

# Municipal Setting Designations



MSDs: Another tool for Houston

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Program Manager



Municipal Setting Designations (MSDs)



# Agenda

- City of Houston - Programmatic
  - What the MSD is
  - Who the MSD impacts
  - Steps in the MSD process
  - **Questions / Comments**
- MSD Applicant - Technical
  - Specific information on the site  
2500 Shakespeare
  - **Questions / Comments**



# Environmental Protection in Texas

- The State of Texas has jurisdiction for environmental protection
  - Texas Commission on Environmental Quality (TCEQ)

- Environmental Complaints



- By Phone: 1-888-777-3186

- Online: <http://www5.tceq.texas.gov/oce/complaints/>

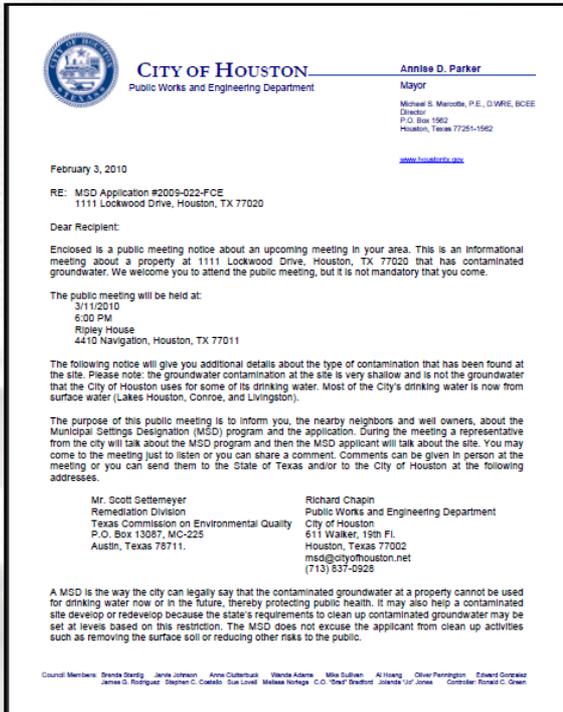


- By Phone: 311

- Online: [http://webintake.houstontx.gov/web\\_intake/Controller](http://webintake.houstontx.gov/web_intake/Controller)

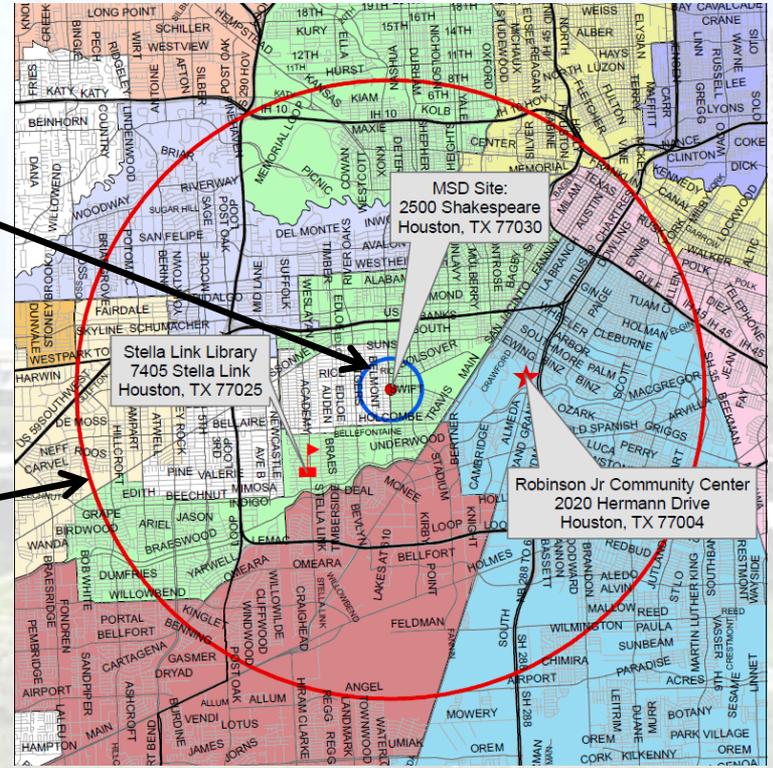


# MSD Notice Letters



**Property Owners**  
First-Class Mail  
½-Mile Radius  
*City Requirement*

**Water Well Owners**  
Certified Mail  
5-Mile Radius  
*State Requirement*



*If you received a notice through certified mail that means you have a water well according to the State's records*



## Municipal Setting Designations (MSDs)

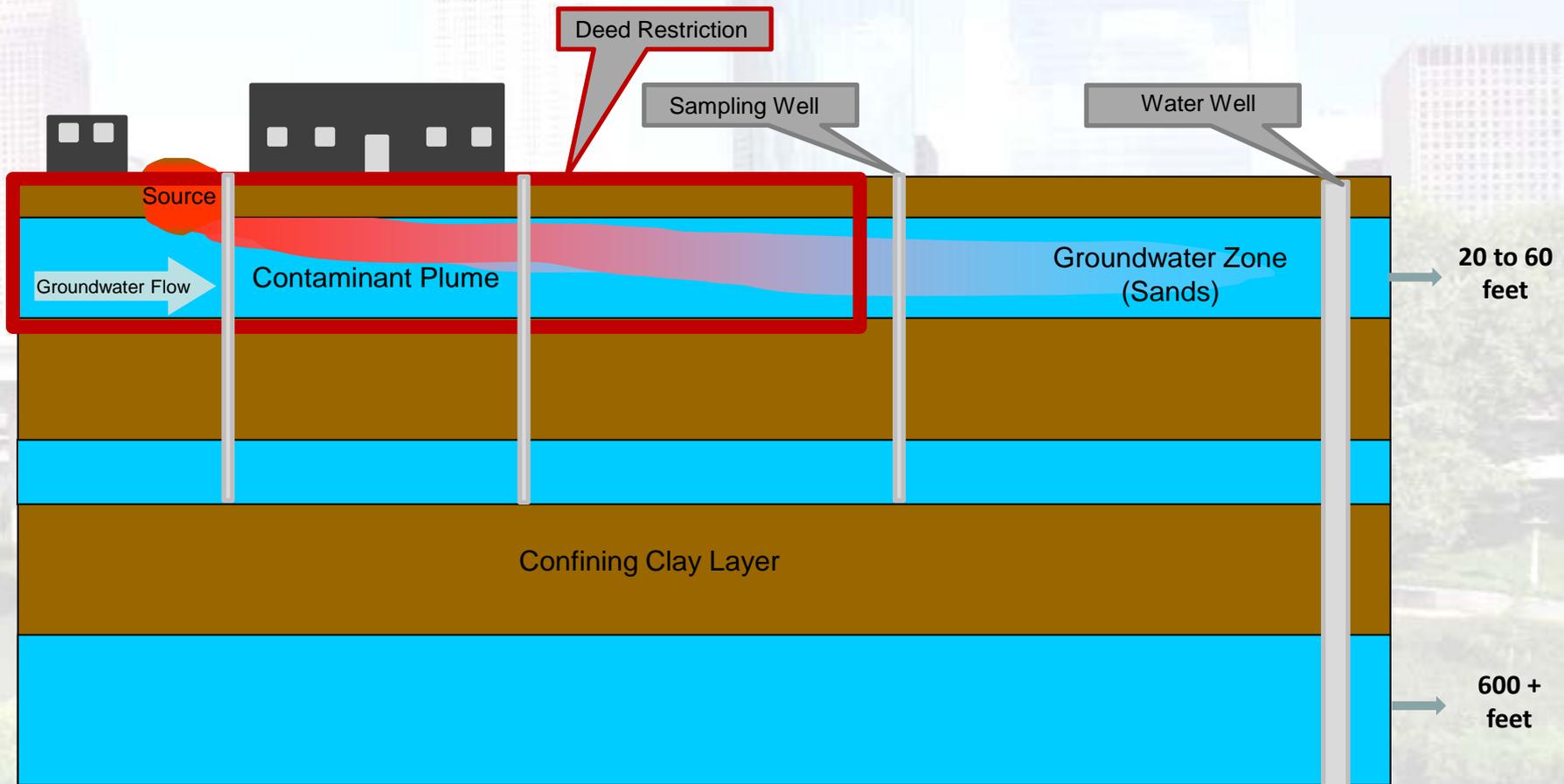


# What an MSD is

- **Voluntary** deed restriction to prevent the use of contaminated groundwater
  - No water wells on the subject property for drinking water purposes
  - A legally binding way to ensure the public is not exposed to contaminants



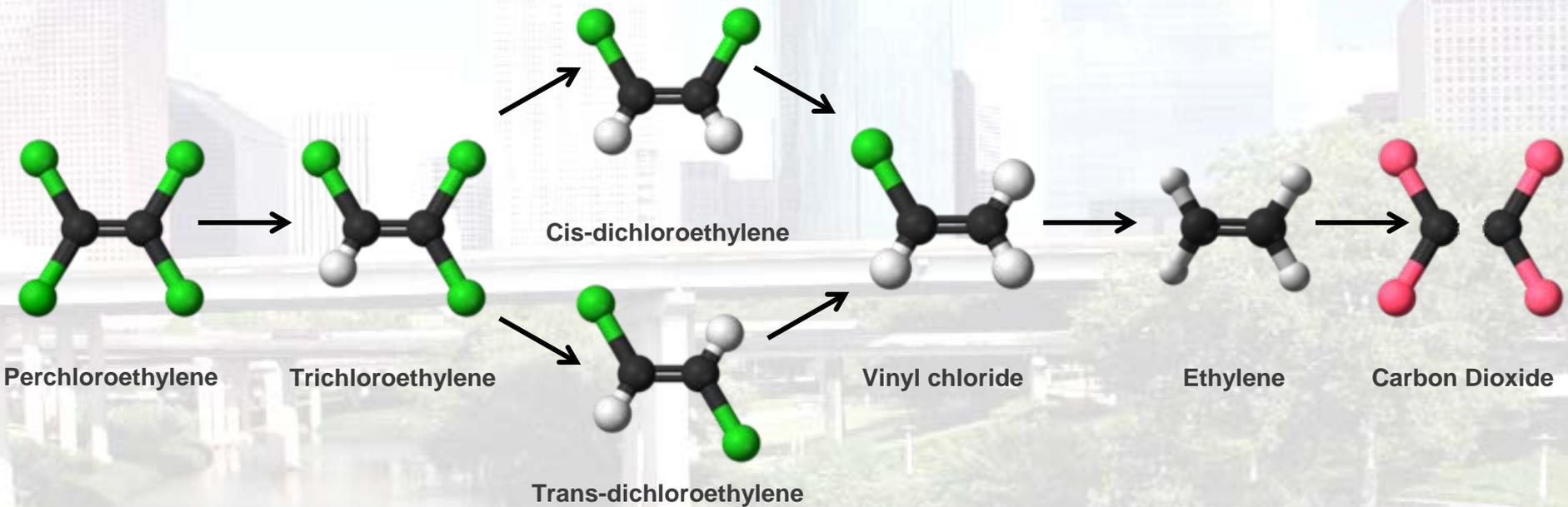
# Groundwater Contamination



*Please Note: Houston has shallow contaminated groundwater scattered across the City*



# Chemical Degradation



This process takes decades, but is found to be the most efficient strategy.

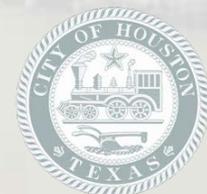
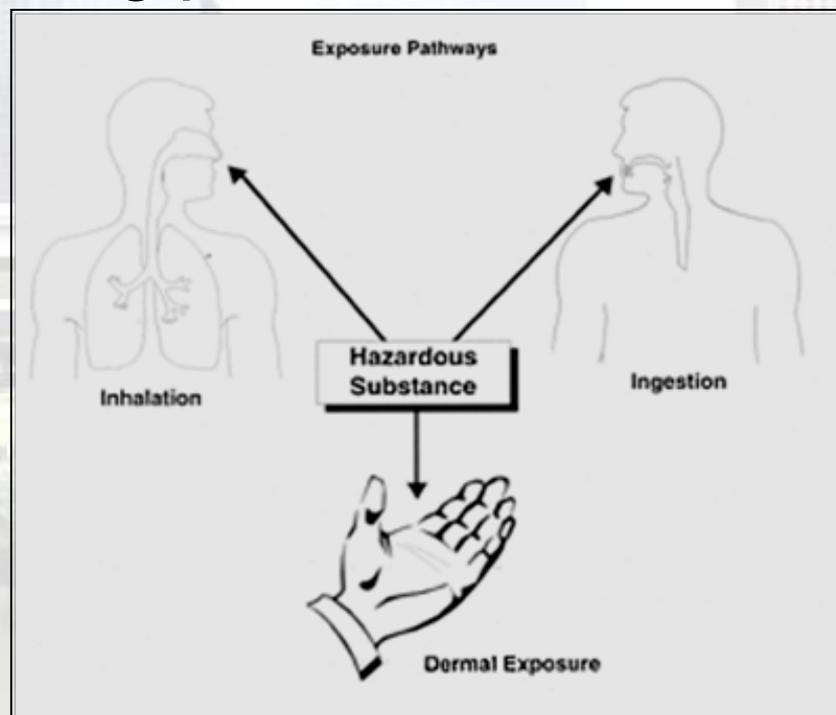


Municipal Setting Designations (MSDs)



# Exposure Pathways

- Cleanup Programs are based on public exposure to contaminants and reducing public health risks
- Exposure Pathways
  - ~~Ingestion~~
  - Inhalation
  - Contact (dermal)
  - Soil
  - Groundwater to surface water
  - Ecological



# Environmental Cleanup

- The MSD is only **one step** in the cleanup process
- An MSD does **NOT** excuse the applicant from reducing risks to the public
- Responsible Parties are always responsible



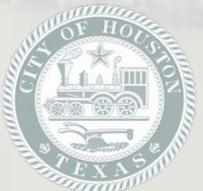
# Who the MSD Impacts

- An MSD does not affect you!
  - An MSD **DOES NOT AFFECT** your property
  - An MSD **DOES NOT AFFECT** your water well
  - There are **NO REQUIREMENTS** on you
- Drinking water supplied by the City is not affected

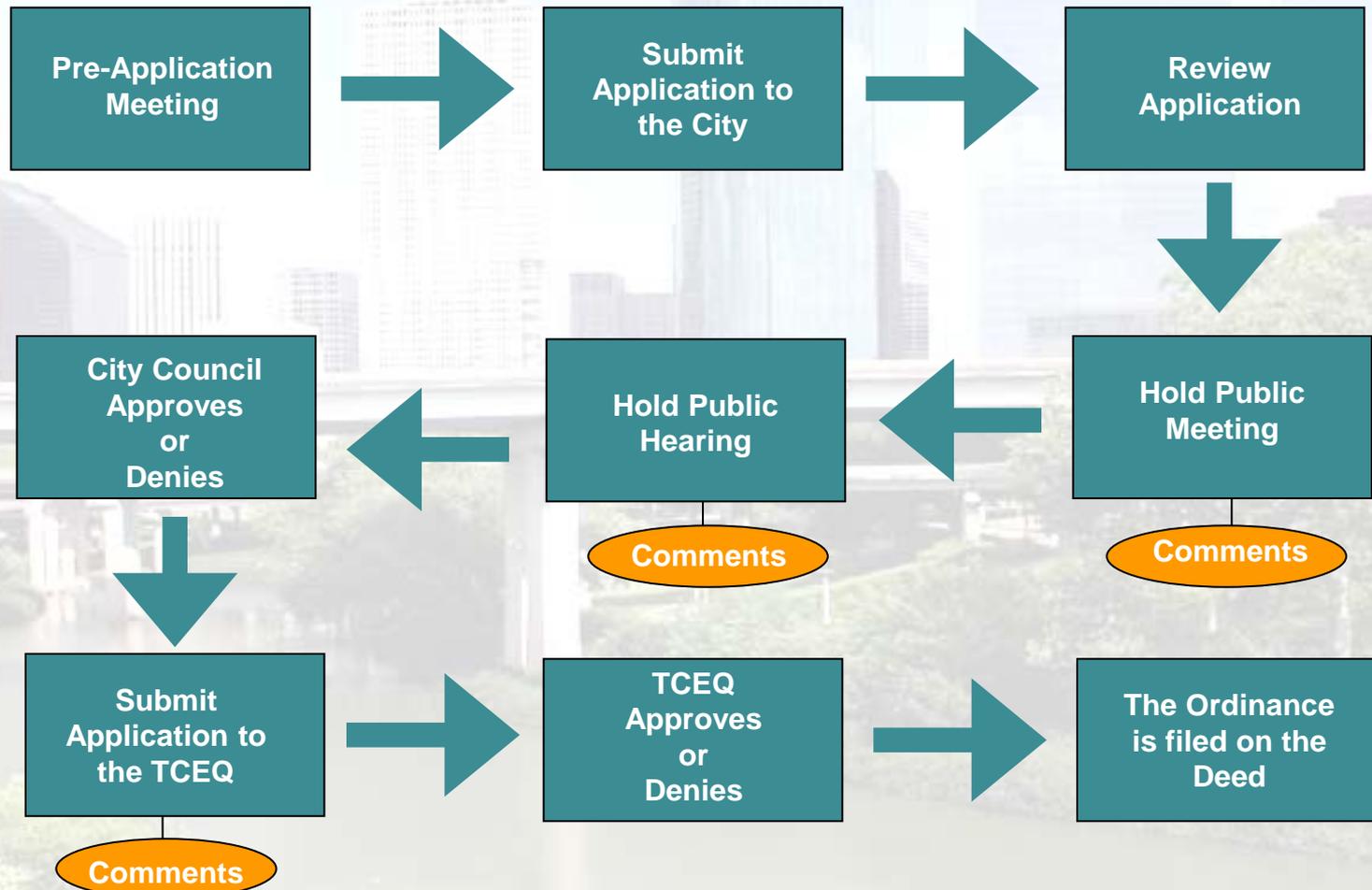


# City's Requirements of the Applicant

- Enrollment in a State or Federal cleanup program
- Thorough investigation
  - Data must show that the groundwater plume is stable or decreasing, and delineated.
- A **third party** Engineer (P.E.) or Geologist (P.G.) must certify application

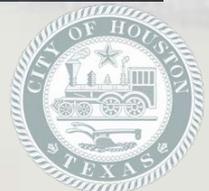


# Steps in the Process

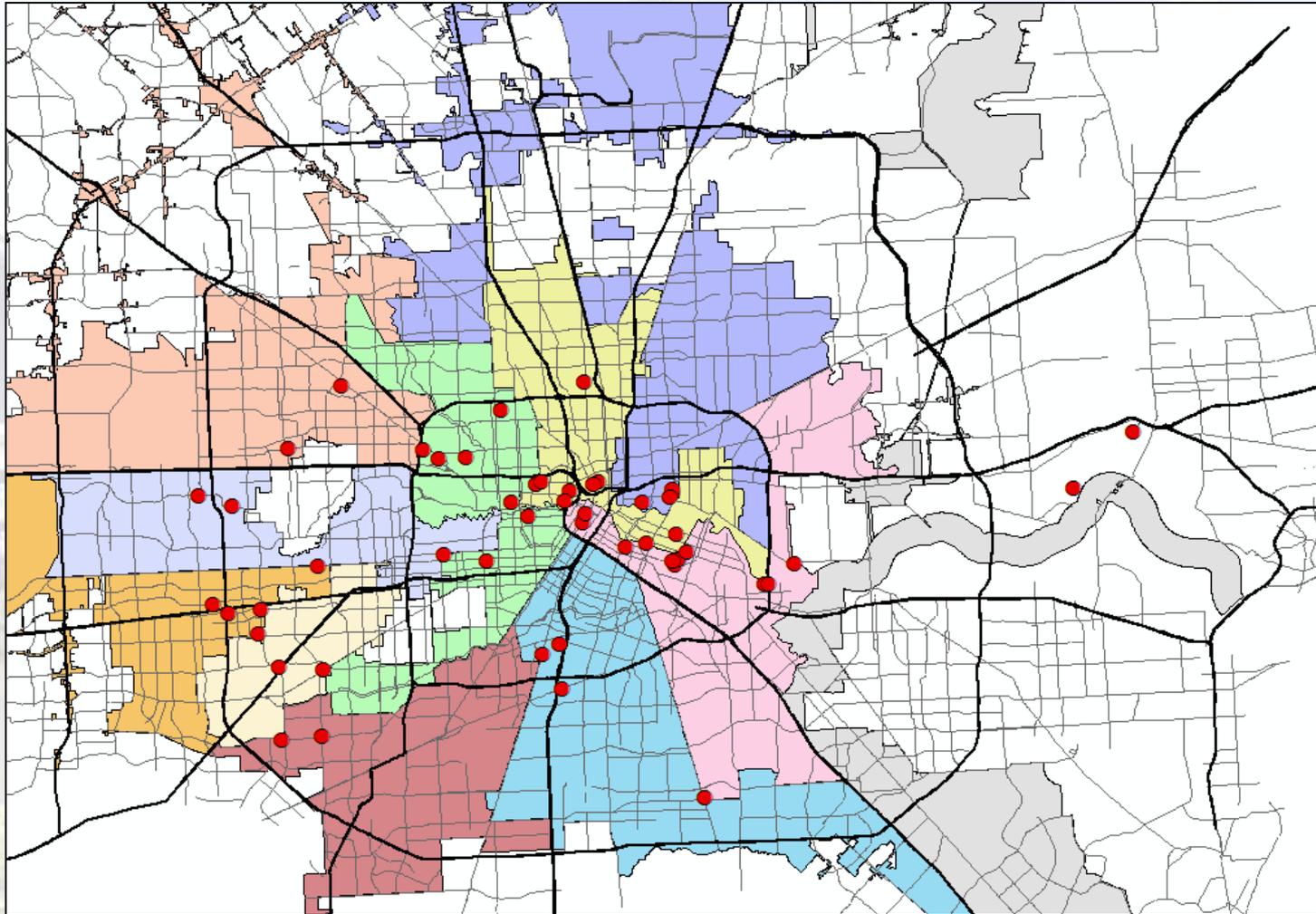


# Why Support An MSD?

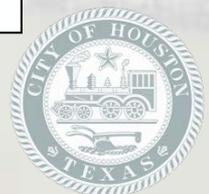
- Protects the public from consumption of contaminated groundwater
- Encourages clean-up of contaminated sites
- Promotes redevelopment of under-utilized properties



# MSD Sites in Houston



Municipal Setting Designations (MSDs)



# MSD Application Availability

- McGovern-Stella Link Library
  - 7405 Stella Link
  - Reference Desk
- Also available online at:  
[www.houstonmsd.org](http://www.houstonmsd.org)
  - MSD in Review Page



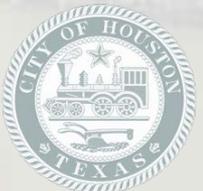
# Public Hearing

- **Date:** June 13, 2013
- **Time:** 10:00 AM
- **Place:** City Council Chamber (Committee Meeting)  
Transportation, Technology, & Infrastructure
- **Address:** 901 Bagby, Second Floor  
Houston, Texas 77002

Any person wishing to speak on this issue must arrive at least 15 min early and sign the speakers list located on the front desk.



**Municipal Setting Designations (MSDs)**



# Contact Information

**Jedediah Greenfield**  
Program Manager

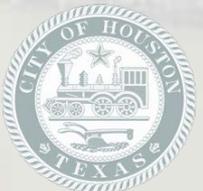
**Public Works & Engineering**  
**City of Houston,**  
**1002 Washington, 2<sup>nd</sup> Floor**  
**Houston, Texas 77002**

**[msd@houstontx.gov](mailto:msd@houstontx.gov)**

**(832) 394-9005**



Municipal Setting Designations (MSDs)

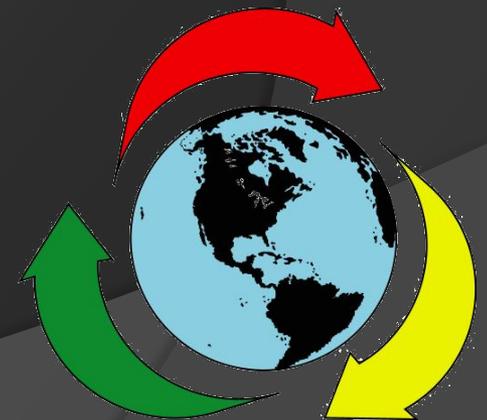


# DUTCH LINE PROPERTIES II, LTD

PARKING LOT  
2500 SHAKESPEARE.  
MSD #2013-056-RVP

Presented By:

Michael F. Marcon, P.G.  
InControl Technologies, Inc.  
3845 FM 1960 West; Suite 195  
Houston, Texas 77068  
(281) 580-8892





**Location of Proposed MSD Boundary**

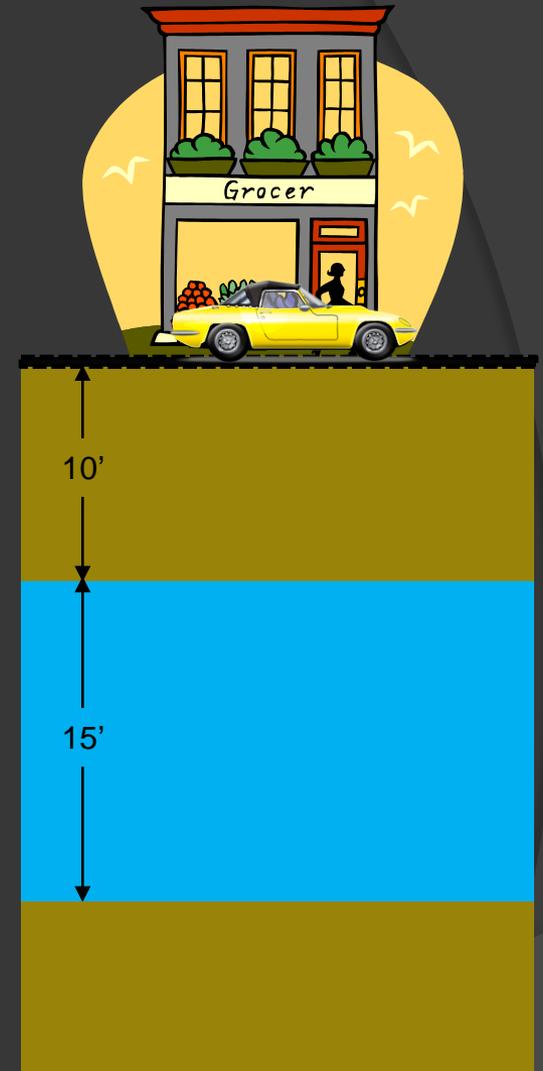
# Site History

- Historic property uses include:
  - a dry cleaner (circa 1950s)
  - a gasoline station (circa 1940s) and
  - a parking lot from mid-1950s forward.
- Property use unchanged since then.



# Environmental Setting

- The first shallow groundwater bearing zone is approximately 10- to 25- feet below surface.
- Underlain by a thick clay unit limiting further vertical migration.
- Groundwater flow is to the southwest, toward Brays Bayou.
- Brays Bayou is located approximately 1.2-miles down- and cross-gradient of proposed MSD boundary.



# Rice Village Parking Lot

- As part of environmental due diligence, a Phase I ESA was conducted which identified the historical cleaners and gas station.
- Phase II ESA was conducted to determine if a release had occurred from historic operations. Soil and groundwater samples were collected.
- The property was enrolled in the Texas Voluntary Cleanup Program and assigned VCP No. 2527.



# Sample Locations

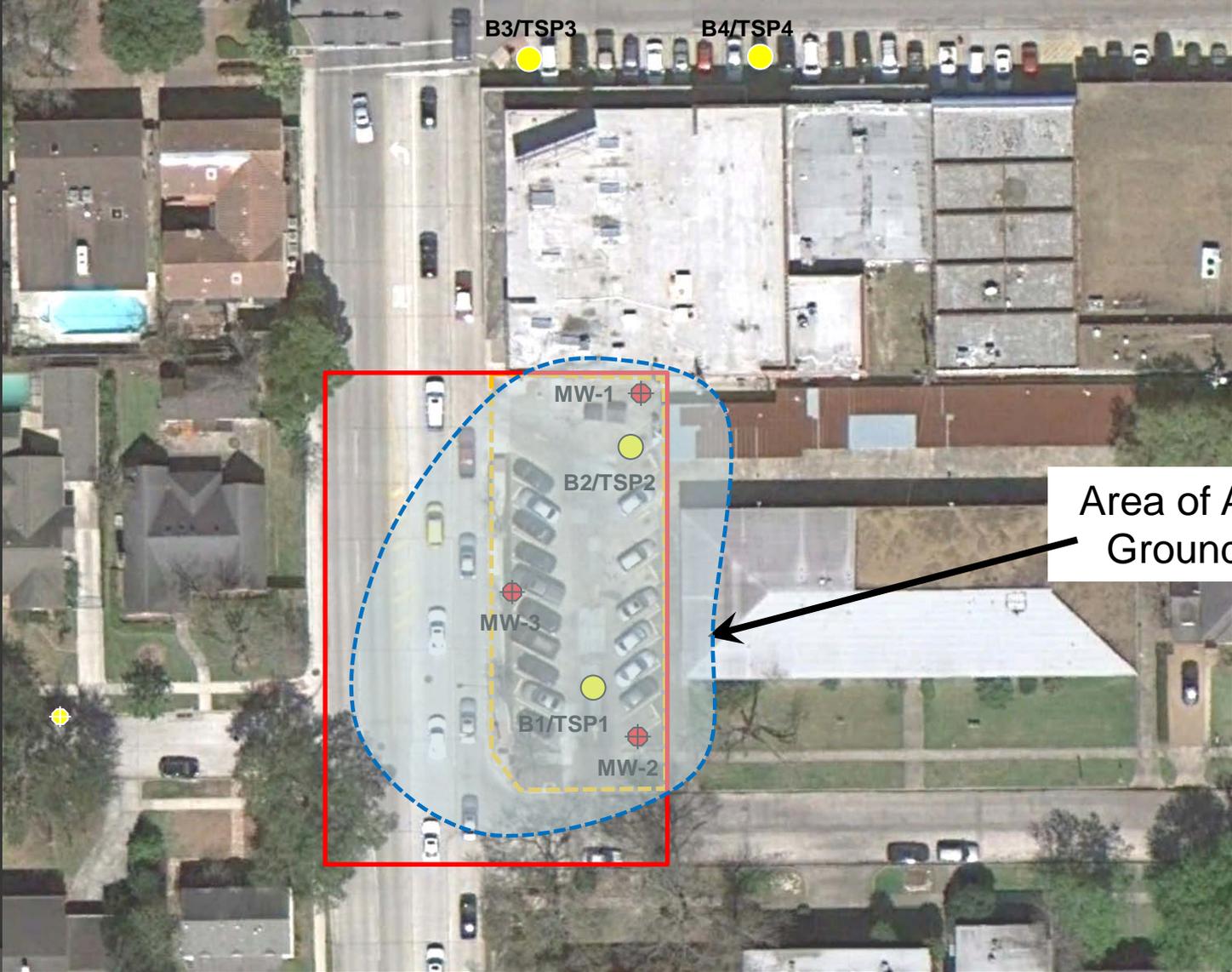


# Investigation Results - VOCs

- Shallow soils have not been impacted by VOCs.
- Groundwater samples collected from monitoring wells had VOCs (PCE, TCE, cis-1,2-DCE, and vinyl chloride) at concentrations above regulatory levels.
- The VOC plume has been delineated to the greatest extent possible.



# VOCs in Groundwater



Area of Affected Groundwater

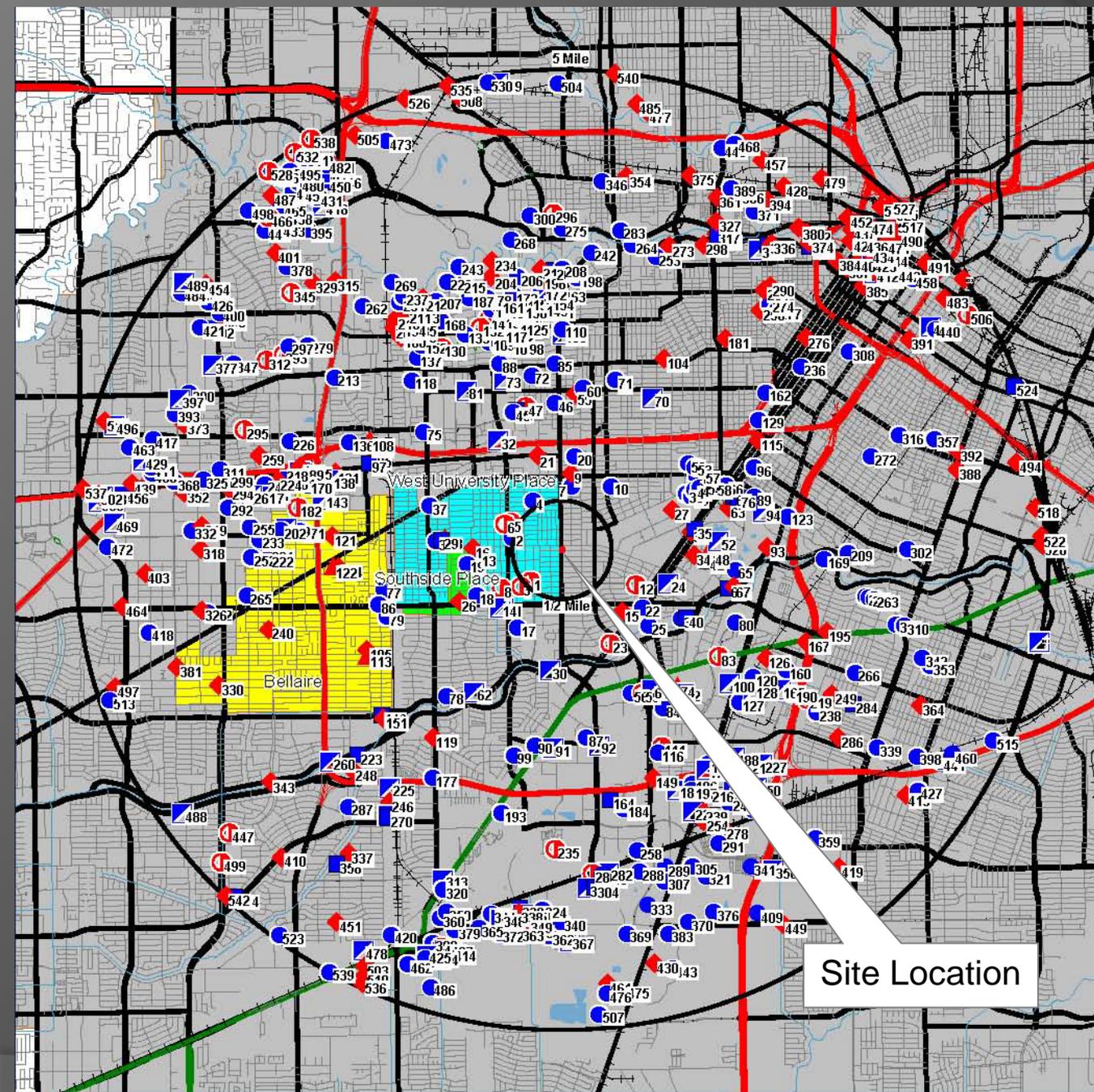
# Are You Exposed?

## No - Why?



- First and foremost - Groundwater is not accessible and is not a source of potable or drinking water.
- There are no downgradient users of groundwater.
- Located in a primarily commercial area of Houston. The most likely land use will remain commercial.
- Key benefit of MSD process is
  - City's utility database to notify workers to use proper protective equipment.
  - No potable wells allowed to inside MSD Boundary.





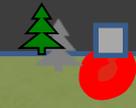
The nearest domestic water well is located 0.52-miles west (cross gradient) and completed at depth of 200-ft below ground surface.

The nearest public water supply well is located approximately 1-mile north (cross gradient). Owned by City of West University Place and completed at depth of greater than 1,200-ft below ground surface.

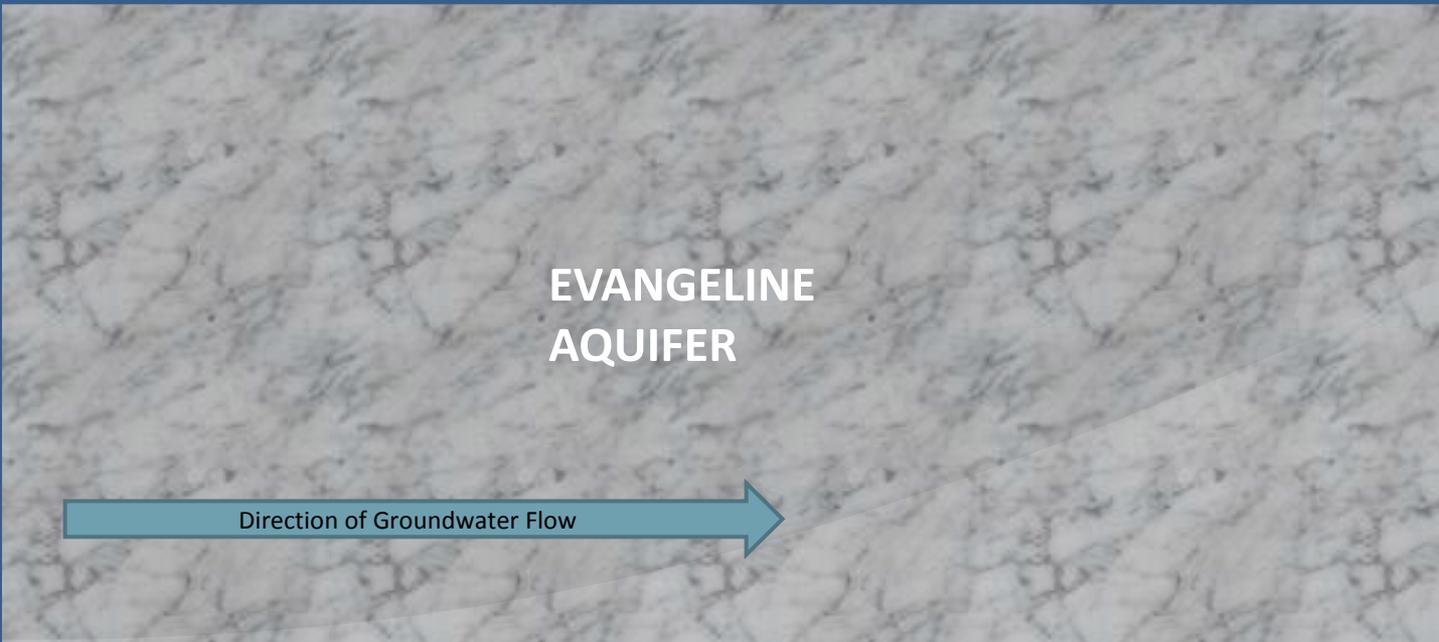
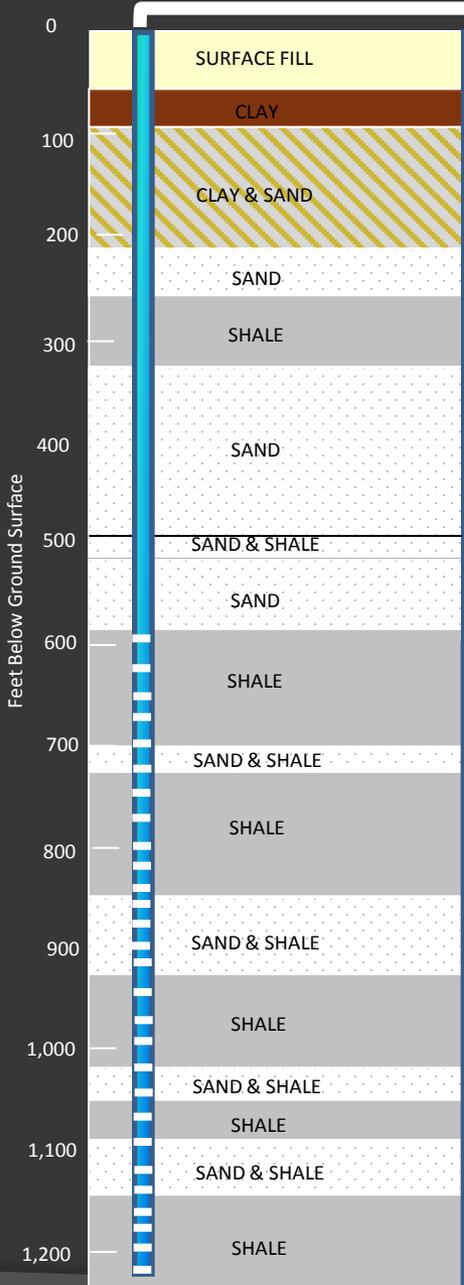
Site Location



# More than 5,000 feet Separation



MSD



# Summary

- Affected groundwater has been vertically and horizontally delineated and is stable.
- The closest active public water supply well is approximately than 1-mile away from the subject property.
- The closest domestic well is located approximately 0.5-miles away from the subject property in a cross gradient direction.
- No current exposure to the chemicals present in groundwater. The MSD will prevent the installation of potable water wells on the MSD properties.

