



Project Update: Bulk Fuels Facility Jet Fuel Leak

Radioactive and Hazardous Materials Committee

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October 15, 2024

Kirtland AFB BFF Jet Fuel Leak - Stakeholders



May be adversely affected by decisions; conventionally defines "stakeholder"

Water Authority, VA Hospital, residents

Soil and groundwater impacted by leaked jet fuel and aviation gas

Contractors

May be favorably affected by a decision, typically economic gain

U.S. Air Force

Those who create and own the risk

Those responsible for preventing or minimizing the risk; typically federal, state, and local regulators

New Mexico Environment Department, EPA

The Water Authority At-a-Glance

- ~ 670,000 people served
- Over 200,000 customer accounts
- ~ 650 employees
- Serving ~ 30 billion gallons of drinking water
- Treating ~ 18.5 billion gallons of wastewater
- Groundwater and Surface Water sources



Site Overview and Background

 Decades long jet fuel leak discovered 25 years ago

 Both soil (vadose zone) and aquifer are impacted

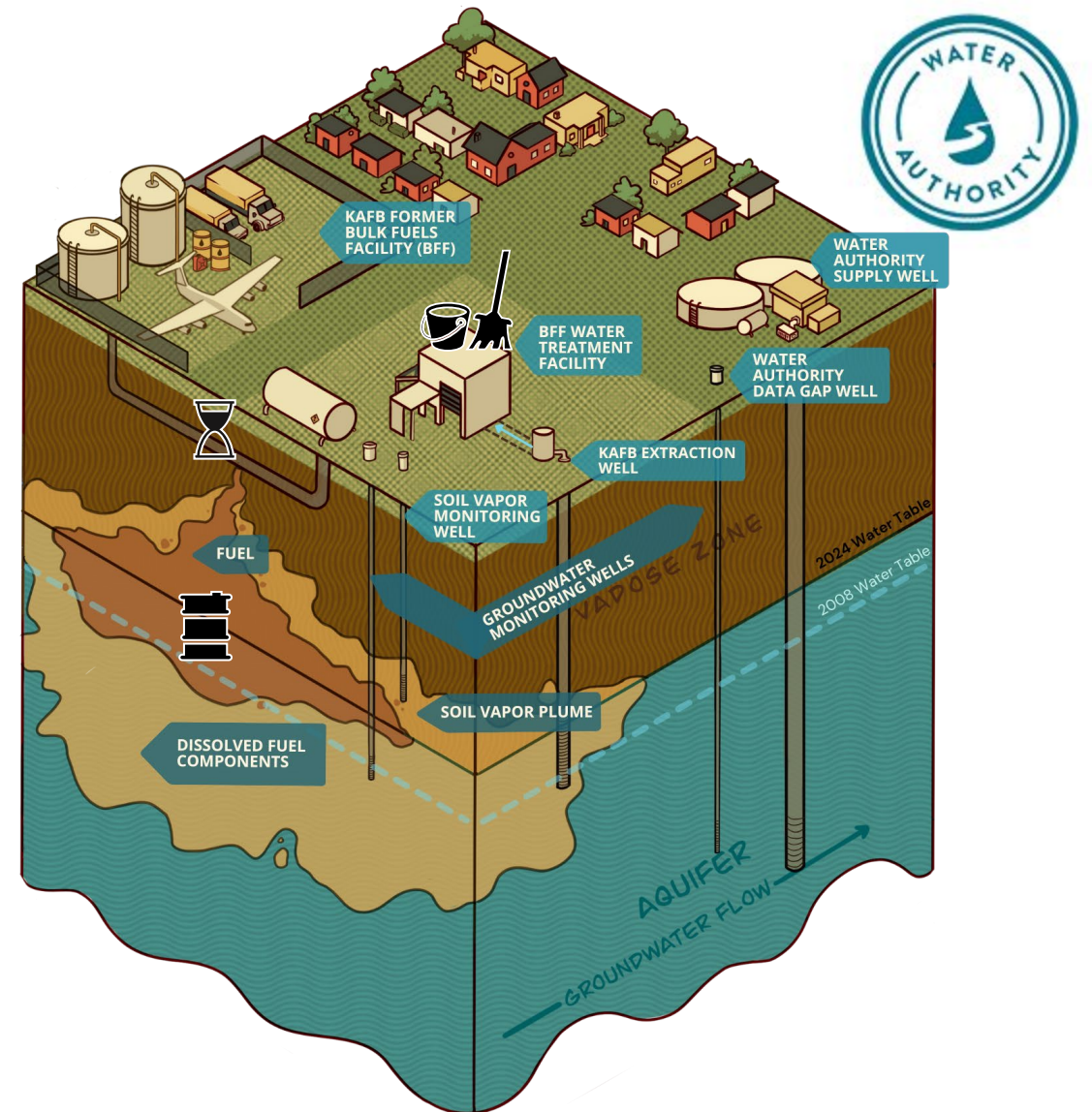
Fuel component, ethylene dibromide (EDB), spread to within a 1/2 mile of drinking water supply wells

 Cleanup follows RCRA Corrective Action process

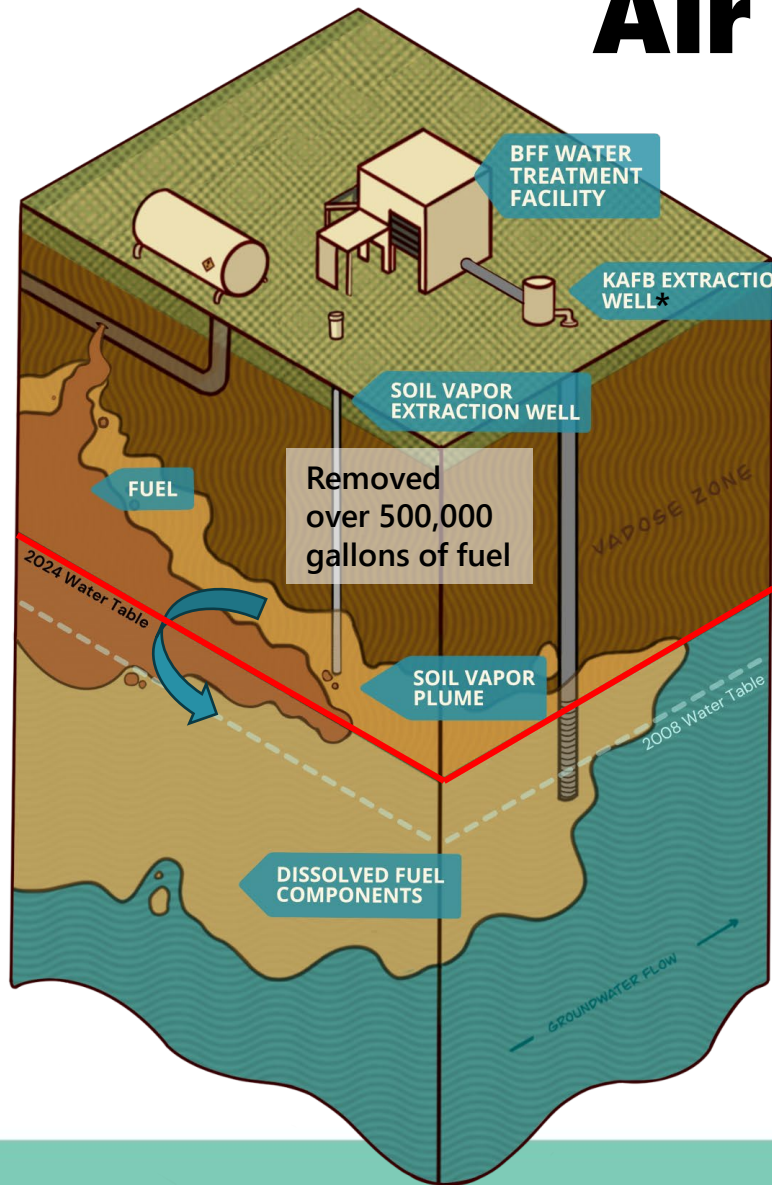
• Breaks cleanup into:

- 1) Investigation
- 2) Cleanup Method Selection
- 3) Final Cleanup

 Interim Measures



Air Force Proactive Actions – Interim Measures



*Collaboration between Water Authority and Air Force

PAST: Soil Vapor Extraction with multiple SVE units (2006 – 2015)

CURRENT: Groundwater "Pump & Treat" with 4 extraction wells (est. 2015)

Source Water Impacts

- Currently no active fuel treatment, allowing groundwater contamination to persist
- Without active treatment of the remaining fuel in the ground, cleanup is estimated to take over 800 years

Water Authority Proactive Actions



Voluntarily sample all nearby supply wells for fuel components



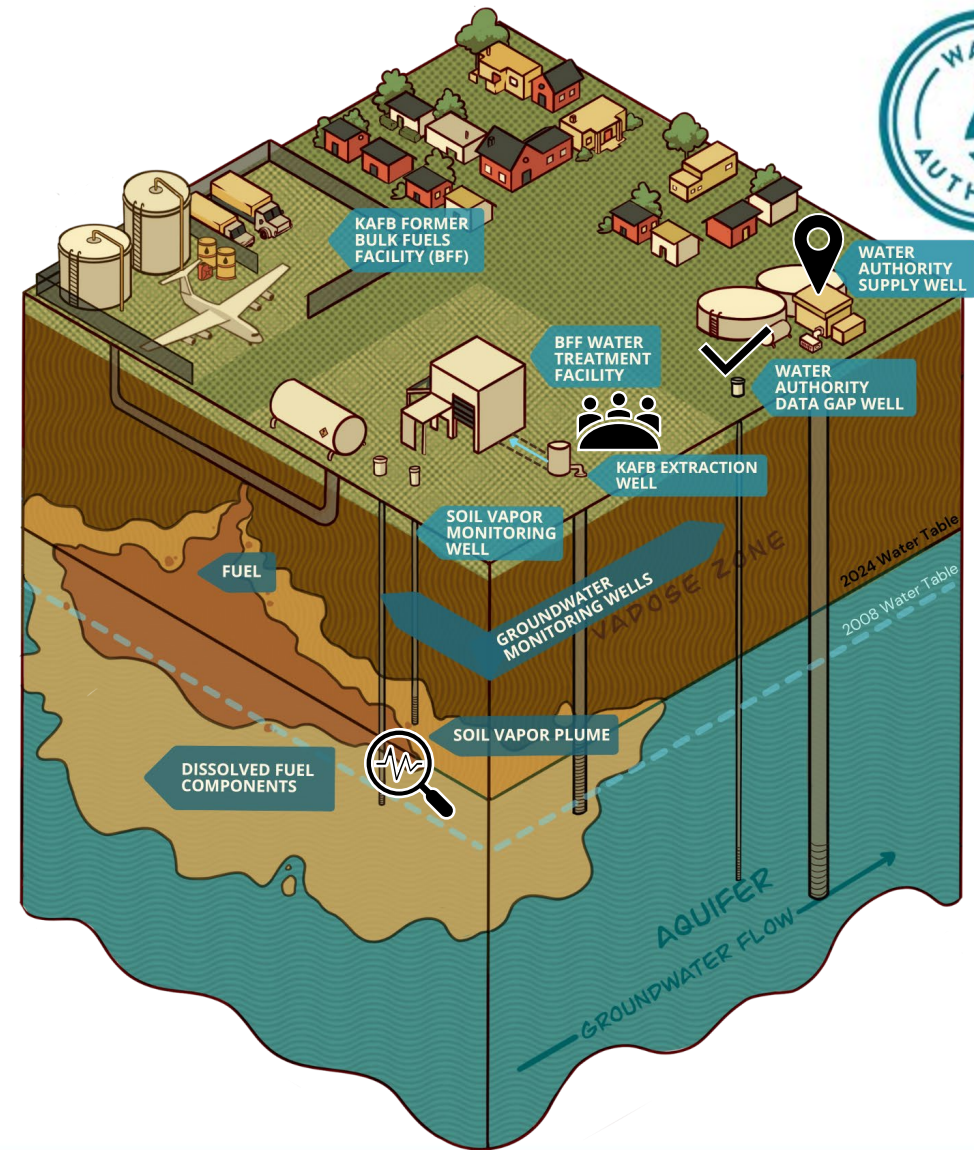
Consolidate and conduct technical analyses of site data



Installed and continue to sample the Data Gap Monitoring Well



Coordinate with local, state, and federal representatives to ensure effective site cleanup





Water Authority Concerns

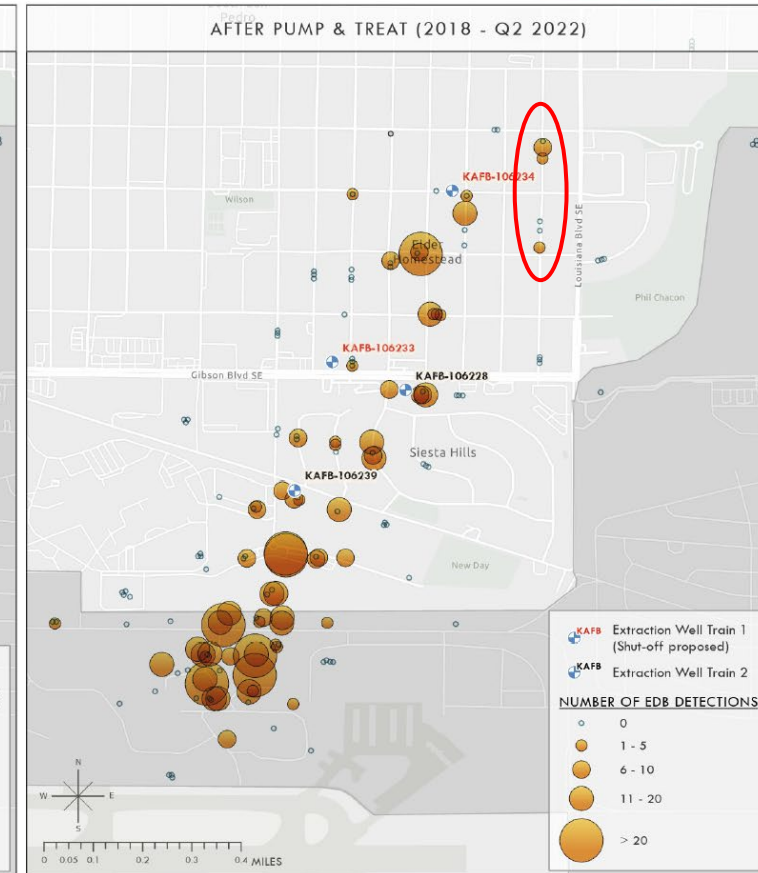
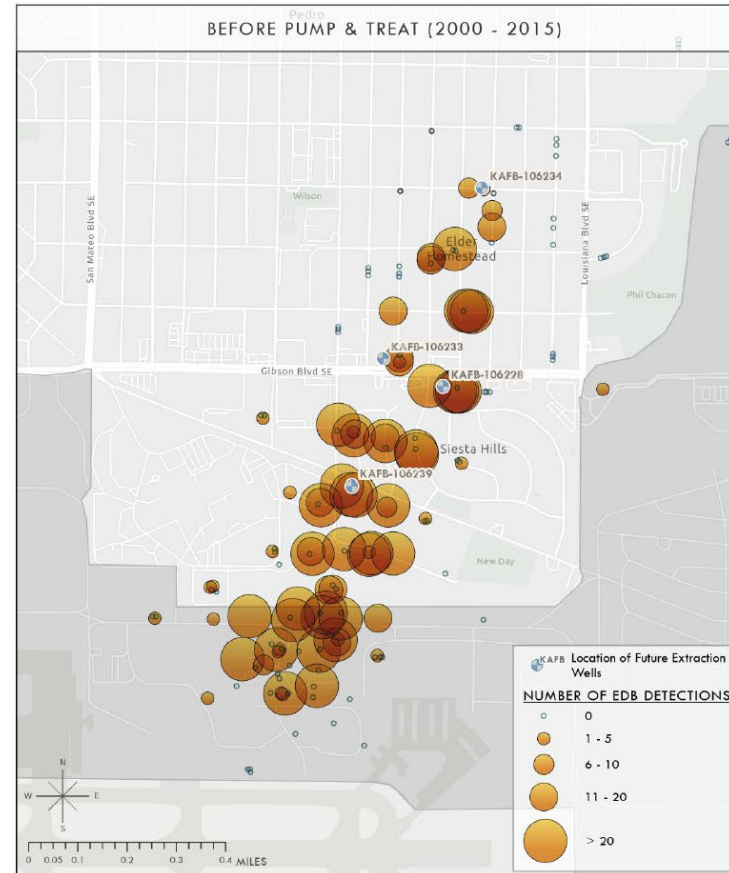
- Groundwater contamination will persist without active source cleanup
- No meaningful involvement of the Water Authority on key site decisions
- Progress towards cleanup is being overstated by incomplete data and analysis

Pump and Treat Modification



- On July 9th, 2024, the Air Force provided notice to NMED of its intent to turn off 2 out of the 4 interim measure extraction wells
 - Pumping will be increased at the remaining extraction wells
 - Shut-down wells will be “idled” to turn on when needed

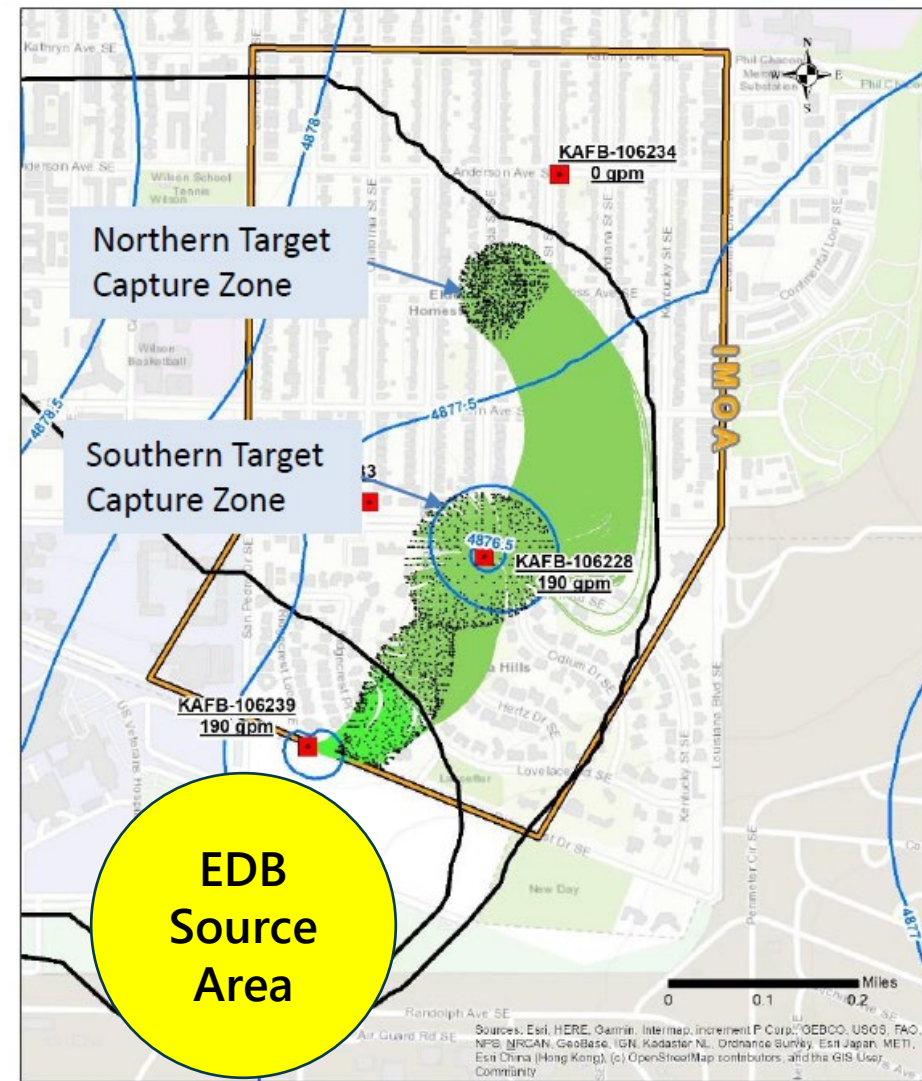
- Little technical justification was provided
- A robust analysis of potential impacts to EDB migration was not completed
- Unclear what would trigger resuming operation of the two extraction wells taken offline



EDB Migration

Air Force stated objective is "...provide protection to water supply wells by hydraulic capture of the dissolved-phase EDB utilizing well pumping."

- Air Force analysis leaves out important information
 - EDB south of Ridgecrest Drive (Source Area)
 - Regional supply well pumping
- Incomplete semi-annual analyses drive management decisions
 - Air Force concluded no EDB breakthrough



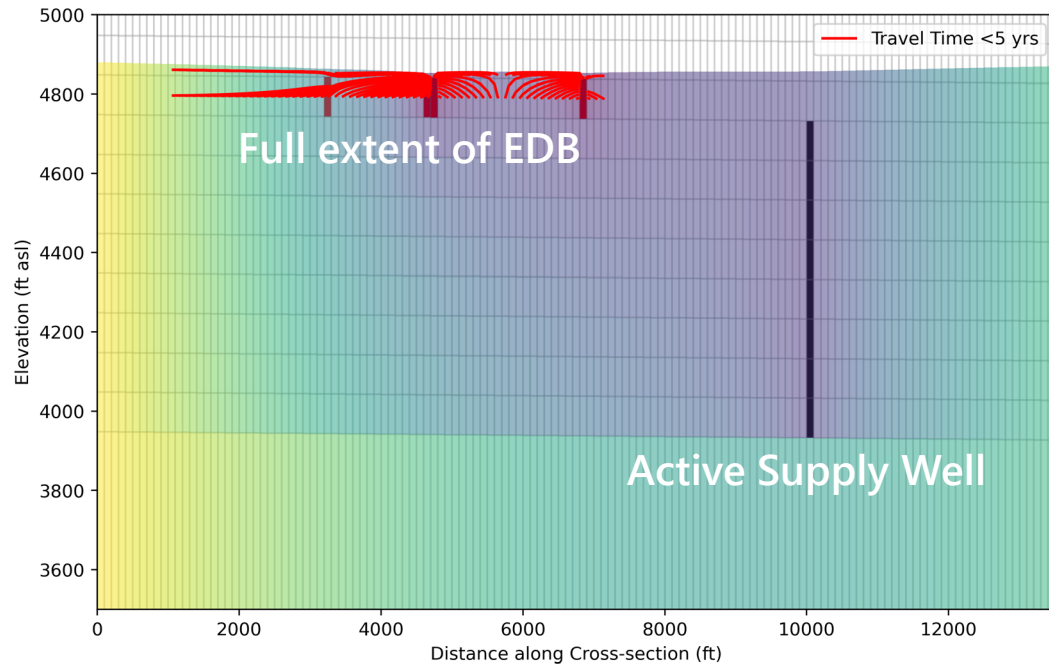
Well Capture Analyses
Q2 2023 Groundwater Flow Scenario
Maximum 2022 - 2023 TCZ Volume

Legend:
■ Interim Remedy Extraction
□ Simulated Capture Zones
— REI 4857 Potentiometric Surface Contours
— TCZ Particle Tracks
— KAFB-106228 Capture
— KAFB-106239 Capture

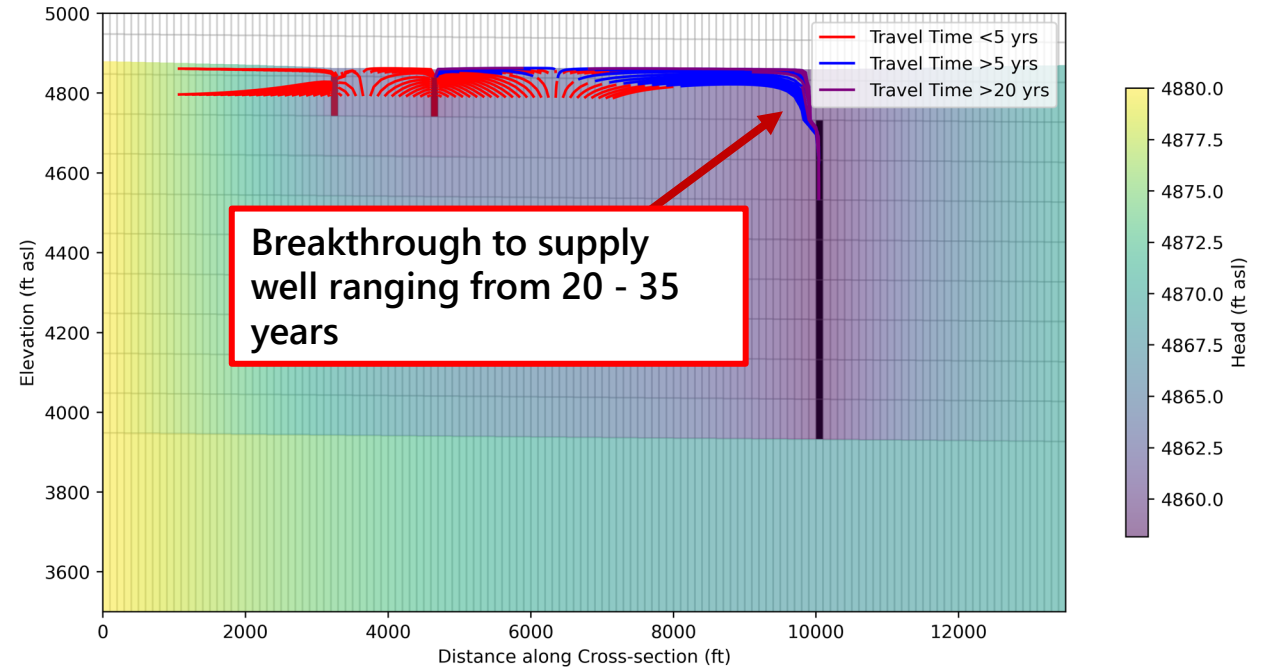
Water Authority Analysis



Current Operation
All extraction wells on



Proposed Operation
Two extraction wells off



What is needed?



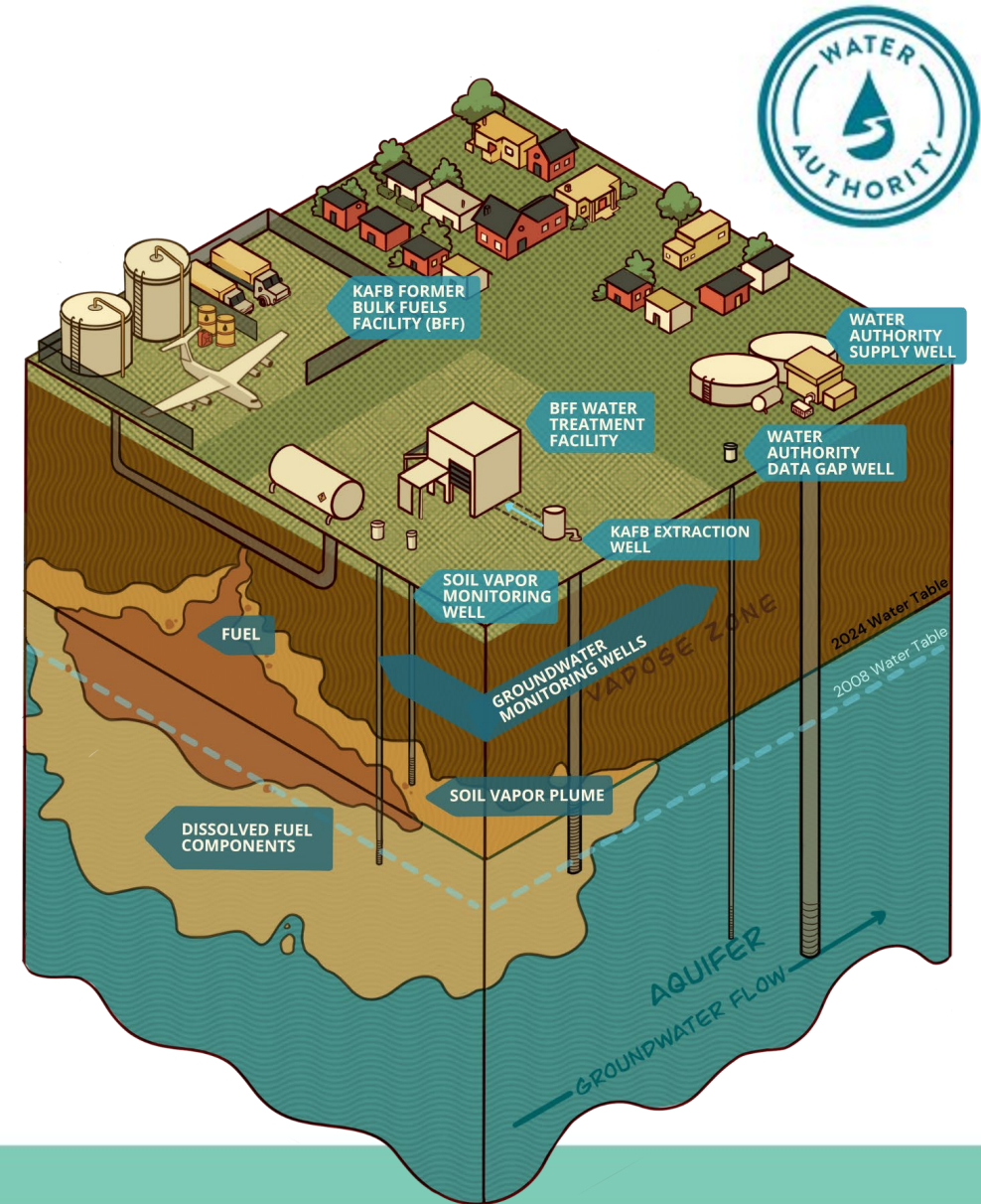
Active cleanup of remaining fuel



Water Authority involvement in technical discussions and decision making



Dedicated regulatory staff to project





Questions?