

JULY 2023 GROUNDWATER PFAS VAP RESULTS
EGL E PFAS ASSESSMENT GRANT 23'0573
CHERRY CAPITAL AIRPORT (TVC)

Date Issued: 9/28/23
 Date Surveyed:
 Designed By:
 Drawn By: DJT
 Checked By: AES
 Scale: 1" = 800'
 Original sheet size is 22x34
 Location:
 T 27 N, R 10 W & T 27 N, R 11 W,
 GARFIELD & EAST BAY TOWNSHIPS,
 CITY OF TRAVERSE CITY,
 GRAND TRAVERSE COUNTY,
 MICHIGAN
 Project Number:
 2022630003
 Sheet:
 1

VAP-020 Ground elevation - 612.8								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
30		<2.0	<2.0	<2.0	2.6	<2.0	<2.0	3.0
40		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
50		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
60		<2.0	<2.0	<2.0	210	13	<2.0	14

VAP-019 Ground elevation - 610.8								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
30		<2.0	<2.0	<2.0	6.5	<2.0	6.4	2.8
40		<2.0	<2.0	<2.0	10	<2.0	<2.0	<2.0
50		<2.0	<2.0	<2.0	87	<2.0	<2.0	<2.0
60		<2.0	2.1	<2.0	700	<2.0	<2.0	<2.0

VAP-018 Ground elevation - 610.6								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
20		<2.0	<2.0	<2.0	5.1	<2.0	3.1	9.7
30		<2.0	2.7	<2.0	250	<2.0	<2.0	15
40		<2.0	<2.0	<2.0	540	<2.0	<2.0	61

VAP-017 Ground elevation - 609.2								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
20		<4.1	2.8	<2	<2	<2	4.1	<2
30		<3.9	<2	<2	20	7	<2	5.0

VAP-016 Ground elevation - 606.6								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
20		<4	2.7	<2	<2	<2	3.4	2.6
30		<3.9	4.1	<1.9	<1.9	2.5	19	<1.9

VAP-015 Ground elevation - 588.2								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
10		<3.9	2.6	2.3	<1.9	2.1	8.8	10
20		<4	8.0	7.9	2.5	<2	<2	4.6
30		<3.8	<1.9	<1.9	6.2	5.6	2.4	3.0
40		<3.9	<2	5.7	100	13	2.3	12
50		<3.9	<1.9	5.3	160	4.8	<1.9	11
60		<3.9	<2	<2	24	<2	<2	<2

VAP-014 Ground elevation - 590.1								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
10		<4	4.1	<2	<2	2.2	8.9	4.8
20		<4.1	2.4	8.2	6.8	<2.0	5.8	8.3
30		<3.9	<1.9	5.7	5.8	4.7	5.8	3.8
40		<4.1	<2.0	13	22	74	26	16
50		<4.0	2.5	27	37	170	33	29
60		<4.1	<2.1	33	34	120	38	24

VAP-013 Ground elevation - 588.0								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
10		<10	6.4	6.9	10	<2.0	45	16
20		<9.8	24	4.4	2.0	<2.0	7.6	<2.0
30		<9.9	100	8.4	14	<2.0	<2.0	10
40		<10	58	29	16	5.7	<2.0	36
50		<10	10	29	25	5.1	<2.0	30
60		<10	3.4	37	48	2.2	<2.0	38

VAP-012 Ground elevation - 587.2								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
10		<3.9	<2.0	4.6	40	<2.0	8.0	3.0
20		<4.1	<2.0	2.1	49	<2.0	<2.0	2.4
30		<3.9	<2.0	2.4	35	<2.0	<2.0	2.2
40		<4.1	2.7	11	18	<2.1	<2.1	4.2
50		<3.9	2.2	8.0	24	<2.0	3.4	3.4
60		<4.1	2.8	9.8	22	<2.0	<2.0	3.8

VAP-011 Ground elevation - 609.91								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
20		<1.9	<1.9	7.7	13	2.1	4.1	33
30		<2	<2	7.7	3.6	54	22	29
40		<3.8	<1.9	43	42	180	64	160
50		<4	2.2	39	49	190	58	210

VAP-010 Ground elevation - 609.90								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
20		<3.9	<2.0	3.9	<2.0	<2.0	<2.0	3.2
30		<4.0	<2.0	5.0	3.0	<2.0	<2.0	5.0
40		<4.0	<2.0	5.1	3.8	<2.0	<2.0	5.0
50		<4.0	<2.0	3.4	2.2	<2.0	<2.0	3.0
60		<4.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

LEGEND

GROUNDWATER MONITORING WELL

VAP LOCATION

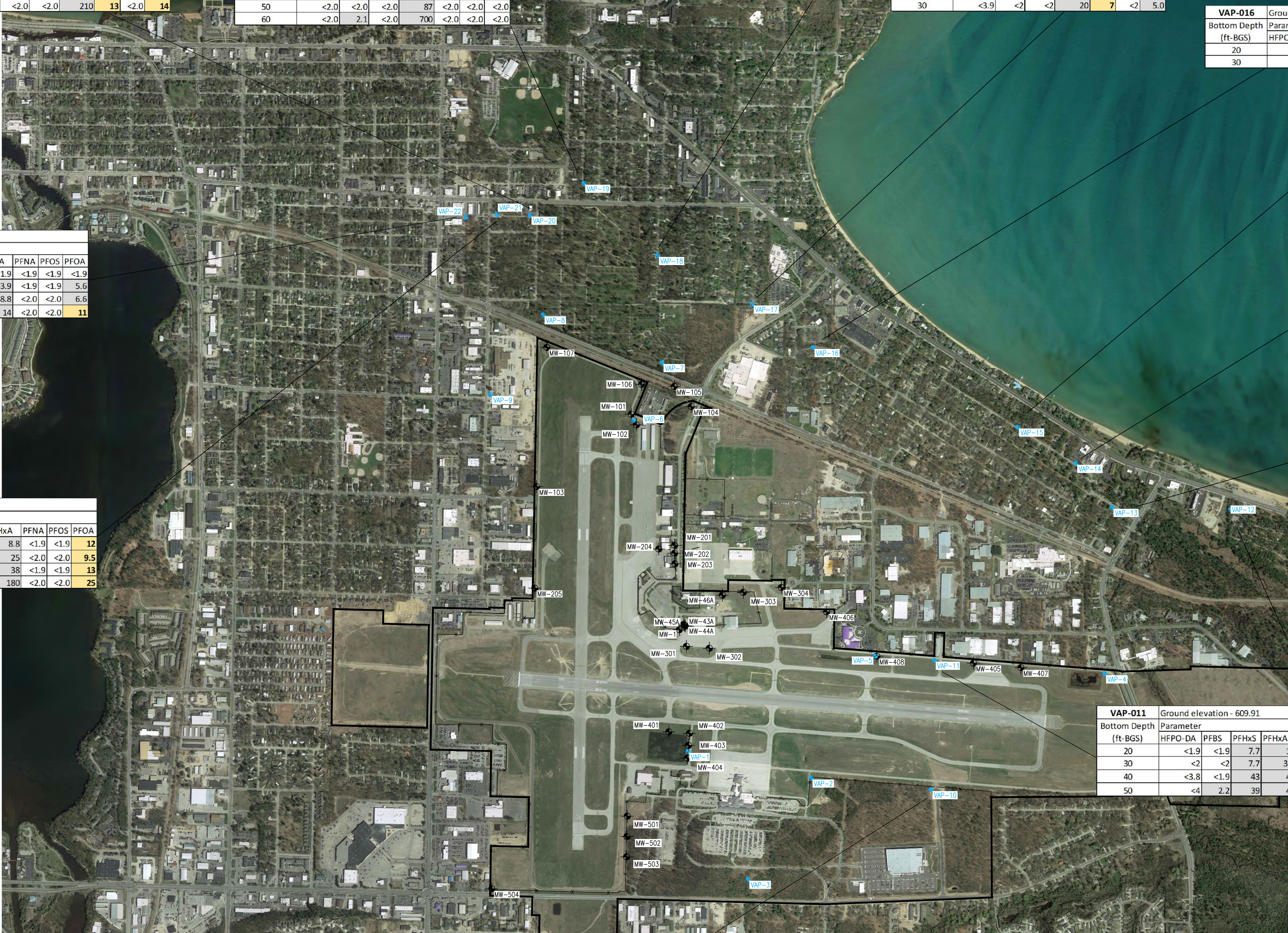
Results provided in nanograms per liter (ppt)
 VAP Sample Dates June 26 - 30 & July 10 - 12 & 24, 2023
 Yellow highlighted results exceed DW Criterion

SCALE 1" = 800'

0' 800' 1,600'

ANALYTE	Residential Drinking Water Criteria (12/21/2020) ng/L	Groundwater - Surface Water Interface Criteria (12/21/2020) ng/L
HFPO-DA	370	-
Perfluorobutanesulfonic acid (PFBS)	420	-
Perfluorohexanesulfonic acid (PFHxS)	51	-
Perfluorohexanoic acid (PFHxA)	400,000	-
Perfluorononanoic acid (PFNA)	6	-
Perfluorooctanesulfonic acid (PFOS)	16	11
Perfluorooctanoic acid (PFOA)	8	420

THIS IMAGE IS INTENDED TO SHOW THE APPROXIMATE WELL LOCATIONS WITH RESPECT TO BUILDINGS AND OTHER SITE FEATURES. THE MONITORING WELL LOCATION IMAGE SHOULD NOT BE USED TO DETERMINE LOCATIONS OF UTILITIES, BUILDING ELEMENTS, TOPOGRAPHY, OR OTHER PROPOSED OR EXISTING FEATURES OF THE SITE. THIS SITE IMAGE IS FROM GOOGLE AERIAL IMAGERY.



VAP-022 Ground elevation - 612.6								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
30		<1.9	13	4.1	<1.9	<1.9	<1.9	<1.9
40		<1.9	4.0	7.9	3.9	<1.9	<1.9	5.6
50		<2.0	3.3	8.3	8.8	<2.0	<2.0	6.6
60		<2.0	2.2	32	14	<2.0	<2.0	11

VAP-021 Ground elevation - 612.9								
Bottom Depth (ft-BGS)	Parameter	HFPO-DA	PFBS	PFHxS	PFHxA	PFNA	PFOS	PFOA
30		<1.9	3.7	2.9	8.8	<1.9	<1.9	12
40		<2.0	<2.0	13	25	<2.0	<2.0	9.5
50		<1.9	2.2	23	38	<1.9	<1.9	13
60		<2.0	<2.0	20	180	<2.0	<2.0	25