



Livonia Town Hall

Department of Environmental Quality

Remediation and Redevelopment Division

March 21, 2019

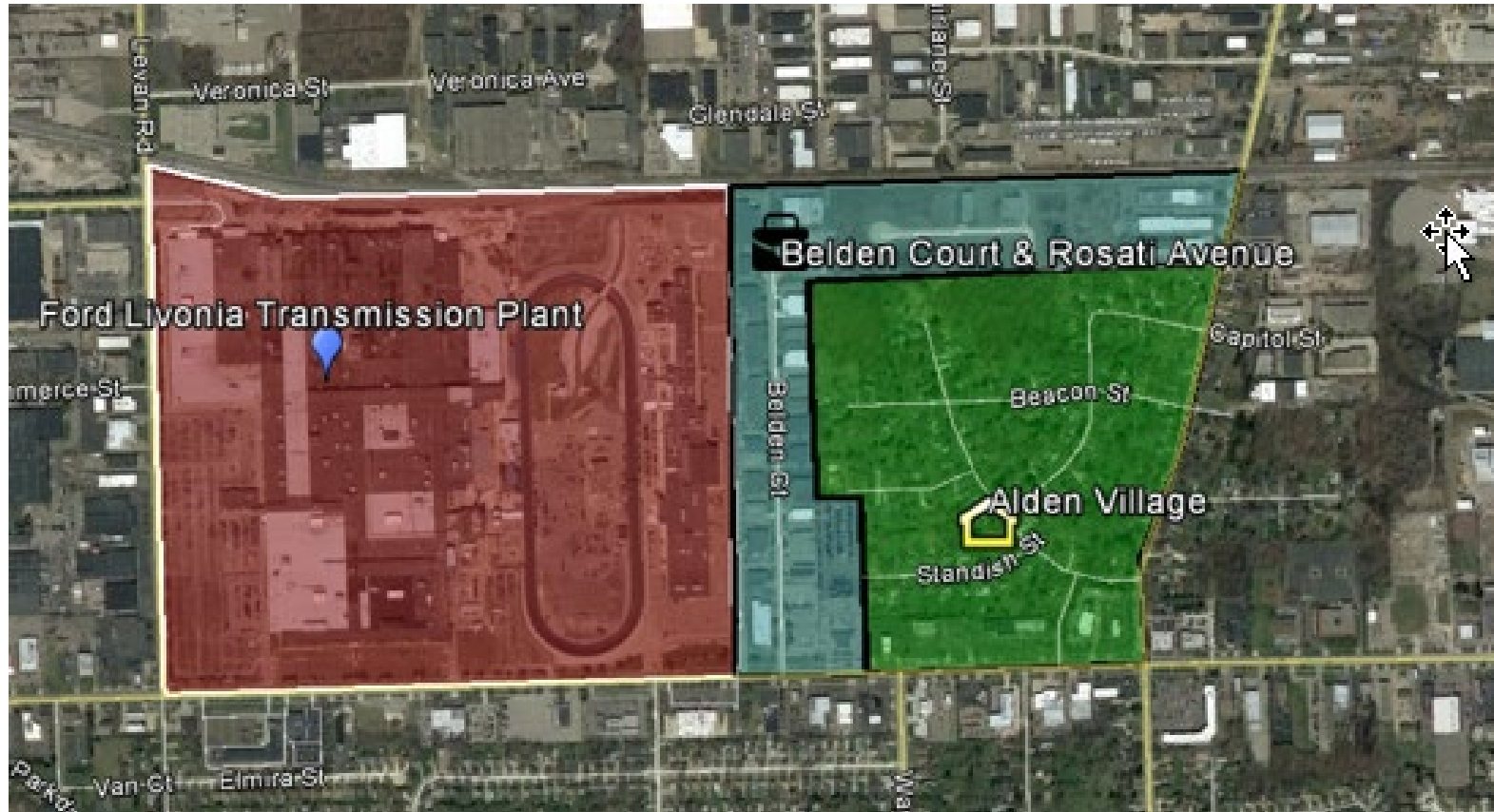
# Purpose of Meeting:

Update residents and businesses on activities at the Ford Livonia Transmission site since the DEQ Public Informational Meeting in August 2018

# Discussion Topics:

- Brief History
- Activities since August 2018 Public Meeting
- Current Site Activities
- Mitigation Systems
- Next Steps

# Adjacent Neighborhood and Business District



# Brief History of Ford Livonia Transmission Plant & DEQ

- 1952: Ford Livonia Transmission Plant (Plant) opens, numerous chemicals used in Plant operations
- 1990's: Releases from petroleum underground storage tanks reported to DEQ, contamination reported to be limited to Plant property and near tanks only
- Late 2015: Ford notified DEQ of vinyl chloride migrating off its property to the east, additional notifications sent to DEQ in 2016 and 2017
- February 2016: Ford held public meeting
- 2016: Ford continues investigation of Plant and area downgradient (east of Plant), installing monitoring wells, soil borings and soil-gas wells

# Brief History of Ford Livonia Transmission Plant & DEQ

- Consent Decree Entered July 21, 2017
- August 25, 2017 - First submittal from Ford under the Consent Decree received, outlining basic site information
- December 2017 - Remedial Investigation work plan submitted from Ford, March 2018 - DEQ rejects plan due to deficiencies
- April 2018 revised Remedial Investigation work plans submitted from Ford, one plan for a vapor intrusion investigation in residential neighborhood and one plan for investigation of contamination within the Plant, including investigation of utility corridors, delineating contamination and investigating source areas
- DEQ Public meeting held August 20, 2018 to gather citizen comments on plans

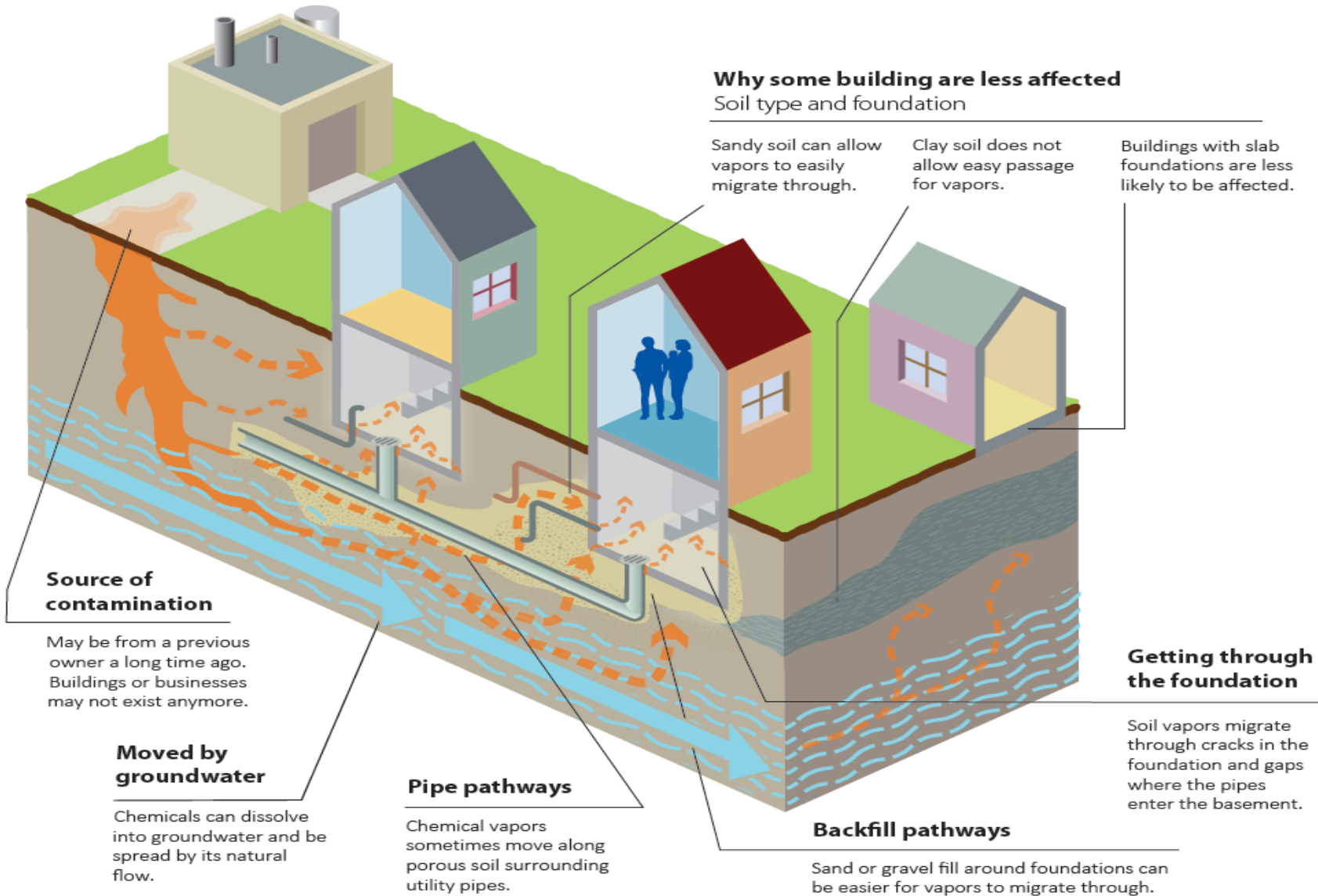
# Activities Since August 2018 Public Meeting

- August 30, 2018 - citizen comments reviewed and many incorporated into DEQ approval of plans with conditions; Vapor intrusion plan focused on investigating the vapor intrusion pathway in the residential neighborhood and business district east of the Plant; the investigation plan for the Plant focused on contamination within the Plant, including investigation of utility corridors, delineating contamination and investigating source areas

## Residential/Commercial Area:

- Soil-gas wells and vapor pins were installed and indoor air sampling was conducted in Fall 2018
- Ford is required to collect groundwater, soil-gas and indoor air samples on a quarterly basis to ensure representative samples are collected to evaluate vapor intrusion

# Vapor Intrusion - A Complex Pathway

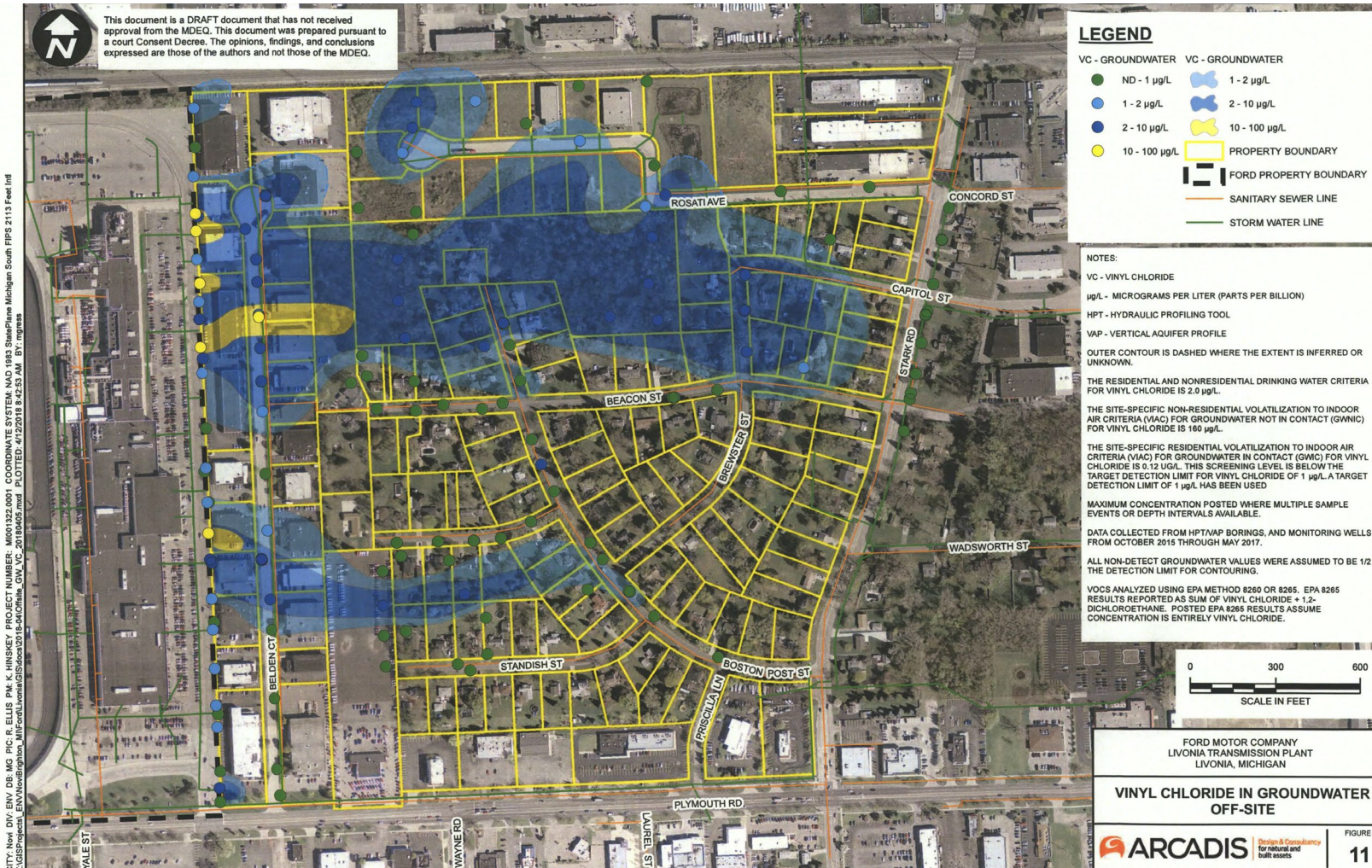




# Indoor Air Sampling



# Ford's Initial Conceptual Site Model: Vinyl Chloride Off-site



# Activities Since August 2018 Public Meeting

- Data from soil-gas wells, vapor pins and indoor air samples from residences and businesses showed groundwater was very shallow and prevented representative and reliable soil-gas samples from being collected at most residences
- In November 2018 DEQ determined shallow groundwater wells were required to adequately assess the vapor intrusion pathway and directed Ford to install shallow groundwater wells
- December 2018 DEQ reviewed all data and determined numerous inconsistencies in data collection and recording of data and errors and required Ford to address all issues, requiring re-sampling of many locations

# Activities Since August 2018 Public Meeting

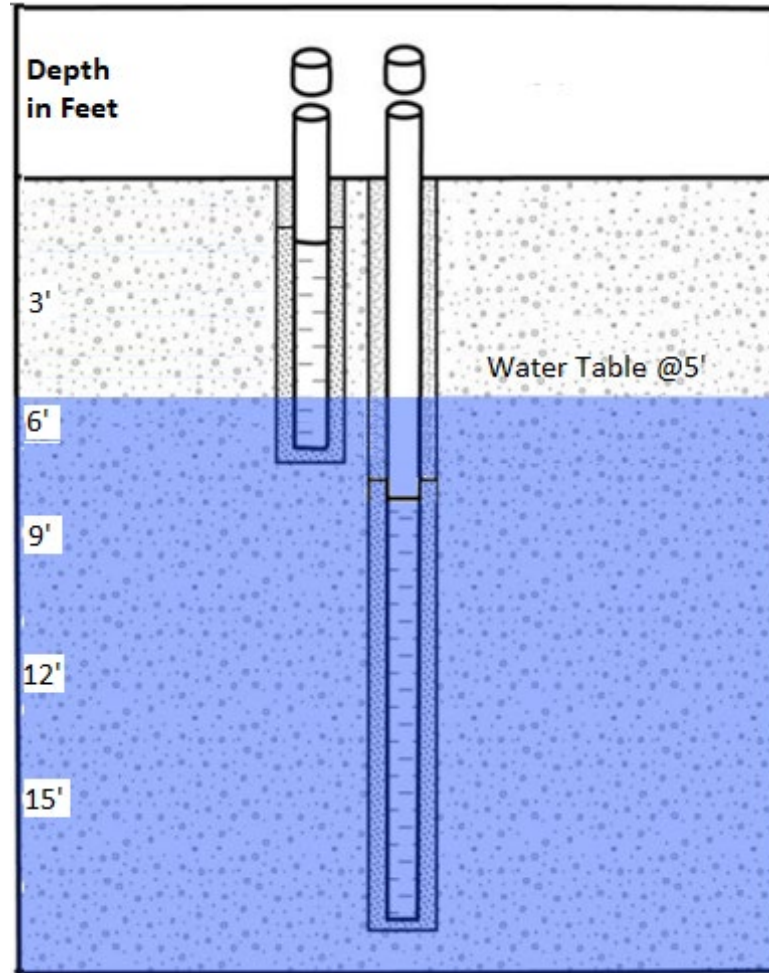
## Residences:

- Soil-gas samples from residences homes were all below residential site specific criteria; indoor air samples were below residential screening levels
- Two garages had indoor air samples above residential screening levels; DHHS determined these exceedances were due to products used or stored in the garages (additional evaluation being conducted)

## Businesses:

- Soil-gas samples from 2 businesses exceeded commercial site specific criteria and indoor air samples exceeded commercial screening levels (sources of TCE present in both businesses, additional evaluation being conducted)
- Indoor air samples in 3 other businesses exceeded commercial screening levels; DHHS advised likely due to products inside businesses or from building materials (additional evaluation being conducted)

# Shallow Groundwater Well



# Current Site Activities

- Shallow monitor wells with screens intersecting the groundwater table were installed starting in December 2018 to present at all residences where access was granted
- 108 shallow monitor wells have been installed to date
- Based on citizen feedback from public meeting, the DEQ has collected duplicate samples of random wells for analysis at the State of Michigan Environmental Quality laboratory and continues to collect duplicate samples

# Data on our duplicate samples

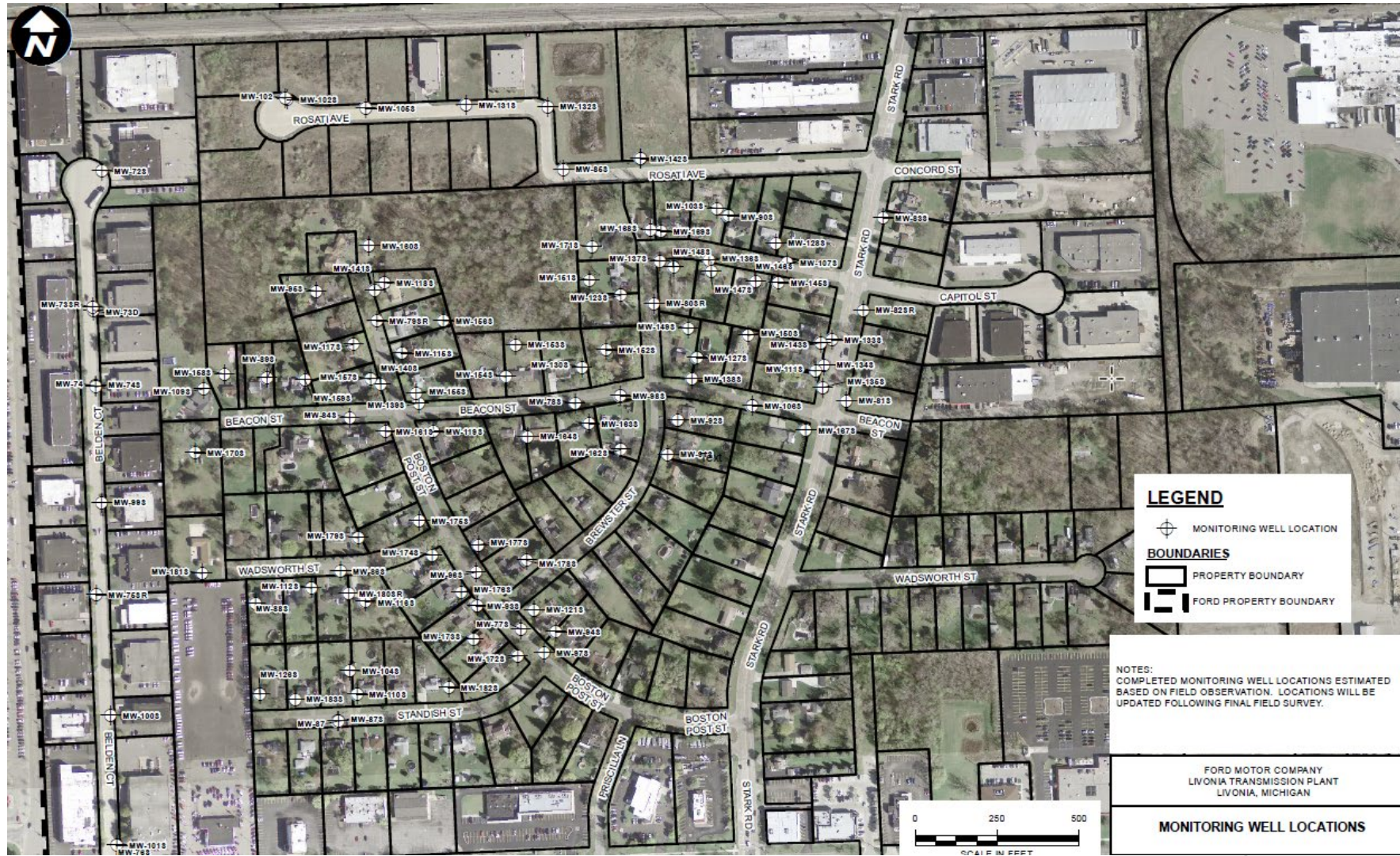
- DEQ has collected 30 duplicate groundwater samples to date from the first sampling event of the shallow groundwater wells
- DEQ sample results have ranged from below criteria to 2 ug/L
- Ford sample results for these wells during the most recent sampling period has ranged from below criteria to 1.7 ug/L
- Variation between DEQ and Ford groundwater duplicate samples have been within normal ranges

# Current Site Activities

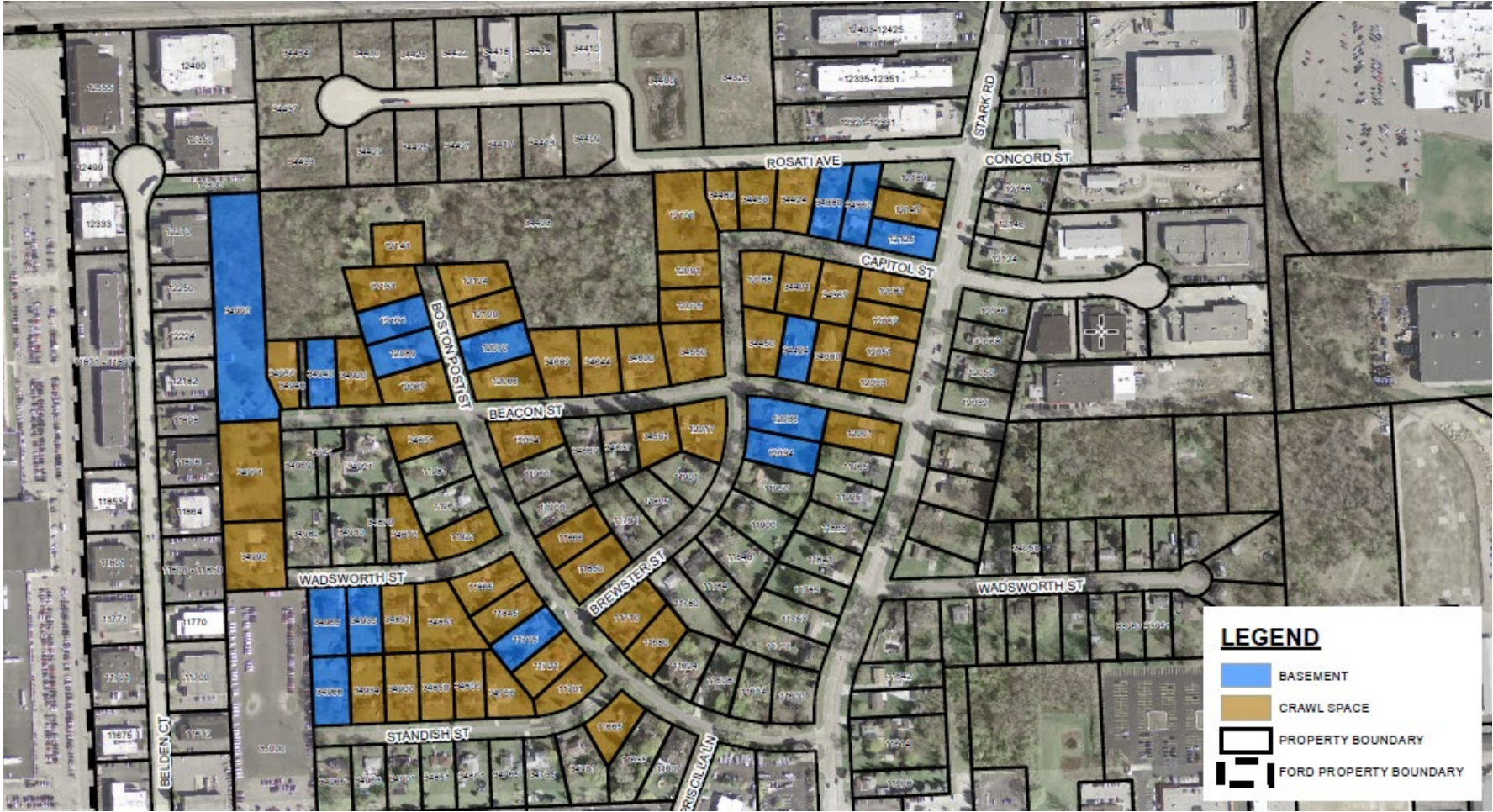
- Data from shallow groundwater wells were reviewed immediately upon submittal and vinyl chloride was detected in some wells above the target detection levels of 1 part per billion (ppb)
- DEQ notified Ford that these exceedances required Ford to mitigate any structure within the groundwater plume where vinyl chloride was present above 1 ppb and 100' outward of the plume. Ford was given 45 days to complete this action
- Homes requiring mitigation required site visits/inspections to gather information to design the mitigation systems. Based on building type and building specific variation, adjustments to standard mitigation systems are needed. The DEQ provided expert assistance to Ford during the design period



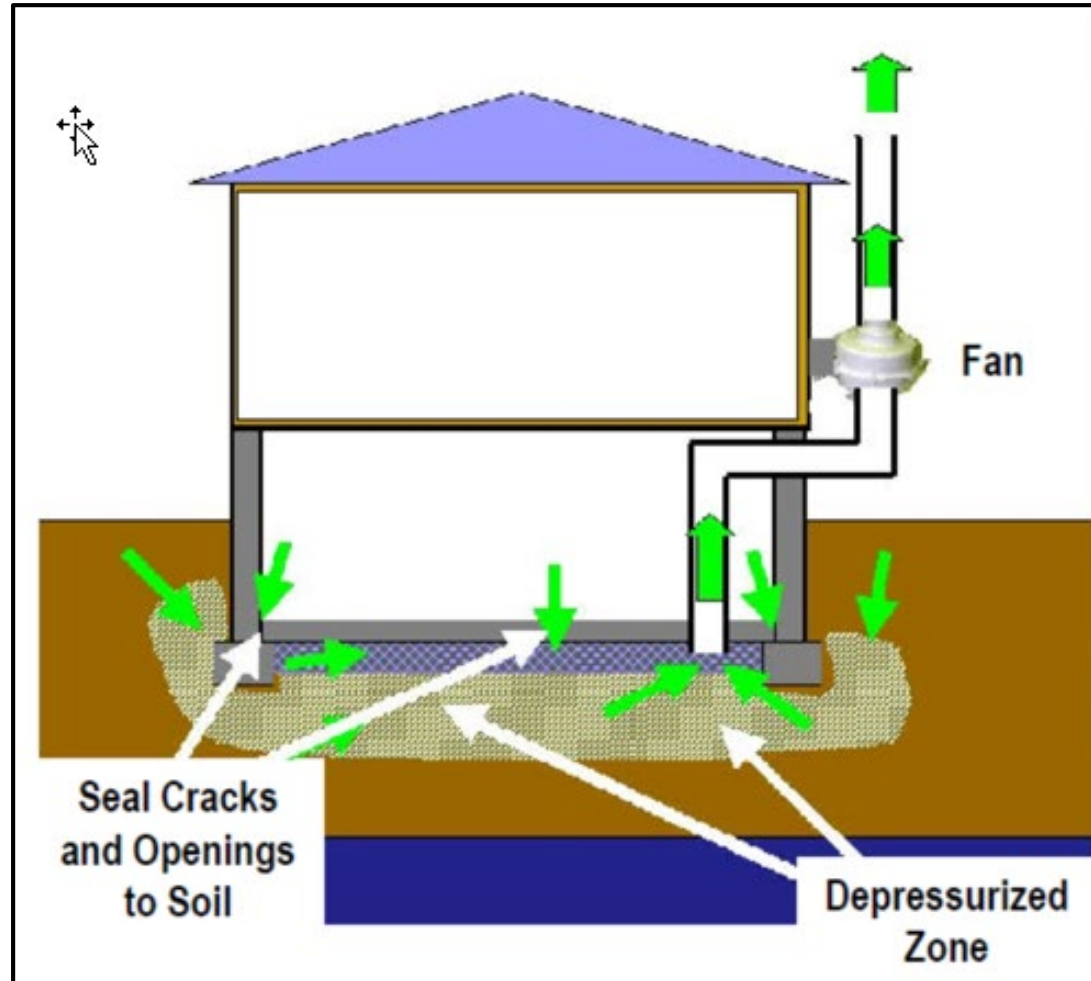
# Shallow Groundwater Data



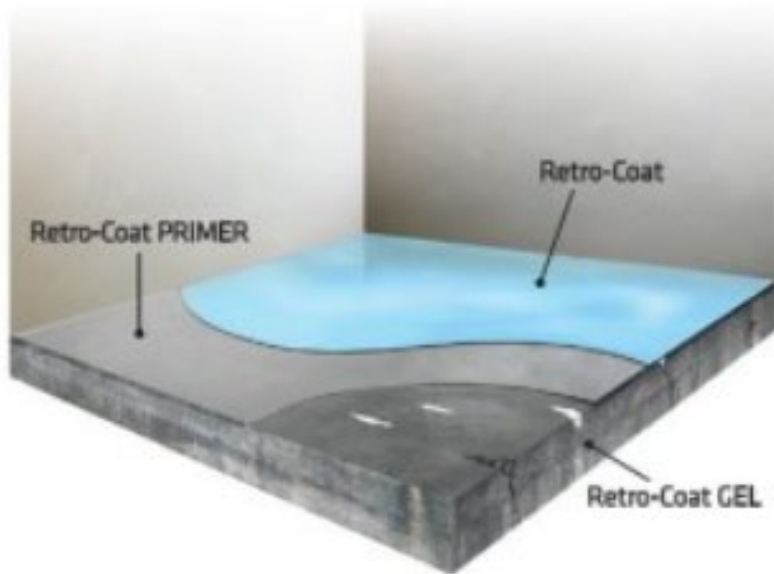
# Building surveys



# Mitigation System



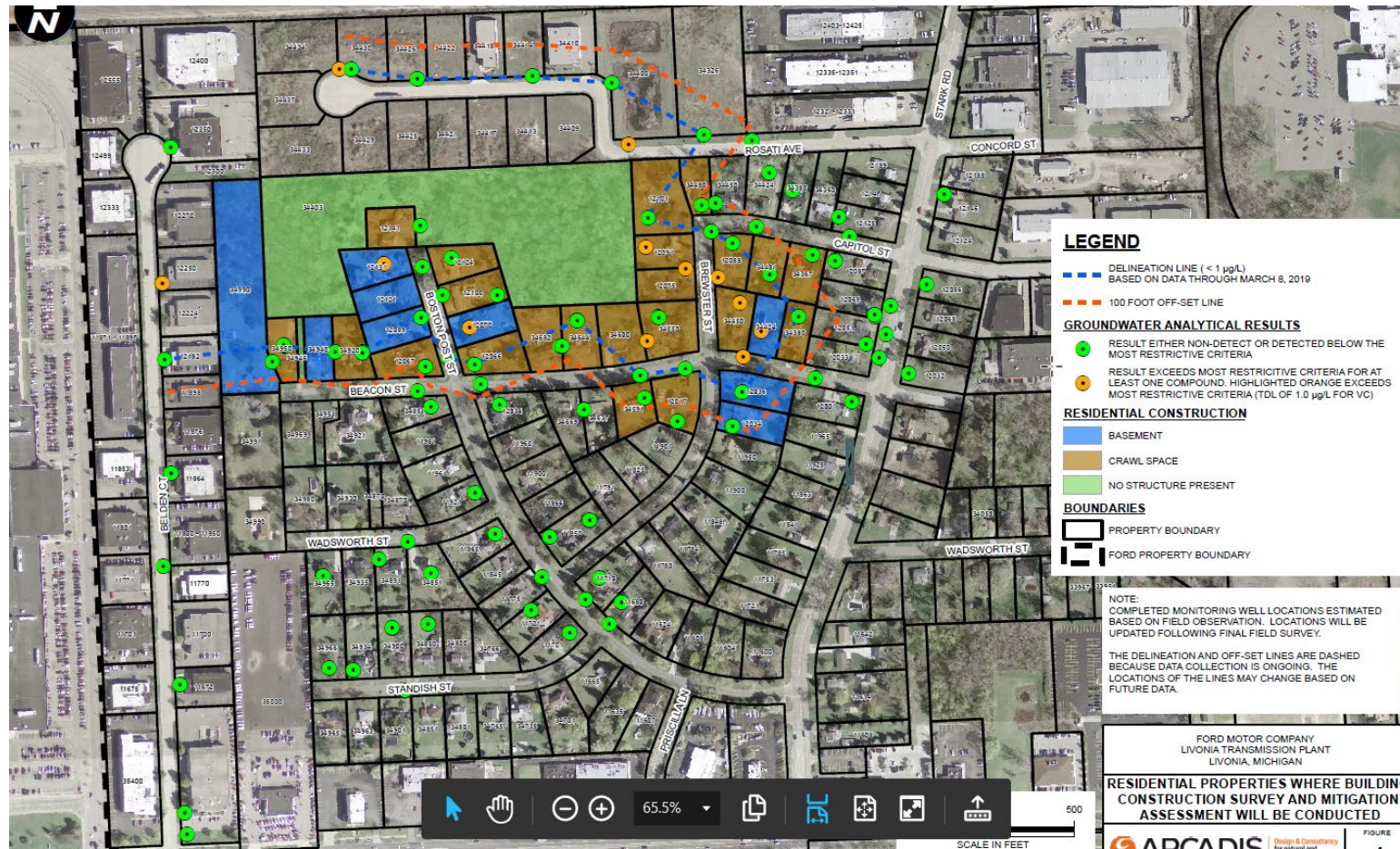
# Mitigation for basements where shallow water is present (example Retro Coat by Land Science)



# Current Site Activities

- Based on first estimate of plume, Ford discussed 50 homes needing mitigation. In February 2019 Ford installed additional shallow wells to further define the groundwater plume and 100' outward of the plume. These new wells were below 1 ppb therefore Ford proposes removing 19 residences from the original estimate of homes requiring mitigation since they are outside of the groundwater plume and 100' outward of the plume; DEQ is currently reviewing that request
- Ford advised DEQ that access was not provided to some homes and mitigation systems cannot be installed at these homes within the 45 days and requested an extension. DEQ responded to this request and stated that a 30 day extension was acceptable for homes where homeowners had requested delays in installing but extensions without proof of owner delay were not granted
- Some structures such as detached garages and sheds will have floors sealed as the method of mitigation. The weather needs to be warmer to conduct this work for the sealant to work
- Ford has requested that DEQ agree that 7 homes that are within the groundwater plume and 100' boundary do not require immediate mitigation based on data collected to date. DEQ responded and does not agree to this request since sufficient data is not available to eliminate homes and is requiring these homes be included in expedited mitigation

# Ford groundwater plume map 3/12/19



# Next Steps

- Continued sampling of all shallow monitoring wells to account for seasonal variation and groundwater fluctuation, second round of sampling will be April-May
- Continued sampling of soil-gas wells and vapor pins that provide representative soil-gas data
- On-going installation of additional mitigation systems (Ford reports 10 scheduled currently)
- Inspection and maintenance of installed mitigation systems (Ford reports 8 installed)

# Next Steps

- If additional shallow wells or future sampling of shallow wells show data above 1 ppb vinyl chloride, mitigation will be required for those areas and the groundwater plume definition expanded to include those wells and 100' outward
- Additional investigation of the Plant and contamination north and south of the Plant and investigation of utility corridors
- Once an adequate set of data is available that provides representative shallow groundwater concentrations and conditions, a report of findings will be submitted to DEQ. After DEQ review and approval of the report, within 60 days of approval, a remedial action plan is due to the DEQ. This remedial action plan will address long-term solutions for the contamination from the Plant. Under the Consent Decree the plan is required to receive review and approval from the DEQ. A public meeting will be held seeking public input on this plan and comments included in DEQ approval of the plan



# Contact Information

The DEQ has a project web page at [www.michigan.gov/LivoniaVI](http://www.michigan.gov/LivoniaVI)

To reach a DEQ representative, please contact the Environmental Assistance Center by phone at 800-662-9278, or by email at DEQ-RRD-Ford-Livonia@michigan.gov

E-mail listserv: [www.michigan.gov/deq](http://www.michigan.gov/deq)

Click on the red envelope at the bottom of the page and type in your email address. Next find “Local Topic Updates” and select Ford Livonia Vapor Intrusion