



RACER TRUST LANSING PLANTS 2, 3, & 6

2025 Third Quarter Progress Report | October 28, 2025

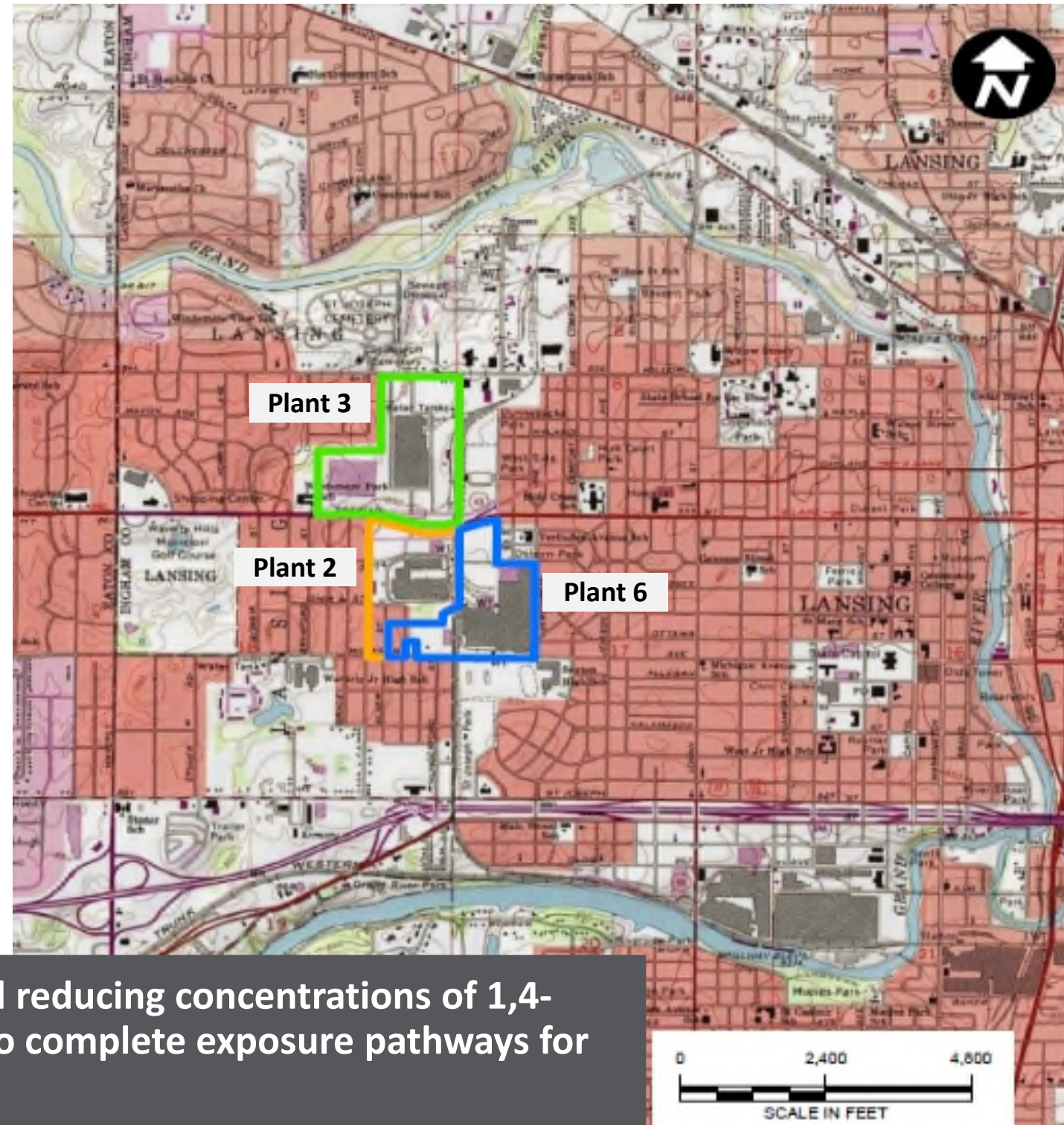
More detailed reports are available on RACER's Webpage for this Site:
<https://www.racertrust.org/properties/lansing-plant-2-industrial-land>

Table of Contents

1. Introduction
2. Remediation of 1,4-Dioxane in Weathered Bedrock
3. Semi-Annual Groundwater Sampling Results
5. Reporting
6. Schedule
7. Biosparge Appendix

Site Introduction

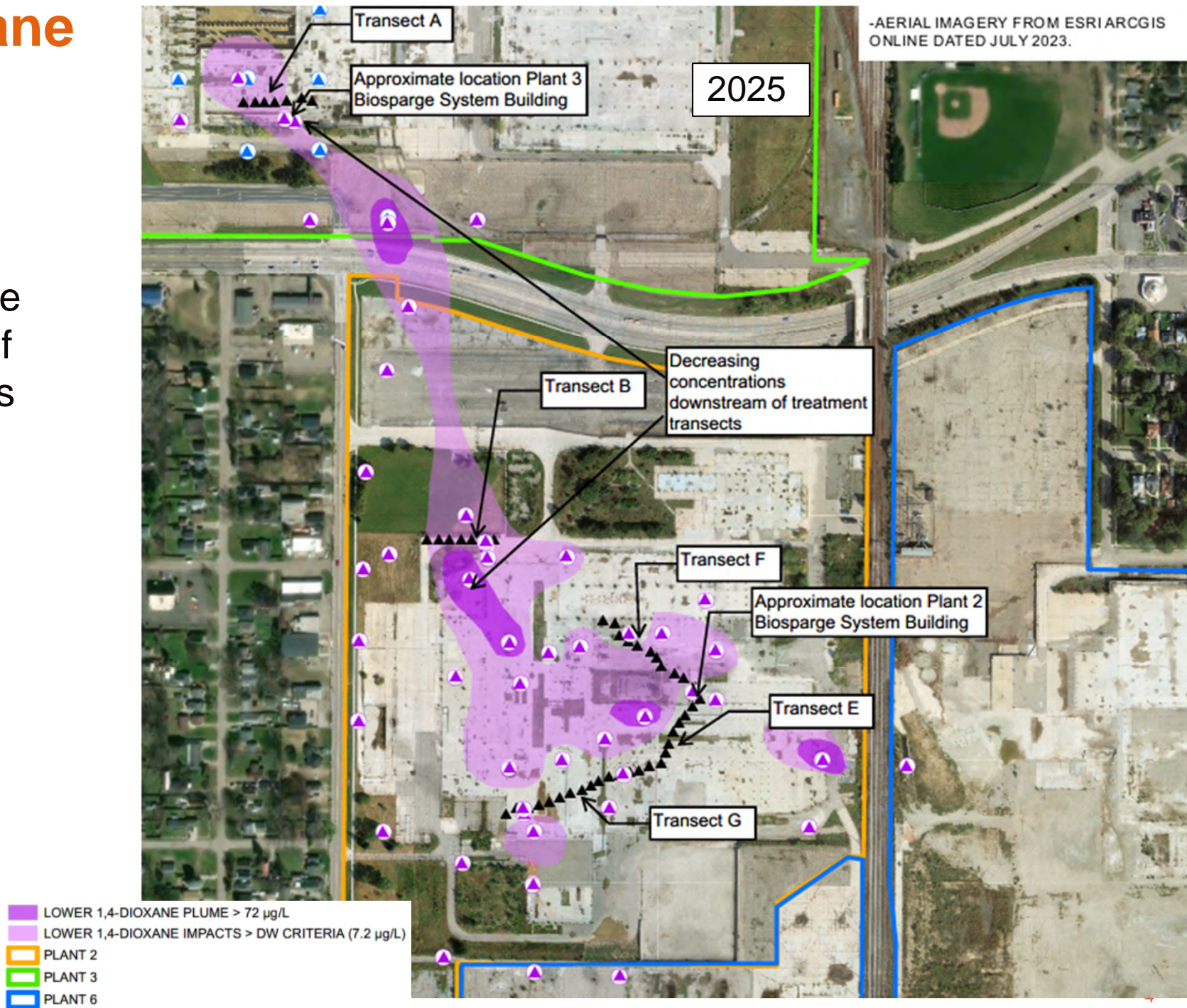
- Remediation at the RACER Lansing Site is being performed through the Resource Conservation and Recovery Act (RCRA) Corrective Action program under the oversight of the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Current activities include focused site characterization and interim remedial actions.
- There is currently no known complete exposure pathways for area residents associated with the site contaminants.
- Characterization of the 1,4-dioxane plume in weathered bedrock at a depth of approximately 60 to 75 feet below the ground surface is complete. Remediation of 1,4-dioxane in the weathered bedrock includes operation of the Plant 2 and Plant 3 biosparge systems (The Plant 3 system began operating in 2019 and the Plant 2 system began operating in 2020). The biosparge system has successfully reduced concentrations of 1,4-dioxane in the weathered bedrock. Short-term system objectives continue to be met.
- Routine groundwater monitoring on and in certain areas adjacent to Plants 2, 3, & 6 in the shallow (perched) zone, weathered bedrock, shallow bedrock, and deep bedrock is ongoing and is anticipated to continue for several years.



Activities completed during this period continued reducing concentrations of 1,4-dioxane in the weathered bedrock and verified no complete exposure pathways for area residents

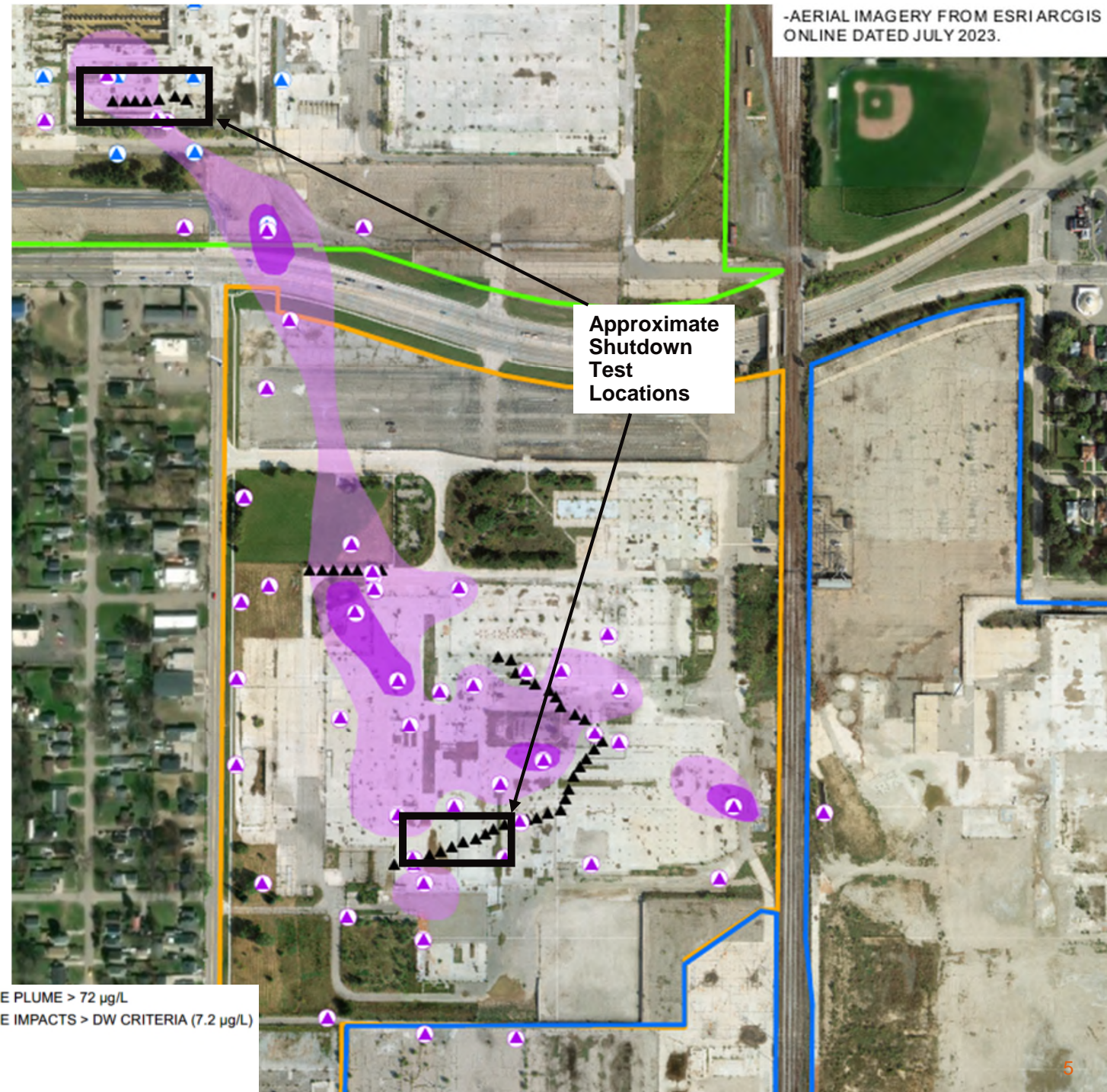
Remediation of 1,4-Dioxane in Weathered Bedrock

- Results of performance monitoring show that the biosparge systems are achieving the short-term objective of reducing 1,4-dioxane concentrations and mass along the core of the weathered bedrock plume



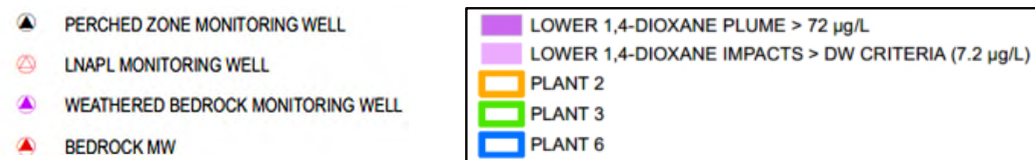
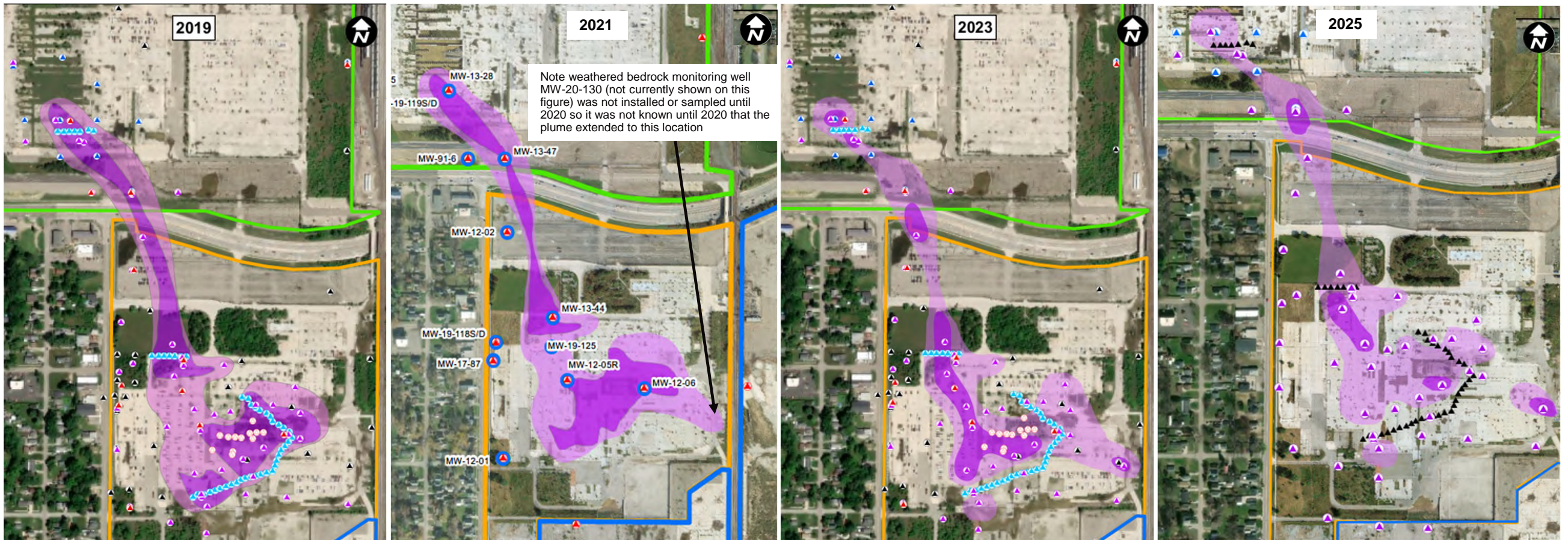
Remediation of 1,4-Dioxane in Weathered Bedrock

- A test was proposed to temporarily shut down portions of the biosparge system to evaluate how the groundwater concentrations respond and to assess if modifications to the operation of the biosparge system are needed to reduce concentrations further. EGLE provided conditional approval on July 21, 2025.
- The pre-shut down testing was completed on August 25 and 26, 2025 and additional sampling will be completed during the second semi-annual sampling event planned for Fourth Quarter 2025 (October). The results will be reported in the Fourth Quarter Progress Report.
 - Plant 3 was completely shut down on August 25, 2025 (Transect A), to complete the EGLE approved temporary shut down test
 - Transect G at Plant 2 was also shut down as part of the approved temporary shut down test



Remediation of 1,4-Dioxane in Weathered Bedrock

Visual depiction of lower 1,4-dioxane plume (located within the deep overburden and weathered bedrock) distribution in 2019, 2021, 2023 and 2025



Semi-Annual Groundwater Sampling Results

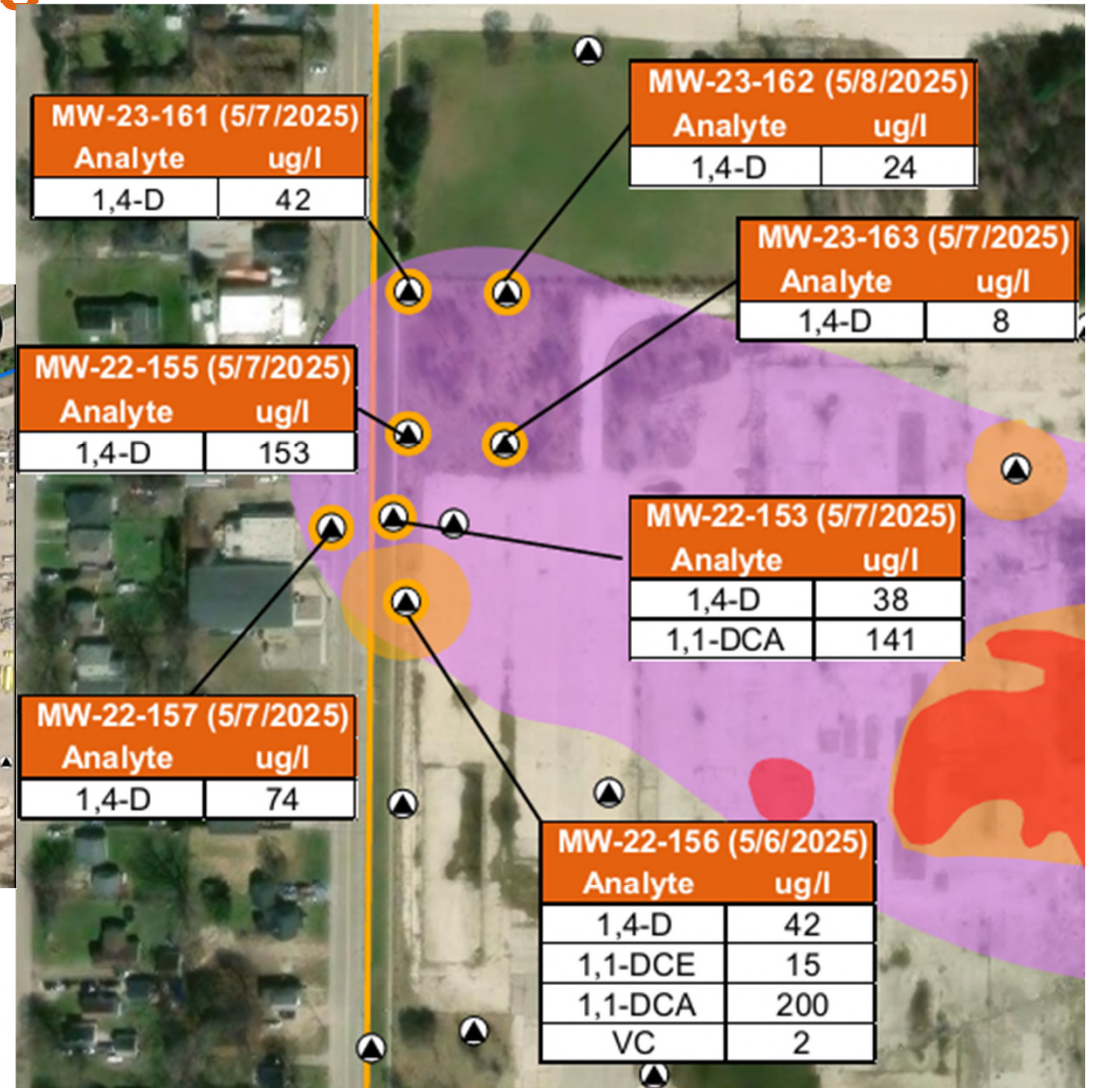
- The concentrations of 1,4-dioxane (1,4-D) and volatile organic compounds (VOCs) are consistent with 2024 data collected around MW-14-58R area



LEGEND

- PERCHED ZONE MONITORING WELL
- WELLS SAMPLED AND EITHER 1,4-D OR VOCs EXCEED CRITERIA
- WELLS SAMPLED AND 1,4-D AND VOCs DO NOT EXCEED CRITERIA
- APPROXIMATE EXTENT LNAPL
- EXTENT VOC'S IN PERCHED ZONE > DW CRITERIA
- PERCHED 1,4-DIOXANE IMPACTS > DW CRITERIA (7.2 ug/L)
- PLANT 2
- PLANT 3
- PLANT 6 (DASHED WHERE SOLD)

Notes: 1,1-dichloroethane = 1,1-DCA
 1,1-dichloroethene = 1,1-DCE, Groundwater Surface Water Interface Criteria = GSI
 Criteria, Residential Site Specific Volatilization to Indoor Air Criteria = Res SSVIAC















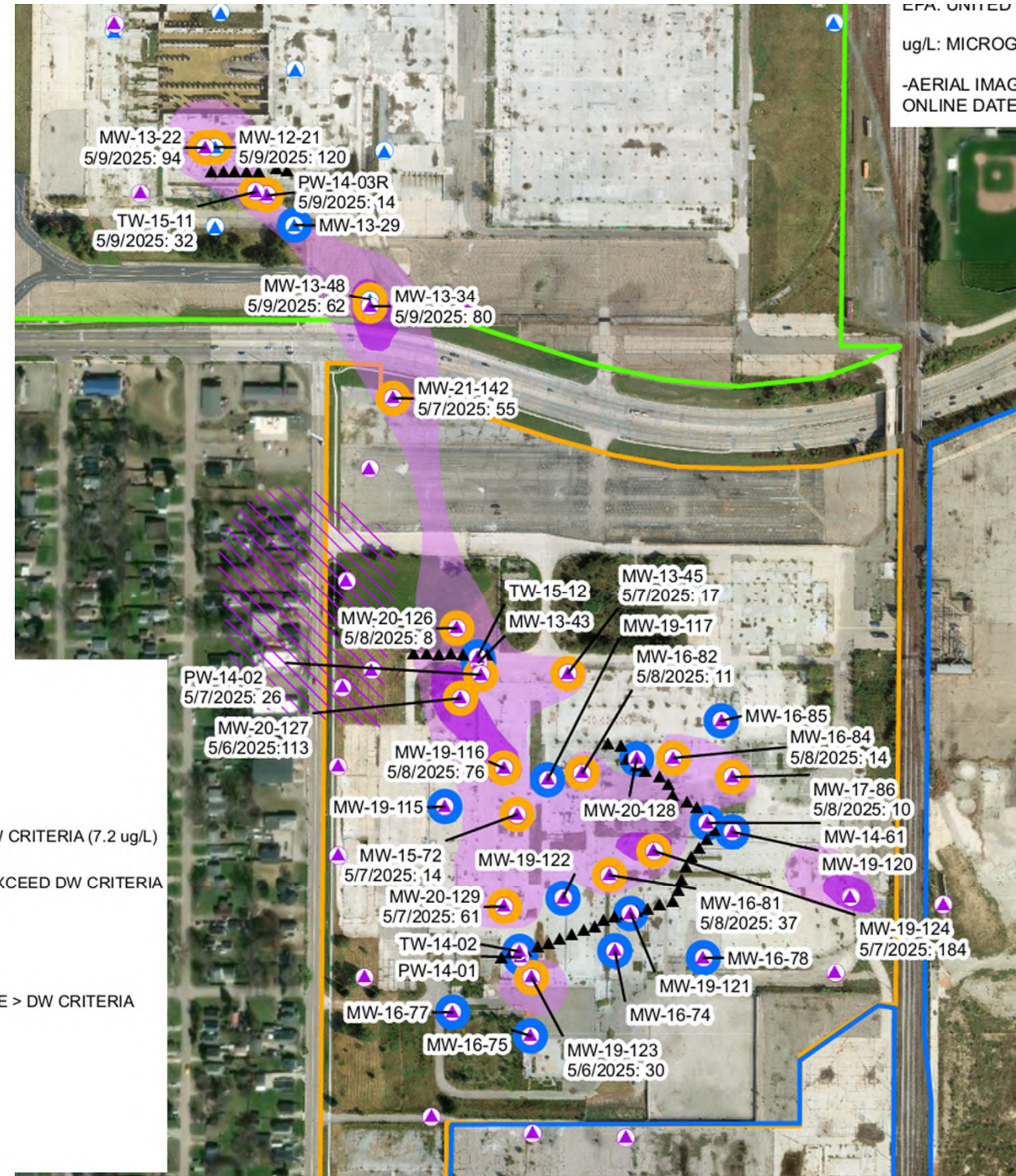
VOCs	Res Drinking Water	GSI Criteria	Res SSVIAC
1,1-DCA	880	740	67
1,1-DCE	7	130	170
1,4-Dioxane	7.2	280	14,000
Vinyl Chloride	2	13	0.96

Semi-Annual Groundwater Sampling Results

- Concentrations of 1,4-dioxane within the lower 1,4-dioxane plume were generally lower in Second Quarter 2025 than previous events
- The 2025 Semi-Annual Groundwater Sampling Report was submitted to EGLE in October and can be found on the RACER Public Website (see link on page 1 or 9)

LEGEND

-  DEEP OVERBURDEN MONITORING WELL
-  WEATHERED BEDROCK MONITORING WELL
-  BIOSPARGE
-  WELLS SAMPLED AND 1,4-DIOXANE EXCEEDS DW CRITERIA (7.2 ug/L)
-  WELLS SAMPLED AND 1,4-DIOXANE DOES NOT EXCEED DW CRITERIA
-  LOWER 1,4-DIOXANE PLUME > 72 ug/L
-  LOWER 1,4-DIOXANE IMPACTS > DW CRITERIA
-  POTENTIAL OFF-SITE LOWER 1,4-DIOXANE PLUME > DW CRITERIA
-  PLANT 2
-  PLANT 3
-  PLANT 6 (Dashed Where Sold)
-  Plant 6 - Sold



Reports Submitted to EGLE Third Quarter 2025

- Second Quarter 2025 Progress Report submitted to EGLE on July 16, 2025
- Reports can be viewed or downloaded from the RACER Website for the Lansing Property:
<https://www.racertrust.org/properties/lansing-plant-2-industrial-land>

Work in Progress and Near-Term Milestones Anticipated During the Fourth Quarter of 2025



Activity	Schedule
Remediation of 1,4-Dioxane in the Weathered Bedrock	
Plants 2 and 3 Biosparge System Operation	Ongoing
Biosparge Temporary Shut Down Test Evaluation and Sampling	October 2025
Investigation of 1,4-Dioxane	
None Planned for Fourth Quarter 2025	
Investigation and Remediation of PFAS	
Semi-Annual Storm Sewer Sampling	October 2025
Other Investigations, Sampling and Reporting	
Annual Groundwater Monitoring Event	October 2025
2025 Annual Exposure Barrier Inspection Reporting	November 2025

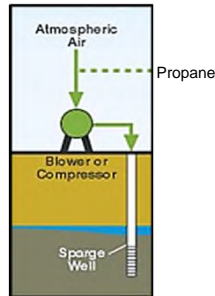
Appendix

BIOSPARGING TREATMENT OF 1,4-DIOXANE

Lansing Industrial Land, Lansing and Lansing Township, Michigan

WHAT IS BIOSPARGING?

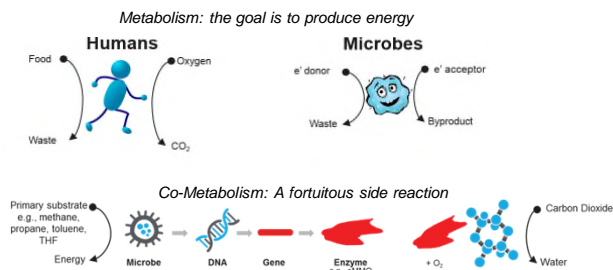
- Air and small amounts of propane are injected into the ground through wells
- Promotes biodegradation of chemicals in groundwater, much faster than it would occur naturally
- 1,4-dioxane is treated in the ground, so minimal waste is generated
- Nearby wells are sampled to make sure treatment is occurring



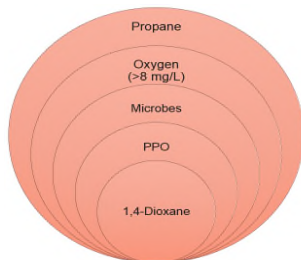
TREATMENT OBJECTIVES

- Reduce onsite concentrations of 1,4-dioxane in the top/weathered zone of the bedrock aquifer
- Prevent off-site migration of 1,4-dioxane

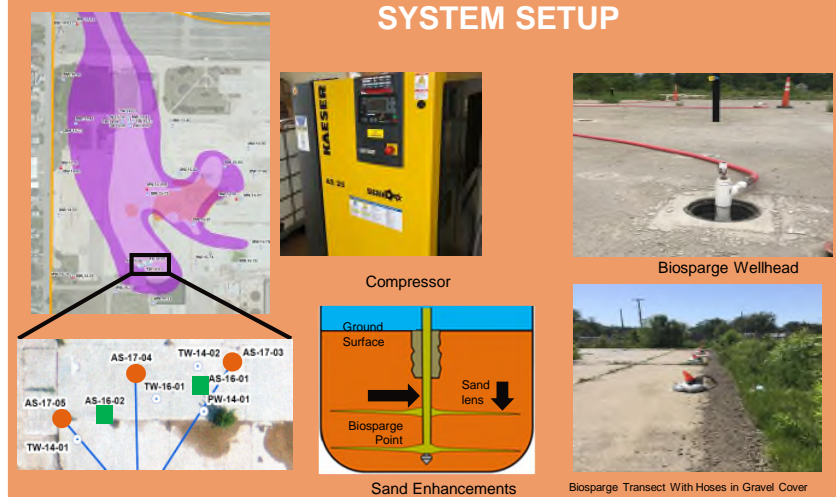
CO-METABOLIC BIODEGRADATION OF 1,4-DIOXANE:



Propane + Oxygen + Microbes = 1,4-Dioxane Treatment

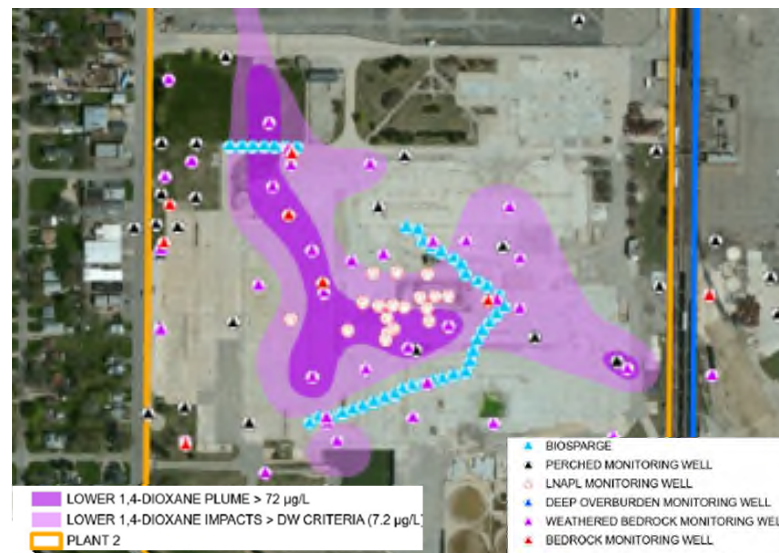


SYSTEM SETUP



- 2016 Pilot Test Biosparge Points
- 2018 Pre-Design Study Biosparge Points With Sand Enhancements
- Weathered Bedrock Monitoring Well

Plant 2 Biosparge Transect Layout



RACER Lansing Biosparge System

- Testing showed that biosparging is a low cost, effective, safe, and sustainable method for treating 1,4-dioxane at the Site and that the installation of sand enhancements improves treatment
- Biosparge system includes 5 treatment transects with 48 sparge wells across Plants 2 and 3
- Biosparge equipment buildings are located on Plant 2 and 3 with nearly 5 miles of hose to convey air/propane from the buildings to the injection wells
- Treated groundwater flows from northwest to southeast as it is cleaned by each treatment transect
- Network of monitoring wells is to track treatment progress
- After 4 to 5 years of operation, the biosparge system has reduced average 1,4-dioxane plume concentrations from a range of 160 - 485 µg/L down to a range of 20 - 50 µg/L and has met the treatment objectives



Plant 2 Biosparge Building, Propane Tank, Hoses, and Nutrient Injection Tanks