



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# Milford Drinking Water Information Session

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April 27, 2022

# Introductions, Logistics, and Agenda

- Introductions
- Agenda
  - Proactive approach to protect the Village's drinking water
  - Drinking water & monitoring well data
  - Administrative Order
  - Emergency and Long-Term Plans
  - Vinyl Chloride & Chlorinated solvent information
  - Questions and Answers

# Protecting the Residents of Milford

- Vinyl chloride has not been detected in the Village's drinking water. Village is monitoring drinking water wells and treated water monthly.
- The vinyl chloride detected in monitoring well OW-16D2 less than 200 feet from the Village's drinking water wells and was above EGLE's Part 201 residential generic drinking water criteria.
- The Administrative Order was issued to ZF Active Safety US Inc. (ZF) because EGLE determined the vinyl chloride detection in the nearby monitoring well posed an imminent and substantial endangerment to the Village's drinking water.
- Administrative Order includes emergency response and long-term treatment of the Village drinking water.

## Village's Drinking Water Wells & Monitoring Well OW-16D2

- Village's Drinking Water source is groundwater from 2 wells & water is treated to remove iron.
- Monitoring well OW-16D2 with vinyl chloride located in park less than 200 feet from drinking water wells.



# Drinking Water and Monitoring Well Sampling & Results

- *Vinyl chloride has NOT been detected in the Village's drinking water.*
- Village monitors quarterly for volatile organic compounds.
- Since detection of vinyl chloride in May 2021 at monitoring well OW-16D2.
  - monitoring of OW-16D2 increased and is now monthly.
  - drinking water wells & treated water testing have increased to *monthly*.

# Monitoring Well OW-16D2 Results

## Vinyl Chloride in Monitoring Well OW-16D2

Date Sampled	Sample Type	Vinyl Chloride Concentration (micrograms per liter, ug/L)
5/13/2021		3.5
6/8/2021		1.2
	duplicate	1.3
8/3/2021		3.0
	split sample*	3.0
	lab re-check*	3.0
8/16/2021		1.8
	split sample*	3.0
9/1/2021		1.7
9/13/2021		1.6
9/27/2021		1.8
10/11/2021		1.4
	split sample*	1.0
10/25/2021		1.5
11/8/2021		1.5

Date Sampled	Sample Type	Vinyl Chloride Concentration (micrograms per liter, ug/L)
12/6/2021		Not detected
	split sample*	Not detected
1/4/2022		2.5
	split sample*	3.0
1/25/2022		3.2
	split sample*	2.0
2/17/2022		2.0
	split sample*	1.0
3/21/2022		2.3
	split sample*	1.0
4/4/2022**		Not detected
	2nd lab	Not detected
	split sample*	Not detected
4/8/2022**		Not detected
	2nd lab	Not detected
	split sample*	Not detected

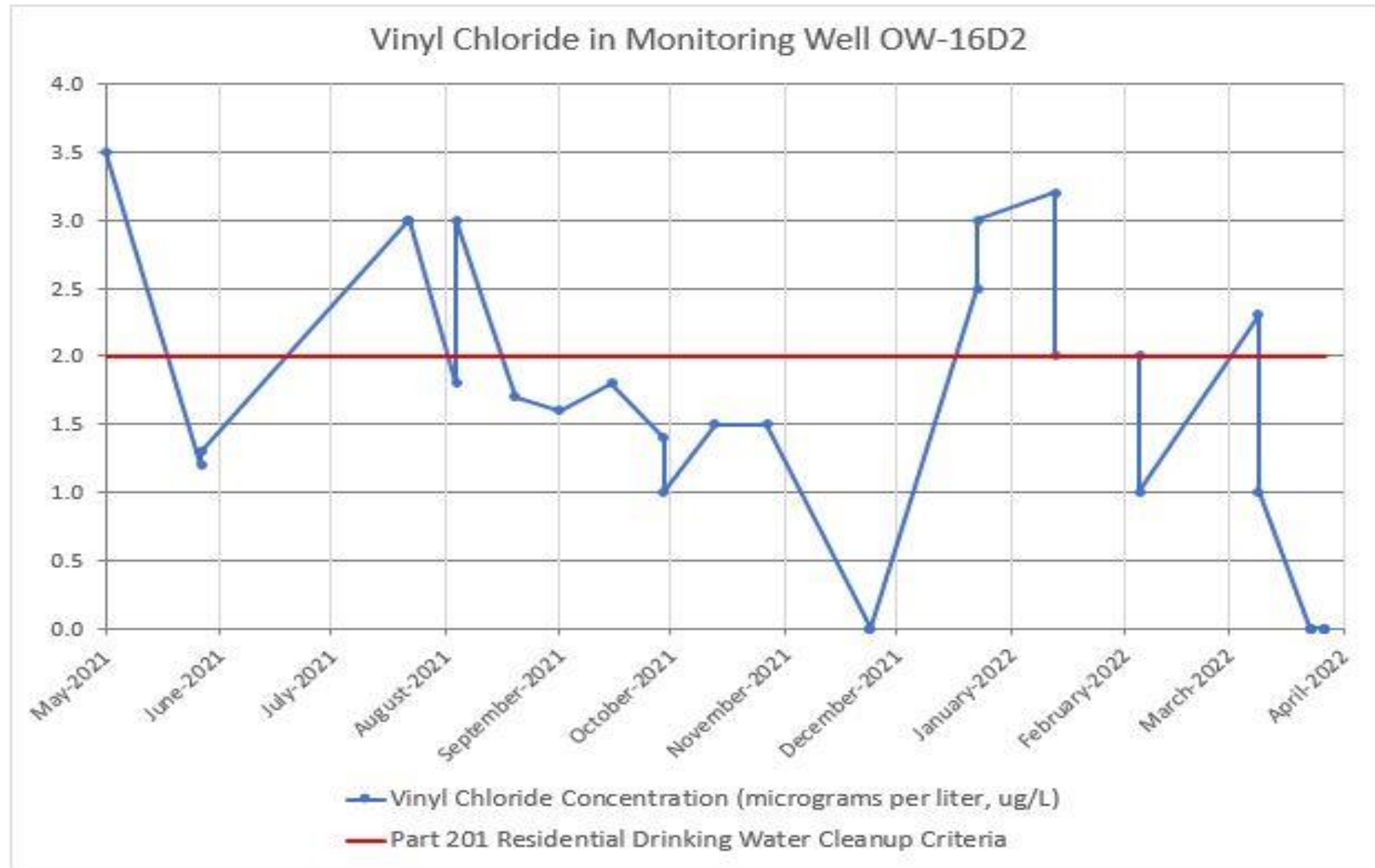
**Concentrations** are greater than the Part 201 Residential Drinking Water Cleanup Criteria of 2.0 ug/L. Drinking Water Maximum Contaminant Level (MCL) is 2 ug/L.

\*split samples collected by Wood/Village; all other samples collected by Arcadis/ZF

\*\* Samples were collected following efforts by Arcadis/ZF to clean the monitoring well.

Laboratory analytical method detection limit for vinyl chloride is 0.5 ug/L.

# Monitoring Well OW-16D2 Results



# Village Drinking Water Results

## Monitoring for Vinyl Chloride in Drinking Water Wells & Water To Customers

Date Sampled	Sample Type	Vinyl Chloride Concentration (micrograms per liter, ug/L)
3/2/2021	Drinking Water Well, PW-2	Not detected
6/1/2021	Drinking Water Well, PW-2	Not detected
6/8/2021	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
7/6/2021	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
8/3/2021	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
9/7/2021	Drinking Water Well, PW-2	Not detected
10/7/2021	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
11/8/2021	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
12/7/2021	Drinking Water Well, PW-2	Not detected
1/4/2022	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
2/4/2022	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected
3/10/2022	Drinking Water Well, PW-4	Not detected
4/4/2022	Drinking Water Well, PW-2	Not detected
	Drinking Water Well, PW-4	Not detected

Date Sampled	Sample Type	Vinyl Chloride Concentration (micrograms per liter, ug/L)
3/2/2021	Treated Water	Not detected
6/1/2021	Treated Water	Not detected
6/8/2021	Treated Water	Not detected
7/6/2021	Treated Water	Not detected
8/3/2021	Treated Water	Not detected
9/7/2021	Treated Water	Not detected
11/8/2021	Treated Water	Not detected
12/7/2021	Treated Water	Not detected
1/4/2022	Treated Water	Not detected
2/4/2022	Treated Water	Not detected
3/10/2022	Treated Water	Not detected
4/4/2022	Treated Water	Not detected

**Concentrations** are greater than the Drinking Water Maximum Contaminant Level (MCL) is 2 ug/L.

Laboratory analytical method detection limit for vinyl chloride is 0.5 ug/L.



# Administrative Order

- EGLE issued an Administrative Order on March 16<sup>th</sup>, 2022.
- The Administrative Order requires ZF to cooperate with the Village regarding:

Installation of a permanent treatment system on the village drinking water system

Financial assurance for the long-term operation of the permanent treatment system

Emergency response measures  
(Interim Response Measures)

# Emergency Response

- The Administrative Order requires interim response measures.
- Intended to cover the time period between now and when the new treatment to remove vinyl chloride is operational.
- To go into effect if vinyl chloride is detected in the drinking water after treatment above the MCL (2 ug/L).
- Implementation will involve the Village, EGLE, DHHS and ZF.

# Long-Term Plans

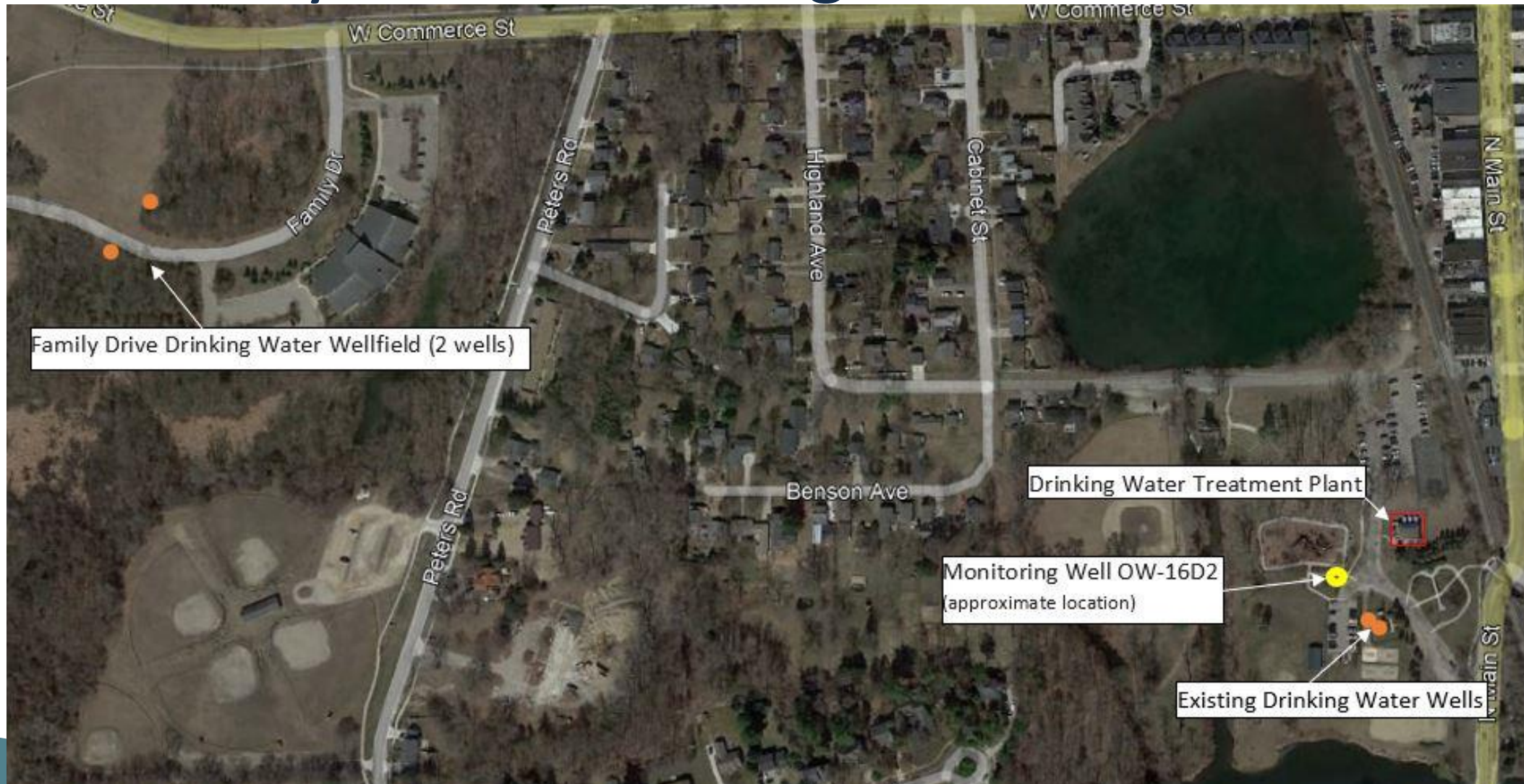
- Required by Order – design, construction, installation & operation of additional treatment at the Village's water treatment plant to remove vinyl chloride\*.
- Commitment by the Village and EGLE to have the Family Drive drinking water wellfield permitted and brought on-line.
- ZF continues to operate a groundwater pump and treat system.
- Regular updates to the Village residents.

\*Vinyl chloride *has not* been detected in the Village's drinking water.

# Family Drive Drinking Water Wellfield

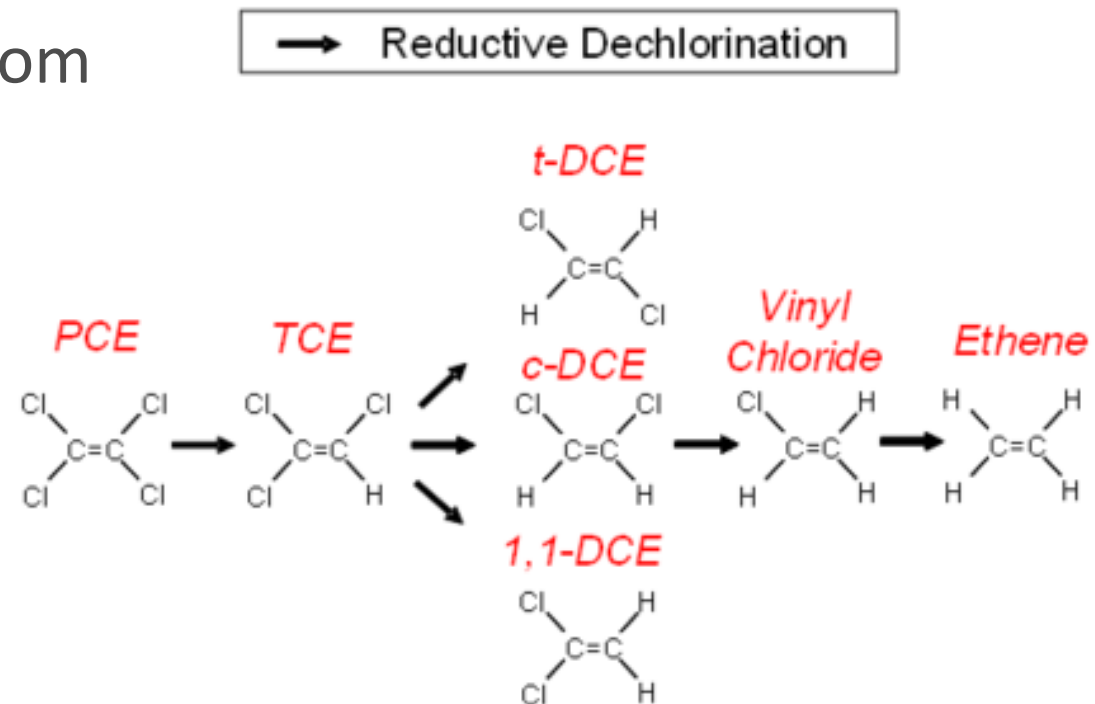
- Provides another source of water but cannot fully replace existing wells.
- Permitting process for wellfield, includes:
  - Sampling wells for contaminants; no VOCs detected
  - Verifying water production from wells
  - Design of well pumps & transmission piping to get water to the treatment plant
- In design and permitting phase.
- \$2M in federal dollars secured for bringing new Family Drive wellfield into service.

# Family Drive Drinking Water Wellfield



# What is vinyl chloride & chlorinated solvents?

- Vinyl chloride - volatile organic compound and break down contaminant of chlorinated solvents.
- Chlorinated solvents include trichloroethylene (TCE), tetrachloroethylene (PCE), and their break down contaminants.
- Break down contaminants from PCE and TCE are:



# Treatment for Vinyl Chloride

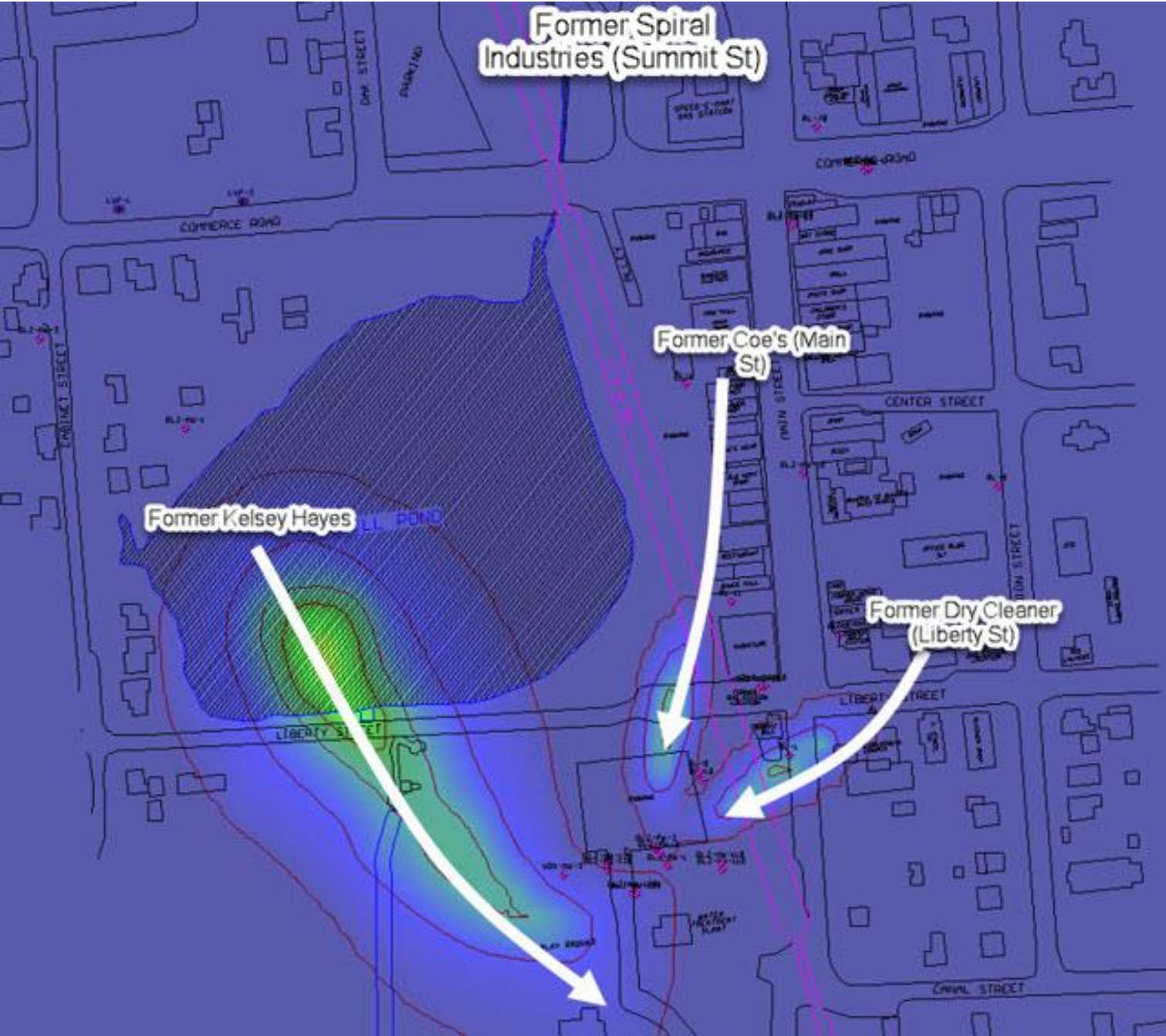
- Air stripping – process to remove vinyl chloride by passing air over thin layer of water on media, air removes vinyl chloride from water & air discharges to atmosphere.
  - Air discharge may need treatment & permit depending on concentrations.
- New treatment must go through EGLE DWEHD review and permitting.
- Monitoring of water quality parameters pre- and post-new treatment and lead and copper monitoring.

# Sources of Chlorinated Compounds

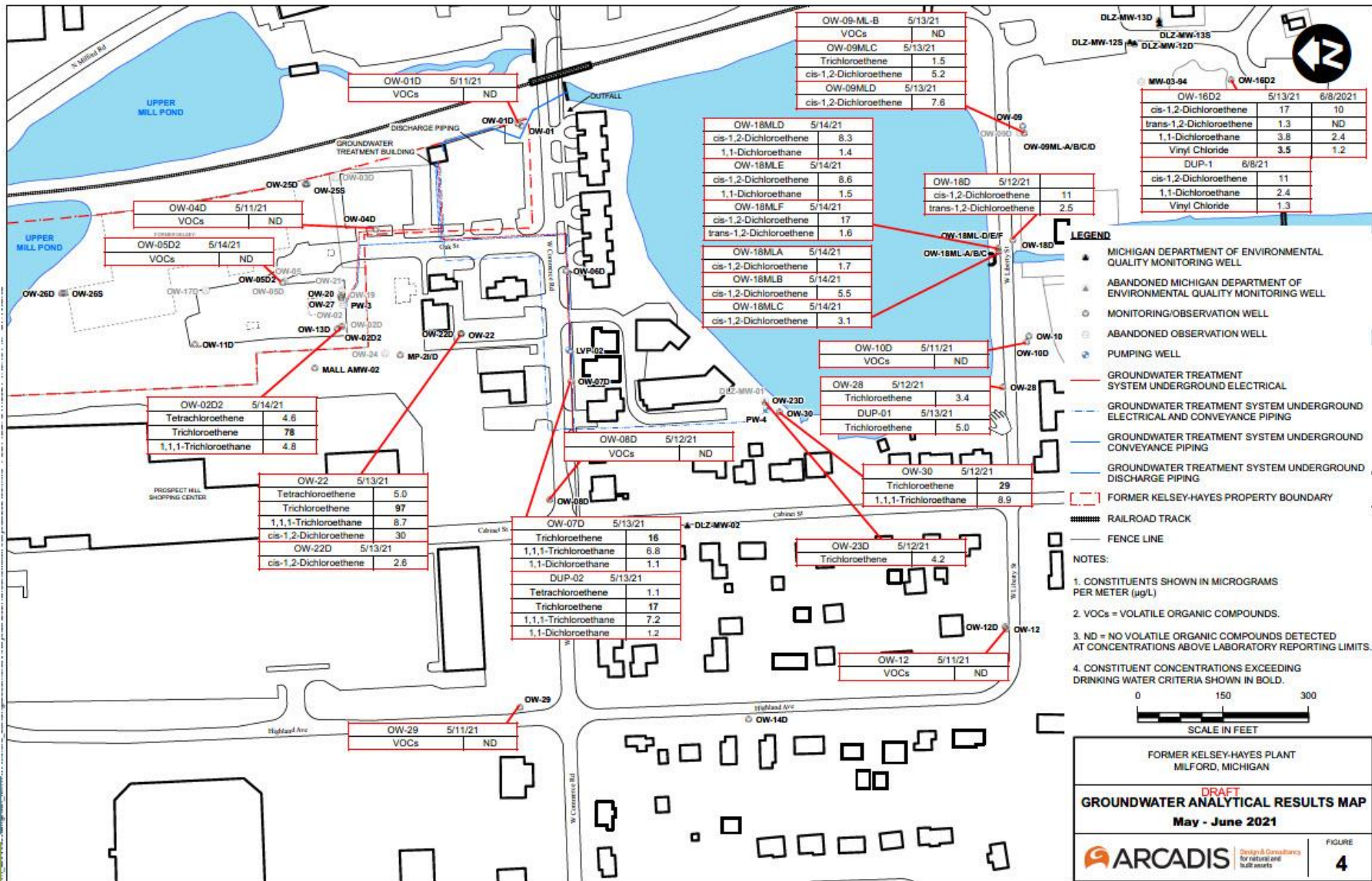
- The known groundwater sources of chlorinated compounds in the Village of Milford:
  - Former Kelsey Hayes Site (Oak Street) [ZF operates a pump and treat system]
  - Former Coe's Cleaner (Main Street) [The State operates a pump and treat system]
  - Former Dry Cleaners (possibly another Coe's location) (Liberty Street) [The State's system captures this plume]
  - Former Spiral Industries (Summit Street) [No known deep groundwater plume]



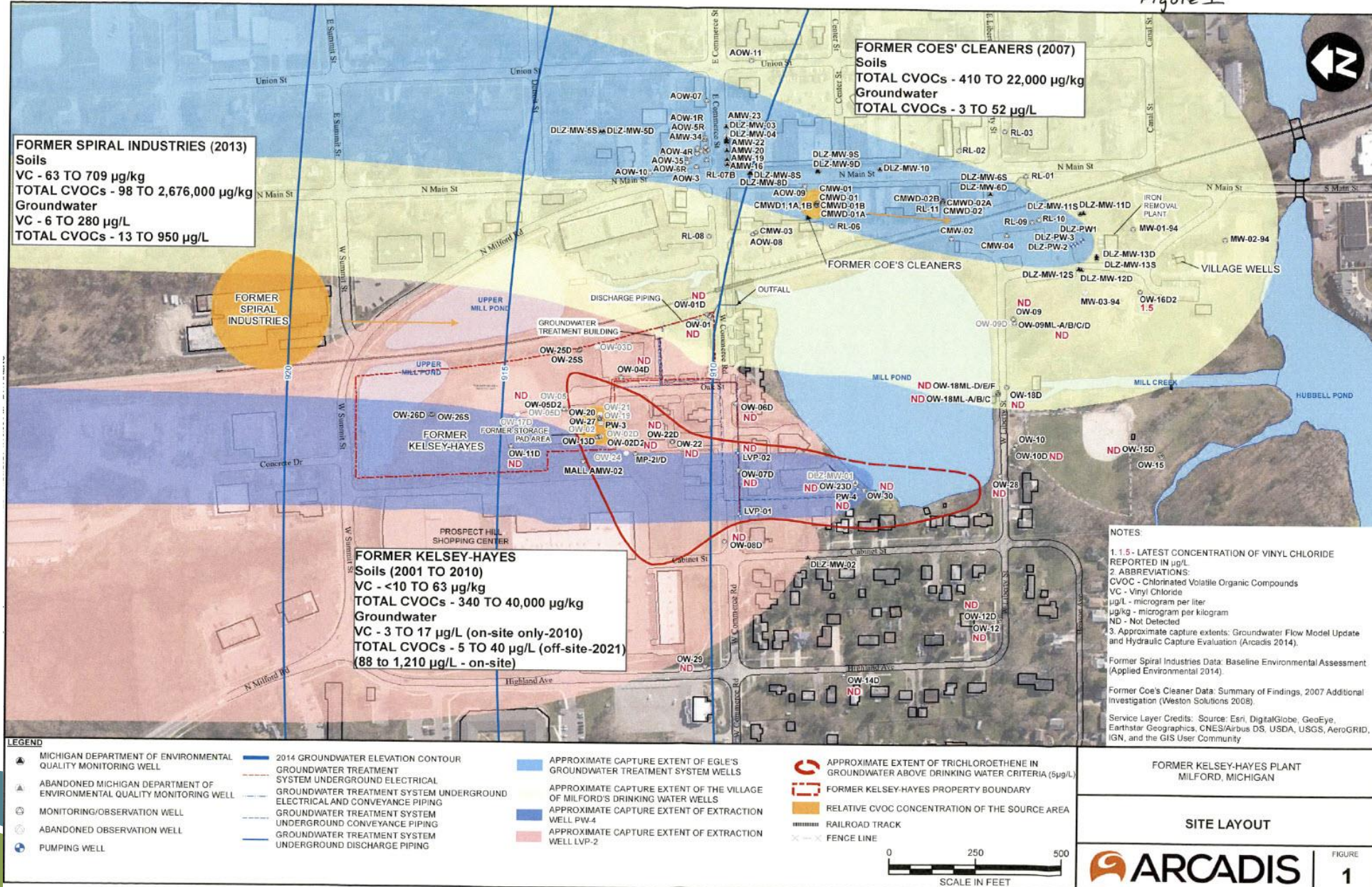
# Chlorinated Solvent Groundwater Contamination Plumes



# Kelsey Hayes Groundwater Contamination



# Groundwater Treatment and Drinking Water Capture Zones



# On-Going Communications to Residents

- Updates including the information presented today:
  - Village website: [www.villageofmilford.org/vinylchloride](http://www.villageofmilford.org/vinylchloride)
- Updates on actions being taken by EGLE:
  - EGLE website: [https://public.govdelivery.com/accounts/MIDEQ/subscriber/new?topic\\_id=MIDEQ\\_470](https://public.govdelivery.com/accounts/MIDEQ/subscriber/new?topic_id=MIDEQ_470)

# Summary

- Vinyl chloride has not been detected in the Village's drinking water.
- There are short-term and long-term plans in motion.
- Village, EGLE, and DHHS are:
  - Committed to addressing the risk of vinyl chloride to the Village's drinking water.
  - Will continue to work collaboratively.
  - Will continue to monitor for vinyl chloride and other contaminants.
  - Will continue to update residents.

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