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RESIDENTIAL WELL RESAMPLING RESPONSE ACTIVITY PLAN North Kent Study Area

September 30, 2020
File No. 16.0062961.70

PREPARED FOR:
Wolverine World Wide, Inc.
Rockford, Michigan

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Acronym	Definition
CD	Consent Decree
COVID-19	Coronavirus Disease 2019
DQO	Data Quality Objective
EGLE	Michigan Department of Environmental, Great Lakes and Energy
GIS	Geographic Information Systems
MCL	Maximum Contaminant Level
MS/MSD	Matrix Spike/Matrix Spike Duplicate
ng/L	Nanogram per Liter
NKSA	North Kent Study Area
PFAS	Per- and Polyfluoroalkyl Substances
PFBS	Perfluorobutane Sulfonic Acid
PFHxA	Perfluorohexanoic Acid
PFHxS	Perfluorohexane Sulfonic Acid
PFNA	Perfluorononanoic Acid
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
POET	Point of Entry Treatment
QAPP	Quality Assurance Project Plan [<i>Former Wolverine Tannery, House Street Disposal Area, and Woven/Jewell Area, Per- and Polyfluoroalkyl Substances Investigation Program</i>]
QA/QC	Quality Assurance/Quality Control
R&W/GZA	Rose & Westra, a Division of GZA GeoEnvironmental, Inc.
RAP	Response Activity Plan
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedures
Wolverine	Wolverine World Wide, Inc.



1.0 INTRODUCTION

On behalf of Wolverine, R&W/GZA prepared this RAP to describe the approach for select residential well resampling in the NKSA. This RAP is prepared pursuant to CD No. 1:18-cv-00039, effective February 19, 2020. Specifically, this scope of work is established in Sections 7.4(c), 7.6, and Appendix M of the CD.

2.0 BACKGROUND

This RAP addresses residential well resampling in the areas which are not receiving municipal water (i.e. Filter Areas as defined in the CD). The proposed activities in this RAP are intended to provide testing data to supplement the Perimeter Wells RAP (due on August 17, 2020) to monitor for PFAS migration from the Municipal Water Areas.

3.0 GENERAL APPROACH

The following information was reviewed and utilized to develop the basis for the proposed sampling:

- The estimated extent of PFOS plus PFOA (PFOS+PFOA) exceeding 70 ng/L, based on the analytical results for the residential drinking water wells, the vertical aquifer profiling samples, and the groundwater monitoring well samples.
- The estimated extent of PFOA+PFOS exceeding 10 ng/L, based on the analytical results for the residential drinking water wells, the vertical aquifer profiling samples, and the groundwater monitoring well samples. The extent of PFOA+PFOS exceeding 10 ng/L is reviewed with the extent exceeding 70 ng/L to evaluate PFOA+PFOS migration. The parcels in the filter areas, excluding vacant parcels, parcels receiving municipal water, and those parcels with a POET system installed, are outlined in **Figure 1**.
- Use of groundwater contours and flow to identify downgradient area of the source(s).
- Isoconcentration maps of the following six PFAS which are on the list of the draft State MCLs proposed by EGLE. **See Figures 3 through 9.**

Contaminant	Proposed MCL in ng/l
PFBS	420
PFHxS	51
PFHxA	400,000
PFNA	6
PFOS	16
PFOA	8

R&W/GZA interpolated the isoconcentration maps for PFBS, PFHxS, PFHxA, PFNA, PFOS, PFOA, and PFOA+PFOS based on drinking water well data (including POET influent sampling), vertical aquifer profiling data, and monitoring well data received as of January 6, 2020. The extent of these compounds exceeding the proposed MCLs were evaluated along with the estimated extents of PFOA+PFOS exceeding 10 and 70 ng/L. The evaluation



indicates the extent of PFOA+PFOS exceeding 10 ng/L was the controlling factor in terms of spatial distribution. Therefore, the estimated extent of PFOA+PFOS exceeding 10 ng/L isoconcentration map was used to select parcels for residential well resampling.

- The parcels within the filter areas that do not have a POET installed were identified and overlain onto the PFOA+PFOS isoconcentration map. The parcels within the filter areas and without a POET, but within or in contact with the PFOA+PFOS isoconcentration extent exceeding 10 ng/L, have been selected for resampling within the first year after the Effective Date of the CD. Parcels within the filter areas which have a POET installed will not be resampled because they have already been resampled at least twice during the POET monitoring.
- In certain areas, residential well depths, where estimable, were evaluated in comparison to the known depths of contamination nearby so that a representative portion of parcels in the area could be selected for the initial resampling event.

4.0 PROPOSED STATEMENT OF WORK

This section of the RAP summarizes the planned responses to the required action items in Sections 7.4(c), 7.6, and Appendix M of the CD. This includes the schedule for conducting residential well sampling in the Filter Areas, and frequency and locations where residential well sampling will occur, including the justification and rationale for selection, data quality objectives, quality assurance and quality control, maps of sampling locations (See **Figures 1, 2, and A – D**), and tables summarizing existing residential well sampling results and well screen elevations (See **Tables 1 through 4**).

Resampling will be conducted using a staggered approach, with the goal of resampling each residence within the filter areas of the North Kent Study Area that has not been sampled two or more times as of February 19, 2020. There are 590 parcels within the filter areas that do not have a POET system. Of those parcels, 477 have been sampled only one time and are included in this SOW. Of these 477 parcels, 44 have maximum PFOS+PFOA concentrations exceeding 10 ppt, and 4 have known concentrations of PFOA between 8 ppt (Part 201 criterion) and 10 ppt. These 48 parcels will be sampled a total of three times as described below. There are also several parcels that have been connected to municipal water since completion of the supporting documents to the CD and there are several parcels that appear to be vacant or unoccupied that may not ultimately be sampled.

Based on the above approach, approximately 224 parcels have been selected for the initial year of residential resampling. This selection includes the 48 parcels where the concentration of PFOS+PFOA previously exceeded 10 ppt or 8 ppt PFOA.

During the second year following the date of the CD, approximately 148 additional parcels will be sampled. These 150 parcels will be evaluated and confirmed once results are received from the initial year. Additionally, parcels within the filter areas which do not have a POET system with a known PFOA+PFOS concentration greater than 10 ng/l or exceeding an applicable PFAS-cleanup criterion will be sampled annually until they have been sampled a total of at least three times (including sampling events prior to February 19, 2020). Once these homes have a minimum of three sampling events, additional sampling will be re-evaluated.

During the third year following the date of the CD, the remaining approximately 141 parcels as well as parcels with concentrations of PFOA+PFOS over 10 ppt or exceeding an applicable PFAS-cleanup criterion which have not been sampled a total of three times (i.e., those whose PFOA+PFOS concentrations were found to be greater than 10 ppt while executing this RAP) will also be sampled.



The following table summarizes the approximate sampling dates, intervals, and parcels planned for sampling.

Sampling Dates	Number of NKSA Parcels*	Table Containing List of Parcels	Total Resampling Events Post CD
Annually as listed below	48	1	Up to 3
Between 2-19-2020 and 2-19-2021	179 (plus the 48 parcels above)	2	Up to 3 (for 1 st year set)
Between 2-19-2021 and 2-19-2022	146 (plus parcels with > 10 ppt)	3	Up to 2 (for 2 nd year set)
Between 2-19-2022 and 2-19-2023	140 (plus parcels with > 10 ppt that have not yet been sampled 3 times)	4	1 (for 3 rd year set)

* These numbers vary from those presented in Appendix M of the CD. The changes are due to several items, including some parcels being connected to municipal water after Appendix M was completed. Specifically, in sampling year 1, the number of parcels is likely artificially large as there is several parcels that appear to be either vacant or unoccupied listed. Each address will be confirmed for status during the corresponding sampling year.

The parcel sampling events are identified on **Figure 2** with additional details on **Figures A – D**. Parcels with known prior PFOS+PFOA detections above 10 ppt or other applicable PFAS criterion are being prioritized for sampling in each calendar year event.

On behalf of Wolverine World Wide, GZA/R&W will contact the property owners as outlined in this work plan to arrange for resampling of their wells.

As previously outlined in Appendix M of the CD, in filter areas, if a parcel is resampled and a detection of PFOS+PFOA greater than 10 ppt or other applicable PFAS criterion is identified, that resident will be offered a POU which will be maintained in accordance with the POU O&M.

5.0 SAMPLING AND ANALYTICAL PROCEDURES

This section provides a generalized SAP for the residential well resampling. Specific information regarding sampling procedures and analytical methods is provided in the *Former Wolverine Tannery, House Street Disposal Area, and Wolven/Jewell Area, Per- and Polyfluoroalkyl Substances Investigation Program*, most recent revision (QAPP).

5.1. SAMPLING LOCATIONS

One sample will be collected from each parcel. In accordance with the previously-approved QAPP and SOPs, and consistent with Wolverine's standard procedures, the sample from each parcel will be collected from either an untreated exterior faucet or an untreated interior fixture, as close to the water inlet/well as possible.

5.2. SAMPLE COLLECTION AND LABELING

Samples will be collected for PFAS analysis as outlined on the schedule in **Section 4.0** and detailed in the drinking water sampling SOPs in the QAPP. Detailed field and laboratory requirements are also provided in the QAPP.

Sample identification will consist of nomenclatures that include the unique location identification, designation of drinking water with DW, and the sample collection date, including four-numeral date (i.e., XXX Main Street-DW-



MM/DD/YYYY). If applicable, sample identification for each sample will be repeated for each sampling event with consistent spelling, updating only the collection date.

To prevent misidentification of samples, legible labels will be affixed to each sample container. The labels will be sufficiently durable to remain legible even when wet. At a minimum, the labels will contain the following information:

- Location ID;
- Name or initials of collector; and
- Date and time of collection.

5.3. SAMPLE SHIPPING

Sample bottles will be placed into the cooler and packed with double-bagged wet ice immediately following collection. Packing material will be used as necessary. A temperature blank will be placed in the cooler prior to shipment. The cooler shall be addressed to the appropriate laboratory and dispatched as soon as practical to ensure timely arrival.

5.4. ANALYTICAL METHOD AND PARAMETERS

PFAS will be analyzed using EPA Method 537 (Rev 1.1). The analyte list and reporting limits are provided in Table A.7.8 of the QAPP.

6.0 **DATA QUALITY OBJECTIVES, QUALITY ASSURANCE AND QUALITY CONTROL**

6.1. DATA QUALITY OBJECTIVES

Project DQOs are provided in Section A.7 and Table A.7.1 of the QAPP. Site-specific performance measurement criteria are provided in Table A.7.2 of the QAPP, and laboratory quality control acceptance criteria are provided in Table B.5.2 of the QAPP.

6.2. QUALITY ASSURANCE AND QUALITY CONTROL

The following field quality control samples will be collected at a rate of one per 20 samples in accordance with the QAPP: Field blanks, field duplicates, and MS/MSDs.

- Field blanks will be collected by pouring laboratory-supplied certified PFAS-free water into a sample container at the point of sample collection. The purpose of field blanks is to assess potential contamination at the sample point.
- Field duplicates will be collected by filling one additional sample container with water from the sample point. The purpose of field duplicates is to assess variability in sample composition. Field duplicates are not intended to be blind duplicates.



- MS/MSD samples will be collected by filling two additional sets of sample bottles with water from the sample point. MS/MSD analyses are conducted by the analytical laboratory after samples have been collected and submitted. Analysis of known concentrations of analytes spiked in the MS/MSD samples indicate if matrix interference effects are occurring.
- QA/QC samples will be collected using the methods described in **Section 5.0** and SOPs A19 and B01 in the project-specific QAPP. Samples will be labeled as described in **Section 5.0**. The location of QA/QC samples will be entered into the sampling logs. QA/QC samples will be analyzed using the same analytical methods used for the primary sample.

7.0 INVESTIGATION DERIVED WASTE

Well water flushed during the sampling is the only investigation derived waste anticipated. The flushed water will be discharged to the nearby ground surface or into a drain within the home if inside sampling is required in accordance with EGLE interoffice communication regarding purge water disposal from well sampling and development (EGLE, 1999).

8.0 ANTICIPATED SCHEDULE

The schedule for implementation of the residential well resampling in the filter areas as described above will be as follows:

- Initial set of residential wells will be sampled within one year of the Effective Date of the CD.
- Second set of residential wells will be sampled within two years of the Effective Date of the CD.
- Third set of residential wells will be sampled within three years of the Effective Date of the CD.

The schedule for sampling will depend greatly on R&W/GZA's ability to obtain access to each residential parcel and the potential impact of COVID-19.

Upon completion of the three years of residential well sampling outlined in this RAP, R&W/GZA will review the data in consultation with EGLE. As provided in the CD, Wolverine will submit a completion report summarizing the results of the sampling outlined in this RAP. As provided in section 7.12(ii) and Appendix M of the Consent Decree, the completion report will discuss the need for any next steps regarding residential well sampling, including any proposed long term and/or cessation of residential well sampling, subject to any required approval by EGLE under the Consent Decree.



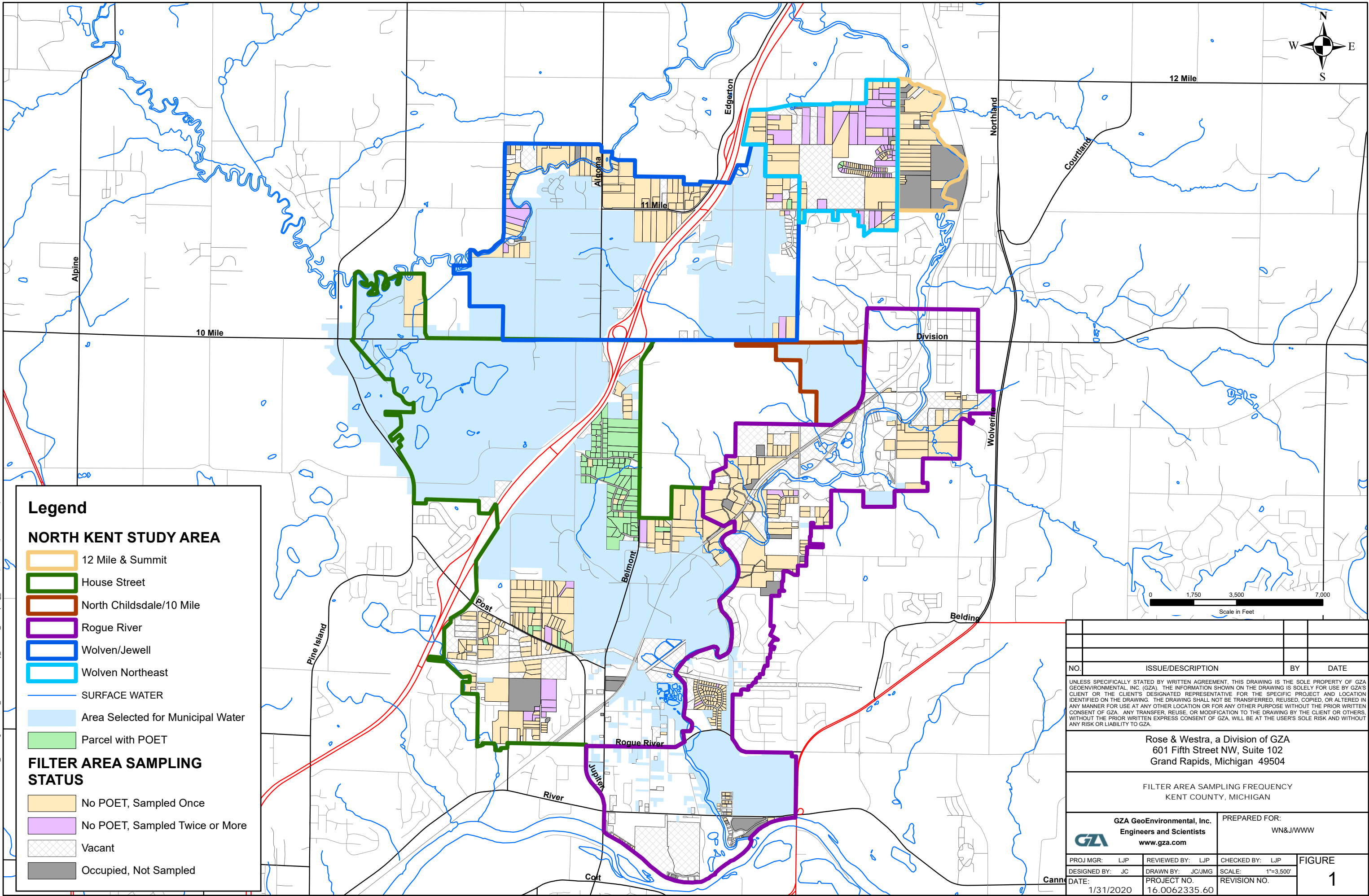
REFERENCES

- Michigan Department of Environmental Quality. 1999. *Interoffice Communication, Operation Memo Gen-10, Re: Purge Water Disposal from Well Sampling and Development*.
https://www.michigan.gov/documents/deq/deq-whm-hwp-Op-Memo-Gen-10-Rev1_235127_7.pdf
- R&W/GZA. 2020. *Former Wolverine Tannery, House Street Disposal Area, and Woven/Jewell Area, Per- and Polyfluoroalkyl Substances Investigation Program* (most recent version).
- United States District Court, Western District of Michigan Southern Division. 2020. *Case 1:18-cv-00039-JTN-SJB ECF No. 151, filed 02/19/2020*.



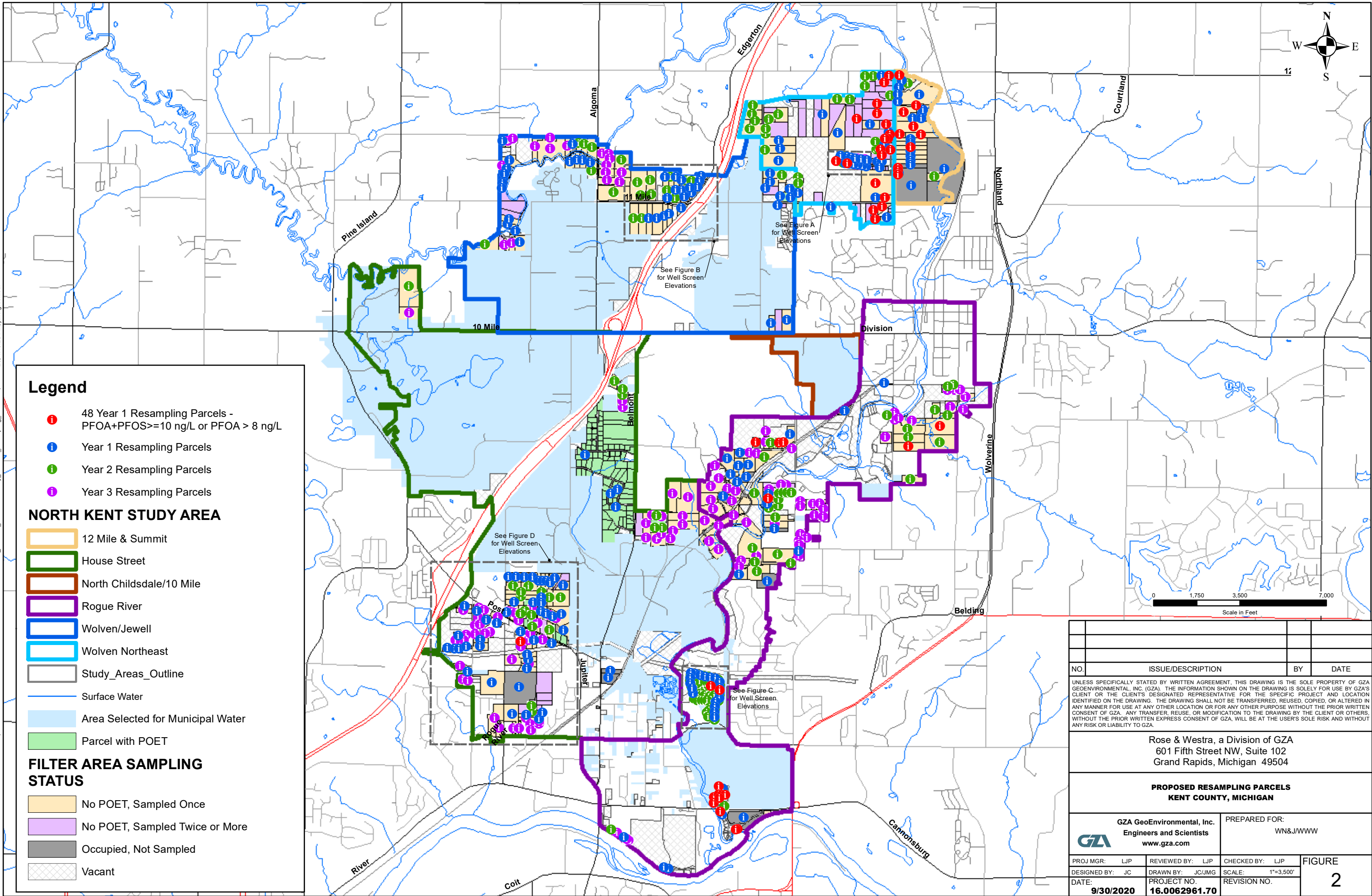
FIGURES

© 2020 - GZA GeoEnvironmental, Inc. C:\GIS_Mapping\01\GRGS_CAD\KenCounty_A\Areas_resampling_WP.mxd, 1/31/2020, 10:52:19 AM, Jim Cai



NO.	ISSUE/DESCRIPTION	BY	DATE
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FILTER AREA SAMPLING FREQUENCY KENT COUNTY, MICHIGAN			
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE 1
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1"=3,500'	
DATE: 1/31/2020	PROJECT NO. 16.0062335.60	REVISION NO.	

© 2020 - GZA GeoEnvironmental, Inc. J:\16.xx Grand Rapids\16.0062335\16.0062335\16.0062335 5x VNU\WWW\16.0062335 52\MapData_GIS\GIS_CAD\KentCounty_AltAreas_resampling_WP2.mxd, 9/30/2020, 1:40:25 PM, julia.groenleer



Legend

- 1 48 Year 1 Resampling Parcels - PFOA+PFOS >= 10 ng/L or PFOA > 8 ng/L
- 1 Year 1 Resampling Parcels
- 1 Year 2 Resampling Parcels
- 1 Year 3 Resampling Parcels

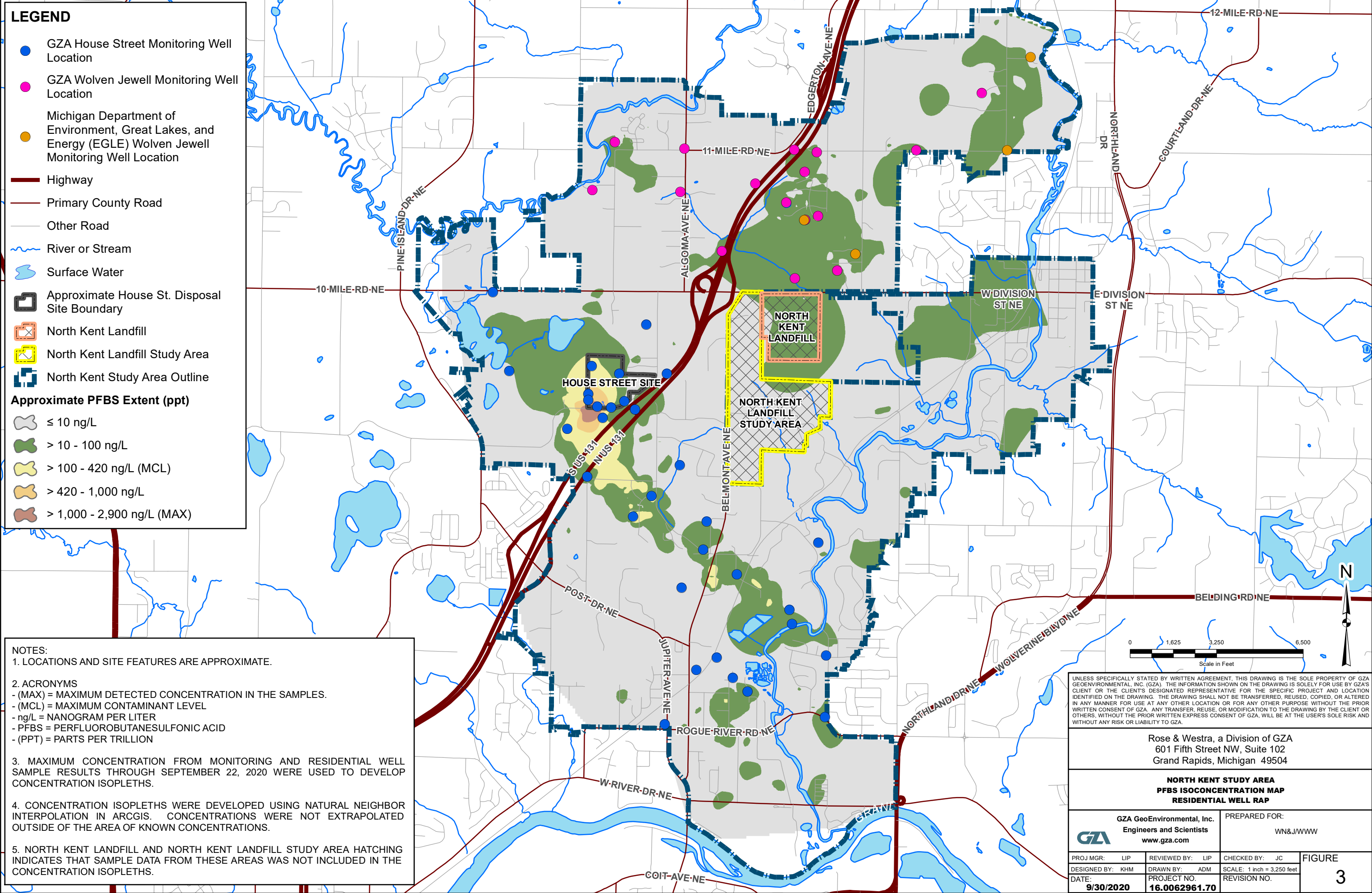
NORTH KENT STUDY AREA

- 12 Mile & Summit
- House Street
- North Childsdale/10 Mile
- Rogue River
- Wolven/Jewell
- Wolven Northeast
- Study_Areas_Outline
- Surface Water
- Area Selected for Municipal Water
- Parcel with POET

FILTER AREA SAMPLING STATUS

- No POET, Sampled Once
- No POET, Sampled Twice or More
- Occupied, Not Sampled
- Vacant

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PROPOSED RESAMPLING PARCELS KENT COUNTY, MICHIGAN			
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE 2
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1"=3,500'	
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	



LEGEND

GZA House Street Monitoring Well Location

GZA Wolven Jewell Monitoring Well Location

Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wolven Jewell Monitoring Well Location

Highway

Primary County Road

Other Road

River or Stream

Surface Water

Approximate House St. Disposal Site Boundary

North Kent Landfill

North Kent Landfill Study Area

North Kent Study Area Outline

Approximate PFHxS Extent (ppt)

≤ 10 ng/L

> 10 - 51 ng/L (MCL)

> 51 - 500 ng/L

> 500 - 1,000 ng/L

> 1,000 - 21,000 ng/L (MAX)

NOTES:

1. LOCATIONS AND SITE FEATURES ARE APPROXIMATE.

2. ACRONYMS

- (MAX) = MAXIMUM DETECTED CONCENTRATION IN THE SAMPLES.
- (MCL) = MAXIMUM CONTAMINANT LEVEL
- ng/L = NANOGRAM PER LITER
- PFHxS = PERFLUOROHEXANESULFONIC ACID
- (PPT) = PARTS PER TRILLION

3. MAXIMUM CONCENTRATION FROM MONITORING AND RESIDENTIAL WELL SAMPLE RESULTS THROUGH SEPTEMBER 22, 2020 WERE USED TO DEVELOP CONCENTRATION ISOPLETHS.

4. CONCENTRATION ISOPLETHS WERE DEVELOPED USING NATURAL NEIGHBOR INTERPOLATION IN ARCGIS. CONCENTRATIONS WERE NOT EXTRAPOLATED OUTSIDE OF THE AREA OF KNOWN CONCENTRATIONS.

5. NORTH KENT LANDFILL AND NORTH KENT LANDFILL STUDY AREA HATCHING INDICATES THAT SAMPLE DATA FROM THESE AREAS WAS NOT INCLUDED IN THE CONCENTRATION ISOPLETHS.

The map displays the North Kent Study Area, outlined in blue. It shows the approximate House Street Disposal Site boundary in grey and the North Kent Landfill Study Area in yellow. Concentration isopleths for PFHxS are shown in various shades of green and yellow, indicating different levels of contamination. Monitoring wells are marked with blue dots (GZA House Street) and pink dots (GZA Wolven Jewell). Major roads like Highway 131, 11-Mile Rd NE, and 12-Mile Rd NE are shown in red. The map also includes a north arrow and a scale bar (0 to 6,500 feet).

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PREPARED FOR:
WN&J/WWW

PROJ MGR: LIP

DESIGNED BY: KHM

DATE: 9/30/2020

REVIEWED BY: LIP

DRAWN BY: ADM

PROJECT NO. 16.0062961.70

CHECKED BY: JC

SCALE: 1 inch = 3,250 feet

REVISION NO.

FIGURE
4

LEGEND

GZA House Street Monitoring Well Location

GZA Wolven Jewell Monitoring Well Location

Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wolven Jewell Monitoring Well Location

Highway

Primary County Road

Other Road

River or Stream

Surface Water

Approximate House St. Disposal Site Boundary

North Kent Landfill

North Kent Landfill Study Area

North Kent Study Area Outline

Approximate PFHxA Extent (ppt)

≤ 10 ng/L

> 10 - 100 ng/L

> 100 - 1,000 ng/L

> 1,000 - 2,000 ng/L

> 2,000 - 3,200 ng/L (MAX)

NOTES:

1. LOCATIONS AND SITE FEATURES ARE APPROXIMATE.

2. ACRONYMS

- (MAX) = MAXIMUM DETECTED CONCENTRATION IN THE SAMPLES.
- ng/L = NANOGRAM PER LITER
- PFHxA = PERFLUOROHEXANOIC ACID
- (PPT) = PARTS PER TRILLION

3. MAXIMUM CONCENTRATION FROM MONITORING AND RESIDENTIAL WELL SAMPLE RESULTS THROUGH SEPTEMBER 22, 2020 WERE USED TO DEVELOP CONCENTRATION ISOPLETHS.

4. CONCENTRATION ISOPLETHS WERE DEVELOPED USING NATURAL NEIGHBOR INTERPOLATION IN ARCGIS. CONCENTRATIONS WERE NOT EXTRAPOLATED OUTSIDE OF THE AREA OF KNOWN CONCENTRATIONS.

5. NORTH KENT LANDFILL AND NORTH KENT LANDFILL STUDY AREA HATCHING INDICATES THAT SAMPLE DATA FROM THESE AREAS WAS NOT INCLUDED IN THE CONCENTRATION ISOPLETHS.

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PREPARED FOR:
WN&J/WWW

PROJ MGR: LIP

DESIGNED BY: KHM

DATE: 9/30/2020

REVIEWED BY: LIP

DRAWN BY: ADM

PROJECT NO. 16.0062961.70

CHECKED BY: JC

SCALE: 1 inch = 3,250 feet

REVISION NO.

FIGURE
5

LEGEND

GZA House Street Monitoring Well Location

GZA Wolven Jewell Monitoring Well Location

Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wolven Jewell Monitoring Well Location

Highway

Primary County Road

Other Road

River or Stream

Surface Water

Approximate House St. Disposal Site Boundary

North Kent Landfill

North Kent Landfill Study Area

North Kent Study Area Outline

Approximate PFNA Extent (ppt)

≤ 6 ng/L (MCL)

> 6 - 10 ng/L

> 10 - 20 ng/L

> 20 - 80 ng/L

> 80 - 120 ng/L (MAX)

NOTES:

1. LOCATIONS AND SITE FEATURES ARE APPROXIMATE.

2. ACRONYMS

- (MAX) = MAXIMUM DETECTED CONCENTRATION IN THE SAMPLES.
- (MCL) = MAXIMUM CONTAMINANT LEVEL
- ng/L = NANOGRAM PER LITER
- PFNA = PERFLUORONONANOIC ACID
- (PPT) = PARTS PER TRILLION

3. MAXIMUM CONCENTRATION FROM MONITORING AND RESIDENTIAL WELL SAMPLE RESULTS THROUGH SEPTEMBER 22, 2020 WERE USED TO DEVELOP CONCENTRATION ISOPLETHS.

4. CONCENTRATION ISOPLETHS WERE DEVELOPED USING NATURAL NEIGHBOR INTERPOLATION IN ARCGIS. CONCENTRATIONS WERE NOT EXTRAPOLATED OUTSIDE OF THE AREA OF KNOWN CONCENTRATIONS.

5. NORTH KENT LANDFILL AND NORTH KENT LANDFILL STUDY AREA HATCHING INDICATES THAT SAMPLE DATA FROM THESE AREAS WAS NOT INCLUDED IN THE CONCENTRATION ISOPLETHS.

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PROJ MGR: LIP	REVIEWED BY: LIP	CHECKED BY: JC	FIGURE
DESIGNED BY: KHM	DRAWN BY: ADM	SCALE: 1 inch = 3,250 feet	6
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	

LEGEND

GZA House Street Monitoring Well Location

GZA Wolven Jewell Monitoring Well Location

Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wolven Jewell Monitoring Well Location

Highway

Primary County Road

Other Road

River or Stream

Surface Water

Approximate House St. Disposal Site Boundary

North Kent Landfill

North Kent Landfill Study Area

North Kent Study Area Outline

Approximate PFOS Extent (ppt)

≤ 10 ng/L

> 10 - 16 ng/L (DWC)

> 16 - 100 ng/L

> 100 - 1,000 ng/L

> 1,000 - 100,000 ng/L (MAX)

NOTES:

1. LOCATIONS AND SITE FEATURES ARE APPROXIMATE.

2. ACRONYMS

- (DWC) = DRINKING WATER CRITERIA
- (MAX) = MAXIMUM DETECTED CONCENTRATION IN THE SAMPLES.
- ng/L = NANOGRAM PER LITER
- PFOS = PERFLUOROOCTANE SULFONATE
- (PPT) = PARTS PER TRILLION

3. MAXIMUM CONCENTRATION FROM MONITORING AND RESIDENTIAL WELL SAMPLE RESULTS THROUGH SEPTEMBER 22, 2020 WERE USED TO DEVELOP CONCENTRATION ISOPLETHS.

4. CONCENTRATION ISOPLETHS WERE DEVELOPED USING NATURAL NEIGHBOR INTERPOLATION IN ARCGIS. CONCENTRATIONS WERE NOT EXTRAPOLATED OUTSIDE OF THE AREA OF KNOWN CONCENTRATIONS.

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PROJ MGR: LIP

DESIGNED BY: KHM

DATE: 9/30/2020

REVIEWED BY: LIP

DRAWN BY: ADM

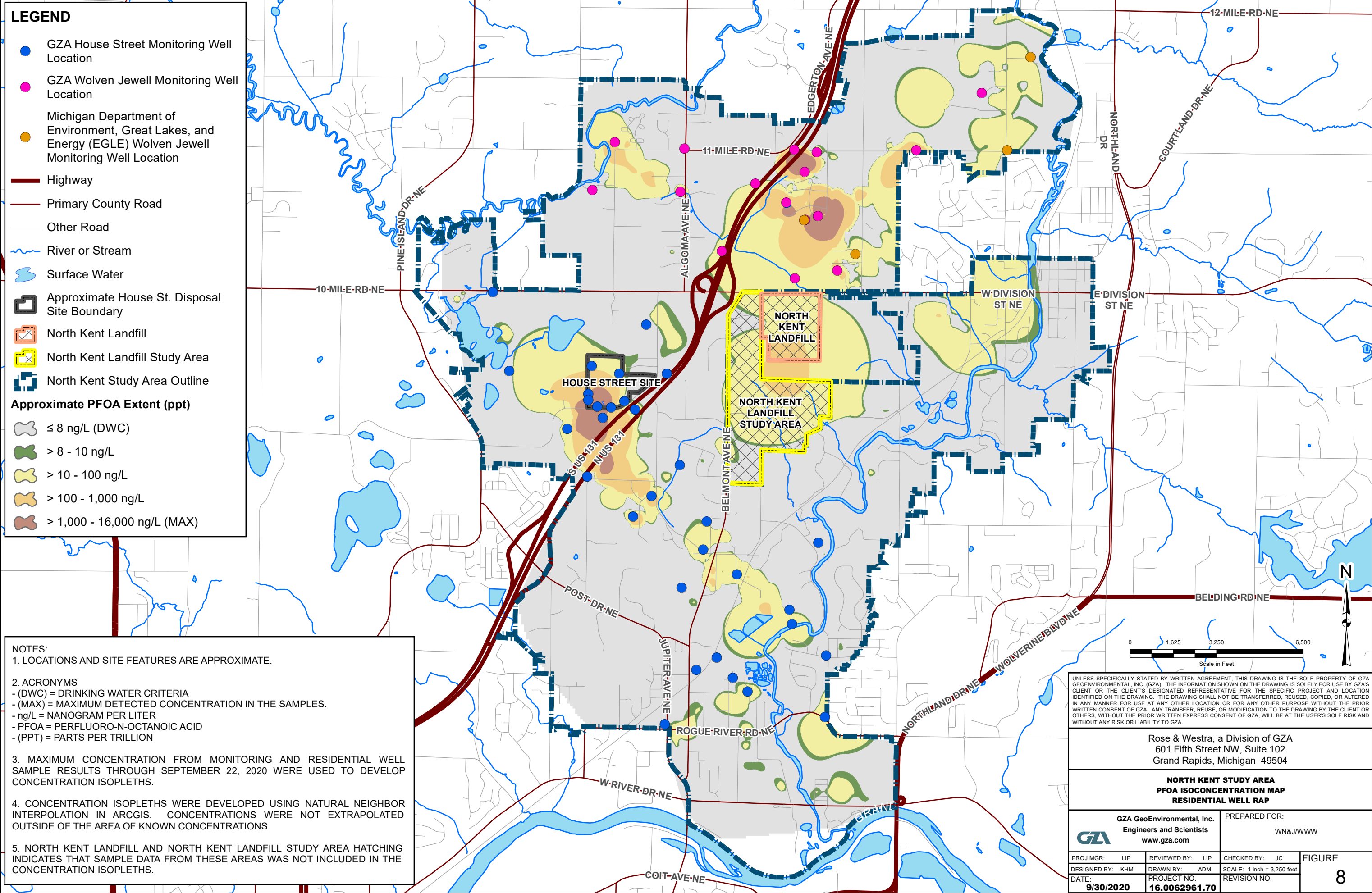
PROJECT NO. 16.0062961.70

CHECKED BY: JC

SCALE: 1 inch = 3,250 feet

REVISION NO.

FIGURE
7



LEGEND

GZA House Street Monitoring Well Location

GZA Wolven Jewell Monitoring Well Location

Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wolven Jewell Monitoring Well Location

Highway

Primary County Road

Other Road

River or Stream

Surface Water

Approximate House St. Disposal Site Boundary

North Kent Landfill

North Kent Landfill Study Area

North Kent Study Area Outline

Approximate PFOA Extent (ppt)

≤ 8 ng/L (DWC)

> 8 - 10 ng/L

> 10 - 100 ng/L

> 100 - 1,000 ng/L

> 1,000 - 16,000 ng/L (MAX)

NOTES:

1. LOCATIONS AND SITE FEATURES ARE APPROXIMATE.

2. ACRONYMS

- (DWC) = DRINKING WATER CRITERIA
- (MAX) = MAXIMUM DETECTED CONCENTRATION IN THE SAMPLES.
- ng/L = NANOGRAM PER LITER
- PFOA = PERFLUORO-N-OCTANOIC ACID
- (PPT) = PARTS PER TRILLION

3. MAXIMUM CONCENTRATION FROM MONITORING AND RESIDENTIAL WELL SAMPLE RESULTS THROUGH SEPTEMBER 22, 2020 WERE USED TO DEVELOP CONCENTRATION ISOPLETHS.

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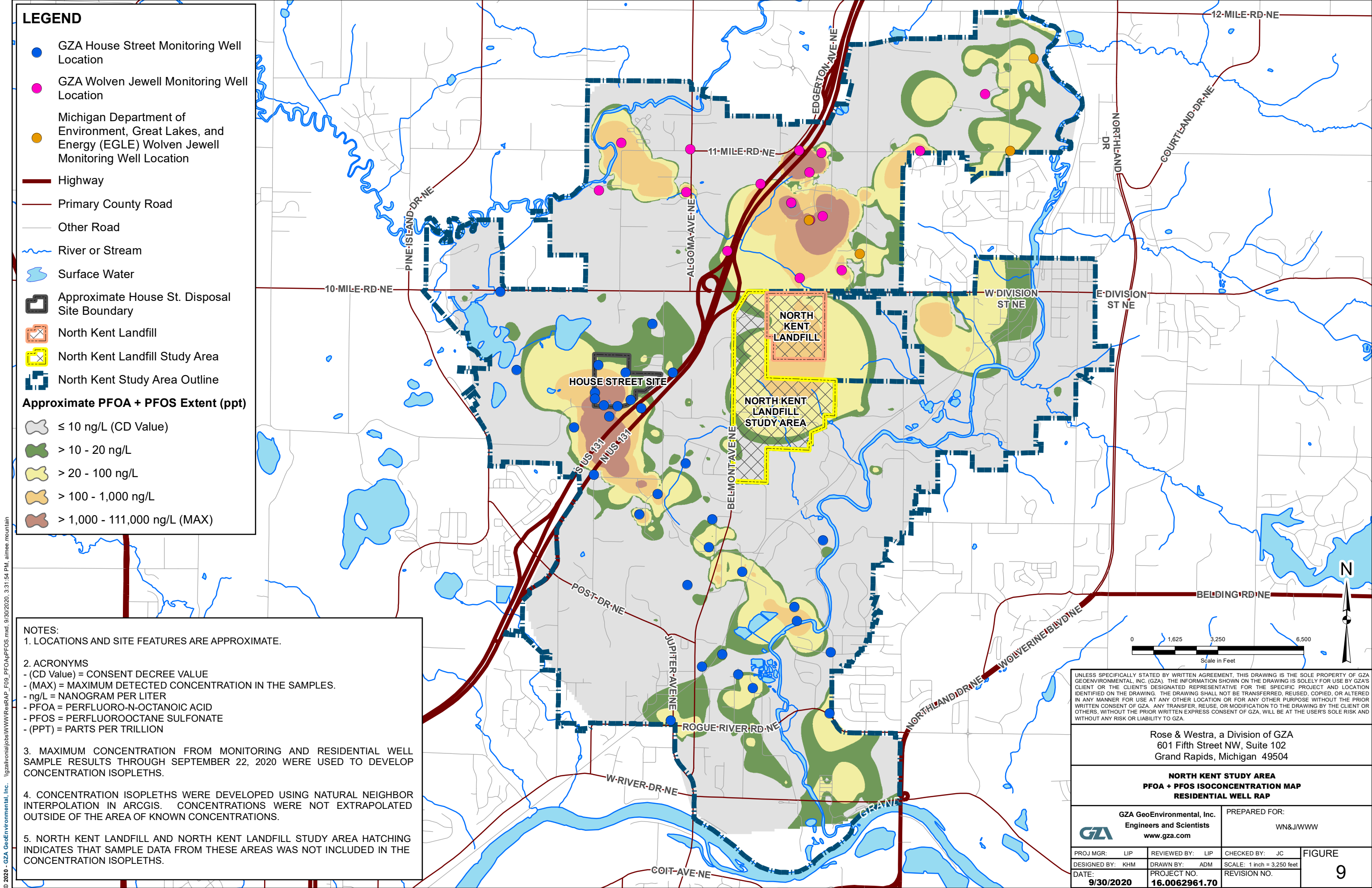
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NORTH KENT STUDY AREA
PFOA ISOCONCENTRATION MAP
RESIDENTIAL WELL RAP

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PREPARED FOR:
WN&J/WWW

PROJ MGR: LIP	REVIEWED BY: LIP	CHECKED BY: JC	FIGURE 8
DESIGNED BY: KHM	DRAWN BY: ADM	SCALE: 1 inch = 3,250 feet	
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	



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NOTES:

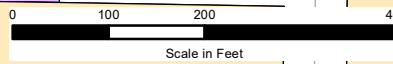
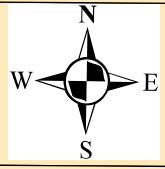
- LOCATIONS AND SITE FEATURES ARE APPROXIMATE.
- ACRONYMS
 - (CD Value) = CONSENT DECREE VALUE
 - (MAX) = MAXIMUM DETECTED CONCENTRATION IN THE SAMPLES.
 - ng/L = NANOGRAM PER LITER
 - PFOA = PERFLUORO-N-OCTANOIC ACID
 - PFOS = PERFLUOROOCTANE SULFONATE
 - (PPT) = PARTS PER TRILLION
- MAXIMUM CONCENTRATION FROM MONITORING AND RESIDENTIAL WELL SAMPLE RESULTS THROUGH SEPTEMBER 22, 2020 WERE USED TO DEVELOP CONCENTRATION ISOPLETHS.
- CONCENTRATION ISOPLETHS WERE DEVELOPED USING NATURAL NEIGHBOR INTERPOLATION IN ARCGIS. CONCENTRATIONS WERE NOT EXTRAPOLATED OUTSIDE OF THE AREA OF KNOWN CONCENTRATIONS.
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**NORTH KENT STUDY AREA
PFOA + PFOS ISOCONCENTRATION MAP
RESIDENTIAL WELL RAP**

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PROJ MGR: LIP	REVIEWED BY: LIP	CHECKED BY: JC	FIGURE
DESIGNED BY: KHM	DRAWN BY: ADM	SCALE: 1 inch = 3,250 feet	9
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	



Legend

- i 48 Year 1 Resampling Parcels - PFOA+PFOS>=10 ng/L or PFOA > 8 ng/L
- i Year 1 Resampling Parcels
- i Year 2 Resampling Parcels
- i Year 3 Resampling Parcels
- Residential Well Screen Elevation (Ft)

Parcel with POET

FILTER AREA SAMPLING STATUS

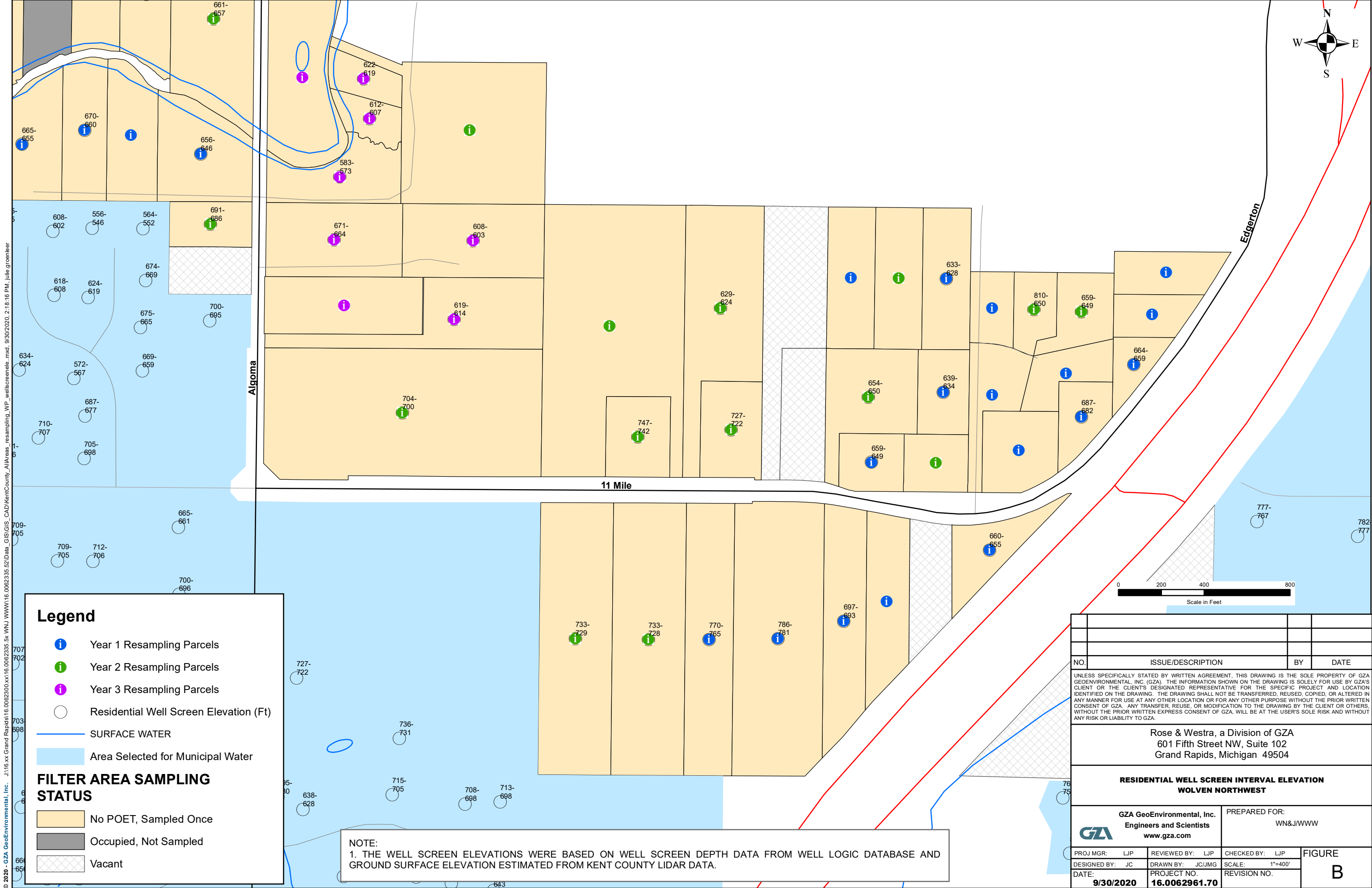
- No POET, Sampled Once
- No POET, Sampled Twice or More
- Occupied, Not Sampled
- Vacant

NOTE:

1. THE WELL SCREEN ELEVATIONS WERE BASED ON WELL SCREEN DEPTH DATA FROM WELL LOGIC DATABASE AND GROUND SURFACE ELEVATION ESTIMATED FROM KENT COUNTY LIDAR DATA.

NO.	ISSUE/DESCRIPTION	BY	DATE
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RESIDENTIAL WELL SCREEN INTERVAL ELEVATION WOLVEN NORTHEAST			
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE A
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1"=200'	
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	

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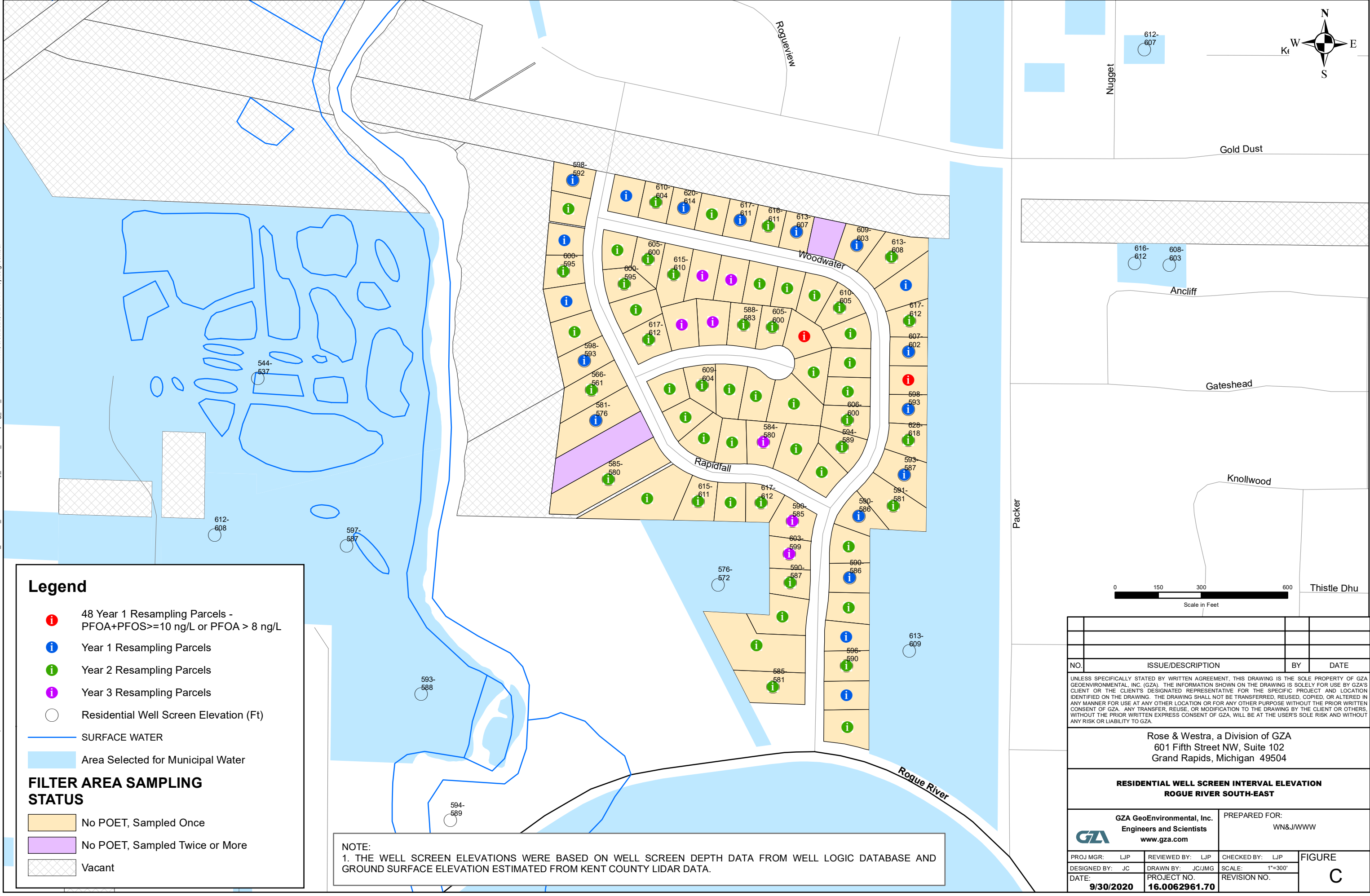
Legend

- i Year 1 Resampling Parcels
- i Year 2 Resampling Parcels
- i Year 3 Resampling Parcels
- Residential Well Screen Elevation (Ft)
- SURFACE WATER
- Area Selected for Municipal Water

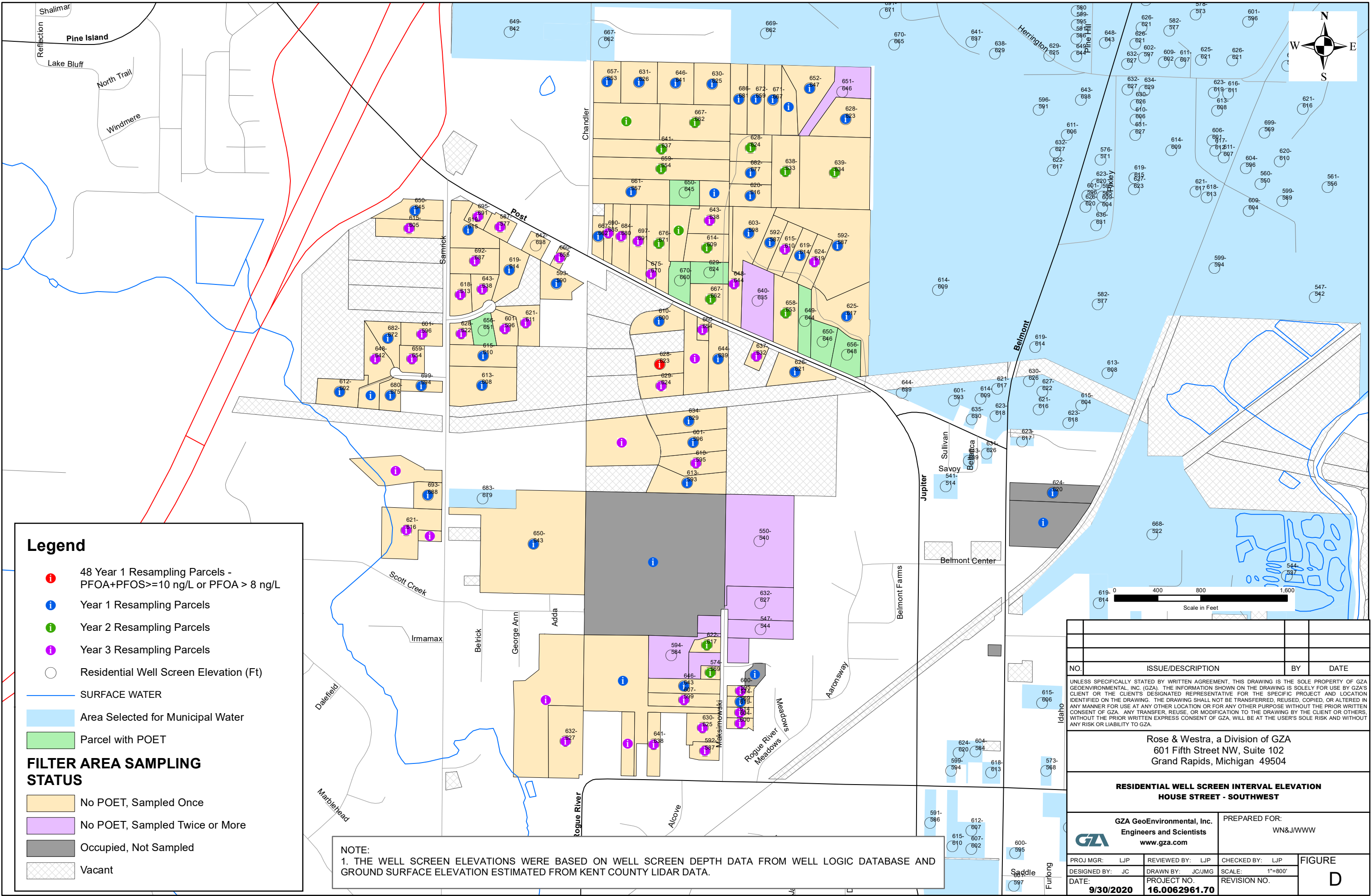
FILTER AREA SAMPLING STATUS

- No POET, Sampled Once
- Occupied, Not Sampled
- Vacant

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GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE B
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1"=400'	
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	



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RESIDENTIAL WELL SCREEN INTERVAL ELEVATION HOUSE STREET - SOUTHWEST			
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: WN&J/WWW	
PROJ MGR: LJP	REVIEWED BY: LJP	CHECKED BY: LJP	FIGURE D
DESIGNED BY: JC	DRAWN BY: JC/JMG	SCALE: 1"=80'	
DATE: 9/30/2020	PROJECT NO. 16.0062961.70	REVISION NO.	



TABLES

TABLE 1
ADDRESSES WITH KNOWN CONCENTRATIONS ABOVE 10 PPT FOR PFOS+PFOA OR PFOA ABOVE 8 PPT LIST
Algoma and Plainfield Townships, Kent County, MI

16.0062961.70
Page 1 of 1

PPN	Address	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
37 Locations Sampled Once						
410625100022	4150 12 MILE RD NE	691-687	9.7	14	23.7	42.8
410625100025	9740 SUMMIT AVE NE	687-683	22	23.2	45.2	78.9
410625100044	9610 SUMMIT AVE NE	NA	19.8	16.7	36.5	63.96
410625100045	9620 SUMMIT AVE NE	NA	5.25	25.9	31.15	91.04
410625100048	9630 SUMMIT AVE NE	690-683	9.34	39.9	49.24	85.19
410625100062	9958 SUMMIT AVE NE	691-686	12.4	14.8	27.2	53.85
410625100072	9800 SUMMIT AVE NE	674-669	9.13	4.08	13.21	26.378
410625100074	9605 SUMMIT AVE NE	NA	27	21	48	104.2
410625301011	4168 TRADEWIND DR NE	579-568	ND	12	12	49
410625301033	3900 WHIRLWIND DR NE	701-691	13	12	25	51.2
410625326003	9552 SUMMIT AVE NE	NA	1.26	14.1	15.36	40.53
410625326008	9380 SUMMIT AVE NE	676-671	2.05	10.1	12.15	45.49
410625351001	9391 SUMMIT AVE NE	675-670	21	35	56	125.2
410625351003	4145 11 MILE RD NE	NA	12	22	34	86
410625376001	9350 SUMMIT AVE NE	NA	3.44	16.3	19.74	54.55
410625376003	9300 SUMMIT AVE NE	695-685	ND	17.3	17.3	55.63
410636101007	4170 11 MILE RD NE	701-696	19	34	53	102.6
410636101013	9105 SUMMIT AVE NE	742-738	18	37	55	98.8
411001300021	7800 JERICHO AVE NE	721-716	ND	8.4	8.4	42.1
411001401002	7957 NORTHLAND DR NE	NA	9.5	5.4	14.9	28.6
411002300016	3335 HOUSE ST NE	769-765	8.5	17	25.5	67.3
411002300028	3515 HOUSE ST NE	697-692	ND	9.8	9.8	21.8
411002300029	3535 HOUSE ST NE	703-699	5.1	9.6	14.7	27.7
411011126007	3531 WARWICK GLEN DR NE	635-610	26	15	41	54.2
411015426026	6298 WOODWATER DR NE	NA	5.2	6.4	11.6	40.1
411015427006	3083 RAPIDFALL CT NE	NA	ND	9.8	9.8	19.9
411016176019	6600 BOTANY BLUFF DR NE	628-623	ND	9.2	9.2	9.2
411022277002	5663 MALL AVE NE	577-567	16	9.5	25.5	55.5
411022277004	5653 MALL AVE NE	NA	22	8.8	30.8	60.9
411022278007	5750 MALL AVE NE	580-570	16	6.0	22	40.4
411022279001	3150 RIPLEY ST NE	594-584	24	11	35	59.4
411022279003	3160 RIPLEY ST NE	589-581	22	7.9	29.9	48
411022279004	3180 RIPLEY ST NE	586-578	20	8.5	28.5	48.5
411022279005	5748 MALL AVE NE	NA	15	9.6	24.6	59.7
411022426002	3104 INDIAN DR NE	577-564	9.7	5.7	15.4	31.8
411023303009	3252 INDIAN DR NE	NA	9.2	7.0	16.2	27.2
411023303013	3246 INDIAN DR NE	NA	11	7.9	18.9	35.4
11 Locations Sampled Twice						
410625100023	9933 SUMMIT AVE NE	684-679	4.1	14	18.1	53.4
410625100031	9881 SUMMIT AVE NE	NA	5.8	8.2	14	59
410625100032	9737 SUMMIT AVE NE	NA	6.4	15	21.4	65.4
410625100051	4133 WRENS WAY CT NE	NA	11	27	36.7	81.6
410625301001	4195 TRADEWIND DR NE	NA	18	36	51	91.4
410625301002	4189 TRADEWIND DR NE	697-687	24	22	46	68.8
410625301038	3830 WHIRLWIND DR NE	719-709	ND	13	13	33.5
410625315002	9545 SUMMIT AVE NE	NA	26	24	50	70.5
410625315003	9489 SUMMIT AVE NE	658-654	15	28	43	65
410626200024	9798 DEER TRL NE	690-685	ND	59	59	191
410636101011	4080 11 MILE RD NE	742-737	17	45	60	129.4

Notes:

1. Well screen elevations provided in feet above mean sea level, North American Vertical Datum of 1988 (NAVD 88).
2. "NA" indicates not available.
3. "ppt" indicates parts per trillion.
4. "ND" indicates not detected at a concentration greater than laboratory reporting limits.
5. For maximum PFOS+PFOA and maximum total PFAS results, concentrations of individual samples were summed and the maximum of the sum is shown. Therefore, for locations that were sampled more than once, the sum of maximum PFOS and maximum PFOA concentrations shown may differ from the maximum PFOS+PFOA value shown.

TABLE 2
FIRST YEAR SAMPLING LIST
Algoma and Plainfield Townships, Kent County, MI

16.0062961.70
Page 1 of 3

PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
410625100027	4355 RIVERWATCH RD NE	NA	NA	NA	NA	NA	NA
410625100028	4320 RIVERWATCH RD NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410625100029	4350 RIVERWATCH RD NE	SAMPLED BY OTHERS	NA	ND	ND	ND	1.26
410625100036	9796 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	ND	0.905	0.905	5.795
410625100049	4101 WRENS WAY CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	10.5
410625100060	4100 12 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410625100063	9940 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410625100064	9920 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410625100067	9910 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410625100068	9900 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410625100071	9908 SUMMIT AVE NE	SAMPLED BY OTHERS	641-636	ND	0.335	0.335	3.317
410625100073	9617 SUMMIT AVE NE	VACANT	NA	NA	NA	NA	NA
410625301013	4176 TRADEWIND DR NE	SAMPLED BY R&W/GZA	689-679	ND	ND	ND	ND
410625301018	4124 WHIRLWIND DR NE	NO RESPONSE	673-663	NA	NA	NA	NA
410625301024	4036 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	697-687	ND	ND	ND	ND
410625301026	3998 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	702-692	ND	ND	ND	ND
410625301028	3966 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	693-683	ND	ND	ND	ND
410625301030	3938 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	696-686	ND	ND	ND	ND
410625301032	3914 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410625301034	3882 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	712-702	ND	ND	ND	ND
410625301041	3855 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	704-694	ND	ND	ND	11.1
410625301044	3909 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	697-687	ND	ND	ND	ND
410625301046	3921 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	702-692	ND	ND	ND	ND
410625301048	3963 WHIRLWIND DR NE	SAMPLED BY OTHERS	707-697	NA	NA	NA	NA
410625301051	3989 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	693-683	ND	ND	ND	ND
410625301054	4029 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	678-668	ND	ND	ND	ND
410625301059	4125 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	696-686	ND	ND	ND	13.6
410625301061	4155 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	722-712	ND	4.7	4.7	26.9
410625326001	9564 SUMMIT AVE NE	SAMPLED BY OTHERS	637-633	ND	3.37	3.37	17.533
410625326002	9558 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	ND	ND	ND	8.61
410625326004	9530 SUMMIT AVE NE	SAMPLED BY OTHERS	668-658	ND	6.96	6.96	47.33
410625326005	9490 SUMMIT AVE NE	SAMPLED BY OTHERS	661-651	ND	2.63	2.63	23.549
410625326006	9450 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	1.14	6.28	7.42	32.78
410625326007	9410 SUMMIT AVE NE	NA	NA	NA	NA	NA	NA
410625351002	4099 11 MILE RD NE	SAMPLED BY R&W/GZA	719-714	ND	5.5	5.5	57.5
410625376002	9320 SUMMIT AVE NE	SAMPLED BY OTHERS	593-583	ND	0.367	0.367	4.677
410625376004	9200 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410625401001	9400 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
410626200012	3800 VERSHEL DR NE	SAMPLED BY R&W/GZA	703-698	ND	ND	ND	ND
410626200037	9787 DEER TRL NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626300003	9590 WOLVEN AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626300008	9350 WOLVEN AVE NE	SAMPLED BY R&W/GZA	565-558	ND	ND	ND	ND
410626300009	9300 WOLVEN AVE NE	SAMPLED BY R&W/GZA	788-784	ND	ND	ND	ND
410626300015	9550 WOLVEN AVE NE	SAMPLED BY R&W/GZA	705-700	ND	ND	ND	ND
410626300016	9280 WOLVEN AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626300019	9300 WINZER CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626300020	9269 WINZER CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626300022	3599 11 MILE RD NE	SAMPLED BY R&W/GZA	694-682	ND	ND	ND	ND
410626300028	9400 WOLVEN AVE NE	SAMPLED BY R&W/GZA	549-526	ND	ND	ND	ND
410626400005	3617 11 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400006	2989 11 MILE RD NE	SAMPLED BY R&W/GZA	687-682	ND	ND	ND	ND
410627400007	9321 DIMICK DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400016	9301 DIMICK DR NE	SAMPLED BY R&W/GZA	633-628	ND	ND	ND	ND
410627400023	9355 EDGERTON AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400025	9303 EDGERTON AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400026	9283 EDGERTON AVE NE	SAMPLED BY R&W/GZA	664-659	ND	ND	ND	ND
410627400037	2929 11 MILE RD NE	SAMPLED BY R&W/GZA	659-649	ND	ND	ND	ND
410627400038	2901 DIMICK CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400041	2900 DIMICK CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	7.7
410627400042	2929 DIMICK CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400044	2949 11 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400054	9299 DIMICK DR NE	SAMPLED BY R&W/GZA	639-634	ND	ND	ND	ND
410628300021	9350 GRANGE AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628300032	9300 GRANGE AVE NE	SAMPLED BY R&W/GZA	663-653	ND	ND	ND	ND

TABLE 2
FIRST YEAR SAMPLING LIST
 Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
410628300033	9270 GRANGE AVE NE	SAMPLED BY R&W/GZA	658-654	7.1	ND	7.1	7.1
410628300036	9400 GRANGE AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628300037	9380 GRANGE AVE NE	SAMPLED BY R&W/GZA	661-656	ND	ND	ND	ND
410628300040	9568 GRANGE AVE NE	NA	NA	NA	NA	NA	NA
410628300047	9434 GRANGE AVE NE	SAMPLED BY R&W/GZA	662-657	ND	ND	ND	ND
410628426002	2260 FONGER ST NE	NA	NA	NA	NA	NA	NA
410628427001	9419 ALGOMA AVE NE	SAMPLED BY R&W/GZA	665-655	ND	ND	ND	ND
410628427002	2263 KIKI RUN NE	SAMPLED BY R&W/GZA	670-660	ND	ND	ND	ND
410628427003	2301 KIKI RUN NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628427004	9417 ALGOMA AVE NE	SAMPLED BY R&W/GZA	656-646	ND	ND	ND	ND
410633100026	9080 GRANGE AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410633100031	9108 GRANGE AVE NE	SAMPLED BY R&W/GZA	660-650	ND	ND	ND	ND
410633100047	1875 11 MILE RD NE	WELL INACTIVE	685-680	NA	NA	NA	NA
410633100075	1900 11 MILE RD NE	SAMPLED BY R&W/GZA	696-691	ND	ND	ND	ND
410634126003	2780 11 MILE RD NE	SAMPLED BY R&W/GZA	770-765	ND	ND	ND	ND
410634126004	2800 11 MILE RD NE	SAMPLED BY R&W/GZA	786-781	ND	ND	ND	ND
410634201001	2810 11 MILE RD NE	SAMPLED BY R&W/GZA	697-693	ND	ND	ND	ND
410634201002	2820 11 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410634201005	2850 11 MILE RD NE	SAMPLED BY R&W/GZA	660-655	ND	ND	ND	ND
410635100023	3500 11 MILE RD NE	SAMPLED BY R&W/GZA	706-695	ND	ND	ND	ND
410635226001	3820 11 MILE RD NE	SAMPLED BY R&W/GZA	718-713	ND	ND	ND	ND
410635376006	3439 10 MILE RD NE	SAMPLED BY R&W/GZA	710-700	ND	ND	ND	ND
410635376008	3667 10 MILE RD NE	SAMPLED BY R&W/GZA	724-720	ND	ND	ND	ND
410636101014	9111 SUMMIT AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001151009	279 OAK ST NE	SAMPLED BY R&W/GZA	652-647	ND	6.7	6.7	6.7
411002200066	8005 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	619-609	ND	ND	ND	ND
411002300020	3141 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	622-612	ND	ND	ND	ND
411002300021	3253 RIO ROGUE LN NE	SAMPLED BY R&W/GZA	437-417	ND	ND	ND	ND
411002300035	3300 HOUSE ST NE	SAMPLED BY R&W/GZA	756-751	ND	ND	ND	ND
411002300040	3569 HOUSE ST NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	8.5
411002300046	3350 HOUSE ST NE	DECLINED	630-620	NA	NA	NA	NA
411002300049	3304 HOUSE ST NE	SAMPLED BY R&W/GZA	731-727	ND	ND	ND	ND
411002300052	3380 HOUSE ST NE	SAMPLED BY R&W/GZA	760-755	ND	ND	ND	ND
411003400014	3131 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	518-435	ND	ND	ND	ND
411004427003	2300 STRAWBERRY FARMS ST NE	SAMPLED BY R&W/GZA	601-586	ND	ND	ND	ND
411009376001	6976 CHANDLER DR NE	SAMPLED BY R&W/GZA	657-653	ND	ND	ND	ND
411009376002	6986 CHANDLER DR NE	SAMPLED BY R&W/GZA	631-626	ND	ND	ND	ND
411009376003	6990 CHANDLER DR NE	SAMPLED BY R&W/GZA	646-641	ND	ND	ND	ND
411009376004	6996 CHANDLER DR NE	SAMPLED BY R&W/GZA	630-625	ND	ND	ND	ND
411009376010	6812 CHANDLER DR NE	SAMPLED BY R&W/GZA	661-657	ND	ND	ND	ND
411009376012	6803 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411009451001	6855 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	686-681	ND	ND	ND	ND
411009451002	6865 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	672-659	ND	ND	ND	ND
411009451003	6875 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	671-667	ND	ND	ND	ND
411009451006	6895 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	628-623	ND	ND	ND	ND
411009451008	6830 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	682-677	ND	ND	ND	ND
411009451009	6810 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	620-616	ND	ND	ND	ND
411009451017	6879 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411009451018	6885 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	652-647	ND	ND	ND	ND
411010101015	7500 CLOUDBERRY LN NE	SAMPLED BY R&W/GZA	727-718	ND	ND	ND	ND
411010101018	7525 STEEPLEBUSH LN NE	SAMPLED BY R&W/GZA	722-717	ND	5.3	5.3	18.3
411010101023	2490 PERSIMMON PL NE	SAMPLED BY R&W/GZA	547-438	ND	ND	ND	ND
411010200033	7500 RIO ROGUE TRL NE	DECLINED	598-588	NA	NA	NA	NA
411011126006	3543 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	557-547	ND	ND	ND	ND
411011126017	3509 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	548-538	ND	7.7	7.7	17.7
411011176004	7365 CHILDSDALE AVE NE	NO RESPONSE	NA	NA	NA	NA	NA
411011301004	3260 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	614-609	ND	ND	ND	ND
411011375001	6955 CHILDSDALE AVE NE	SAMPLED BY OTHERS	NA	NA	NA	NA	NA
411011401030	3620 KROES ST NE	NO RESPONSE	NA	NA	NA	NA	NA
411015152009	6418 BELMONT AVE NE	DECLINED	624-620	NA	NA	NA	NA
411015301009	6352 BELMONT AVE NE	DECLINED	NA	NA	NA	NA	NA
411015426013	6402 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	3.7	3.7	17.4
411015426015	6386 WOODWATER DR NE	SAMPLED BY R&W/GZA	620-614	ND	2.8	2.8	15.5
411015426017	6370 WOODWATER DR NE	SAMPLED BY R&W/GZA	617-611	ND	3.5	3.5	15.6

TABLE 2
FIRST YEAR SAMPLING LIST
 Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
411015426019	6354 WOODWATER DR NE	SAMPLED BY R&W/GZA	613-607	ND	2.9	2.9	15.6
411015426021	6338 WOODWATER DR NE	SAMPLED BY R&W/GZA	609-603	ND	ND	ND	ND
411015426023	6322 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	5.7
411015426025	6306 WOODWATER DR NE	SAMPLED BY R&W/GZA	607-602	ND	ND	ND	4.6
411015426027	6290 WOODWATER DR NE	SAMPLED BY R&W/GZA	598-593	ND	3	3	7.3
411015426029	6274 WOODWATER DR NE	SAMPLED BY R&W/GZA	593-587	ND	ND	ND	4.4
411015428003	6315 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	581-576	ND	ND	ND	ND
411015428019	6415 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	598-592	ND	2.2	2.2	16.6
411015428021	6391 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	3.9	3.9	17.8
411015428023	6363 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	3	3	15.8
411015428025	6335 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	598-593	ND	ND	ND	ND
411015429001	6258 WOODWATER DR NE	SAMPLED BY R&W/GZA	590-586	ND	ND	ND	5.4
411015429003	6226 WOODWATER DR NE	SAMPLED BY R&W/GZA	590-586	ND	ND	ND	15.9
411015429005	6192 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	7.3
411015429007	6160 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	3.4	3.4	28.4
411016102007	1790 POST DR NE	SAMPLED BY R&W/GZA	593-590	ND	ND	ND	ND
411016102009	6780 SAMRICK AVE NE	SAMPLED BY R&W/GZA	619-615	ND	ND	ND	ND
411016103003	1651 CORNERSTONE CT NE	SAMPLED BY R&W/GZA	619-614	ND	ND	ND	ND
411016126021	1815 POST DR NE	SAMPLED BY R&W/GZA	667-662	ND	ND	ND	ND
411016151006	6580 SAMRICK AVE NE	SAMPLED BY R&W/GZA	615-610	ND	ND	ND	ND
411016151007	6534 SAMRICK AVE NE	SAMPLED BY OTHERS	613-608	ND	ND	ND	ND
411016176008	6480 BOTANY BLUFF DR NE	SAMPLED BY R&W/GZA	601-596	ND	ND	ND	ND
411016176009	6400 BOTANY BLUFF DR NE	SAMPLED BY R&W/GZA	613-593	ND	ND	ND	ND
411016176017	6630 BOTANY BLUFF DR NE	SAMPLED BY R&W/GZA	610-600	ND	ND	ND	ND
411016176023	6520 BOTANY BLUFF DR NE	SAMPLED BY R&W/GZA	634-629	ND	ND	ND	ND
411016176024	1990 POST DR NE	SAMPLED BY R&W/GZA	644-639	ND	ND	ND	ND
411016201018	6799 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	603-598	ND	ND	ND	ND
411016201019	6788 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	592-587	ND	ND	ND	ND
411016201021	6744 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	619-614	ND	ND	ND	ND
411016201023	6700 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	592-587	ND	ND	ND	ND
411016201025	6648 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	625-617	ND	ND	ND	ND
411016251005	2086 POST DR NE	SAMPLED BY R&W/GZA	626-621	ND	ND	ND	ND
411016301029	6378 SAMRICK AVE NE	SAMPLED BY R&W/GZA	650-643	ND	ND	ND	ND
411016326003	6243 MAKSIMOWSKI AVE NE	WELL INACTIVE	NA	NA	NA	NA	NA
411016376016	1879 ROGUE RIVER RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411016376045	6129 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	646-643	ND	ND	ND	ND
411016451052	6114 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	574-569	ND	ND	ND	ND
411016451093	2050 REINIER CT NE	NA	NA	NA	NA	NA	NA
411017226003	6761 SAMRICK AVE NE	SAMPLED BY R&W/GZA	650-645	ND	ND	ND	ND
411017276003	1499 PARK FOREST CT NE	SAMPLED BY R&W/GZA	682-672	ND	ND	ND	ND
411017276005	1508 PARK FOREST CT NE	SAMPLED BY R&W/GZA	612-602	ND	ND	ND	ND
411017276006	1506 PARK FOREST CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411017276007	1500 PARK FOREST CT NE	SAMPLED BY R&W/GZA	680-675	ND	ND	ND	ND
411017277002	6531 SAMRICK AVE NE	SAMPLED BY R&W/GZA	699-694	ND	ND	ND	ND
411017426008	6393 SAMRICK AVE NE	SAMPLED BY R&W/GZA	693-688	ND	ND	ND	ND
411022278006	3179 RIPLEY ST NE	SAMPLED BY R&W/GZA	576-571	ND	1.9	1.9	16
411022302029	2574 KONKLE DR NE	NA	NA	NA	NA	NA	NA
411022426019	3112 INDIAN DR NE	TOWNSHIP - NO WELLS	NA	NA	NA	NA	NA
411022451002	2806 KONKLE DR NE	NO RESPONSE	NA	NA	NA	NA	NA
411022451005	2830 KONKLE DR NE	NO RESPONSE	NA	NA	NA	NA	NA
411023301001	3277 INDIAN DR NE	SAMPLED BY OTHERS	570-560	3.55	1.41	4.96	22.824

Notes:

1. "Sampled by Others" indicates the results provided were collected by AECOM or independently by the homeowner.
2. Well screen elevations provided in feet above mean sea level, North American Vertical Datum of 1988 (NAVD 88).
3. "NA" indicates not available.
4. "ppt" indicates parts per trillion.
5. "ND" indicates not detected at a concentration greater than laboratory reporting limits.

TABLE 3
SECOND YEAR SAMPLING LIST
Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
410625100038	4020 12 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410625100042	9915 BRADLEY DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410625100056	9905 SUMMIT AVE NE	SAMPLED BY R&W/GZA	651-641	ND	ND	ND	ND
410625100061	4050 12 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410625100065	9924 SUMMIT AVE NE	SAMPLED BY OTHERS	676-670	ND	2.44	2.44	7.15
410625301005	4167 TRADEWIND DR NE	SAMPLED BY R&W/GZA	688-678	ND	ND	ND	ND
410625301008	4144 TRADEWIND DR NE	SAMPLED BY R&W/GZA	710-690	ND	ND	ND	ND
410625301009	4158 TRADEWIND DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410625301010	4164 TRADEWIND DR NE	SAMPLED BY R&W/GZA	640-630	ND	ND	ND	ND
410625301025	4020 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	718-708	ND	ND	ND	ND
410625301035	3870 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	709-699	ND	ND	ND	ND
410625301043	3885 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	698-688	ND	ND	ND	ND
410625451001	9220 SUMMIT AVE NE	SAMPLED BY OTHERS	NA	ND	ND	ND	1.13
410626100014	9612 WOLVEN AVE NE	SAMPLED BY R&W/GZA	776-772	ND	ND	ND	5.9
410626100016	9620 WOLVEN AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626100029	9789 WOLVEN AVE NE	SAMPLED BY R&W/GZA	690-686	ND	ND	ND	ND
410626100048	9715 WOLVEN AVE NE	SAMPLED BY R&W/GZA	702-697	ND	ND	ND	ND
410626100049	9754 WOLVEN AVE NE	SAMPLED BY R&W/GZA	775-765	ND	4	4	4
410626100051	9740 WOLVEN AVE NE	SAMPLED BY R&W/GZA	791-786	ND	ND	ND	ND
410626100058	9691 WOLVEN AVE NE	SAMPLED BY R&W/GZA	795-785	ND	ND	ND	ND
410626100059	9693 WOLVEN AVE NE	SAMPLED BY R&W/GZA	694-686	ND	ND	ND	ND
410626200034	9831 DEER TRL NE	SAMPLED BY R&W/GZA	711-706	ND	ND	ND	ND
410626200035	9820 DEER TRL NE	SAMPLED BY R&W/GZA	693-683	ND	ND	ND	ND
410626300014	9524 WOLVEN AVE NE	SAMPLED BY R&W/GZA	708-703	ND	2.9	2.9	95.8
410626300023	9345 WINZER CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626400004	3651 11 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410626400011	9351 ALSHIRE FARMS DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627300006	2445 11 MILE RD NE	SAMPLED BY R&W/GZA	704-700	ND	ND	ND	ND
410627300022	9422 ROGUE WOOD AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	4.7
410627300030	2619 11 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627300031	2659 11 MILE RD NE	SAMPLED BY R&W/GZA	747-742	ND	2.7	2.7	2.7
410627300032	2703 11 MILE RD NE	SAMPLED BY R&W/GZA	629-624	ND	ND	ND	ND
410627300033	2727 11 MILE RD NE	SAMPLED BY R&W/GZA	727-722	ND	ND	ND	ND
410627400014	9309 DIMICK DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400035	2901 11 MILE RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627400039	2909 DIMICK CT NE	SAMPLED BY R&W/GZA	656-650	ND	ND	ND	ND
410627400040	2915 DIMICK CT NE	SAMPLED BY R&W/GZA	659-649	ND	ND	ND	ND
410627400053	2809 11 MILE RD NE	SAMPLED BY R&W/GZA	654-650	ND	ND	ND	ND
410628426003	2270 FONGER ST NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628426004	2320 FONGER ST NE	SAMPLED BY R&W/GZA	698-693	ND	ND	ND	ND
410628426005	9569 ALGOMA AVE NE	SAMPLED BY R&W/GZA	661-657	ND	ND	ND	ND
410628477001	9385 ALGOMA AVE NE	SAMPLED BY R&W/GZA	691-686	ND	ND	ND	ND
410632400063	8685 AMMERMAN DR NE	SAMPLED BY R&W/GZA	693-683	ND	ND	ND	ND
410633100019	1790 11 MILE RD NE	SAMPLED BY R&W/GZA	688-683	ND	ND	ND	ND
410634126001	2626 11 MILE RD NE	SAMPLED BY R&W/GZA	733-729	ND	ND	ND	ND
410634126002	2680 11 MILE RD NE	SAMPLED BY R&W/GZA	733-728	ND	ND	ND	ND
411001152003	8015 JERICHO AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001251003	8215 NORTHLAND DR NE	SAMPLED BY R&W/GZA	NA	ND	4.4	4.4	21.4
411001251008	8197 NORTHLAND DR NE	SAMPLED BY R&W/GZA	622-617	ND	ND	ND	ND
411001251015	8005 NORTHLAND DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001251019	4444 SEDONA VALLEY DR NE	SAMPLED BY R&W/GZA	618-608	ND	ND	ND	ND
411001300015	7880 JERICHO AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001300020	7860 JERICHO AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001300023	7606 JERICHO AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001401003	7875 NORTHLAND DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411002300027	3485 HOUSE ST NE	SAMPLED BY R&W/GZA	695-690	ND	ND	ND	14
411002300043	3433 HOUSE ST NE	SAMPLED BY R&W/GZA	709-705	ND	ND	ND	8.9
411002300051	3392 HOUSE ST NE	SAMPLED BY R&W/GZA	702-697	ND	ND	ND	5.3
411003102007	8195 GRAPHIC DR NE	SAMPLED BY R&W/GZA	684-679	ND	ND	ND	ND
411003151008	8110 GRAPHIC DR NE	SAMPLED BY R&W/GZA	681-671	ND	ND	ND	ND
411003152001	8166 GRAPHIC DR NE	SAMPLED BY R&W/GZA	676-671	ND	ND	ND	ND
411009376005	6916 CHANDLER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	6.3
411009376006	6835 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	667-662	ND	ND	ND	ND
411009376009	6840 CHANDLER DR NE	SAMPLED BY R&W/GZA	659-654	ND	ND	ND	ND

TABLE 3
SECOND YEAR SAMPLING LIST
Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
411009376013	6880 CHANDLER DR NE	SAMPLED BY R&W/GZA	641-637	ND	ND	ND	ND
411009451007	6850 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	628-624	ND	ND	ND	ND
411009451010	6880 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	638-633	ND	2.1	2.1	2.1
411009451011	6900 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	639-634	ND	ND	ND	ND
411010176006	7301 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411010176010	7455 PACKER DR NE	SAMPLED BY R&W/GZA	651-646	ND	ND	ND	ND
411010176016	7315 PACKER DR NE	SAMPLED BY R&W/GZA	631-626	ND	ND	ND	ND
411011101001	3355 RIO ROGUE LN NE	SAMPLED BY R&W/GZA	552-542	ND	ND	ND	6.8
411011126009	3495 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	NA	ND	5.8	5.8	16.9
411011126010	3500 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	496-491	ND	ND	ND	ND
411011126011	3528 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	NA	ND	2.7	2.7	17
411011126012	3550 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011126013	3568 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	7.8
411011126014	3580 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	619-609	ND	ND	ND	15.1
411011126015	3596 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	14.5
411011176001	7377 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	581-576	ND	ND	ND	ND
411011301009	3301 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011301010	3408 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	12
411011301011	3404 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	531-526	ND	2.3	2.3	25.3
411011326001	7137 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	553-528	ND	ND	ND	ND
411011326002	7099 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	587-582	ND	ND	ND	13
411015426014	6394 WOODWATER DR NE	SAMPLED BY R&W/GZA	610-604	ND	ND	ND	ND
411015426016	6378 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	3.7	3.7	18.1
411015426018	6362 WOODWATER DR NE	SAMPLED BY R&W/GZA	616-611	ND	2.8	2.8	18.7
411015426022	6330 WOODWATER DR NE	SAMPLED BY R&W/GZA	613-608	ND	5	5	80.3
411015426024	6314 WOODWATER DR NE	SAMPLED BY R&W/GZA	617-612	ND	ND	ND	4.4
411015426028	6282 WOODWATER DR NE	SAMPLED BY R&W/GZA	628-618	ND	ND	ND	ND
411015426030	6266 WOODWATER DR NE	SAMPLED BY R&W/GZA	591-581	ND	ND	ND	11.2
411015427001	6332 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	617-612	ND	1.7	1.7	7.3
411015427004	3055 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	588-583	ND	ND	ND	ND
411015427005	3065 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	605-600	ND	ND	ND	19.9
411015427007	3086 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411015427008	3080 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	9.2
411015427009	3066 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	8.4
411015427010	3050 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	NA	ND	2.3	2.3	21.3
411015427011	3036 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	609-604	ND	ND	ND	ND
411015427012	6312 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	5.3	5.3	18.5
411015427013	6298 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	19.5
411015427014	6280 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411015427015	6270 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411015427017	6254 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	1.7	1.7	8.6
411015427018	6250 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	5.1	5.1	20
411015427019	6399 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	4.1	4.1	20.6
411015427020	6368 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	600-595	ND	3.1	3.1	23.4
411015427021	6350 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	2.1	2.1	8.3
411015427022	6391 WOODWATER DR NE	SAMPLED BY R&W/GZA	605-600	ND	3	3	10.1
411015427023	6383 WOODWATER DR NE	SAMPLED BY R&W/GZA	615-610	ND	1.9	1.9	8.6
411015427026	6359 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	4.5
411015427027	6351 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	4.3
411015427028	6341 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	15
411015427029	6325 WOODWATER DR NE	SAMPLED BY R&W/GZA	610-605	ND	5.1	5.1	35.7
411015427030	6311 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	3.6	3.6	12.5
411015427031	6301 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411015427032	6293 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	3.3	3.3	20.6
411015427033	6285 WOODWATER DR NE	SAMPLED BY R&W/GZA	606-600	ND	3	3	22.1
411015427034	6273 WOODWATER DR NE	SAMPLED BY R&W/GZA	594-589	ND	3.3	3.3	21.5
411015428002	6327 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	566-561	ND	ND	ND	ND
411015428005	6291 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	585-580	ND	ND	ND	ND
411015428006	6283 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411015428007	6275 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	615-611	ND	4.4	4.4	81.8
411015428008	6267 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	4.8	4.8	35.6
411015428009	6259 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	617-612	ND	5.2	5.2	10.6
411015428012	6211 WOODWATER DR NE	SAMPLED BY R&W/GZA	590-587	ND	ND	ND	8.3

TABLE 3
SECOND YEAR SAMPLING LIST
Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
411015428013	6195 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	5.8
411015428014	6177 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	20
411015428015	6163 WOODWATER DR NE	SAMPLED BY R&W/GZA	585-581	ND	ND	ND	6.7
411015428020	6405 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	4.4	4.4	27.9
411015428022	6375 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	600-595	ND	3.4	3.4	22.9
411015428024	6351 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	NA	ND	4.2	4.2	10.4
411015429002	6240 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	10.4
411015429004	6208 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	2.2	2.2	24.8
411015429006	6176 WOODWATER DR NE	SAMPLED BY R&W/GZA	596-590	ND	ND	ND	5.1
411015429008	6146 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	3.1	3.1	16.8
411016126018	1977 POST DR NE	SAMPLED BY R&W/GZA	667-662	ND	ND	ND	ND
411016126022	6777 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411016126024	6739 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	614-609	ND	ND	ND	ND
411016126025	1901 POST DR NE	SAMPLED BY R&W/GZA	676-671	ND	ND	ND	ND
411016201015	2069 POST DR NE	SAMPLED BY R&W/GZA	658-653	ND	ND	ND	ND
411016376015	6145 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	574-569	ND	ND	ND	ND
411016376035	6191 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	622-617	ND	ND	ND	ND
411022280013	6485 WEST RIVER DR NE	SAMPLED BY R&W/GZA	586-581	ND	ND	ND	4.6
411022302031	2490 KONKLE DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	9.5

Notes:

1. "Sampled by Others" indicates the results provided were collected by AECOM or independently by the homeowner.
2. Well screen elevations provided in feet above mean sea level, North American Vertical Datum of 1988 (NAVD 88).
3. "NA" indicates not available.
4. "ppt" indicates parts per trillion.
5. "ND" indicates not detected at a concentration greater than laboratory reporting limits.

TABLE 4
THIRD YEAR SAMPLING LIST
 Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
410625301027	3980 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	701-691	ND	ND	ND	ND
410625301029	3950 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	692-682	ND	ND	ND	ND
410625301031	3926 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	705-695	ND	ND	ND	ND
410625301045	3913 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	699-689	ND	ND	ND	ND
410625301047	3945 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	691-681	ND	ND	ND	ND
410625301049	3975 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	693-688	ND	ND	ND	ND
410625301050	3983 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	694-684	ND	ND	ND	ND
410625301052	3991 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	691-681	ND	ND	ND	ND
410625301053	4011 WHIRLWIND DR NE	SAMPLED BY R&W/GZA	689-679	ND	ND	ND	ND
410627300003	9530 ALGOMA AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627300015	9476 ROGUE WOOD AVE NE	SAMPLED BY R&W/GZA	622-619	ND	ND	ND	ND
410627300016	9430 ROGUE WOOD AVE NE	SAMPLED BY R&W/GZA	612-607	ND	ND	ND	ND
410627300017	9420 ROGUE WOOD AVE NE	SAMPLED BY R&W/GZA	583-573	ND	ND	ND	ND
410627300025	9380 ALGOMA AVE NE	SAMPLED BY R&W/GZA	671-664	ND	ND	ND	ND
410627300026	2545 WHITE TAIL DR NE	SAMPLED BY R&W/GZA	608-603	ND	ND	ND	ND
410627300027	9350 ALGOMA AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410627300028	9326 ALGOMA AVE NE	SAMPLED BY R&W/GZA	619-614	ND	ND	ND	ND
410628300035	9410 GRANGE AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628300041	1860 FONGER ST NE	SAMPLED BY R&W/GZA	644-640	ND	ND	ND	ND
410628300042	1880 FONGER ST NE	SAMPLED BY R&W/GZA	641-636	ND	ND	ND	ND
410628401001	2020 FONGER ST NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628401004	2130 FONGER ST NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410628401005	2188 FONGER ST NE	SAMPLED BY R&W/GZA	646-641	ND	ND	ND	ND
410628426001	2220 FONGER ST NE	SAMPLED BY R&W/GZA	680-671	ND	ND	ND	ND
410632400039	8515 AMMERMAN DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
410633100077	1850 11 MILE RD NE	SAMPLED BY R&W/GZA	679-674	ND	ND	ND	ND
410633100078	1874 11 MILE RD NE	SAMPLED BY R&W/GZA	688-678	ND	ND	ND	ND
411001251006	8159 NORTHLAND DR NE	SAMPLED BY R&W/GZA	662-655	ND	2.5	2.5	2.5
411001251009	8191 NORTHLAND DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001251020	4540 SEDONA VALLEY DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001276002	8144 NORTHLAND DR NE	SAMPLED BY R&W/GZA	673-665	ND	2.5	2.5	9.4
411001276011	8194 NORTHLAND DR NE	SAMPLED BY R&W/GZA	721-716	ND	ND	ND	ND
411001300002	7887 JERICHO AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411001300012	7980 JERICHO AVE NE	SAMPLED BY R&W/GZA	651-646	ND	ND	ND	ND
411001300017	8008 JERICHO AVE NE	SAMPLED BY R&W/GZA	635-630	ND	ND	ND	ND
411001300018	7992 JERICHO AVE NE	SAMPLED BY R&W/GZA	673-665	ND	ND	ND	ND
411001300019	7994 JERICHO AVE NE	SAMPLED BY R&W/GZA	591-581	ND	ND	ND	ND
411001427001	4611 WINDCLIFF DR NE	SAMPLED BY R&W/GZA	672-667	ND	ND	ND	ND
411002300003	3431 HOUSE ST NE	SAMPLED BY R&W/GZA	777-767	ND	ND	ND	ND
411002300006	3600 HOUSE ST NE	SAMPLED BY R&W/GZA	653-648	ND	ND	ND	ND
411002300033	3310 HOUSE ST NE	SAMPLED BY R&W/GZA	794-789	ND	3.9	3.9	3.9
411002300053	3344 HOUSE ST NE	SAMPLED BY R&W/GZA	789-784	ND	3.1	3.1	3.1
411002300054	3411 HOUSE ST NE	SAMPLED BY R&W/GZA	728-718	ND	6.5	6.5	6.5
411003151002	8060 GRAPHIC DR NE	SAMPLED BY R&W/GZA	680-650	ND	ND	ND	ND
411003151007	8080 GRAPHIC DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411003400029	3130 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	569-545	ND	ND	ND	ND
411003400031	3150 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	654-644	ND	ND	ND	ND
411010176002	7475 PACKER DR NE	SAMPLED BY R&W/GZA	608-603	ND	ND	ND	ND
411010176008	7280 BELMONT AVE NE	SAMPLED BY R&W/GZA	613-608	ND	ND	ND	ND
411010176011	7429 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411010176012	7461 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411010176018	7265 PACKER DR NE	SAMPLED BY R&W/GZA	611-606	ND	ND	ND	ND
411010176019	7295 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411010200003	7390 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411010200007	7300 PACKER DR NE	SAMPLED BY R&W/GZA	657-652	ND	ND	ND	ND
411010200016	7590 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	633-628	ND	ND	ND	ND
411010200017	7550 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	628-618	ND	4.6	4.6	4.6
411010200018	7500 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	533	ND	ND	ND	ND
411010200019	7450 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	527-514	ND	ND	ND	ND
411010200022	7220 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	616-610	ND	ND	ND	ND
411010200027	7200 ROGUEWOOD DR NE	SAMPLED BY R&W/GZA	581-576	ND	ND	ND	ND
411010200028	7280 PACKER DR NE	SAMPLED BY R&W/GZA	576-571	ND	ND	ND	ND
411010200030	7402 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411010200031	7400 PACKER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND

TABLE 4
THIRD YEAR SAMPLING LIST
 Algoma and Plainfield Townships, Kent County, MI

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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
411010200032	7533 RIO ROGUE TRL NE	SAMPLED BY R&W/GZA	610-599	ND	ND	ND	ND
411010200034	7262 PACKER DR NE	SAMPLED BY R&W/GZA	658-654	ND	ND	ND	ND
411010426002	7212 PACKER DR NE	SAMPLED BY R&W/GZA	570-566	ND	ND	ND	ND
411011103001	7530 RIO ROGUE TRL NE	SAMPLED BY R&W/GZA	606-586	ND	ND	ND	ND
411011103002	7512 RIO ROGUE TRL NE	SAMPLED BY R&W/GZA	582-562	ND	ND	ND	ND
411011126002	3577 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	584-569	ND	1.6	1.6	6
411011126003	3569 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011126005	3551 WARWICK GLEN DR NE	SAMPLED BY R&W/GZA	556-546	ND	2.7	2.7	2.7
411011151001	3361 RIO ROGUE LN NE	SAMPLED BY R&W/GZA	600-590	ND	7.1	7.1	7.1
411011151002	3359 RIO ROGUE LN NE	SAMPLED BY R&W/GZA	NA	ND	2.2	2.2	2.2
411011176003	7373 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	579-569	ND	ND	ND	ND
411011201002	7470 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011201003	7454 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	654-649	ND	ND	ND	ND
411011201005	7442 BROOKS LN NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011201006	7436 BROOKS LN NE	SAMPLED BY R&W/GZA	717-712	ND	ND	ND	ND
411011201007	7430 BROOKS LN NE	SAMPLED BY R&W/GZA	620-610	ND	ND	ND	ND
411011201015	7425 BROOKS LN NE	SAMPLED BY R&W/GZA	707-702	ND	ND	ND	ND
411011251003	7284 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	648-644	ND	ND	ND	ND
411011251004	7260 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	659-649	ND	ND	ND	ND
411011251005	7242 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011251006	7200 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	631-626	ND	ND	ND	ND
411011253005	7390 BROOKS LN NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411011301002	3311 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	577-572	ND	ND	ND	ND
411011301003	3295 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	592-587	ND	ND	ND	ND
411011301008	3303 SUNSET BLUFF NE	SAMPLED BY R&W/GZA	560-555	ND	ND	ND	ND
411011401031	7144 CHILDSDALE AVE NE	SAMPLED BY R&W/GZA	618-613	ND	ND	ND	ND
411015427002	3031 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	6.2
411015427003	3041 RAPIDFALL CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	7.7
411015427016	6262 RAPIDFALL DR NE	SAMPLED BY R&W/GZA	584-580	ND	ND	ND	ND
411015427024	6375 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411015427025	6367 WOODWATER DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	5.4
411015428010	6241 WOODWATER DR NE	SAMPLED BY R&W/GZA	590-585	ND	ND	ND	5.2
411015428011	6229 WOODWATER DR NE	SAMPLED BY R&W/GZA	603-599	ND	ND	ND	ND
411016101002	1646 POST DR NE	SAMPLED BY R&W/GZA	695-691	ND	ND	ND	ND
411016101009	1772 POST DR NE	SAMPLED BY R&W/GZA	660-655	ND	ND	ND	ND
411016101012	1690 POST DR NE	SAMPLED BY R&W/GZA	587-577	ND	ND	ND	ND
411016102001	6726 SAMRICK AVE NE	SAMPLED BY R&W/GZA	692-687	ND	ND	ND	ND
411016103001	1625 CORNERSTONE CT NE	SAMPLED BY R&W/GZA	618-613	ND	ND	ND	ND
411016103002	1633 CORNERSTONE CT NE	SAMPLED BY R&W/GZA	643-638	ND	ND	ND	ND
411016103005	1678 CORNERSTONE CT NE	SAMPLED BY R&W/GZA	621-611	ND	ND	ND	ND
411016103006	1662 CORNERSTONE CT NE	SAMPLED BY R&W/GZA	601-596	ND	ND	ND	ND
411016103008	1628 CORNERSTONE CT NE	SAMPLED BY R&W/GZA	628-622	ND	ND	ND	ND
411016126002	1825 POST DR NE	SAMPLED BY R&W/GZA	690-685	ND	ND	ND	ND
411016126007	1881 POST DR NE	SAMPLED BY R&W/GZA	675-670	ND	ND	ND	ND
411016126010	1845 POST DR NE	SAMPLED BY R&W/GZA	684-680	ND	ND	ND	5.5
411016126013	1861 POST DR NE	SAMPLED BY R&W/GZA	697-691	ND	ND	ND	ND
411016126023	6779 BLUE RIDGE DR NE	SAMPLED BY R&W/GZA	643-638	ND	ND	ND	ND
411016176011	6560 BOTANY BLUFF DR NE	SAMPLED BY OTHERS	629-624	ND	ND	ND	ND
411016176012	1970 POST DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411016176013	1978 POST DR NE	SAMPLED BY R&W/GZA	660-654	ND	ND	ND	ND
411016176015	6440 BOTANY BLUFF DR NE	SAMPLED BY R&W/GZA	610-595	ND	ND	ND	ND
411016176032	6455 BOTANY BLUFF DR NE	SAMPLED BY R&W/GZA (WELL INACTIVE)	NA	ND	ND	ND	ND
411016201002	2001 POST DR NE	SAMPLED BY R&W/GZA	648-644	ND	ND	ND	ND
411016201020	6766 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	615-610	ND	ND	ND	ND
411016201022	6722 REDTAIL RIDGE DR NE	SAMPLED BY R&W/GZA	624-619	ND	ND	ND	ND
411016251007	2062 POST DR NE	SAMPLED BY R&W/GZA	637-632	ND	ND	ND	ND
411016365022	1799 ROGUE RIVER DR NE	SAMPLED BY R&W/GZA	632-627	ND	ND	ND	ND
411016365045	6152 GEORGE ANN CT NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411016376005	6111 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	607-599	ND	ND	ND	ND
411016376009	1867 ROGUE RIVER RD NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411016376010	1901 ROGUE RIVER RD NE	SAMPLED BY R&W/GZA	641-638	ND	ND	ND	ND
411016376043	6075 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	630-625	ND	ND	ND	ND
411016376044	6057 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	592-587	ND	ND	ND	ND

TABLE 4
THIRD YEAR SAMPLING LIST
Algoma and Plainfield Townships, Kent County, MI

16.0062961.70
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PPN	Address	Note	Well Screen Elevation (feet)	Maximum PFOS (ppt)	Maximum PFOA (ppt)	Maximum PFOS+PFOA (ppt)	Maximum Total PFAS (ppt)
411016451030	6088 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	604-600	ND	ND	ND	ND
411016451035	6100 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	619-614	ND	ND	ND	ND
411016451094	6118 MAKSIMOWSKI AVE NE	SAMPLED BY R&W/GZA	600-595	ND	ND	ND	ND
411017226002	6611 SAMRICK AVE NE	SAMPLED BY R&W/GZA	601-596	ND	ND	ND	ND
411017226004	6759 SAMRICK AVE NE	SAMPLED BY R&W/GZA	615-605	ND	ND	ND	ND
411017276002	1471 PARK FOREST CT NE	SAMPLED BY R&W/GZA	659-654	ND	ND	ND	ND
411017276004	1510 PARK FOREST CT NE	SAMPLED BY R&W/GZA	648-642	ND	ND	ND	ND
411017277010	6421 SAMRICK AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411017426002	6355 SAMRICK AVE NE	SAMPLED BY R&W/GZA	621-616	ND	ND	ND	ND
411017426003	6335 SAMRICK AVE NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	ND
411022302022	2594 KONKLE DR NE	SAMPLED BY R&W/GZA	576-571	ND	ND	ND	7.1
411022302028	2518 KONKLE DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	8
411022302030	2584 KONKLE DR NE	SAMPLED BY R&W/GZA	NA	ND	ND	ND	8

Notes:

1. "Sampled by Others" indicates the results provided were collected by AECOM or independently by the homeowner.
2. Well screen elevations provided in feet above mean sea level, North American Vertical Datum of 1988 (NAVD 88).
3. "NA" indicates not available.
4. "ppt" indicates parts per trillion.
5. "ND" indicates not detected at a concentration greater than laboratory reporting limits.



GZA GeoEnvironmental, Inc.