

# GELMAN PLUME MONITORING WELL MEETING SUMMARY – OCTOBER 28, 2019

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## Monitoring Well Location Recommendations for the Gelman Plume

### Summary Outline

- October 28, 2019 Meeting Overview
- Definitions
- Written Open-Ended Feedback
- Open Discussion Feedback
- Appendix A: Sign-in Sheet
- Appendix B: Demographic Questionnaire Results
- Appendix C: Resources



### QUESTIONS?

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## October 28, 2019 MEETING OVERVIEW

Date: Monday, October 28, 2019

Time: 7:00 – 9:00 p.m.

Location: City Council Chambers, 2<sup>nd</sup> Floor, Larcom City Hall, 301 E Huron St

Public: 29 (see sign-in sheet Appendix A and Appendix B for a summary of participant demographics)

Elected Officials: Councilmember Hayner (Ward 1), Councilmember Lumm (Ward 2), Councilmember Griswold (Ward 2), Councilmember Nelson (Ward 4), Councilmember Eaton (Ward 4)

City Staff: 5; Brian Steglitz, Kayla Coleman, Lisa Wondrash, Craig Hupy, Nani Wolf

Consultants: Patti McCall (Tetra Tech)

Meeting purpose: An informational meeting to share monitoring well location recommendations for the Gelman Plume. A complete [CTN video recording](#) is available.

### Meeting Agenda

- I) Welcome, Introductions & Meeting Purpose
- II) Project Overview
  - A) Background Information
  - B) Project Phases
    - 1) Data Collection
    - 2) 3-Dimensional Model
    - 3) Independent Review
    - 4) Sample Collection
    - 5) Well Location Recommendations
    - 6) Public Engagement
  - C) Next Steps
- III) Open Discussion, Q&A

The meeting covered the following topics:

- Data collection and analyses to-date.
- 3D model creation to help predict contamination migration.
- Recommended monitoring well locations.
- Public engagement process, stakeholder involvement and expertise.

## DEFINITIONS AND ACRONYMS

**1,4 dioxane:** a synthetic industrial chemical that was historically used as a chemical stabilizer or was a by-product of solvent manufacturing; it creates a solution when mixed with water and is likely carcinogenic to humans (as classified by the Environmental Protection Agency).

**3D model:** a mathematical representation of the surface of an object in three dimensions.

**CARD:** Coalition for Action on Remediation of Dioxane.

**Contaminant plume:** an area of polluted groundwater spreading out from a single identifiable source of pollution.

**EGLE:** Michigan Department of Environment, Great Lakes, & Energy (formerly the Michigan Department of Environmental Quality, MDEQ).

**Kriging (deterministic interpolation):** a statistical process that estimates the dimensions of an unknown surface between two known points.

**ppb:** parts per billion (a measure of contaminant concentration).

**Sentinel well:** a groundwater-monitoring well located between a known area of groundwater contamination and drinking-water supply wells.

**Topography:** the configuration of a surface including the position of its natural and man-made features.

## WRITTEN OPEN-ENDED FEEDBACK

Feedback forms were provided at the meeting, 2 were returned. The following written comments and questions have been transcribed as written to the best of staff ability. Staff responses are in *italics* where provided.

- Please tell us if our water test is bad who will pay to hook up to city water.  
*Fees for connecting to City of Ann Arbor water will be paid by the polluter (Gelman Sciences Inc., owned by Pall Corporation/Danaher Corporation). If residing in a township, the connection fee will still be paid by the polluter and coordination will be handled by the township administration. Townships have service purchase agreements with the City of Ann Arbor for municipal water and, as such, any affected residents would be direct customers of the township.*
  - The fact this meeting is happening is momentous! Onward (& on to cleanup).
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## OPEN DISCUSSION FEEDBACK

The following questions and comments were raised by meeting participants during the October 28 meeting discussion. This is not a direct transcription of the meeting discussion. This summary has been prepared from notes taken during the meeting. Staff and consultant responses to questions and comments are noted in *italics*.

- How do you treat 1,4 dioxane to make it as safe as possible? *At a municipal level, the city would likely use advanced oxidation treatment which involves either ultraviolet light or ozone in combination with hydrogen peroxide.*
- Please incorporate the collected data into EGLE's database.
- MDEQ has claimed that, if the plume migrates past M-14, Barton pond has a natural blocking capacity.
- How do the proposed monitoring wells that Judge Shelton rejected align with the monitoring wells identified through the 3D modeling process? *The wells are not identical in placement to those Judge Shelton rated and we hope to answer plume migration pathway questions using the proposed monitoring wells.*
- Does Gelman share well data with the City of Ann Arbor? *Yes, through an online repository available for public access.*
- Why was the city/Tetra Tech unable to collect stage 4 samples? *Gelman does not want to sample using a method with a detection limit under 1 ppb and would not allow us to do so. However, the lower-threshold data was not essential to the model's creation. The city will use the method with a lower detection limit of 0.07ppb for sampling the proposed monitoring wells.*
- What is the data source and estimation of how much dioxane remains in the ground? *850,000 pounds of dioxane was initially deposited by Gelman between 1966 and 1986 but how much remains is unknown. The data used in the model came from existing data; soil boring logs, well sampling, EGLE, Gelman, and Roger Rayle with CARD.*

- Is it true that in 2005 Gelman stopped using UV light to treat the dioxane plume? Yes.
- Are there wells that have never been tested? *Unknown.*
- More monitoring wells will not save or protect our drinking water – the \$400,000 cost of the wells should be spent on cleanup instead. The Gelman Plume will not successfully become a Superfund cleanup item. *The goal of the proposed wells is to have an early warning system to protect the city's water supply.*
- Is the model in a format the public can view or manipulate on Google Earth? *It can potentially be incorporated into the Google platform. The model is provided through its own program but the excel data sheets can be immediately provided and have been made available to CARD.*
- Councilmember Hayner: found the cost of the wells to be less than \$400,000 when self-calculated.
- Happy about the close work with Roger Rayle and Lawrence Lemke.
- Disappointment that it will take over two years to install the wells. *The next step will be to present recommendations to City Council for their consideration. A schedule will be proposed that takes into account both priorities and a funding source.*
- Have there been any new soil borings in the last 5 years? *No new borings were completed for this model; existing soil boring lithology was used and elevation data was provided by Fleis & VandenBrink Engineering, Inc. The goal of the first stage was to find places where we could best leverage new data to understand plume migration.*
- Is the assumption that tonight's discussion is not a part of the consent agreement correct? Yes.
- Is council considering grant funding for cleanup? *Staff has been directed to pursue all possible funding avenues for cleanup, including grant funding.*
- Ann Arbor Township has wells located on sandy soils subject to possible groundwater contamination. Are there companies private residents can use to test their water? Can the process be expedited? *A list of service providers will be distributed after the meeting, the lavender area on the map provided in the presentation are those regularly tested by the county (see Appendix C).*
- Councilmember Hayner: the Washtenaw County health department has been regularly testing periphery township wells and has a schedule to do so – reach out to them with a request that your well be added. *The County plan includes testing all wells that are within a 1000 feet buffer of locations where 1,4 dioxane was detected at or above 1 ppb.*
- What happens if 1,4 dioxane reaches Barton pond? *The monitoring wells are to help us react before contamination occurs. If Barton Pond does become contaminated the water treatment plant will use the treatments with which it is currently equipped to remove the dioxane from the drinking water supply. The plant currently has ozone treatment that can effectively remove 70% of dioxane from the water, and will include additional treatment if needed as part of future capital improvements.*

- Councilmember Griswold: satisfaction with the knowledge and dedication among all parties in the room and confident in success.
- Who is going to test township wells or pay for township residents to connect to City of Ann Arbor water? *Any hookup fees would be at the expense of the polluter. Adjacent townships have purchase agreements with the City of Ann Arbor for municipal water, so any township residents would not be direct customers of the city but rather customers of the township.*
- Gelman has paid for township residents to hook up to city water but has not paid for some residents to connect to sewer. *The area for which the township has existing sewer infrastructure is less than the area it is authorized to serve with drinking water; Jackson Rd is the primary area with sewer.*
- In Scio Township approximately 2,500 residents receive City of Ann Arbor water and residents are billed via the township. Another possibility for the provision of municipal water is for township properties to be annexed into the city.
- The plume is growing and some believe it has already reached the Huron River. Installing wells is not a surface water contamination solution. Dioxane is a carcinogen that is toxic to humans and can disrupt cell signaling and fetal development.
- Councilmember Hayner: the polluter pay method is not working and the public may have to pay for cleanup. Cleanup has been estimated at \$30-50 million and Gelman has a \$30 million fund at its disposal. Cleanup may be presented as a City of Ann Arbor ballot initiative. Ultraviolet light treatment would be very expensive for the water treatment plant.
- \$50 million over ten years was the original proposed cost figure; a county bond to pay for cleanup has been discussed. Debbie Stabenow mentioned that Superfund is still a viable option if the responsible party can cover the cost – the parent company that purchased Gelman has sufficient funds to do so. Would like to see Ann Arbor petition for superfund cleanup.
- West Park surface water has tested positive for dioxane at 22ppb. Basement percolation and evaporation is possible, and vapor intrusion is now included as a priority under Michigan law.
- Will the power point be available online and show the proposed well location areas? *Yes.*
- There is a well at Miller and Dexter Rd behind the party store. *Yes, there is. The selected areas for well location were chosen based on potential likely pathways and allow for aquifer analyses to be completed.*
- Will new wells be screened at near-surface levels as well as down deep? *Yes, the wells will be tested at several different depths.*

## Appendix A: SIGN-IN SHEETS

NAME/Representative of (please print clearly):  
Please provide your name and the name of any group or organization that you represent (if applicable).

Bob Bailey

Jared Walbert  
Gerald Bierman  
EGLE - RRD

Mozhgan Saverchious Bahani

Theresa

Clara Sauer

Kathy Grunwald

R. Zillich

Beth Collins

Claire Dykstra

Alyssa McMurtry

Kyto Baat

Anne Bonnist

Shana Milkie

Priscilla Creever

KEITH MCINTYRE

Mike Alexa

Steve Dykstra

Vivie Caruso

Joan Crimmins

James D'Amor

ALÉXI CHAPIN-SMITH  
REP. YOUSEF RAHBI

Linda Young

Erin Y

Monica Zillich

Kathy Rinal

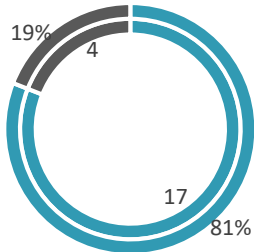
Merrin Haddy

Sandra McIntyre

Karen Alexa

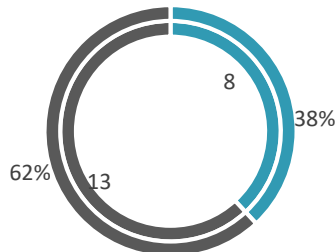
## Appendix B: DEMOGRAPHIC QUESTIONNAIRE RESULTS

Do you live within the city limits of Ann Arbor?



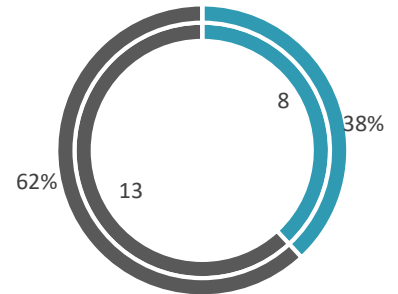
■ Yes ■ No

Do you work within the city limits of Ann Arbor?



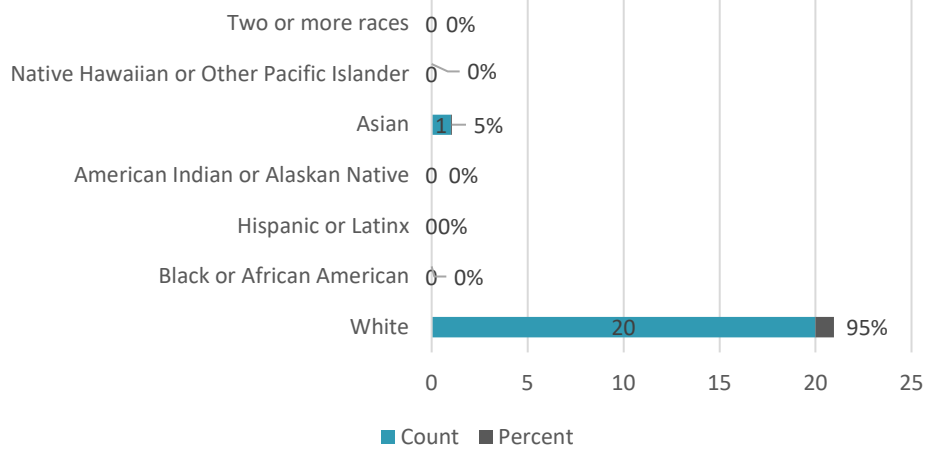
■ Yes ■ No

What is your gender?



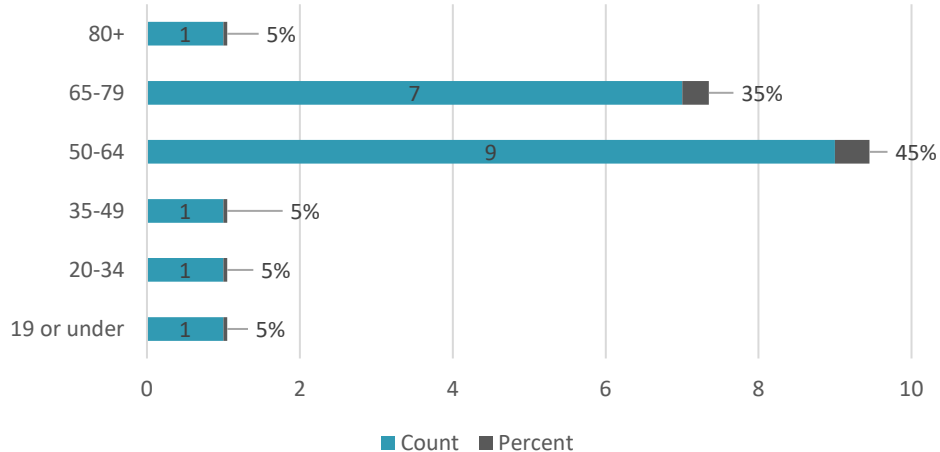
■ Male ■ Female ■ Other

What is your race?



■ Count ■ Percent

What is your age group?



■ Count ■ Percent



## Appendix C: RESOURCES

For additional information on the Gelman 1,4 dioxane plume, please visit:

- [Washtenaw County Website](#)
- [EGLE Website](#)
- [City of Ann Arbor Website](#)

Well Testing Service Providers

- [Washtenaw County](#)
- [Ann Arbor Technical Services](#)
- [Brighton Analytical](#)
- [EGLE Drinking Water Laboratory](#)
- [Pace Analytical](#) (performs [Method 522 Testing](#))
- [Eurofins Test America](#) (performs [Method 522 Testing](#))

Additional Information

- [EPA 1,4 Dioxane Fact Sheet](#)
- [Esri Kriging and Interpolation Fact Sheet](#)
- [EPA Superfund](#) and [Superfund Hazard Ranking System Quickscore](#)
- [Coalition for Action on Remediation of Dioxane \(CARD\)](#)
- [Washtenaw County Public Health Fact Sheet on 1,4-Dioxane \(PDF\)](#)