



# Alpena Groundwater Use Ordinance

*Presentation Prepared and Provided by*

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# Where We Are Located





# Overview

## Purpose

- Obtain closure of the Sparkle Mart North Leaking Underground Storage Tank (LUST) site

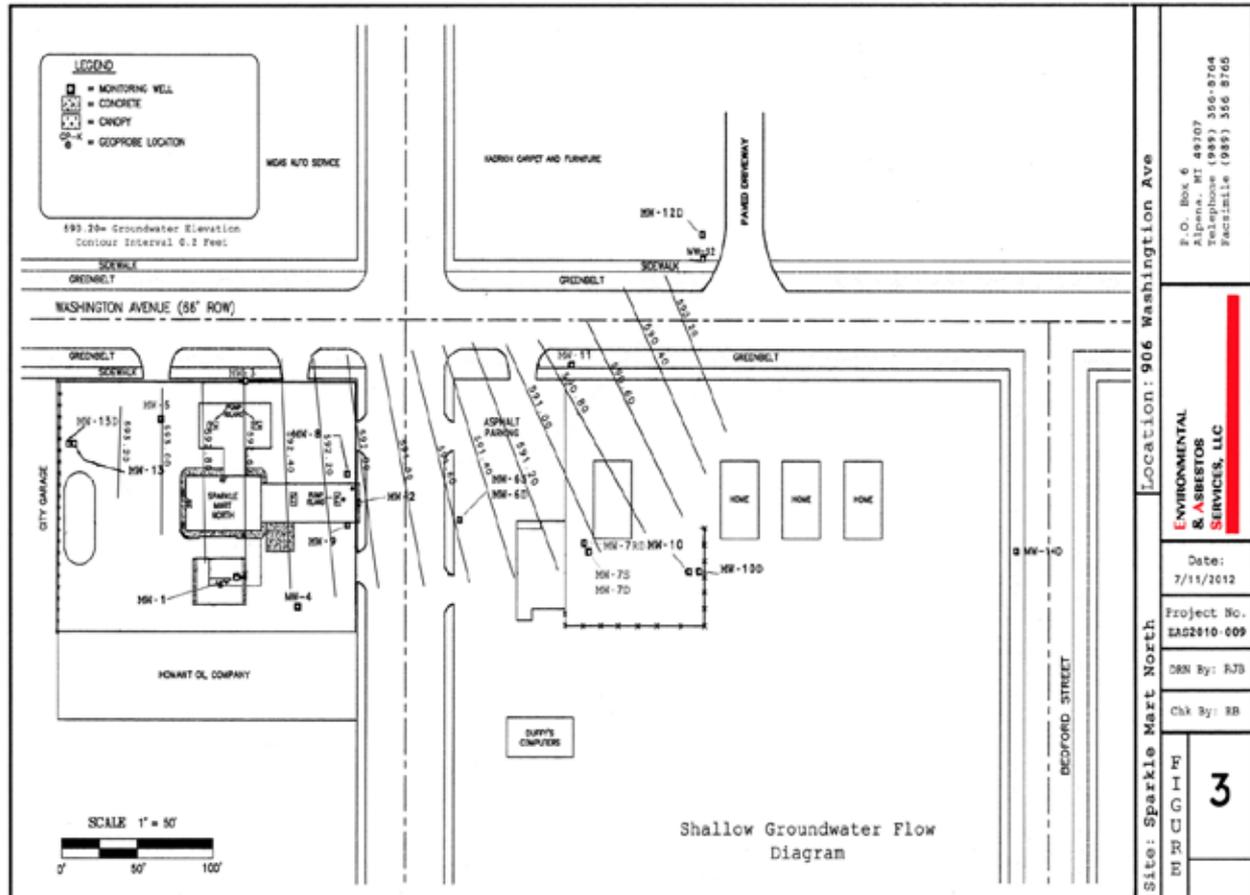
## Challenges

- Multiple sites of environmental contamination resulting in comingled plumes
- Adjacent residential neighborhood

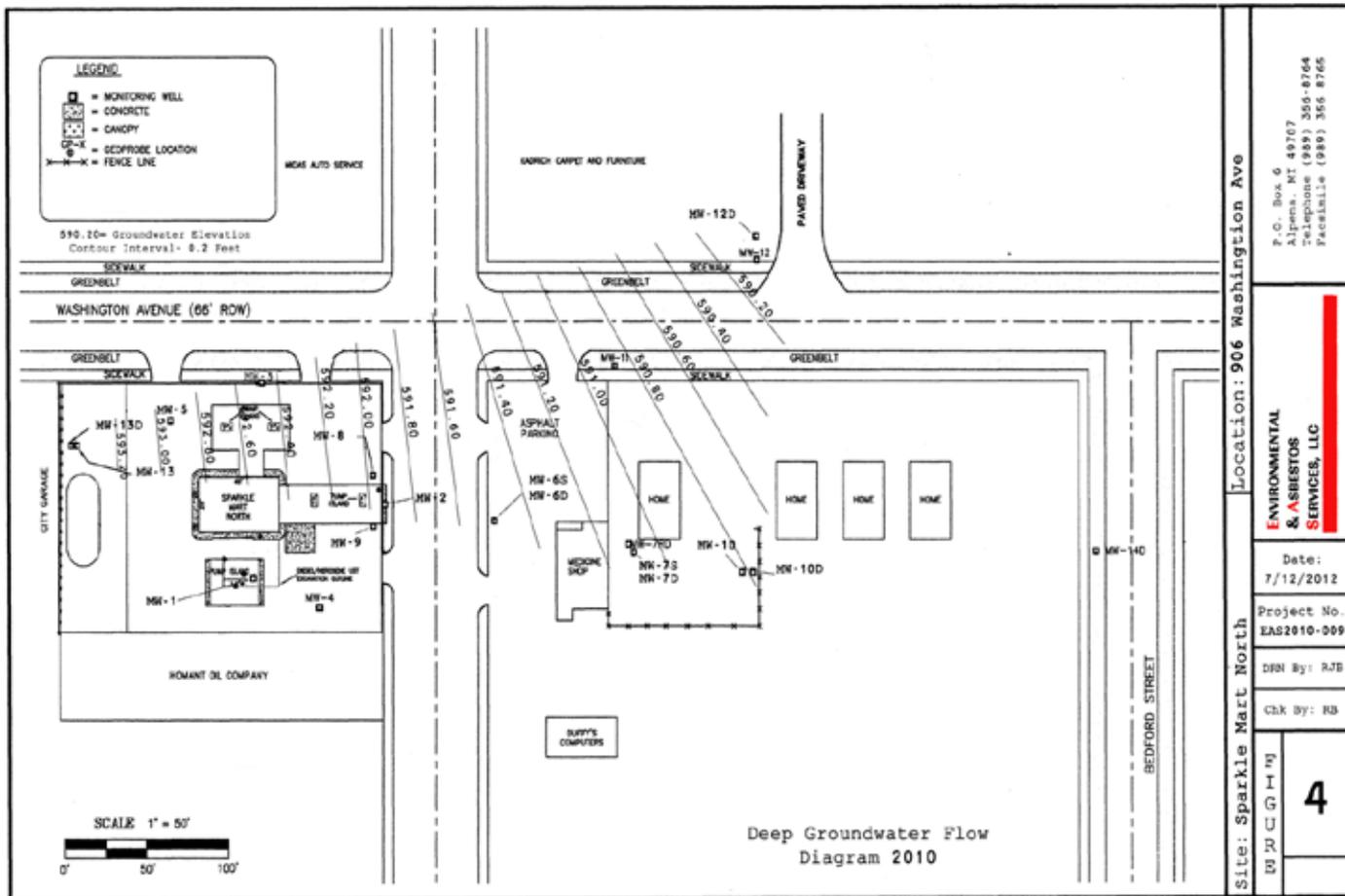
# Site History

- The Sparkle Mart North site is located on the southwest corner of Ripley Street and Washington Avenue.
- A confirmed release was reported at the site in 1998.
- Groundwater monitoring has been on-going since 2000 providing a substantial historical record of groundwater contaminant concentrations.
- Groundwater investigation identified other sources of groundwater contamination.

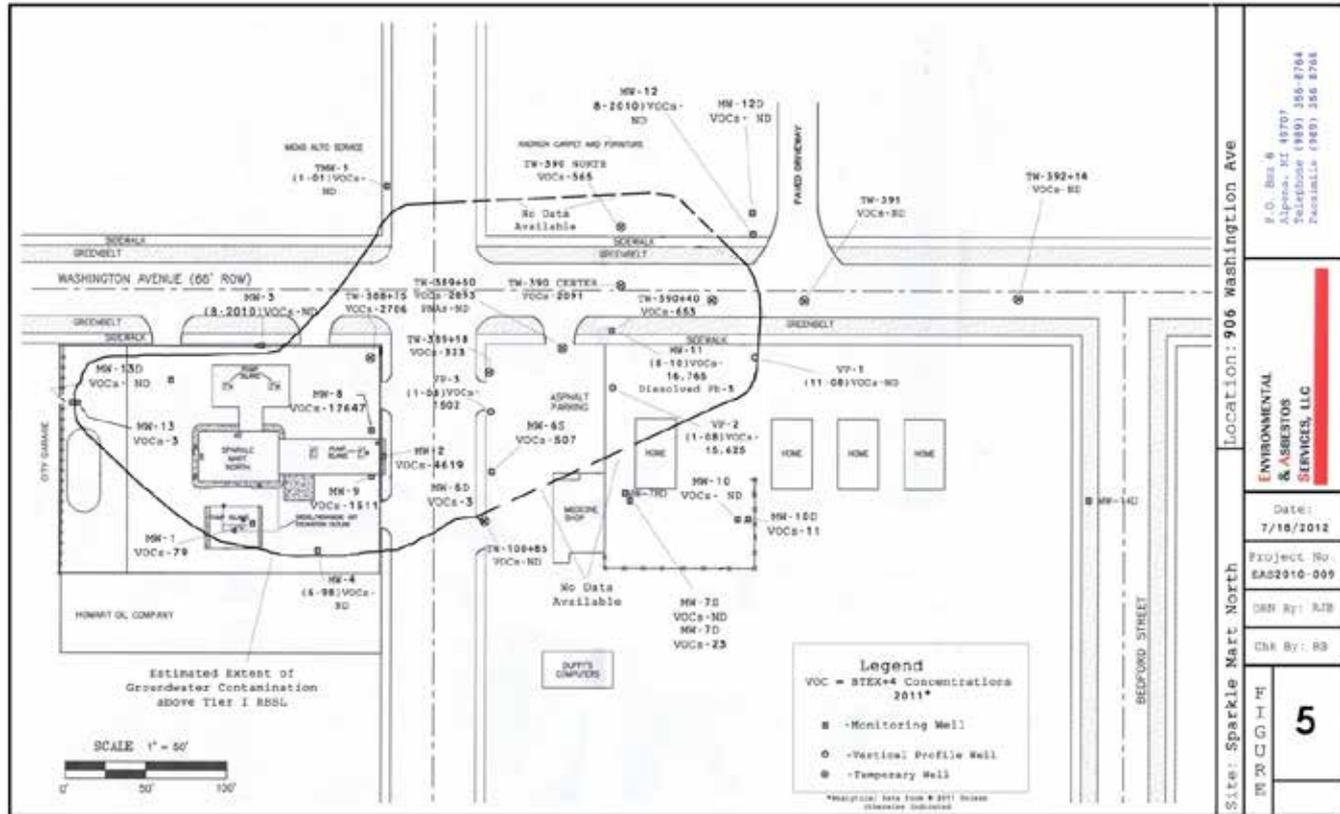
# Shallow Well Groundwater Flow



# Deep Well Groundwater Flow



# Extent of Contamination



# Conceptual Site Model

- Corrective Action Plan designed to eliminate the Groundwater Ingestion Exposure Pathway using Institutional Controls.
- Provide a “buffer zone” surrounding the known extent of groundwater impact to account for migration and other potential sources of groundwater contamination in the area.

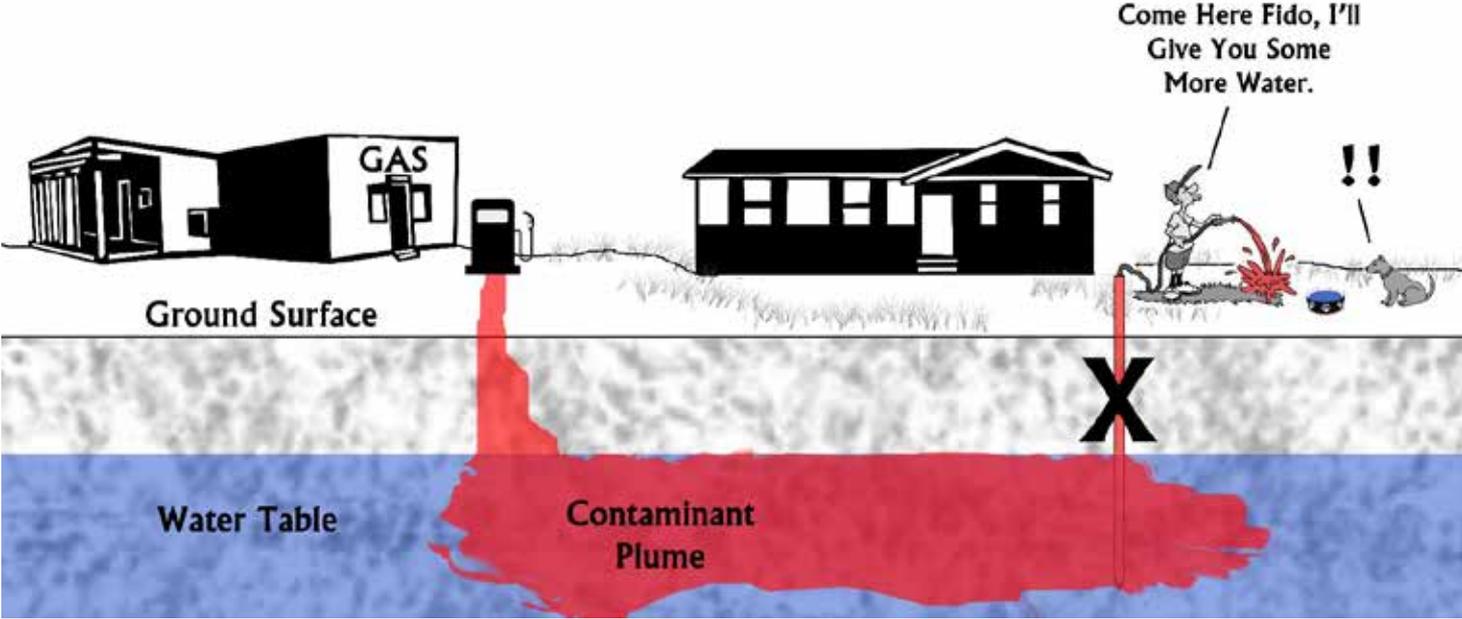
## Options

- Restrictive Covenants
- Groundwater Use Ordinance

# Potential Exposure Pathways

- Groundwater ingestion.
  - Municipal water supply used for drinking water. (Confirmed by water well records and homeowner survey.)
- Volatilization to Indoor Air.
  - Concentrations below Generic Criteria.

# Exposure Pathway



# Groundwater Restriction Map



# Collaboration

- City of Alpena
- Michigan Department of Environmental Quality
- Consultant (EAS, Inc.)
- Former Owner/Operator
- Attorney

# Ordinance Restricting Groundwater Use

- Initially the Local Ordinance was to regulate and restrict the use of groundwater to address both Part 201 and Part 213 sites.



# Issues/Problems

- Method for recording of properties within the restricted zone.

## Differences

Part 213 – Recorded with the Register of Deeds as an Ordinance Affecting Multiple Properties.

Part 201-Ordinance shall be Published and Maintained in the same Manner as Zoning Ordinances.

# Solution

- Amend Ordinance to be exclusively for Part 213 LUST sites

# **City of Alpena Local Ordinance**

**CITY COUNCIL  
CITY OF ALPENA**

**Alpena County, Michigan**

**ORDINANCE NO. 2015-429**

**AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CITY OF ALPENA BY ADDING SECTIONS 98-40 THROUGH 98-53 TO CHAPTER 98, ARTICLE II OF THE CODE OF ORDINANCES OF THE CITY OF ALPENA TO REGULATE AND RESTRICT THE USE OF GROUNDWATER IN CERTAIN AREAS OF THE CITY OF ALPENA DUE TO THE PRESENCE OF GROUNDWATER CONTAMINATION RESULTING FROM A RELEASE PURSUANT TO PART 213, LEAKING UNDERGROUND STORAGE TANKS, OF THE NATURAL RESOURCE AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451 AS AMENDED.**

# Municipal Code Web Page

[https://www.municode.com/library/mi/alpena/codes/code\\_of\\_ordinances?nodeId=COOR\\_CH98UT\\_ARTIIWA\\_DIV1GE\\_S98-40FI](https://www.municode.com/library/mi/alpena/codes/code_of_ordinances?nodeId=COOR_CH98UT_ARTIIWA_DIV1GE_S98-40FI)

# Outcomes and Future Impacts

- Ordinance only for Part 213 sites
- Protects human health and the environment from groundwater contamination that is routinely encountered in urban areas.
- Provides an avenue for closure and/or redevelopment of other Part 213 sites.

# Presenters Contact Information

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