

Online Public Meeting

Wolverine's Draft

Area 5, Area 6, Area 11 & 12, and Area 19

Groundwater Investigation

Response Activity Plans

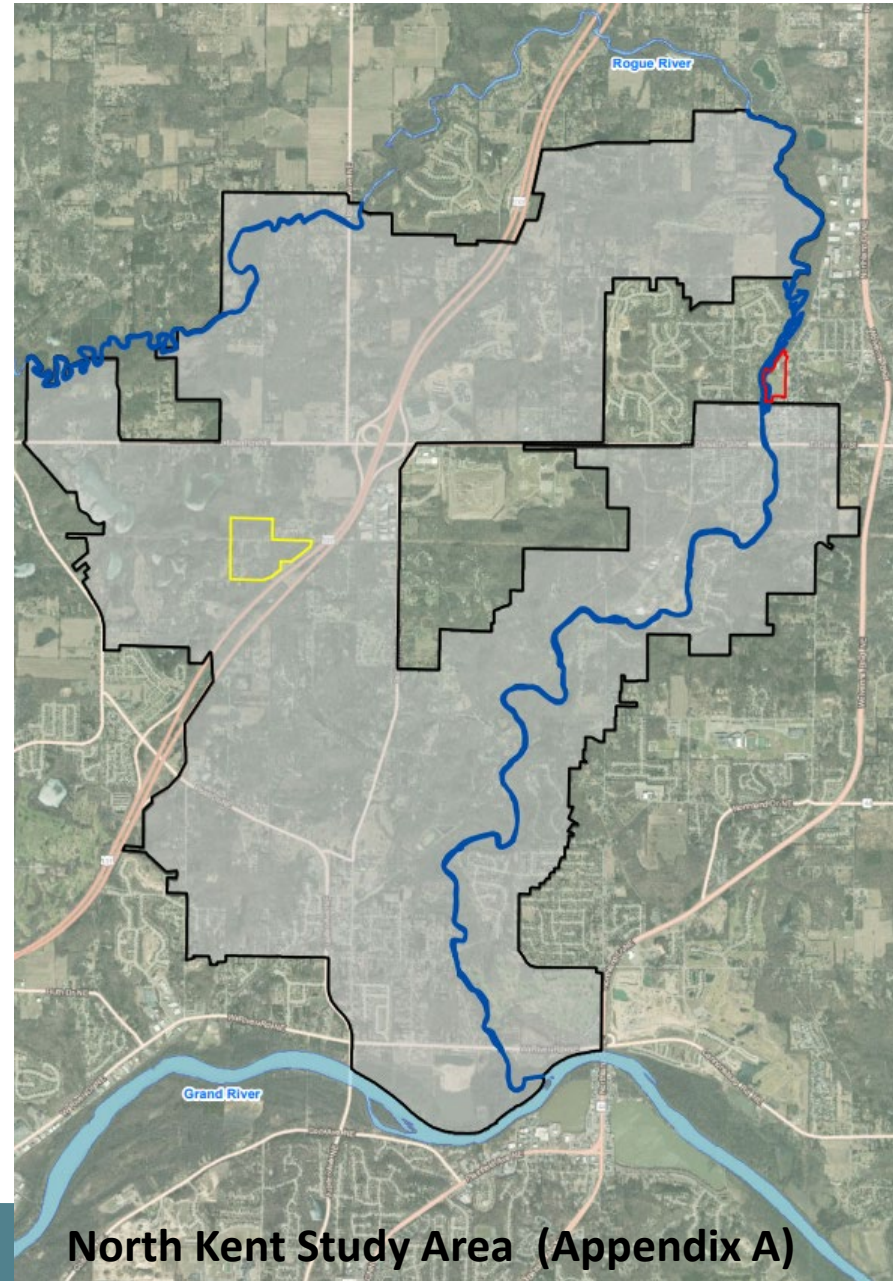
Tuesday, August 18, 2020
6:00 – 8:00pm



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

February 19, 2020 Consent Decree

- Consent Decree between the State of Michigan (Plaintiff), Plainfield and Algoma Townships (Intervening Plaintiffs) and Wolverine (Defendant) became effective on Feb. 19, 2020 (www.Michigan.gov/Belmont)
- Serves as the framework for all future PFAS response activities performed by Wolverine in the “North Kent Study Area”
- Wolverine will conduct these activities under EGLE oversight



North Kent Study Area (Appendix A)

Requirements of Consent Decree

General actions Wolverine must take under the Consent Decree:

- Municipal Water Expansion (Section 6.0)
- Filter Operation & Maintenance (Section 7.5)
- Residential Drinking Water Well Sampling (Section 7.6)
- Tannery Site Source Control (Section 7.7)
- House Street Disposal Site Source Control (Section 7.8)
- **Groundwater Investigations**
(Section 7.9, Appendix P, and Appendix R)
- Groundwater-Surface Water Interface (GSI) Investigation (Section 7.10)

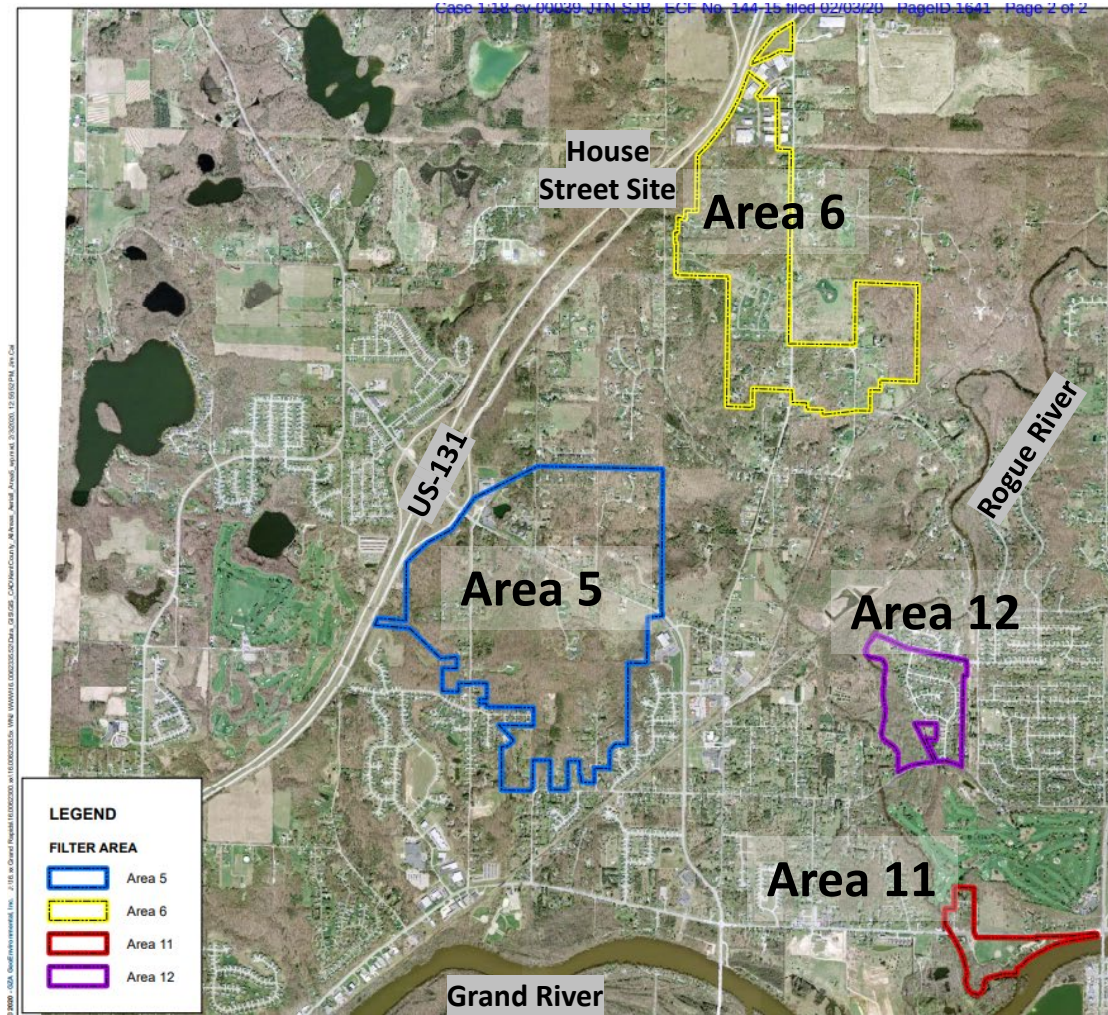


Area 5, 6, 11 & 12, 19
Response Activity Plans

Consent Decree: Appendix P

Area 5, Area 6, and Area 11 & 12 Groundwater Investigations Statement of Work

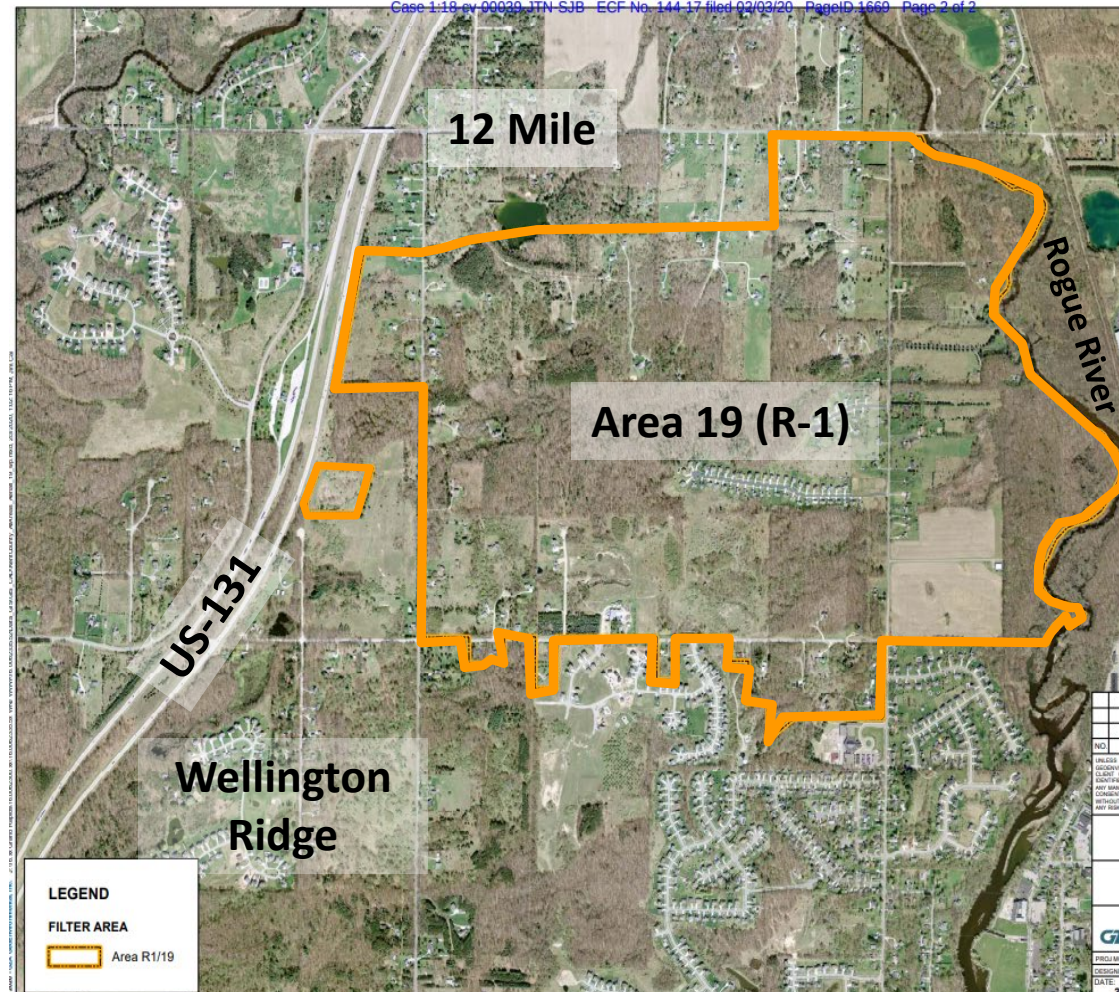
- Appendix P contains a Statement of Work (SOW) which proposed the general approach for Wolverine's initial groundwater investigation within Areas 5, 6, 11 & 12.
- This SOW was publicly noticed and approved as part of the Consent Decree



Consent Decree: Appendix R

Area 19 (R-1) Groundwater Investigations Statement of Work

- Appendix R contains a Statement of Work (SOW) which proposed the general approach and rationale for Wolverine's groundwater investigation within Areas 19 (R-1).
- This SOW was publicly noticed and approved as part of the Consent Decree



(NOT subject to change based on this comment period)

Appendix P and R:

General outline for the initial phase of Wolverine's groundwater investigations

- Number of proposed Investigation locations
- Sampling schedules

NOTE: EGLE VIEWS THESE LOCATIONS AS AN INITIAL STEP AND EXPECTS ADDITIONAL LOCATIONS WILL BE NEEDED TO OBTAIN VERTICAL AND HORIZONTAL DEFINITION WITHIN THESE AREAS.

Response Activity Plans:

Contains details regarding the work that was outlined in Appendix P and R.

Parts of these plans that would be subject to change based on this comment period include (but not limited to):

- Any portion of these plans that are NOT consistent with the requirements of the Consent Decree, Appendix P or R.
- Conceptual site model
- Figures, tables, cross-sections
- Details regarding the sampling procedures/protocols

Consent Decree Groundwater Investigation Requirements For Areas 5, 6, 11, & 12 (7.9 (i)):

- Define the vertical and horizontal extent of PFAS Compounds contamination as required by Part 201
- Confirm and monitor the location and stability of the PFAS Compounds plume(s) once the plume(s) are defined.

Consent Decree Groundwater Investigation Requirements For Area 19 (R-1) (7.9 (ii)):

- Define the vertical and horizontal extent of PFAS Compounds contamination as required by Part 201
- Conduct at least one sampling event at each monitoring well once installed.
- After the one sampling event, EGLE will take over any additional sampling and maintenance of the monitoring wells in Area 19 (R-1).

Note: Wolverine also has obligations for residential well resampling and filter operation and maintenance in these Areas which are discussed in other Response Activity Plans.

Report Format

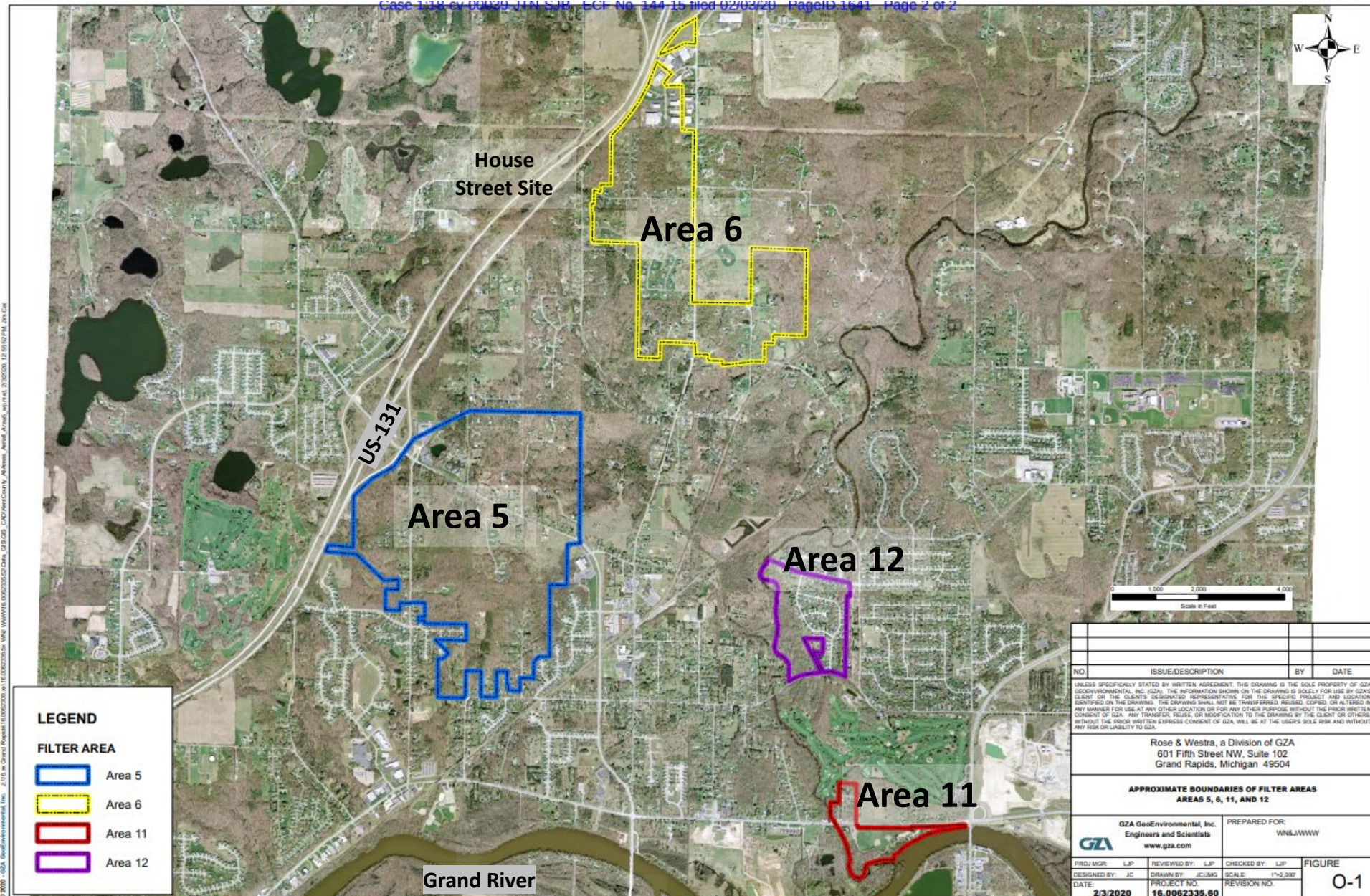
- Introduction (Sections 1.0)
- **Conceptual Site Model (Section 2.0)**
(Topography, hydrology, geology, hydrogeology, PFAS distribution in groundwater, data gaps)
- **Proposed Statement of Work (Section 3.0)**
- Investigation Methodology (Section 4.0)
- Sampling & Analytical Procedures (Section 5.0)
- Data Quality Assurance and Control (Section 6.0)
- Investigation Derived Waste (Section 7.0)
- Anticipated Schedule (Section 8.0)
- Tables, Figures & Cross Sections
- Appendix A – 2019 Groundwater Sampling Memo

Photo: EGLE subcontractor logging soil during investigation activities



Photo: October 2018 - EGLE subcontractor installing groundwater monitoring wells





Area 5 - EGLE Map & Interpretation

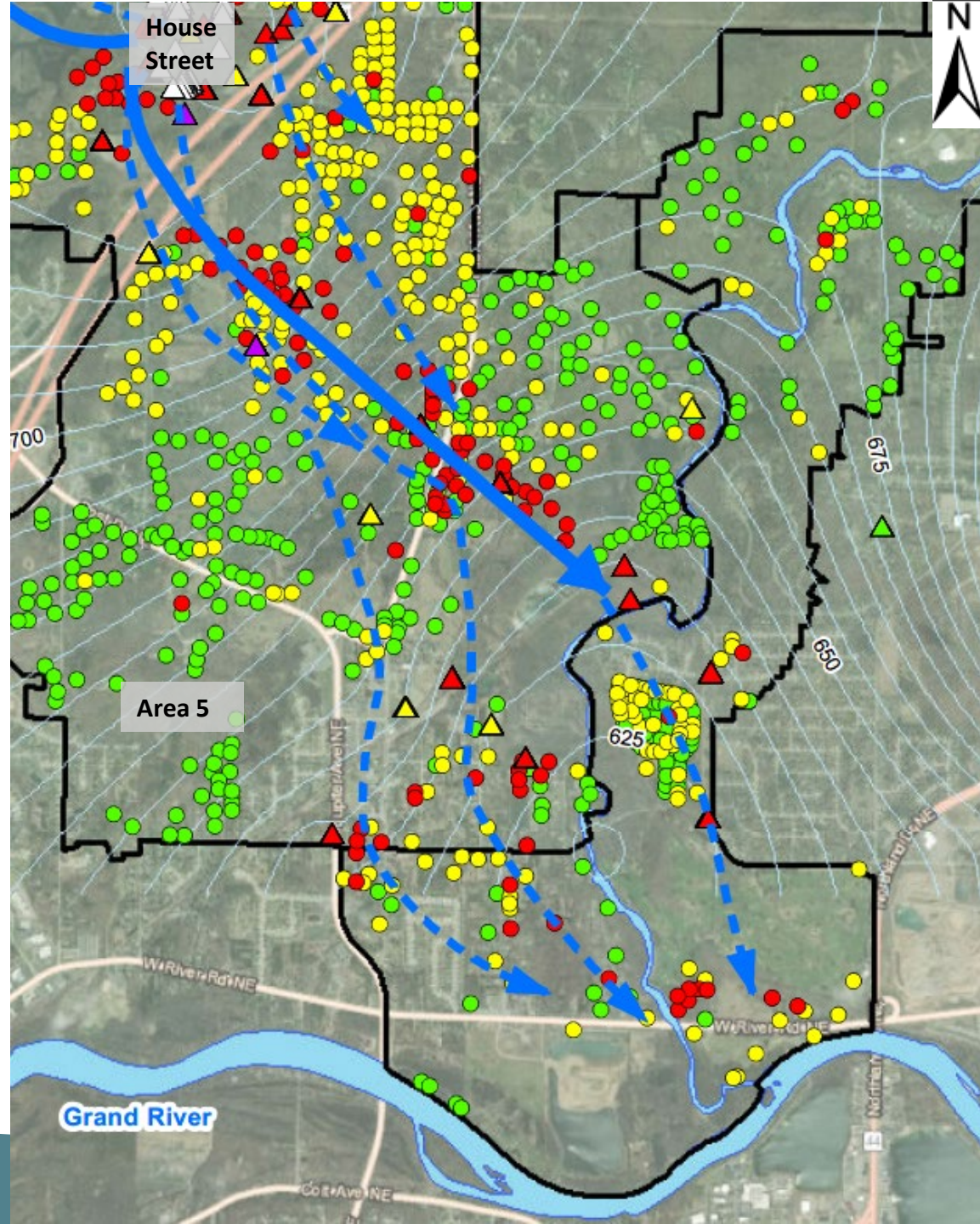
Residential Well Sampling Location PFOA & PFOS, ppt

- Non-Detect for PFOA and PFOS
- Detection for PFOA or PFOS, but no exceedance
- Exceedance, PFOA > 8 or PFOS > 16

Groundwater Locations PFOA & PFOS, ppt

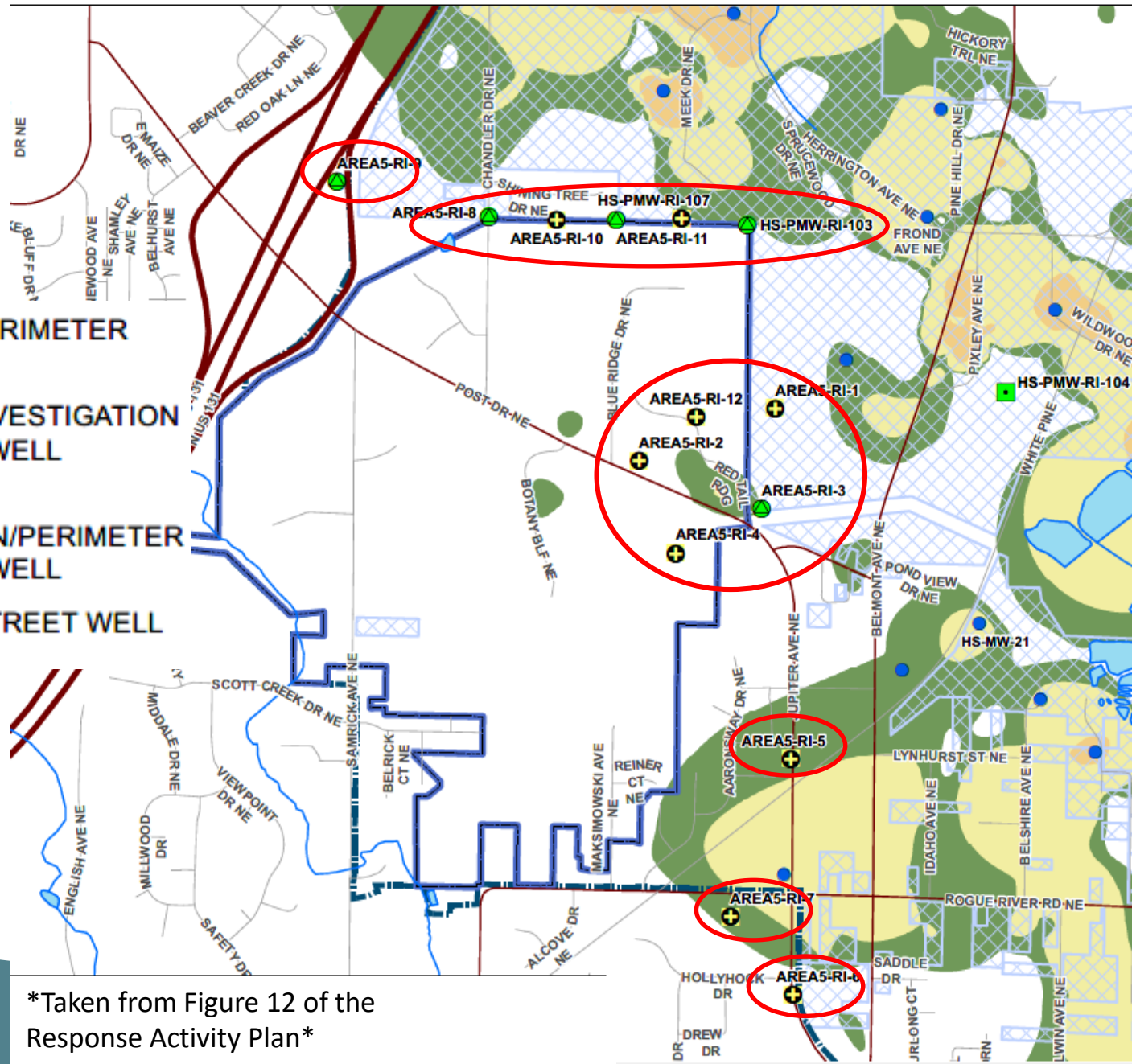
- ▲ Non-Detect for PFOA and PFOS
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- ▲ PFOA or PFOS > 1,000 and < 5,000
- ▲ PFOA or PFOS > 5,000 and < 10,000
- ▲ PFOA or PFOS > 10,000

*Groundwater contours depicted are for the intermediate aquifer which contains the most monitoring well and residential well data.



Response Activity Plan Scope of Work - Area 5

- 1 - ■ PROPOSED PERIMETER MONITORING
- 10 - ⊕ PROPOSED INVESTIGATION MONITORING WELL
- 5 - ● PROPOSED INVESTIGATION/PERIMETER MONITORING WELL
- Existing ● GZA HOUSE STREET WELL LOCATION



*Taken from Figure 12 of the
Response Activity Plan*

Area 6 - EGLE Map & Interpretation

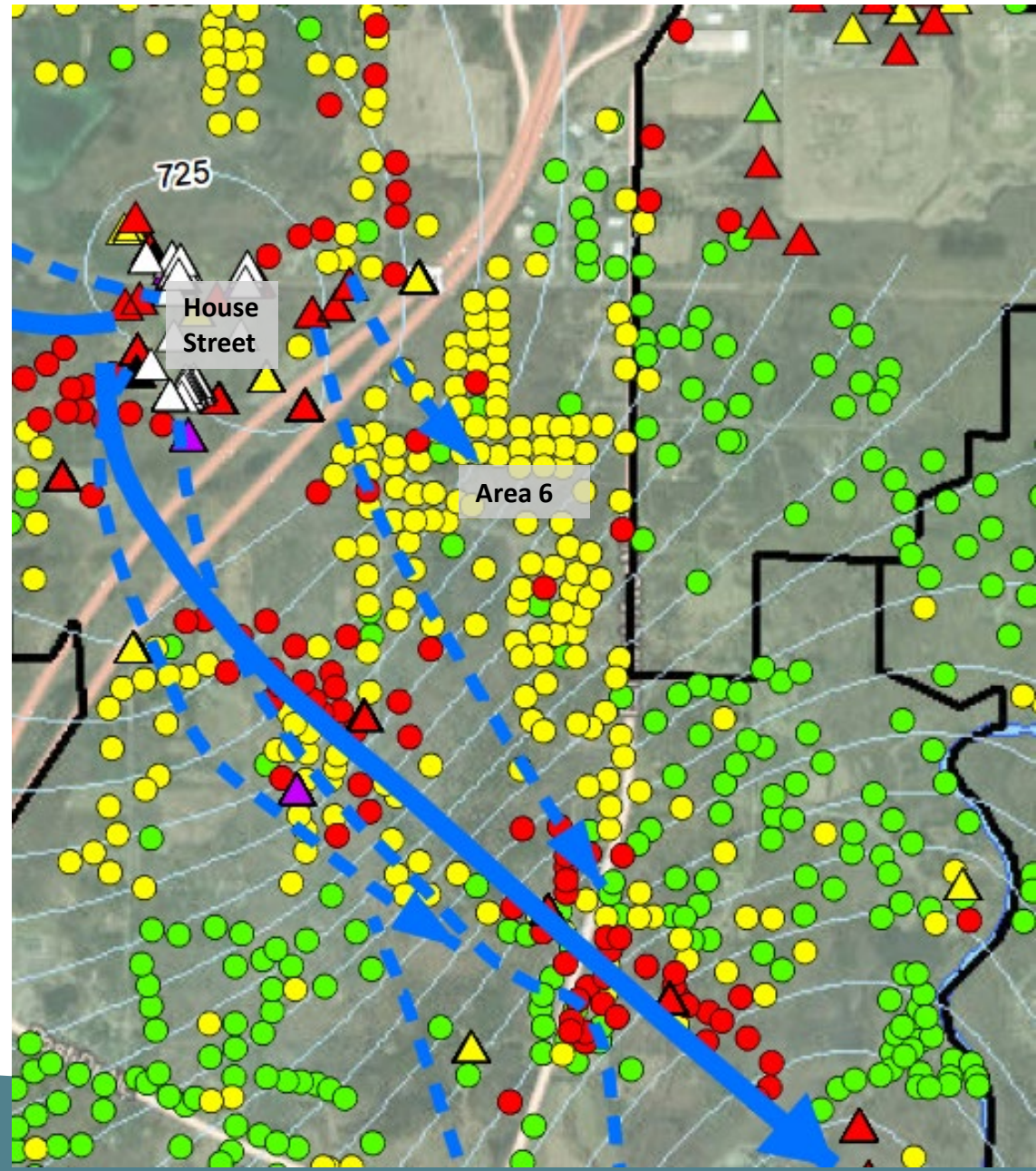
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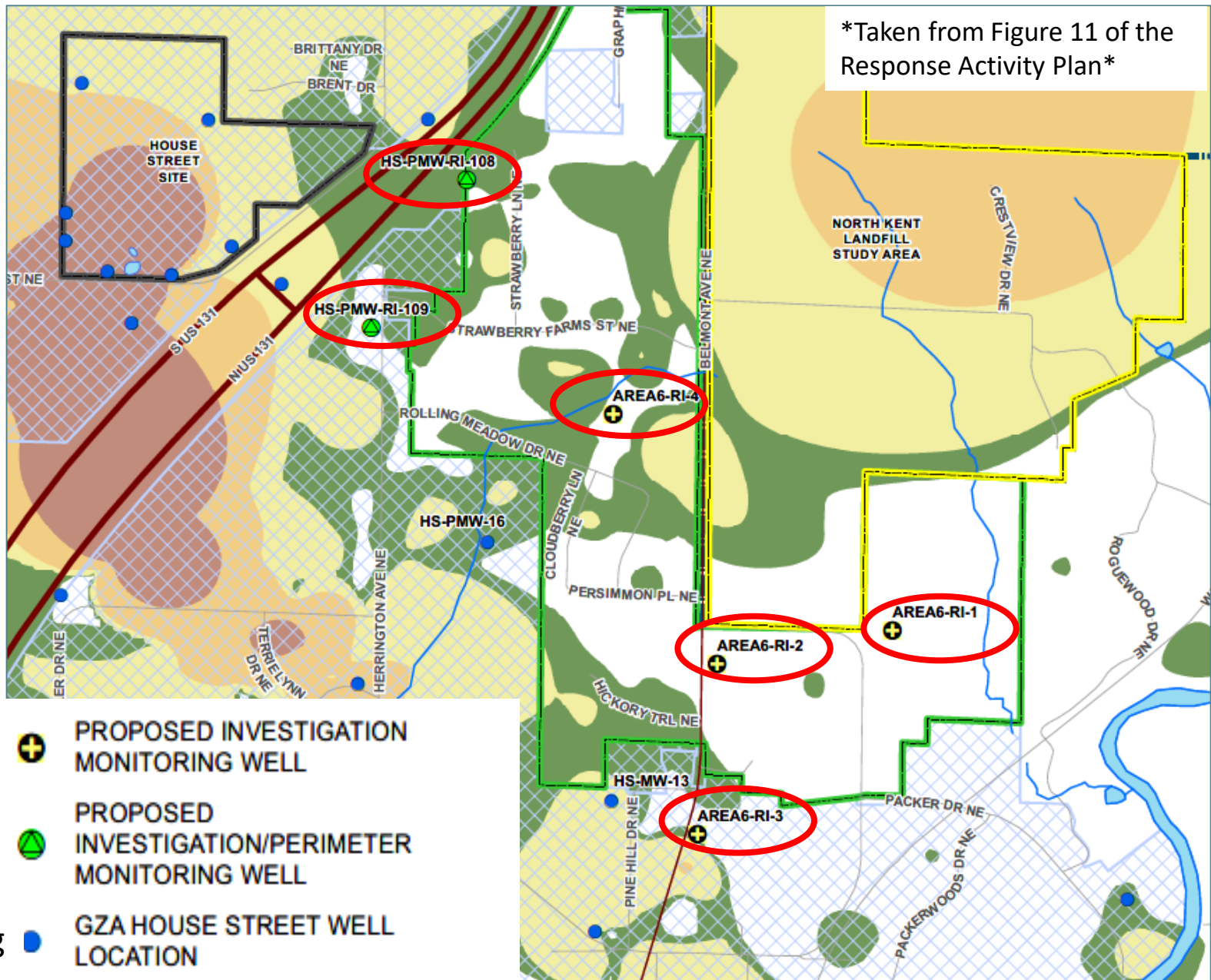
Groundwater Locations PFOA & PFOS, ppt

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*Groundwater contours depicted are for the intermediate aquifer which contains the most monitoring well and residential well data.



Response Activity Plan Scope of Work - Area 6



Area 11 & 12 – EGLE Map & Interpretation

Residential Well Sampling Location PFOA & PFOS, ppt

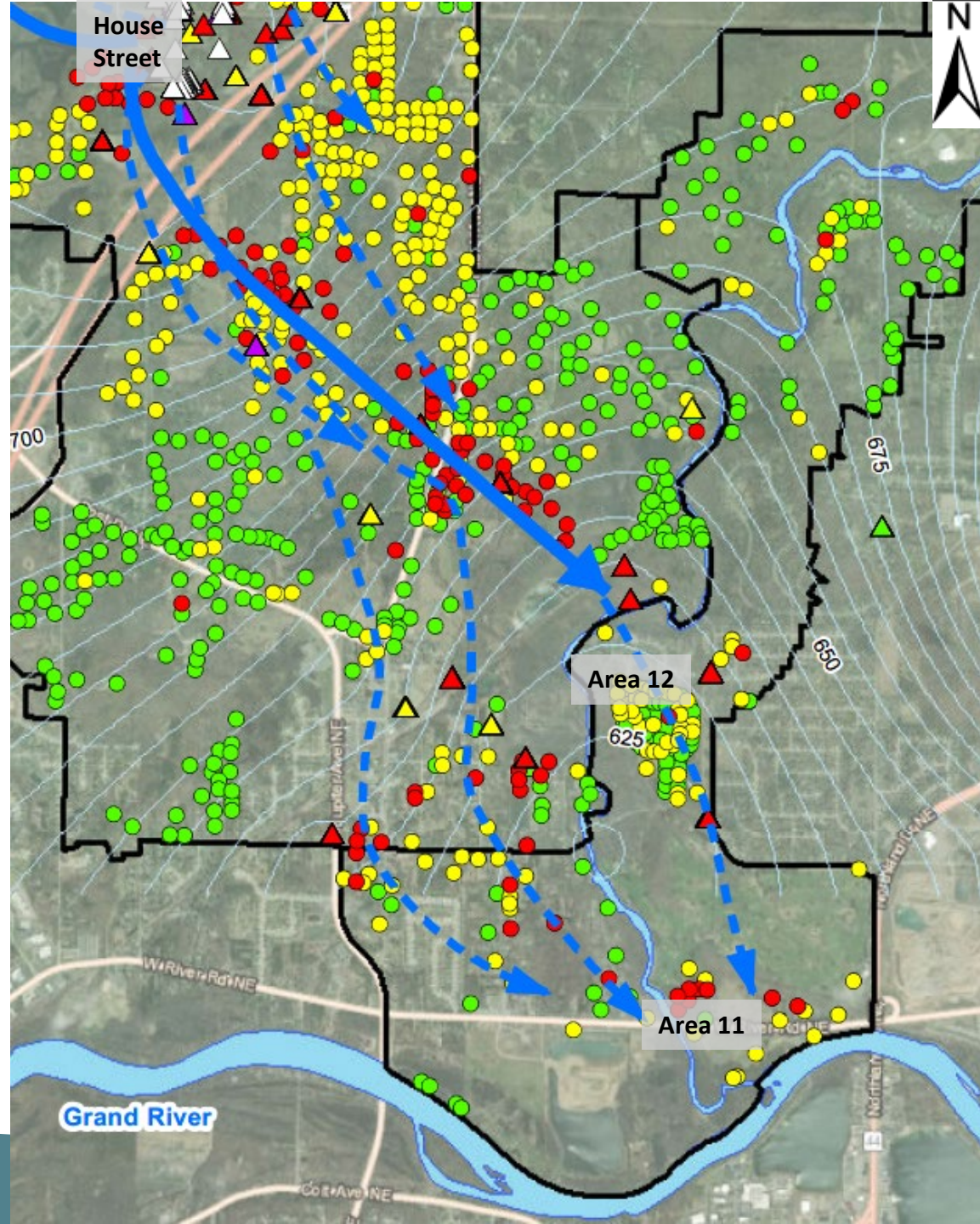
- Non-Detect for PFOA and PFOS
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Groundwater Locations

PFOA & PFOS, ppt

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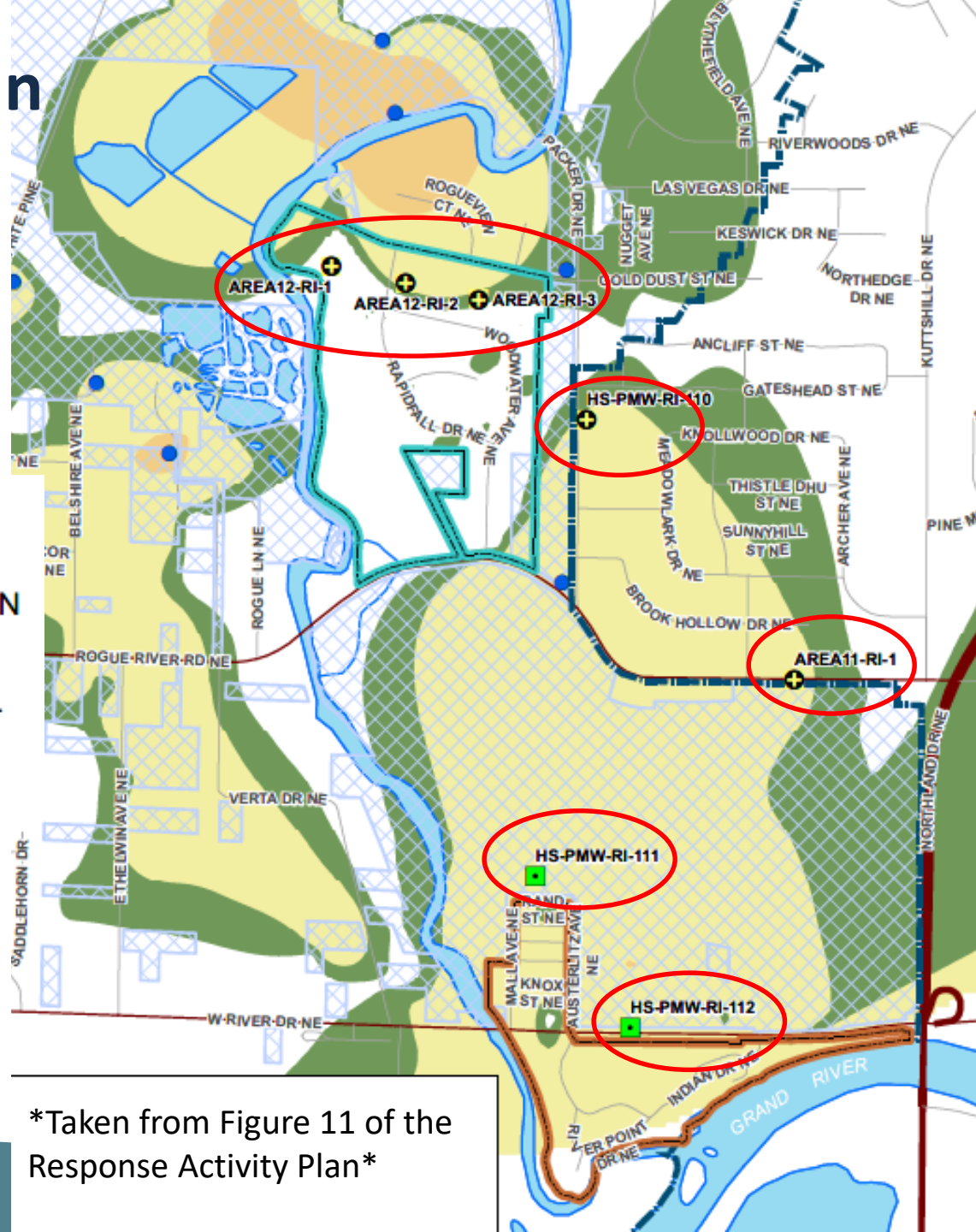


Response Activity Plan

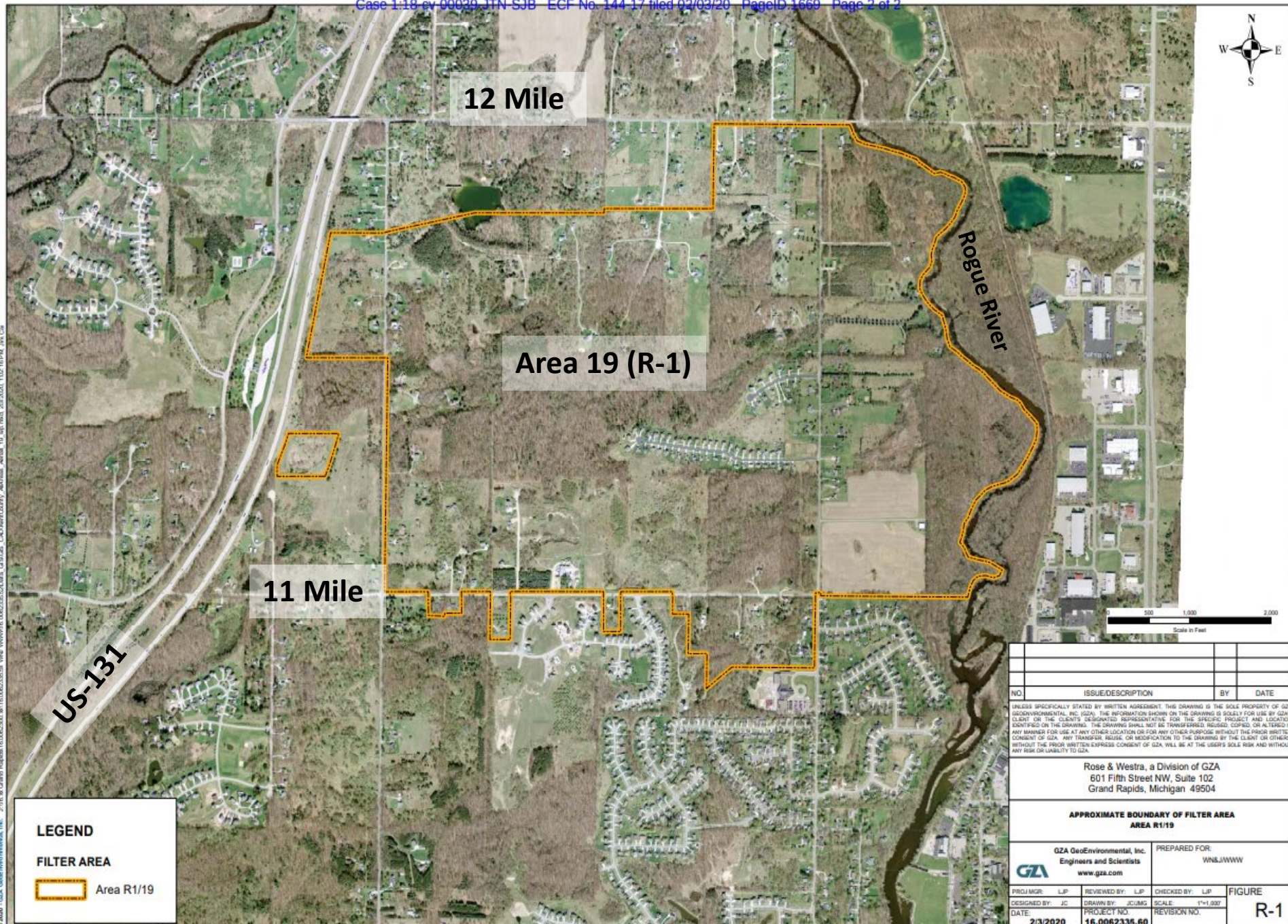
Scope of Work

Area 11 & 12

- 2 - ■ PROPOSED PERIMETER MONITORING
- 5 - ⊕ PROPOSED INVESTIGATION MONITORING WELL
- Existing ● GZA HOUSE STREET WELL LOCATION



Taken from Figure 11 of the Response Activity Plan



Area 19 (R-1) - EGLE Map & Interpretation

Residential Well Sampling Location

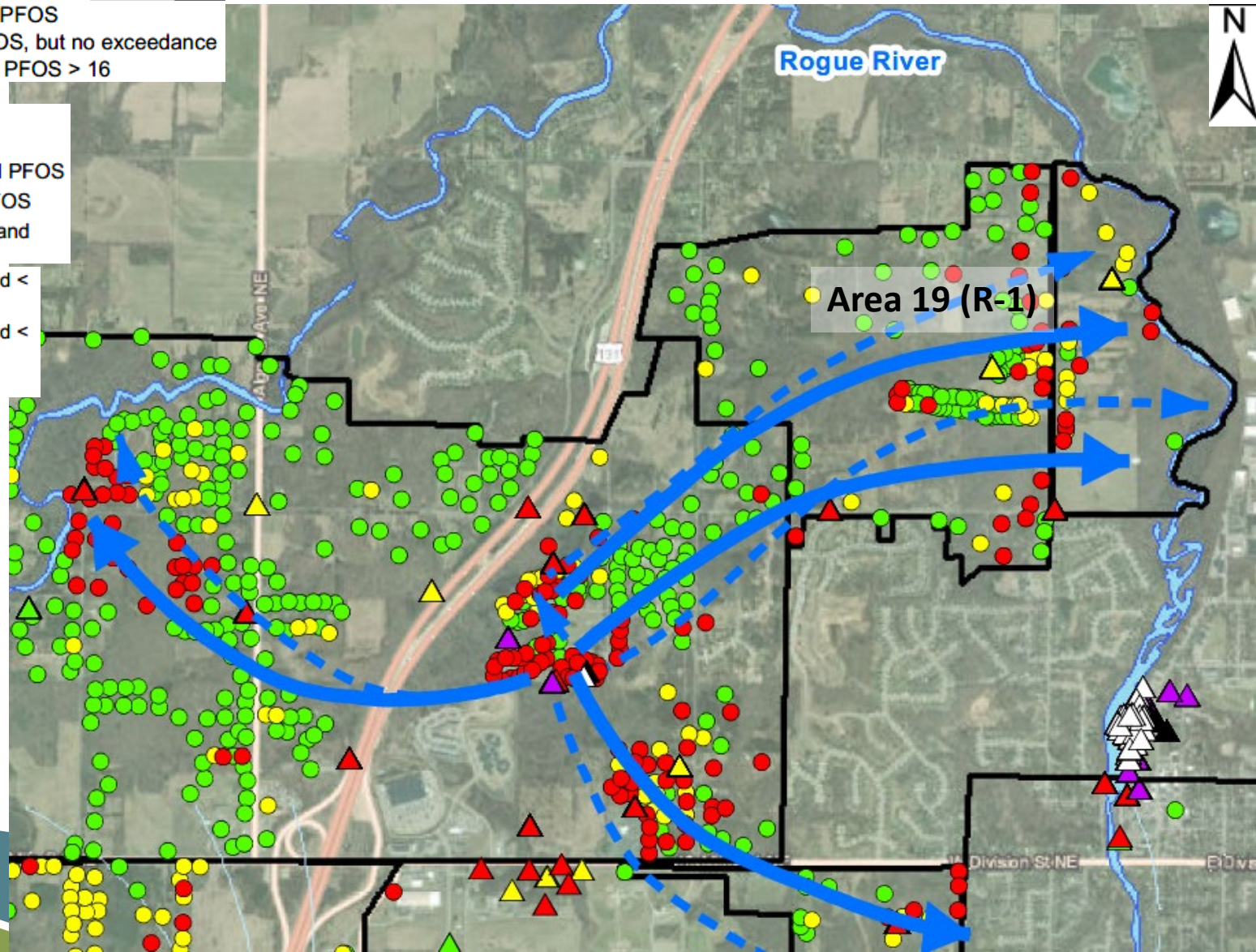
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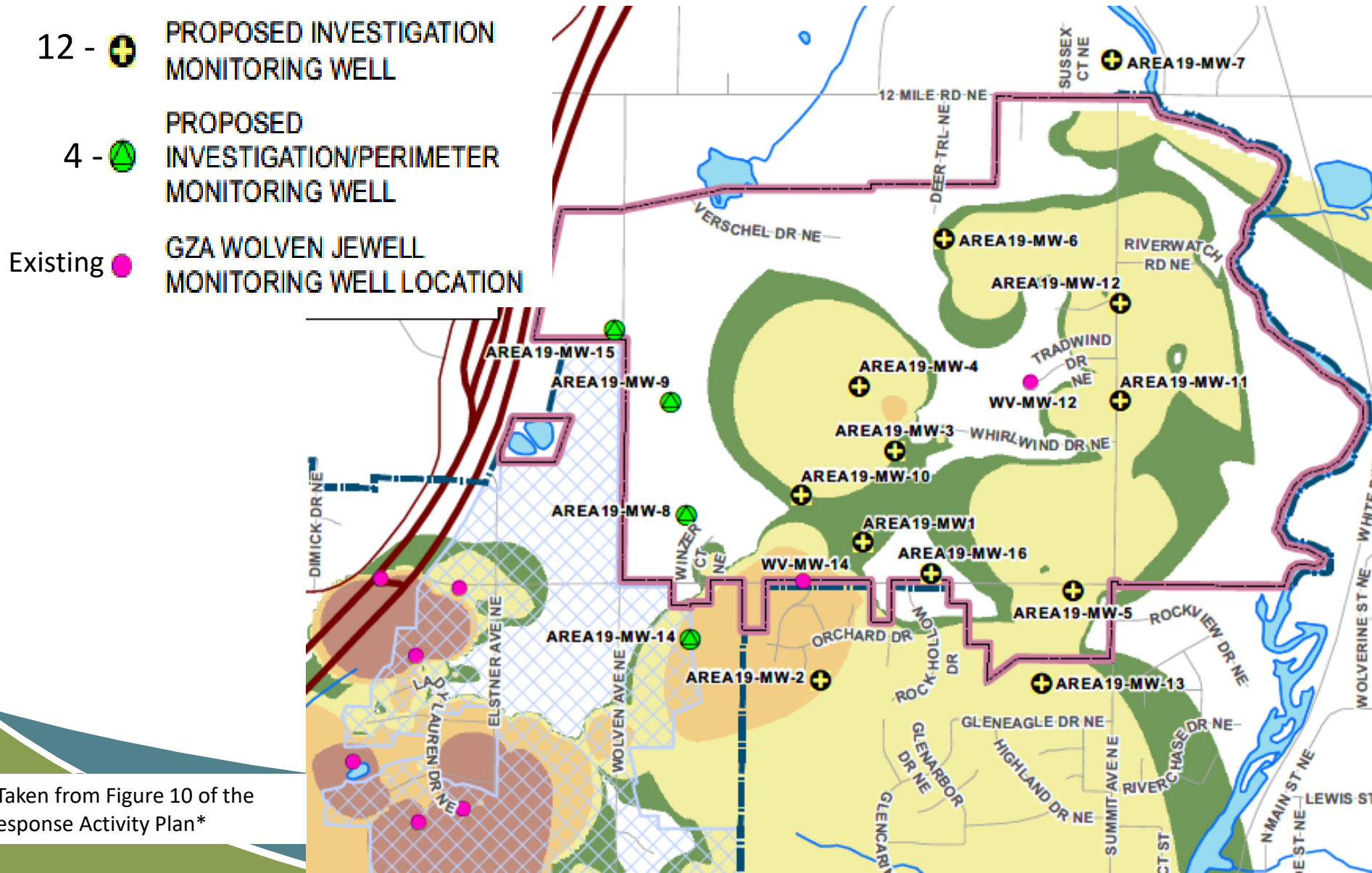
Groundwater Locations

PFOA & PFOS, ppt

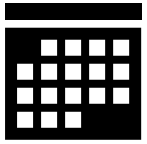
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- ▲ PFOA or PFOS > 10,000



Response Activity Plan Scope of Work -Area 19 (R-1)



Anticipated Schedule



- Wolverine's consultant anticipates obtaining access and completing the installation of well clusters proposed in these work plans over the course of the next 16 months.



- After completion and 4 quarters of sampling of the well clusters, GZA will meet with EGLE to discuss placement of additional well clusters needed to meet the requirements of vertical and horizontal definition of PFAS contamination in each area.



- Completion Reports (Section 7.12 (vi and vii)) are due no later than 5 years following the Effective Date of the Consent Decree. Must contain a long-term monitoring plan for Areas 5, 6, 11, & 12.

Report Review Next Steps

Take Comments

EGLE will take written public comments:

EGLE-RRD-Housestreet@michigan.gov

through September 10, 2020.

Prepare Response Document

EGLE will prepare a response document to summarize and address the public comments received.

This response document will be posted to www.Michigan.gov/belmont

Respond to Wolverine

EGLE will complete its review of the Response Activity Plans and provide comments back to Wolverine.

Wolverine Response Activity Plan Due Dates:

Response Activity Plan	Due Date to EGLE	Public Meeting Date	Comment Period
Filter Operation and Maintenance (O&M)	4-6-2020	5-26-2020	5-14 to 6-13-2020
Groundwater Surface Water Interface (GSI)	4-20-2020	5-27-2020	5-14 to 6-13-2020
Residential Well Resampling	5-4-2020	6-23-2020	6-11 to 7-18-2020
Groundwater Investigation - Area 5	6-18-2020	8-18-2020	Until 9-10-2020
Groundwater Investigation - Area 6			
Groundwater Investigation - Area 11			
Groundwater Investigation - Area 12			
Groundwater Investigation - Area R-1 (19)			
Perimeter Wells	8-17-2020	TBD	At least 30 days

TBD: To be determined

Consent Decree and Response Activity Plans are posted online at:
www.Michigan.gov/belmont

We want to hear from you!

You can continue to submit your written comments through **September 10, 2020** to:

EGLE-RRD-Housestreet@michigan.gov

Or by mail to:

Karen Vorce

EGLE-RRD

350 Ottawa Avenue NW, Unit 10

Grand Rapids, MI 49503

Questions?

Karen's Contact Info:

Phone: 616-439-8008

Email: vorcek@Michigan.gov

When submitting comments, make sure to note which
Response Activity Plan you are commenting on