

Municipal Setting Designations



MSDs: Another tool for Houston

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Municipal Setting Designations (MSDs)



Agenda

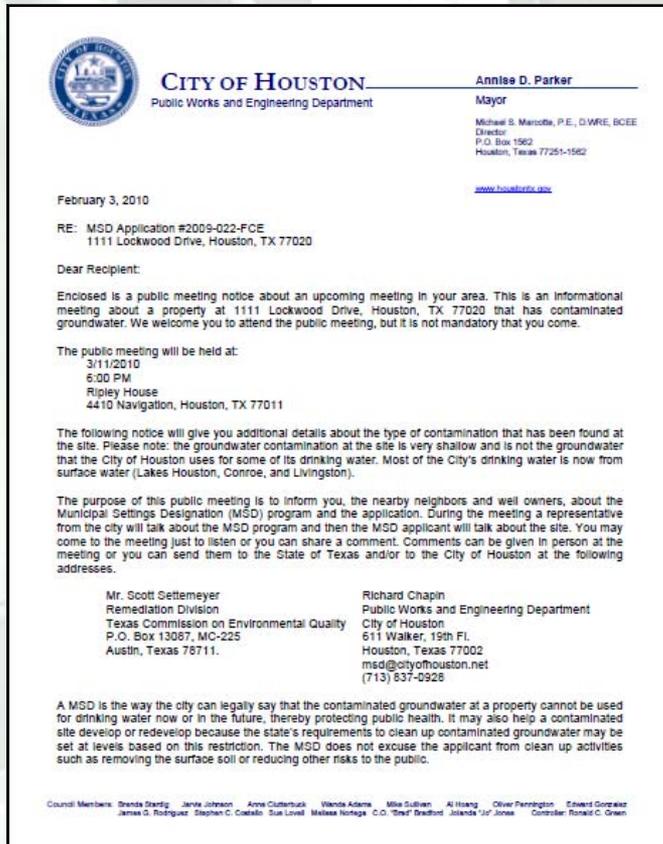
- City of Houston
 - Why we are here
 - Who the MSD impacts
 - What an MSD is
 - Why support an MSD
 - Steps in the MSD process
- MSD Applicant
 - Specific information on the site
12534 Memorial Drive
- Public comment and questions

Why Are We Here



- Inform you about an MSD application
 - Differential Development – 1994, Ltd.
 - MSD #2008-012-DD
- Explain what an MSD is and what it does for the applicant, the local community, and the City
- Receive public comments

MSD Notice Letters



- Public Notices:
 - Property owners
First Class Mail
1/2-Mile
(City Requirement)
 - Water well owners
Certified Mail
5-Miles
(State Requirement)

Who the MSD Impacts



- Unless you are the applicant:
 - 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

What an MSD is



- Voluntary deed restriction to prevent the use of contaminated groundwater
 - State program created in 2003, administered by TCEQ
 - City process created in November 2007, administered by Public Works & Engineering
- TCEQ cannot approve an MSD without the City Council's support

What an MSD is



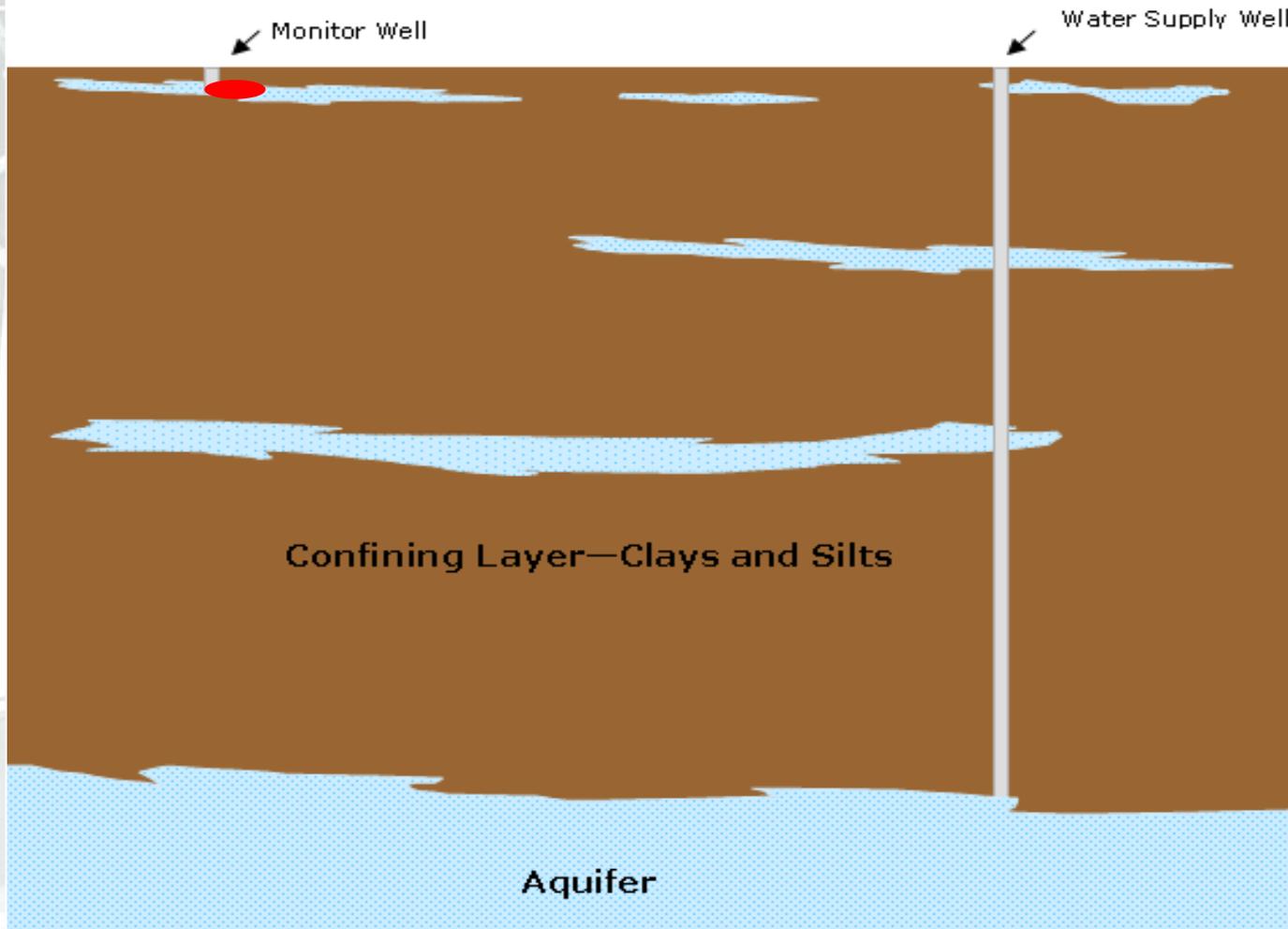
- An alternative method to address groundwater contamination
- Houston has shallow groundwater contamination scattered across the city
- This program only considers very shallow contamination (up to 200' below the surface)

City Water Supply



- Houston's drinking water comes from either deep aquifers (20%) or surface water (80%)
 - Surface water supply
 - Lake Houston
 - Lake Conroe
 - Lake Livingston
 - Trinity River

Shallow Contamination



Impacted groundwater is typically between 20 and 60 feet below the surface.

Drinking Water Supply Wells typically get water from 600 feet or deeper below the surface.

Problems of Traditional Remediation Methods

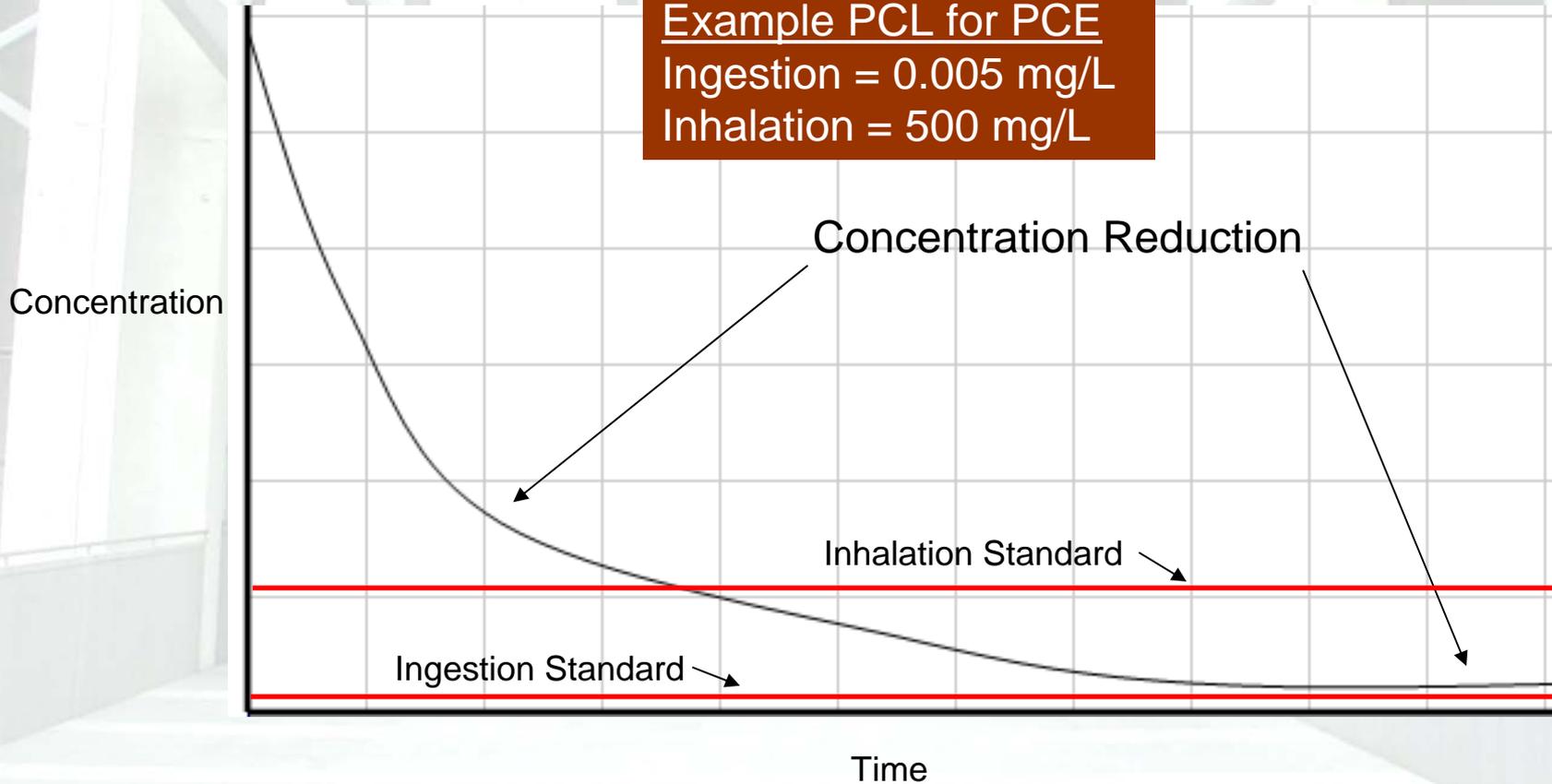


- Groundwater must be cleaned to drinking water standards even if:
 - There is no need or desire to use it, or
 - Water bearing zone is too silty, too salty, or low producing
- Groundwater remediation to drinking water standards is inefficient, costly, and can take decades

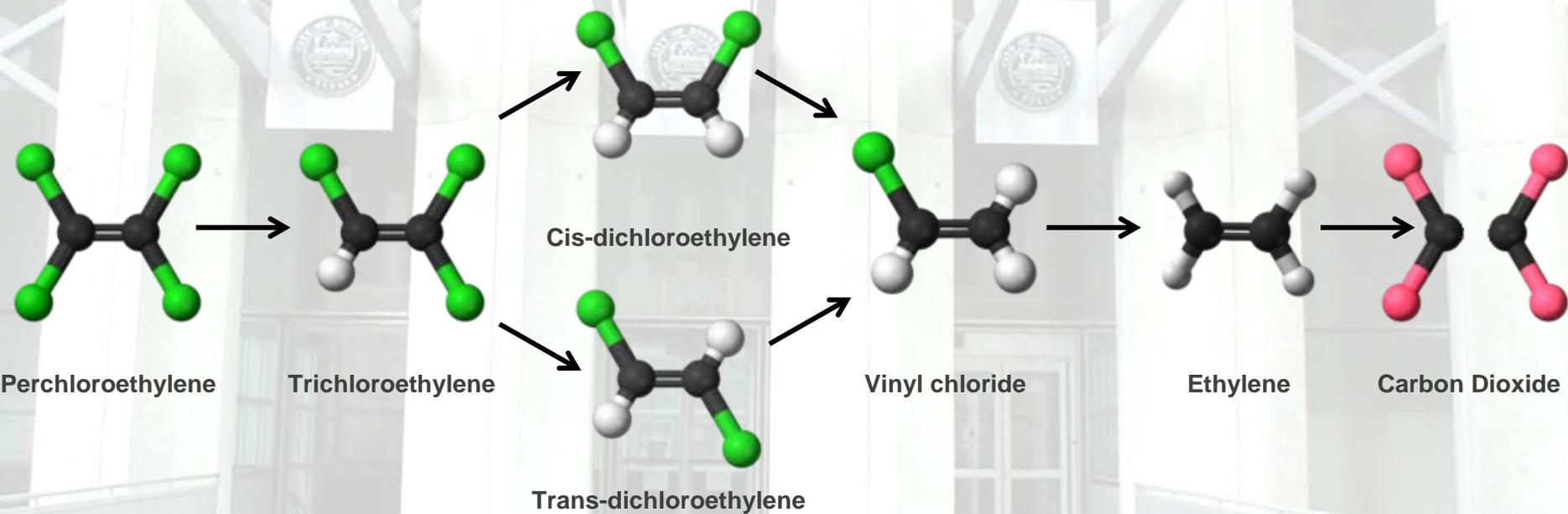
Groundwater Remediation



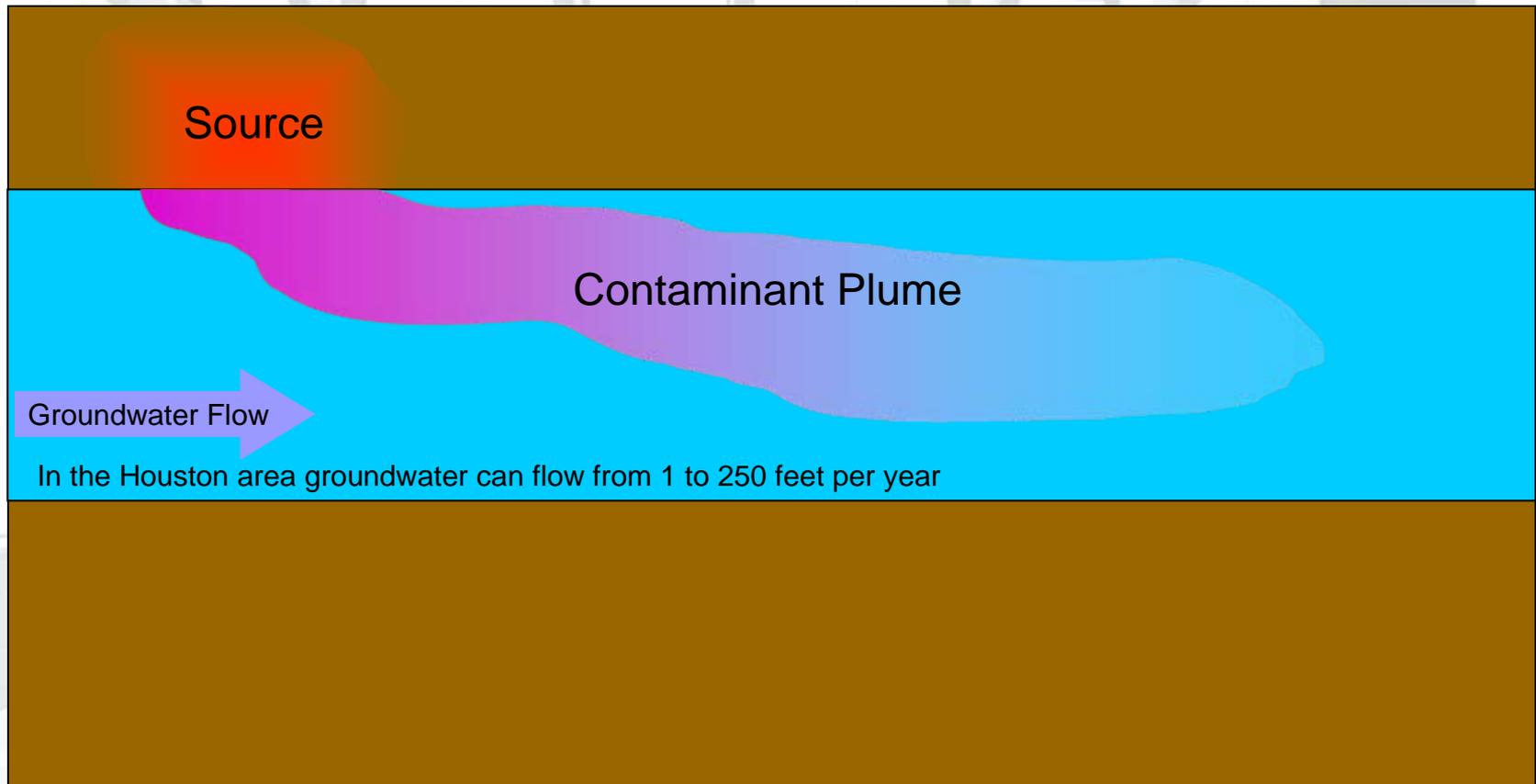
Example PCL for PCE
Ingestion = 0.005 mg/L
Inhalation = 500 mg/L



Natural Attenuation



Contaminant Flow



Applicant's Responsibility



- An MSD does **NOT** excuse the applicant from reducing other risks to the public
- Owner must address other exposure pathways
 - Non-Ingestion
 - Soil
 - Vapors
 - Runoff and other flows

City's Requirements of the Applicant:



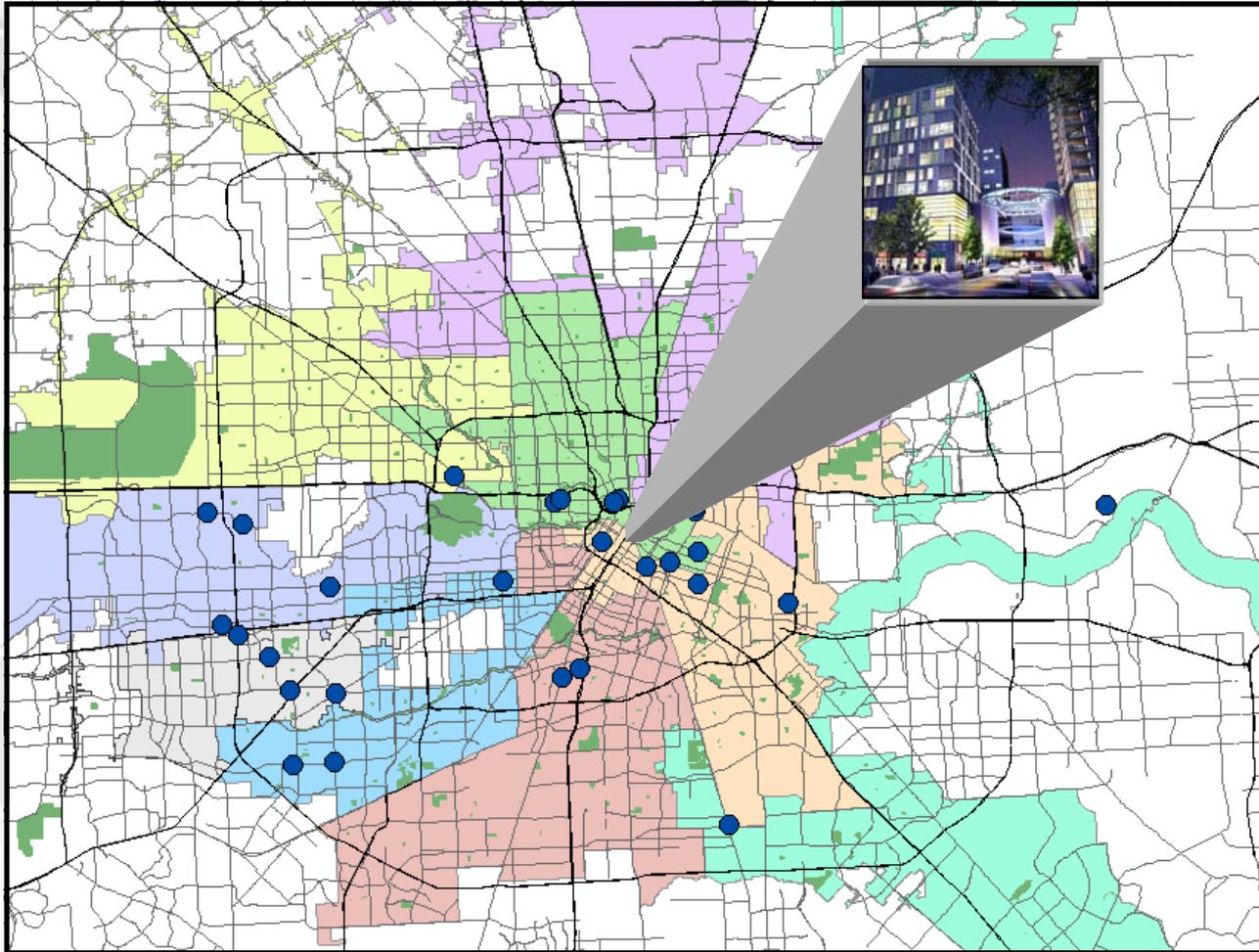
- Site must already be in a State or Federal clean up program
- Site must have been thoroughly investigated
- Data must show that the groundwater plume is stable or diminishing.
- A Professional Engineer (P.E.) or Professional Geologist (P.G.) must be willing to certify that the plume is stable or contracting.

Why Support An MSD?



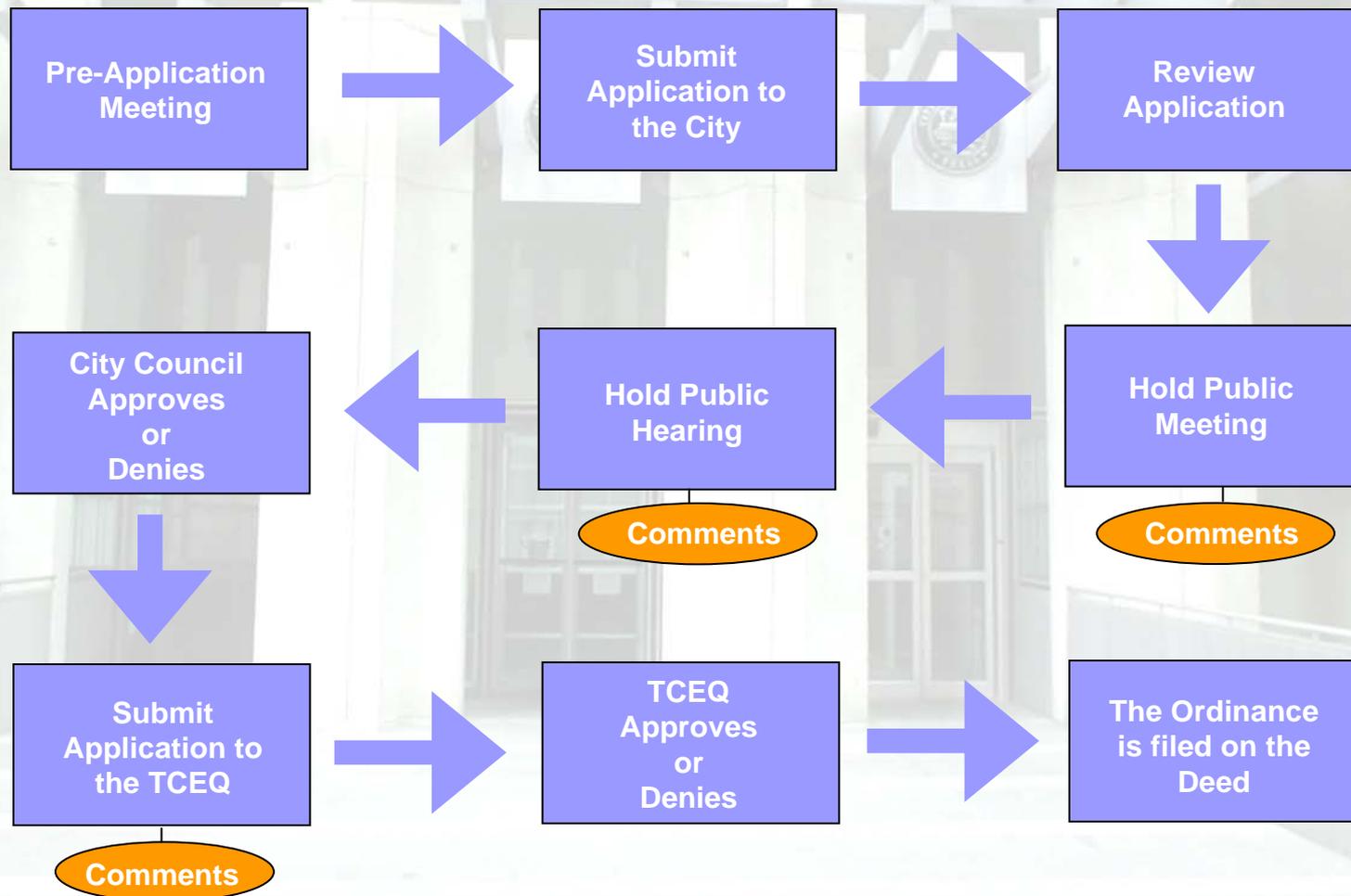
- Protects the public from consumption of shallow contaminated groundwater
- Encourages clean-up of contaminated sites through participation in a State or Federal program
- Promotes redevelopment of under-utilized properties

MSD Sites in Houston



Municipal Setting Designations (MSDs)

Steps in the Process



MSD Application



- Spring Branch Memorial Library
reference desk

- Library Address
930 Corbindale
Houston, TX 77024



The MSD Website



www.houstonmsd.org

The screenshot shows the City of Houston website interface. At the top, there is a navigation bar with links for Home, I Want To..., Government, Services, Residenc, Departments, Visitors, and En Engagem. Below this, the breadcrumb trail reads 'Home > Planning > Municipal Settings Designation'. The main content area is titled 'Public Works and Engineering' and 'Municipal Settings Designation'. It features a 'Department Links' sidebar on the left and a main text area on the right. The main text area includes a 'History' section, a 'General Information' section with bullet points, and a 'Forms and Information' section. At the bottom of the page, there is a footer with copyright information and a 'Site Map' link.

For more information concerning the application or process of an MSD in Houston, call:

Carol Ellinger Haddock
Senior Assistant Director, PE
PW&E/Planning & Development Services Division
PH 713.837.0928
FX 713.837.0658

- o [MSD Calendar](#)
- o [MSD Completed](#)
- o [MSD in Review](#)

Municipal Setting Designations (MSDs)

The MSD Website



MSD in Review

Carol Ellinger Haddock , Assistant Director, P.E.

MSD in Review

Differential Development – 1994, Ltd. #2008-012-DD (Lantern Lane Shopping Center Site)

[Executive Summary](#)

[Full Application](#)

Hoerbiger Corp. of America Inc. and Morgan Advanced Materials and Tech. Inc. # 2009-016-Milby (Milby Street Site)

[Executive Summary](#)

[Full Application](#)

Estate of Isadore and Esther Robinson # 2009-020-GMI (Former Gulf Metals Industries Landfill Site)

[Executive Summary](#)

[Full Application](#)

[Public Meeting Notice](#)

[Public Meeting Presentation](#)

Silver Bishop Holdings, LP #2010-025-NOR (Navigation-Norwood Site)

[Executive Summary](#)

[Full Application](#)

[Public Meeting Notice](#)

[Public Meeting Presentation](#)

MSD Calendar

Carol Ellinger Haddock , Assistant Director, P.E.

Municipal Settings Designations Calendar

Information on the latest meetings, conferences, and events.

Date	Time	Event
07/14/2010	9:00 AM	Public Hearing: FPA/PinPoint Mykawa, LLC. (MSD # 2009-020-GMI) City Hall Council Chambers, 2nd Floor, 901 Bagby, Houston, TX 77002
07/20/2010	6:00 PM	Public Meeting: Schlumberger Technology Corporation (MSD #2010-027-STC) Judson Robinson Jr. Community Center, 2020 Hermann Dr., Houston, TX 77004
08/03/2010	6:00 PM	Public Meeting: Differential Development - 1994, Ltd. (MSD #2008-012-DD) Tracey Gee Community Center, 3599 Westchase Dr., Houston, TX 77042
08/04/2010	9:00 AM	Public Hearing: BAE Systems Resolutions Corporation, Inc. (MSD #2010-026-FSS) City Hall Council Chambers, 2nd Floor, 901 Bagby, Houston, TX 77002
08/24/2010	6:00 PM	Public Meeting: Board of Regents of the University of Texas System (MSD #2010-028-ACD) Judson Robinson Jr. Community Center, 2020 Hermann Dr., Houston, TX 77004

Public Hearing



- Date: September 16, 2010
- Time: 10:00 am
- Place: City Council Chamber (Committee Meeting)
Development and Regulatory Affairs
- 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.

Contact Information



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&

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**Public Works & Engineering
City of Houston,
611 Walker, 19th Floor
Houston, Texas 77002**



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(832) 395-2699

Municipal Setting Designations (MSDs)

Contact Information



Scott Settemeyer

Remediation Division

Texas Commission on Environmental Quality

P.O. Box 13087, MC-225

Austin, Texas 78711

ssetteme@tceq.state.tx.us



Lantern Lane Shopping Center

12534 Memorial Dr.
MSD #2008-012-DD

Presented By:

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



Current Development



- Developed as a multi-tenant shopping center
- Tenants include Rice Epicurean, Starbucks and Fidelity Investments
- Property size = 79,501 square feet



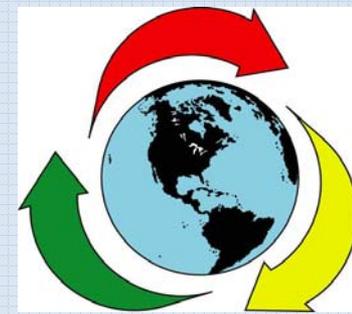
Lantern Lane Shopping Center



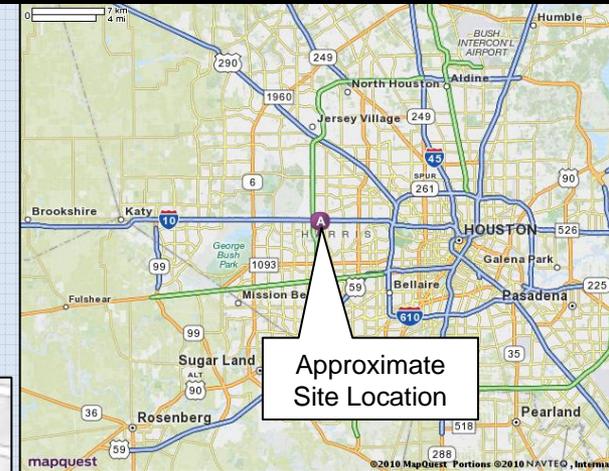
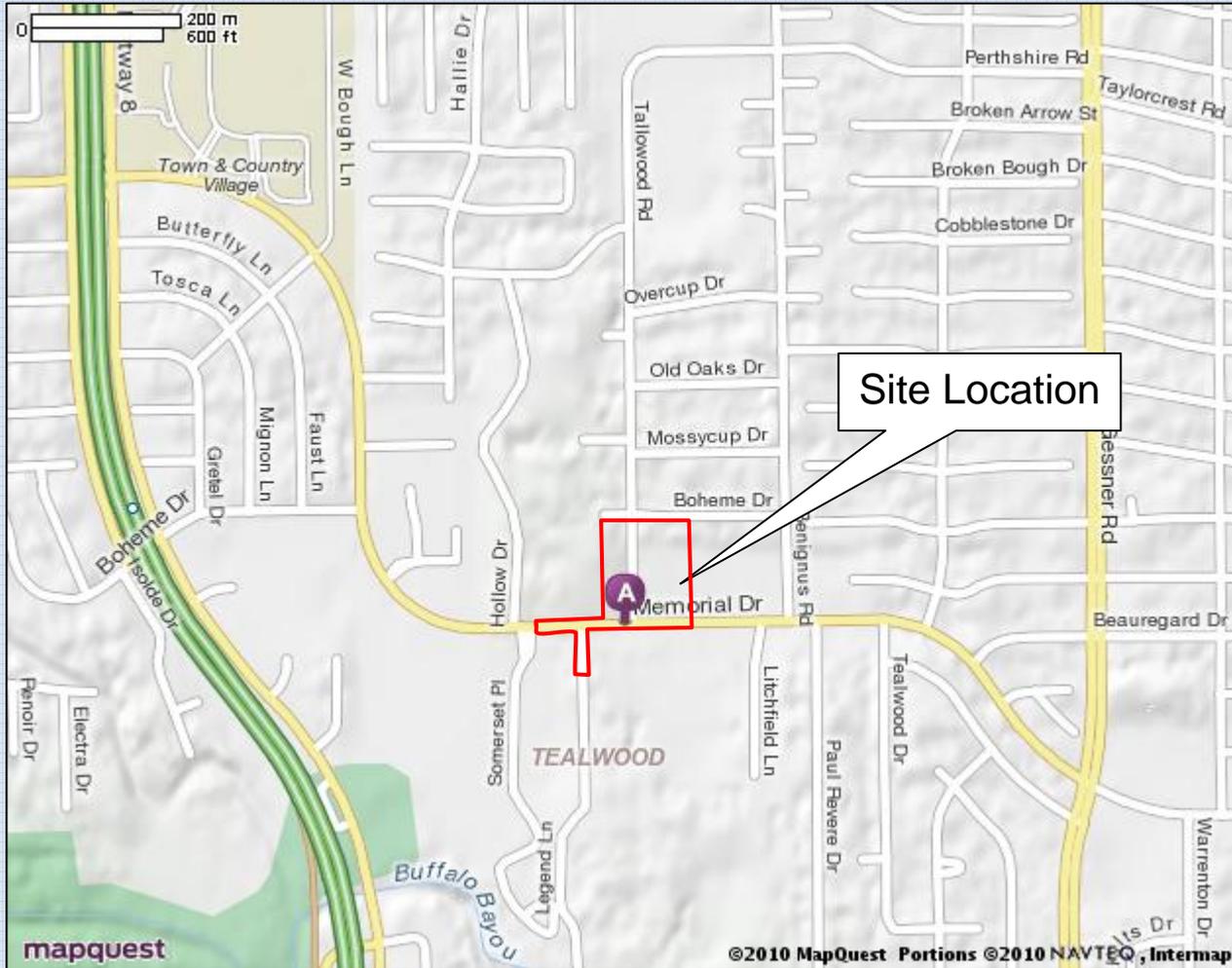
- During a historical investigation, a release of dry cleaning related chlorinated solvents was discovered from the dry cleaning facility to the shallow groundwater.
- The property was enrolled in the Texas Voluntary Cleanup Program in July 2004 and assigned VCP No. 1714.
- Investigations completed between 2003 and the present defined the horizontal and vertical extents of the contaminants in soil and groundwater.

Lantern Lane Shopping Center

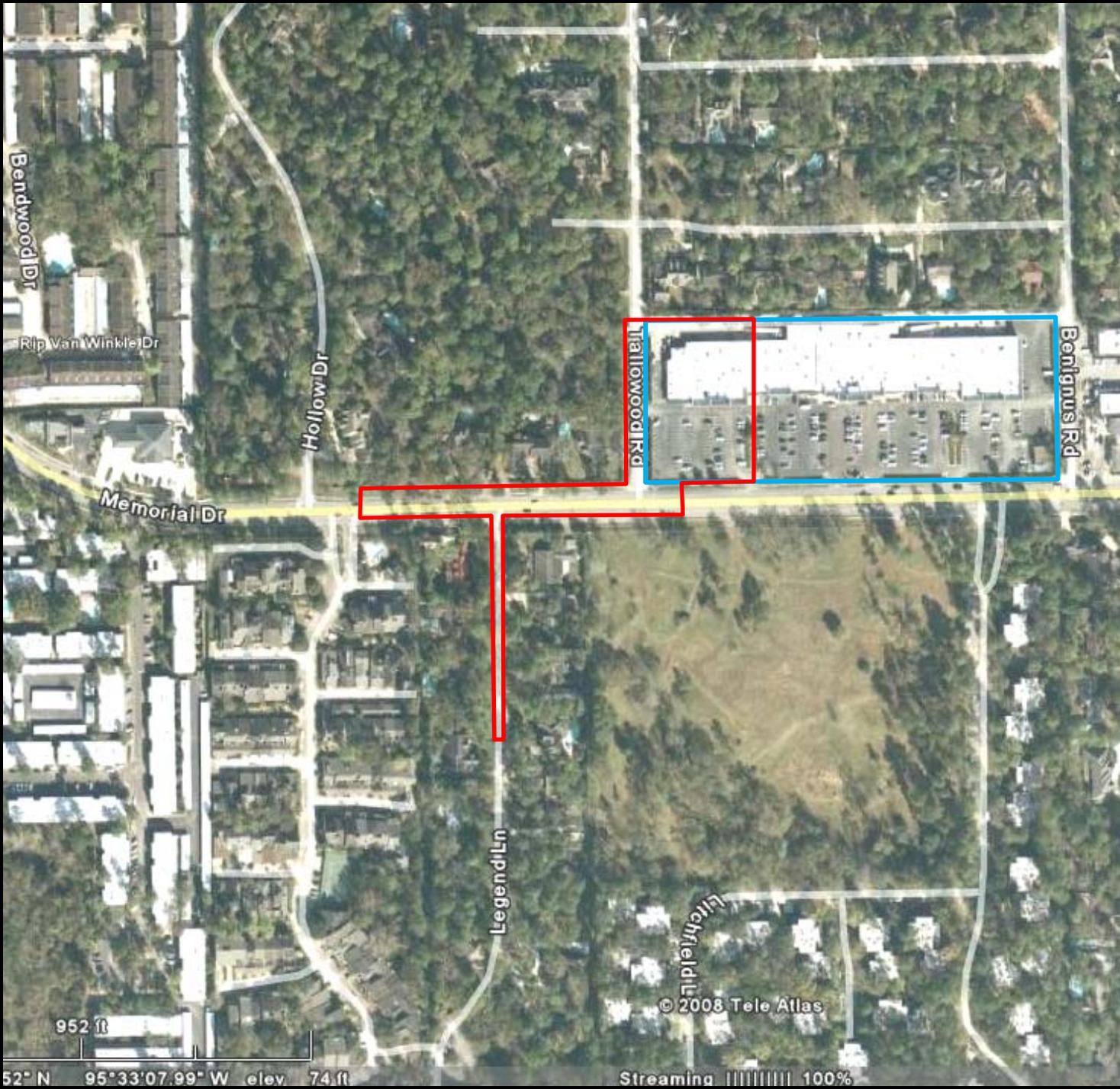
Site History



- Shopping Center developed in 1962.
- Pro Cleaners operated a dry cleaning facility from 2000 to 2007.
- Tenant space formerly occupied by a hardware store.
- No other dry cleaners were previously located in Lantern Lane Shopping Center.
- Two PCE-based dry cleaning machines were replaced with hydrocarbon-based machines in February 2005.
- Dry cleaning equipment was removed in 2007 when dry cleaners closed.



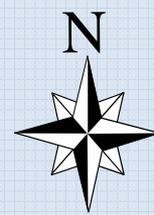
Proposed
MSD
Boundary



MSD Boundary



Property Boundary



952 ft

52° N 95° 33' 07.99" W elev 74. ft

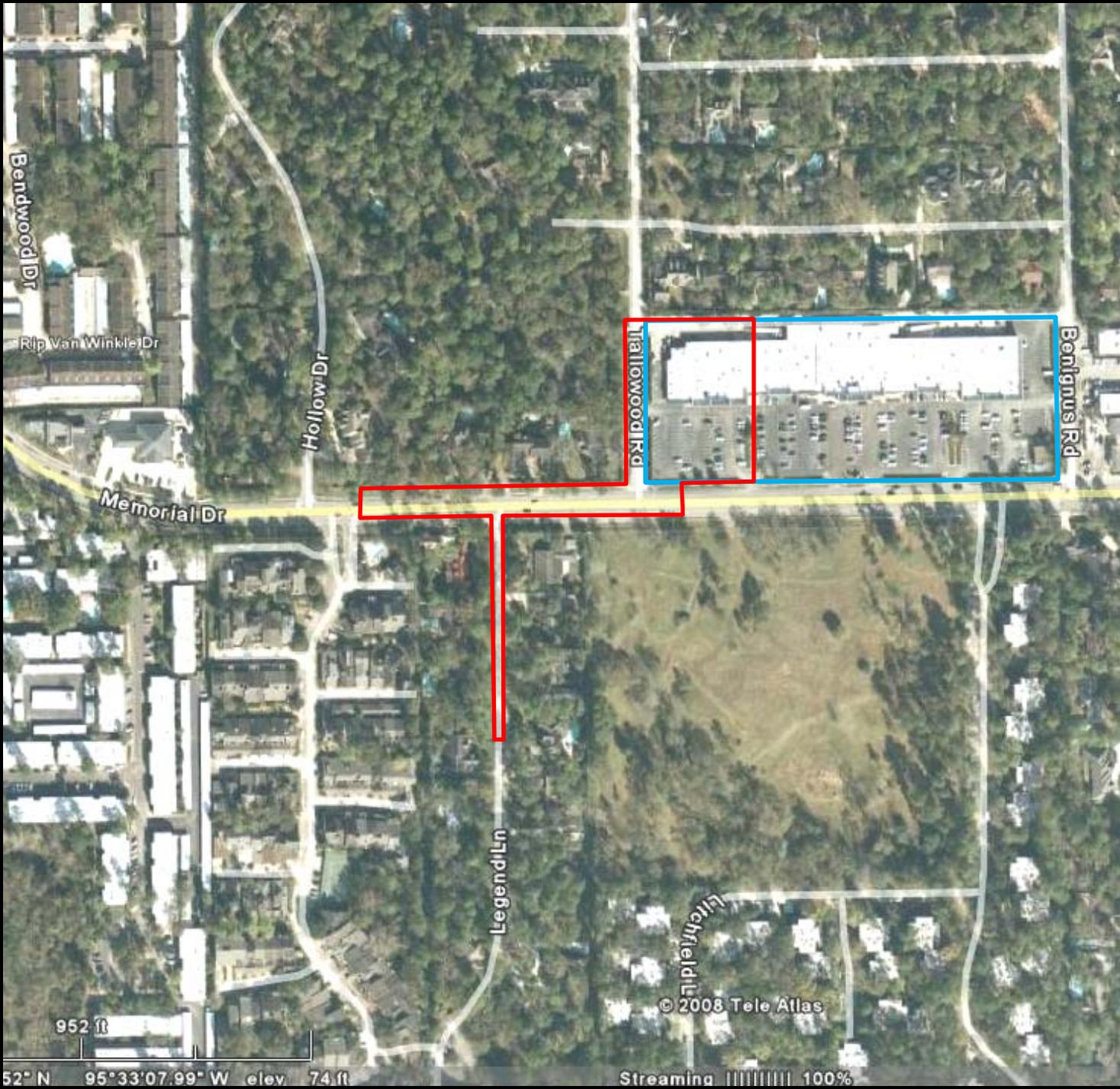
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Streaming 100%

Lantern Lane Shopping Center



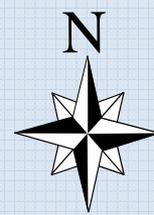
- Chlorinated solvents (tetrachloroethene (PCE) and its degradation products) are the constituents identified in the shallow groundwater plume.
- Two groundwater bearing zones were identified.
- First groundwater bearing zone is approximately 20- to 35-feet below surface.
- Second groundwater bearing zone is approximately 40- to 50-feet below ground surface.
- Groundwater flow is towards the southwest.



MSD Boundary



Property Boundary



952 ft

52° N 95° 33' 07.99" W elev 74. ft

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Streaming 100%

Investigation History



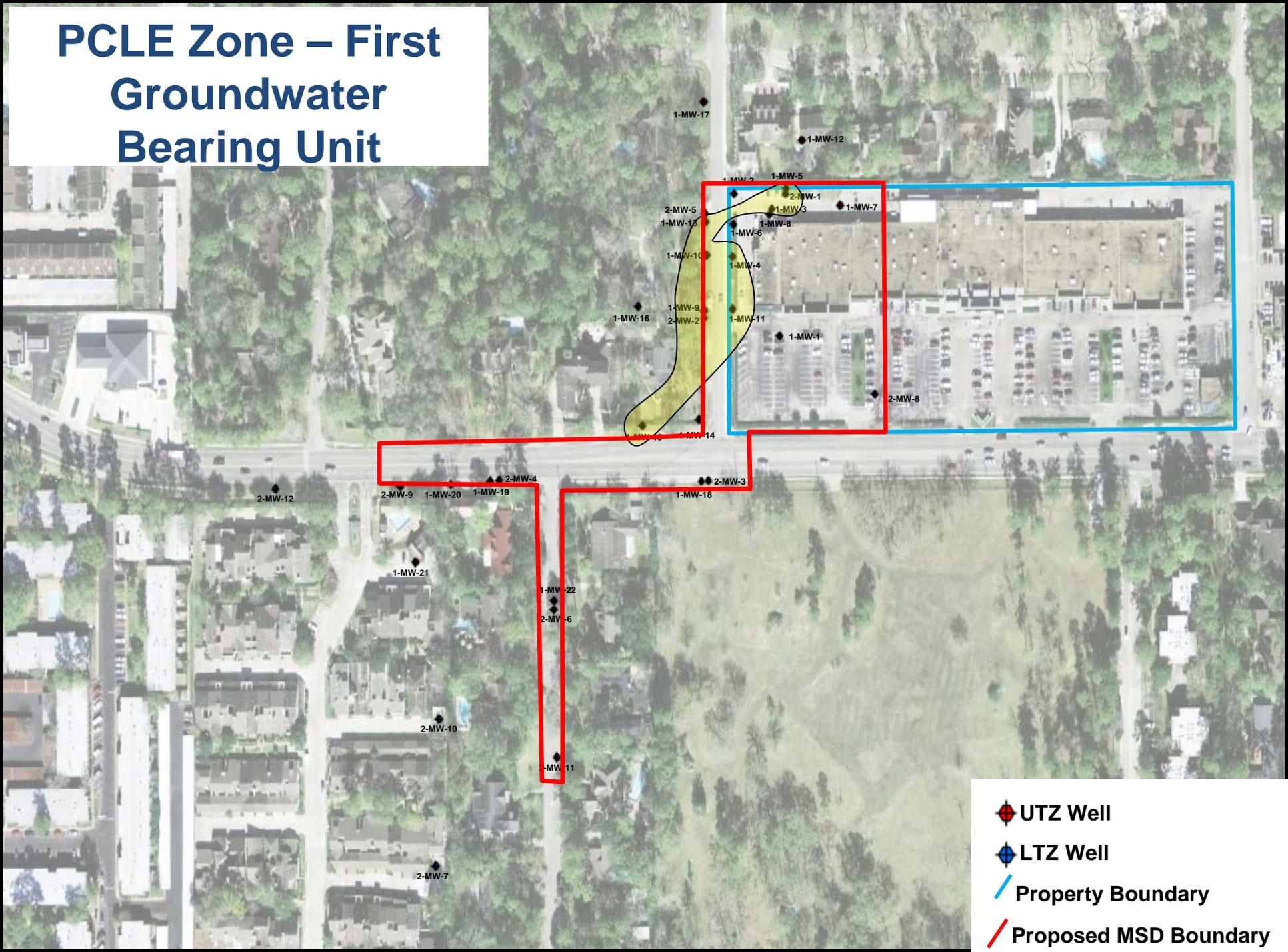
- September 2003 – wastewater samples collected from lint trap indicated release to sanitary sewer line.
- Subsequent wastewater samples confirm release from sanitary sewer line.
- Between 2004 and 2008 a total of 34 permanent groundwater monitoring wells have been installed to delineate the first and second groundwater bearing units (22 in first, 12 in second).
- Over 30 soil samples have been analyzed between 2003 and 2008 to investigate any impacts to soil.

Investigation Results



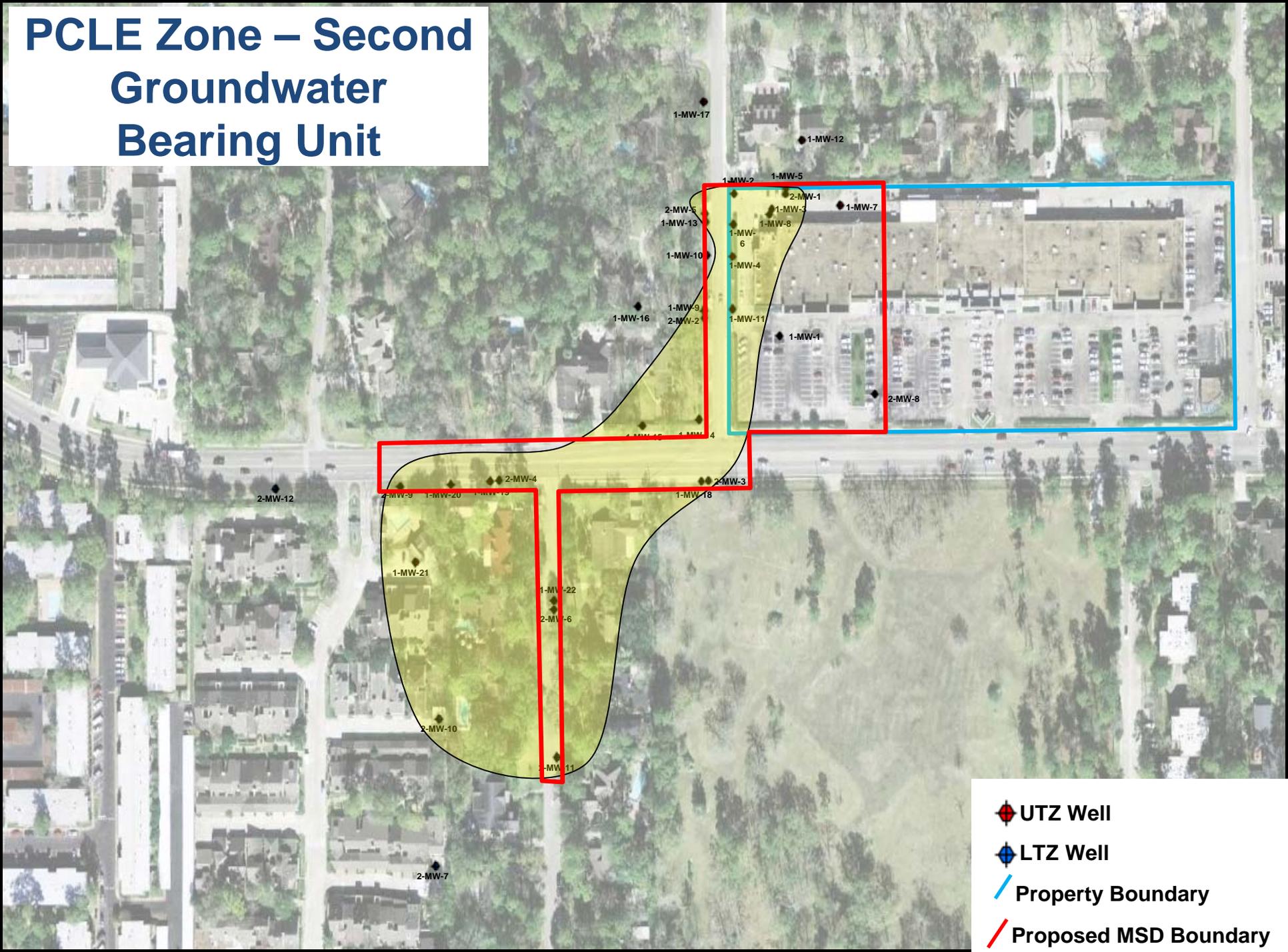
- None of the soil samples reported dry cleaning compounds at concentrations above action levels.
- Wastewater samples collected from lint trap indicate release from sanitary sewer line during dry cleaner operations.
- Groundwater samples collected from monitoring wells report tetrachloroethene (PCE) and trichloroethene (TCE) at concentrations above action levels.

PCLE Zone – First Groundwater Bearing Unit



- ◆ UTZ Well
- ◆ LTZ Well
- Property Boundary
- Proposed MSD Boundary

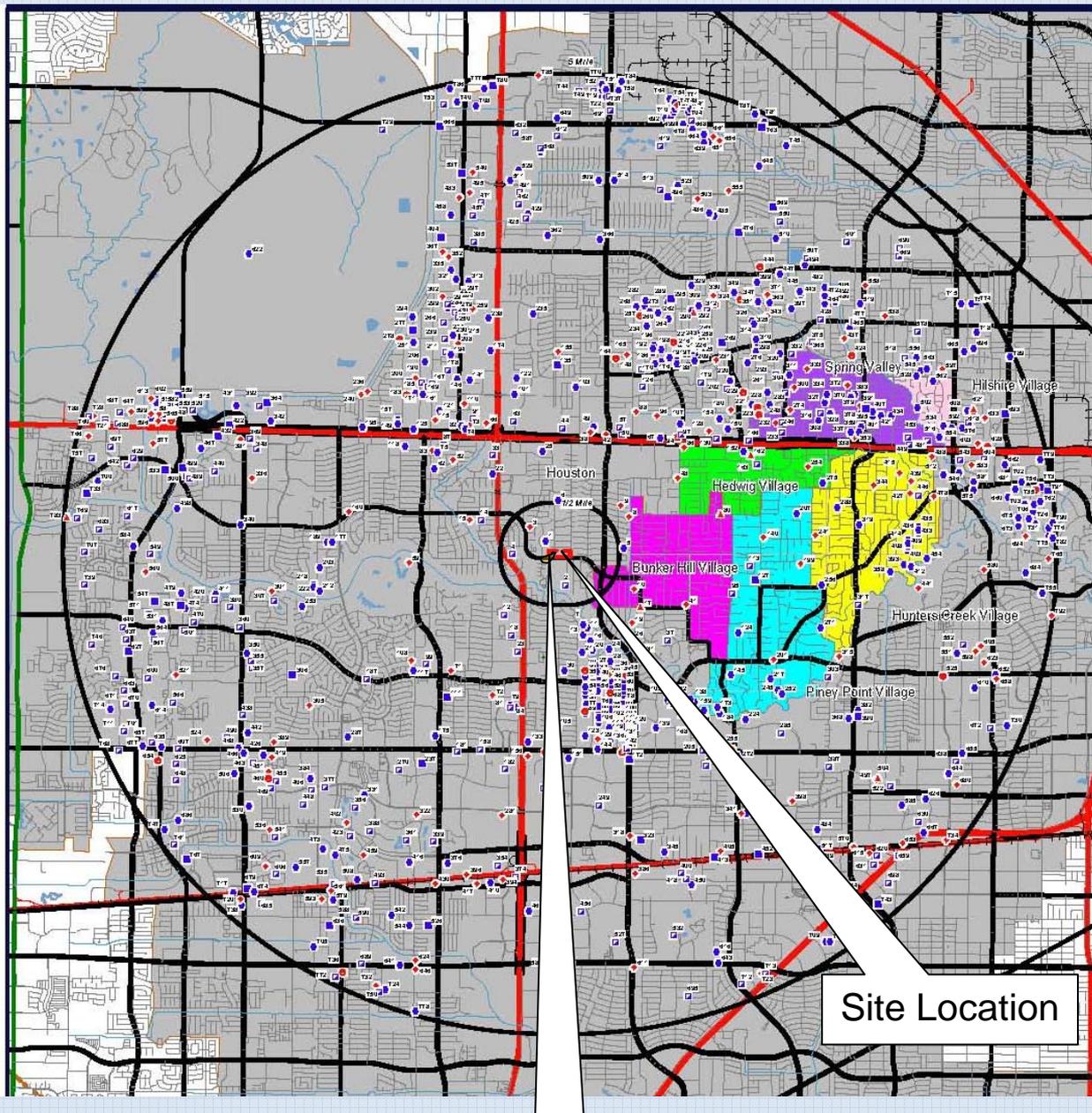
PCLE Zone – Second Groundwater Bearing Unit



Protection from Affected Media



- None of the soil samples reported dry cleaning compounds at concentrations above action levels.
- Groundwater is not readily accessible.
- Affected groundwater is not a source of drinking water.
- Most of the area is covered by roads, parking lots, buildings.
- MSD will be placed in the City's Utility database to notify workers when working on property to use proper protective equipment.



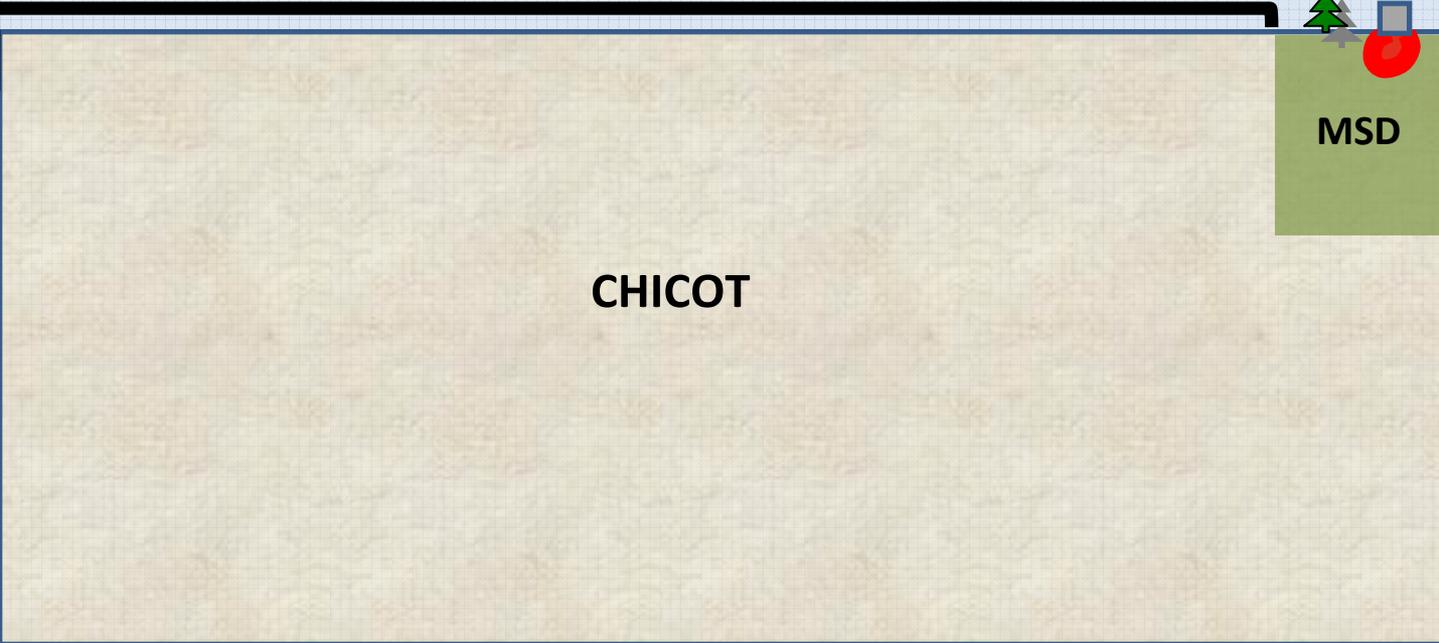
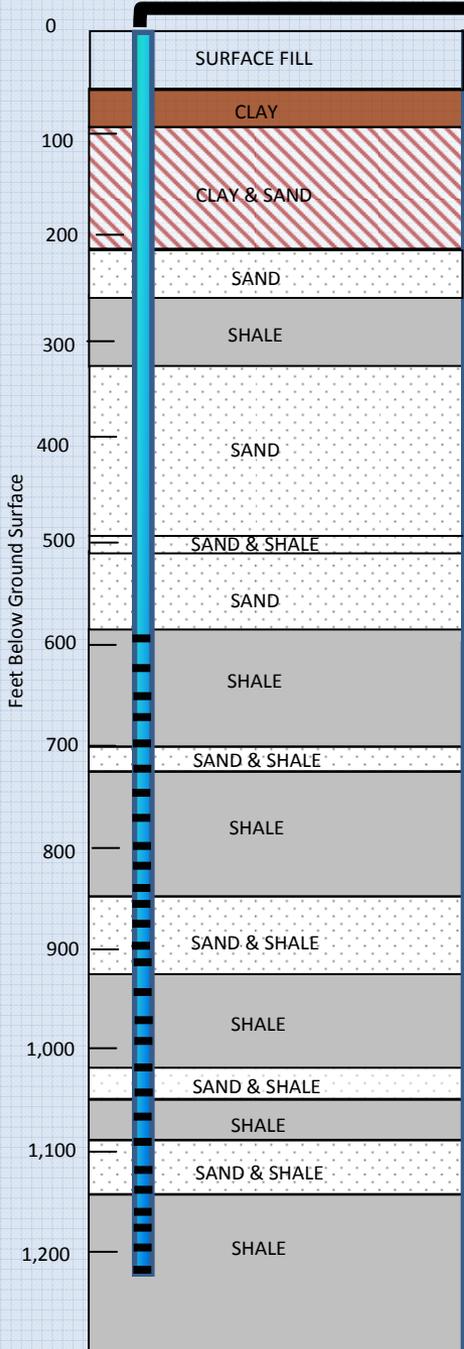
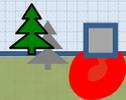
Plume

Site Location

The nearest domestic water well is located almost 800-ft northwest (upgradient) and completed at depth greater than 300-ft below ground surface.

The nearest public water supply well is located greater than 2,000-ft west (cross gradient).

~ 2,000 feet Separation

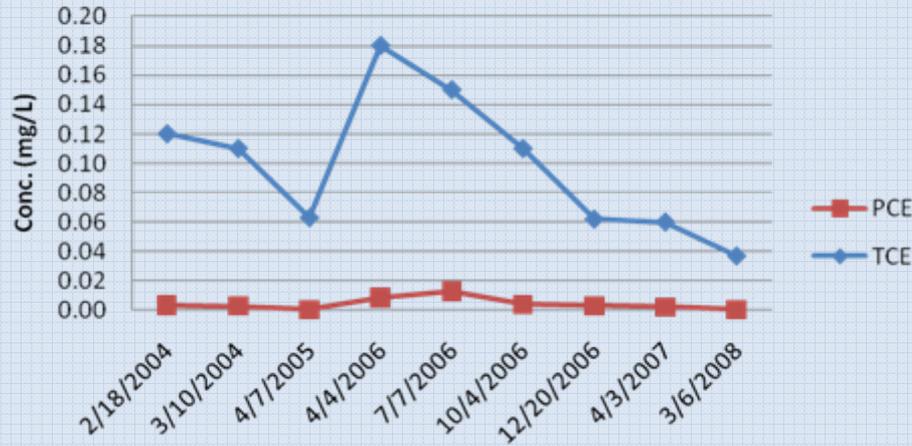


MSD

Concentration Over Time



1-MW-3



1-MW-3 located at rear of former cleaner

1-MW-9 located at source area in sewer line

1-MW-9



Concentration Over Time



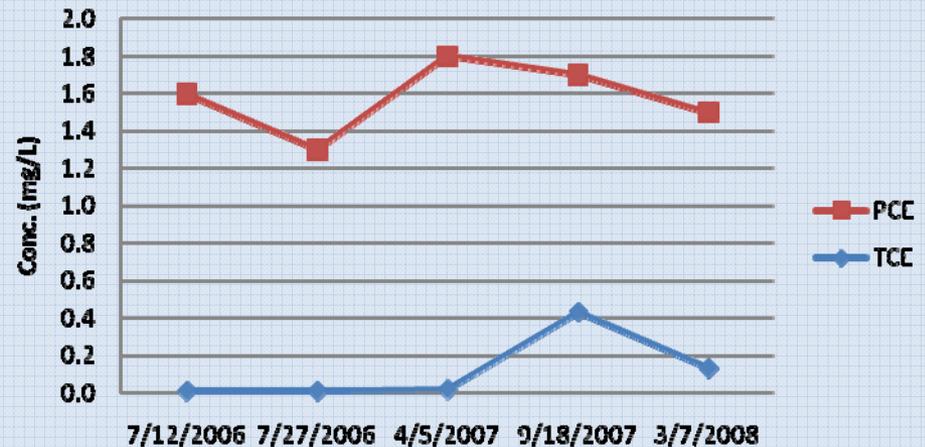
2-MW-1



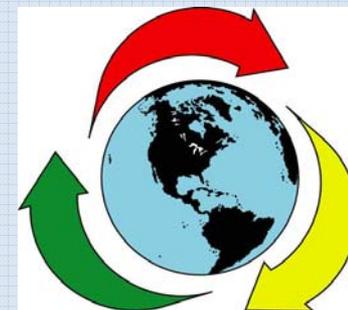
2-MW-1 located at rear of former cleaner

2-MW-2 located at source area in sewer line

2-MW-2



Summary



- The constituents have been vertically and horizontally defined and are not spreading.
- The closest active public water supply well is approximately 2,000 feet away from the subject property in a cross-gradient direction.
- The closest domestic well is located approximately 800 feet away from the subject property in an upgradient direction.
- The nearest water well in a downgradient direction is greater than 1 mile from the subject property.