

# **Municipal Setting Designation (MSD) Program for Former Zarzamora Service Center**



## **Community Health Committee**

December 16, 2024

Razi Hosseini, P.E., R.P.L.S., Director/City Engineer, Public Works Department

# Agenda

---

- Overview
  - What is an Municipal Setting Designation
  - What are the benefits?
  - Project Timeline
  - Next Steps





# What is an MSD

- In 2003, Texas Legislature voted to amend the Texas Health and Safety Code and allow municipalities to authorize MSDs to address existing groundwater contamination beneath redeveloping properties.
- In April 2016, the San Antonio City Council approved the MSD ordinance (Ordinance # 2016-04-07-0247).
- Ordinance to restrict the potable use of shallow groundwater for human consumption.



# MSD Benefits

---

- Protects the public from human consumption of shallow contaminated groundwater.
- Promotes redevelopment of under-utilized properties.
- Allows the City to transform this old service center into green space for the expansion of Normoyle Park.
- Ensures the park is safe for public park use.





# Project Timeline

February 2023

Performed Administrative and Technical Review of MSD Application

September 2023

Determined plume stable and decreased concentrations

June 2024

Received SAWS and Edwards Aquifer Authority concurrence

November 2024

Conducted a public meeting

December 2024

Community Health Committee Briefing on MSD application

# Next Steps



- ✓ City Council Action (MSD Ordinance)
  - January 2025
- ✓ SAWS Board (Resolution of Support)
  - February 2025
- ✓ TCEQ Review (60 to 90 days)
  - Complete March 2025
- ✓ TCEQ Approval & Issue Certificate of Completion
  - Summer 2025



# Modern Geosciences

Kenneth Tramm  
PHD, PE, PG, CHMM



**MODERN GEOSCIENCES**  
TRUSTED ENVIRONMENTAL ADVISORS®

# MSD Application

## Former Zarzamora Service Center

*4503 – 4719 South Zarzamora Street  
San Antonio, Texas*



**MODERN GEOSCIENCES**

Trusted Environmental Advisors

Modern Geosciences  
Kenneth S. Tramm, PhD, PE, PG, CHMM

December 16, 2024

# General History

- Site: 29-acre property first developed in 1960s
  - Operations included city vehicle maintenance and fire-fighter training (Aqueous Film Forming Foam; AFFF use ended in ~1986).
  - 12 underground storage tanks (USTs) installed/removed from 1962 – 2019.
- 1980s – Regional groundwater impact found at Kelly Air Force Base (AFB) [“East Kelly” or Zone 4] that extends to and through the Site.
- Kelly AFB has installed over 600 monitor wells to address chlorinated solvent releases affecting on and off-site properties (1980s-2023).
- A 2007 ATSDR<sup>‡</sup> Public Health Assessment “concluded that the off-site environmental contamination in the East Kelly area poses no apparent public health hazard.”

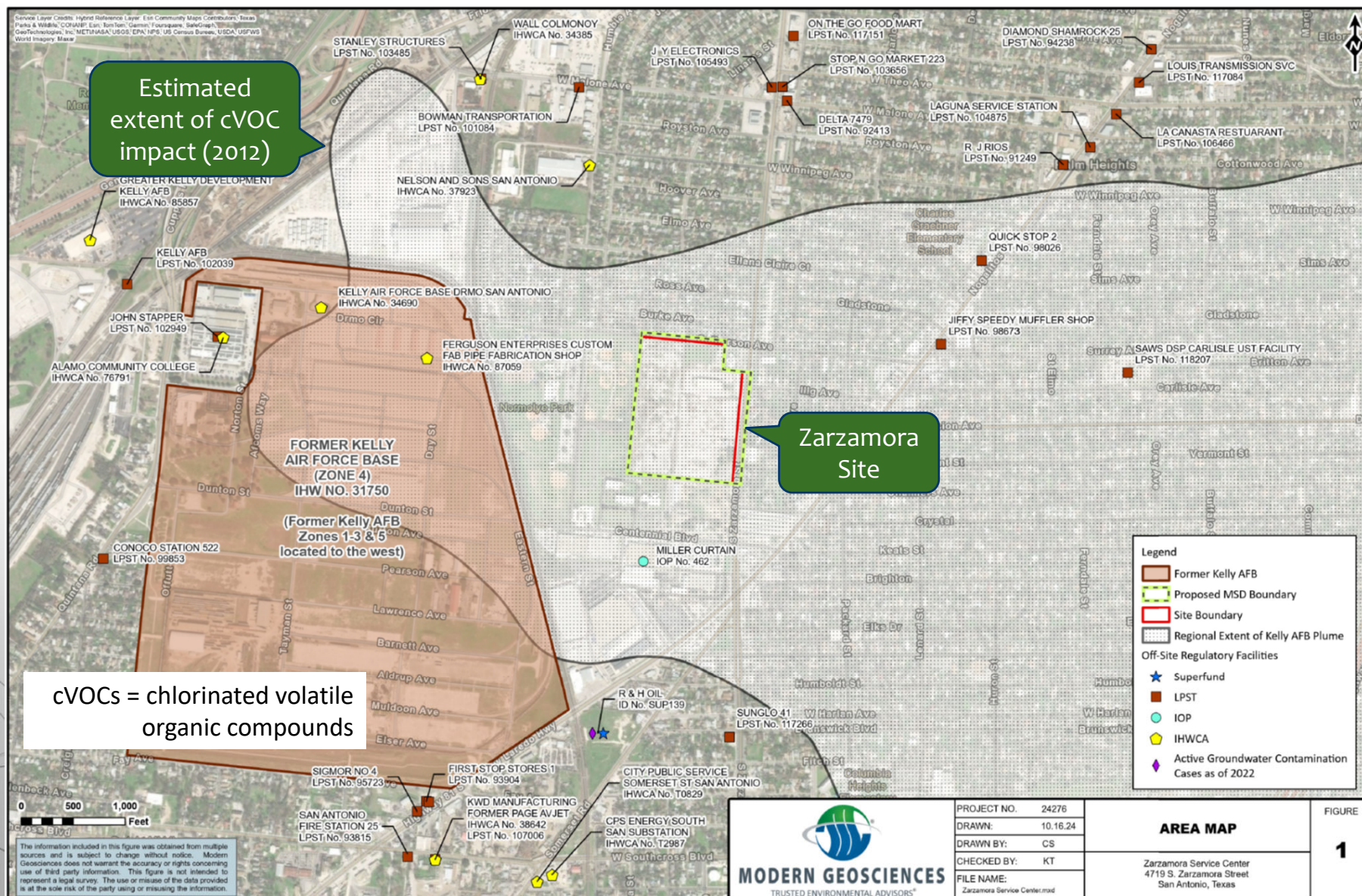


**MODERN GEOSCIENCES**

Trusted Environmental Advisors

<sup>‡</sup> - Public Health Assessment for East Kelly AFB.  
Agency for Toxic Substances and Disease Registry (ATSDR). 2007.







# Assessment/Remedial Activities

- UST Removal/Closure completed under LPST Nos. 14137, 110476, and 94488
- 2014 – per and polyfluoroalkyl substances (PFAS) confirmed at the Site along with Kelly AFB cVOCs in groundwater<sup>‡</sup> by potential purchaser
- 2014 – Site entered into Texas Voluntary Cleanup Program (VCP No. 2686) by potential purchaser, later taken over by City.
- 2015 – 2024 City completed assessment and targeted remedial measures (soil and infrastructure removal)
  - Over 250 investigation points (groundwater, soil, soilgas, wipe samples)
  - 12 USTs removed, Burn Pit Residue excavations, Drain system excavation
  - Tower removed and engineered cap added in August/September 2024



**MODERN GEOSCIENCES**

Trusted Environmental Advisors

<sup>‡</sup> - Trichloroethene (TCE) is primary cVOC, but PFAS recently confirmed to be associated with Kelly AFB release(s). Data suggests regional PFAS near the Site to not be from an AFFF source (i.e., plating-related).

UST = Underground Storage Tank, LPST = Leaking Petroleum Storage Tank [regulatory designation]





# Soil PCLE Zones

Limited to SW Corner of Site

- PFHpA
- PFHxS
- PFOS
- PFOA



PCLE Zones = Protective Concentration Level Exceedance (PCLE) Zones

PFHpA = perfluoroheptanoic acid

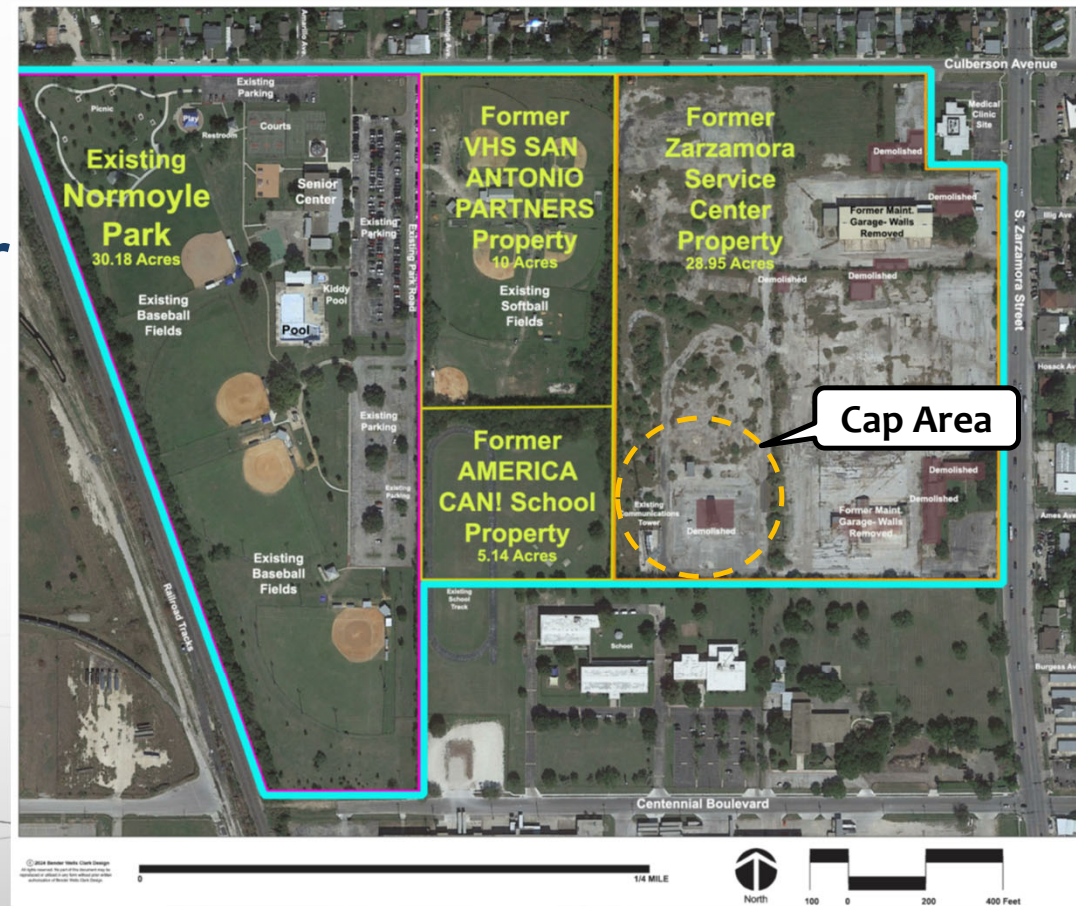
PFHxS = perfluorohexanesulfonic acid

PFOS = perfluorooctanesulfonic acid

PFOA = perfluorooctanoic acid

# Leveraging Redevelopment

Planned Overlook used as engineered cap to minimize future impact to groundwater



**MODERN GEOSCIENCES**

Trusted Environmental Advisors



# GW PCLE Zones

## On-site Source

- **MW-11**

## Downgradient

- **MW-17**

## Off-site Contribution

- West **MW-2**

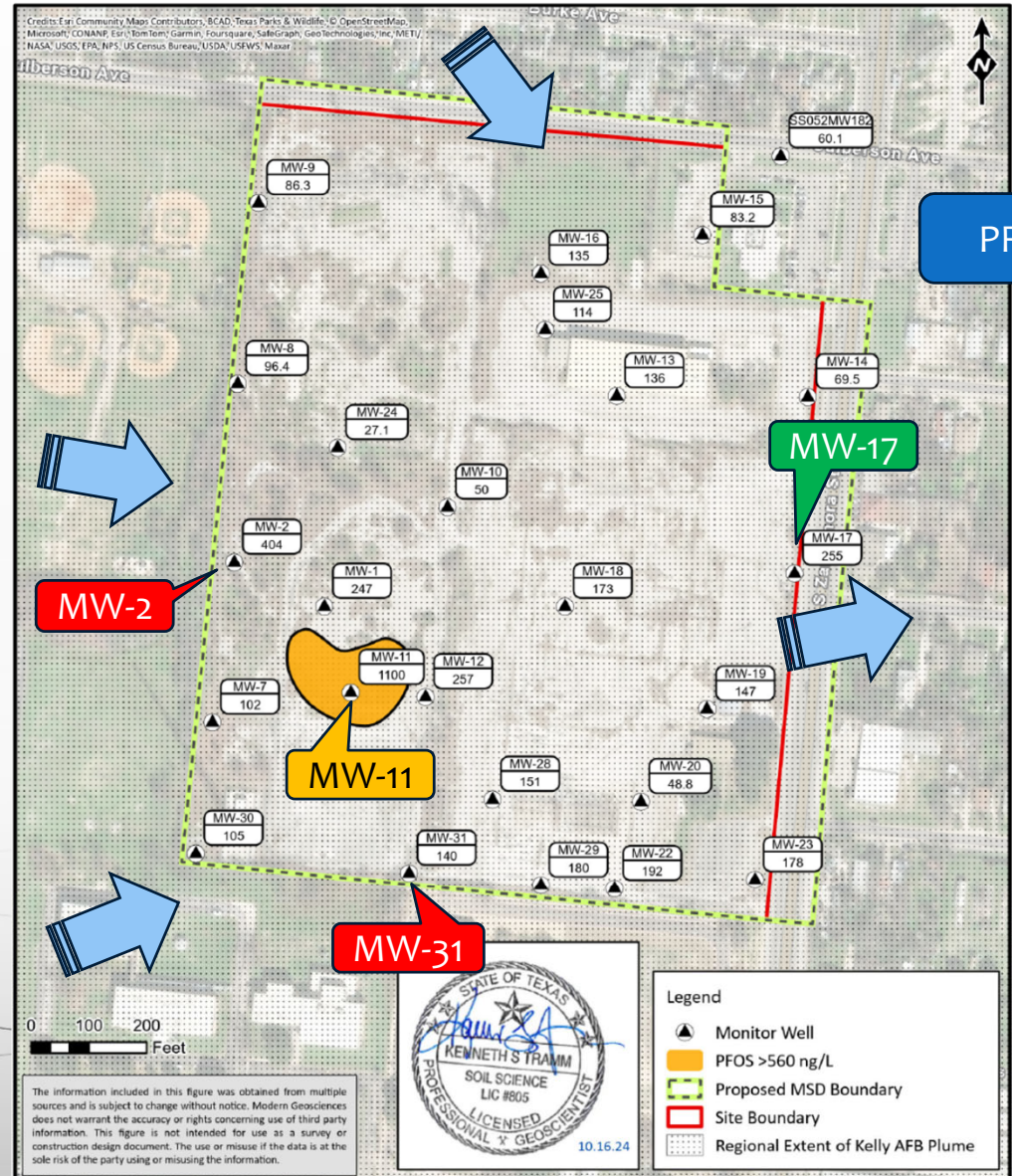
- South **MW-31**



**MODERN GEOSCIENCES**

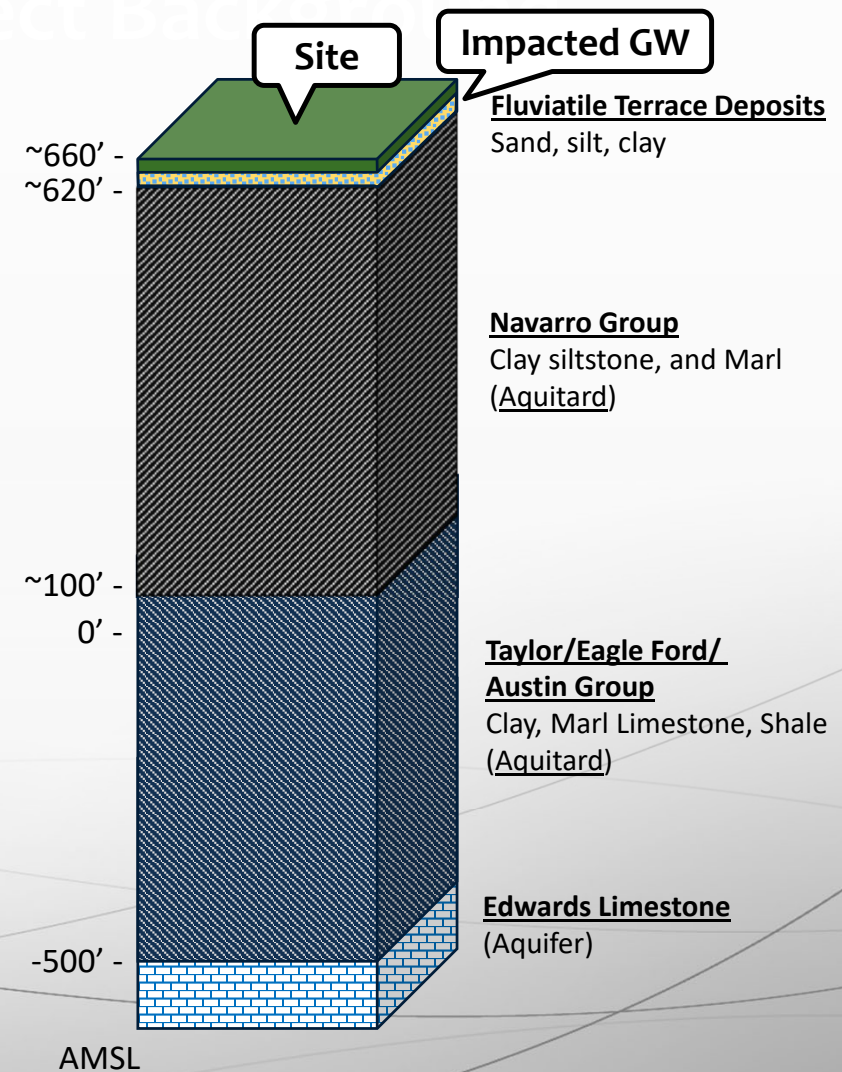
Trusted Environmental Advisors

GW = Groundwater



# Regional Hydrogeology

- Impacted Unit: Perched Groundwater Unit is encountered at ~30' and extends about 10' to 15'. Variable flow patterns, but generally flows east from Site.
- Aquitards: Navarro Clay (~500' thick) and Taylor, Eagle Ford, Austin Groups (~500' thick)
- Aquifer: Edwards Limestone – Regional Source



Generalized Depictions  
from TWDB Report 296  
and USGS Paper 1588



**MODERN GEOSCIENCES**

Trusted Environmental Advisors

# Area Groundwater Use

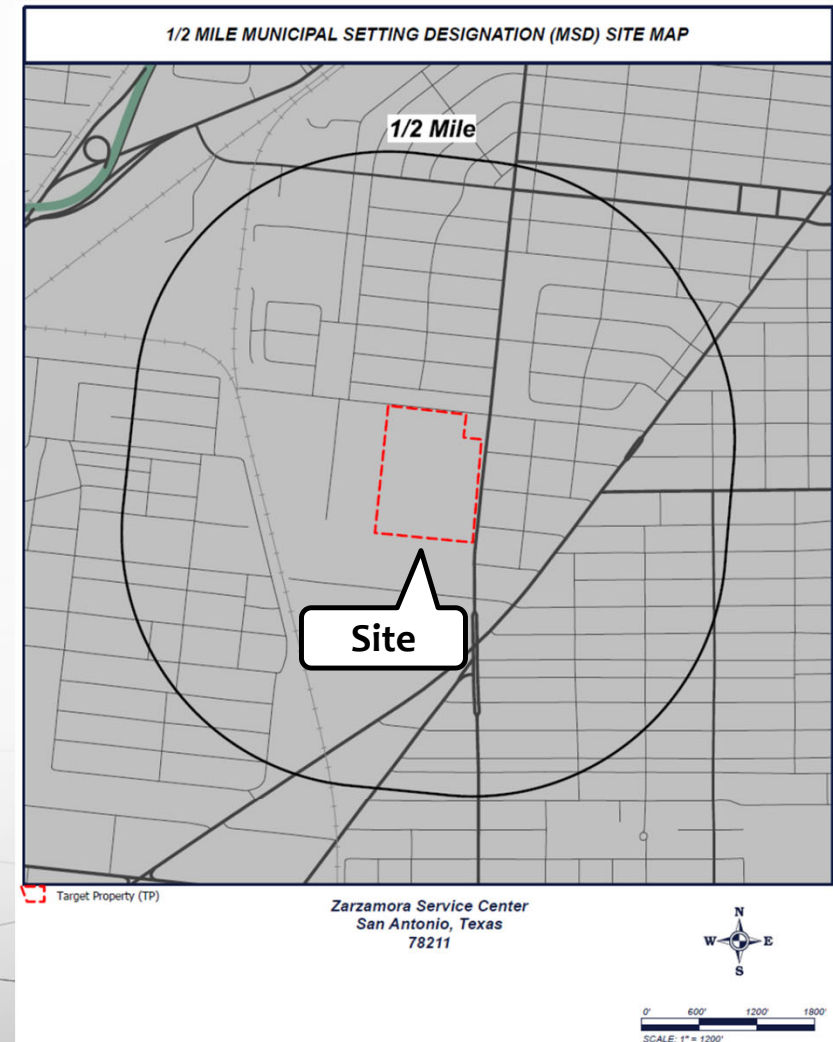
- No registered or threatened wells within ½ mile



**MODERN GEOSCIENCES**

Trusted Environmental Advisors

Sources: SAWS,  
TCEQ, WUD, and SSDRD  
(Geosearch)





# Potable Water Sources

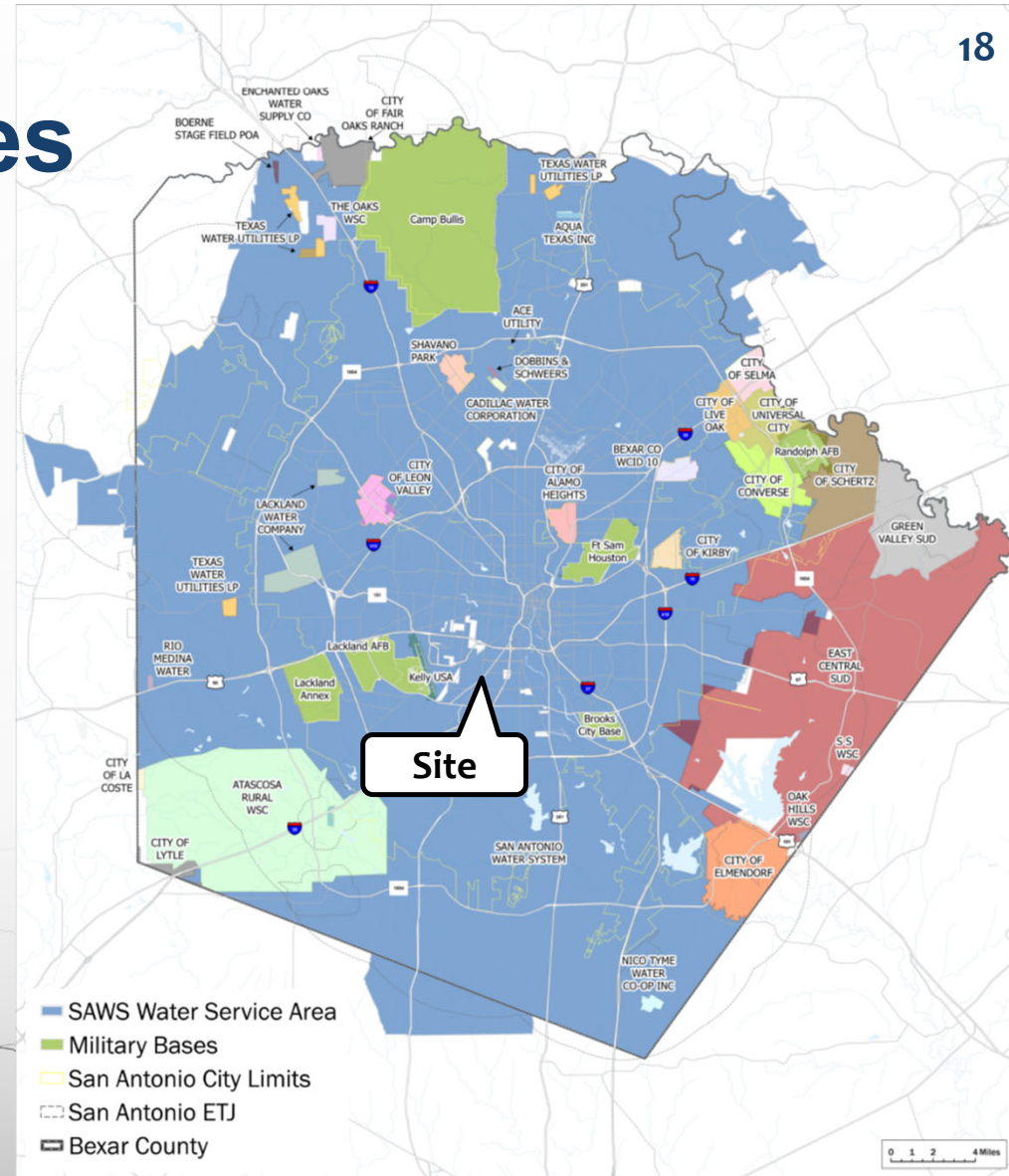
- SAWS Provides Area Water
- Sources: Edwards, Carrizo, Trinity, and Wilcox Aquifers. Supplemented by Canyon Lake



**MODERN GEOSCIENCES**

Trusted Environmental Advisors

Source: SAWS, 2024



# General Process to complete the MSD

- Application submitted ✓
- City reviews and approves an MSD Application ✓
- Public Notice (Property Owners – 2,500', Well Owners- 5 mi, Newspapers) ✓
- Public Meeting (11-19-24) ✓
- **Community Health Committee (CHC) Meeting**
- Public Hearing (City Council Meeting)
- SAWS Resolution
- Prepare TCEQ Application for Certification



**MODERN GEOSCIENCES**

Trusted Environmental Advisors