



RACER Trust

Lansing Industrial Land

Project Update

August 9, 2018 • Lansing, Michigan

racertrust.org



About RACER Trust

- **Former General Motors Corp. (GM) bankruptcy (June 2009)**
- **Established by U.S. Bankruptcy Court March 2011**
 - **89 former GM locations, 14 states**
 - **44 million square feet of industrial space**
 - **66 buildings**
 - **7,000 acres**



RACER Trust's Mission

- **Help communities affected by the closure of GM facilities**
- **Conduct safe, effective, efficient environmental cleanups**
- **Position properties for economic redevelopment and job creation through the sale to qualified, responsible buyers**



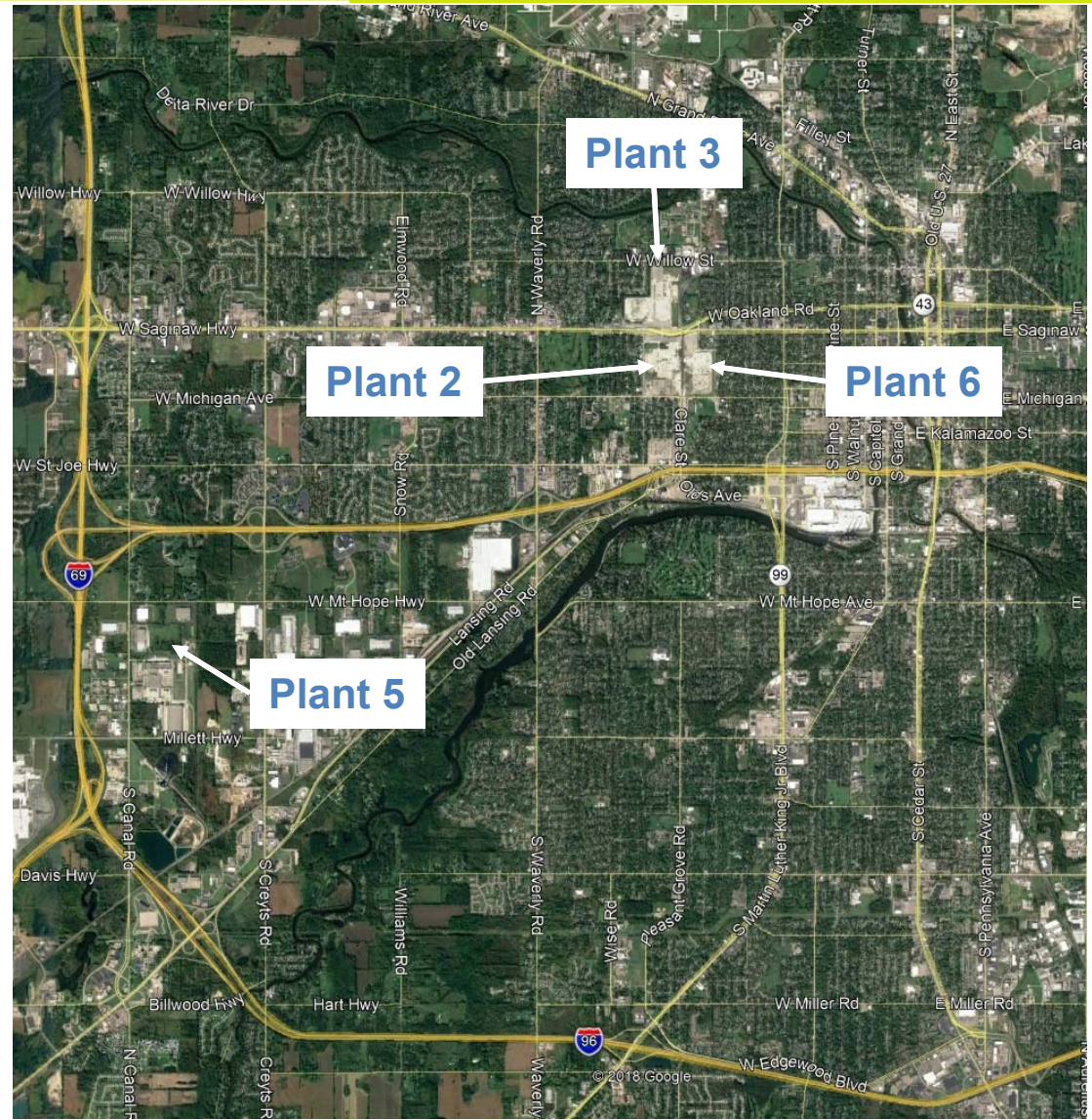
RACER Trust in the Capital Region

- **Lansing Plant 2, 2801 W. Saginaw St., Lansing Township**
- **Lansing Plant 3, 2800 W. Saginaw St., Lansing Township**
- **Lansing Plant 5, 2901 S. Canal Rd., Delta Township**
- **Lansing Plant 6, 401 N. Verlinden St., Lansing**



RACER Trust in the Capital Region

RACER Trust Lansing Industrial Land

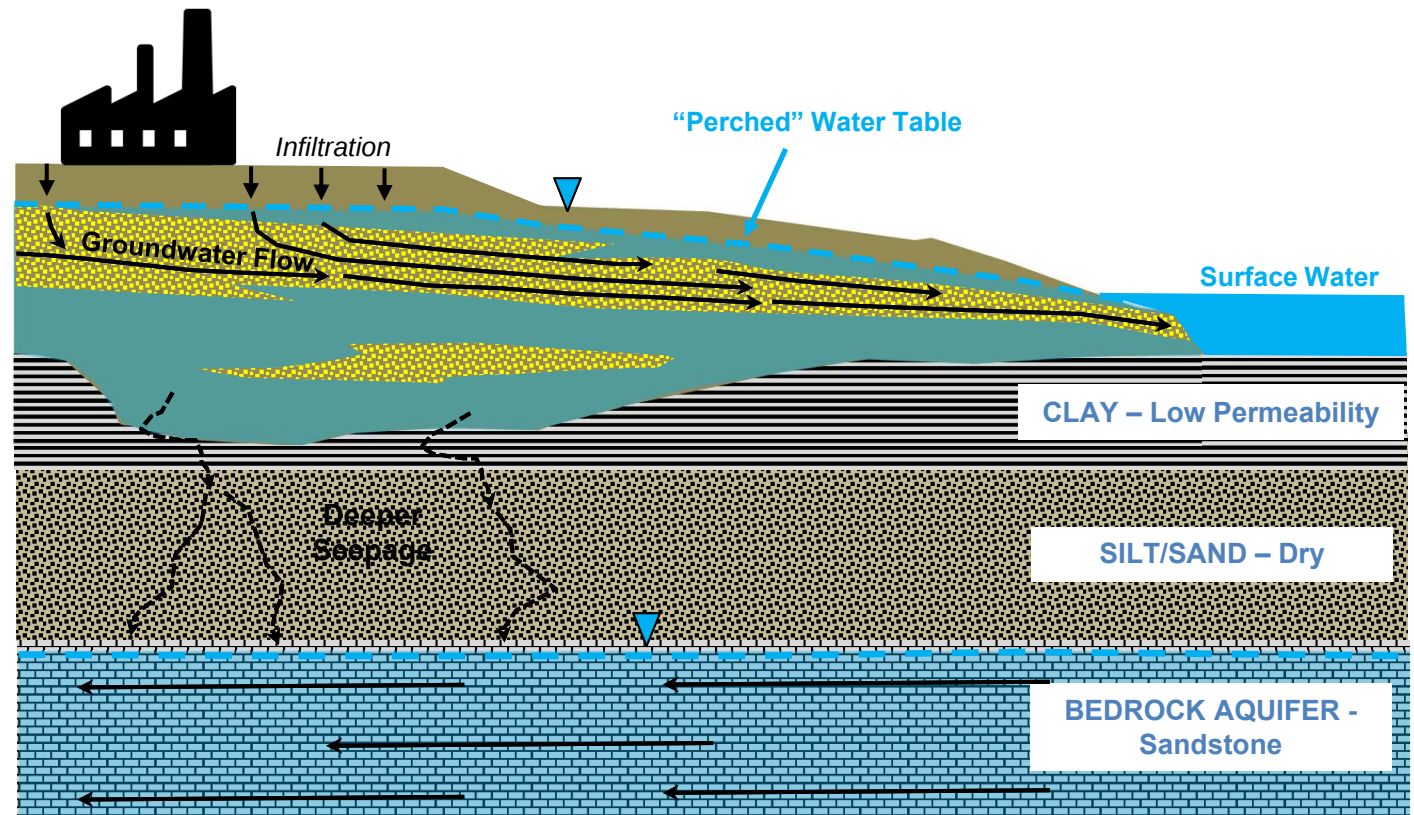




Groundwater and Groundwater Flow

Groundwater flow in the Lansing area is complex with multiple saturated zones and flow directions

- Groundwater will preferentially flow within more permeable sediments like sand
- Low permeability sediments like clay create a barrier to groundwater flow

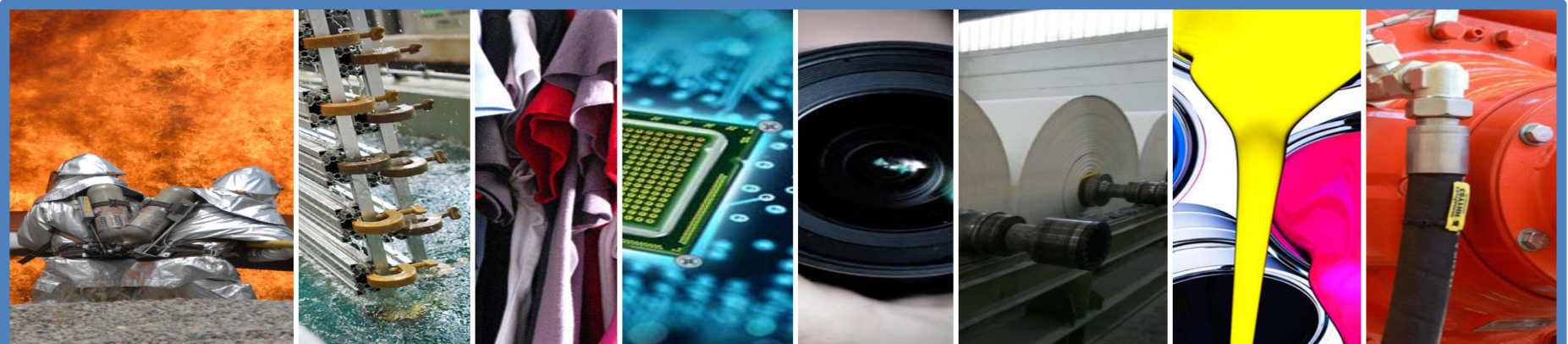




What Are PFAS (Per- and Polyfluoroalkyl Substances)?

PFAS are a part of a group of chemicals used globally during the past half century in manufacturing, firefighting and thousands of common household and other consumer products (USEPA):

- Made up of “chains” of carbon atoms attached to fluorine and other atoms
- Stable, persistent and mobile in the environment
- Bioaccumulative
- Potential adverse health effects, suspected carcinogen



Firefighting Foams

Metal Plating

Textiles

Electronics

Photography

Paper Coatings

Paints

Hydraulic Fluids



Environmental Investigations: PFAS

- **No known exposure to PFAS-impacted groundwater**
- **PFAS has not been detected in the bedrock drinking water aquifer above MDEQ criteria**
- **Highest concentrations are near a former plating line at Plant 3; PFAS-impacted groundwater is migrating away from that area in small sand and silt seams**
- **Exceeds the MDEQ drinking water criteria (70 ppt) in the shallow groundwater on-site, but does not exceed drinking water criteria off-site in the parks**
 - **Most samples below surface water criteria (12 ppt)**



Environmental Investigations: PFAS *(continued)*

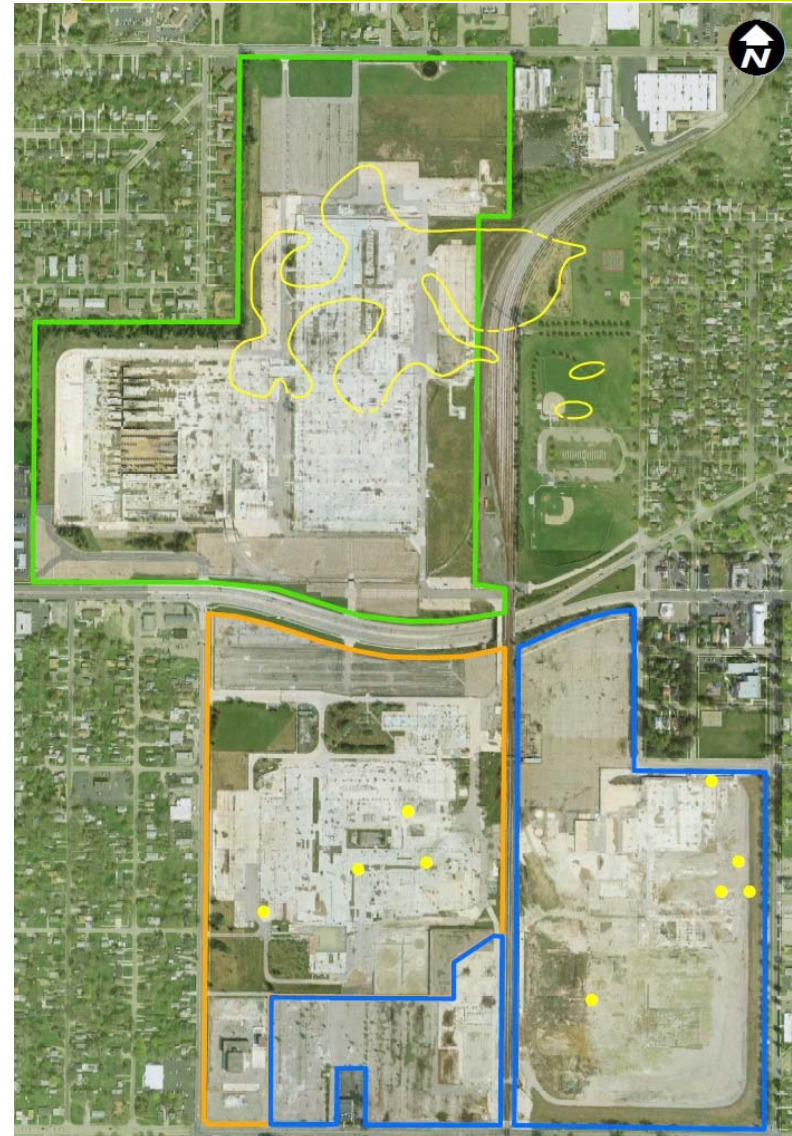
- Some PFAS-impacted groundwater seeps into Plant 3 storm sewers and discharges to the Grand River; RACER Trust working with MDEQ and City of Lansing on plan to plug storm sewers on RACER property (expected Q4 2018)
- PFAS detected in shallow groundwater near Plant 6 property boundary above MDEQ criteria
- Adjacent Adams Plating Federal Superfund Site is also a source of PFAS in groundwater



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LEGEND

-  PFAS > CRITERIA
-  EXTENT PFAS ON PLANT 3 > CRITERIA
-  PLANT 2
-  PLANT 3
-  PLANT 6





Plant 3

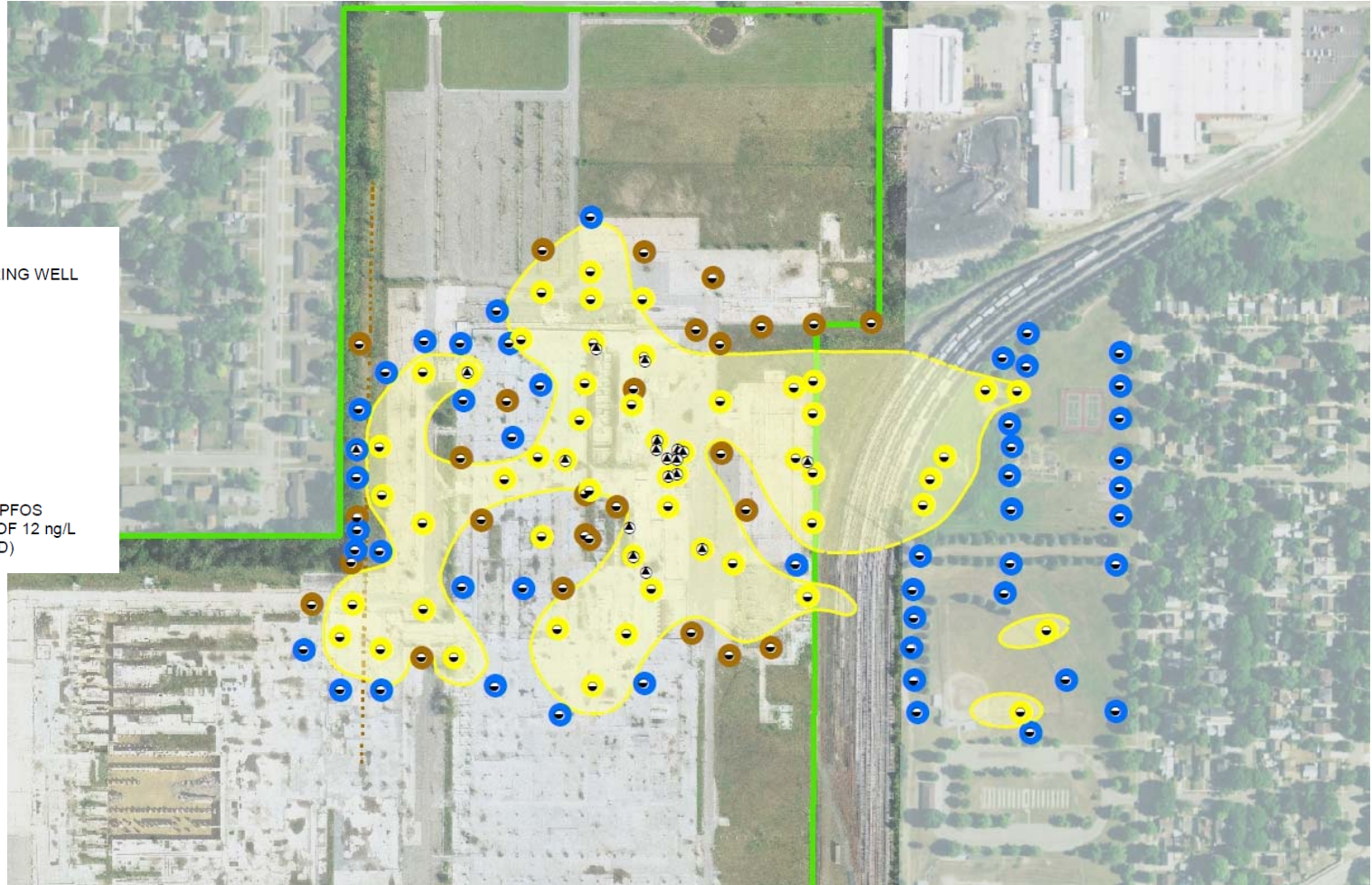
LEGEND

- ▲ PERCHED ZONE MONITORING WELL
- VAP BORING LOCATION

PFAS IN GROUNDWATER

- PFAS BELOW CRITERIA
- PFAS EXCEEDS CRITERIA
- DRY LOCATION

— APPROXIMATE EXTENT OF PFOS
EXCEEDING GSI CRITERIA OF 12 ng/L
(DASHED WHERE INFERRED)





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Plants 2 & 6

LEGEND

- ▲ PERCHED ZONE MONITORING WELL
- VAP BORING LOCATION

PFAS IN GROUNDWATER

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Next Steps: PFAS

- **Periodic sampling on and off-site and reporting**
- **Additional investigation at Plant 6;
on-site, off-site near northeast property boundary and storm
sewer sampling is proposed**
- **Plug storm sewers at Plant 3 to eliminate PFAS discharge to
the Grand River**
- **Will work with MDEQ and LBWL for long-term solutions**

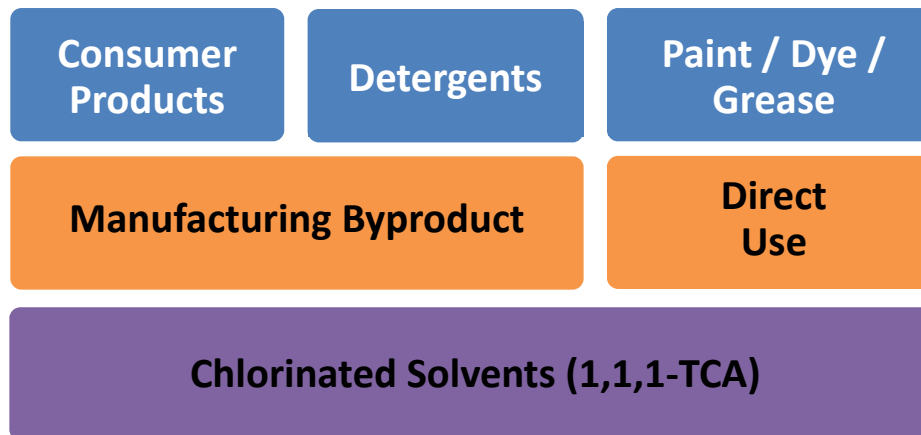


What is 1,4-dioxane?

1,4-dioxane is an industrial solvent. It is typically used as a stabilizer in other solvents and is commonly found in many household products:

- Highly soluble in water
- Very mobile, flows with groundwater
- Creates long plumes
- Potential adverse health effects, suspected carcinogen

Sources of 1,4-dioxane





Environmental Investigations: 1,4-dioxane

- **Delineated 1,4-dioxane to below drinking water criteria**
- **Migration from Plant 3 to Plant 2 property; south-southeast flow**
- **Further migration or expansion of the plume is expected to be minimal**
- **1,4-dioxane greater than drinking water criteria largely confined to RACER property**
 - **Saginaw Street**
 - **Adjacent Adams Plating Federal Superfund Site is also a source of 1,4-dioxane in groundwater**
- **1,4-dioxane above drinking water criteria limited to top/weathered zone of bedrock**



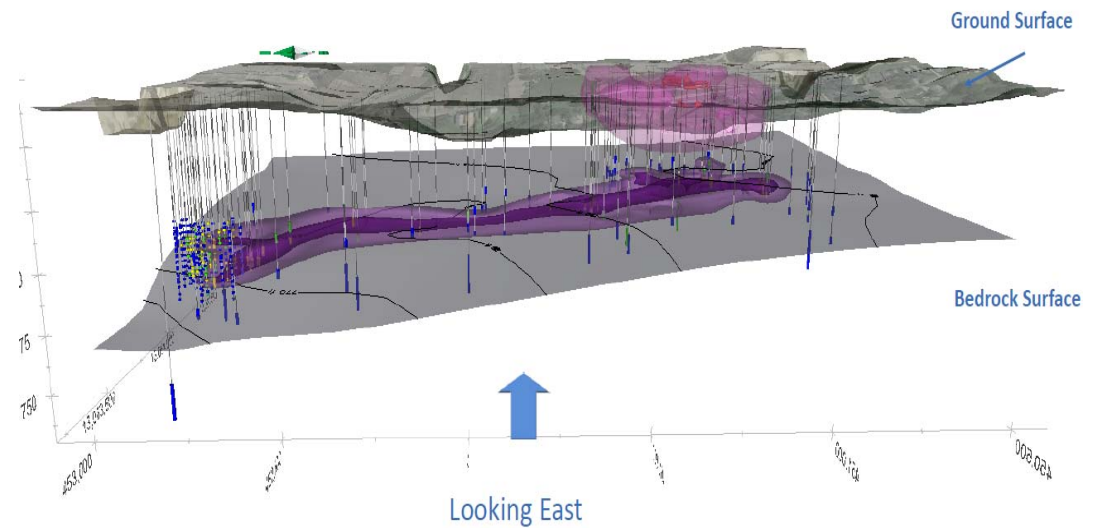
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RACER 1,4-DIOXANE 3D MODEL

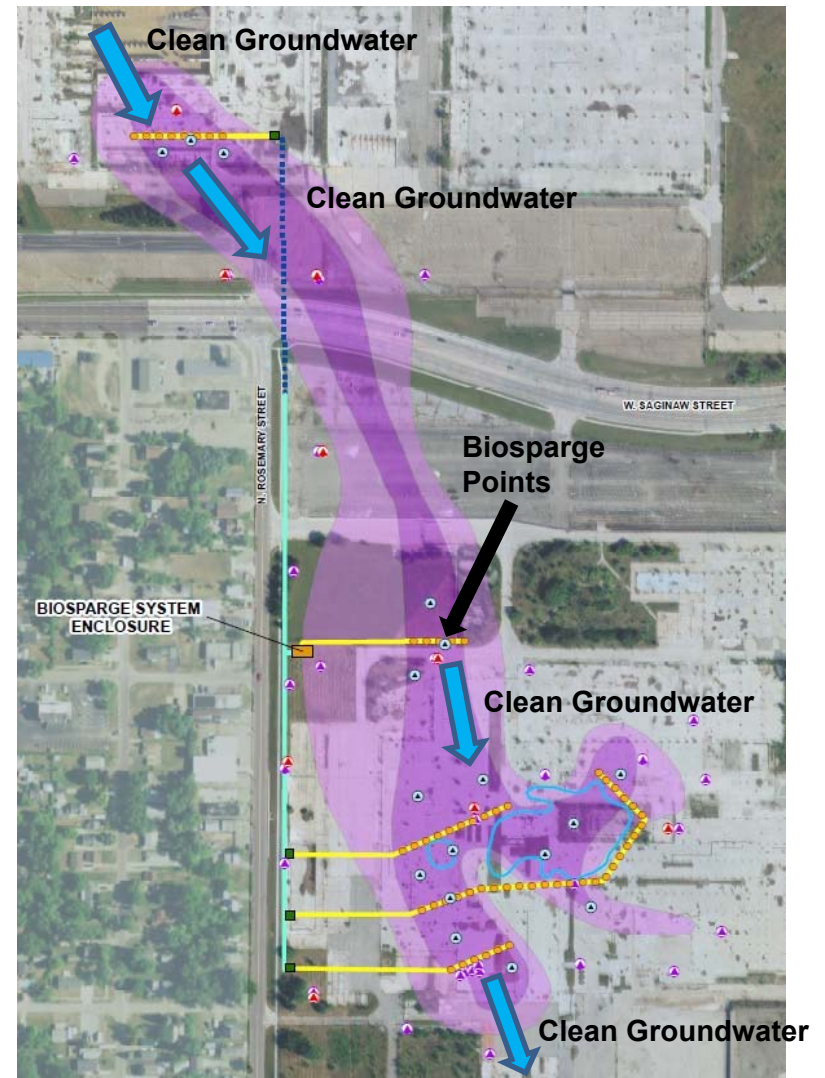




Next Steps: 1,4-dioxane

Will work with MDEQ and LBWL to implement interim measures

- Preferred method: Biosparging
 - Subsurface injection of air, propane, bio nutrients
 - Stimulates microorganisms to break down 1,4-dioxane
 - Sustainable, long-term (10- to 15-year) process aimed at reducing 1,4-dioxane concentrations in groundwater





Information and Materials

racertrust.org/Lansing18



Thank you.
Questions?