

# CARD Update on the 1,4-Dioxane Groundwater Plume

Prepared For:  
Ann Arbor City Council  
Work Session  
February 29, 2016

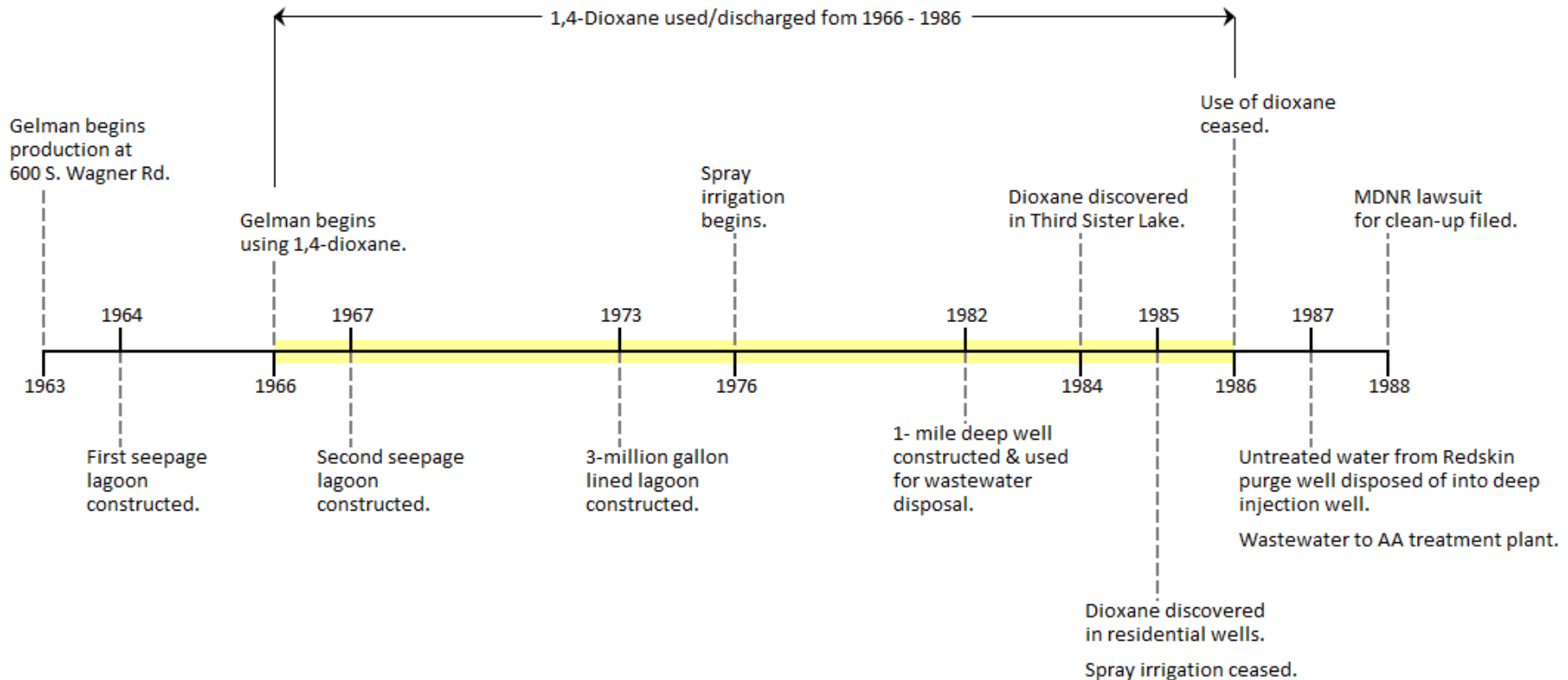
# What is CARD?

- CARD stands for the Coalition for Action on Remediation of Dioxane.
- Founded in 2006 as a partnership between local governments and citizens to develop strategies and policies to address the 1,4-dioxane contamination in our community.
- CARD meets monthly as a group and then meets quarterly with DEQ as a technical advisory committee.

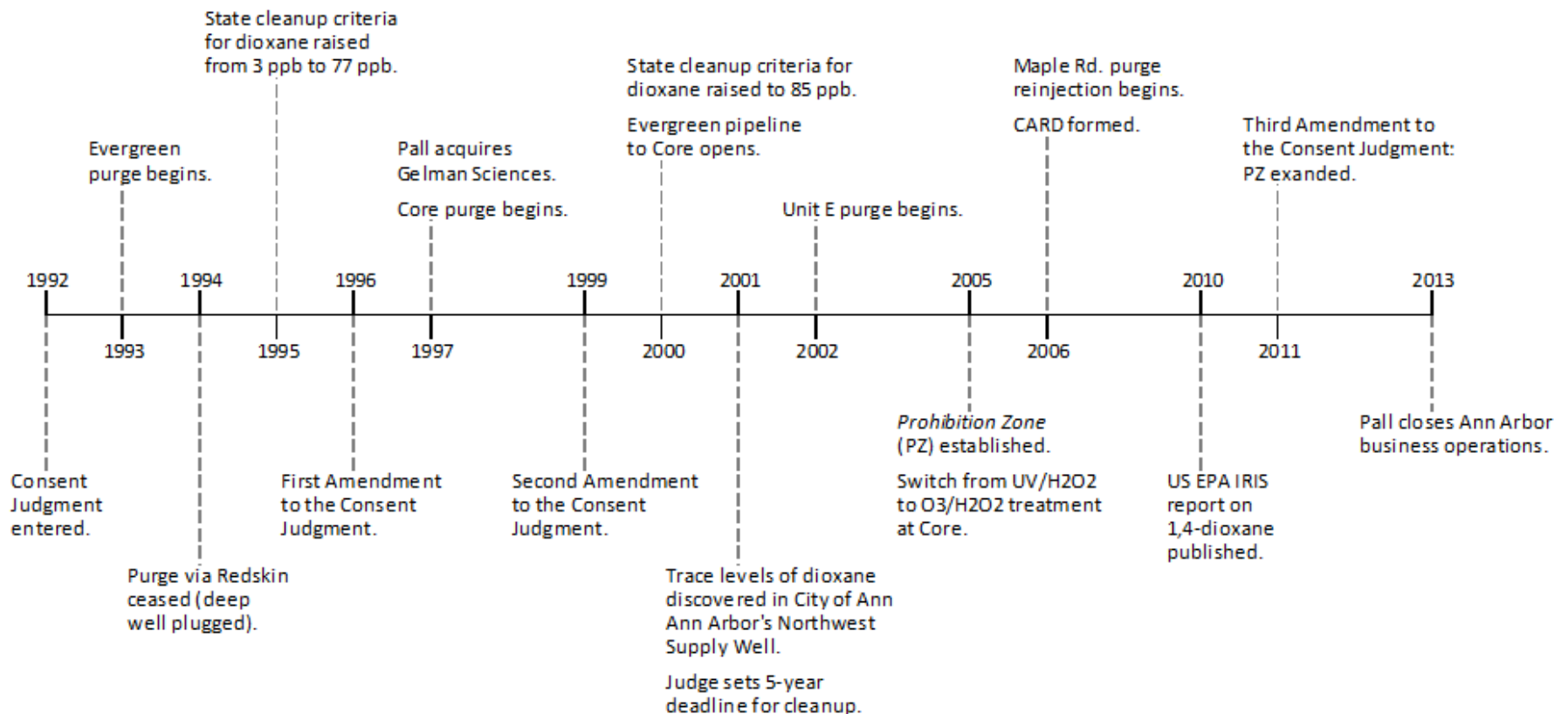
# CARD Concerns

- The plume continues to expand
- The state standard has not changed
- Remediation and sampling are decreasing
- Data Sharing remains a concern
- Lack of Attorney General participation

# Timeline (1963-1988)



# Timeline (1988 – Present)

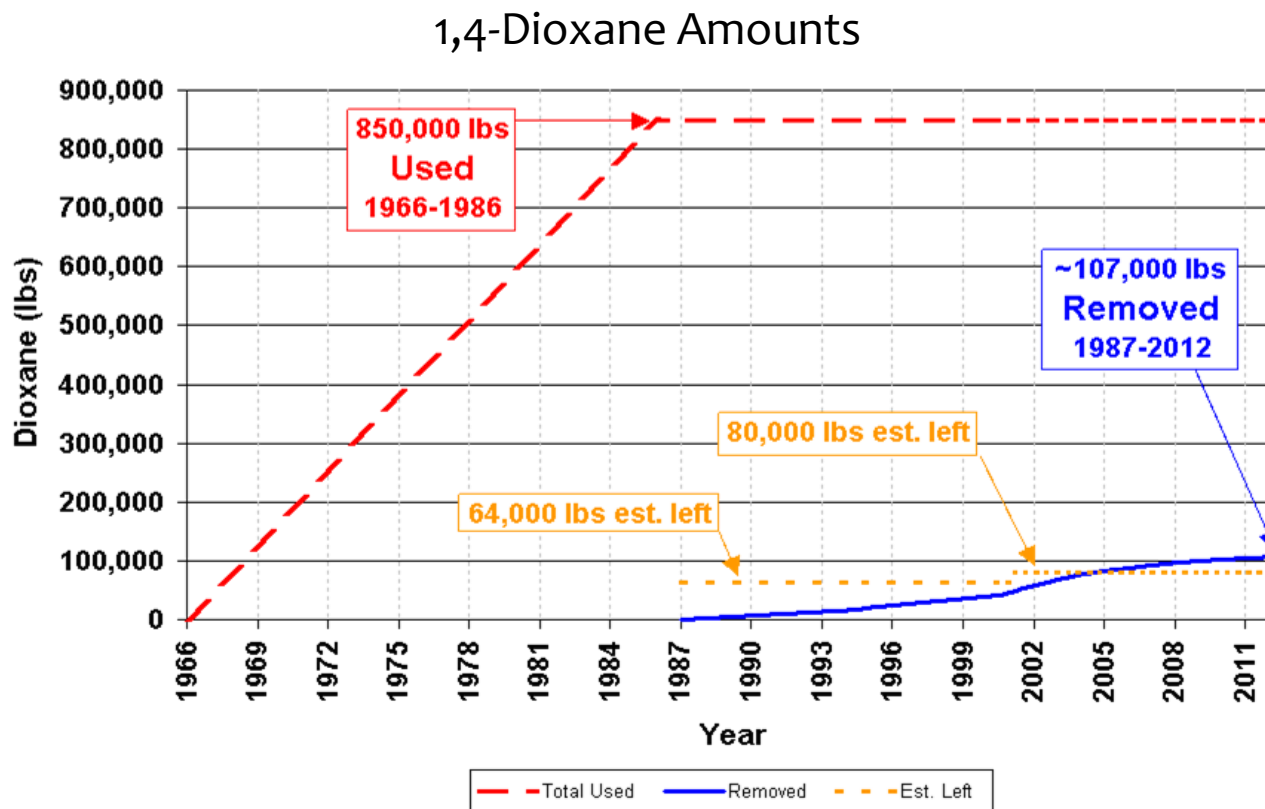


# Recent updates

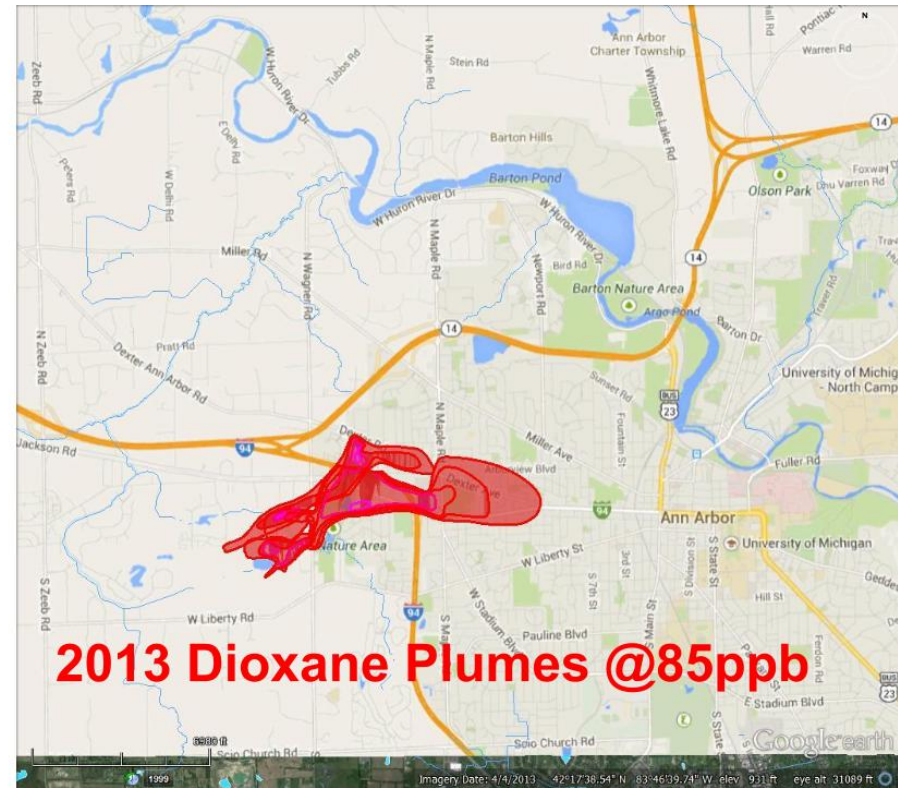
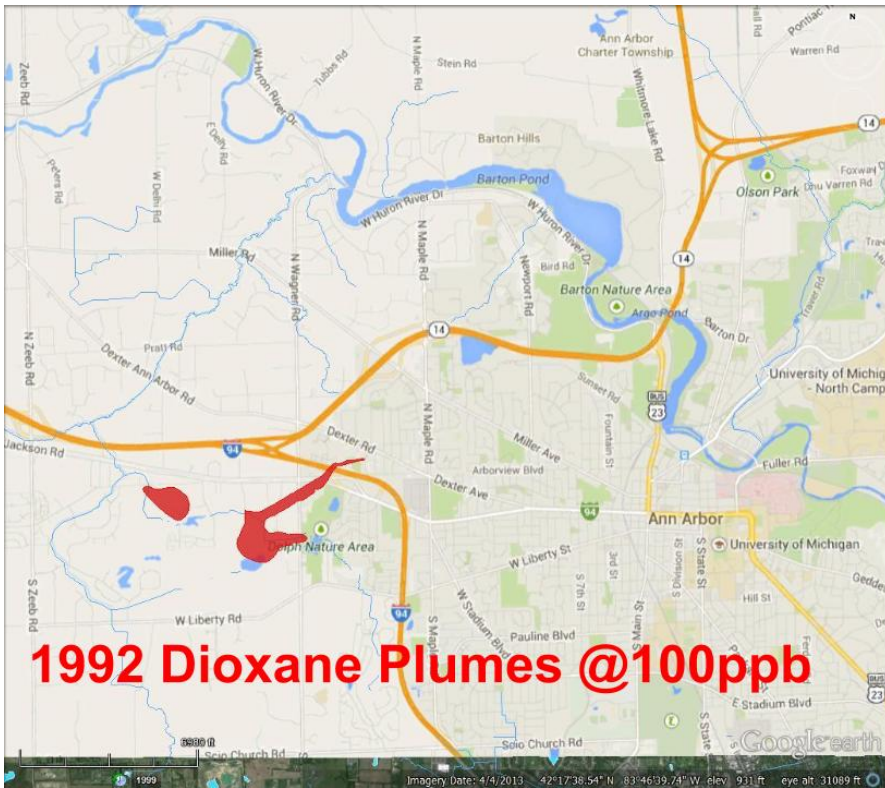
- \* 2012 – Pall removes access to database
- \* 2013 – MDEQ misses clean up criteria deadline
- \* 2014 – 2015 City participation in Criteria Stakeholder Workgroup
- \* 2014 – MDEQ settles with Pall \$500,000

# Remediation Concerns:

Mass of 1,4-Dioxane Left is Unknown.



# Plume Migration Over 21 Years

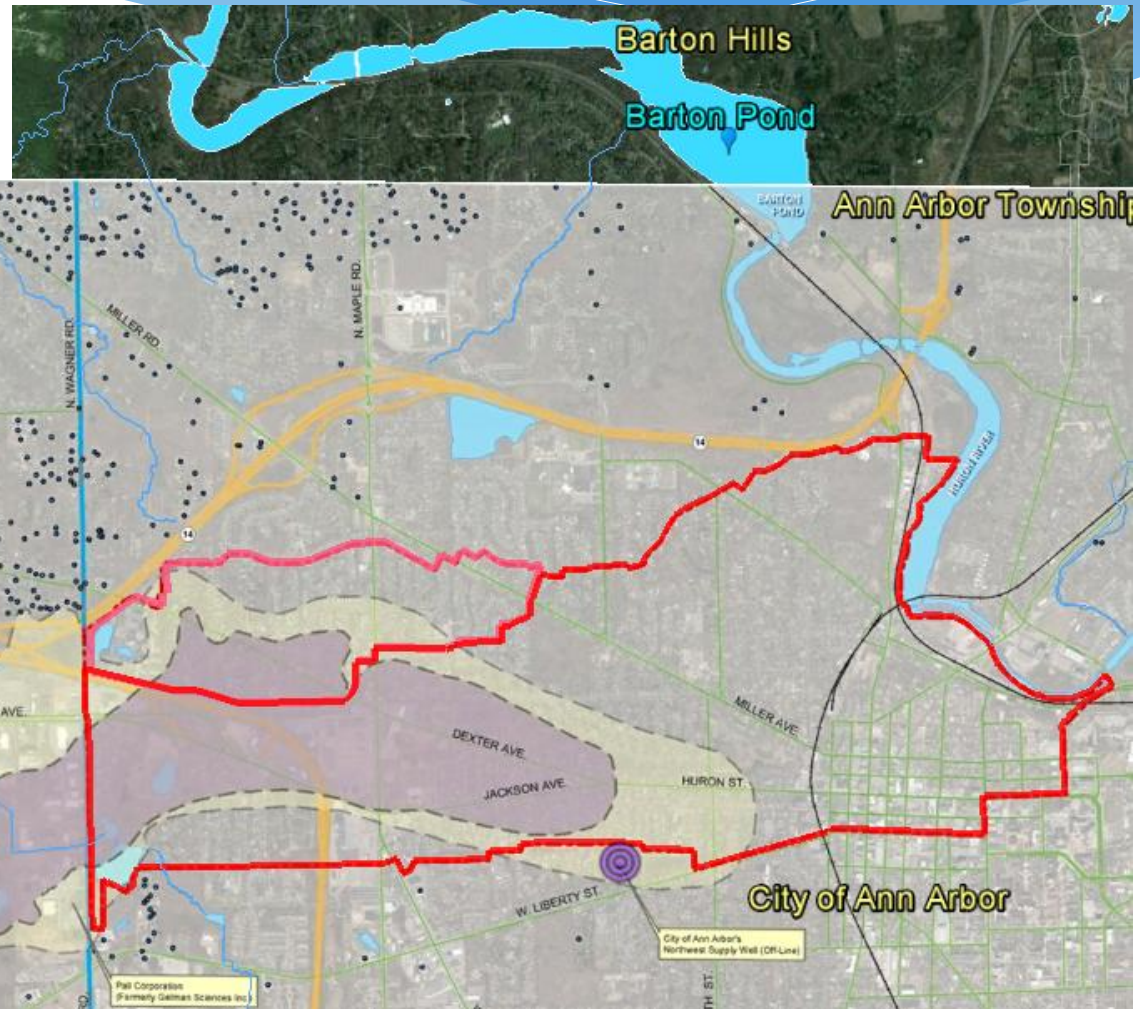






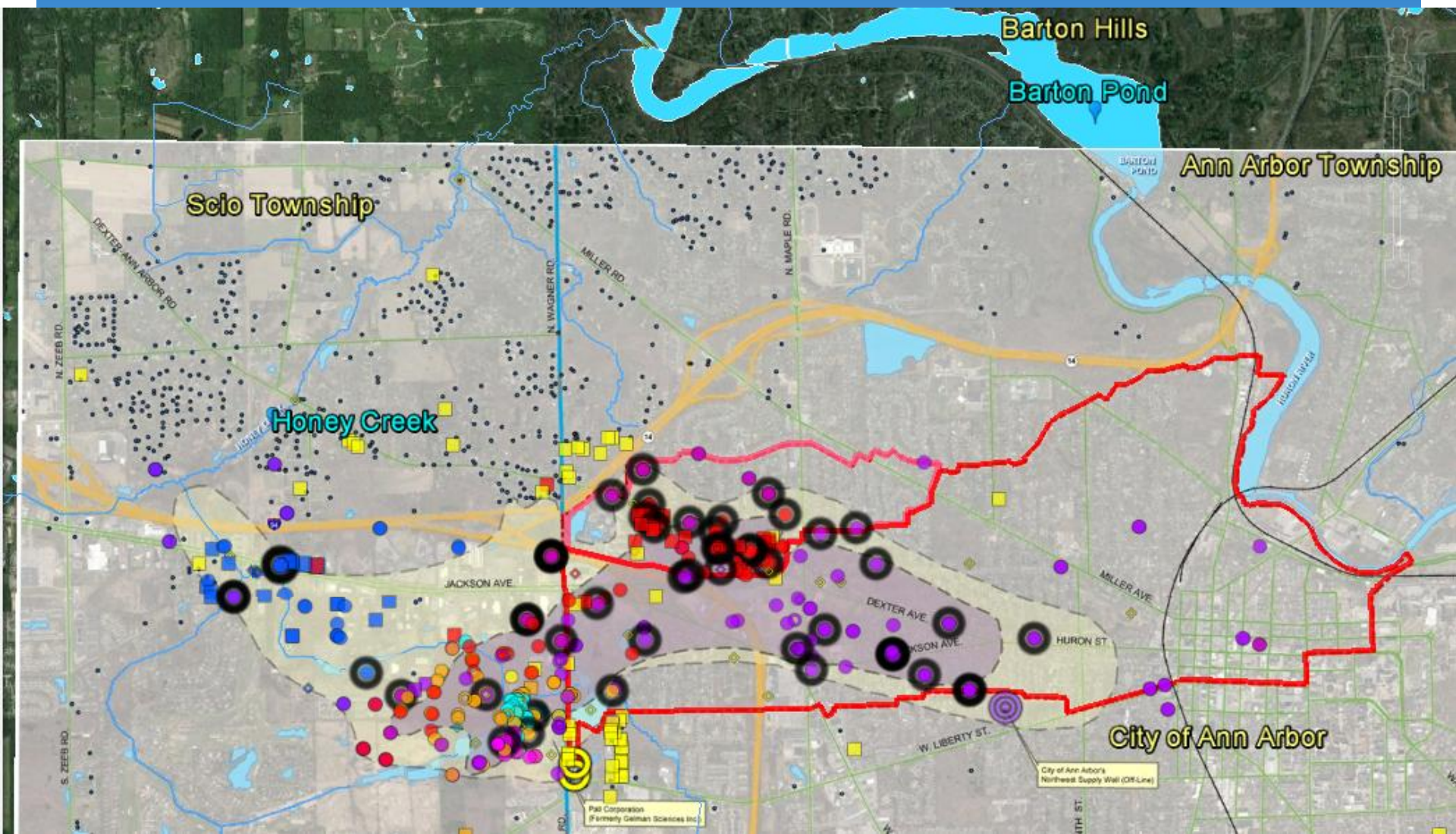
# Where are we now?

Same place as 2012,  
despite trying to move  
forward many times.





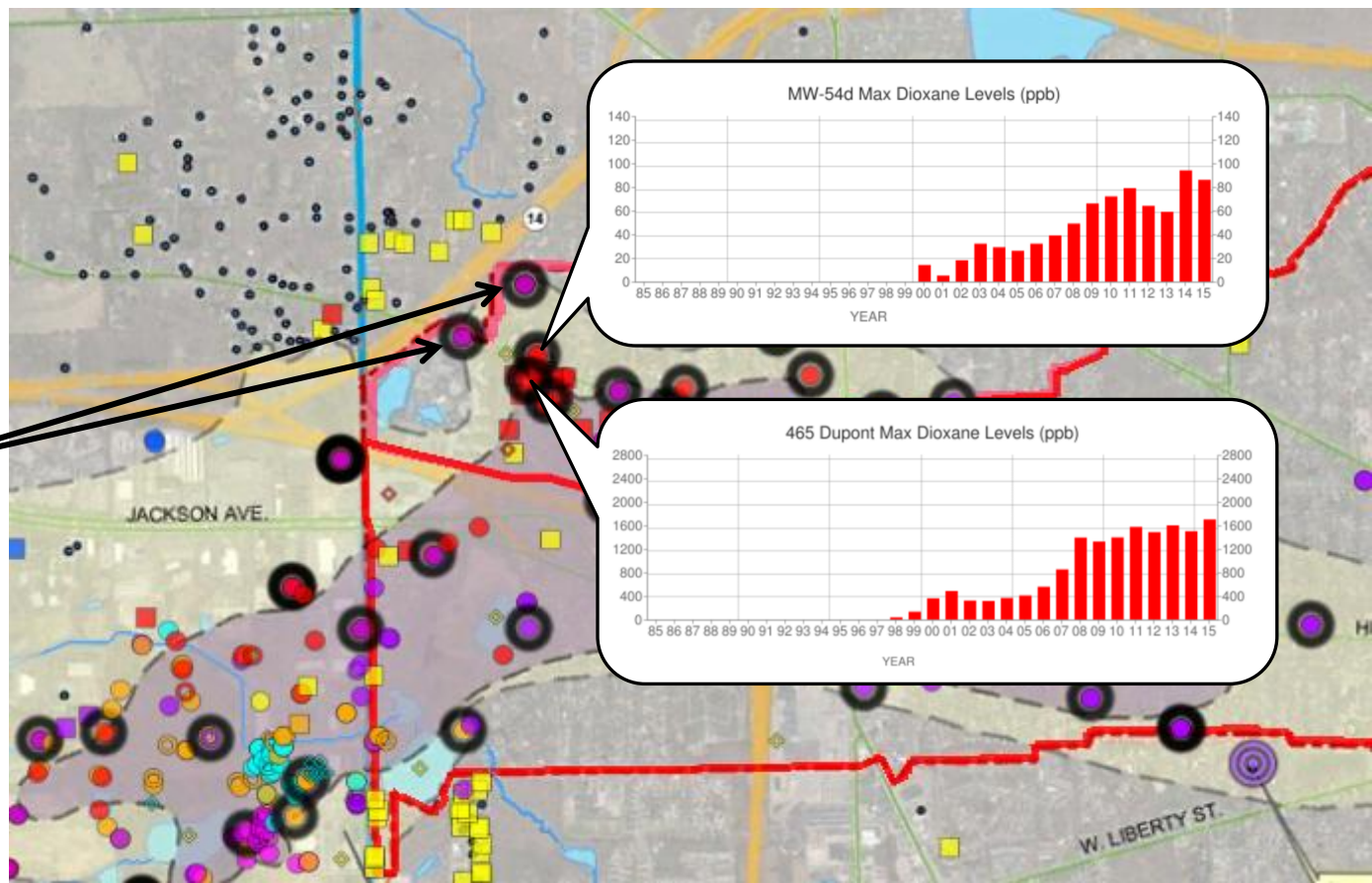
# Remediation Concerns:



# Remediation Concerns:

Increasing 1,4-dioxane concentrations  
and new  
detections.

Wells that now  
have detectable  
concentrations of  
1,4-dioxane





12/2015

2015

Barton Hills

Barton Pond

Ann Arbor Township

ver

Scio Township

Honey Creek

4340 ft

WESTERN AREA  
EASTERN AREA

estimation of the 1,4-dioxane plume based on sampling locations  
greater than 1 part per billion (ppb) or sampling locations  
that may currently be below detectable levels.

Google earth

# Plume Expansion

- \* No contingency plan
- \* New trigger numbers for northern expansion
- \* New wells between contamination and neighborhoods and Barton Pond

# Toxicity Concerns:

## Revised Part 201 Cleanup Criteria

- The EPA changed the cancer risk slope factor for 1,4-dioxane in 2010.
- In 2010 the DEQ was tasked with revising all Part 201 criteria by the end of 2012.
- The revised criteria have still not been released – and the rule making process can take up to 1-year for the rules to be promulgated.

# Data Concerns:

## Information Access and Data Quality

- One central database used by all stakeholders.

## Better Data Management & Sharing

- Electronic submittal of all reports and analyses.
- Consistent Data Quality (all laboratories should use the same analytical method).



# Oversight Concerns:

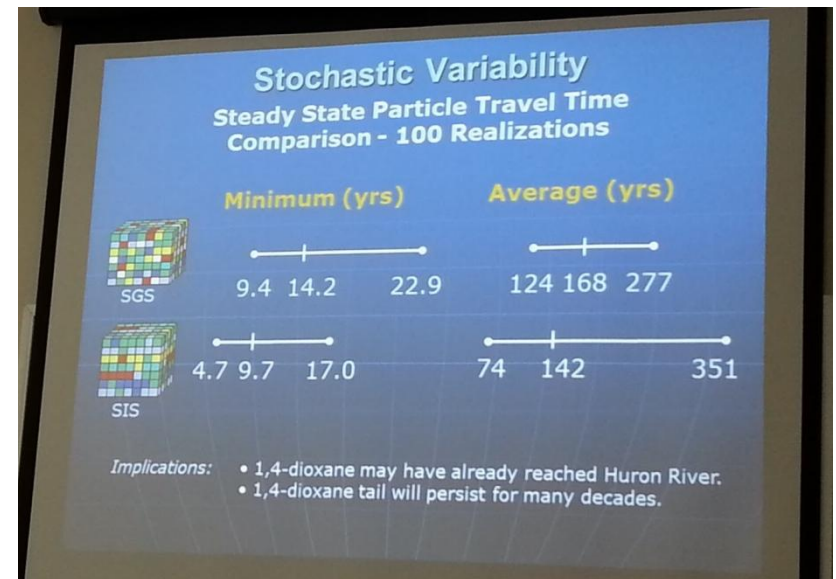
## Clean-Up Oversight

- Remove oversight from Court and bring oversight back to regulatory agency.
- DEQ costs should be covered by responsible party.
- Appoint a court master to bring science into the court room.
- The Attorney General should attend quarterly CARD meetings to understand the site.

# Oversight Concerns:

## Long-Term Plan for Future

- Additional monitoring wells and improved well placement methods.
- Control plume migration to protect drinking water supplies.
- Full transparency by Pall Corp. and the DEQ.



# Wrap-Up:

## What CARD asked of the Board of Commissioners:

- Continue to attend CARD meetings and support our activities.
- Understand that is a long term remediation site that is not going away in the foreseeable future.
- Continue to put pressure on the DEQ to revise the Part 201 criteria.
- Be aware that if the 1,4-dioxane criteria is revised that remediation modifications will take place in the court system.

# Special Thanks

Special thanks to  
Roger Rayle & Jennifer Conn  
who put together the  
maps and graphs in this  
presentation.