

QUARTERLY  
UPDATE

GELMAN PLUME <sup>and</sup>  
1,4-Dioxane

### Settlement Update

- From approximately the spring of 2017 until the fall of 2020, a proposed fourth amendment to and restatement of the Consent Judgment was under negotiation between Gelman, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), the City of Ann Arbor, Washtenaw County and its Health Department, Scio Township and the Huron River Watershed Council (The Intervenors).
- On May 3, 2021, Judge Connors held an evidentiary hearing regarding the Gelman plume cleanup. As a result of the hearing and based on the legal briefs and technical reports that the parties filed in advance of the hearing, the judge ordered Gelman to implement the requirements in the proposed fourth amended consent judgment that had been made public after the negotiations concluded in the fall of 2020 (“Response Activity Order”).
- Gelman filed a motion to partially stay the Response Activity Order (RAO) pending appeal, which Judge Connors denied. Gelman then filed both a claim of appeal and an application for leave to appeal the RAO. On June 29, 2021, Court of Appeals Judge Christopher Murray dismissed the claim of appeal, deciding that the RAO does not constitute a final order and that Gelman has no direct right of appeal.
- On July 26, 2021, the Court of Appeals granted Gelman’s application for leave to appeal, meaning that the Court of Appeals is going to consider the merits of Gelman’s challenge to the RAO.
- On September 15, 2022, the Michigan Court of Appeals vacated Judge Connors’ June 1, 2021 RAO, which directed that Gelman immediately implement the proposed 4th Amended Consent Judgment and comply with the revised cleanup criteria for the Gelman Sciences groundwater contamination, which was reduced from 85 ppb to 7.2 ppb. This means that the 3rd Amendment to the Consent Judgment is reinstated as the document that governs how the cleanup and containment is to be conducted and could impact the prohibition zone boundaries and where groundwater is not permitted for use. Because the 3rd Amended Consent Judgment does not incorporate the reduced cleanup level for 1,4 dioxane, the State has indicated it has begun communications with Gelman Sciences to negotiate an amended consent judgment to implement the revised cleanup criteria and address other requirements in the now-vacated RAO. The City will continue to advocate for and pursue the gains that were achieved as part of the RAO and proposed 4th Amended Consent Judgment.
  - EPA completed the Site Inspection (SI) Sampling Plan and secured access for SI sampling on the Gelman property and other surrounding areas.
  - Sampling activities were completed between September 26 and October 8, 2022.
  - Weston (EPA’s hired contractor) is currently conducting quality assurance/quality control (QA/QC) on the data.
  - EPA is working with the Washtenaw County Health Department to draft residential results letters.
  - Weston has begun drafting the SI report and anticipates a draft report will be submitted to EPA by mid-March. EPA expects to release sampling results to residents in late winter 2023.
  - Environmental Protection Agency (EPA) updates regarding the Gelman site can now be found on the EPA’s website at: <https://www.epa.gov/mi/gelman-sciences> and the ‘frequently asked questions’ for the Gelman site is: <https://www.epa.gov/mi/gelman-science-frequently-asked-questions-0>

## SENTINEL WELL INSTALLATION

In November 2022, the City completed a test boring to bedrock (275-feet below ground surface) in Garden Homes Park. Seven groundwater samples were collected throughout the two aquifers encountered in the test boring. These groundwater samples were analyzed for 1,4-dioxane using Method 522. There were no detections. Based on the test boring, a set of nested wells were installed to serve as an early warning for any potential migrating 1,4-dioxane from the southwest toward Barton Pond. The total well depths are 147 and 214 feet below ground surface. The monitoring wells will be sampled in early April. An aquifer analysis is also in progress to determine the hydraulic conductivity of the two aquifers. Field data will be collected for the analysis in the second quarter 2023.



## Agency Updates

### MS4 PERMIT

- Concentrations of 1,4-dioxane entering the Allen Creek Drain stormwater system have significantly increased since 2017 surrounding West Park area. One location in particular has increased from 4.4 ppb in 2017 to 49 ppb in the fall of 2020. The concentration of 1,4-dioxane at this location was 33 ppb in 2021 and 37 ppb in 2022.
- The Allen Creek Drain stormwater system is part of Washtenaw County's Municipal Separate Storm Sewer System (MS4).
- Based on the 'corrective action required' notice sent by the Washtenaw County Water Resources Commission Office (WCWRC) to Gelman for increased concentrations of 1,4-dioxane in the Allen Creek Drain stormwater system, Gelman submitted a work plan on April 15, 2021, for sampling. EGLE and WCWRC reviewed the work plan, provided feedback to Gelman and requested an updated work plan. A revised workplan has been re-submitted to EGLE for review as a Groundwater to Surface Water Interface (GSI) issue rather than an MS4 issue. EGLE staff completed a technical review of the work plan, citing insufficient information in the work plan. No further engagement has occurred because of the Court of Appeals ruling that vacated the 4th Amended CJ. EGLE is currently negotiating for more protective criteria than what is in the 3rd Amendment to the Consent Judgment.
- On December 15, 2022, the WCCRC office sent a letter to Gelman indicating that action was required to remain in compliance with the County's MS4 permit requirements regarding outstanding issues noted in January 2021. The letter stated that the migration of 1,4-dioxane into Allen Creek Drain must cease or be in compliance with applicable State and County statutes and requirements.

# Agency Updates

## EGLE / CARD

- CARD meetings were held virtually on February 7 and March 7, 2023. Additional personnel from EGLE were present for the March meeting.
- EGLE provided the following updates:
  - The eastern area GSI work plan was reviewed by EGLE who indicated a response letter to the work plan was sent to Gelman, identifying insufficiencies. EGLE is encouraging Gelman to continue completing tasks on the western GSI work plan.
  - Re-sampling of surface water in West Park and Third Sister Lake was completed by EGLE in 4<sup>th</sup> quarter 2022. Results are posted on [EGLE's dedicated webpage](#).
  - Gelman will be converting IW-2 to an extraction well for the Rose Area extraction well. It will be piped to the existing infrastructure and treated at the Gelman facility.
  - Three onsite extraction wells are currently pumping in the source area.
  - Two monitoring wells in the 4<sup>th</sup> Amended Consent Judgement in Scio Township require access agreements in order to be installed. Gelman still intends to install these two wells when the access is granted.
  - With the vacated ruling, Gelman is currently not pursuing the following:
    - Phytoremediation in the marshy area with tree plantings, although the appropriate permits were obtained.
    - Installation of the heated soil vapor extraction system in the former burn pit area.
    - Installation of monitoring wells in the West Park area.
- Washtenaw County Health Department completed over 175 residential well samples in 2022 with the most recent sampling event completed in August. The residential sampling for 2023 is the most extensive to date and includes 244 locations.
- Ann Arbor Township completed residential well sampling at 11 homes and analyzed the results using USEPA Method 522. All locations were non-detect except one location, which had a detection of 9.1-ppb 1,4-dioxane in October. Additional sampling in November and December indicated results of 1.9-ppb and non-detect using Method 522. EGLE has completed sampling monthly December through February with non-detect results. EGLE committed to sampling in March before determining future sampling commitments. The March sampling was completed with other entities, including EPA. The results are not available yet.
- The next scheduled meeting will be held on April 4, 2023, at 6PM via Zoom.

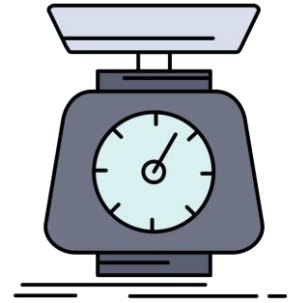
## NPDES PERMIT

- EGLE is reviewing the NPDES permit application that was submitted for Gelman's current system on April 4, 2019.
- EGLE is nearing completion of the permit review. Once the review is complete, draft comments will be provided to Gelman. After Gelman's review the proposed permit will be made available for public review and EGLE will hold a public hearing on the permit application.

## Pall Groundwater Treatment Updates

Total Volume of  
Groundwater Treated  
**December 2022 – February 2023**

**75,112,282 gallons**



**Mass of  
1,4 Dioxane Removed**

December: 80.48 lbs  
January: 92.23 lbs  
February: 82.56 lbs  
Total: 255.27 lbs

*The mass calculations were determined from the NPDES monthly discharge reports using the maximum daily influent concentration and maximum daily effluent concentrations.*

*The volume was calculated from the average monthly flows in the monthly discharge report.*

## Next Quarterly Report Due July 2023

- Settlement Update
- EGLE and CARD Updates
- NPDES Permitting Progress
- MS4 Permit
- Sentinel Well Monitoring