

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
6347 Westheimer Road
 - **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

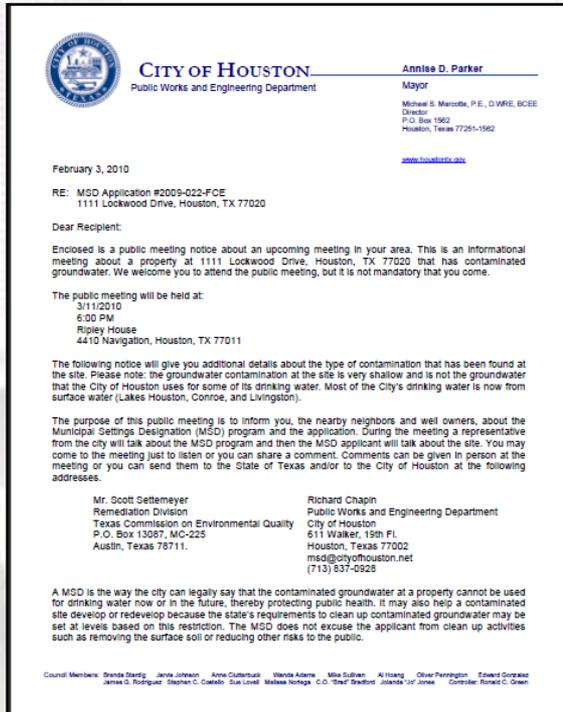
- Online: http://webintake.houstontx.gov/web_intake/Controller



Municipal Setting Designations (MSDs)

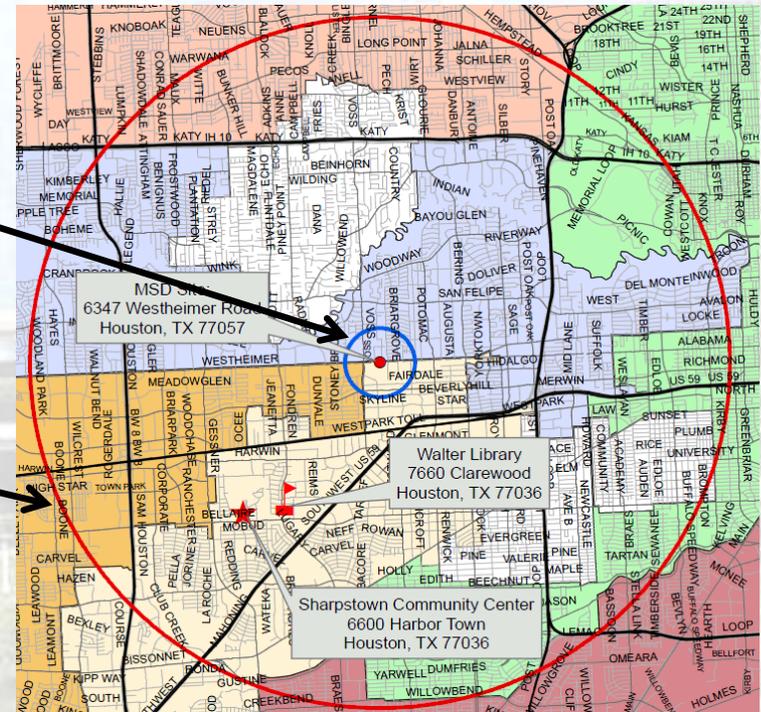


MSD Notice Letters



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)

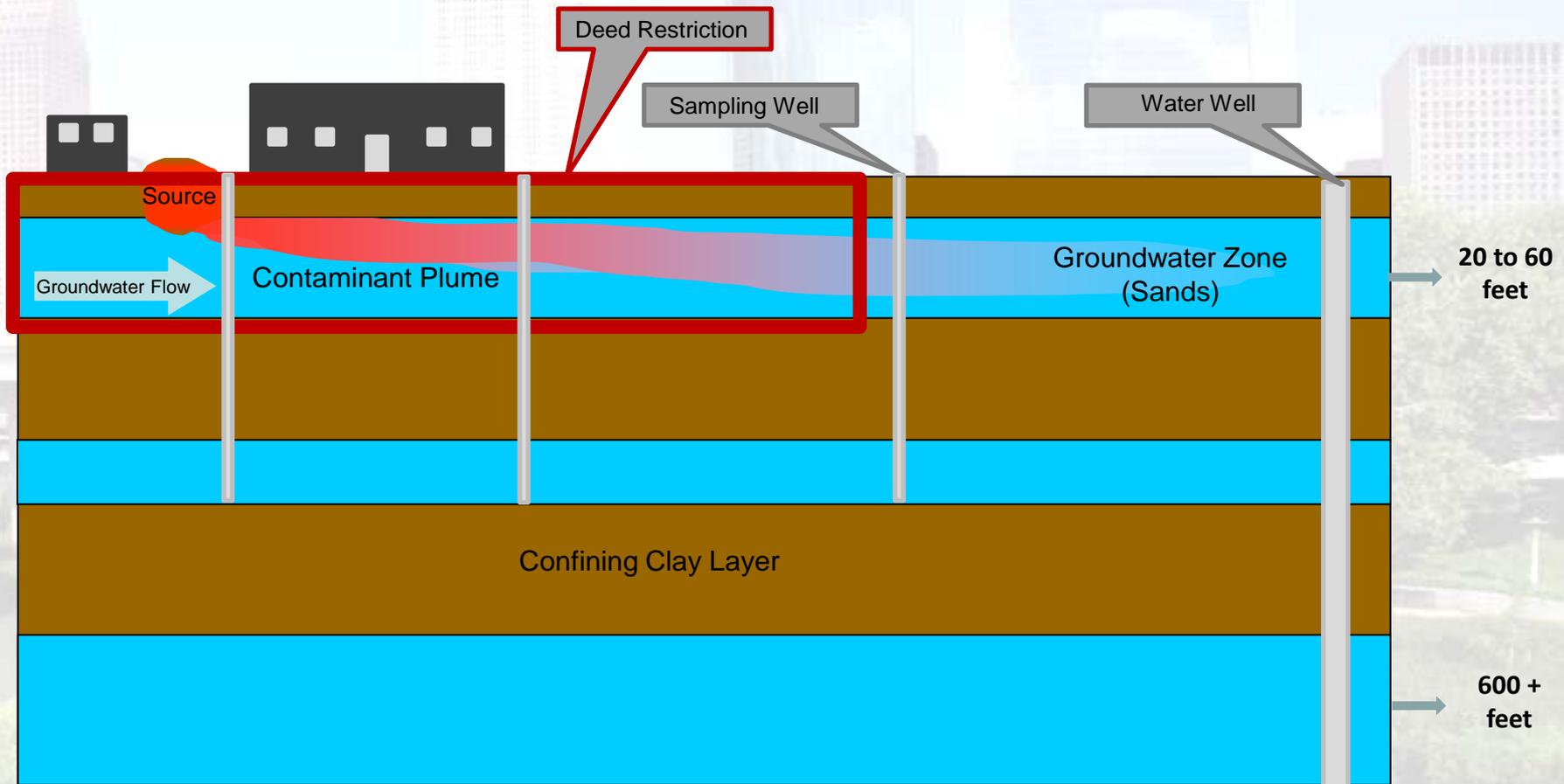


What an MSD is

- **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



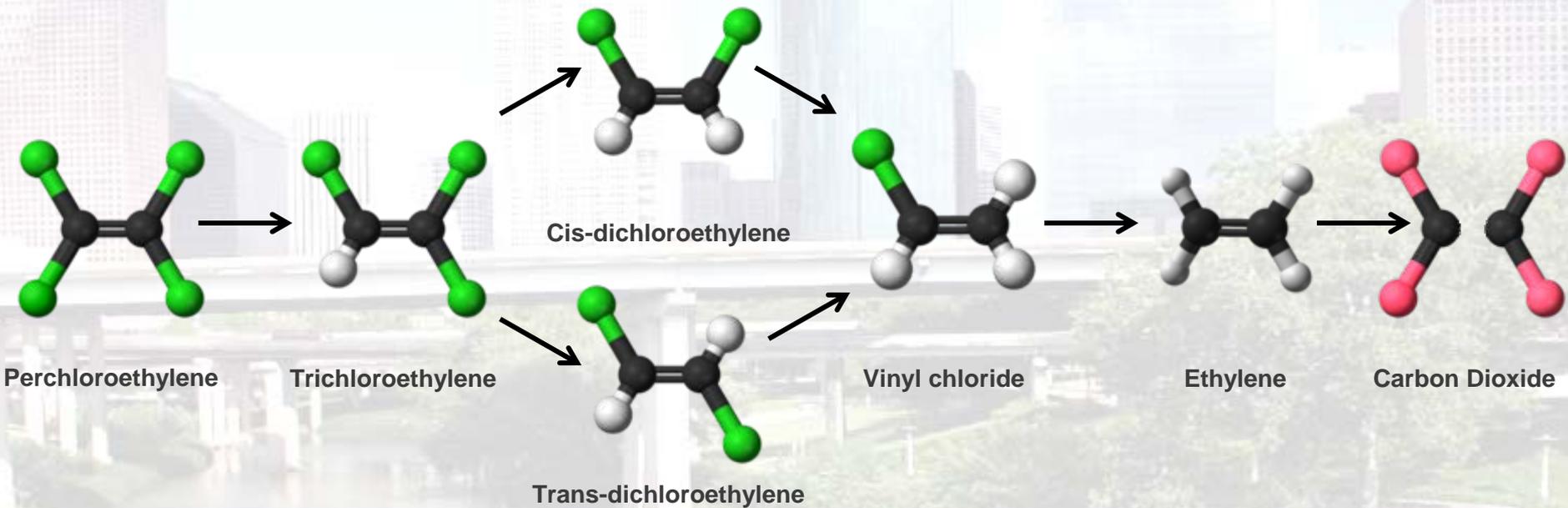
Groundwater Contamination



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.

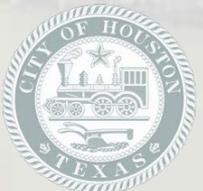
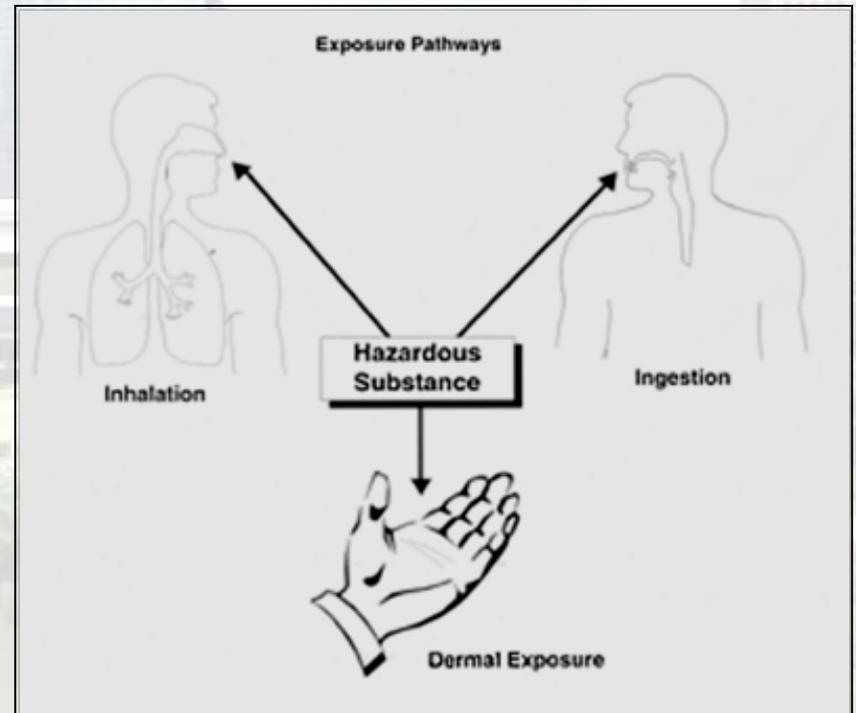


Municipal Setting Designations (MSDs)



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



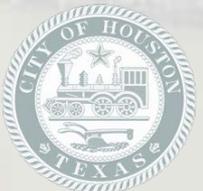
Environmental Cleanup

- 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



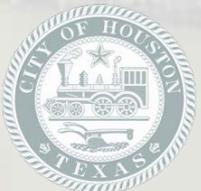
Who the MSD Impacts

- 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

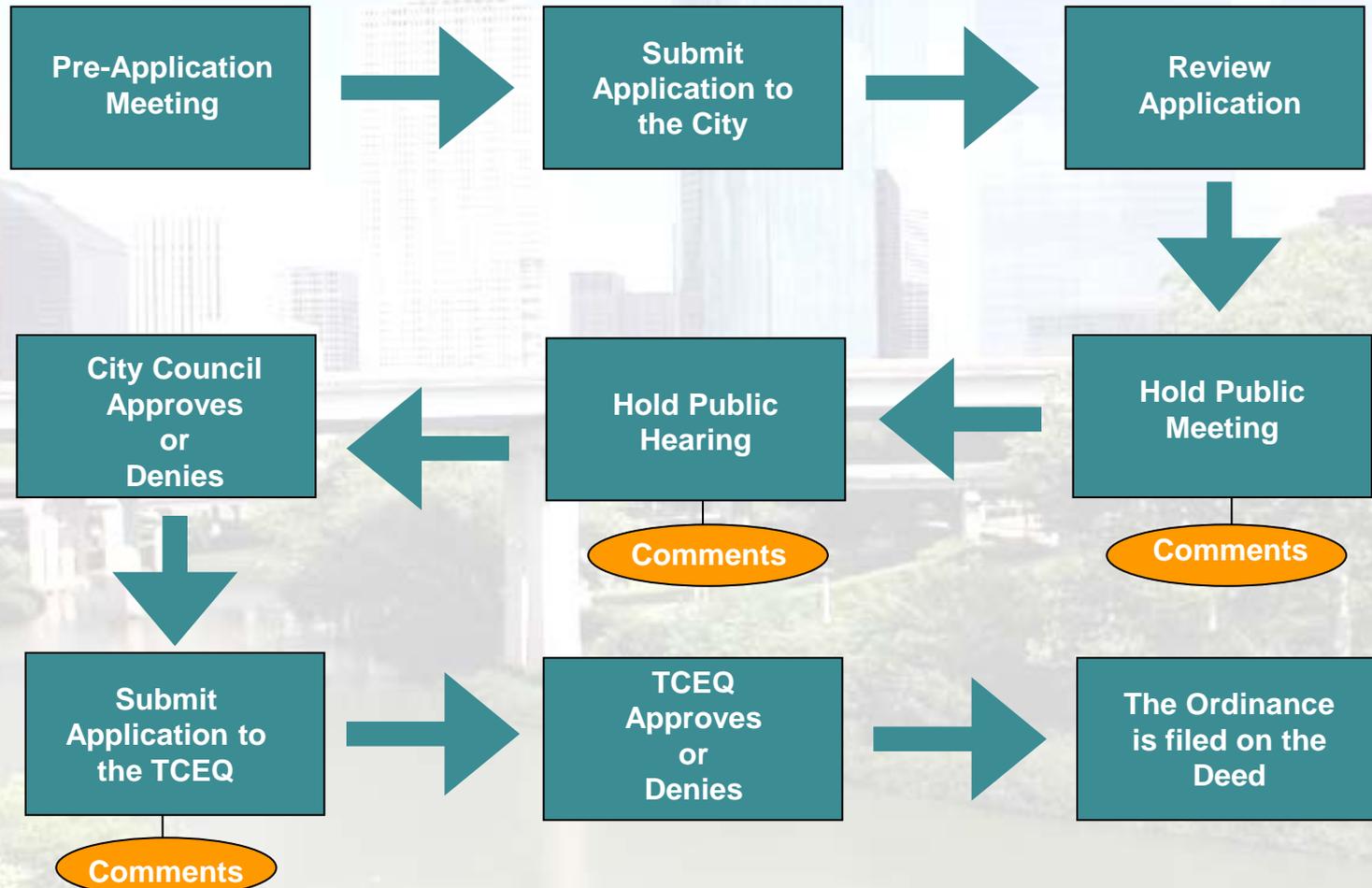


City's Requirements of the Applicant

- 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

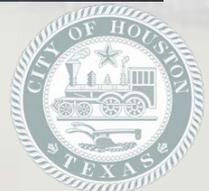


Steps in the Process

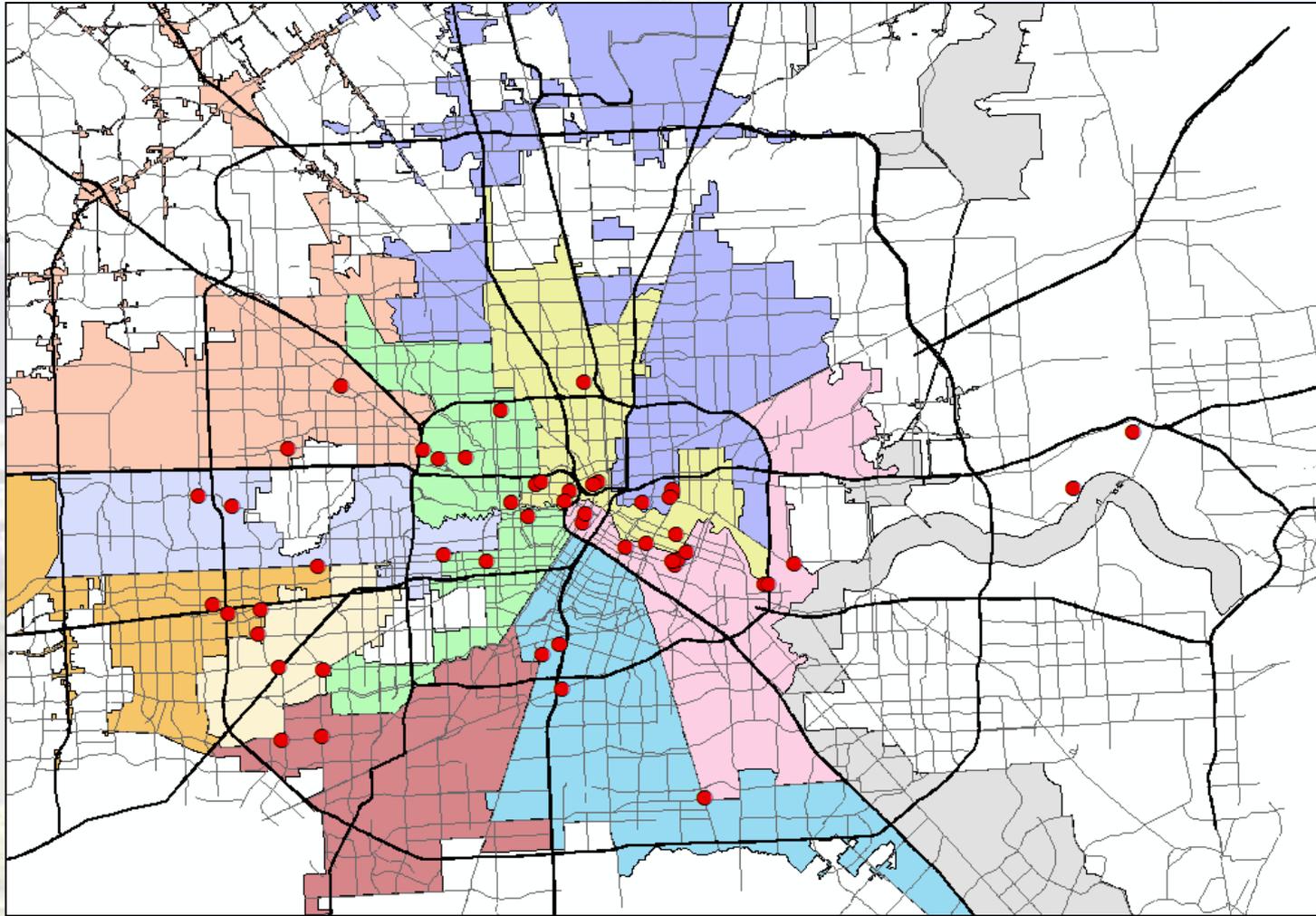


Why Support An MSD?

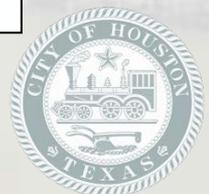
- Protects the public from consumption of contaminated groundwater
- Encourages clean-up of contaminated sites
- Promotes redevelopment of under-utilized properties



MSD Sites in Houston



Municipal Setting Designations (MSDs)



MSD Application Availability

- Walter Library
 - 7660 Clarewood
 - Reference Desk
- Also available online at:
www.houstonmsd.org
 - MSD in Review Page



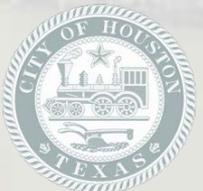
Public Hearing

- **Date:** April 9, 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

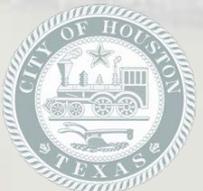
Public Works & Engineering
City of Houston,
1002 Washington, 2nd Floor
Houston, Texas 77002

msd@houstontx.gov

(832) 394-9005



Municipal Setting Designations (MSDs)





Mariner Village Shopping Center

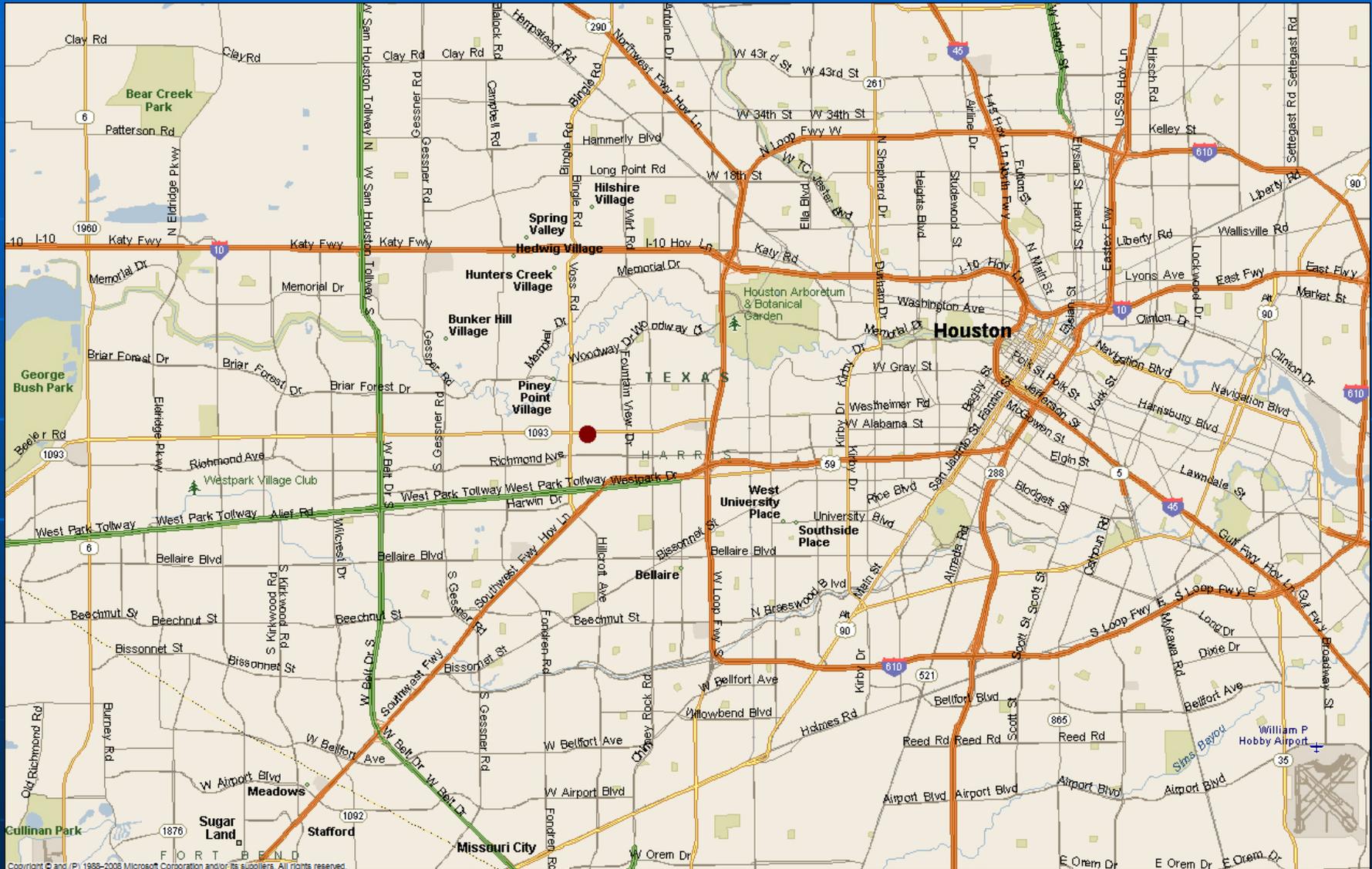
**6347 Westheimer Road
Houston, Texas**

MSD Application #2012-053-MVC

Presented by:

**Weston Solutions, Inc.
Blake A. Dinwiddie, Project Manager**

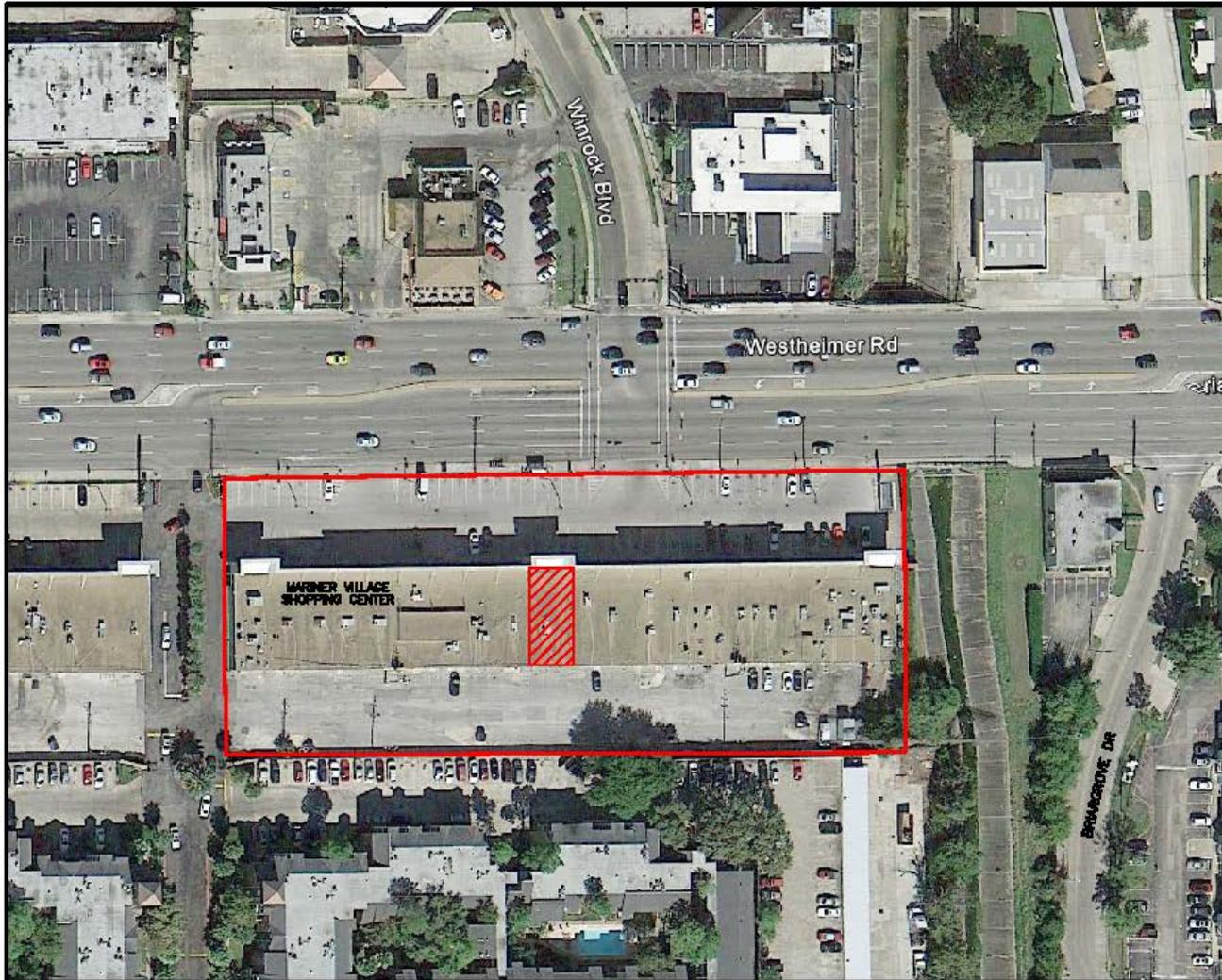
Mariner Village - Site Location Map



Property Background and Description

- Located on south side of Westheimer Road approximately 2 miles west of 610 West Loop.
- Consists of three tracts of land totaling 5.3 acres. Tract 2 (2.2 acres) is the proposed MSD property.
- Surrounding property use is mixed commercial/industrial and residential.
- Has participated in the Texas Commission on Environmental Quality Voluntary Cleanup Program since 1998.

Mariner Village - Site Plan Map



Property Background and Description (Cont.)

- Historical Property Use
 - Used for agricultural purposes prior to development.
 - Developed in mid 1970s.
 - Dry cleaning operations in one tenant space from 1980 – 1998.
- Current Use
 - Multi-tenant shopping center.
 - Lease spaces contain retail outlets and restaurants.
 - No dry cleaner operations being conducted on the property.

Groundwater Investigation Summary

- Shallow groundwater unit is impacted by solvents used in former dry cleaning operations.
 - Dry Cleaner Solvent - Perchloroethene (PCE)
 - PCE Degradation Compounds
 - Trichloroethene
 - 1,2-dichloroethene
 - 1,1-dichloroethene
 - Vinyl chloride
- PCE present in shallow groundwater 15 - 20 feet below ground surface.

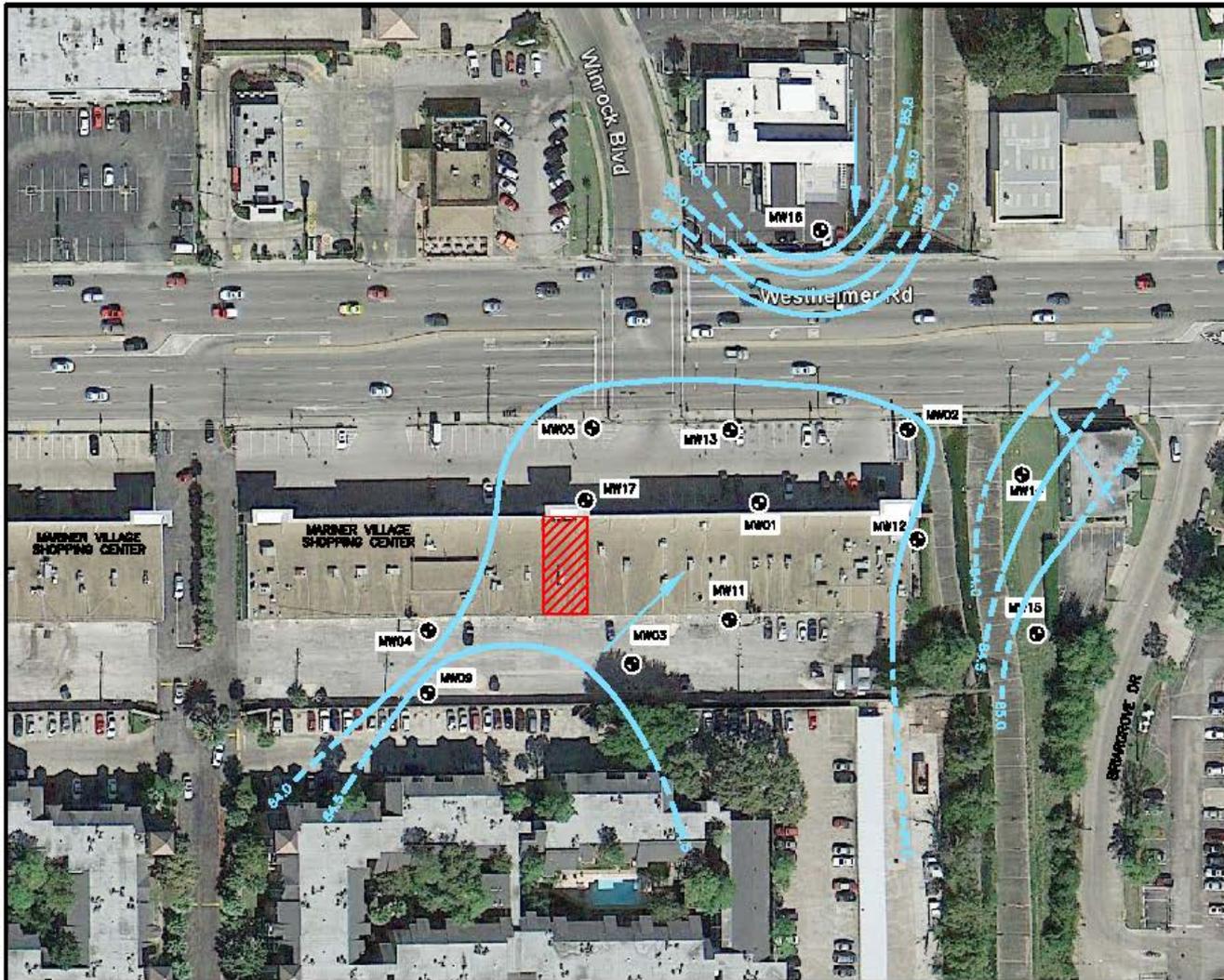
Groundwater Investigation Summary (Cont.)

- Data collected since 1999 indicates the PCE plume is stable and not expanding or migrating.
- PCE plume does not extend off-site, but may extend under a portion of Westheimer Road (City right-of-way).
- Groundwater beneath the site has been shown to flow consistently toward the north-northeast (or toward Westheimer Road).
- The shallow groundwater zone is not a potable water source and is classified as a Class 2 groundwater resource.

Summary of Remedial Activities

- Source Removal (2001)
 - Former dry cleaning machine removed.
 - Affected soil below the slab was excavated and disposed off-site.
 - Soil venting for removal of vapors from residual PCE.
- Groundwater Treatment (2004 and 2006)
 - Chemical oxidants injected into groundwater to treat hotspots within the core of the plume.
 - Resulted in further reduction of PCE concentrations.

Groundwater Gradient Map

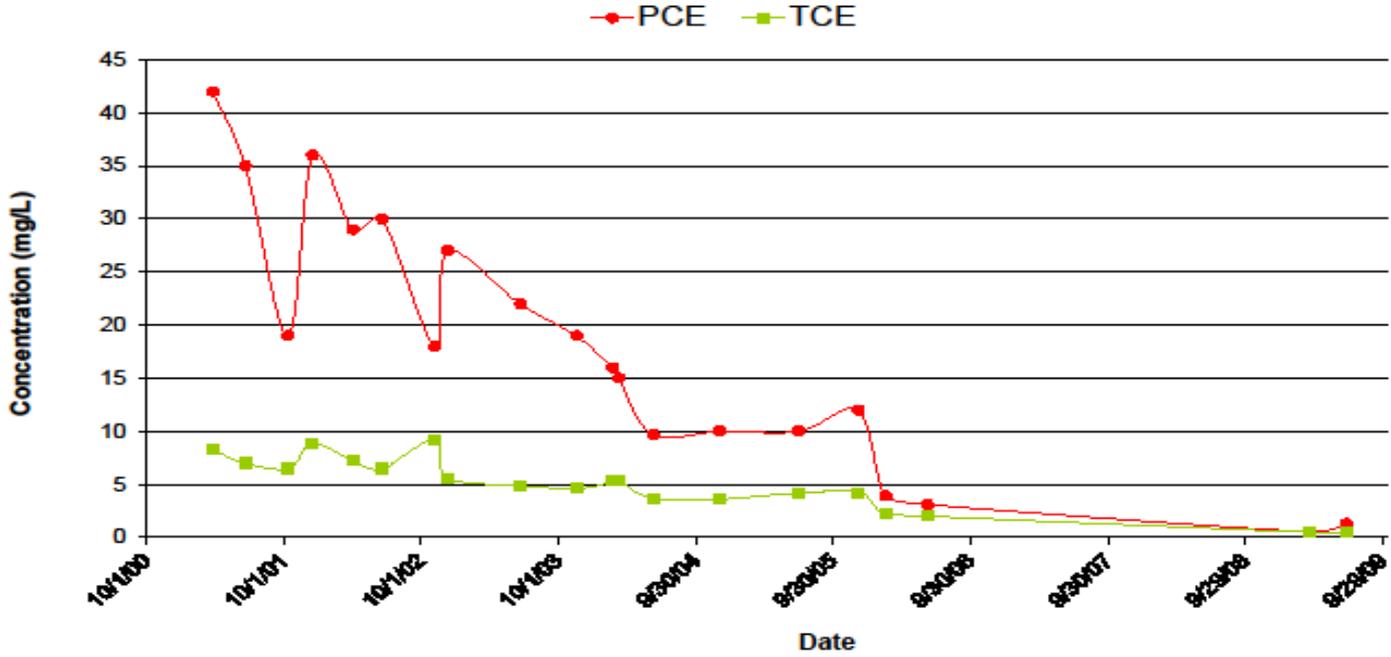


Affected Groundwater Map



Groundwater Concentrations vs Time

Mariner Village Shopping Center
MW13 Trend Graph



6347 Westheimer Rd.
Groundwater Monitor Well

Public Supply
Water Well

15-20 feet

Alluvial Deposits

Alluvial Deposits

Confining Layer - Clays and Silts of the Beaumont / Montgomery / Bentley Formations

1,000 feet +

Evangeline Aquifer

Summary

- Shallow groundwater has been affected by solvents from former dry cleaning operations.
- Source of contamination has been removed (dry cleaning machine and affected soil).
- PCE plume present in shallow groundwater approximately 15 – 20 feet below ground surface.
- Groundwater treatment to reduce overall PCE concentrations has been completed.

Summary

- PCE plume is stable and is not expanding or migrating. PCE will continue to degrade over time.
- Shallow groundwater not used as a potable source.

QUESTIONS?

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