

New Mexico Office of Natural Resources Trustee

NASA White Sands Test Facility Natural Resource Damage Assessment of Groundwater Injuries

Radioactive and Hazardous Substances Committee
October 15, 2024



Following a Release of Hazardous Substances into New Mexico's Environment, Responsibility is Shared:

NMED: Remediation

NMED Requires Responsible Party to:

1. Identify and Characterize the Release(s); and
2. Clean up contamination to protect public health and the environment.



ONRT: Restoration

ONRT Requires Responsible Party to:

1. Restore injured natural resources to pre-release condition
2. When that's not possible in a timely way, replace or acquire the equivalent.
3. Compensate affected communities for loss of use from time of release to complete restoration



WSTF Operations

- Established to support the NASA Apollo Space Program in the early 1960s
 - Testing spacecraft propulsion systems
- Over time, focus shifted to Space Shuttle program hazard tests
- Ongoing operations at the Site:
 - Field test facility under NASA's Lyndon B. Johnson Space Center, supporting United States space program, private industry, and foreign government agencies



White Sands Test Facility

- Contaminants:

- Trichloroethylene (TCE)
- Perchloroethylene (PCE)
- Nitroso dimethylamine (NDMA)
- Freon

- Co-Trustees:

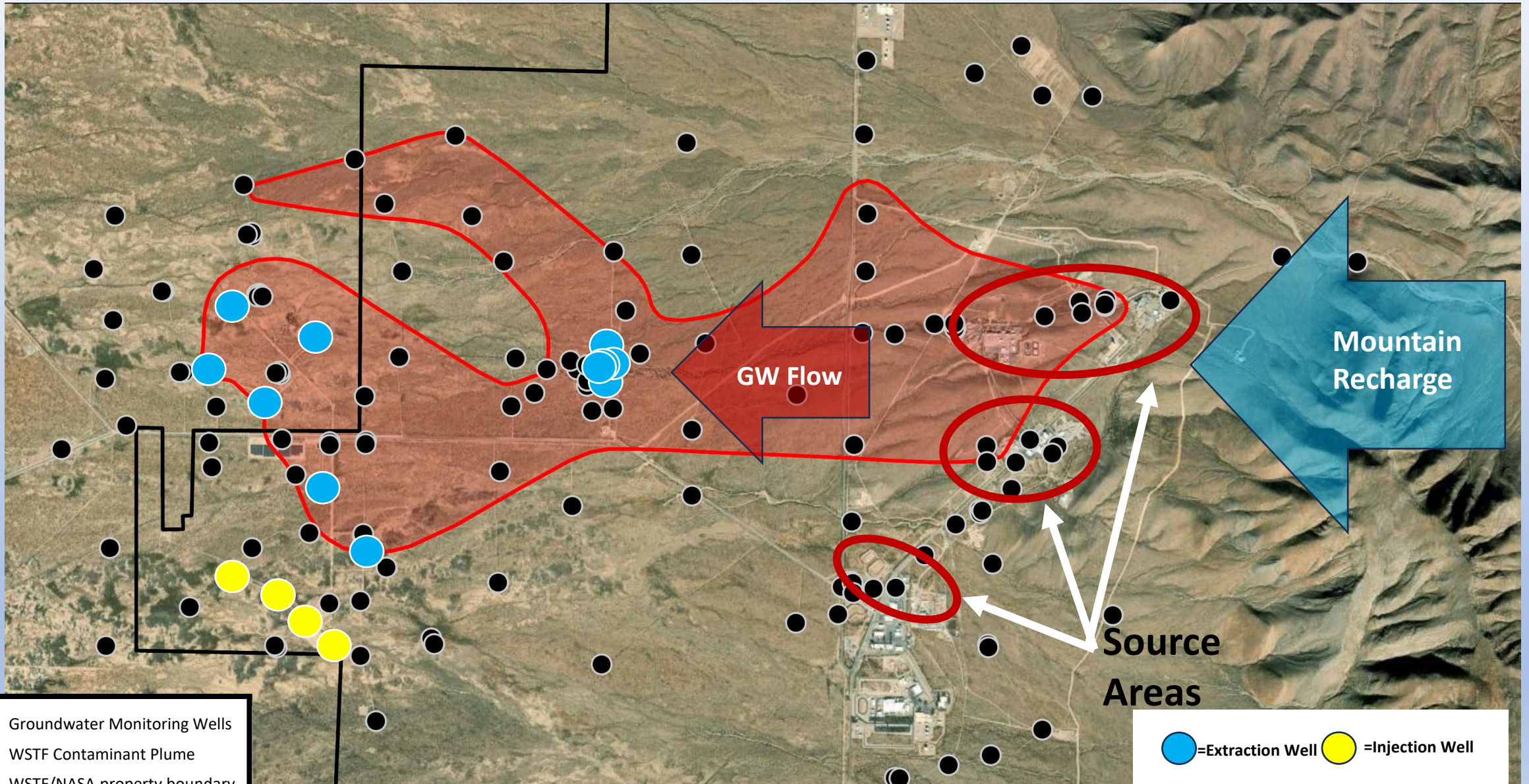
- ONRT
- US DOD/US Army

- Potentially Responsible Parties:

- NASA
- US Army



Pathway of Contaminants

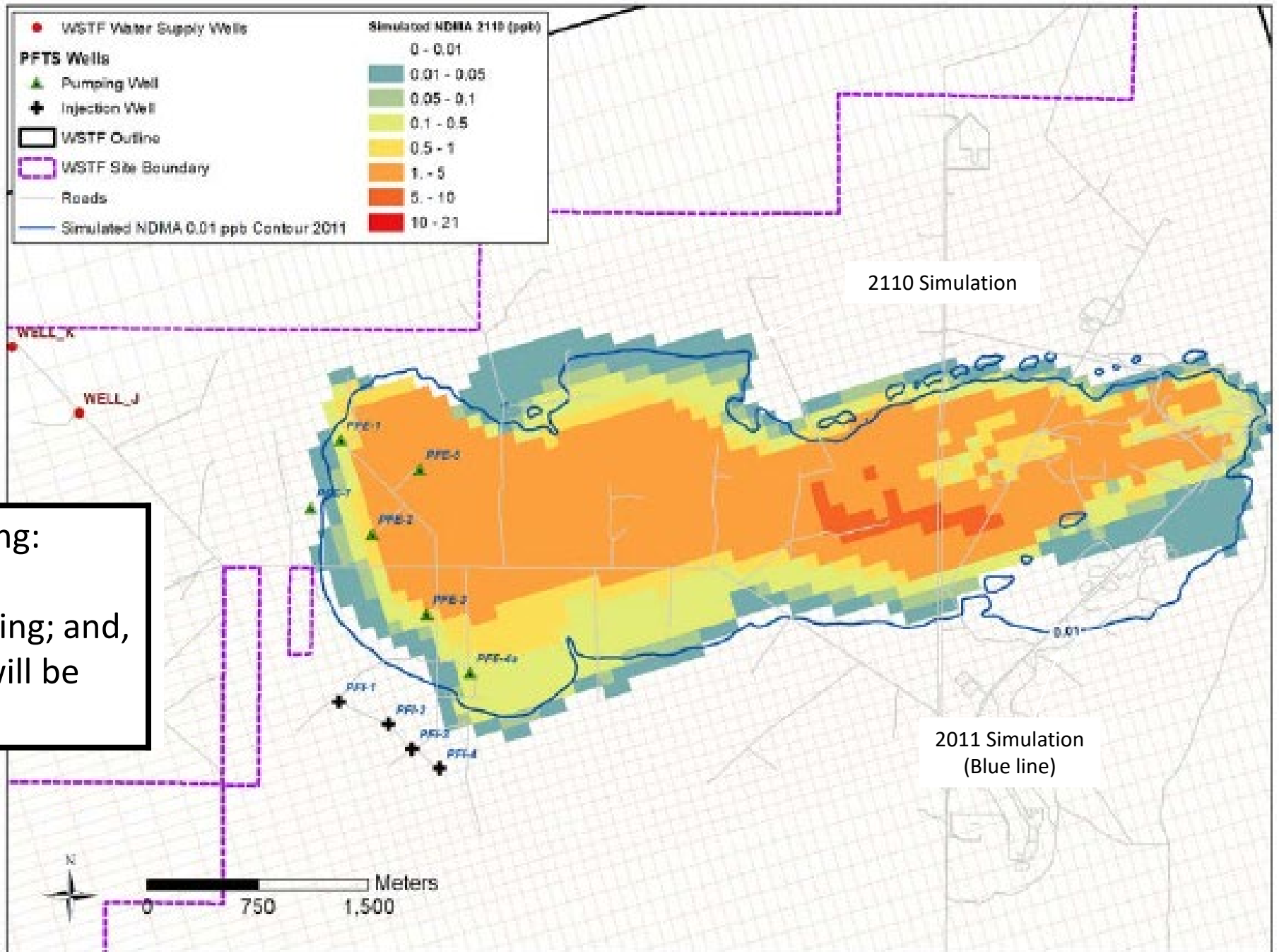


Remediation Timeline is at least 100 Years

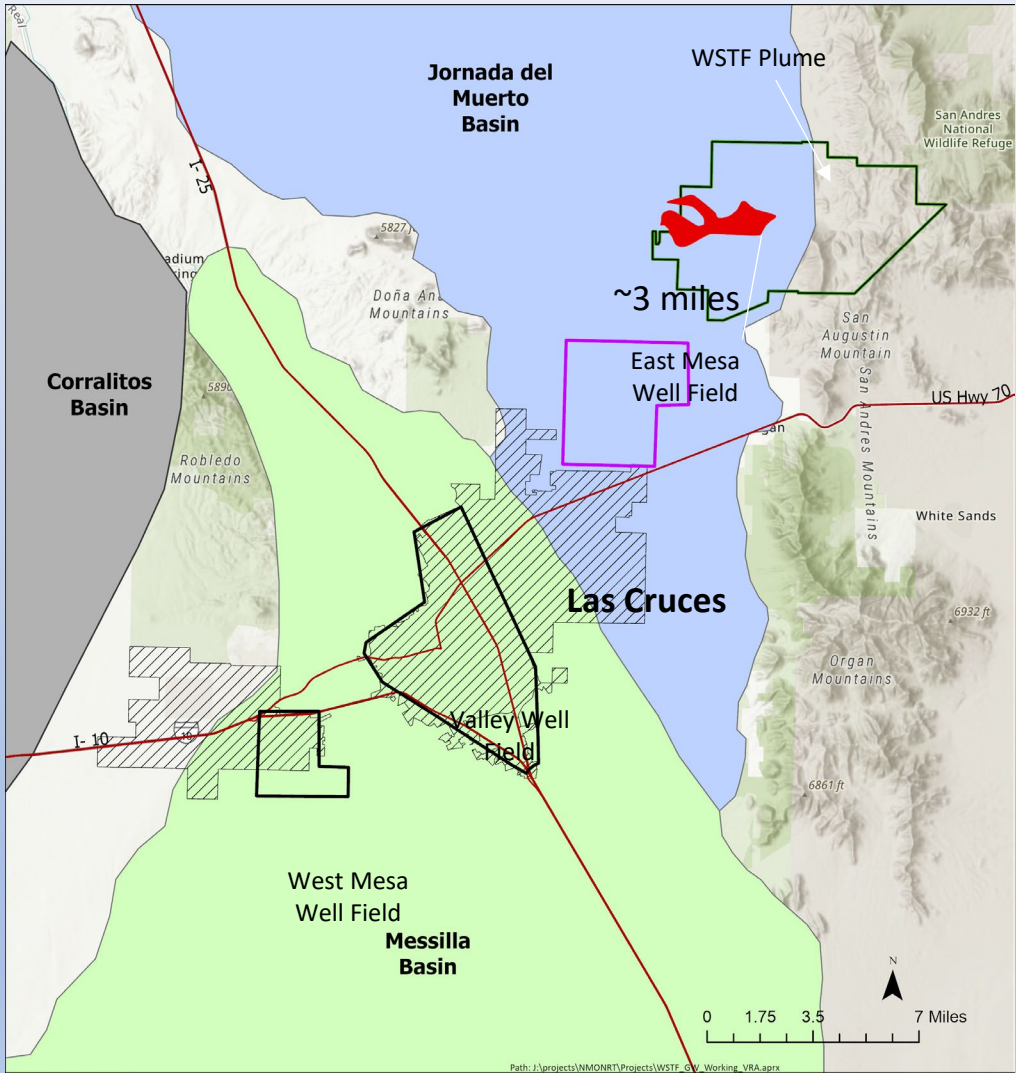
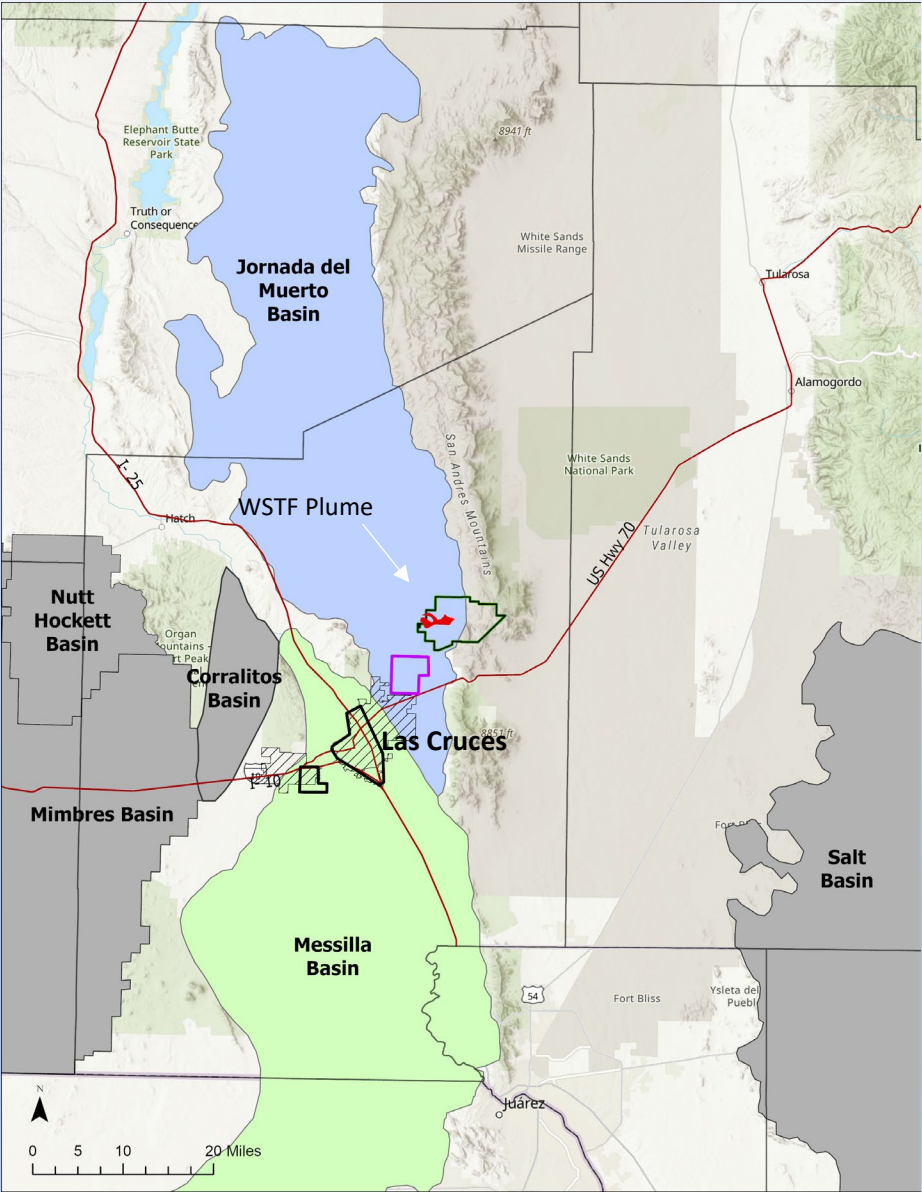
Per NASA's 2011 modeling:

In 100 years:

- Cleanup will be ongoing; and,
- NDMA plume front will be about the same.

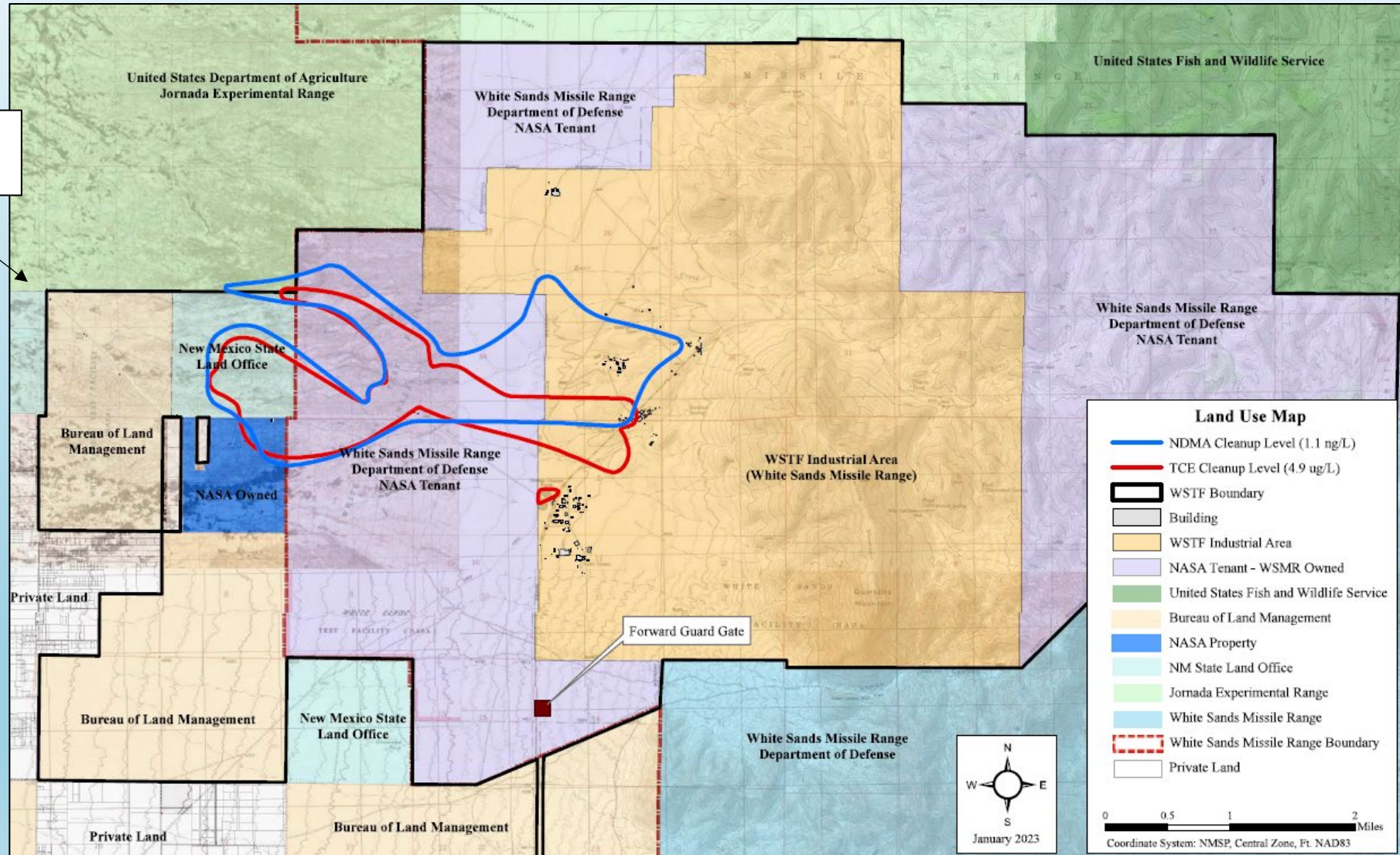


Location of WSTF Groundwater Contaminant Plume Relative to Las Cruces

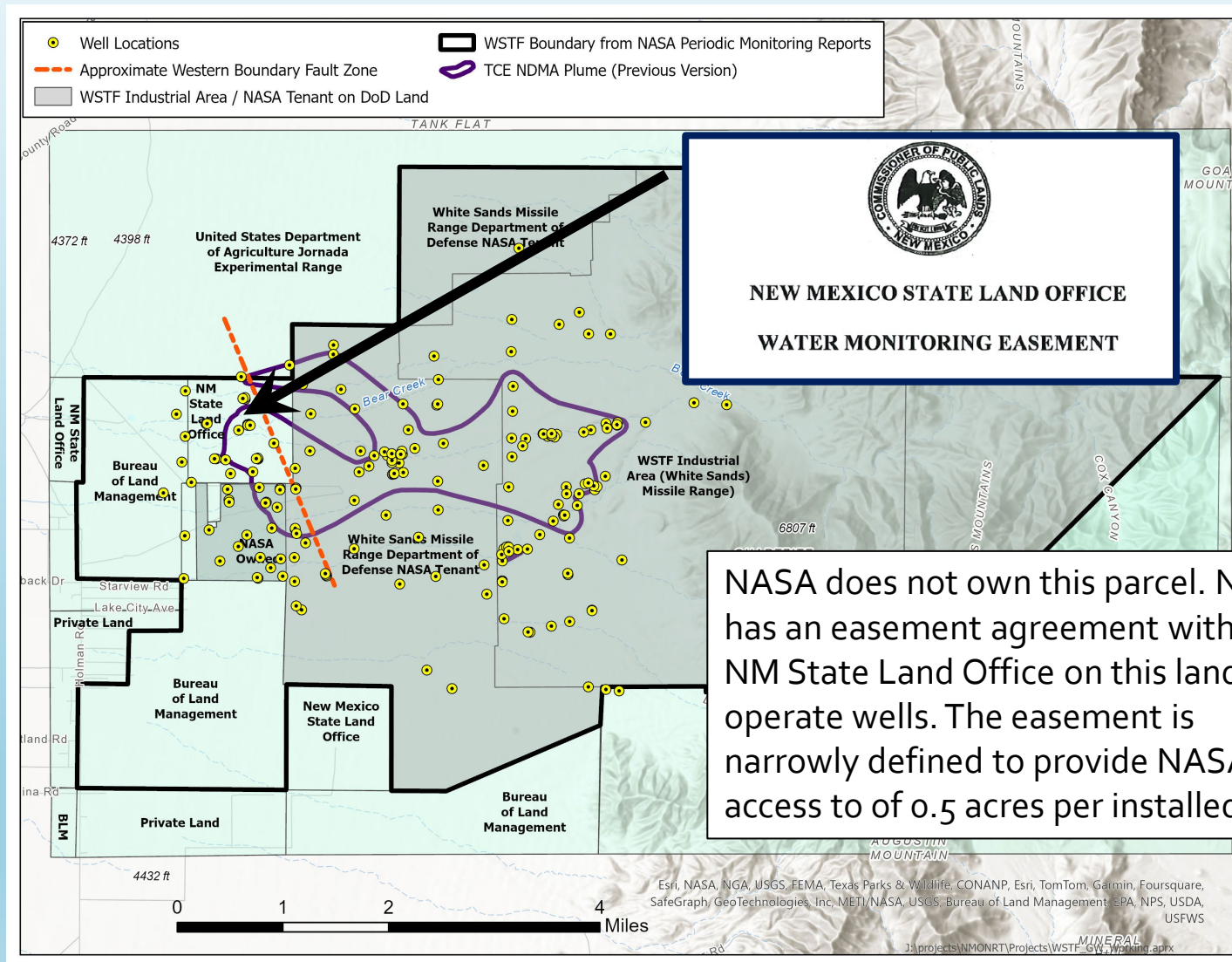


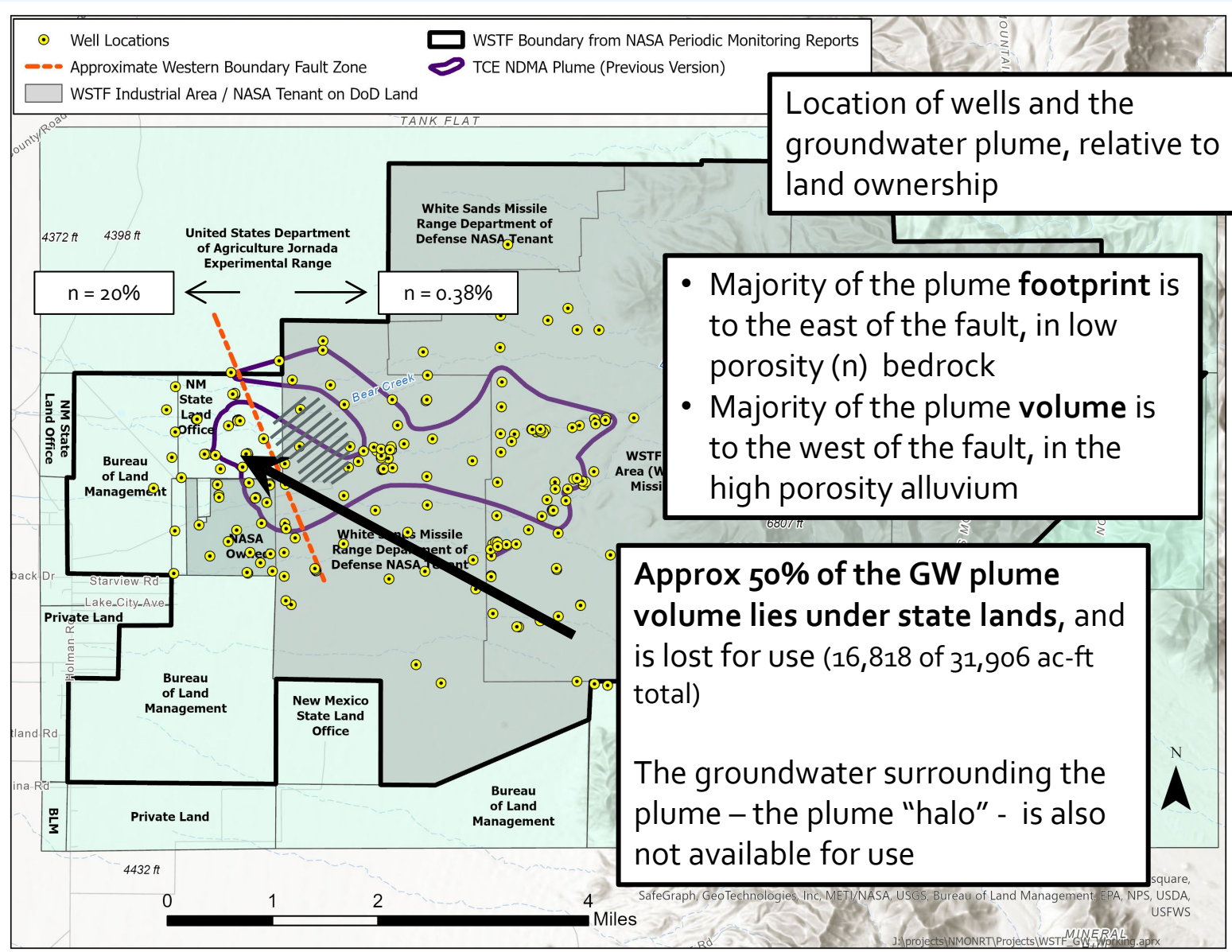
Plume Extent - Clarification of WSTF "Boundary"

The "boundary" is not a property boundary

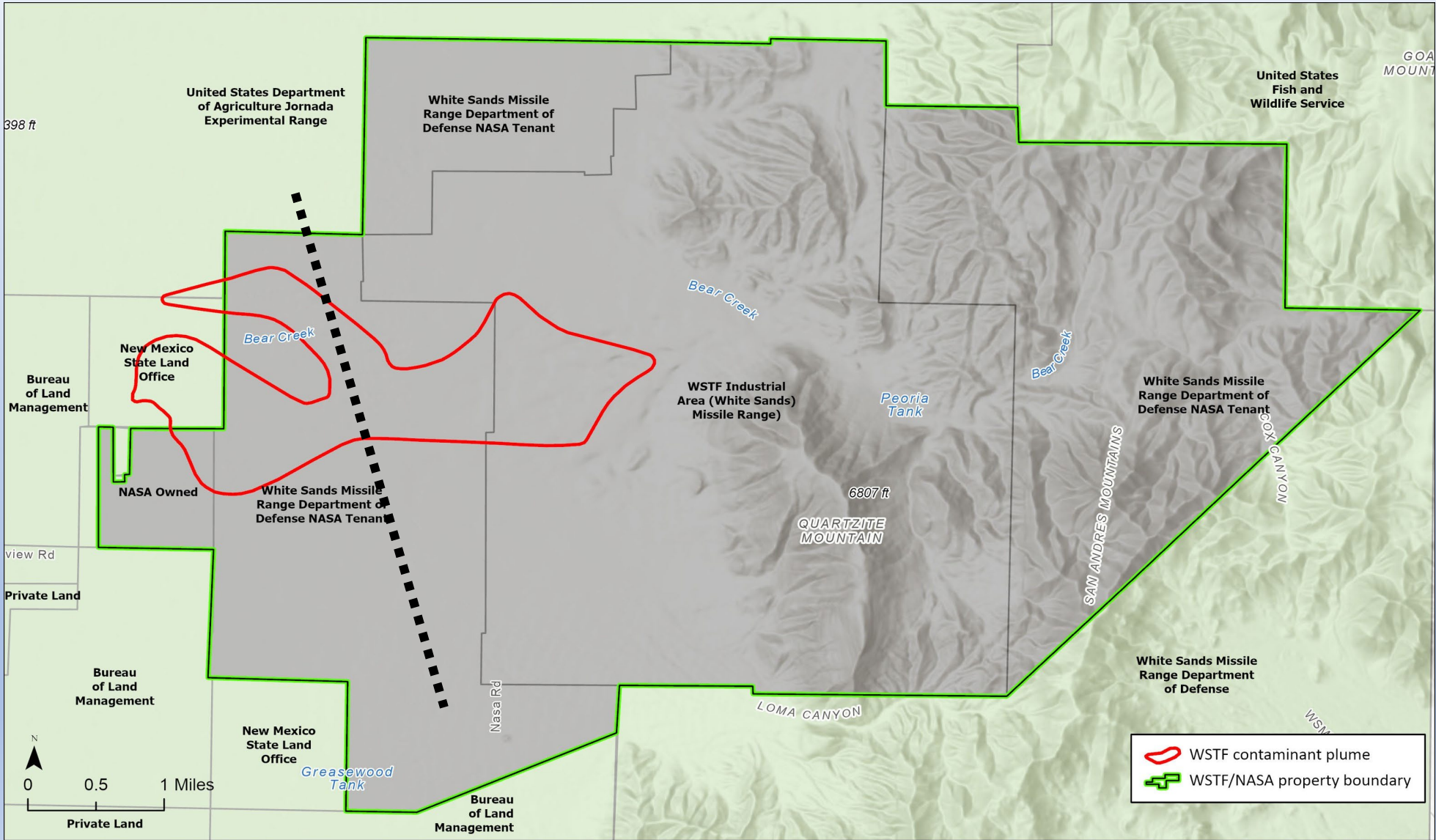


Plume Extent – New Mexico State Land Office





Service Losses to New Mexicans Resulting from the WSTF Plume



The Ultimate Goal - Restoration!



Goal of NRDA is to implement restoration projects to make the New Mexico public whole



Examples of groundwater projects include

- Installing recharge enhancement structures
- Preventing future contamination (wastewater systems)
- Funding water conservation
- Providing alternative water supplies
- Removing invasive species



Once a claim is settled, ONRT seeks input from the public on restoration projects to spend the settlement money



ONRT applies established criteria to select projects

For example:

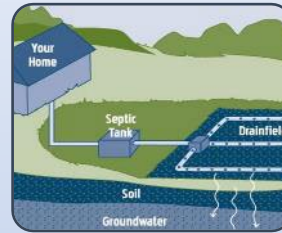
- Geographical nexus to the injured resource and public
- Consistency with regional/local plans

Other Potential Projects?

WSTF GW
Restoration
Options



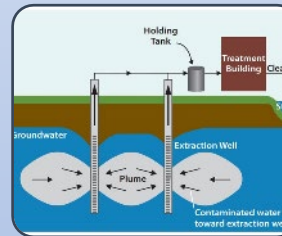
Recharge
enhancements



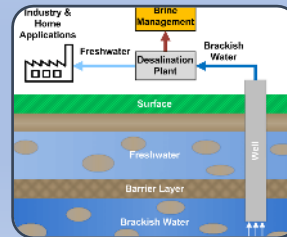
Wastewater
improvements



Invasive species
removal



Groundwater
remediation



Alternative
water supplies

Current Status/Next Steps



Milestones

- 2016: Preassessment Screen complete
- 2019-2022: Damage Assessment
- 2022/2023: ONRT invited NASA and DOD to enter into settlement discussions.
- January-July 2024: meetings between NASA and NMED to determine status of remediation process
- August 2024: USDOJ indicated willingness to enter into discussions regarding natural resource injuries
- October 2024: first meeting

Questions?

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