

# 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  
801 Gillette
  - **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/>



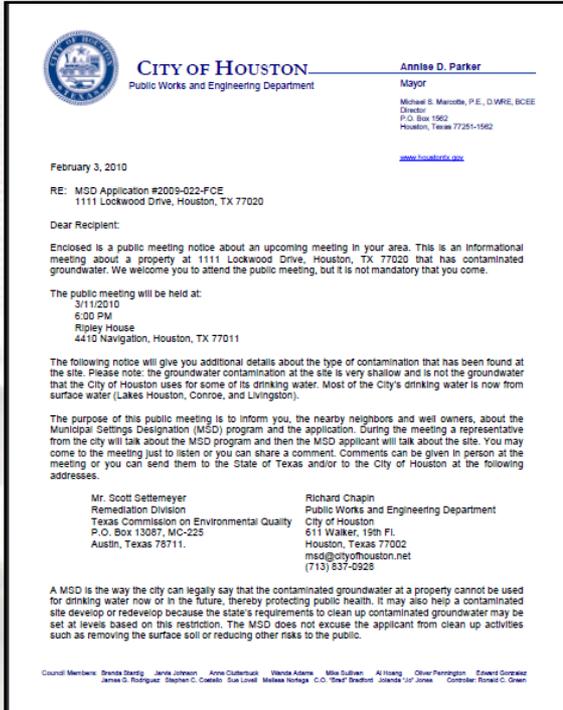
- By Phone: 311
- Online: [http://webintake.houstontx.gov/web\\_intake/Controller](http://webintake.houstontx.gov/web_intake/Controller)



Municipal Setting Designations (MSDs)

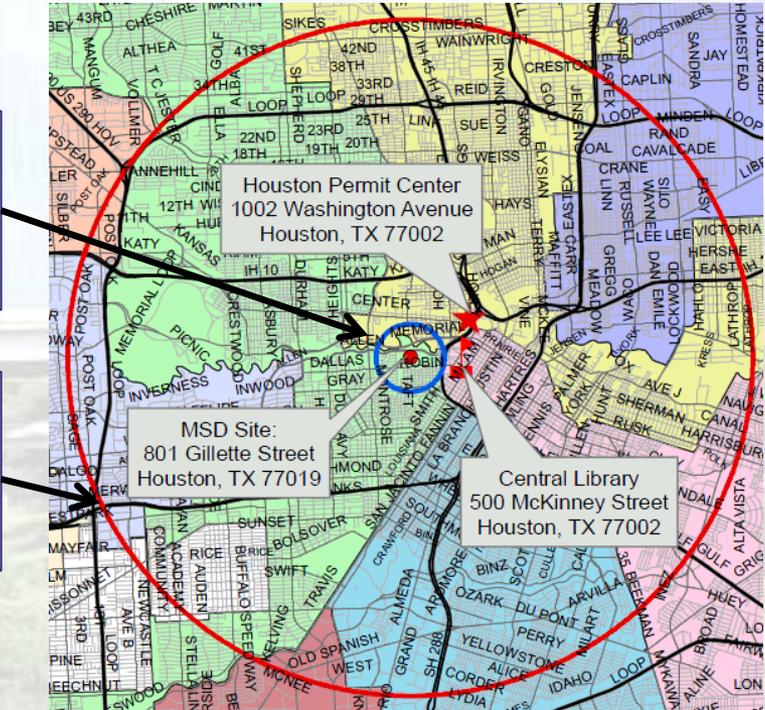


# MSD Notice Letters



**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)**

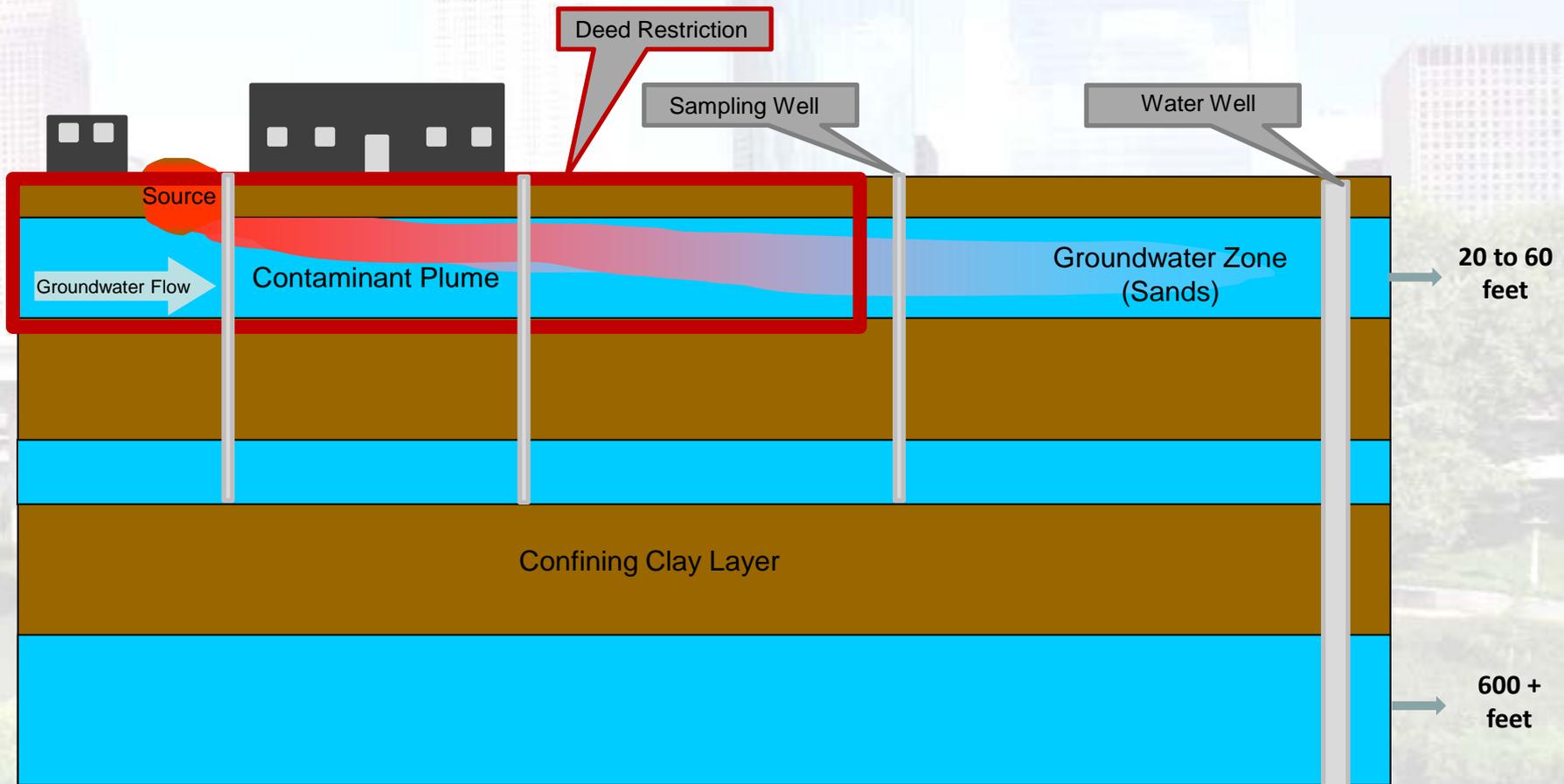


# What an MSD is

- **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



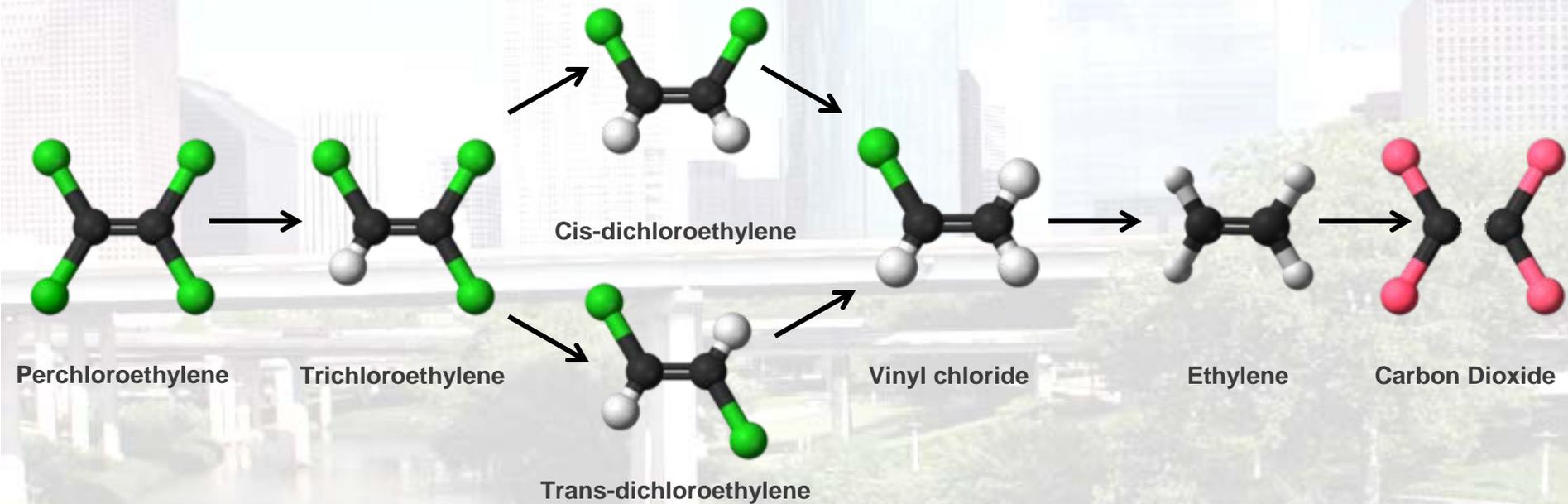
# Groundwater Contamination



*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.

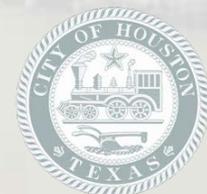
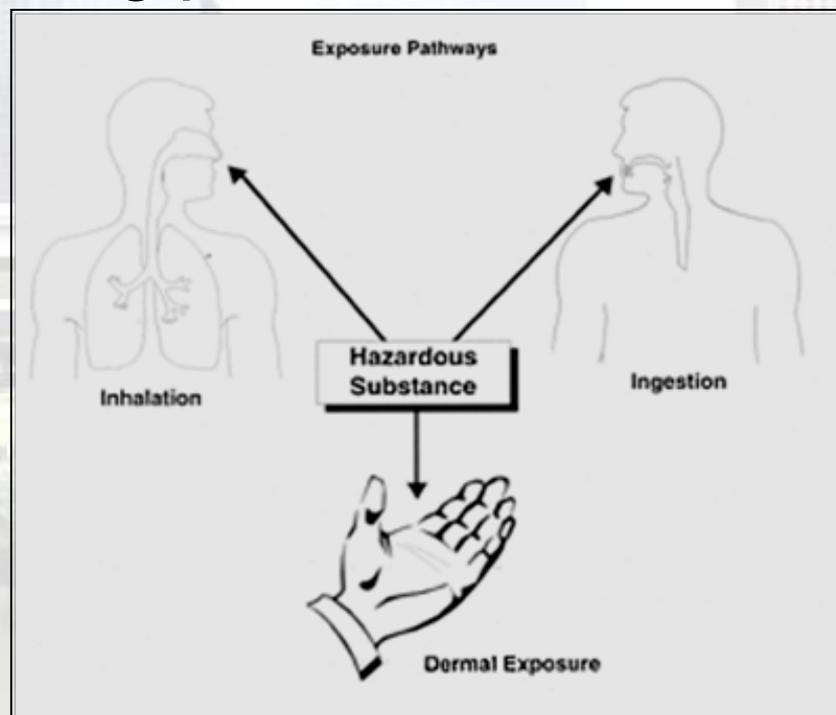


Municipal Setting Designations (MSDs)



# 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



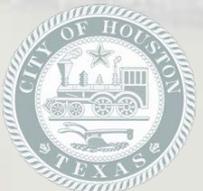
# Environmental Cleanup

- 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



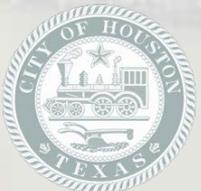
# Who the MSD Impacts

- 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

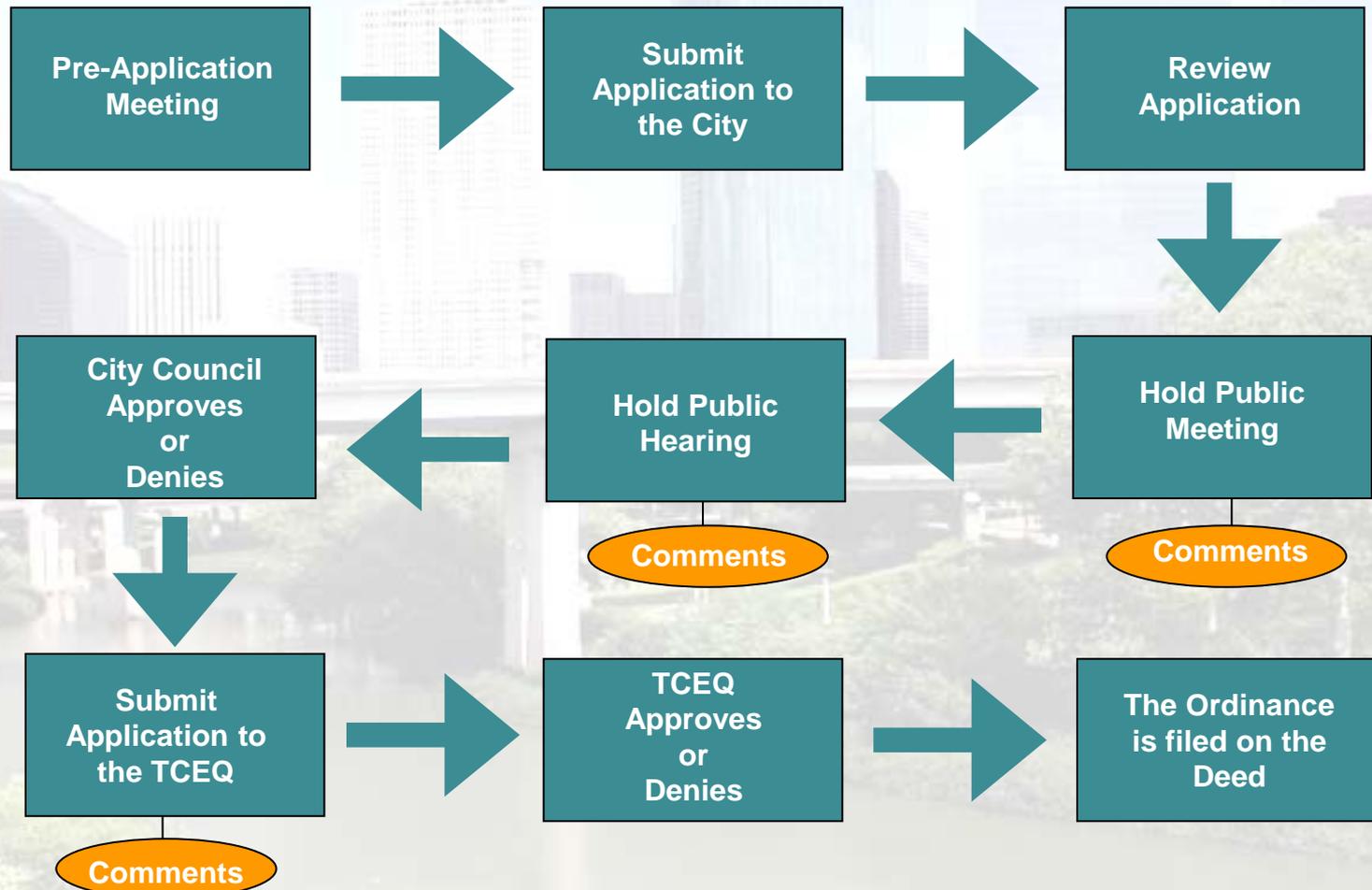


# City's Requirements of the Applicant

- 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

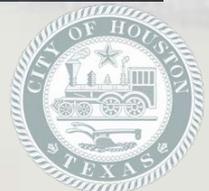


# Steps in the Process

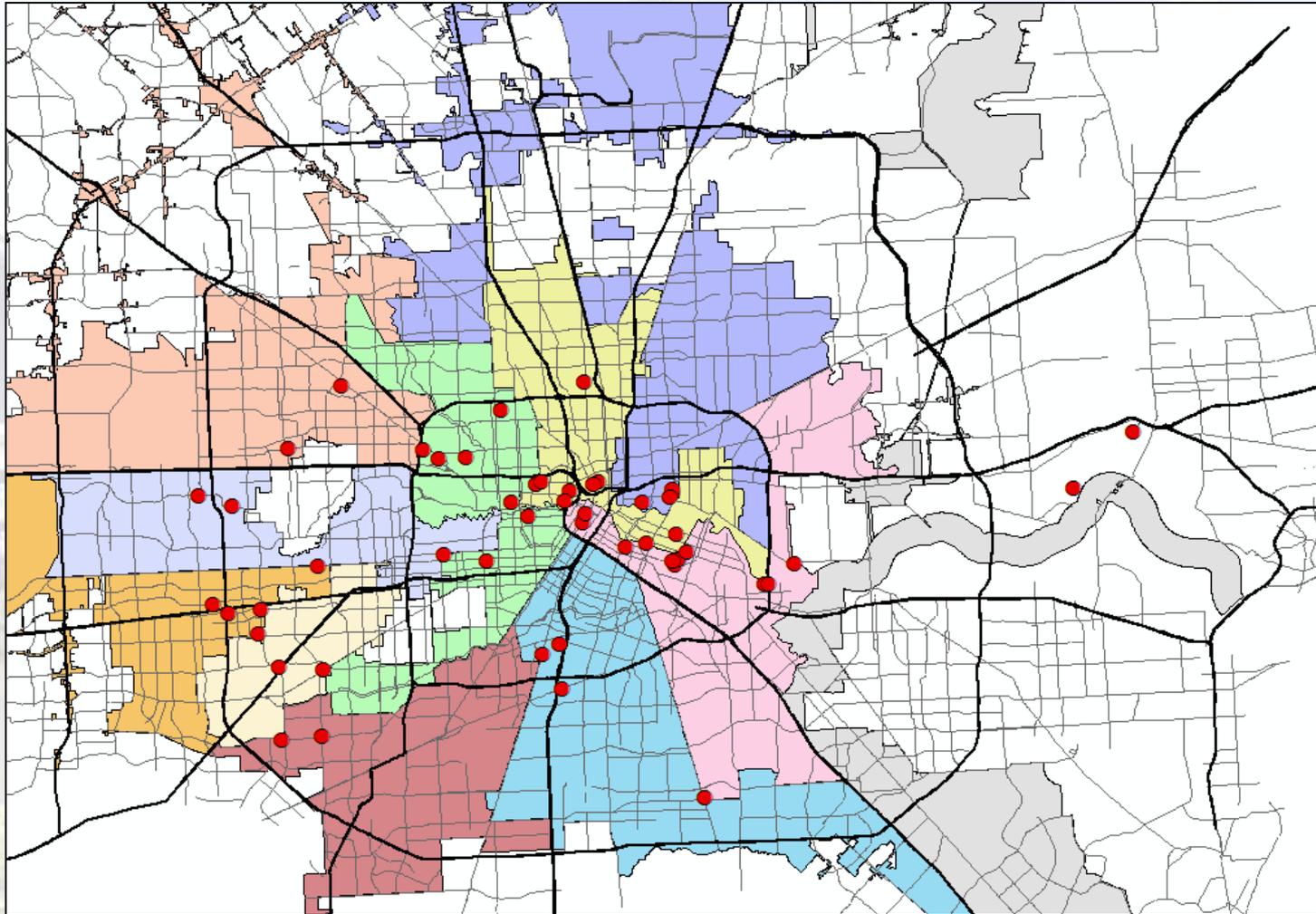


# Why Support An MSD?

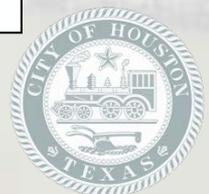
- Protects the public from consumption of contaminated groundwater
- Encourages clean-up of contaminated sites
- Promotes redevelopment of under-utilized properties



# MSD Sites in Houston

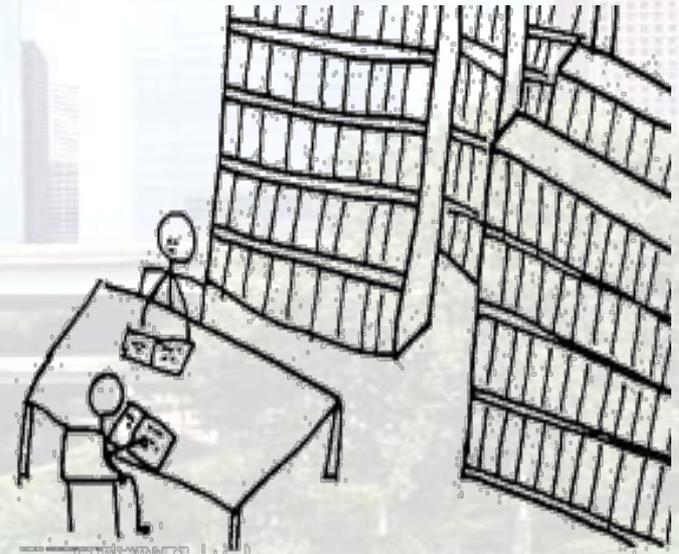


Municipal Setting Designations (MSDs)



# MSD Application Availability

- Central Library
  - 500 McKinney
  - Reference Desk, 3<sup>rd</sup> floor
- Also available online at:  
[www.houstonmsd.org](http://www.houstonmsd.org)
  - MSD in Review Page



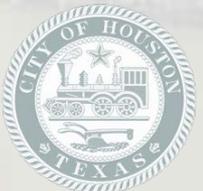
# Public Hearing

- **Date:** May 14, 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 should arrive about 15 min early and sign the speakers list located on the front desk.



**Municipal Setting Designations (MSDs)**



# Contact Information

**Jedediah Greenfield**  
Program Manager

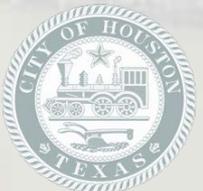
**Public Works & Engineering**  
**City of Houston,**  
**1002 Washington, 2<sup>nd</sup> Floor**  
**Houston, Texas 77002**

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

**(832) 394-9005**



Municipal Setting Designations (MSDs)





# Gillette Street Property

801 & 1701 Gillette Street  
Houston, Texas 77019



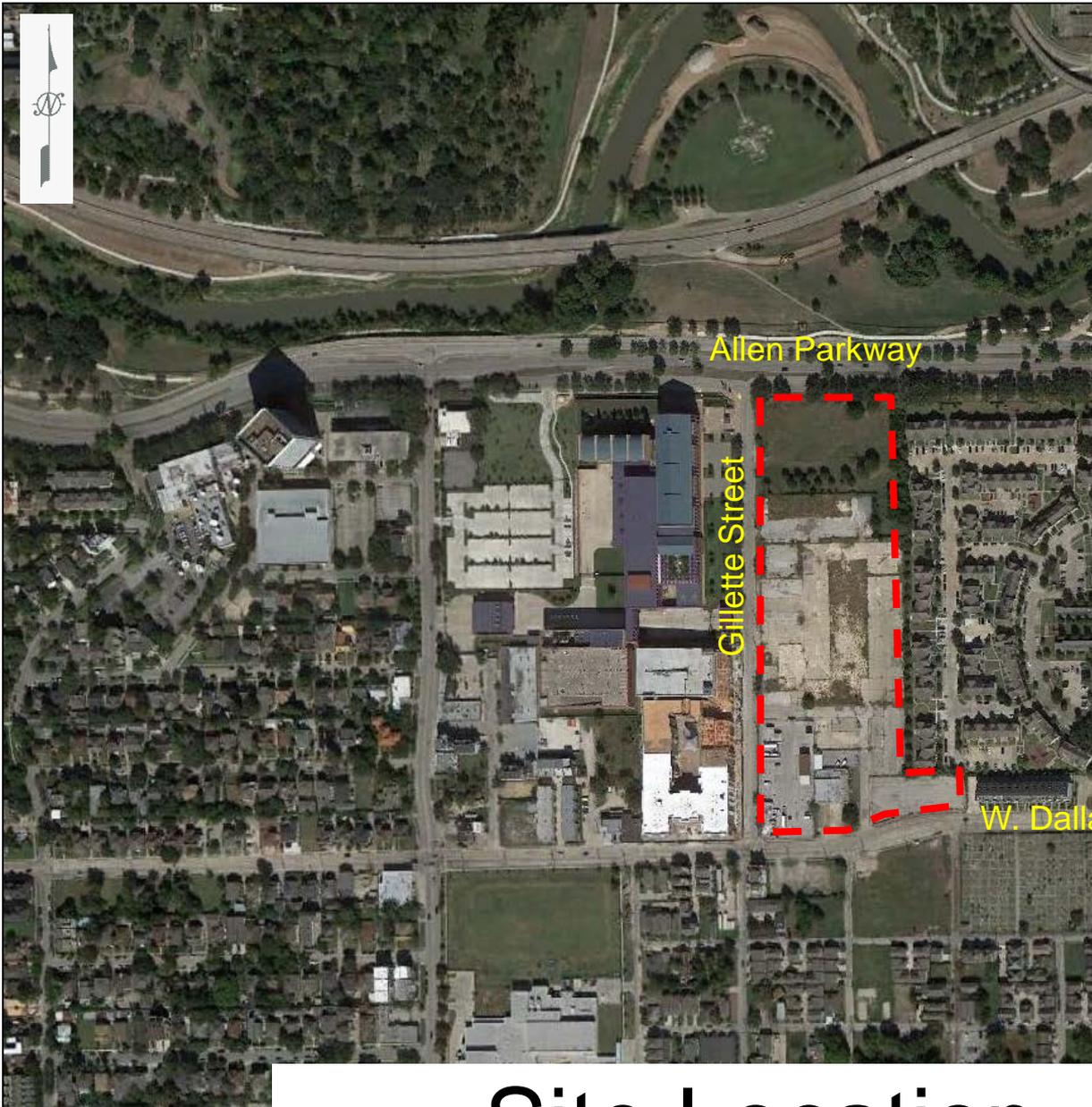
Applicant/Owner:  
Coastal Water Authority



Consultant:  
Terracon Consultants, Inc.

# Presentation Agenda

- Site History
- Environmental Studies
- Impacted Groundwater
- Questions and Answers



# Site Location



# Site Boundary

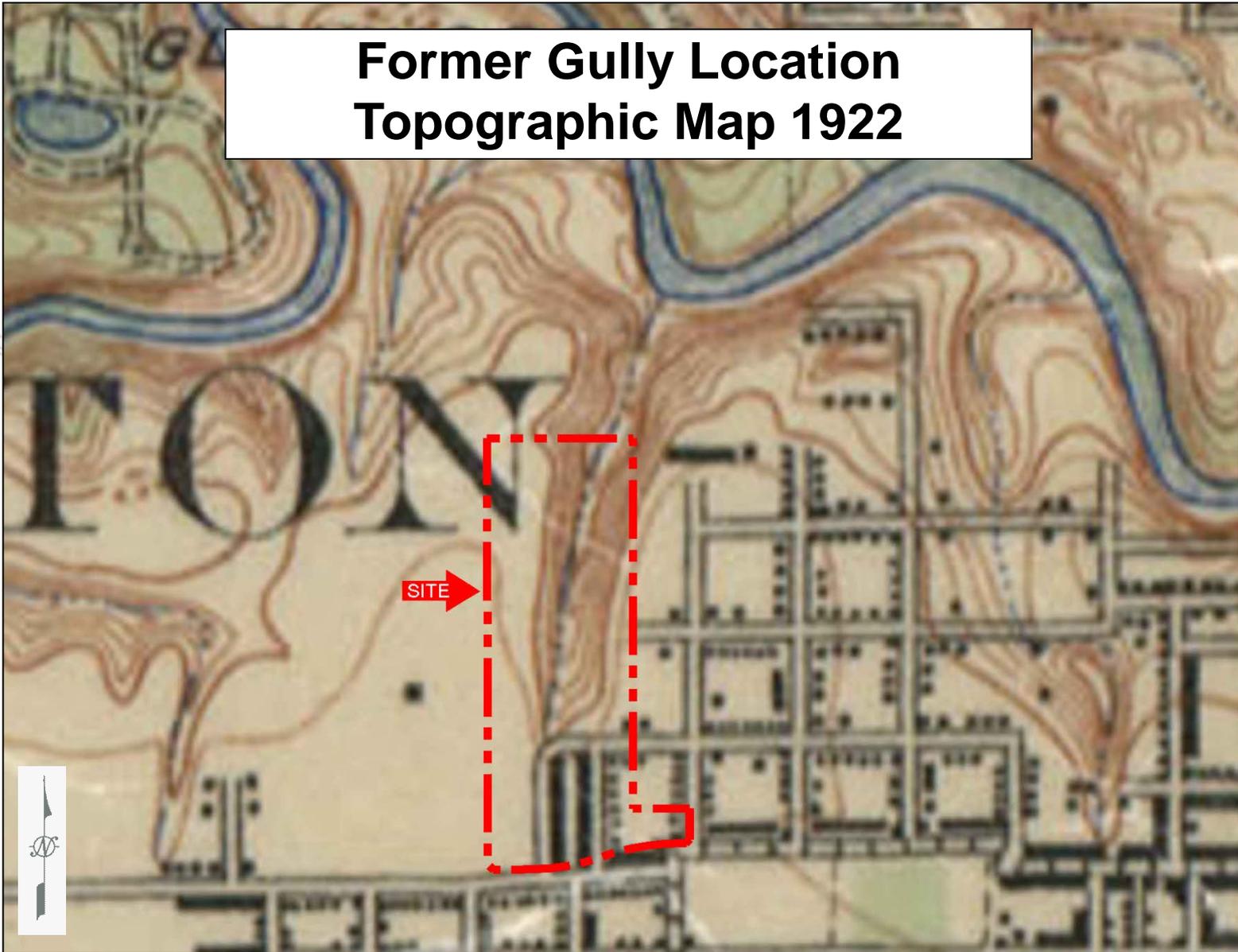


APPROXIMATE SCALE 1"= 200'

# Site History – Past Use

- A City of Houston former municipal incinerator was located on the central portion of the site in the 1930s and the site later became the City of Houston's Fleet Maintenance Facility.
- Buried debris, including pieces of broken glass, incinerator ash, metal and bricks appear to have been used, in part, to fill a former gully that traversed the site.
- Underground storage tanks (USTs) that were part of the fleet maintenance facility were reported as Leaking Petroleum Storage Tank (LPST) cases under the TCEQ's PST Program.
- Both LPST cases received closure in 1998 and 2008.
- Vacant land on the northern portion of the site, former San Felipe Park

# Former Gully Location Topographic Map 1922



# Site History – Current Use

- Property currently vacant. Approximately 10.52 acres.
- The site is surrounded by residential development (east, south, and southwest) and retail/commercial/industrial properties (west and south) with Buffalo Bayou to the north.



# Soil Boring and Monitor Well Location Map

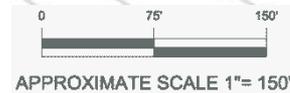
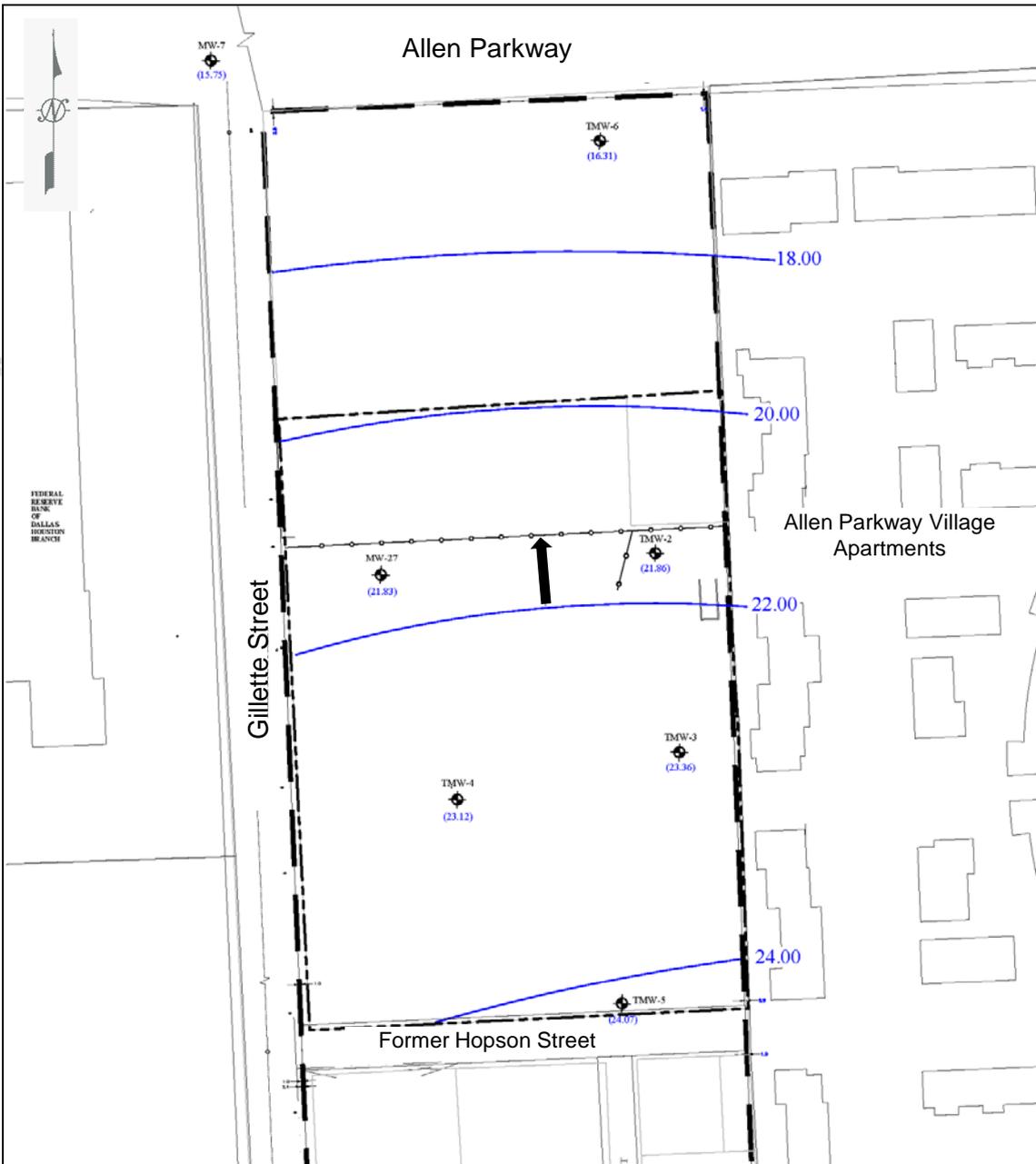
# Soil and Groundwater Sampling Activities

- Environmental Investigations began in 1998
- 197 soil borings – 329 soil samples
- 84 groundwater samples
- 22 groundwater monitor wells historically, 7 existing monitor wells
- Groundwater Monitoring conducted from 2001- 2012
- Groundwater plume has been delineated onsite
- Groundwater flow direction is toward the north

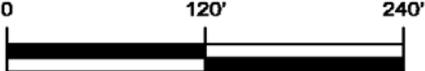
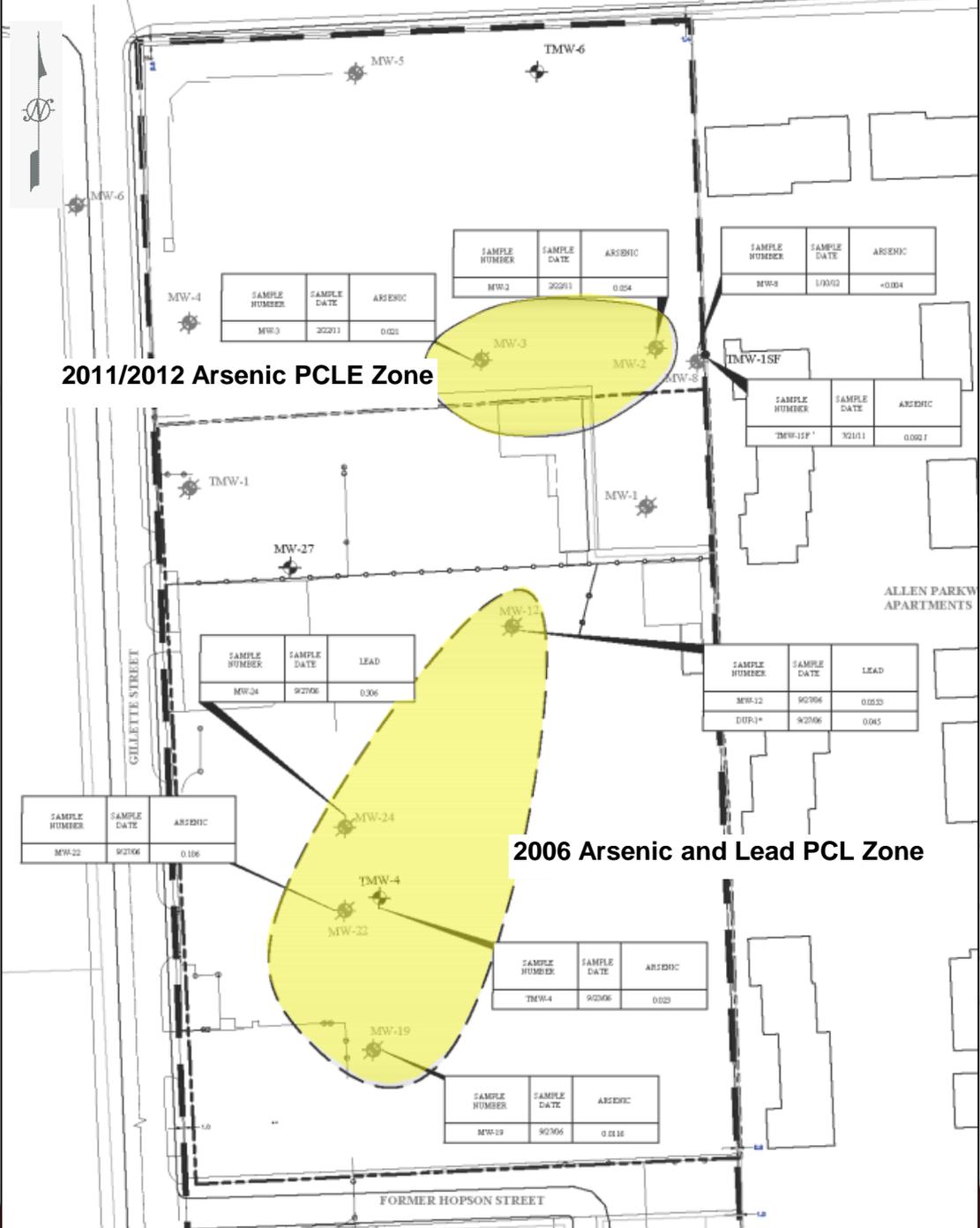
# Contaminants and Sources

- Shallow water-bearing unit (~ 35 feet bgs) affected primarily by metals.
  - Arsenic
  - Lead
  
- Historically, the Leaking Petroleum Storage Tank (LPST) sites on the southern portion of the property reported gasoline constituents and received closure under the TCEQ Petroleum Storage Tank Program.
  - Benzene
  - Methyl tert-butyl ether (MTBE)

# Groundwater Flow Direction



# Groundwater Protective Concentration Level Exceedance (PCLE) Zone



APPROXIMATE SCALE 1"= 120'

# Plume Delineation and Stability

- **Groundwater plume and contaminant concentrations are stable and/or decreasing**
- Arsenic
- Protective Concentration Level (PCL) is 0.01 mg/L
- Maximum concentration of arsenic was 1.49 mg/L in 2002
- Maximum concentration of arsenic was 0.054 mg/L in 2011/2012
- Lead
- Protective Concentration Level (PCL) is 0.015 mg/L
- Maximum concentration of lead was 1.69 mg/L in 2002
- Maximum concentration of lead was 0.002 mg/L in 2011/2012
- A MSD will prohibit the use of groundwater at the site

# Summary

- A MSD will prohibit the use of groundwater at the site through an ordinance enforceable by the city and filed in the county property records.
- A MSD will facilitate completion of cleanup activities at the site and future re-development.
- Groundwater chemicals of concern (COC) concentrations are stable and/or decreasing through natural attenuation.
- Groundwater delineation is complete.

Questions?