

EATON COUNTY BOARD OF COMMISSIONERS



Tim Barnes
Blake Mulder
Terrance Augustine
Brandon Haskell
Jeanne Pearl-Wright

Trevor "TJ" Youngquist
Mark Mudry
Joseph C. Brehler
Brian Droscha
Jacob Toomey

Scott Hansen
Brian Lautzenheiser
Jim Mott - Chair
Frank Holmes
Barbara A. Rogers - Vice Chair

EATON COUNTY BOARD OF COMMISSIONERS/PUBLIC WORKS AND PLANNING COMMITTEE

**WEDNESDAY, DECEMBER 13, 2023
9:00 A.M.**

BOARD OF COMMISSIONERS' ROOM, COUNTY COURTHOUSE, CHARLOTTE

AGENDA

1. Call to Order.
2. Pledge of Allegiance.
3. Agenda Additions and Changes.
4. Approval of November 8, 2023 Minutes.
5. Limited Public Comment.
6. Construction Code/Planning and Zoning Report.
 - Finance Report
7. DIA Update.
 - Finance Report
8. Parks Report.
 - Parks Workgroup – Strategic Plan recommendation
 - Finance Report
9. Landfill Semi-Annual Monitoring Report
10. Miscellaneous.
11. Limited Public Comment.
12. Adjournment.

A quorum of the Board of Commissioners may be present at this meeting.



1045 Independence Blvd.
Charlotte, MI 48813



eatoncounty.org

PUBLIC WORKS & PLANNING COMMITTEE

**WEDNESDAY, NOVEMBER 8, 2023
9:00 A.M.**

MINUTES

MEMBERS PRESENT:

Commissioners Barbara Rogers, Terrance Augustine, Blake Mulder, Joe Brehler, and Brian Lautzenheiser, Scott Hansen, and Trevor Youngquist.

ALSO PRESENT:

Commissioner Jim Mott; Connie Sobie, Claudine Williams, Drain Commissioner Richard Wagner, Chris Garrison, Travis Keeton, Logan Bailey, Deb Penfield, and Brandy Miller.

The November 8, 2023 regular meeting of the Public Works and Planning Committee was called to order at 9:00 a.m. by Chairperson Rogers.

The Pledge of Allegiance was given by all.

Commissioner Mulder moved to approve the agenda with the removal of the Landfill Report. Commissioner Lautzenheiser seconded. Motion carried unanimously.

Commissioner Lautzenheiser moved to approve the October 11, 2023 meeting minutes. Commissioner Hansen seconded. Motion carried unanimously.

Limited Public Comment. David Howell stated he lives on Guinea Rd in Delta Township, a quarter mile north of the new GM battery plant. He is concerned about contamination of ground water when the new plant opens. He would like to know what the Emergency Management Plan is in the event of a hazardous spill.

Construction Code, Planning and Zoning Director, Chris Garrison, presented the department's monthly report. The Department is requesting to purchase software from BS&A to allow for online permitting. Discussion held. Commissioner Brehler moved to recommend approval to the Ways and Means Committee. Commissioner Augustine supported. Motion carried unanimously.

Director Garrison proposed a new fee schedule. Discussion held. Commissioner Youngquist moved to increase the late fee to \$250.00. Commissioner Augustine seconded. Motion carried with one member (Commissioner Brehler) voting in opposition.

Drain Commissioner, Richard Wagner was present to provide the department's Semi-Annual Report. Discussion held.

A Resolution to approve the Greater Lansing Regional Committee Memorandum of Agreement Renewal was presented. Commissioner Augustine moved to recommend approval to the Board of Commissioners. Commissioner Youngquist seconded. Motion carried unanimously.

Resource Recovery Program Assistant, Debbie Penfield, presented the department's monthly report. Commissioner Augustine moved approval for the request of a part time recycling position to the Ways and Means Committee. Commissioner Youngquist seconded. Motion carried unanimously.

Parks Director, Travis Keeton, presented the department's monthly report. Updates were given on bids for various projects and the work being done to identify invasive species in the parks. Commissioner Augustine requested a budget report monthly at every Public Works and Planning Committee meeting.

Commissioner Mulder moved to recommend the appointment of Mark Mudry to the Capitol Area Regional Transportation Study Committee for a term of one year expiring on 12/31/2024, with Claudine Williams serving as the alternate. Commissioner Augustine supported. Motion carried unanimously.

Limited Public Comment. None.

Chairperson Rogers adjourned the meeting at 10:49 a.m.

The next regularly scheduled meeting of the Public Works and Planning Committee will be held at 9:00 a.m. on Wednesday, December 13, 2023 in the Board of Commissioners Room of the Courthouse located at 1045 Independence Blvd, Charlotte MI 48813.

Barbara Rogers, Chairperson



Eaton County Department of Construction Codes & Planning and Zoning

1045 Independence Boulevard, Charlotte, Michigan 48813
Telephone: (517) 543-3004 Fax: (517) 543-9924

"OUR GOAL IS TO PROVIDE A SAFER PLACE TO LIVE, WORK AND PLAY"

Department of Construction Codes & Planning and Zoning Report 12/4/2023 For Public Works & Planning Committee December 13, 2023

Department Boards:

- The **Planning Commission** met on December 5th, they approved two change of condition applications for businesses located in Eaton Rapids and Kalamo Townships.
- The **Zoning Board of Appeals** met on December 5th, they denied an application for review of the Planning Commission's Decision regarding CU-10-23-7.
- The **Construction Code Board of Appeals** did not meet in December due to lack of business.
- The **Zoning Ordinance Committee** met on November 21st, They discussed a request from an Eaton County Resident to consider allowing for the construction of duplexes in a Low Density Residential (R-1) Zoning District; currently the Zoning Ordinance only allows for conversion of single family homes into a duplex. The Zoning Ordinance Committee recommended staff to work on a District Change Amendment Application to change the text of the Zoning Ordinance allowing for construction of duplexes as a use by right in an R-1 Zoning District.

They also discussed potential marihuana requirements within the Zoning Ordinance; the Zoning Ordinance Committee has directed staff to identify where marihuana facilities may fit within the current language of the Zoning Ordinance and then request an interpretation of the Zoning Board of Appeals. Staff has spoken with our attorney, who will also review the interpretation prior to the Zoning Board of Appeals hearing an application. Once complete, we will have a legal opinion on where marihuana facilities could operate within the county if a township chooses to opt into the program. In addition, after we have the opinion, staff will work on a District Change Amendment Application to change the text of the Zoning Ordinance, proposing to add the definitions of marihuana facilities and hemp and prohibit marijuana facilities as a Home Business.

The next Zoning Ordinance Committee Meeting is scheduled for January 16th.

Online Permitting System (BS&A):

Staff has a meeting scheduled with BS&A on Friday, December 8th to begin discussions on the implementation of the online permitting system. Staff from Info. Systems, Property Descriptions and Equalization, Treasures Office and our office has continued discussions with BS&A to determine if their cloud based systems for their building, assessing and tax programs will work for Eaton County.

Master Plan Update:

The Planning Commission at their December 5th meeting moved to recommend the Board of Commissioners at their January 17th meeting approve the Draft Eaton County Master Plan to be sent out for the required sixty-three (63) day review period.

Code Enforcement (open/active):

- Work without permits seven (7)
- Hazardous buildings twenty (20)
- Junk thirty-nine (39)
- Zoning thirty-three (33)

No tickets were issued in the month of November.

County Wide Housing Starts		January	February	March	April	May	June	July	August	September	October	November	December	2023 Totals	2022 Totals
Delta Twp.	Site Built	1	0	0	1	1	4	0	0	2	0	0	0	9	23
	Mobile Homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	1	0	0	1	1	4	0	0	2	0	0	0	9	23
Eaton County	Site Built	2	4	1	4	6	3	8	10	14	11	6	0	69	78
	Mobile Homes	1	0	0	0	0	0	0	0	1	2	2	0	6	9
	Totals	3	4	1	4	6	3	8	10	15	13	8	0	75	87
Eaton Rapids	Site Built	1	0	0	0	0	0	0	1	1	0	1	0	4	0
	Mobile Homes	0	0	0	4	0	0	0	0	0	0	0	0	4	10
	Totals	1	0	0	4	0	0	0	1	1	0	1	0	8	10
Grand Ledge	Site Built	0	0	4	1	1	0	0	0	0	0	0	0	6	14
	Mobile Homes	9	0	0	0	0	0	0	0	10	0	0	0	19	5
	Totals	9	0	4	1	1	0	0	0	10	0	0	0	25	19
Oneida	Site Built	0	0	0	0	0	1	0	0	0	0	0	0	1	2
	Mobile Homes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	0	0	0	0	0	1	0	0	0	0	0	0	1	2
County Wide Total		14	4	5	10	8	8	8	11	28	0	0	0	118	141

Monthly Activity Con Code	Tickets issued		Magistrate hearings		Court cases		Commercial Plan Review		Complaints regarding contractors		Public Surveys		TOTAL	
													MONTH	
MO/YR	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"
JAN				1		0		2		0		4	0	7
FEB				0		0		4		0		0	0	4
MARCH				0		0		0		0		3	0	3
APRIL				0		0		4		0		2	0	6
MAY				0		0		5		0		2	0	7
JUNE			0	0	0	0	0	5	0	1	3	8	3	14
JULY		22	0	1	0	0	4	4	0	0	4	5	8	32
AUG		6	2	0	0	1	2	3	0	0	2	4	6	14
SEPT		0	0	1	0	1	3	4	0	0	2	2	5	8
OCT		0	0	0	1	0	0	4	0	0	6	3	7	7
NOV			0		0		2	7	0	0	1	2	3	9
DEC			0		1		1		0		1		3	0
TOTALS	0	28	2	3	2	2	12	42	0	1	19	35	35	111

Construction Inspections	Building		Electrical		Mechanical		Plumbing		TOTAL	
									MONTH	
MO/YR	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"
JAN	231	224	108	132	101	211	65	78	505	645
FEB	164	240	108	109	77	106	35	96	384	551
MARCH	198	255	117	89	121	87	70	156	506	587
APRIL	271	237	121	98	88	89	99	182	579	606
MAY	300	326	101	104	112	86	60	177	573	693
JUNE	305	297	137	120	108	86	92	62	642	565
JULY	338	335	117	101	83	68	72	47	610	551
AUG	390	471	144	148	116	114	81	71	731	804
SEPT	345	432	111	124	100	59	79	11	635	626
OCT	359	437	130	141	116	114	56	66	661	758
NOV	336	361	150	104	89	97	69	93	644	655
DEC	209		79		58		58		404	
TOTALS	3446	3615	1417	1270	1169	1117	835	1039	6874	7041

Construction Permits	Building		Electrical		Mechanical		Plumbing		TOTAL	
									MONTH	
MO/YR	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"
JAN	53	50	83	69	71	85	30	44	237	248
FEB	35	64	71	46	84	63	42	259	232	432
MARCH	67	47	73	57	71	63	46	78	257	245
APRIL	92	78	80	82	67	71	59	46	298	277
MAY	74	83	95	64	86	64	53	35	308	246
JUNE	82	68	90	80	102	75	42	34	316	257
JULY	83	91	74	80	73	60	33	22	263	253
AUG	82	90	116	79	153	60	32	40	383	269
SEPT	62	143	80	116	69	74	45	31	256	364
OCT	71	65	82	103	95	107	38	35	286	310
NOV	43	67	63	140	82	174	28	142	216	523
DEC	28		52		78		39		197	
TOTALS	772	846	959	916	1031	896	487	766	3249	3424

Construction Enforcements	WWOP	WWOP	WWOP	WWOP	HAZ BLDG	HAZ BLDG	HAZ BLDG	HAZ BLDG
	(NEW)	(NEW)	(CLOSED)	(PENDING)	(NEW)	(NEW)	(CLOSED)	(PENDING)
		2022 carryover 13				2022 carryover 9		
MO/YR	2022	2023	2023	2023(PENDING)	2022	2023	2023	2023(PENDING)
JAN	19	22	19	16	0	7	3	13
FEB	10	20	22	14	2	5	2	16
MARCH	14	14	11	17	2	5	4	17
APRIL	16	20	11	26	4	0	3	14
MAY	14	9	14	21	2	5	3	16
JUNE	9	12	12	21	0	2	2	16
JULY	20	14	10	25	1	0	3	19
AUG	17	8	17	16	2	3	4	18
SEPT	7	5	11	10	3	1	1	18
OCT	11	3	1	12	3	5	3	20
NOV	9	1	6	7	3	0	0	20
DEC	10				1			
TOTALS	156	128	134	7	23	33	28	20
			TOTAL WORK WITHOUT PERMITS (WWP) & HAZARDOUS BUILDINGS VIOLATIONS					27

Planning & Zoning Cases	Conditional Use Permits		Board of Appeals		Administrative Variances		District Change Amendments		Site Plan Reviews		Zoning Referrals		Private Roads		Agricultural Buildings		Lot Line Adjustments		Land Divisions Reviewed		TOTAL	
																					MONTH	
MO/YR	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"	"22"	"23"
JAN	0	0	0	0	0	0	0	0	0	0	18	19	0	0	5	0	8	1	6	2	37	22
FEB	4	0	1	0	0	0	0	0	0	0	16	16	0	0	0	2	0	5	3	1	24	24
MARCH	0	0	0	0	0	0	0	0	0	0	20	19	0	0	1	2	3	1	4	3	28	25
APRIL	0	4	1	1	0	0	0	1	0	0	38	22	0	0	3	3	3	0	6	1	51	32
MAY	2	3	0	2	0	0	1	0	0	0	36	22	0	0	3	3	2	2	2	2	46	34
JUNE	1	0	0	0	0	0	0	0	0	0	38	22	0	0	0	1	4	2	4	1	47	26
JULY	2	0	1	0	0	0	1	0	0	0	31	32	0	0	2	1	2	3	4	1	43	37
AUG	1	1	0	0	0	0	0	1	0	0	37	25	0	0	3	4	2	4	2	2	45	37
SEPT	1	1	1	0	0	0	0	0	0	0	29	25	0	0	2	4	2	2	4	1	39	33
OCT	1	4	1	0	0	0	0	0	0	0	26	21	0	0	1	1	1	3	4	3	34	32
NOV	0	0	0	0	0	0	0	0	0	0	14	16	0	0	0	1	2	2	3	1	19	20
DEC	0	2	1	1	0		0		0		12		0		5		6		0		24	3
TOTALS	12	15	6	4	0	0	2	2	0	0	315	239	1	0	25	22	35	25	42	18	437	325

Planning & Zoning Enfor.	JUNK	JUNK	JUNK	JUNK	ZONING	ZONING	ZONING	ZONING
	(NEW)	(NEW)	(CLOSED)	(PENDING)	(NEW)	(NEW)	(CLOSED)	(PENDING)
		2022 carryover: 31				2022 carryover: 26		
MO/YR	2022	2023	2023	2023(PENDING)	2022	2023	2023	2023(PENDING)
JAN	1	3	0	34	7	2	1	27
FEB	1	2	0	36	0	1	0	28
MARCH	1	7	4	39	2	3	1	30
APRIL	6	2	1	40	3	1	0	31
MAY	6	2	1	41	2	3	3	31
JUNE	0	1	0	42	1	2	2	31
JULY	1	0	0	42	10	0	1	30
AUG	1	1	3	40	5	0	4	26
SEPT	2	2	0	42	1	1	0	27
OCT	1	3	3	42	1	3	0	30
NOV	2	0	3	39	4	5	2	33
DEC	1				0			
TOTALS	23	23	15	39	36	21	14	33
			TOTAL PENDING JUNK & ZONING VIOLATIONS					72

Eaton County Resource Recovery
Financial Report
Fiscal Year 2023/24
Through the end of November, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Revenues						
Administration						
Private Grant	36,000	36,000	-	-	36,000.00	0%
Donations	11,000	11,000	-	8,000.00	3,000.00	73%
Transfers-In	81,392	81,392	-	81,392.00	-	100%
Fund Balance - Carry Over	33,395	33,395	-	-	33,395.00	0%
Total Administration Revenues	161,787	161,787	-	89,392.00	72,395.00	
Operational Revenues						
Waste Hauler Licenses	1,800	1,800	-	1,500.00	300.00	83%
Solid Waste Surcharge	330,000	330,000	-	346,767.46	(16,767.46)	105%
Agricultural Plastic Revenue	2,500	2,500	613.84	2,000.00	500.00	80%
Total Operational Revenues	334,300	334,300	613.84	350,267.46	(15,967.46)	
Total Revenues	496,087	496,087	613.84	439,659.46	56,427.54	89%
Expenditures						
Administration						
Personnel	192,908	192,908	10,162.18	175,780.83	17,127.17	91%
Supplies	3,000	3,000	211.46	2,968.76	31.24	99%
Other Services	10,104	10,104	291.85	9,751.10	352.90	97%
Debt Service - Vehicle Lease	-	-	-	-	-	0%
Transfer Out - Public Improvement	40,624	40,624	-	40,624.00	-	100%
Total Administration Expenditures	246,636	246,636	10,665.49	229,124.69	17,511.31	93%
Operational Expenditures						
County Projects	132,350	132,350	520.09	132,350.00	-	100%
Local Projects	117,101	117,101	909.83	117,101.00	-	100%
Total Operational Expenditures	249,451	249,451	1,429.92	249,451.00	-	100%
Total Expenditures	496,087	496,087	12,095.41	478,575.69	17,511.31	96%
Excess Revenues over Expenses (Net Carryover)	-	-	(11,481.57)	(38,916.23)	73,938.85	
Available Resources from Administration	(84,849)	(84,849)	(10,665.49)	(139,732.69)	54,883.69	
Available Resources from Operations	84,849	84,849	(816.08)	100,816.46	(15,967.46)	
Projected Net Carryover	-	-	(11,481.57)	(38,916.23)	38,916.23	
9/30/2023 Estimated Fund Balance	240,513	240,513	240,513	240,513		
Projected 9/30/2024 Fund Balance	207,118	207,118	229,031	201,597		

**Eaton County Resource Recovery
Program Update**
Fiscal Year 2023/24
Through the end of November, 2023

	Adopted Budget	Amended Budget	YTD Transactions	Projected YTD Transactions	Amended Budget Less YTD Transactions	% Used
Summary of Programs						
529 - County Programs						
Roadside Cleanup	1,900.00	1,900.00	332.14	1,900.00	1,567.86	100.0%
Household Battery Collection	11,000.00	11,000.00	-	11,000.00	11,000.00	100.0%
Scrap Tire Collection	36,000.00	36,000.00	-	36,000.00	36,000.00	100.0%
Household Hazardous Waste Collection	60,000.00	60,000.00	-	60,000.00	60,000.00	100.0%
Education Programs	1,000.00	1,000.00	54.95	1,000.00	945.05	100.0%
Electronic Recycling	18,000.00	18,000.00	-	18,000.00	18,000.00	100.0%
Event Supplies & Contractual	1,200.00	1,200.00	133.00	1,200.00	1,067.00	100.0%
Promotion Programs	3,250.00	3,250.00	133.00	3,250.00	3,117.00	100.0%
Total	132,350.00	132,350.00	653.09	132,350.00	131,696.91	100.0%
530 - SWAG Programs						
Bellevue/Olivet	17,501.00	17,501.00	-	17,501.00	17,501.00	100.0%
Charlotte Area Recycling (CARA)	28,500.00	28,500.00	-	28,500.00	28,500.00	100.0%
Delta Twp - Recycling Center	27,600.00	27,600.00	-	27,600.00	27,600.00	100.0%
City of Grand Ledge - Recycling	21,500.00	21,500.00	-	21,500.00	21,500.00	100.0%
Sunfield Recycling Center (Pilot Project)	22,000.00	22,000.00	909.83	22,000.00	21,090.17	100.0%
Total	117,101.00	117,101.00	909.83	117,101.00	116,191.17	100.0%

Eaton County Construction Code
Financial Report
Fiscal Year 2023/24
Through the end of November, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Revenues						
Permitting Revenue						
Building Permits *	300,000	350,375	371,241.01	711,148.05	(360,773.05)	203%
Mechanical Permits	120,000	120,000	30,123.00	180,738.00	(60,738.00)	151%
Electrical Permits	120,000	120,000	33,750.00	202,500.00	(82,500.00)	169%
Plumbing Permits	65,000	65,000	22,832.00	136,992.00	(71,992.00)	211%
Total Permitting Revenue	605,000	655,375	457,946.01	1,231,378.05	(576,003.05)	
Other Revenue						
Construction Code Services	11,600	11,600	6,841.00	41,046.00	(29,446.00)	354%
Fines and Forfeitures	500	500	-	-	500.00	0%
Fund Balance Carryover	400,310	400,310	-	-	400,310.00	0%
Total Other Revenue	412,410	412,410	6,841.00	41,046.00	371,364.00	
Total Revenues	1,017,410	1,067,785	464,787.01	1,272,424.05	(204,639.05)	119%
Operational Expenditures						
Personnel	682,374	682,374	65,500.63	638,447.56	43,926.44	94%
Supplies	22,700	22,700	1,913.75	16,482.50	6,217.50	73%
Other Services & Charges	59,012	79,387	9,053.69	44,322.14	35,064.86	56%
Total Operational Expenditures	764,086	784,461	76,468.07	699,252.20	85,208.80	
Other Expenditures						
Debt Service - Vehicle Leases	19,404	19,404	3,233.76	19,402.56	1.44	100%
Capital Outlay	51,000	51,000	-	51,000.00	-	100%
Transfer Out - General Fund	45,000	45,000	-	45,000.00	-	100%
Transfer Out - Public Improvement	134,000	134,000	-	134,000.00	-	100%
Transfer Out - Computer Fund	3,920	33,920	-	33,920.00	-	100%
Total Other Expenditures	253,324	283,324	3,233.76	283,322.56	1.44	100%
Total Expenditures	1,017,410	1,067,785	79,701.83	982,574.76	85,210.24	92%
Excess Revenues over Expenses (Net Carryover)	-	-	385,085.18	289,849.29		
9/30/2023 Estimated Fund Balance	1,139,660	1,139,660	1,139,660	1,139,660		
Projected 9/30/2024 Fund Balance	739,350	739,350	754,575	1,429,509		

* Projected Building Permits Includes One-Time Single Permit for \$288,036

Resource Recovery Department Report

For Public Works & Planning Committee

November 2023

General Updates:

Resource Recovery was invited to join a vape disposal workgroup spearheaded by the Barry-Eaton Health Department and including the Barry Conservation District, with a goal of developing a plan for the proper disposal of used tobacco and THC electronic vapor pens. These pens are considered hazardous waste due to both the liquid compositions and the lithium batteries they contain. Initial team meeting took place on 11/02 with a followup meeting on 11/17. This is in the initial development phase and further details will be provided as they become available.

Completed EGLE ReTRAC online annual material recovery reporting.

11/09/2023: Attended the Michigan Recycling Coalitions annual "Fall Into Recycling" event which focused on extended producer responsibility and its role in increasing recycling rates.

11/30/2023: Attended a meeting with Metro Recycling, MSU Recycling, and NexTrex. NexTrex, a manufacturer of composite decking and outdoor furniture made from recycled polyethylene (PE) packaging, is seeking partnerships to improve their access to and stabilize the market for this commodity. NexTrex requested further dialogue with Eaton County regarding the program; I will provide updates when available.

Local Projects:

The department has received and is reviewing 14 applications for the soon to be vacant Sunfield Recycling Center Operator. We hope to schedule interviews as soon as possible, as having the new operator train with the departing operator would be ideal.

There are repairs and improvements needed at the Sunfield Recycling Center to include monthly rental of both a dumpster and a portable toilet, along with service on overhead lighting which needs bulb replacements and a fixture repair. Approval is requested to move forward with these items.

County Programs:

Solid Waste Ordinance Licensing forms were mailed to all haulers currently licensed to operate in Eaton County. These forms are due prior to January 1, 2024.

Education:

Attended the Grand Ledge Chamber of Commerce Expo 11/08/2023 providing information and education on ECRR services.

**Eaton County Resource Recovery
Program Update**
Fiscal Year 2023/24
Through the end of November, 2023

	Adopted Budget	Amended Budget	YTD Transactions	Projected YTD Transactions	Amended Budget Less YTD Transactions	% Used
Summary of Programs						
529 - County Programs						
Roadside Cleanup	1,900.00	1,900.00	332.14	1,900.00	1,567.86	100.0%
Household Battery Collection	11,000.00	11,000.00	-	11,000.00	11,000.00	100.0%
Scrap Tire Collection	36,000.00	36,000.00	-	36,000.00	36,000.00	100.0%
Household Hazardous Waste Collection	60,000.00	60,000.00	-	60,000.00	60,000.00	100.0%
Education Programs	1,000.00	1,000.00	54.95	1,000.00	945.05	100.0%
Electronic Recycling	18,000.00	18,000.00	-	18,000.00	18,000.00	100.0%
Event Supplies & Contractual	1,200.00	1,200.00	133.00	1,200.00	1,067.00	100.0%
Promotion Programs	3,250.00	3,250.00	133.00	3,250.00	3,117.00	100.0%
Total	132,350.00	132,350.00	653.09	132,350.00	131,696.91	100.0%
530 - SWAG Programs						
Bellevue/Olivet	17,501.00	17,501.00	-	17,501.00	17,501.00	100.0%
Charlotte Area Recycling (CARA)	28,500.00	28,500.00	-	28,500.00	28,500.00	100.0%
Delta Twp - Recycling Center	27,600.00	27,600.00	-	27,600.00	27,600.00	100.0%
City of Grand Ledge - Recycling	21,500.00	21,500.00	-	21,500.00	21,500.00	100.0%
Sunfield Recycling Center (Pilot Project)	22,000.00	22,000.00	909.83	22,000.00	21,090.17	100.0%
Total	117,101.00	117,101.00	909.83	117,101.00	116,191.17	100.0%

Eaton County Resource Recovery
Financial Report
Fiscal Year 2023/24
Through the end of November, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Revenues						
Administration						
Private Grant	36,000	36,000	-	-	36,000.00	0%
Donations	11,000	11,000	-	8,000.00	3,000.00	73%
Transfers-In	81,392	81,392	-	81,392.00	-	100%
Fund Balance - Carry Over	33,395	33,395	-	-	33,395.00	0%
Total Administration Revenues	161,787	161,787	-	89,392.00	72,395.00	
Operational Revenues						
Waste Hauler Licenses	1,800	1,800	-	1,500.00	300.00	83%
Solid Waste Surcharge	330,000	330,000	-	346,767.46	(16,767.46)	105%
Agricultural Plastic Revenue	2,500	2,500	613.84	2,000.00	500.00	80%
Total Operational Revenues	334,300	334,300	613.84	350,267.46	(15,967.46)	
Total Revenues	496,087	496,087	613.84	439,659.46	56,427.54	89%
Expenditures						
Administration						
Personnel	192,908	192,908	10,162.18	175,780.83	17,127.17	91%
Supplies	3,000	3,000	211.46	2,968.76	31.24	99%
Other Services	10,104	10,104	291.85	9,751.10	352.90	97%
Debt Service - Vehicle Lease	-	-	-	-	-	0%
Transfer Out - Public Improvement	40,624	40,624	-	40,624.00	-	100%
Total Administration Expenditures	246,636	246,636	10,665.49	229,124.69	17,511.31	93%
Operational Expenditures						
County Projects	132,350	132,350	520.09	132,350.00	-	100%
Local Projects	117,101	117,101	909.83	117,101.00	-	100%
Total Operational Expenditures	249,451	249,451	1,429.92	249,451.00	-	100%
Total Expenditures	496,087	496,087	12,095.41	478,575.69	17,511.31	96%
Excess Revenues over Expenses (Net Carryover)	-	-	(11,481.57)	(38,916.23)	73,938.85	
Available Resources from Administration	(84,849)	(84,849)	(10,665.49)	(139,732.69)	54,883.69	
Available Resources from Operations	84,849	84,849	(816.08)	100,816.46	(15,967.46)	
Projected Net Carryover	-	-	(11,481.57)	(38,916.23)	38,916.23	
9/30/2023 Estimated Fund Balance	240,513	240,513	240,513	240,513		
Projected 9/30/2024 Fund Balance	207,118	207,118	229,031	201,597		



133 FITZGERALD PARK DR.
Grand Ledge, MI 48837
(517) 627-7351 office
(517) 627-4234 fax
www.eatoncountyparks.org

Directors Report-December 13, 2023

Monthly Briefing:

RFP

MMRMA Grant

Dyer Kiln Quote

Crandell Auto Lock Doors

RFP Parks Strategic Plan: The RFP for a strategic plan for Fitzgerald, Lincoln Brick, Crandell, and Fox Parks was issued. The deadline was 5:00 p.m. on December 1st and we had 4 companies submit proposals. The Parks Focus Work Group met on December 6th to go over the proposals. The focus group would like to recommend the proposal submitted by Williams & Works.

MMRMA Grant: The grant application submitted to MMRMA for 50% reimbursement of the Lincoln Brick security gates has been approved. The total amount Eaton County will receive is \$10,740.00, bringing the total cost of the security gates at Lincoln Brick to \$10,740.00.

Dyer Kiln Restoration: Jeff Bowen has submitted his quote for the restoration work for the Dyer Kiln, this came in at \$60,000.00. I will move forward with this and expect the work to begin in early/late spring of 2024. The work that will be done should preserve the kiln for 40-60 years.

Crandell Lake Auto Locks: The auto locks that were installed at the Crandell vault toilet are working great, this building has not experienced any vandalism since these were installed. Currently, the doors are programmed to lock at 6 p.m., these times will be adjusted throughout the year.

EATON COUNTY BOARD OF COMMISSIONERS

DECEMBER 20, 2023

**RESOLUTION TO APPROVE PROFESSIONAL PLANNING SERVICES
AGREEMENT WITH WILLIAMS AND WORKS, INC**

Introduced by the Public Works & Planning Committee

WHEREAS; the Eaton County Board of Commissioners is responsible for the overall operation of Eaton County Parks; and

WHEREAS; the Eaton County Board of Commissioners Chairman's Parks Workgroup determined a need to undertake a process to produce Strategic Plan(s) in four (4) County Parks to recommend direction on future development, capital improvements, and operational efficiencies to improve, create, and maintain a parks and recreation system that meets the needs of the community; and

WHEREAS; the Strategic Plan(s) are meant to complement and expand on the existing Eaton County Parks Master Plan; and

WHEREAS; a request for proposals process was conducted; and

WHEREAS; the Parks Workgroup has reviewed all submitted proposals and recommends entering into a contract with Williams and Works, Inc. to provide strategic planning services for an amount not to exceed sixty thousand and fifty-five dollars (\$60,055).

NOW, THEREFORE, BE IT RESOLVED, the Eaton County Board of Commissioners approves a contract with Williams and Works, Inc. to provide planning services as outlined in the attached Proposal and Professional Services Agreement and authorizes the Controller to make any necessary budget amendments.

BE IT FURTHER RESOLVED, the Chairperson of the Board of Commissioners or their designee is authorized to sign the contract.



Eaton County Parks Strategic Plan

PROPOSAL PREPARED BY:
williams&works

Mr. Travis Keeton
Parks Director
133 Fitzgerald Park Drive
Grand Ledge, Michigan 48837

December 1, 2023

Dear Mr. Keeton,

It was a pleasure talking with you mid-November to discuss the request for proposal (RFP) for the Eaton County Parks Strategic Plan. This proposal constitutes our strong interest in the project. Our multi-faceted team of planners, designers, and engineers at Williams & Works are uniquely qualified to develop a compelling vision for each of these Eaton County parks.

Our Understanding

We are committed to developing a parks strategic plan for Crandell, Fitzgerald, Lincoln Brick, and Fox Parks that will be implemented and serve Eaton County for years to come. For park specific strategic plans to be truly effective, they must be rooted in meaningful input from staff, elected officials, and the Eaton County community. Since the passing of the park millage in 2022, the County has clear direction and support from the public to move forward with improvements to these beloved recreational spaces. We understand the importance of enhancing these unique parks with an emphasis on providing creative places to play, access to valuable natural features, and celebrating the county's only public waterfront. Our objective is to assist Eaton County in developing strategic park designs that are embraced by the community and useful in bringing about thoughtful, balanced, incremental, and accessible updates to all of the four subject parks.

Our Approach

The planning and design professionals at Williams & Works serve a multitude of communities in a variety of tasks including: park design and visioning plans, trail engineering and construction, recreation plans, master plans, nonmotorized plans, GIS mapping, opinion surveys, and more. We pride ourselves on producing user-friendly and attractive planning documents. Our approach is a fruitful one, yet mindful of the County's resources. We are open to further tailoring and refining our approach as desired.

We understand that the County is seeking to have a robust evaluation and design process in the development of these plans, and we look forward to facilitating the activities that would meet that goal. We are grateful for the opportunity to submit this proposal and look forward to learning more about your charming mid-Michigan communities and recreational facilities. Please contact us if we can provide further information.

Sincerely,



Maleah Rakestraw, PLA
Landscape Architect and Project Manager



Andy Moore, AICP
Executive and Planning Group Lead

SERVING THE
MIDWEST FOR
+25 years



williams&works

OUR STORY

Williams & Works is an employee-owned company dedicated to providing the highest level of service to our clients. Many of our clients have been with us for decades, and have come to rely on the professional, honest and thorough level of service we provide. At Williams & Works, we build relationships with our clients and work with them, not for them. We bring a team approach to our assignments and constantly strive to be more efficient and economical in our business practices.

OUR APPROACH

We are a multi-generational consulting firm of planners, engineers, surveyors, and other professionals, and we are:

- Dedicated to client service and satisfaction serving a diverse array of needs
- Providers of quality customer experience from project conception to implementation
- Interdisciplinary and holistic in our approach to creative challenges
- Forward-focused with a commitment to sustainable solutions in land use decisions, community development, and economic strategy

Contact

549 Ottawa Ave NW
Suite 310
Grand Rapids, MI 49503
(616) 224 - 1500
contact@williams-works.com

PLANNING FOCUS

Our planners strive to create inviting, sustainable communities. We understand that each community is unique and requires its own tailored approach to planning services. Williams & Works assists municipalities, non-profit organizations, and developers with land use projects and provides the tools needed to accomplish their goals. Our planners are also experienced in the day-to-day application of zoning administration and land use regulations, often realizing the ramifications of key policy decisions before they are enacted. With a thorough understanding of community engagement best practices, our award-winning planning group uses many hands-on traditional and digital means to elicit meaningful input to guide community-based planning projects.



Our Team

Team Organization



Maleah Rakestraw, ASLA
PROJECT MANAGER
+
LANDSCAPE ARCHITECT

Andy Moore, AICP
QA/QC

Toby Hayes, AICP Candidate
PLANNER + GIS

Tanya DeOliveria, AICP
NON-MOTORIZED TRANSPORTATION
PLANNER

Katie Mendez, EIT
PROJECT ENGINEER

Kim Nguyen
GRAPHIC ARTIST

Williams & Works' overarching strategy is rooted in a commitment to excellence and client satisfaction. To accomplish this, we value our ability to offer clear communication and staff with diverse perspectives. Williams & Works has curated a team of professionals knowledgeable in the development of strategic park design and construction. Our multidisciplinary firm includes landscape architects, planners, engineers, and designers who are experienced in creative community outreach, park and trail design, grant writing, and recreation-focused construction.

Andy Moore, AICP will act as the Principal-in-Charge for this assignment, with a focus on quality assurance review for all project deliverables. In his capacity as a firm executive and planning department lead, Andy brings a wealth of experience to the table. He has authored multiple award-winning plans, 5-year recreation plans, and innovative park design strategies. With a keen eye for detail and a commitment to excellence, Andy plays a pivotal role in driving the success and high standards of the team's projects.

Maleah Rakestraw, PLA, ASLA is a landscape architect with a strong background in community planning. She will serve as the project manager and designer for this scope of work. As project manager, Ms. Rakestraw will be the primary point of contact with the County and oversee the day-to-day work of the project team. Ms. Rakestraw is skilled in creative community engagement, consensus building ideation, park and play-space design, trail planning, and project visualization. She has led the design of many park visioning projects including the City of Rockford's Garden Club and Memorial Parks Master Plans, Barry County's Metcalf Lake Design Plan, and multiple waterfront master plans.

Toby Hayes, AICP Candidate is a recent graduate from Michigan State University's Planning program and is an avid recreationalist. He is very familiar with many Eaton County parks, with particular admiration for Fitzgerald and Lincoln Brick Parks. Toby will be responsible for the generation of GIS inventory maps, review of relevant planning documents, and outreach assistance. With a passion for planning and a deep appreciation for the County's

park system, Toby brings a user-oriented perspective to help inform the design process.

Katie Mendez, EIT will serve as the project engineer. She will provide expertise in assessing park conditions, operations, and restoration strategies. Her diverse experience spans recreation site engineering, stormwater management design, and utility mapping. Notably, Katie has played a key role in the engineering and construction of recent park projects, such as significant improvements to Grand Rapids' Highland Park. This included the creation of accessible trails and pathways, specialized multi-sport courts, an enhanced parking lot, and thoughtful amenities.

Tanya DeOliveira, AICP is a certified planner specializing in non-motorized and parks and recreation plans. Tanya has ample experience in creating successful planning guidelines, authoring many municipal recreation plans and the Bikeway Design Guidelines for Clemson University. Ms. DeOliveira will assist in the development of the strategic plan goals and reports.

Kim Nguyen, our resident graphic artist, will be responsible for the creation of project branding and visual themes, in addition to producing outreach materials and final documents which are both aesthetic and user friendly.

While these are the primary persons assigned to address the majority of this work, our team approach to completing assignments will involve other members of the firm as required. However, Ms. Rakestraw and Mr. Hayes will be responsible for attending meetings and performing much of the work on this assignment.



ANDY MOORE, AICP

executive + QA/QC

moore@williams-works.com

Community Planning

Project Management

Public Engagement Facilitation

Zoning Administration

GIS Mapping

EDUCATION

B.S., Geography
Grand Valley State University

REGISTRATIONS AND CERTIFICATIONS

American Institute of Certified Planners

PROFESSIONAL AFFILIATIONS

American Planning Association
Michigan Association of Planning
Grand Valley State University
Distinguished Alumnus-in-Residence, Geography and Planning (2012)

RECENT SPEAKING ENGAGEMENTS, TRAINING SEMINARS, AND ARTICLES

Speaker - *Dissecting Your Township's Zoning Decisions*. Michigan Townships Association 2023 Annual Conference. April 19, 2023.

Instructor - Site Plan Review Workshop. March 1, 2023.

Speaker - *The Anatomy of a Bulletproof Zoning Decision*. Michigan Townships Association 2022 Annual Conference. April 26, 2022.

Moore, A. *Tips for Developing an Effective Master Plan*. Published in *The Review*, Jan/Feb 2022.

Andy leads Williams & Works' planning group as an executive and project manager. His work includes consulting with dozens of public and private sector clients on a variety of planning and zoning assignments including writing master plans, parks and recreation plans, and zoning ordinances; site plan and special land use review; public engagement, expert consultation, and a variety of special projects. He also works closely with communities throughout West Michigan, assisting with day-to-day planning and zoning issues.

He joined Williams & Works in 2004 after receiving his undergraduate degree from Grand Valley State University. In 2012, he was honored by GVSU's Geography and Planning department as their Distinguished Alumnus-in-Residence.

Before joining Williams & Works, Andy worked with Ottawa County GIS, the City of Grand Rapids Planning Department, and The Rapid.

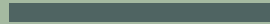


MALEAH RAKESTRAW, PLA

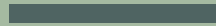
landscape architect

rakestraw@williams-works.com

Public Space Planning & Urban Design



Graphic Visualization



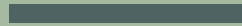
Public Engagement Facilitation



Horticultural Design



Site Development



EDUCATION

M.A., Environmental Design
Michigan State University

B.A., Landscape Architecture
Michigan State University

REGISTRATIONS AND CERTIFICATIONS

Licensed Professional Landscape Architect -
Michigan

PROFESSIONAL AFFILIATIONS

American Society of Landscape Architects,
Michigan Chapter Executive Committee

Michigan State University Student Chapter of
the ASLA, Past Vice President

As Williams & Works' first landscape architect, Maleah has a strong focus on the creation of place through the physical realm.

She is an alumna of Michigan State University where she studied both landscape architecture and environmental design. With a passion for site planning and visualization, her professional experience has expanded to include a variety of projects ranging from large-scale private developments and park planning to urban design and community engagement. She is a published co-author in the Journal of Current Urban Studies and has been a past speaker for the National Signage Research & Education Conference.

Maleah sat on the state chapter executive committee for the American Society of Landscape Architects and is a current member of Downtown Grand Rapids, Inc.'s GR Forward Goal 1 Alliance focused on river activation and restoration.



TOBY HAYES, AICP CANDIDATE

community planner

hayes@williams-works.com



EDUCATION

B.S., Urban and Regional Planning
Michigan State University

REGISTRATIONS AND CERTIFICATIONS

American Institute of Certified Planners, Candidate
Domicology Certification

PROFESSIONAL AFFILIATIONS

American Planning Association
Michigan Association of Planning
Michigan State University Urban and Regional
Planning Student Association, Past President and
Vice President

Toby Hayes is a community planner with the Williams and Works Planning Group. He has a bachelor's degree in Urban and Regional Planning from Michigan State University with concentrations in environmental planning, economic development, and non-motorized transportation. In addition, he has a minor in Graphic Design. Toby joined the team full-time in 2023. He assists communities with a variety of planning and zoning needs, including GIS projects, master plans, and site plan reviews.

Prior to joining the team at Williams and Works, Toby worked at the City of Kentwood, Michigan as a planning intern. He also worked as research assistant at the Michigan State University Center for Community and Economic Development and aided with outreach and university and legislative initiatives in regards to circular economic principals. Additionally, Toby was a teaching assistant in the School of Planning, Design, and Construction. His bachelor's capstone project focused on non-motorized transportation planning for Garfield Charter Township, Michigan.



KATIE MENDEZ, EIT

project engineer

mendez@williams-works.com

Construction Administration	████████████████████
Site Engineering	████████████████████
Stormwater Management	██████████████████
Utility Mapping	██████████████
Road Design	██████████████████

EDUCATION

B.S., Engineering
Calvin College

Since joining the Williams & Works team in 2020, Katie has been involved with a variety of projects, including trail engineering, waste water treatment design, construction inspection for parks and public infrastructure, and GIS utility mapping. She enjoys being in the field and taking projects from design through to construction. She has served as a project engineer for multiple MDOT LAP projects.

REGISTRATIONS AND CERTIFICATIONS

Passed Fundamentals of Engineering Exam
Certified Storm Water Operator (CSWO)
Certified Soil Erosion and Sedimentation
Control (SESC) Plan Reviewer & Developer
MDOT Certified Office Technician
MDOT Bituminous Paving Operations

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers
Michigan Water Environment Association

Katie has experience working on projects including HMA mill/fill, HMA crush and shapes, and utility repairs and replacements. Recently, she's acted as a project engineer for public street and recreation projects in Lowell, the City of Grand Rapids, and the City of Middleville. She is also experienced in creating AutoCAD plans, construction specifications, and design calculations for stormwater and wastewater systems.



TANYA DeOLIVEIRA, AICP

NMT planner

deoliveira@williams-works.com

Transportation Planning	██████████
Public Engagement	██████████
Non-Motorized Trail Design & Planning	████████████████████
Long Range Planning	██████████
Project Management	████████████████████

EDUCATION

M.S., Urban & Regional Planning
University of Wisconsin-Madison
B.S., Human Development & Social Relations
Kalamazoo College

CERTIFICATIONS

American Institute of Certified Planners
Certificate in Town-Gown Relations,
International Town & Gown Association

PROFESSIONAL AFFILIATIONS

American Planning Association
Michigan Association of Planning
Association of Pedestrian and Bicycle
Professionals

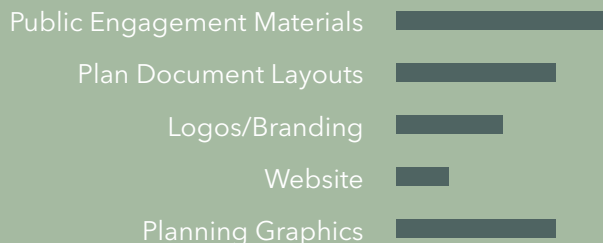
Tanya DeOliveira has over 15 years of experience leading, writing, and implementing comprehensive master, transportation, non-motorized, park and recreation plans, projects, and studies. Her commitment to inclusive and equitable community engagement has facilitated systems change.

Tanya understands that effective planning is driven by hard work. Her extensive experience collaborating with state agencies like the DNR and MDOT has built trust and fortified community development opportunities with townships, villages, cities, and counties across the state. Her pragmatic approach to place-based planning was recognized by the South Carolina Chapter of the American Society of Landscape Architects with the Genius Loci Award. She was the Executive Secretary for the Active Jackson Coalition, member of the MDOT University Region I-94 Jackson Modernization Project Review Committee, the Vice Chair of the Palmetto Cycling Coalition, and nominated to the Clemson University Interpretive Plan History Task Force.

Tanya has also worked with the Region 2 Planning Commission, Clemson University Planning & Design, and the Wisconsin Dept. of Transportation.



**KIM
NGUYEN**
graphic designer
nguyen@williams-works.com



EDUCATION

B.F.A., Digital Media
Kendall College of Art and Design

TECHNICAL SKILLS

Adobe Photoshop
Adobe Illustrator
Adobe InDesign
Microsoft Office
HTML/CSS

As an illustrator and designer, Kim enjoys bringing a strong attention to detail and a different perspective to the planning team at Williams & Works. Kim's responsibilities have included designing plan documents (East Lansing Master Plan, Comstock Charter Township Master Plan, Roosevelt Park Area Specific Plan), project-specific websites, and various logos and iconography for planning project cohesion.

Kim has years of experience in designing materials for facilitating public engagement such as advertisements and fliers for both digital and print, activity and survey hand-outs, and informational boards for charrettes and public meetings. Kim is extremely versatile; other notable projects include designing wayfinding signage for the City of Lowell, logos for the City of the Village of Douglas and Fruitport Township, and cross-sectional diagrams for street reconstruction projects throughout the City of Grand Rapids.



Our Experience

References

Williams & Works has a long-standing history with many municipal clients. Below is a list of five references who can speak to a variety of our planning, engineering, and surveying work. Williams & Works acts as the Planner of Record in the cities of Ionia and Lowell, as well as the Engineer of Record in Lowell.

- **AURELIUS TOWNSHIP**

David Droscha, Supervisor
(517) 628-2093

- **CITY OF IONIA**

Precia Garland, City Manager
(616) 527-4170, ext. 5776

- **CITY OF LOWELL**

Michael Burns, City Manager
(616) 897-8457

- **CITY OF ROCKFORD**

Thad M. Beard, City Manager
(616) 866-1537

- **BARRY COUNTY PARKS COMMISSION**

Dan Patton, Director
(269) 945-3775

- Recent work includes the update of the Township's Comprehensive Master Plan and the upcoming update of the Township's 5-Year Parks and Recreation Plan.

- Recent work includes the update of the City's 5-Year Parks and Recreation Plan and the creation of site specific park and development plans.

- Recent work includes the update of the City's 5-Year Parks and Recreation Plan, LARA trail build-out, construction of multiple streets, local tree ordinance updates, and site specific park design plans.

- Recent work includes the overhaul of the City's Comprehensive Master Plan and the development of site specific design plans for multiple public parks.

- Recent work includes extensions of significant regional trails and the development of a site specific design for a new county park.



Metcalf Lake Natural Area

METCALF LAKE PARK MASTER PLAN Barry County, Michigan

David and Eleanor Bailey envisioned a beautiful natural space for the public to enjoy when they donated their land for the Metcalf Lake Natural Area & Park over 20 years ago. With the support of the Bailey's children, Barry County Parks & Recreation Commission and Southwest Michigan Land Conservancy partnered with Williams & Works to create a design plan for this property that enhances the natural area while providing safe public access.

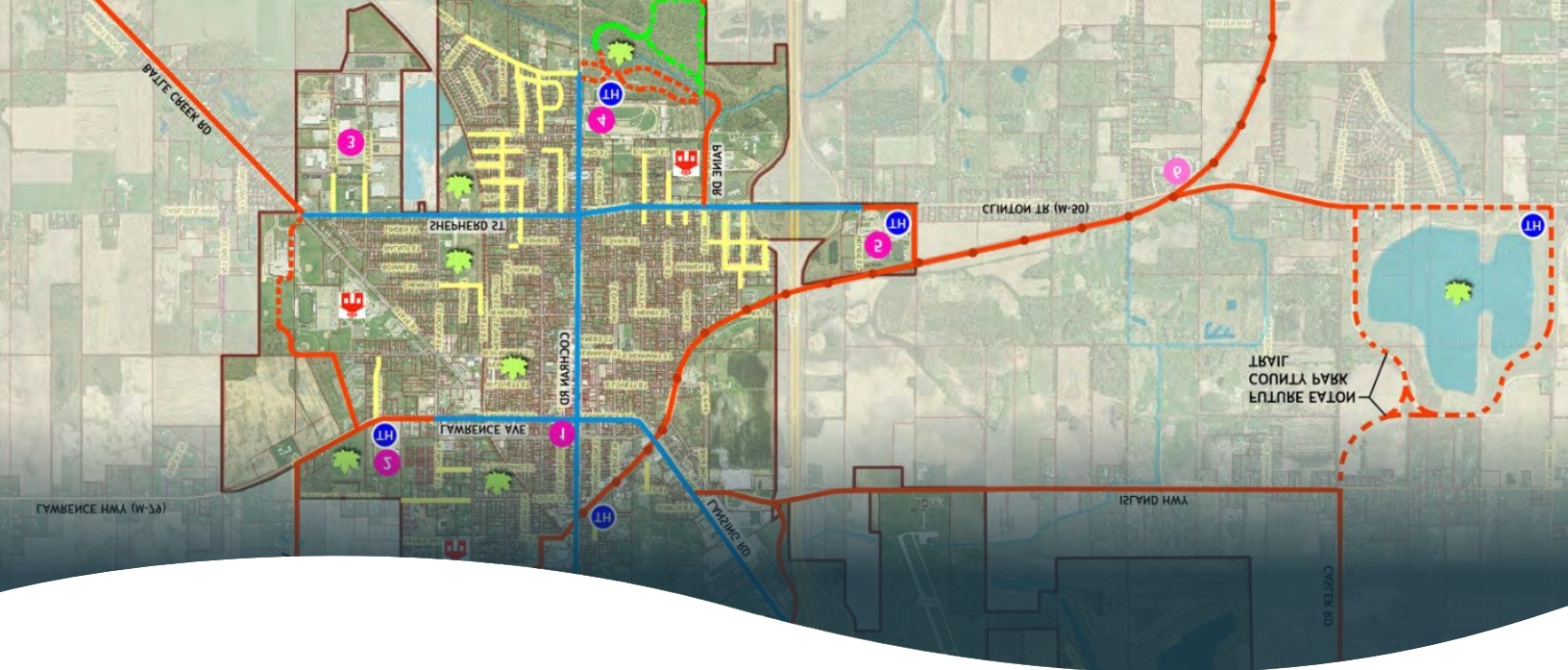
Metcalf Lake Natural Area & Park is a quiet space that's home to Assyria Township's third largest water body. In 1999, the 160-acre parcel was donated to the City of Battle Creek with deed restrictions specifying its use as a natural area open to the public. In addition to the 30-acre lake, the site is heavily wooded and contains forested freshwater and emergent wetlands. The property is picturesque. Its wooded ridges and wide ravines lend themselves well to potential future trails systems. Groves of white cedar, eastern hemlock, and tamarack edge Metcalf Lake, giving parts of the property an "Up North" feel. The property is also a vital headwater source for Waubasca Creek and a whole chain of downstream lakes that includes Waubasca and Foster Lakes, all the way down to the Kalamazoo River.

The preferred design sought to provide varying investment levels depending on available resources and public support. The investment levels share a common vision to protect the natural resources of the park while allowing low-impact recreation opportunities for area residents and visitors.



REFERENCE

Dan Patton, Director
Barry County Parks Commission
(269) 945-3775



City of Charlotte

NON-MOTORIZED TRANSPORTATION PLAN

Eaton County, Michigan

The City of Charlotte realized the importance of planning for and maintaining non-motorized transportation infrastructure both now and in the future. Williams & Works, together with community project partners, helped to analyze the area's local population, available right-of-way, adjacent land use, topography and projected users that would impact a non-motorized transportation system.

The City of Charlotte Non-Motorized Transportation Plan was crafted as a vision for both on-street and off-street non-motorized facilities that would provide a convenient and safe option to link people to schools, businesses, parks and trails, natural resources, and cultural and historic landmarks.

The plan included a comprehensive analysis of existing pedestrian facilities and was developed with robust public input and engagement. Interactive maps, color coded to enhance usability, provided a framework for a transportation vision. Design elements were provided that included typical street cross-sections and identified locations for bike lanes and off-street trails. The plan also included cost estimates and an implementation framework tied to potential funding sources.



REFERENCE

Bryan Myrkle, Community
Development Director
City of Charlotte
(517) 543-8853



City of Rockford

MEMORIAL PARK & GARDEN CLUB PARK MASTER PLANS Kent County, Michigan

Garden Club Park and Memorial Park are two of Rockford's most visible and well-used park facilities. Both offer amenities to people of all ages and experience high attendance throughout the year. Williams & Works led a concurrent design process to craft strategic master plans for both parks. Through careful planning and the development of a clear community based vision, each park was designed to accommodate the future wants, needs, and demands of the City with the creation of two master plans.

A creative public engagement campaign was held utilizing a "pop up" style outreach technique to seamlessly integrate our planning efforts into local, well attended events such as the Farmer's Market, Art in the Park, and Parkside Elementary's Walkathon. Preliminary plans were developed to reflect the feedback collected, with Garden Club Park designs focusing on gathering and events, while the Memorial Park plans highlight the natural systems and prioritize play.

In 2020, the Garden Club Park and Memorial Park Master Plan was awarded a Excellence in Urban Design award from the Michigan Association of Planning. Steps toward plan implementation have begun at Garden Club Park, and include a new stage and the programming of existing parking spaces for outdoor winter activities.



REFERENCE

Thad M. Beard, City Manager
City of Rockford
(616) 866-1537



City of Belding

LIGHTNING BEND PRESERVE MASTER PLAN & PHASE I ENGINEERING Ionia County, Michigan

Lightning Bend Preserve is a picturesque natural area beloved by local residents and visiting recreationists. The park is home to many rustic trails that meander through towering forests, past lush vernal pools, and along magnificent ridges overlooking the Flat River. The acquisition of new park property on the western edge of the site opened up opportunities for future park enhancements.

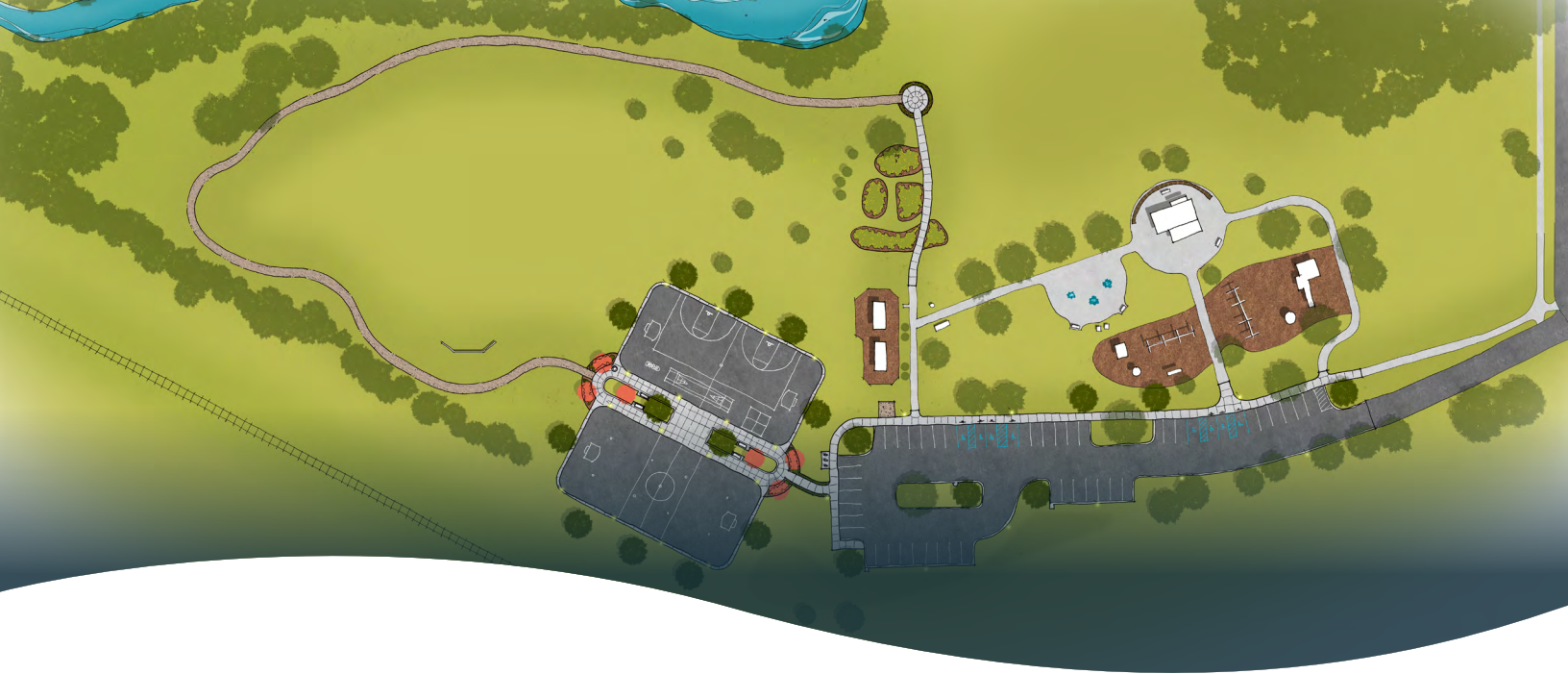
In 2020, Williams & Works assisted the City in the creation of a long-term master plan for this unique recreational space. The master plan includes improvements to the existing park trailhead with a new bathroom facility and utility expansion to support local gatherings and events, the development of a new neighborhood scale trailhead, the creation of an accessible non-motorized trail connection to both park trailheads and the Flat River, and essential upgrades to the existing 18-hole disc golf course known as SMASH Park.

With assistance from Williams & Works, the City of Belding was awarded a \$300,000 DNR Michigan Natural Resource Trust Fund grant to complete a first phase of park improvements, including a new accessible trail, restroom facility, a river overlook, signage, and disc golf course improvements. The first phase of construction is currently underway, with final phase build-out to be completed in the summer of 2024.



REFERENCE

Jon E. Stoppels, City Manager
City of Belding
(616) 794-1900



City of Grand Rapids

HIGHLAND PARK MASTER PLAN & ENGINEERING Kent County, Michigan

Highland Park is a nearly 30 acre recreational space just east of the Medical Mile in downtown Grand Rapids. Its picturesque landscapes, natural features, and centralized play areas make it a popular place in the city to recreate. In 2021, the city began exploring alternative recreational elements that could be included at Highland Park. Williams & Works provided planning and engineering services to first update the park master plan design. Because of the multiple character areas already existing in the park and the unique topography that limited access, circulation patterns, trails, and parking were a primary focus of the plan update.

The second phase of this work included implementation. The first temporary boulder (rock climbing) wall was installed in 2022 and is acting as a test project to determine the success of a later permanent feature. The construction of additional park features is wrapping up. Williams & Works provided engineering services for the development of a new accessible trail loop, a reconfigured parking area, lighting, and two new multi-sport courts. Through the development of the multi-sport court, a plaza emerged as an important central space for anticipated bike polo tournaments and local neighborhood events. The plaza acts as both a place to gather and as a primary corridor from the reconfigured parking lot to the new trail system. This flexible, multi-use space will be a valuable asset to the park as build-out of the master plan continues.



REFERENCE

Karie Enriquez, Project Manager
City of Grand Rapids
(616) 456-4281



We have a history of creating plans that yield tangible results.

Williams & Works has proven experience in assisting our clients with governmental grant and private fund-raising efforts to help finance their park and non-motorized trail projects. In the past few years, we have helped our clients secure commitments for over **\$10 million** in recreation related funding.

More than filling out an application form.

Williams & Works assists its client's success by going to great lengths to research all project attributes that are required to receive a high score for funding and makes conscious efforts to establish a relationship with the individuals who make the grant selections. Our experience and involvement in all aspects of the grant process allows us to be aware of all the requirements.

- **Trail Users** - By assigning key personnel that are avid trail users, bikers, walkers and hikers to non-motorized trail grants, our applications have a realistic, hands-on tone which are well received by the funding agencies.
- **Public Engagement** - Our in-house community planners are experts at facilitating public engagement activities that are important for demonstrating to the funding agencies and foundations the need and desire for recreational improvements.
- **Graphics** - The use of high-quality graphics to accompany our applications helps to illustrate the unique project features to the grant and foundation reviewers.



Lowell River Walk

RECREATION PROJECT	GRANT ISSUED	AMOUNT
Fred Meijer Flat River Valley Rail Trail - Belding	MDOT Enhancement Grant MDNR Rec Trails Grant Foundation Grants	\$1,016,000 \$300,000 \$159,000
Lowell Area Trailway	MDNR Trust Fund Grant MDOT Enhancement Grant Local Fundraising	\$698,000 \$275,000 \$300,000
Gee Drive Trail - Lowell	Safe Routes 2 School	\$240,000
Roosevelt Elementary Trail - Stevensville	Safe Routes 2 School	\$284,000
River Valley Rail Trail Connection (current/pending)	MDOT TAP Grant Foundation Grants	\$3,100,000 \$500,000
Berrien County Non-Motorized Path – John Beers Road	MDOT CMAQ Grant	\$240,000
Fred Meijer Flat River Valley Rail Trail	MDOT Acquisition Grant	\$500,000
Lincoln Charter Township – Non-motorized Trail	MDOT CMAQ Grants	\$550,000
Texas Township Park and Trail Extension Grant	MDNR Trust Fund	\$287,000
Village of McBride Park and Trail Improvements Grant	Safe Routes 2 School	\$132,000
City of Hastings – Sidewalk Improvements	MDOT TAP Grant	\$698,000
Caledonia Township – Phase 1 Trails	MDOT Enhancement Grant	\$850,000
City of North Muskegon Trail Extension	MDOT Enhancement Grant	\$208,000
Lowell Riverwalk Extension	MDNR Trust Funds Local Grants	\$300,000 \$100,000
City of Belding Lightning Bend Park Improvements	MDNR Trust Fund	\$300,000



Project Scope

Our Approach and Scope

The scope of work presented in this proposal has been crafted in response to your Request for Proposals for a strategic plan for four parks within Eaton County. Specifically, we have outlined a scope of services that includes tasks for research, engagement, conceptual site development, and strategic implementation for Crandell, Fitzgerald, Lincoln Brick, and Fox Parks. While this letter presents an overall work scope and our approach to this assignment, we are open to further refining and tailoring our approach to meet the Eaton County Board of Commissioners' needs.

We envision this process as a collaborative effort between our team, the Commission (Public Works & the Planning Commission), the Parks Focus Group, staff, and community stakeholders. The resulting Parks Strategic Plan will effectively serve as a solid foundation for a collective vision, guide future investments, and identify funding opportunities for passive recreational amenities and environmental stewardship efforts. We propose a 3-phase project, as outlined below.

PHASE 1: LEARN

1.1. Project Kick-Off. The project will kick-off with an in-person meeting to make introductions, set expectations, and establish lines of communication. This meeting is when the project truly begins as our team, county officials, and staff representatives work hand-in-hand to refine the planning process and establish goals for the community engagement strategy. This task will be important in achieving an understanding of the work scope, timeline, and general recreation and programming needs for each park. This will also be an opportunity for our team to learn about unique facets of the parks so that our site visits can be more targeted, focusing on elements important to the County.

- **Meeting 1** (Parks Focus Group + W&W)

1.2. Mapping and Research. We will review the current County-wide Parks and Recreation Plan, Master Plan, relevant sections of the County and local Zoning Ordinances, and other applicable documents provided to our team, such as deeds or previous park designs. Our review of these critical documents will help guide the site inventory, analysis, and preliminary design phases by providing accumulated knowledge of the facilities, land uses, concerns, and strengths of Eaton County and its residents.

To create informed base maps for conceptual design, we will gather necessary publicly available data such as GIS topographic information, parcel data, utility easements, maps from the National Wetlands Inventory, USDA Soil Survey, or Michigan Natural Features Inventory, and other readily available information about the sites. We assume that recent surveys of the parks will be provided to us by the county, if available.

- **Optional Task – Drone Survey.** *Our survey team has drone capabilities that can provide detailed aerial imagery and elevation generation to inventory the site. This includes existing conditions of approximate topography, visible surface elements, such as hardscaping, play structures, buildings, manholes, vegetation massing, and water features. If a recent survey of the site is not available and this optional task is not selected, the conceptual plans will be developed using publicly available aeriels and GIS data. If this optional task is selected, the drone survey will be conducted in the Spring of 2024 when the park grounds are clear of snow and the impacts of tree canopy are lessened.*

1.3. Site Visits. Our team will conduct a site visit at each of the four subject parks over the course of a single day. This date will be set in early spring so that park elements are more visible and potential drainage issues may be more easily identified. Representatives from public works and/or the parks department will be encouraged to join to share their knowledge of the parks and discuss areas of concern, although their attendance is not required. During this time, a walking and/or rolling inventory and audit of park operations and assets will occur through means of photographs and written summaries of each park, specifically taking note of cultural and historic elements, identification of sensitive environments, assessments of existing park features and their lifespans, maintenance challenges, and accessibility.

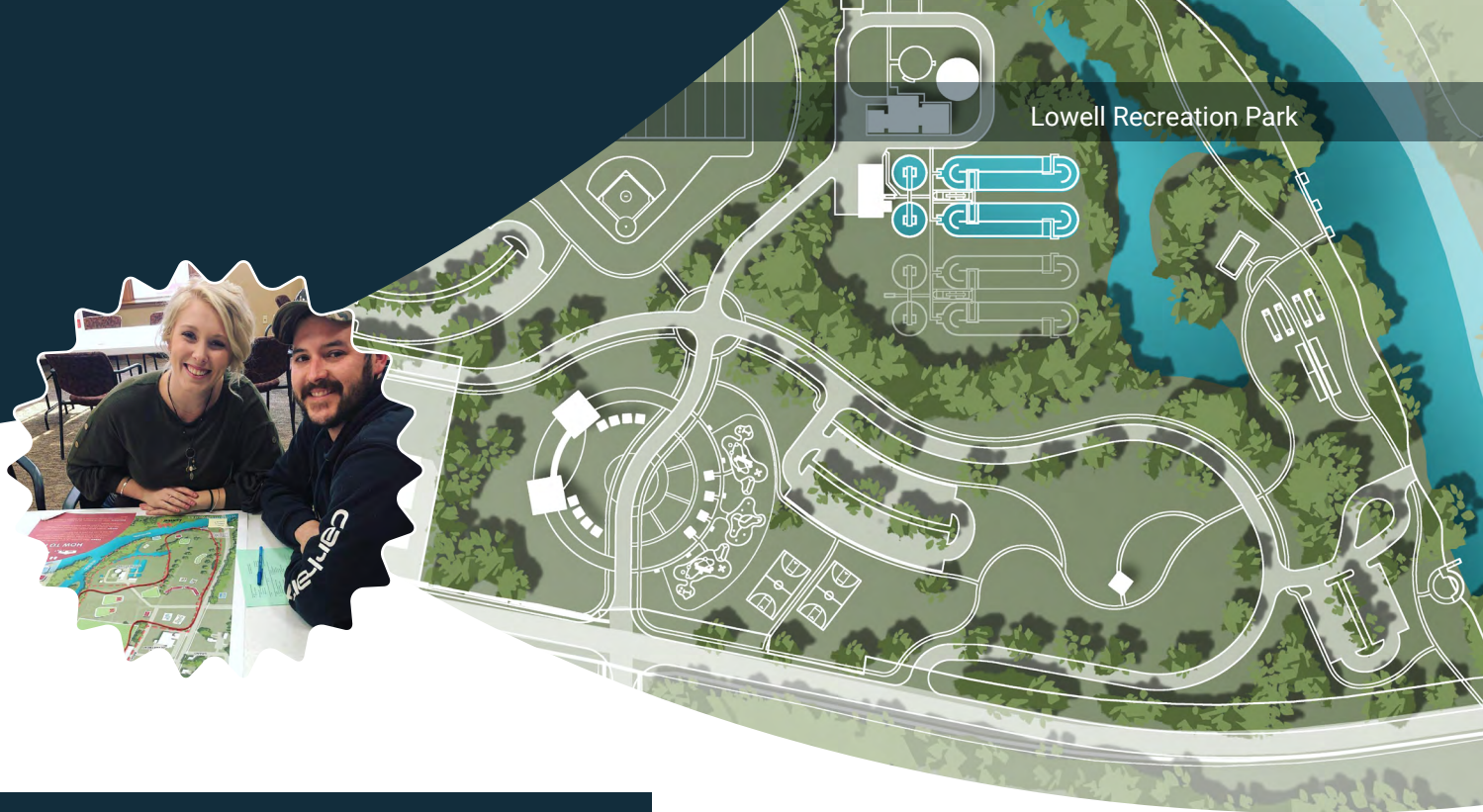
- **Meeting 2** (Staff + W&W)
-

1.4. Engage. Because of the range of geography and variety in character of the four parks, we propose that the outreach campaign consist of two stakeholder meetings focusing on two parks at a time; one for Crandell and Fox Parks and a separate meeting for Lincoln Brick and Fitzgerald Parks. This will provide an opportunity for more targeted discussion between residents, neighbors, community leaders, and staff. Open communication about the site-specific opportunities, constraints, and general desires for the future of these four Eaton County parks will be a key focus of the outreach campaign. Depending on the County's preference, stakeholder meetings may be held at unique venues such as local entertainment spaces or at the parks themselves. Engaging activities will be developed for both meetings to help facilitate discussion, such as breakout sessions, design your own park games, or interactive polling. Outcomes from these meetings will be compiled into a summary report and presented to the Commission during the working session described in task 2.1.

- **Meetings 3 & 4** (Stakeholders + W&W)
- **Optional Task – Supplemental Outreach.** *Williams & Works specializes in creative community engagement and can provide further services for this task should the County desire a more robust outreach strategy.*

The following techniques are suggested as optional additional tasks the County may consider:

- Online Survey – *An online survey is an excellent tool used to cast a wide net for community input. Our team of professional planners will work with the county to develop a digital survey using the online platform SurveyMonkey. This survey instrument has the ability to reach a broad range of people over a wide geography. It is recognized that the County conducted a general parks survey as part of the 2020 Parks Master Plan update, but a new online survey would allow for more direct feedback on specific topics related to each park.*
- Community Open House + Design Working Session – *A community open house and design session can be conducted with the public as an opportunity to allow residents to visualize and brainstorm with the design team. This tool can be completed early in the process to gather input to inform the preliminary designs or as a way to allow the public to vet early concepts. This feedback loop provides another touch point with the community and can confirm that their ideas have been heard and that the designs meet community expectations.*



PHASE 2: DESIGN

2.1. Working Session. The planning team will synthesize public feedback and refine materials produced during the focus group meetings in order to create a concept plan and cohesive set of deliverables. Review of the engagement report with the Parks Focus Group and staff will segue into brainstorming goals and visions for the selected parks. Loose sketches may be generated in response to these goals during the working session, providing an opportunity for everyone to grab a pen or dictate design ideas.

- **Meeting 5** (Parks Focus Group + W&W)

2.2. Preliminary Design Development. Clearly defined goals and objectives that align with community desires will guide the overall design process, allowing our team to dive into the preliminary design. One preliminary conceptual site diagram will be produced for each park. These first concepts will be plan-view site designs at an approximate scale, and hand-sketched for client review and discussion. These designs will focus on highlighting access and circulation, points of interest, desire lines, interactions between proposed and existing facilities, and general locations for new park amenities. Preliminary designs will be sent to staff for comment and minor revision before Commission review.

2.3. Preliminary Design Review. The preliminary designs and a short summary of the planning process to date will be presented to the Commission and Parks Focus Group for initial feedback and critique. To keep the review of the four park concepts timely and organized, an evaluation worksheet will be provided ahead of the meeting. This worksheet may be completed prior to the meeting and will guide the revision process.

- **Meeting 6** (Commission + Parks Focus Group + W&W)

2.4. Design Revisions. The feedback provided by the Commission and Parks Focus Group will be used to craft a revised design for each park. The revised design will illustrate greater detail than the preliminary concept, showing more specific elements such as parking spaces, sized buildings, play structures, or unique features. These concepts will then be shared digitally with staff for review and comment via email, allowing for further narrowing of conceptual upgrades and improvements to the four parks.

PHASE 3: SYNTHESIS

3.1. Final Design. Once staff have provided their feedback on the revised designs, final concept elements will be generated. Final designs for each of the four parks will include one rendered site plan, at least one perspective graphic, and a phasing plan to guide implementation. The final design deliverables will be shared with the Parks Focus Group and staff and discussed during a virtual review meeting. One round of revisions will be made to the final design deliverables before compiling the strategic plan draft.

- **Meeting 7** (Parks Focus Group + W&W) - Virtual

3.2. Strategic Plan Draft. A complete draft plan will include all deliverables to date in a single report, including documentation of the planning process, a high-level inventory of the parks, the final park designs, and a general maintenance and sustainability strategy for each park. Additionally, a goal matrix will be created for each of the four parks that will define specific objective tasks, recommended timelines, potential funding sources, and the anticipated parties responsible for managing each task. This matrix will provide a metric to hold the County accountable to its goals and objectives. The strategic plan draft will be shared with the Parks Focus Group and staff and discussed during a virtual review meeting. One round of final edits will be completed prior to distribution to the Commission.

- **Meeting 8** (Parks Focus Group + W&W) - Virtual
- **Optional Task – Opinion of Probable Costs.** *While the inclusion of potential costs for each park design is not requested in the RFQ, our engineering group can provide an opinion of probable costs for conceptual design elements to illustrate a more complete picture regarding the effort and funds needed to execute plan strategies.*

3.3. Adoption. Based on review and recommended changes from the Parks Focus Group and staff, final revisions will be made to the Strategic Plan Draft. The final draft will then be distributed to the Commission for review and consideration of recommendation/adoption.

- **Meeting 9** (Commission + W&W)





Budget & Timeline

Tentative Schedule

	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
Phase 1: Learn									
1.1. Project Kick-Off	x								
1.2. Mapping and Research									
1.3. Site Visits			x						
1.4. Engage				xx					
Phase 2: Design									
2.1 Working Session					x				
2.2 Preliminary Design									
2.3 Preliminary Design Review						x			
2.4 Design Revisions									
Phase: Synthesis									
3.1 Final Design								x	
3.2 Strategic Plan Draft									x
3.3. Adoption									x

x = Meeting

Budget Breakdown

Williams & Works proposes to complete the tasks outlined in this proposal for a not-to-exceed fee, as outlined below. This not-to-exceed fee is calculated on an hourly reimbursable basis and includes the costs of labor, mileage, and reimbursable expenses for the work scope outlined in this letter, excluding optional tasks. Fees for optional tasks are listed below and may be added to the scope of work at the County's request. Optional tasks will add to the project total and may extend the tentative project schedule.

PHASE 1: LEARN	\$13,490
PHASE 2: DESIGN.....	\$21,380
PHASE 1: SYNTHESIS	\$25,185

Project Total: \$60,055

OPTIONAL TASKS (Excluded from Project Total)

Drone Flyover.....	\$2,140 per park
Online Survey	\$2,520
Community Open House.....	\$3,950
Opinion of Probable Costs.....	\$5,215

EATON COUNTY
PARKS STRATEGIC PLAN

williams&works

www.williams-works.com

PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT is entered into by and between Eaton County of 1045 Independence Boulevard Charlotte, MI 48813 (hereinafter “Client”), and Williams & Works, Inc., of 549 Ottawa Ave., N.W., Grand Rapids, Michigan, 49503 (hereinafter “Williams & Works”).

SCOPE OF SERVICES. The Client hereby contracts with Williams & Works to perform the following described professional services, hereinafter collectively referred to as the Scope of Services, with regard to the Client’s Project as described or referred to herein:

Detailed in the proposal dated December 1, 2023 for the Eaton County Parks Strategic Plan for Crandell, Fitzgerald, Lincoln Brick, and Fox Parks.

Further, it is agreed that Williams & Works is not providing services pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the rules promulgated thereunder by the Securities and Exchange Commission, that are intended to be or considered to be advice or recommendations regarding financial products or the issuance of debt or securities. Client is responsible for contracting separately with a registered financial advisor to provide all services required by the Dodd-Frank Wall Street Reform and Consumer Protection Act and applicable SEC rules.

WILLIAMS & WORKS’ COMPENSATION. Williams & Works shall be paid for all services rendered on the following basis: Hourly plus expenses for a not-to-exceed fee of sixty thousand fifty-five Dollars (\$60,055).

CLIENT’S REPRESENTATIVE. The Client has designated Travis Keeton, Eaton County Parks Director, as the official representative of the Client. As such, the Representative shall be responsible for executing any document pertaining to the Agreement or any amendment thereto, and for the approval of all change orders, addenda, and additional services to be performed by Williams & Works.

TERMS AND CONDITIONS. Williams & Works’ terms and conditions of contract, as included herewith, shall apply to all work performed by Williams & Works and to all obligations of the Client pursuant to this Agreement, unless otherwise specifically agreed in writing.

ADDITIONAL PROVISIONS. The Client and Williams & Works mutually agree that the rights and obligations of the parties under this Agreement shall be further governed by Additional Provisions, if any are attached hereto, and that such Additional Provisions, together with the Terms and Conditions are intended by the Client and Williams & Works as a final expression and complete and exclusive statement of their agreement

Additional Provisions: ☒ None ☐ Attachment

ENTIRE AGREEMENT/SEVERABILITY. If any element of this Agreement is held to violate the law or a regulation, or whose insurability cannot be confirmed by Williams & Works, it shall be deemed void, and all remaining provisions shall continue in force.

IN WITNESS WHEREOF, the parties have made and executed this Agreement.

CLIENT: Eaton County

Signed: _____

Name: _____

Title: _____

Signed: _____

Name: _____

Title: _____

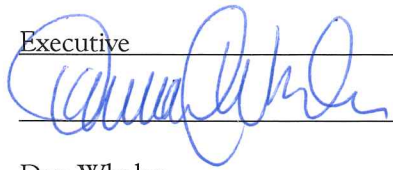
Date Signed: _____

WILLIAMS & WORKS, INC.

Signed:  _____

Name: Andy Moore

Title: Executive

Signed:  _____

Name: Dan Whalen

Title: Executive

Date Signed: December 7, 2023

TERMS AND CONDITIONS

The following terms and conditions shall be a part of the Williams & Works contractual undertaking to perform professional services and Williams & Works' undertaking to perform such services and to enter into this Agreement is expressly conditioned on Client's assent to such Terms and Conditions, notwithstanding any additional or conflicting Terms and Conditions of Client, which are expressly objected to and rejected by Williams & Works. Where a client issues a purchase order to authorize Williams & Works' undertaking to perform professional services, that undertaking will be governed solely by the Terms and Conditions and Additional Provisions, if any, of this Agreement.

1. **PERFORMANCE.** Williams & Works shall exercise the normal standard of care and diligence in performing the professional services explicitly described in this contract as normally employed by other professionals performing the same or similar services, but Williams & Works makes no warranty, express or implied, with respect to any services performed hereunder. Williams & Works shall not be liable for any claim, damage, cost or expense (including attorney fees) or other liability or loss not directly caused by the negligent acts, errors or omissions of Williams & Works.
2. **AMENDMENT/MODIFICATION.** Additional services, modifications or amendments of this agreement shall only be authorized in writing signed by the Client and Williams & Works. All such additional services shall nevertheless be performed by Williams & Works subject to these Terms and Conditions.
3. **SUBCONTRACTORS.** Williams & Works may engage subcontractors on behalf of the Client to perform a portion of the services to be provided by Williams & Works hereunder.
4. **TERMINATION.** This Agreement may be terminated by either party upon fourteen (14) days' prior written notice. In the event of termination, Williams & Works shall be paid up to the effective date of termination for all services rendered by it, and all drawings or other documents prepared by Williams & Works shall remain the property of Williams & Works and not be delivered to Client until all moneys owed to Williams & Works by Client (whether or not such moneys have then become due and payable) have been paid. Williams & Works assumes no liability for the use of drawings and other documents delivered to the Client under this clause, unless specifically agreed to in writing.
5. **PAYMENT.** Williams & Works shall bill for services rendered and reimbursable costs incurred on a periodic basis. Each invoice shall be due and payable within fifteen (15) days of the presentation of the invoice. Invoices over thirty (30) days past due will be charged monthly interest at the rate of seven percent (7%) per annum on the unpaid balance or the highest lawful rate, whichever is less. The Client hereby waives any defense of usury with regard to said rate of interest. Williams & Works may, after seven (7) days' written notice to Client, suspend performance of services until all past due amounts are paid.
6. **DISPUTE RESOLUTION.** Any dispute arising pursuant to any contract to which these Terms and Conditions apply shall be initially submitted to non-binding mediation, unless the parties agree otherwise. Should a dispute not be resolved by mediation, the laws of the State of Michigan will govern the validity of this Agreement, its interpretation and performance. In the event of litigation arising from, or related to, this Agreement, the prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees and other related expenses.
7. **INSURANCE.** Upon request, Williams & Works will furnish the Client with a written description of insurance coverages being maintained by Williams & Works which may be related to Williams & Works' performance of services hereunder. No oral representations regarding insurance shall be binding upon Williams & Works.
8. **COST ESTIMATES.** Since Williams & Works has no control over the cost of labor and materials or over competitive bidding and/or market conditions, any estimates of equipment, construction or operating costs will be made on the basis of Williams & Works' experience, but Williams & Works does not warrant the accuracy of such estimates as compared to contractors' bids or actual costs incurred.
9. **INDEMNITY.** Subject to any limitations stated in this Agreement, Williams & Works will indemnify and hold harmless the Client, its officers, directors, employees and subcontractors from and against all claims and actions including reasonable attorney's fees, arising out of damages or injuries to persons or tangible property caused by a professionally negligent act, error or omission of Williams & Works or any of its agents, subcontractors or employees in the performance of services under this contract. Williams & Works will not be responsible for any

TERMS AND CONDITIONS (continued)

portion of loss, damage or liability arising from any contributing negligent acts by the Client, its subcontractors, agents, staff or consultants. The Client will indemnify and hold harmless Williams & Works, its employees, officers, directors and subcontractors from and against all claims and actions, including attorney fees, arising out of or related to damages or injuries to persons or property related or connected to the acts of the Client or any of its agents, subcontractors and/or employees.

10. **SITE ACCESS AND SECURITY.** Client shall obtain authorization for entry and use of land as necessary for Williams & Works to perform its Services. Client shall be solely responsible for any claims arising from the disturbance of surface or subsurface lands or waters caused by the performance of any of Williams & Works' services, except for such damage as caused by the sole negligence of Williams & Works.
11. **UNDERGROUND STRUCTURES OR UTILITIES.** In the performance of its services, Williams & Works will take reasonable care and precautions to avoid damage to underground structures or utilities. Client agrees to indemnify, protect and hold harmless Williams & Works from and against all liability, claims, demands, losses, expenses and costs (including attorney's fees) for and damage to or consequential loss from damage to any underground structures or utilities which are not called to Williams & Works' attention or which are not currently shown on plans furnished to Williams & Works, except for such damage as caused by the sole negligence of Williams & Works.
12. **SITE CONDITIONS.** The Client recognizes that the presence of hazardous materials or pollution on or beneath the surface of a site may create risks and liabilities. Williams & Works has neither created nor contributed to this pollution. Consequently, the Client recognizes and hereby acknowledges that this Agreement accordingly limits Williams & Works' liability.
13. **WAIVER.** No waiver, discharge, or renunciation of any claim of right of Williams & Works arising out of breach of this Agreement by Client shall be effective unless in writing signed by Williams & Works and supported by separate consideration.
14. **GOVERNING LAW.** This Agreement shall be deemed to have been made in Kent County, Michigan, and shall be governed by, and construed in accordance with the laws of the State of Michigan, existing at the time of the making of this Agreement.
15. **SHOP DRAWINGS.** If shop drawing review is provided under this Agreement, Williams & Works will check and review samples, catalog data, schedules, shop drawings, laboratory, shop and mill tests of materials and equipment, and all other data which the Contractor is required to submit, only for conformance with the design concept of the Project and compliance with the information given by the construction Contract Documents.
16. **DOCUMENTS.** All project documents, drawings, files, working papers or other materials, whether written or electronic, prepared, or furnished to the Client by Williams & Works under this Agreement are intended for the specific purposes of this Agreement only. Any reuse of said documents, drawings, files, working papers or other materials after they have left the custody of Williams & Works shall be at the user's sole risk without liability to, or cause of action against, Williams & Works.
17. **CONSTRUCTION PHASE SERVICES.** When authorized to provide construction observation or construction management services, Williams & Works' liability with regard to the compliance of construction to Construction Documents prepared by Williams & Works shall be only as expressly described in the Scope of Services.
18. **FEDERAL/LOCAL RIGHT TO KNOW COMPLIANCE.** In compliance with the Federal Hazard Communication Standards and applicable local laws or ordinances, the Client shall provide Williams & Works with a list of hazardous substances in the work place to which Williams & Works employees or subcontractors may be exposed in performance of the Services to be provided under this Agreement. The Client shall also provide a listing of protective measures in case exposure to said hazardous substances occurs.
19. **THIRD PARTY RIGHTS.** Except as specifically stated in this Agreement, this Agreement does not create any rights or benefits to parties other than the Client and Williams & Works.
20. **LIMITATION OF LIABILITY.** The Client agrees that the liability of Williams & Works under this Agreement for Client's damages is limited to the greater of One Hundred Thousand Dollars (\$100,000.00) or the amount of this Agreement.

Eaton County Parks and Recreation
Financial Report
Fiscal Year 2023/24
Through the end of November, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Revenues						
Administration						
Property Tax Revenues	2,209,922	2,209,922	(2.10)	2,209,922.00	-	100%
Grant Revenues	-	-	-	-	-	0%
Donations	1,200	1,200	-	-	1,200.00	0%
Transfers-In	-	-	-	-	-	0%
Fund Balance - Carry Over	(1,168,730)	(563,372)	-	-	(563,372.00)	0%
Total Administration Revenues	1,042,392	1,647,750	(2.10)	2,209,922.00	(562,172.00)	
Operational Revenues						
Site Fees	12,310	12,310	1,644.61	9,867.66	2,442.34	80%
Naturalist & Special Program Revenues	31,900	31,900	(320.00)	8,080.00	23,820.00	25%
Farm Rental Income	17,700	17,700	-	17,000.00	700.00	96%
Total Operational Revenues	61,910	61,910	1,324.61	34,947.66	26,962.34	
Total Revenues	1,104,302	1,709,660	1,322.51	2,244,869.66	(535,209.66)	131%
Expenditures						
Administration						
Personnel	628,368	628,368	81,040.15	584,327.98	44,040.02	93%
Supplies	36,057	36,057	3,689.97	21,139.82	14,917.18	59%
Other Services	51,604	51,604	6,988.68	21,932.08	29,671.92	43%
Debt Service (Vehicle Lease)	17,650	17,650	4,274.46	25,646.76	(7,996.76)	145%
Transfers Out - General Fund	-	-	-	-	-	0%
Total Administration Expenditures	733,679	733,679	95,993.26	653,046.64	80,632.36	89%
Operational Expenditures						
Park Specific Expenses (less personnel)	203,123	203,123	22,250.39	133,502.34	69,620.66	66%
Capital and One Time Purchases	167,500	167,500	16,132.00	165,057.00	2,443.00	99%
Grant Program Expenses	-	605,358	-	605,358.00	-	100%
Total Operational Expenditures	370,623	975,981	38,382.39	903,917.34	72,063.66	93%
Total Expenditures	1,104,302	1,709,660	134,375.65	1,556,963.98	152,696.02	91%
Excess Revenues over Expenses (Net Carryover)	-	-	(133,053.14)	687,905.68	(382,513.64)	
9/30/2023 Estimated Fund Balance	2,037,796	2,037,796	2,037,796	2,037,796		
Projected 9/30/2024 Fund Balance	3,206,526	2,601,168	1,904,743	2,725,702		

Eaton County Parks and Recreation
Program Update
Fiscal Year 2023/24
Through the end of November, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Park Specific Expenses (less personnel)						
Fitzgerald Park	97,423	97,423	13,698.49	82,190.94	15,232.06	84.4%
Fox Park	47,000	47,000	3,818.29	22,909.74	24,090.26	48.7%
Bellevue Area Parks	2,000	2,000	187.92	1,127.52	872.48	56.4%
Lincoln Park	39,700	39,700	3,531.76	21,190.56	18,509.44	53.4%
Crandell Park	17,000	17,000	1,013.93	6,083.58	10,916.42	35.8%
Total Park Specific Expenses	203,123	203,123	22,250.39	133,502.34	69,620.66	65.7%
Capital and One Time Purchases						
Admin - Equipment Trailer	24,000	24,000	-	24,000.00	-	100.0%
Admin - Bobcat	84,000	84,000	-	84,000.00	-	100.0%
Admin - Zero Turn Mower	16,000	16,000	13,557.00	13,557.00	2,443.00	84.7%
Lincoln Park - HVAC Replacement/Repairs	25,000	25,000	-	25,000.00	-	100.0%
Lincoln Park - Bathroom Auto Locks	5,000	5,000	-	5,000.00	-	100.0%
Crandell Park - Kayak Dock Extension	8,500	8,500	-	8,500.00	-	100.0%
Crandell Park - Bathroom Auto Locks	5,000	5,000	2,575.00	5,000.00	-	100.0%
Total Capital and One Time Purchases	573,746	573,746	60,632.78	432,061.68	141,684.32	75.3%
Grant Programs						
Eaton Rapids - Mill Pointe Park Pavillion	-	39,200	-	39,200.00	-	100.0%
City of Charlotte - Library Picnic Area	-	5,000	-	5,000.00	-	100.0%
Delta Township - Webster Bridge Design	-	150,750	-	150,750.00	-	100.0%
Grand Ledge - Grand Ledge Ball Park Phase I	-	212,694	-	212,694.00	-	100.0%
Hamlin Township - Hamlin Park Picnic & Play	-	87,157	-	87,157.00	-	100.0%
Olivet - Walking Bridge Fencing	-	5,000	-	5,000.00	-	100.0%
Vermontville - Creating Safe Fall Space	-	35,000	-	35,000.00	-	100.0%
Pottersville - Sunset Hills Park	-	65,557	-	65,557.00	-	100.0%
Signage	-	5,000	-	5,000.00	-	100.0%
Total Grant Programs	-	605,358	-	605,358.00	-	100.0%

Proposed Rollover Amendment - 12/13/2023

Expense Changes	2022/23 Projects	2022/23 Project Costs	Requested Rollover	Comments/Status
208.755.00.975.000 - Equipment	Lincoln Brick - Automated Security Gate	30,000.00	-	Project completed budget savings from project: approx. \$15,000
208.752.00.777.000 - Grounds	Fitzgerald Park - Staircase/Switchback	45,000.00	-	Project on hold pending workgroup determination
208.751.00.967.000 - Project Costs	Grant Program Projects	600,358.00	600,358.00	Project started
208.751.00.967.000 - Project Costs	Grant Program Signage	10,000.00	10,000.00	Project started
208.754.00.970.000 - Buildings	Dyer Kiln Preservation	200,000.00	200,000.00	Project delayed until Spring, 2024; scope of project being evaluated
Total Expenses Changes		885,358.00	810,358.00	

Revenue Changes	Requested Rollover	Comments/Status
208.960.00.695.000 - Fund Balance	810,358.00	Increase in Use of Fund Balance
Total Revenue Changes	-	810,358.00

Eaton County Parks and Recreation
Financial Report
Fiscal Year 2022/23
Through the end of September, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Revenues						
Administration						
Property Tax Revenues	-	2,024,927	2,072,307.06	2,072,307.06	(47,380.06)	102%
Grant Revenues	128,332	27,582	-	-	27,582.00	0%
Donations	2,000	2,000	698.00	698.00	1,302.00	35%
Transfers-In	747,046	284,979	284,979.00	284,979.00	-	100%
Fund Balance - Carry Over	-	(380,782)	-	-	(380,782.00)	0%
Total Administration Revenues	877,378	1,958,706	2,357,984.06	2,357,984.06	(399,278.06)	
Operational Revenues						
Site Fees	91,300	15,300	18,464.00	18,464.00	(3,164.00)	121%
Naturalist & Special Program Revenues	30,200	30,200	34,993.03	34,993.03	(4,793.03)	116%
Farm Rental Income	17,700	17,700	17,654.49	17,654.49	45.51	100%
Total Operational Revenues	139,200	63,200	71,111.52	71,111.52	(7,911.52)	
Total Revenues	1,016,578	2,021,906	2,429,095.58	2,429,095.58	(407,189.58)	120%
Expenditures						
Administration						
Personnel	584,866	635,936	515,507.78	515,507.78	120,428.22	81%
Supplies	35,000	53,094	25,412.75	25,412.75	27,681.25	48%
Other Services	52,121	53,177	31,044.94	31,044.94	22,132.06	58%
Debt Service (Vehicle Lease)	18,506	19,006	18,912.78	18,912.78	93.22	100%
Transfers Out - General Fund	-	-	-	-	-	0%
Total Administration Expenditures	690,493	761,213	590,878.25	590,878.25	170,334.75	78%
Operational Expenditures						
Park Specific Expenses (less personnel)	96,085	103,885	91,570.82	91,570.82	12,314.18	88%
Capital and One Time Purchases	230,000	546,450	173,048.58	177,548.78	368,901.22	32%
Grant Program Expenses	-	610,358	-	-	610,358.00	0%
Total Operational Expenditures	326,085	1,260,693	264,619.40	269,119.60	991,573.40	21%
Total Expenditures	1,016,578	2,021,906	855,497.65	859,997.85	1,161,908.15	43%
Excess Revenues over Expenses (Net Carryover)	-	-	1,573,597.93	1,569,097.73	754,718.57	
9/30/2022 Fund Balance	464,198	464,198	464,198	464,198		
<i>Projected 9/30/2023 Fund Balance</i>	<i>464,198</i>	<i>844,980</i>	<i>2,037,796</i>	<i>2,033,296</i>		

Eaton County Parks and Recreation
Program Update
Fiscal Year 2022/23
Through the end of September, 2023

	Original Budget	Adjusted Budget	Actual Year to Date	Projected Year to Date	Remaining Balance	% Used
Park Specific Expenses (less personnel)						
Fitzgerald Park	57,164	65,114	65,096.35	65,096.35	17.65	100.0%
Fox Park	14,800	14,630	11,612.84	11,612.84	3,017.16	79.4%
Bellevue Area Parks	1,400	1,420	1,148.65	1,148.65	271.35	80.9%
Lincoln Park	17,721	17,721	10,571.57	10,571.57	7,149.43	59.7%
Crandell Park	5,000	5,000	3,141.41	3,141.41	1,858.59	62.8%
Total Park Specific Expenses	96,085	103,885	91,570.82	91,570.82	12,314.18	88.1%
Capital and One Time Purchases						
Crandell Lake Devel. (MDNR Grant Match)	180,000	-	-	-	-	0.0%
Replacement Tractor	50,000	50,000	34,928.85	34,928.85	15,071.15	69.9%
Parks Vehicle(s) Purchase	-	73,190	68,689.80	73,190.00	-	100.0%
Equipment - Sinclair Recreation	-	23,260	23,260.00	23,260.00	-	100.0%
Lincoln Brick - Automated Security Gates	-	30,000	21,413.00	21,413.00	8,587.00	71.4%
Boulders & Signage - Lincoln & Fox Parks	-	75,000	24,756.93	24,756.93	50,243.07	33.0%
Fitzgerald Park - Staircase/Switchback	-	45,000	-	-	45,000.00	0.0%
Dyer Kiln Preservation Structure	-	200,000	-	-	200,000.00	0.0%
General Park Improvements	-	50,000	-	-	50,000.00	0.0%
Total Capital and One Time Purchases	422,170	704,220	356,190.22	360,690.42	343,529.58	51.2%
Grant Programs						
Eaton Rapids - Mill Pointe Park Pavillion	-	39,200	-	-	39,200.00	0.0%
City of Charlotte - Library Picnic Area	-	5,000	-	-	5,000.00	0.0%
Delta Township - Webster Bridge Design	-	150,750	-	-	150,750.00	0.0%
Grand Ledge - Grand Ledge Ball Park Phase I	-	212,694	-	-	212,694.00	0.0%
Hamlin Township - Hamlin Park Picnic & Play	-	87,157	-	-	87,157.00	0.0%
Olivet - Walking Bridge Fencing	-	5,000	-	-	5,000.00	0.0%
Vermontville - Creating Safe Fall Space	-	35,000	-	-	35,000.00	0.0%
Pottersville - Sunset Hills Park	-	65,557	-	-	65,557.00	0.0%
Signage	-	10,000	-	-	10,000.00	0.0%
Total Grant Programs	-	610,358	-	-	610,358.00	0.0%



Via Email

October 5, 2023

Chad Powers
Director
Eaton County Physical Plant
1045 Independence Boulevard
Charlotte, MI 48813

Re: **Semi-Annual Groundwater Monitoring – September 2023**
Eaton County Landfill

Dear Mr. Powers:

This letter has been prepared in association with the second semi-annual groundwater and surface water sampling event of 2023 at the referenced site. Sampling was conducted on September 19 through 22, 2023. During this sampling event, static water levels were measured in 16 monitoring wells, groundwater samples were collected from 14 monitoring wells (MW-2s, MW-2d, MW-3, MW-7r, MW-8s, MW-8dr, MW-10s, MW-10d, MW-15sr, MW-15dr, MW-17sr, MW-17dr, MW-18s, and MW-19s), and two surface water samples (SW-1 and SW-2) were obtained. A groundwater sample was not collected from MW-16 because the well has deteriorated and does not recharge sufficiently during the sampling event to allow for the collection of a representative sample. Monitor well MW-12 was not sampled because this well does not appear to be part of the same hydrogeologic units being monitored throughout the site. The water level at this location is significantly lower than the wells located hydraulically downgradient from it.

Strata personnel obtained static water level measurements from 16 monitoring wells on September 19, 2023. A summary of the groundwater elevation data is presented in Table 1 (Attachment 1). Prior to sampling, a volume of groundwater was purged from each monitoring well. Monitoring wells were purged until a minimum of 3 casing volumes of groundwater were removed from each well, field parameters (temperature, specific conductance, and pH) generally stabilized to within 5% of successive readings, or until monitoring wells had bailed dry at least 3 times and field parameters generally stabilized. Temperature, specific conductance, and pH measurements were obtained using a Hanna Instruments combination meter. This information is included on the "Groundwater Monitoring Field Data Sheets" included as Attachment 2. All groundwater samples submitted for metal analyses were field filtered with Geotech, in-line, 0.45-micron membrane filters. Following collection, the samples were stored in a cooler on ice until being delivered to the lab following chain-of-custody protocol. Samples were submitted for analysis of the semi-annual suite of parameters. The analytical reports and chain-of-custody records are included as Attachment 3.

Groundwater surface elevation data (Attachment 1) for the shallow and deep wells were plotted on a site map and contoured using the computer code SURFER®. The resultant groundwater surface elevation contour maps are presented as Figure 1 (shallow wells) and Figure 2 (deep wells). Examination of the elevation data/contours on these figures indicates groundwater migrates toward the north/northwest, which is consistent with historic data.

Table 2 (Attachment 4) is a summary of the analytical results from the monitor well and surface water samples and a comparison to applicable Generic Residential Cleanup Criteria (GRCC). In general, results are similar to previous sampling events. Volatile organic compounds (VOCs) were only detected at or above their compound-specific reporting limits in the groundwater samples from MW-7r, MW-15sr, MW-17sr, and MW-17dr. The groundwater sample from MW-7r contained vinyl chloride at a concentration of 1.2 µg/L. MW-15sr contained 1,1-dichloroethane (4.8 µg/L), 1,2-dichloroethane (1.2 µg/L) cis-1,2-dichloroethene (69 µg/L), diethyl ether (19 µg/L), and vinyl chloride (1.6 µg/L). Of these concentrations, diethyl ether is the only compound that exceeded its Drinking Water (DW) GRCC of 10 µg/L.

The sample from MW-17sr contained vinyl chloride at a concentration of 2.0 µg/L. Monitor well MW-17dr contained dichlorodifluoromethane (6.3 µg/L), diethyl ether (14 µg/L), and vinyl chloride (11 µg/L). Both the diethyl ether and vinyl chloride concentrations are in excess of their respective DW GRCC. It should be noted that both MW-17sr and MW-17dr are located hydraulically downgradient from MW-15sr.

Inorganic and metal analytical results for groundwater samples indicate that the reported concentrations of all parameters, except iron, manganese, and total dissolved solids (TDS), are either below their respective reporting limits and/or GRCC, if published. Iron was detected in all groundwater samples (except the samples from MW-8s and MW-8dr) at concentrations that range from 260 µg/L (MW-3) to 5,900 µg/L (MW-17dr). The reported iron concentrations exceed its DW GRCC (300 µg/L) in all the monitor well samples in which it was detected except for MW-3 (260 µg/L). It should be noted that the 300 µg/L DW GRCC for iron is an aesthetic criterion; the health based DW GRCC for iron is 2,000 µg/L. Magnesium was detected in all groundwater samples above its reporting limit, however no concentration exceeded its DW GRCC of 400,000 µg/L. Manganese was present in MW-2s, MW-7r, MW-8dr, MW-17sr, MW-17dr, and MW-19s at concentrations that range from 51 µg/L (MW-19s) to 240 µg/L (MW-8dr). All reported manganese concentrations in the groundwater samples exceed its aesthetic DW GRCC of 50 µg/L. The health based DW GRCC for manganese is 860 µg/L. All groundwater water samples contained TDS at concentrations that range from 330,000 µg/L (MW-8s) to 600,000 µg/L (MW-10s and MW-17dr). The TDS concentrations in MW-10s and MW-17dr exceed their DW and Groundwater/Surface Water Interface (GSI) GRCC of 500,000 µg/L.

Surface water quality results indicate that no VOCs were detected this event. Both surface water samples (SW-1 and SW-2) contain inorganic and metal analytes at concentrations above compound-specific reporting limits. The reported surface water concentrations were compared to Rule 57 criteria. Because the surface water traversing across the site is not used as a drinking water source, Strata compared the results to the Non-Drink (ND) Human Noncancer Value (HNV) and the Human Cancer Value (HCV), as well as the Wildlife Value (WV). A comparison was not made to the Aquatic Life Values. Of the metals analyzed, only the concentration of arsenic from SW-1 (15 µg/L) exceeds the ND HCV of 10 µg/L for arsenic. None of the other reported concentrations in SW-1 and SW-2 exceed ND HNV, ND HCV, or WV.

The next semi-annual sampling event is scheduled for March 2024. The aforementioned wells and two surface water locations will be included in the monitoring.

Should you have any questions or comments, please do not hesitate to contact our office at (517) 676-6900.

Sincerely,

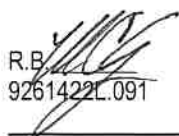
STRATA ENVIRONMENTAL SERVICES, INC.



Sophia V. Serafini
Environmental Professional

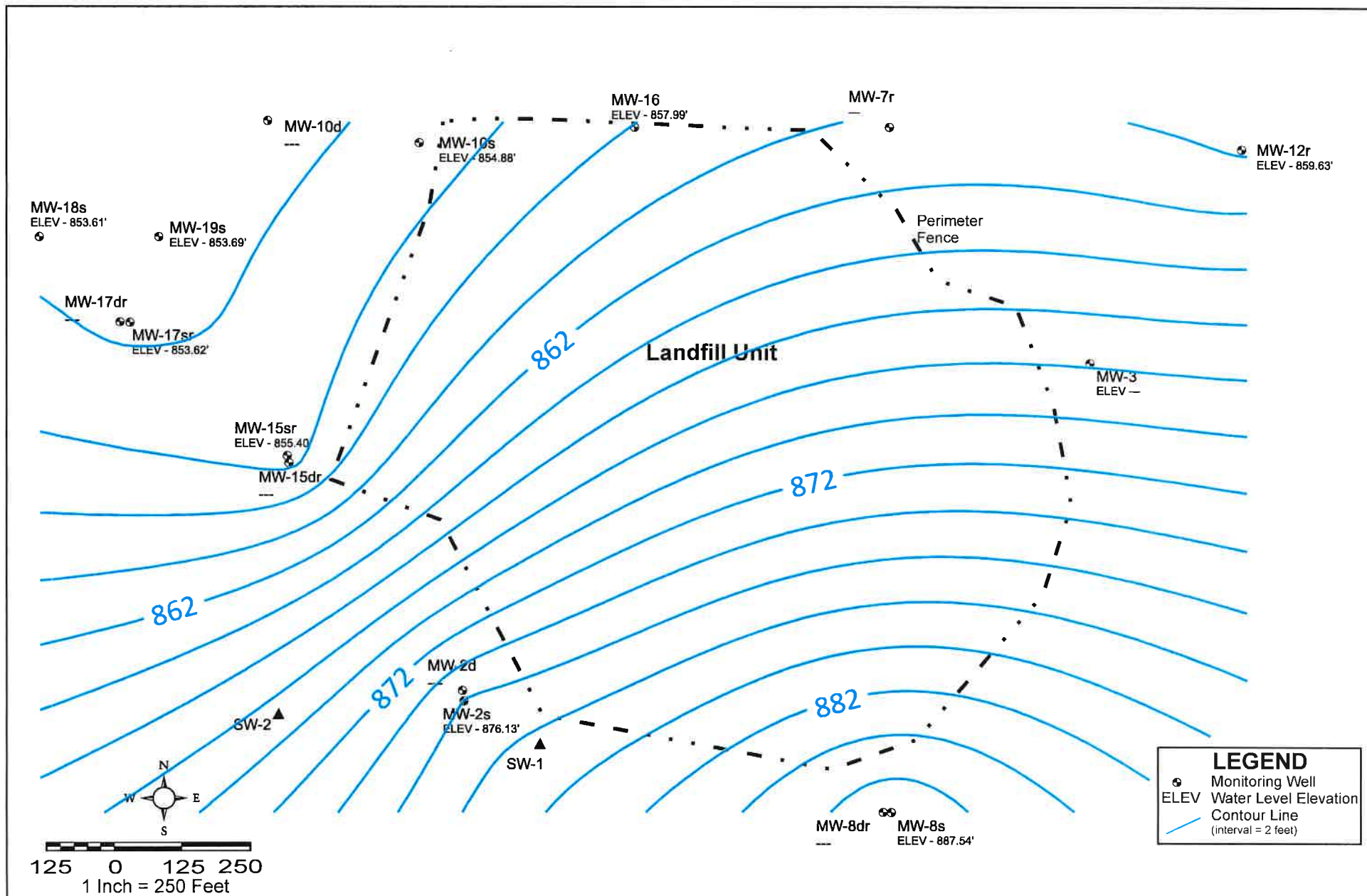
Encls.

Cc: Mr. Evin Maguire (EGLE)



R.B. Maguire
9261422L091

FIGURES

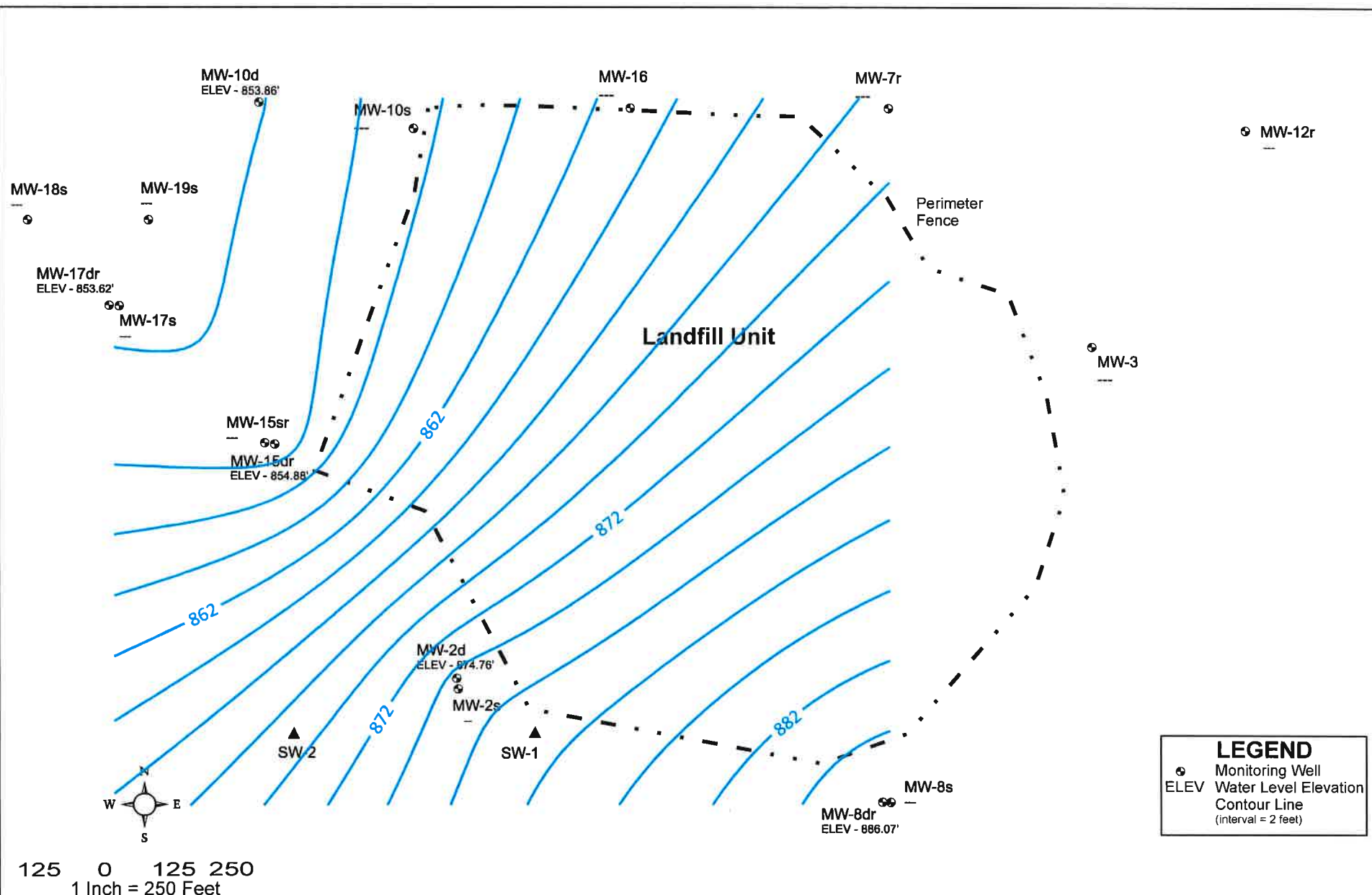


SEMI-ANNUAL GROUNDWATER MONITORING

Eaton County Landfill
Section 20, Benton Township
Eaton County, Michigan

STRATA ENVIRONMENTAL
SERVICES, INC.

FIGURE 1
Groundwater Surface Elevation
Shallow Wells
September 19, 2023



SEMI-ANNUAL GROUNDWATER MONITORING
 Eaton County Landfill
 Section 20, Benton Township
 Eaton County, Michigan



FIGURE 2
 Groundwater Surface Elevation
 Deep Wells
 September 19, 2023

ATTACHMENT 1

TABLE 1. Groundwater Elevation Data

Project Name: Eaton County Landfill
Project Number: 926-1422

Well I.D.	Date of Measurement	Ground Elevation	Measuring Point	Measuring Point Above G.L.	Measuring Point Elevation	Depth to Water	Water Level Elevation	Comments
MW-2s	9/19/2023	---	TOC	---	882.65	6.52	876.13	
MW-2d	9/19/2023	---	TOC	---	882.62	7.86	874.76	
MW-3	9/19/2023	---	TOC	---	912.92	11.22	901.70	
MW-7r	9/19/2023	---	TOC	---	889.91	15.44	874.47	
MW-8s	9/19/2023	---	TOC	---	902.75	15.21	887.54	
MW-8dr	9/19/2023	---	TOC	---	902.52	16.45	886.07	
MW-10s	9/19/2023	---	TOC	---	867.69	12.81	854.88	
MW-10d	9/19/2023	---	TOC	---	863.04	9.18	853.86	
MW-12r	9/19/2023	---	TOC	---	911.07	51.44	859.63	
MW-15sr	9/19/2023	---	TOC	---	869.61	14.21	855.40	
MW-15dr	9/19/2023	---	TOC	---	870.16	15.28	854.88	
MW-16	9/19/2023	---	TOC	---	876.51	18.52	857.99	
MW-17sr	9/19/2023	---	TOC	---	860.41	6.79	853.62	
MW-17dr	9/19/2023	---	TOC	---	860.53	6.91	853.62	
MW-18s	9/19/2023	---	TOC	---	871.00	17.39	853.61	
MW-19s	9/19/2023	---	TOC	---	860.87	7.18	853.69	

All measurements in feet unless otherwise noted

--- = Not Available

ATTACHMENT 2

GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-2s Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd Charlotte MI 48813

Street Number (PO Box) City State Zip

Contact: Chad Powers (517) 543-7500

Name Telephone:

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: Yes ☐ No ☒

Frost Heave: Yes ☐ No ☒

TOC Elevation: 882.65

Static Water Level (ft.): 6.52

Ground Water Elevation: 876.13 feet

Well Depth: TOC Reference 29.00

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 9-20-23 9-22-23

Time of Purge: 0845, 1115 0825 0900

Volume of Water in Casing: 3.75 gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ 11.24 gals.

Purge Water Appearance: light brown + cloudy

Fate of Purge Water: ☒ ☐ ☐

Purge Method: ☐ Disposable Bailer

Purge Method: ☒ S.S. Submersible Pump

Purge Method: ☐ Peristaltic Pump

Decon: Yes ☒ No ☐

Liquinox & Water Wash ☒

Water Rinse ☒ Distilled Rinse ☐

Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: 9-22-23

Time of Sampling: 0905

Field Filtration?: Inline Yes ☒ No ☐

Weather: filter sunny 63°F

Sample Appearance: faintly cloudy

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: 513 umhos/cm

Temperature °C: 14.6

pH: 7.04

PURGE DATA:

Volume Removed	pH	Temperature °C	Specific Conductance micro siemens
① 2.00 gal.	6.86	13.8	626
3.75 gal. dry	6.75	13.4	565
7.00 gal. dry	6.64	13.4	575
② 8.50 gal.	6.90	13.0	599
10.00 gal. dry	6.90	13.4	611
③ 10.50 gal.	7.04	14.6	513
gal.			
gal.			

COMMENTS:

sample # 11

GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-2d Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd Charlotte MI 48813

Street Number (PO Box) City State Zip

Contact: Chad Powers (517) 543-7500

Name Telephone:

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: Yes ☐ No ☒

Frost Heave: Yes ☐ No ☒

TOC Elevation: 882.62

Static Water Level (ft.): 7.86

Ground Water Elevation: 874.76 feet

Well Depth: 51.90

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 09-20-23 09-22-23

Time of Purge: 0850, 1105 0830 0915

Volume of Water in Casing: 7.34 gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ 22.02 gals.

Purge Water Appearance: faintly cloudy

Fate of Purge Water: ☒ ☐

Purge Method: ☐ Disposable Bailer

Purge Method: ☒ S.S. Submersible Pump

Purge Method: ☐ Peristaltic Pump

Decon: Yes ☒ No ☐

Type: ☒ Liquinox & Water Wash

Water Rinse ☒ Distilled Rinse ☐

Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: 09-22-23

Time of Sampling: 0920

Field Filtration?: inline Yes ☒ No ☐

Weather: filter sunny 64°F

Sample Appearance: clear

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: 598 umhos/cm

Temperature °C: 13.4

pH: 6.97

PURGE DATA:

	Volume Removed	pH	Temperature °C	Specific Conductance micro siemens
①	3.0 gal.	6.71	12.6	576
	6.0 gal. dry @ 7.0	6.68	12.7	578
	9.0 gal. dry	6.66	14.4	691
②	12.0 gal.	6.90	12.6	602
	15.0 gal. dry	6.89	12.6	603
③	17.0 gal.	6.97	13.4	598
	gal.			
	gal.			

COMMENTS:

sample # 12



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-3

Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd

Charlotte

MI

48813

Street Number (PO Box)

City

State

Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone:

Personnel Present: SVS/ NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: 912.92

Static Water Level (ft.) 11.22

Ground Water Elevation: 901.70 feet

Well Depth: TOC Reference 17.20

Standing Water: Yes ☐ No ☐

Secured Upon Departure: Yes ☐ No ☐

Well ID Present/Readable: Yes ☐ No ☐

PURGING DATA:

Date of Purge: 9-20-23

Time of Purge: 1000

Volume of Water in Casing: 1.00 gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ 2.99 gals.

Purge Water Appearance: faintly cloudy

Fate of Purge Water: ☒ Ground 10'+ Contained

Purge Method: ☒

Purge Method: ☐

Purge Method: ☐

Decon: ☐

Type: ☐

☒ Disposable Bailer

☐ S.S. Submersible Pump

☐ Peristaltic Pump

Yes ☐ No ☒

Liquinox & Water Wash ☐

Water Rinse ☐ Distilled Rinse ☐

SAMPLING DATA:

Date of Sampling: 9-20-23

Time of Sampling: 1015

Field Filtration?: Inline filter Yes ☒ No ☐

Weather: overcast 64°F

Sample Appearance: faintly cloudy

Sampling Method: ☒ Bailer ☒ Pump-peristaltic

Decon?: Yes ☐ No ☒

Sp. Conductance: 660 umhos/cm

Temperature °C: 12.4

pH: 6.56

PURGE DATA:

Volume Removed

pH

Temperature °C

Specific Conductance
micro siemens

0.5 gal.

6.58

12.8

650

1.0 gal.

6.57

12.8

655

1.5 gal.

6.57

12.6

658

2.0 gal.

6.57

12.4

659

2.5 gal.

6.57

12.3

659

3.0 gal.

6.56

12.4

660

COMMENTS:

sample #3

GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-7r Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd Charlotte MI 48813

Street Number (PO Box) City State Zip

Contact: Chad Powers (517) 543-7500

Name Telephone:

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐ TOC Elevation: 889.91

TOC Survey Mark: North Static Water Level (ft.) 15.44

Well Conditions: Good ☒ Fair ☐ Poor ☐ Ground Water Elevation: 874.47 feet

Casing Material: Galvanized Well Depth: TOC Reference 27'

Casing Diameter: 2" Standing Water: Yes ☐ No ☒

Concrete Pad: Yes ☒ No ☐ Secured Upon Departure: Yes ☒ No ☐

Screen: --- Well ID Present/Readable: Yes ☒ No ☐

Frost Heave: Yes ☐ No ☒

PURGING DATA:

Date of Purge: 9-21-23 Purge Method: ☐ Disposable Bailer

Time of Purge: 0905 Purge Method: ☒ S.S. Submersible Pump

Volume of Water in Casing: 1.93 gals. Purge Method: ☐ Peristaltic Pump

Purge Volume 3X ☒ 5X ☐ Other ☐ 5.78 gals. Decon: Yes ☒ No ☐

Purge Water Appearance: faintly brown + cloudy Type: Liquinox & Water Wash ☒

Fate of Purge Water: ☒ Ground 10'+ Contained Water Rinse ☒ Distilled Rinse ☐

SAMPLING DATA:

Date of Sampling: 9-21-23 Sampling Method: ☒ Bailer ☒ Pump

Time of Sampling: 0915 Decon?: Yes ☒ No ☐

Field Filtration?: Inline Weather: sun, clouds, 61°F Sp. Conductance: 767 umhos/cm

Sample Appearance: clear Temperature °C: 10.9

pH: 6.79

PURGE DATA:

Volume Removed	pH	Temperature °C	Specific Conductance micro siemens
<u>2.0</u> gal.	<u>6.80</u>	<u>12.4</u>	<u>757</u>
<u>4.0</u> gal.	<u>6.80</u>	<u>11.7</u>	<u>762</u>
<u>6.0</u> gal.	<u>6.79</u>	<u>11.0</u>	<u>768</u>
<u>8.0</u> gal.	<u>6.79</u>	<u>10.9</u>	<u>766</u>
<u>10.0</u> gal.	<u>6.79</u>	<u>10.9</u>	<u>767</u>
_____ gal.	_____	_____	_____
_____ gal.	_____	_____	_____
_____ gal.	_____	_____	_____

COMMENTS:

sample # 5



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: **Eaton County Landfill**

Well Number: **MW-8s**

Period of Sampling: **Sep-23**

Facility: **Eaton County**

Address: **1045 Independence Blvd**
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: **Chad Powers**
Name

(517) 543-7500
Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: **902.75**

Static Water Level (ft.) **15.21**

Ground Water Elevation: **887.54** feet

Well Depth: TOC Reference **16.85**

Standing Water: Yes ☐ No ☐

Secured Upon Departure: Yes ☐ No ☐

Well ID Present/Readable: Yes ☐ No ☐

PURGING DATA:

Date of Purge: **9-20-23**

Time of Purge: **1020**

Volume of Water in Casing: **0.27** gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ **0.82** gals.

Purge Water Appearance: **clear**

Fate of Purge Water: ☒ ☐

Purge Method: ☒

Purge Method: ☐

Purge Method: ☐

Decon: Yes ☐ No ☒

Type: ☐

Disposable Bailer

S.S. Submersible Pump

Peristaltic Pump

Liquinox & Water Wash ☐

Water Rinse ☐ Distilled Rinse ☐

Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: **9-20-23**

Time of Sampling: **1030**

Field Filtration?: **Inline** Yes ☒ No ☐

Weather: **filter** **overcast 65°F**

Sample Appearance: **clear**

Sampling Method: ☒ Bailer

Decon?: Yes ☐ No ☒

Sp. Conductance: **536**

Temperature °C: **10.8**

pH: **6.56**

☒ Pump-peristaltic

umhos/cm

PURGE DATA:

Volume Removed pH

0.25 gal. **6.54**

0.50 gal. **6.54**

0.75 gal. **6.54**

1.00 gal. **6.55**

1.25 gal. **6.56**

Temperature °C

11.4

11.0

10.9

10.8

10.8

Specific Conductance

micro siemens

531

537

537

538

536

COMMENTS:

sample #4

GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-8dr Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd Charlotte MI 48813

Street Number (PO Box) City State Zip

Contact: Chad Powers (517) 543-7500

Name Telephone:

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐ TOC Elevation: 902.52

TOC Survey Mark: North Static Water Level (ft.) 16.45

Well Conditions: Good ☒ Fair ☐ Poor ☐ Ground Water Elevation: 886.07 feet

Casing Material: PVC Well Depth: TOC Reference 59'

Casing Diameter: 2" Standing Water: Yes ☐ No ☒

Concrete Pad: Yes ☒ No ☐ Secured Upon Departure: Yes ☒ No ☐

Screen: --- Well ID Present/Readable: Yes ☒ No ☐

Frost Heave: Yes ☐ No ☒

PURGING DATA:

Date of Purge: 9-21-23 Purge Method: ☐ Disposable Bailer

Time of Purge: 0920 Purge Method: ☒ S.S. Submersible Pump

Volume of Water in Casing: 7.09 gals. Purge Method: ☐ Peristaltic Pump

Purge Volume 3X ☒ 5X ☐ Other ☐ 21.28 gals. Decon: Yes ☒ No ☐

Purge Water Appearance: clear Type: Liquinox & Water Wash ☒

Fate of Purge Water: ☒ Ground 10'+ Contained Water Rinse ☒ Distilled Rinse ☐

SAMPLING DATA:

Date of Sampling: 9-21-23 Sampling Method: ☒ Bailer ☒ Pump

Time of Sampling: 0940 Decon?: Yes ☒ No ☐

Field Filtration?: Inline Yes ☒ No ☐ Sp. Conductance: 741 umhos/cm

Weather: filter sun, clouds 62°F Temperature °C: 10.5

Sample Appearance: clear pH: 6.77

PURGE DATA:

Volume Removed	pH	Temperature °C	Specific Conductance micro siemens
<u>5.0</u> gal.	<u>6.76</u>	<u>10.9</u>	<u>738</u>
<u>10.0</u> gal.	<u>6.74</u>	<u>10.7</u>	<u>742</u>
<u>15.0</u> gal.	<u>6.76</u>	<u>10.6</u>	<u>740</u>
<u>20.0</u> gal.	<u>6.77</u>	<u>10.6</u>	<u>742</u>
<u>25.0</u> gal.	<u>6.77</u>	<u>10.5</u>	<u>741</u>
<u>30.0</u> gal.	<u>6.77</u>	<u>10.5</u>	<u>741</u>
_____ gal.	_____	_____	_____
_____ gal.	_____	_____	_____

COMMENTS:

sample # 6



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: **Eaton County Landfill**

Well Number: **MW-10s**

Period of Sampling: **Sep-23**

Facility: **Eaton County**

Address: **1045 Independence Blvd**

Charlotte

MI

48813

Street Number (PO Box)

City

State

Zip

Contact: **Chad Powers**
Name

(517) 543-7500
Telephone:

Personnel Present: SVS/MP

WELL DATA:

Well Secure Upon Arrival: Yes ☐ No ☒

TOC Survey Mark: **North**

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: **Galvanized**

Casing Diameter: **2"**

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: **867.69**

Static Water Level (ft.) **12.8**

Ground Water Elevation: **854.88** feet

Well Depth: TOC Reference **36.10**

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☐ No ☒

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Time of Purge: **1010**

Volume of Water in Casing: **3.88** gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ **11.65** gals.

Purge Water Appearance: **faintly milky**

Fate of Purge Water: ☒ Ground 10'+ Contained ☐

Purge Method: ☐

Purge Method: ☒

Purge Method: ☐

Decon: ☐

Type: ☐

☐ Disposable Bailer

☒ S.S. Submersible Pump

☐ Peristaltic Pump

Yes ☒ No ☐

Liquinox & Water Wash ☒

Water Rinse ☒ Distilled Rinse ☐

SAMPLING DATA:

Time of Sampling: **1020**

Field Filtration?: **Inline** Yes ☒ No ☐

Weather: **Sunny 68°F**

Sample Appearance: **clear**

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: **823** umhos/cm

Temperature °C: **11.6**

pH: **6.98**

PURGE DATA:

Volume Removed

pH

Temperature °C

Specific Conductance

micro siemens

4.0 gal.

7.05

13.1

820

8.0 gal.

7.00

11.9

826

12.0 gal.

6.98

11.6

825

16.0 gal.

6.98

11.6

823

gal.

gal.

gal.

gal.

gal.

gal.

gal.

COMMENTS: sample # 15

GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: **MW-10d**

Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone:

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: PVC

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: 863.04

Static Water Level (ft.) 9.18

Ground Water Elevation: 853.86 feet

Well Depth: TOC Reference 45.40

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 09-20-23 09-22-23

Time of Purge: 0945, 1045 0850 1035

Volume of Water in Casing: 6.04 gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ 18.11 gals.

Purge Water Appearance: dark grey + cloudy

Fate of Purge Water: ☒ ☐ ☐

Purge Method: ☐

Purge Method: ☒

Purge Method: ☐

Decon: ☐

Type: ☐

☐

Disposable Bailer

☒

S.S. Submersible Pump

☐

Peristaltic Pump

Yes ☒

No ☐

Liquinox & Water Wash

Water Rinse ☒

Distilled Rinse ☐

Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: 9-22-23

Time of Sampling: 1040

Field Filtration? Inline Yes ☒ No ☐

Weather: filter sunny 70 F

Sample Appearance: faintly cloudy

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: 630 umhos/cm

Temperature °C: 12.0

pH: 6.99

PURGE DATA:

Volume Removed pH

Temperature °C

Specific Conductance
micro siemens

① 3.0 gal.	6.60	11.3	616
6.0 gal. dry	6.60	11.3	626
12.0 gal. dry	6.52	11.6	636
② 15.0 gal.	6.87	11.6	643
18.0 gal. dry @ 19.0	6.85	11.7	644
③ 21.0 gal.	6.99	12.0	630
gal.			
gal.			

COMMENTS:

sample # 16



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: **Eaton County Landfill**

Well Number:

MW-15sr

Period of Sampling:

Sep-23

Facility: **Eaton County**

Address: **1045 Independence Blvd**

Charlotte

MI

48813

Street Number (PO Box)

City

State

Zip

Contact:

Chad Powers

(517) 543-7500

Name

Telephone:

Personnel Present:

SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: Yes ☐ No ☒

Frost Heave: Yes ☐ No ☒

TOC Elevation:

869.61

Static Water Level (ft.)

14.21

Ground Water Elevation:

855.40 feet

Well Depth: TOC Reference

43.00

Standing Water:

Yes ☐ No ☒

Secured Upon Departure:

Yes ☒ No ☐

Well ID Present/Readable:

Yes ☒ No ☐

PURGING DATA:

Date of Purge: **9-21-23**

Purge Method:

Time of Purge: **0915, 1055, 0840, 0930**

Purge Method:

Volume of Water in Casing: **4.79** gals.

Purge Method:

Purge Volume 3X ☒ 5X ☐ Other ☐ **4.40** gals.

Decon:

Purge Water Appearance: **dark grey, egg smelt**

Type:

Fate of Purge Water: ☒ Ground 10'+ Contained

☐

Disposable Bailer

☒

S.S. Submersible Pump

☐

Peristaltic Pump

Yes ☒ No ☐

Liquinox & Water Wash ☒

Water Rinse ☒

Distilled Rinse ☐

SAMPLING DATA:

Date of Sampling: **9-22-23**

Time of Sampling: **0935**

Sampling Method:

☒ Bailer ☒ Pump

Field Filtration? **inline** Yes ☒ No ☐

Decon?:

Yes ☒ No ☐

Weather: **filter sunny 65°F**

Sp. Conductance: **8105**

umhos/cm

Sample Appearance: **dark grey + murky**

Temperature °C: **14.9**

pH: **7.00**

PURGE DATA:

Volume Removed

pH

Temperature °C

Specific Conductance

micro siemens

① **2.0** gal.

6.70

13.7

996

4.0 gal. dry

6.63

11.7

840

6.0 gal. dry

6.58

14.5

860

② **8.0** gal.

6.78

12.3

691

10.0 gal. dry

6.83

11.8

735

③ **11.0** gal.

7.00

14.9

865

gal.

gal.

COMMENTS:

sample # 13



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-15dr Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd Charlotte MI 48813

Street Number (PO Box) City State Zip

Contact: Chad Powers (517) 543-7500

Name Telephone:

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: 870.16

Static Water Level (ft.): 15.28

Ground Water Elevation: 854.88 feet

Well Depth: TOC Reference 58.00

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 9-22-23 Purge Method: ☐ Disposable Bailer

Time of Purge: 0940 Purge Method: ☒ S.S. Submersible Pump

Volume of Water in Casing: 7.12 gals. Purge Method: ☐ Peristaltic Pump

Purge Volume 3X ☒ 5X ☐ Other ☐ 21.36 gals. Decon: Yes ☒ No ☐

Purge Water Appearance: clear to dark grey Type: Liquinox & Water Wash ☒

Fate of Purge Water: n/egg smell ☒ ☐ Water Rinse ☒ Distilled Rinse ☐

Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: 9-22-23

Time of Sampling: 1000

Field Filtration?: Inline Yes ☒ No ☐

Weather: sunny 65°F

Sample Appearance: clear

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: 633 umhos/cm

Temperature °C: 12.0

pH: 7.09

PURGE DATA:

Volume Removed	pH	Temperature °C	Specific Conductance micro siemens
<u>5.0</u> gal.	<u>7.10</u>	<u>12.9</u>	<u>599</u>
<u>10.0</u> gal.	<u>7.09</u>	<u>12.3</u>	<u>651</u>
<u>15.0</u> gal.	<u>7.09</u>	<u>12.2</u>	<u>641</u>
<u>20.0</u> gal.	<u>7.09</u>	<u>12.1</u>	<u>640</u>
<u>25.0</u> gal.	<u>7.09</u>	<u>12.0</u>	<u>636</u>
<u>30.0</u> gal.	<u>7.09</u>	<u>12.0</u>	<u>633</u>
_____ gal.	_____	_____	_____
_____ gal.	_____	_____	_____

COMMENTS:

sample # 14



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: **Eaton County Landfill**

Well Number:

MW-17sr

Period of Sampling:

Sep-23

Facility: **Eaton County**

Address: **1045 Independence Blvd**

Charlotte

MI

48813

Street Number (PO Box)

City

State

Zip

Contact:

Chad Powers

(517) 543-7500

Name

Telephone:

Personnel Present:

SVS/NP

WELL DATA:

Well Secure Upon Arrival:

Yes ☒

No ☐

TOC Elevation:

860.41

TOC Survey Mark:

North

Static Water Level (ft.)

16.79

Well Conditions:

Good ☒

Fair ☐

Poor ☐

Ground Water Elevation:

853.62 feet

Casing Material:

Galvanized

Well Depth: TOC Reference

43.00

Casing Diameter:

2"

Concrete Pad:

Yes ☒

No ☐

Standing Water:

Yes ☐

No ☒

Screen:

Yes ☐

No ☒

Secured Upon Departure:

Yes ☒

No ☐

Frost Heave:

Yes ☐

No ☒

Well ID Present/Readable:

Yes ☒

No ☐

PURGING DATA:

Date of Purge: **9-21-23**

Purge Method:

☐

Disposable Bailer

Time of Purge:

1010

Purge Method:

☒

S.S. Submersible Pump

Volume of Water in Casing:

16.04 gals.

Purge Method:

☐

Peristaltic Pump

Purge Volume 3X ☒

5X ☐

Other ☐

18.11 gals.

Decon:

Yes ☒

No ☐

Purge Water Appearance:

faint rust to milky

Type:

Liquinox & Water Wash ☒

Fate of Purge Water:

grey

☒

Water Rinse ☒

Distilled Rinse ☐

Ground 10'± Contained

SAMPLING DATA:

Date of Sampling: **9-21-23**

Time of Sampling:

1025

Sampling Method:

☒

Bailer

☒

Pump

Field Filtration?: **inline**

Yes ☒

No ☐

Decon?:

Yes ☐

No ☒

Weather:

filter

sun, clouds 67°F

Sp. Conductance: **708**

umhos/cm

Sample Appearance:

clear

Temperature °C: **11.7**

pH: **6.78**

PURGE DATA:

Volume Removed

pH

Temperature °C

Specific Conductance

micro siemens

5.0 gal.

6.77

13.5

733

10.0 gal.

6.77

12.3

720

15.0 gal.

6.77

11.9

716

20.0 gal.

6.78

11.8

711

25.0 gal.

6.78

11.7

708

COMMENTS:

sample #7



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: **Eaton County Landfill**

Well Number: **MW-18s**

Period of Sampling: **Sep-23**

Facility: **Eaton County**

Address: **1045 Independence Blvd**
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: **Steve Barnett**
Name

(517) 543-2552
Telephone

Personnel Present: SJS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: **North**

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: **Galvanized**

Casing Diameter: **2"**

Concrete Pad: Yes ☒ No ☐

Screen:

Frost Heave: Yes ☐ No ☒

TOC Elevation: **871.00**

Static Water Level (ft.) **17.39**

Ground Water Elevation: **853.61** feet

Well Depth: TOC Reference **60.20**

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Time of Purge: **1110**

Volume of Water in Casing: **7.14** gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ **21.41** gals.

Purge Water Appearance: **clear to dark grey**

Fate of Purge Water: **milky**

Ground 10'+ Contained

Purge Method: ☐

Purge Method: ☒

Purge Method: ☐

Decon:

☐

☒

☐

Disposable Bailer

S.S. Submersible Pump

Peristaltic Pump

Yes ☒ No ☐

Liquinox & Water Wash ☒

Water Rinse ☒ Distilled Rinse ☐

SAMPLING DATA:

Time of Sampling: **1125-1130**

Field Filtration? **inline** Yes ☒ No ☐

Weather: **Filter sunny 70°F**

Sample Appearance: **clear**

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: **679** umhos/cm

Temperature °C: **11.9**

pH: **6.83**

PURGE DATA:

Volume Removed pH

5.0 gal. **6.94**

10.0 gal. **6.90**

25.0 gal. **6.88**

20.0 gal. **6.85**

25.0 gal. **6.83**

30.0 gal. **6.83**

gal.

gal.

Temperature °C

12.7

12.1

12.2

12.1

11.9

Specific Conductance

micro siemens

688

685

680

683

679

COMMENTS:

sample # 10

pump rate @ ~175



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: **MW-19s**

Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: 860.87

Static Water Level (ft.) 7.18

Ground Water Elevation: 853.69 feet

Well Depth: TOC Reference 39.20

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 9-21-23

Time of Purge: 1050

Volume of Water in Casing: 5.34 gals.

Purge Volume 3X ☒ 5X ☐ Other ☐ 16.01 gals.

Purge Water Appearance: milky gray

Fate of Purge Water: ☒ ☐ ☐

Purge Method: ☐

Purge Method: ☒

Purge Method: ☐

Decon: ☐

Type: ☐

☐

Disposable Bailer

☒

S.S. Submersible Pump

☐

Peristaltic Pump

Yes ☒

No ☐

Liquinox & Water Wash ☒

Water Rinse ☒

Distilled Rinse ☐

Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: 9-21-23

Time of Sampling: 1105

Field Filtration?: Yes ☒ No ☐

Weather: sunny 69°F

Sample Appearance: clear

Sampling Method: ☒ Bailer ☒ Pump

Decon?: Yes ☒ No ☐

Sp. Conductance: 819 umhos/cm

Temperature °C: 12.1

pH: 6.86

PURGE DATA:

Volume Removed pH

5.0 gal. 6.82

10.0 gal. 6.83

15.0 gal. 6.84

20.0 gal. 6.86

gal. _____

gal. _____

gal. _____

gal. _____

gal. _____

Temperature °C

13.1

12.3

12.2

12.1

Specific Conductance

micro siemens

873

837

819

819

COMMENTS:

sample # 9



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: SW-1

Period of Sampling: Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone:

Personnel Present: SVS/NP

SAMPLING DATA:

Date of Sampling: 9-20-23

Time of Sampling: 0905

Sampling Method: Dip bottles into water

Field Filtration?:

Yes ☐ No ☒

Decon?:

Yes ☐ No ☐

Weather:

rain 60°F

Sp. Conductance: 698

uS

Sample Appearance:

particulate, floating
sheen

temperature °C: 14.2

pH: 6.70

COMMENTS:

sample # 1



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number:

SW-2

Period of Sampling:

Sep-23

Facility: Eaton County

Address: 1045 Independence Blvd

Charlotte

MI

48813

Street Number (PO Box)

City

State

Zip

Contact: Chad Powers

Name

(517) 543-7500

Telephone:

Personnel Present:

SVS/NP

SAMPLING DATA:

Date of Sampling: 9-20-23

Time of Sampling:

0930

Sampling Method:

Dip bottles into water

Field Filtration?:

Yes ☐

No ☒

Decon?:

Yes ☐

No ☐

Weather:

rain 62°F

Sp. Conductance: 553

uS

Sample Appearance:

fewer particulate,
dark grey

Temperature °C: 13.7

pH: 6.73

COMMENTS:

sample # 2

ATTACHMENT 3



Wednesday, September 27, 2023

Fibertec Project Number: A17296
Project Identification: Eaton County (926-1422) /926-1422
Submittal Date: 09/20/2023

Mr. Mike Serafini
Strata Environmental Services, Inc.
538 W. Ash Street
Mason, MI 48854

Dear Mr. Serafini,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Bailey Welch at 11:01 AM, Sep 27, 2023

For Heather L. Smith
Director of Laboratory Operations

Enclosures

1914 Holloway Drive
11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-001

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-1	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	1	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable I: Parameter not included in NELAC Scope of Analysis.

Trace Elements by ICP/MS, Total Recoverable
Method: EPA 0200.8 (Total Recoverable)/EPA 0200.8

Aliquot ID: A17296-001D **Matrix: Surface Water**
Description: SW-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	15		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
2. Barium	U		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
4. Calcium	120000		µg/L	1200	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
5. Chromium	U		µg/L	10	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
6. Copper	U		µg/L	4.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
7. Iron	13000		µg/L	200	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
8. Lead	U		µg/L	3.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
9. Magnesium	29000		µg/L	400	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
10. Manganese	270		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
11. Nickel	U		µg/L	20	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
12. Potassium	6300		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
13. Selenium	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
14. Sodium	14000		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
15. Zinc	U		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM

Inorganic Anions by IC
Method: EPA 0300.0

Aliquot ID: A17296-001 **Matrix: Surface Water**
Description: SW-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Chloride	17000		µg/L	10000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
2. Nitrate-N	1500		µg/L	23	1.0	09/20/23 21:24	PW23I20G	09/20/23 21:24	W423I20A	RJM
3. Nitrate-N + Nitrite-N	1500		µg/L	53	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/20/23 21:24	PW23I20G	09/20/23 21:24	W423I20A	RJM
5. Sulfate	6500		µg/L	1000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM

Phosphorus, Total
Method: EPA 0365.3

Aliquot ID: A17296-001A **Matrix: Surface Water**
Description: SW-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	77		µg/L	10	1.0	NA	NA	09/21/23	W323I21A	EZ

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Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-001

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-1	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	1	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phenolics, Total Aliquot ID: A17296-001B Matrix: Surface Water
Method: EPA 0420.1 Description: SW-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/21/23	W223121A	MJS

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: A17296-001E Matrix: Surface Water
Method: EPA 0624.1 Description: SW-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50.0	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
2. Acrylonitrile	U		µg/L	2.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
3. Benzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 4. Bromobenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 5. Bromochloromethane	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
6. Bromodichloromethane	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
8. Bromomethane	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
9. 2-Butanone	U		µg/L	25.0	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 10. n-Butylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 11. sec-Butylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 12. tert-Butylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 13. Carbon Disulfide	U	V+	µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
14. Carbon Tetrachloride	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
15. Chlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
16. Chloroethane	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
17. Chloroform	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
18. Chloromethane	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 19. 2-Chlorotoluene	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
21. Dibromochloromethane	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 22. Dibromomethane	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
‡ 26. Dichlorodifluoromethane	U		µg/L	5.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23120A	09/20/23 17:20	VB23120A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-001

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-1	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	1	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17296-001E**

Matrix: **Surface Water**

Method: **EPA 0624.1**

Description: **SW-1**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
31. trans-1,2-Dichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 33. 1,3-Dichloropropane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 34. 1,1-Dichloropropene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.500	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.500	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 37. Diethyl Ether	U		µg/L	10.0	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
38. Ethylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 39. 2-Hexanone	U	V+	µg/L	50.0	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 40. Isopropylbenzene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 41. 4-Methyl-2-pentanone	U		µg/L	50.0	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
42. Methylene Chloride	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 43. Methyl Iodide	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 44. 2-Methylnaphthalene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
45. MTBE	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
46. Naphthalene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 47. n-Propylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 48. Styrene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
51. Tetrachloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
52. Toluene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 53. 1,2,3-Trichlorobenzene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 54. 1,2,4-Trichlorobenzene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
56. 1,1,2-Trichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
57. Trichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
58. Trichlorofluoromethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 59. 1,2,3-Trichloropropane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 60. 1,2,4-Trimethylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
± 61. 1,3,5-Trimethylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
62. Vinyl Chloride	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
63. m&p-Xylene	U		µg/L	2.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
64. o-Xylene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM
65. Xylenes	U		µg/L	3.00	1.0	09/20/23	VB23I20A	09/20/23 17:20	VB23I20A	JLM

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Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-001

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-1	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	1	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Chemical Oxygen Demand (COD) Aliquot ID: **A17296-001A** Matrix: **Surface Water**
Method: HACH 8000 Description: **SW-1**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	15000		µg/L	5000	1.0	09/20/23	PW23I20D	09/20/23	W223I20A	EZ

Alkalinity by Titrimetry Aliquot ID: **A17296-001** Matrix: **Surface Water**
Method: SM 2320 B-2011 Description: **SW-1**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	410000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ

Residue, Filterable (TDS) Aliquot ID: **A17296-001** Matrix: **Surface Water**
Method: SM 2540 C-2015 Description: **SW-1**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	470000	*	µg/L	13000	1.3	NA	NA	09/21/23	WH23I21B	CM

Nitrogen, Ammonia (Auto Analyzer) Aliquot ID: **A17296-001A** Matrix: **Surface Water**
Method: SM 4500-NH₃ G-2011 Description: **SW-1**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	0.35		mg/L	0.010	1.0	09/20/23	PW23I20F	09/20/23	WU23I20A	MJS

Total Organic Carbon (TOC) Aliquot ID: **A17296-001C** Matrix: **Surface Water**
Method: SM 5310 B-2014 Description: **SW-1**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	4600		µg/L	1000	1.0	09/21/23	PW23I21E	09/23/23	WS23I21A	AVC

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-002

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-2	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	2	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Trace Elements by ICP/MS, Total Recoverable
Method: EPA 0200.8 (Total Recoverable)/EPA 0200.8

Aliquot ID: A17296-002D **Matrix: Surface Water**
Description: SW-2

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
2. Barium	U		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
4. Calcium	98000		µg/L	1200	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
5. Chromium	U		µg/L	10	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
6. Copper	U		µg/L	4.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
7. Iron	2500		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
8. Lead	U		µg/L	3.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
9. Magnesium	27000		µg/L	400	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
10. Manganese	360		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
11. Nickel	U		µg/L	20	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
12. Potassium	1700		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
13. Selenium	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
14. Sodium	3700		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
15. Zinc	U		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM

Inorganic Anions by IC
Method: EPA 0300.0

Aliquot ID: A17296-002 **Matrix: Surface Water**
Description: SW-2

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	U		µg/L	10000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
2. Nitrate-N	100		µg/L	23	1.0	09/20/23 21:45	PW23I20G	09/20/23 21:45	W423I20A	RJM
3. Nitrate-N + Nitrite-N	100		µg/L	53	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/20/23 21:45	PW23I20G	09/20/23 21:45	W423I20A	RJM
5. Sulfate	23000		µg/L	1000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM

Phosphorus, Total
Method: EPA 0365.3

Aliquot ID: A17296-002A **Matrix: Surface Water**
Description: SW-2

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	93		µg/L	10	1.0	NA	NA	09/21/23	W323I21A	EZ

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-002

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-2	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	2	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phenolics, Total Aliquot ID: **A17296-002B** Matrix: **Surface Water**
Method: EPA 0420.1 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/21/23	W223I21A	MJS

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17296-002E** Matrix: **Surface Water**
Method: EPA 0624.1 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50.0	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
2. Acrylonitrile	U		µg/L	2.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
3. Benzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 4. Bromobenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 5. Bromochloromethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
6. Bromodichloromethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
8. Bromomethane	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
9. 2-Butanone	U		µg/L	25.0	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 10. n-Butylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 11. sec-Butylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 12. tert-Butylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 13. Carbon Disulfide	U	V+	µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
14. Carbon Tetrachloride	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
15. Chlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
16. Chloroethane	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
17. Chloroform	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
18. Chloromethane	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 19. 2-Chlorotoluene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
21. Dibromochloromethane	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 22. Dibromomethane	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
‡ 26. Dichlorodifluoromethane	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-002

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-2	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	2	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17296-002E

Matrix: Surface Water

Method: EPA 0624.1

Description: SW-2

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
31. trans-1,2-Dichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 33. 1,3-Dichloropropane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 34. 1,1-Dichloropropene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.500	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.500	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 37. Diethyl Ether	U		µg/L	10.0	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
38. Ethylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 39. 2-Hexanone	U	V+	µg/L	50.0	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 40. Isopropylbenzene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 41. 4-Methyl-2-pentanone	U		µg/L	50.0	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
42. Methylene Chloride	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 43. Methyl Iodide	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 44. 2-Methylnaphthalene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
45. MTBE	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
46. Naphthalene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 47. n-Propylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 48. Styrene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
51. Tetrachloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
52. Toluene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 53. 1,2,3-Trichlorobenzene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 54. 1,2,4-Trichlorobenzene	U		µg/L	5.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
56. 1,1,2-Trichloroethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
57. Trichloroethene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
58. Trichlorofluoromethane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 59. 1,2,3-Trichloropropane	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 60. 1,2,4-Trimethylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
± 61. 1,3,5-Trimethylbenzene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
62. Vinyl Chloride	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
63. m&p-Xylene	U		µg/L	2.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
64. o-Xylene	U		µg/L	1.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM
65. Xylenes	U		µg/L	3.00	1.0	09/20/23	VB23I20A	09/20/23 17:47	VB23I20A	JLM

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F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-002

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	SW-2	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	2	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Surface Water	Collect Time:	09:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Chemical Oxygen Demand (COD) Aliquot ID: **A17296-002A** Matrix: **Surface Water**
Method: HACH 8000 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. COD	8300		µg/L	5000	1.0	09/20/23	PW23I20D	09/20/23	W223I20A	EZ

Alkalinity by Titrimetry Aliquot ID: **A17296-002** Matrix: **Surface Water**
Method: SM 2320 B-2011 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
± 1. Bicarbonate Alkalinity	350000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ

Residue, Filterable (TDS) Aliquot ID: **A17296-002** Matrix: **Surface Water**
Method: SM 2540 C-2015 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Dissolved Solids	360000		µg/L	13000	1.3	NA	NA	09/21/23	WH23I21B	CM

Nitrogen, Ammonia (Auto Analyzer) Aliquot ID: **A17296-002A** Matrix: **Surface Water**
Method: SM 4500-NH3 G-2011 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Ammonia-N	0.023		mg/L	0.010	1.0	09/20/23	PW23I20F	09/20/23	WU23I20A	MJS

Total Organic Carbon (TOC) Aliquot ID: **A17296-002C** Matrix: **Surface Water**
Method: SM 5310 B-2014 Description: **SW-2**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Organic Carbon	4500		µg/L	1000	1.0	09/21/23	PW23I21E	09/23/23	WS23I21A	AVC

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-003

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-3	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	3	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17296-003A** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-3**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	16		µg/L	10	1.0	NA	NA	09/21/23	W323I121A	EZ

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17296-003D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-3**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
2. Barium	U		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
4. Calcium	100000		µg/L	1200	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
5. Chromium	U		µg/L	10	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
6. Copper	U		µg/L	4.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
7. Iron	260		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
8. Lead	U		µg/L	3.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
9. Magnesium	30000		µg/L	400	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
10. Manganese	U		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
11. Nickel	U		µg/L	20	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
12. Potassium	1300		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
13. Selenium	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
14. Sodium	7200		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
15. Zinc	120		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17296-003E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-3**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-003

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-3	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	3	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17296-003E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-3

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
± 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
± 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
± 43. Methyl Iodide	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
± 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM

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Brighton, MI 48116
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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-003

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-3	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	3	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17296-003E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-3**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/20/23	VB23I20A	09/20/23 18:14	VB23I20A	JLM

Inorganic Anions by IC

Aliquot ID: **A17296-003**

Matrix: **Ground Water**

Method: **EPA 9056A**

Description: **MW-3**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	2600		µg/L	1000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/20/23 22:45	PW23I20G	09/20/23 22:45	W423I20A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/20/23 22:45	PW23I20G	09/20/23 22:45	W423I20A	RJM
5. Sulfate	46000		µg/L	1000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: **A17296-003C**

Matrix: **Ground Water**

Method: **EPA 9060A**

Description: **MW-3**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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T: (517) 699-0345
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T: (231) 775-8368

F: (517) 699-0388
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Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-003

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-3	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	3	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID: A17296-003C		Matrix: Ground Water		
Method: EPA 9060A						Description: MW-3				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	2200		µg/L	1000	1.0	09/21/23	PW23I21G	09/23/23	WS23I21A	AVC

Phenolics, Total						Aliquot ID: A17296-003B		Matrix: Ground Water		
Method: EPA 9065						Description: MW-3				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/21/23	W223I21A	MJS

Chemical Oxygen Demand (COD)						Aliquot ID: A17296-003A		Matrix: Ground Water		
Method: HACH 8000						Description: MW-3				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	16000		µg/L	5000	1.0	09/20/23	PW23I20D	09/20/23	W223I20A	EZ

Alkalinity by Titrimetry						Aliquot ID: A17296-003		Matrix: Ground Water		
Method: SM 2320 B-2011						Description: MW-3				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	370000	F-	µg CaCO3/L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ
± 2. Carbonate Alkalinity	U	F-	µg CaCO3/L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ
± 3. Hydroxide Alkalinity	U	F-	µg CaCO3/L	20000	1.0	NA	NA	09/21/23	W123I21A	EZ

Residue, Filterable (TDS)						Aliquot ID: A17296-003		Matrix: Ground Water		
Method: SM 2540 C-2015						Description: MW-3				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	410000		µg/L	50000	1.3	NA	NA	09/21/23	WH23I21B	CM

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID: A17296-003A		Matrix: Ground Water		
Method: SM 4500-NH3 G-2011						Description: MW-3				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-003

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-3	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	3	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17296-003A

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-3

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	U		µg/L	50	1.0	09/20/23	PW23120F	09/20/23	WU23120A	MJS

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-004

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	4	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17296-004A** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-8s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	42		µg/L	10	1.0	NA	NA	09/21/23	W323I21A	EZ

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17296-004D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-8s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
2. Barium	U		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
4. Calcium	89000		µg/L	1200	50	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
5. Chromium	U		µg/L	10	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
6. Copper	U		µg/L	4.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
7. Iron	U		µg/L	100	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
8. Lead	U		µg/L	3.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
9. Magnesium	20000		µg/L	300	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
10. Manganese	U		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
11. Nickel	U		µg/L	20	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
12. Potassium	1100		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
13. Selenium	U		µg/L	5.0	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
14. Sodium	2800		µg/L	1000	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM
15. Zinc	340		µg/L	50	5.0	09/25/23	PT23I25C	09/25/23	T423I25A	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17296-004E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-8s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-004

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	4	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A17296-004E **Matrix: Ground Water**
Description: MW-8s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-004

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	4	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17296-004E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-8s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/20/23	VB23I20A	09/20/23 18:41	VB23I20A	JLM

Inorganic Anions by IC

Aliquot ID: **A17296-004**

Matrix: **Ground Water**

Method: **EPA 9056A**

Description: **MW-8s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	1900		µg/L	1000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
2. Nitrate-N	94		µg/L	23	1.0	09/20/23 23:05	PW23I20G	09/20/23 23:05	W423I20A	RJM
3. Nitrate-N + Nitrite-N	94		µg/L	53	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/20/23 23:05	PW23I20G	09/20/23 23:05	W423I20A	RJM
5. Sulfate	5400		µg/L	1000	1.0	09/20/23	PW23I20G	09/20/23	W423I20A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: **A17296-004C**

Matrix: **Ground Water**

Method: **EPA 9060A**

Description: **MW-8s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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8660 S Mackinaw Trail

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Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
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Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-004

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	4	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID: A17296-004C		Matrix: Ground Water		
Method: EPA 9060A						Description: MW-8s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	U		µg/L	1000	1.0	09/21/23	PW23121G	09/23/23	WS23121A	AVC

Phenolics, Total						Aliquot ID: A17296-004B		Matrix: Ground Water		
Method: EPA 9065						Description: MW-8s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/21/23	W223121A	MJS

Chemical Oxygen Demand (COD)						Aliquot ID: A17296-004A		Matrix: Ground Water		
Method: HACH 8000						Description: MW-8s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	U		µg/L	5000	1.0	09/20/23	PW23120D	09/20/23	W223120A	EZ

Alkalinity by Titrimetry						Aliquot ID: A17296-004		Matrix: Ground Water		
Method: SM 2320 B-2011						Description: MW-8s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	310000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123121A	EZ
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123121A	EZ
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/21/23	W123121A	EZ

Residue, Filterable (TDS)						Aliquot ID: A17296-004		Matrix: Ground Water		
Method: SM 2540 C-2015						Description: MW-8s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	330000		µg/L	50000	1.3	NA	NA	09/21/23	WH23121B	CM

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID: A17296-004A		Matrix: Ground Water		
Method: SM 4500-NH ₃ G-2011						Description: MW-8s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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8660 S Mackinaw Trail

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Cadillac, MI 49601

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F: (810) 220-3311
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A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A17296
Laboratory Sample Number: A17296-004

Order: A17296
Date: 09/27/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:	4	Collect Date:	09/20/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Allquot ID: A17296-004A

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-8s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	U		µg/L	50	1.0	09/20/23	PW23120F	09/20/23	WU23120A	MJS

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- *** : Duplicate analysis not within control limits.
F- : Recovery from the spiked aliquot exceeds the lower control limit (matrix spike or matrix spike duplicate).
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

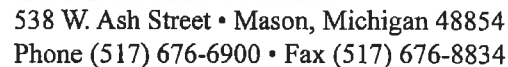
T104704518-23-15 (TX)

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Sampling Personnel: SVS / NP

Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

SURFACE WATER

CHAIN OF CUSTODY

[illegible]

Relinquished by Signature: 	Date 9-20-23	Time 12/5	Received by: (Signature) 	Date 9/20/23	Time 12/5	Relinquished by Signature: 	Date	Time	Received by: (Signature)	Date	Time
Relinquished by Signature: 	Date	Time	Received by: (Signature) 	Date	Time	Method of Shipment:	Bill of Lading:				
Received for Laboratory by:	Date	Time	Data Package Relinquished by:	Date	Time	Data Received by:	Date	Time			

Friday, September 29, 2023

Fibertec Project Number: A17318
Project Identification: Eaton County (926-1422) /926-1422
Submittal Date: 09/21/2023

Mr. Mike Serafini
Strata Environmental Services, Inc.
538 W. Ash Street
Mason, MI 48854

Dear Mr. Serafini,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

Please note that samples were received at 7.8°C which exceeds the maximum criteria of 6°C, however the samples were on ice and in the process of cooling.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



By Bailey Welch at 10:20 AM, Sep 29, 2023

For Heather L. Smith
Director of Laboratory Operations

Enclosures

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-001

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-7r	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total						Aliquot ID: A17318-001C		Matrix: Ground Water		
Method: EPA 0365.3						Description: MW-7r				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	U		µg/L	10	1.0	NA	NA	09/22/23	W323122A	CM

Trace Elements by ICP/MS, Dissolved						Aliquot ID: A17318-001D		Matrix: Ground Water		
Method: EPA 3005A (Dissolved)/EPA 6020A						Description: MW-7r				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	U		µg/L	5.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
2. Barium	U		µg/L	100	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
4. Calcium	120000		µg/L	1200	50	09/26/23	PT23126B	09/26/23	T423126B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
7. Iron	1300		µg/L	100	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
9. Magnesium	39000		µg/L	400	50	09/26/23	PT23126B	09/26/23	T423126B	RJM
10. Manganese	220		µg/L	50	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
12. Potassium	U		µg/L	1000	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
14. Sodium	3400		µg/L	1000	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM

Volatile Organic Compounds (VOCs) by GC/MS						Aliquot ID: A17318-001E		Matrix: Ground Water		
Method: EPA 5030C/EPA 8260D						Description: MW-7r				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23125C	09/25/23 19:08	VB23125C	JLM

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-001

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-7r	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-001E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-7r

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-001

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-7r	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-001E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-7r

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
62. Vinyl Chloride	1.2		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23I25C	09/25/23 19:08	VB23I25C	JLM

Inorganic Anions by IC

Aliquot ID: A17318-001

Matrix: Ground Water

Method: EPA 9056A

Description: MW-7r

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	1900		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 00:17	PW23I21F	09/22/23 00:17	W423I21A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 00:17	PW23I21F	09/22/23 00:17	W423I21A	RJM
5. Sulfate	9300		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17318-001A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-7r

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-001

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-7r	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)

Aliquot ID: **A17318-001A**

Matrix: **Ground Water**

Method: **EPA 9060A**

Description: **MW-7r**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Organic Carbon	1700		µg/L	1000	1.0	09/25/23	PW23I25D	09/26/23	WS23I25A	EZ

Phenolics, Total

Aliquot ID: **A17318-001B**

Matrix: **Ground Water**

Method: **EPA 9065**

Description: **MW-7r**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/25/23	W223I25B	CM

Chemical Oxygen Demand (COD)

Aliquot ID: **A17318-001C**

Matrix: **Ground Water**

Method: **HACH 8000**

Description: **MW-7r**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. COD	U		µg/L	5000	1.0	09/25/23	PW23I25A	09/25/23	W223I25A	EZ

Alkalinity by Titrimetry

Aliquot ID: **A17318-001**

Matrix: **Ground Water**

Method: **SM 2320 B-2011**

Description: **MW-7r**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
‡ 1. Bicarbonate Alkalinity	530000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
‡ 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
‡ 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC

Residue, Filterable (TDS)

Aliquot ID: **A17318-001**

Matrix: **Ground Water**

Method: **SM 2540 C-2015**

Description: **MW-7r**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Dissolved Solids	490000		µg/L	50000	1.3	NA	NA	09/21/23	WH23I21B	CM

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: **A17318-001C**

Matrix: **Ground Water**

Method: **SM 4500-NH₃ G-2011**

Description: **MW-7r**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-001

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-7r	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)
Method: SM 4500-NH3 G-2011

Aliquot ID: A17318-001C Matrix: Ground Water
Description: MW-7r

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	U		µg/L	50	1.0	09/21/23	PW23I21A	09/21/23	WU23I21A	CM

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F: (517) 699-0388
F: (810) 220-3311
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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-002

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: A17318-002C Matrix: Ground Water
Method: EPA 0365.3 Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	U		µg/L	10	1.0	NA	NA	09/22/23	W323122A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: A17318-002D Matrix: Ground Water
Method: EPA 3005A (Dissolved)/EPA 6020A Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	U		µg/L	5.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
2. Barium	U		µg/L	100	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
4. Calcium	100000		µg/L	1200	50	09/26/23	PT23126B	09/26/23	T423126B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
7. Iron	U		µg/L	100	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
9. Magnesium	28000		µg/L	400	50	09/26/23	PT23126B	09/26/23	T423126B	RJM
10. Manganese	240		µg/L	50	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
12. Potassium	1300		µg/L	1000	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
14. Sodium	22000		µg/L	1000	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23126B	09/26/23	T423126B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: A17318-002E Matrix: Ground Water
Method: EPA 5030C/EPA 8260D Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23125C	09/25/23 19:35	VB23125C	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-002

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17318-002E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
‡ 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
‡ 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
‡ 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-002

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-002E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
† 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM
† 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23I25C	09/25/23 19:35	VB23I25C	JLM

Inorganic Anions by IC

Aliquot ID: A17318-002

Matrix: Ground Water

Method: EPA 9056A

Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	70000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 00:38	PW23I21F	09/22/23 00:38	W423I21A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 00:38	PW23I21F	09/22/23 00:38	W423I21A	RJM
5. Sulfate	54000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17318-002A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Hbt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-002

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC) Aliquot ID: **A17318-002A** Matrix: **Ground Water**
Method: EPA 9060A Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	U		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A	EZ

Phenolics, Total Aliquot ID: **A17318-002B** Matrix: **Ground Water**
Method: EPA 9065 Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/25/23	W223125B	CM

Chemical Oxygen Demand (COD) Aliquot ID: **A17318-002C** Matrix: **Ground Water**
Method: HACH 8000 Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	U		µg/L	5000	1.0	09/26/23	PW23126C	09/26/23	W223126A	EZ

Alkalinity by Titrimetry Aliquot ID: **A17318-002** Matrix: **Ground Water**
Method: SM 2320 B-2011 Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
† 1. Bicarbonate Alkalinity	300000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC
† 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC
† 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC

Residue, Filterable (TDS) Aliquot ID: **A17318-002** Matrix: **Ground Water**
Method: SM 2540 C-2015 Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	500000		µg/L	50000	1.3	NA	NA	09/21/23	WH23121B	CM

Nitrogen, Ammonia (Auto Analyzer) Aliquot ID: **A17318-002C** Matrix: **Ground Water**
Method: SM 4500-NH3 G-2011 Description: **MW-8dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-002

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-8dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17318-002C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-8dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Ammonia-N	U		ug/L	50	1.0	09/21/23	PW23121A	09/21/23	WU23121A	CM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-003

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17318-003C** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-17sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	20		µg/L	10	1.0	NA	NA	09/22/23	W323I22A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17318-003D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-17sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	9.6		µg/L	5.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
2. Barium	210		µg/L	100	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
4. Calcium	110000		µg/L	1200	50	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
7. Iron	3600		µg/L	100	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
9. Magnesium	30000		µg/L	400	50	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
10. Manganese	52		µg/L	50	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
12. Potassium	1300		µg/L	1000	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
14. Sodium	8200		µg/L	1000	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17318-003E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-17sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM

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11766 E Grand River
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Hbt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-003

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-003E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-17sr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
‡ 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
‡ 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
‡ 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:03	VB23I25C	JLM

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11766 E Grand River
8660 S Mackinaw Trail

Hbt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-003

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS						Aliquot ID:	A17318-003E	Matrix: Ground Water			
Method: EPA 5030C/EPA 8260D						Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.	
						P. Date	P. Batch	A. Date	A. Batch		
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
62. Vinyl Chloride	2.0		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23125C	09/25/23 20:03	VB23125C	JLM	

Inorganic Anions by IC					Aliquot ID:	A17318-003	Matrix: Ground Water			
Method: EPA 9056A					Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	9800		µg/L	1000	1.0	09/22/23	PW23121F	09/22/23	W423121A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 00:58	PW23121F	09/22/23 00:58	W423121A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23121F	09/22/23	W423121A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 00:58	PW23121F	09/22/23 00:58	W423121A	RJM
5. Sulfate	37000		µg/L	1000	1.0	09/22/23	PW23121F	09/22/23	W423121A	RJM

Carbon, Total Organic (TOC)	Aliquot ID:	A17318-003A	Matrix: Ground Water
Method: EPA 9060A	Description:	MW-17sr	

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-003

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID:	A17318-003A	Matrix: Ground Water			
Method: EPA 9060A						Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
1. Total Organic Carbon	U		ug/L	1000	1.0	09/25/23	PW23I25D	09/26/23	WS23I25A	EZ	

Phenolics, Total						Aliquot ID:	A17318-003B	Matrix: Ground Water			
Method: EPA 9065						Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init	
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/25/23	W223I25B	CM	

Chemical Oxygen Demand (COD)					Aliquot ID:	A17318-003C	Matrix: Ground Water			
Method: HACH 8000					Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init
1. COD	U		µg/L	5000	1.0	09/25/23	PW23I25A	09/25/23	W223I25A	EZ

Alkalinity by Titrimetry					Aliquot ID:	A17318-003	Matrix: Ground Water			
Method: SM 2320 B-2011					Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
± 1. Bicarbonate Alkalinity	410000		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
± 2. Carbonate Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
± 3. Hydroxide Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC

Residue, Filterable (TDS)					Aliquot ID:	A17318-003		Matrix: Ground Water		
Method: SM 2540 C-2015					Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Dissolved Solids	490000		µg/L	50000	1.3	NA	NA	09/21/23	WH23I21B	CM

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID:	A17318-003C		Matrix: Ground Water		
Method: SM 4500-NH3 G-2011						Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init	

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Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-003

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)
Method: SM 4500-NH3 G-2011

Aliquot ID: A17318-003C Matrix: Ground Water
Description: MW-17sr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Ammonia-N	87		µg/L	50	1.0	09/21/23	PW23I21A	09/21/23	WU23I21A	CM

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Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-004

Order: A17318
Date: 09/29/23

Client Identification: **Strata Environmental Services, Inc.**
Client Project Name: **Eaton County (926-1422)**
Client Project No: **926-1422**

Sample Description: **MW-17dr**
Sample No:
Sample Matrix: **Ground Water**

Chain of Custody: **N/A**
Collect Date: **09/21/23**
Collect Time: **10:45**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: A17318-004C Matrix: Ground Water
Method: EPA 0365.3 Description: MW-17dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	23		µg/L	10	1.0	NA	NA	09/22/23	W323I22A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: A17318-004D Matrix: Ground Water
Method: EPA 3005A (Dissolved)/EPA 6020A Description: MW-17dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	9.2		µg/L	5.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
2. Barium	260		µg/L	100	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
4. Calcium	140000		µg/L	1200	50	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
7. Iron	5900		µg/L	100	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
9. Magnesium	34000		µg/L	400	50	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
10. Manganese	86		µg/L	50	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
12. Potassium	1700		µg/L	1000	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
14. Sodium	12000		µg/L	1000	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: A17318-004E Matrix: Ground Water
Method: EPA 5030C/EPA 8260D Description: MW-17dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-004

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17318-004E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-17dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
26. Dichlorodifluoromethane	6.3		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
37. Diethyl Ether	14		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-004

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-004E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-17dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
62. Vinyl Chloride	11		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23I25C	09/25/23 20:30	VB23I25C	JLM

Inorganic Anions by IC

Aliquot ID: A17318-004

Matrix: Ground Water

Method: EPA 9056A

Description: MW-17dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	14000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 01:58	PW23I21F	09/22/23 01:58	W423I21A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 01:58	PW23I21F	09/22/23 01:58	W423I21A	RJM
5. Sulfate	28000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17318-004A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-17dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Hbt, MI 48842
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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-004

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID: A17318-004A	Matrix: Ground Water			
Method: EPA 9060A						Description: MW-17dr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	1500		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A	EZ

Phenolics, Total						Aliquot ID: A17318-004B	Matrix: Ground Water			
Method: EPA 9065						Description: MW-17dr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/25/23	W223125B	CM

Chemical Oxygen Demand (COD)						Aliquot ID: A17318-004C	Matrix: Ground Water			
Method: HACH 8000						Description: MW-17dr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	U		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A	EZ

Alkalinity by Titrimetry						Aliquot ID: A17318-004	Matrix: Ground Water			
Method: SM 2320 B-2011						Description: MW-17dr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	520000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC

Residue, Filterable (TDS)						Aliquot ID: A17318-004	Matrix: Ground Water			
Method: SM 2540 C-2015						Description: MW-17dr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	600000		µg/L	50000	1.3	NA	NA	09/21/23	WH23121B	CM

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID: A17318-004C	Matrix: Ground Water			
Method: SM 4500-NH₃ G-2011						Description: MW-17dr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-004

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: **A17318-004C**

Matrix: **Ground Water**

Method: **SM 4500-NH3 G-2011**

Description: **MW-17dr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	110		µg/L	50	1.0	09/21/23	PW23121A	09/21/23	WU23121A	CM

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-005

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-19s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17318-005C** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-19s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	U		µg/L	10	1.0	NA	NA	09/22/23	W323I22A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17318-005D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-19s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	7.3		µg/L	5.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
2. Barium	190		µg/L	100	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
4. Calcium	120000		µg/L	1200	50	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
7. Iron	2900		µg/L	100	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
9. Magnesium	36000		µg/L	400	50	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
10. Manganese	51		µg/L	50	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
12. Potassium	1600		µg/L	1000	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
14. Sodium	27000		µg/L	1000	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM
15. Zinc	640		µg/L	50	5.0	09/26/23	PT23I26B	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17318-005E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-19s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-005

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-19s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-005E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
± 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
± 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
± 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
± 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM

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Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-005

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-19s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17318-005E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-19s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
± 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM
± 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23I25C	09/25/23 20:58	VB23I25C	JLM

Inorganic Anions by IC

Aliquot ID: **A17318-005**

Matrix: **Ground Water**

Method: **EPA 9056A**

Description: **MW-19s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	39000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 02:19	PW23I21F	09/22/23 02:19	W423I21A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 02:19	PW23I21F	09/22/23 02:19	W423I21A	RJM
5. Sulfate	37000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: **A17318-005A**

Matrix: **Ground Water**

Method: **EPA 9060A**

Description: **MW-19s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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11766 E Grand River
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Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

lab@fibertec.com

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-005

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-19s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC) Aliquot ID: A17318-005A Matrix: Ground Water
Method: EPA 9060A Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	2200		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A	EZ

Phenolics, Total Aliquot ID: A17318-005B Matrix: Ground Water
Method: EPA 9065 Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/25/23	W223125B	CM

Chemical Oxygen Demand (COD) Aliquot ID: A17318-005C Matrix: Ground Water
Method: HACH 8000 Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	U		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A	EZ

Alkalinity by Titrimetry Aliquot ID: A17318-005 Matrix: Ground Water
Method: SM 2320 B-2011 Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	460000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A	ARC

Residue, Filterable (TDS) Aliquot ID: A17318-005 Matrix: Ground Water
Method: SM 2540 C-2015 Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	460000		µg/L	50000	1.3	NA	NA	09/21/23	WH23121B	CM

Nitrogen, Ammonia (Auto Analyzer) Aliquot ID: A17318-005C Matrix: Ground Water
Method: SM 4500-NH₃ G-2011 Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Holt, MI 48842
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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-005

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-19s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17318-005C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Ammonia-N	79		µg/L	50	1.0	09/21/23	PW23121A	09/21/23	WU23121A	CM

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Holt, MI 48842
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T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-006

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-18s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total					Aliquot ID: A17318-006C		Matrix: Ground Water			
Method: EPA 0365.3					Description: MW-18s					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	34		µg/L	10	1.0	NA	NA	09/22/23	W323I22A	CM

Trace Elements by ICP/MS, Dissolved					Aliquot ID: A17318-006D		Matrix: Ground Water			
Method: EPA 3005A (Dissolved)/EPA 6020A					Description: MW-18s					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	6.8		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
2. Barium	160		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
4. Calcium	100000		µg/L	1200	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
7. Iron	1500		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
9. Magnesium	31000		µg/L	400	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
10. Manganese	U		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
12. Potassium	1300		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
14. Sodium	12000		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
15. Zinc	240		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS					Aliquot ID: A17318-006E		Matrix: Ground Water			
Method: EPA 5030C/EPA 8260D					Description: MW-18s					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-006

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-18s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-006E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-18s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-006

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-18s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17318-006E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-18s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
† 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM
† 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23I25C	09/25/23 21:26	VB23I25C	JLM

Inorganic Anions by IC

Aliquot ID: **A17318-006**

Matrix: **Ground Water**

Method: **EPA 9056A**

Description: **MW-18s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	17000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 02:39	PW23I21F	09/22/23 02:39	W423I21A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 02:39	PW23I21F	09/22/23 02:39	W423I21A	RJM
5. Sulfate	39000		µg/L	1000	1.0	09/22/23	PW23I21F	09/22/23	W423I21A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: **A17318-006A**

Matrix: **Ground Water**

Method: **EPA 9060A**

Description: **MW-18s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Brighton, MI 48116
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T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-006

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-18s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:30
Sample Comments:					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.					

Carbon, Total Organic (TOC)					Aliquot ID:	A17318-006A	Matrix: Ground Water			
Method: EPA 9060A					Description:	MW-18s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	1500		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A	EZ

Phenolics, Total						Aliquot ID:	A17318-006B	Matrix: Ground Water			
Method: EPA 9065						Description:	MW-18s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/25/23	W223125B	CM	

Chemical Oxygen Demand (COD)						Aliquot ID:	A17318-006C	Matrix: Ground Water			
Method: HACH 8000						Description:	MW-18s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
1. COD	U		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A	EZ	

Alkalinity by Titrimetry					Aliquot ID:	A17318-006		Matrix: Ground Water		
Method: SM 2320 B-2011					Description:	MW-18s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Bicarbonate Alkalinity	380000		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
‡ 2. Carbonate Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
‡ 3. Hydroxide Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC

Residue, Filterable (TDS)					Aliquot ID:	A17318-006		Matrix: Ground Water		
Method: SM 2540 C-2015					Description:	MW-18s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	430000		µg/L	50000	1.3	NA	NA	09/21/23	WH23121B	CM

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID:	A17318-006C		Matrix: Ground Water		
Method: SM 4500-NH3 G-2011						Description:	MW-18s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init	

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-006

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-18s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17318-006C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-18s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	110		µg/L	50	1.0	09/21/23	PW23121A	09/21/23	WU23121A	CM

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T: (231) 775-8368

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Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-007

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	Trip Blank	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Blank: Trip	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A17318-007
Description: Trip Blank
Matrix: Blank: Trip

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
± 2. Acrylonitrile	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
3. Benzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
± 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
13. Carbon Disulfide	U	V+	µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
± 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
± 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM

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F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17318
Laboratory Sample Number: A17318-007

Order: A17318
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	Trip Blank	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/21/23
Client Project No:	926-1422	Sample Matrix:	Blank: Trip	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17318-007

Matrix: Blank: Trip

Method: EPA 5030C/EPA 8260D

Description: Trip Blank

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. Diethyl Ether	U		µg/L	10	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
39. 2-Hexanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
‡ 43. Methyl Iodide	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
‡ 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
45. MTBE	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
46. Naphthalene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
48. Styrene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
52. Toluene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/25/23	VB23I25C	09/25/23 17:19	VB23I25C	JLM

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Cadillac, MI 49601

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Definitions/Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- V+** Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-23-15 (TX)

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11766 E Grand River
8660 S Mackinaw Trail

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Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
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F: (517) 699-0388
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Phone (517) 676-6900 • Fax (517) 676-8834

Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

Client: EATON CO.

Project Name: ECLF

Project #: 926-1422

Send Results to: MCS

Sampling Personnel: SVS/NP

CHAIN OF CUSTODY

Lab Use		Sample Information				Preservative							Analysis Requested											
Lab Sample ID #	Date	Time	Sample Description and Location (e.g. MW-1)	PID	MATRIX	None	H2SO4	FHNO3	HC1	NaOH	Other	SEE ATTACHED LIST												
5	9-21-23	0915	MW-7r		W	2	2	1	4			X												
6		0940	MW-8dr		W	2	2	1	4			X												
7		1025	MW-17sr		W	2	2	1	4			X												
8		1045	MW-17dr		W	2	2	1	4			X												
9		1105	MW-19s		W	2	2	1	4			X												
10		1130	MW-18s		W	2	2	1	4			X												
			TRIP BLANK		X				3			X												

Received By Lab

SEP 21 2023

Initials: SV

Comments: PO # 6204

QUOTE # 00001518

Project # A17318
Temp: 7.8°C

Received
On Ice

Relinquished by Signature: <u>[Signature]</u>	Date: <u>9-21-23</u> Time: <u>12:15</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u></u> Time: <u></u>	Relinquished by Signature: <u></u>	Date: <u></u> Time: <u></u>	Received by: (Signature) <u></u>	Date: <u></u> Time: <u></u>
Relinquished by Signature: <u></u>	Date: <u></u> Time: <u></u>	Received by: (Signature) <u></u>	Date: <u></u> Time: <u></u>	Method of Shipment: <u></u>		Bill of Lading: <u></u>	
Received for Laboratory by: <u></u>	Date: <u></u> Time: <u></u>	Data Package Relinquished by: <u></u>	Date: <u></u> Time: <u></u>	Data Received by: <u></u>	Date: <u></u> Time: <u></u>		



Friday, September 29, 2023

Fibertec Project Number: A17353
Project Identification: Eaton County (926-1422) /926-1422
Submittal Date: 09/22/2023

Mr. Mike Serafini
Strata Environmental Services, Inc.
538 W. Ash Street
Mason, MI 48854

Dear Mr. Serafini,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Bailey Welch at 3:47 PM, Sep 29, 2023

For Heather L. Smith
Director of Laboratory Operations

Enclosures

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Brighton, MI 48116
Cadillac, MI 49601

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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-001

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17353-001C** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-2s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	20		µg/L	10	1.0	NA	NA	09/25/23	W323I25A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17353-001D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-2s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
2. Barium	U		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
4. Calcium	110000		µg/L	1200	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
7. Iron	430		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
9. Magnesium	34000		µg/L	400	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
10. Manganese	120		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
12. Potassium	1500		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
14. Sodium	20000		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
15. Zinc	1200		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17353-001E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-2s**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM

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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-001

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-001E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-2s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM

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Cadillac, MI 49601

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-001

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A17353-001E **Matrix: Ground Water**
Description: MW-2s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
† 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM
† 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 13:45	VB23I28A	JLM

Inorganic Anions by IC
Method: EPA 9056A

Aliquot ID: A17353-001 **Matrix: Ground Water**
Description: MW-2s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	6600		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 17:20	PW23I22B	09/22/23 17:20	W423I22A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 17:20	PW23I22B	09/22/23 17:20	W423I22A	RJM
5. Sulfate	36000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM

Carbon, Total Organic (TOC)
Method: EPA 9060A

Aliquot ID: A17353-001A **Matrix: Ground Water**
Description: MW-2s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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11766 E Grand River
8660 S Madeline Trail

Hbt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

lab@fibertecus.com

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-001

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID:	A17353-001A	Matrix:	Ground Water
Method: EPA 9060A						Description:	MW-2s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. Total Organic Carbon	1300		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A
									EZ

Phenolics, Total						Aliquot ID:	A17353-001B	Matrix:	Ground Water
Method: EPA 9065						Description:	MW-2s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/27/23	W223127A
									MJS

Chemical Oxygen Demand (COD)						Aliquot ID:	A17353-001C	Matrix:	Ground Water
Method: HACH 8000						Description:	MW-2s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. COD	U		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A
									EZ

Alkalinity by Titrimetry						Aliquot ID:	A17353-001	Matrix:	Ground Water
Method: SM 2320 B-2011						Description:	MW-2s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
± 1. Bicarbonate Alkalinity	350000		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123126A
									ARC
± 2. Carbonate Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123126A
									ARC
± 3. Hydroxide Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123126A
									ARC

Residue, Filterable (TDS)						Aliquot ID:	A17353-001	Matrix:	Ground Water
Method: SM 2540 C-2015						Description:	MW-2s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. Total Dissolved Solids	410000		µg/L	50000	1.3	NA	NA	09/22/23	WH23122C
									ARC

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID:	A17353-001C	Matrix:	Ground Water
Method: SM 4500-NH3 G-2011						Description:	MW-2s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch

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11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-001

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17353-001C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-2s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	U		µg/L	50	1.0	09/25/23	PW23I25B	09/25/23	WU23I25A	AVC

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Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-002

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:20
Sample Comments:					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.					

Phosphorus, Total						Aliquot ID: A17353-002C		Matrix: Ground Water		
Method: EPA 0365.3						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phosphorus	U		µg/L	10	1.0	NA	NA	09/25/23	W323125A	CM

Trace Elements by ICP/MS, Dissolved						Aliquot ID: A17353-002D		Matrix: Ground Water		
Method: EPA 3005A (Dissolved)/EPA 6020A						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	U		µg/L	5.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
2. Barium	U		µg/L	100	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
4. Calcium	94000		µg/L	1200	50	09/26/23	PT23126C	09/26/23	T423126B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
7. Iron	680		µg/L	100	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
9. Magnesium	25000		µg/L	400	50	09/26/23	PT23126C	09/26/23	T423126B	RJM
10. Manganese	U		µg/L	50	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
12. Potassium	1000		µg/L	1000	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
14. Sodium	4200		µg/L	1000	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
15. Zinc	1700		µg/L	50	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM

Volatile Organic Compounds (VOCs) by GC/MS						Aliquot ID: A17353-002E		Matrix: Ground Water		
Method: EPA 5030C/EPA 8260D						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23128A	09/28/23 14:13	VB23128A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-002

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-002E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-2d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
± 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
± 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
± 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
± 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

lab@fibertecus.com

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-002

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-002E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-2d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 14:13	VB23I28A	JLM

Inorganic Anions by IC

Aliquot ID: A17353-002

Matrix: Ground Water

Method: EPA 9056A

Description: MW-2d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	5500		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 17:40	PW23I22B	09/22/23 17:40	W423I22A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 17:40	PW23I22B	09/22/23 17:40	W423I22A	RJM
5. Sulfate	39000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17353-002A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-2d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-002

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID: A17353-002A	Matrix: Ground Water			
Method: EPA 9060A						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Organic Carbon	2000		µg/L	1000	1.0	09/25/23	PW23I25D	09/26/23	WS23I25A	EZ

Phenolics, Total						Aliquot ID: A17353-002B	Matrix: Ground Water			
Method: EPA 9065						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/27/23	W223I27A	MJS

Chemical Oxygen Demand (COD)						Aliquot ID: A17353-002C	Matrix: Ground Water			
Method: HACH 8000						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1.COD	U		µg/L	5000	1.0	09/25/23	PW23I25A	09/25/23	W223I25A	EZ

Alkalinity by Titrimetry					Aliquot ID: A17353-002	Matrix: Ground Water				
Method: SM 2320 B-2011					Description: MW-2d					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Bicarbonate Alkalinity	330000		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	AR
2. Carbonate Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	AR
3. Hydroxide Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	AR

Residue, Filterable (TDS)					Aliquot ID: A17353-002	Matrix: Ground Water				
Method: SM 2540 C-2015					Description: MW-2d					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	420000		µg/L	50000	1.3	NA	NA	09/22/23	WH23I22C	ARC

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID: A17353-002C	Matrix: Ground Water			
Method: SM 4500-NH3 G-2011						Description: MW-2d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init

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8660 S Mackinaw Trail

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Cadillac, MI 49601

T: (517) 699-0345
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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-002

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-2d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17353-002C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-2d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	U		µg/L	50	1.0	09/25/23	PW23I25B	09/25/23	WU23I25A	AVC

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-003

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17353-003C** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-15sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	740		µg/L	50	5.0	NA	NA	09/27/23	W323I27A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17353-003D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-15sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
2. Barium	140		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
4. Calcium	97000		µg/L	1200	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
7. Iron	5600		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
9. Magnesium	46000		µg/L	400	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
10. Manganese	U		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
12. Potassium	3300		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
14. Sodium	27000		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17353-003E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-15sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-003

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-003E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-15sr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
27. 1,1-Dichloroethane	4.8		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
28. 1,2-Dichloroethane	1.2		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
30. cis-1,2-Dichloroethene	69		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
37. Diethyl Ether	19		µg/L	10	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM

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F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-003

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A17353-003E**

Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **MW-15sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
62. Vinyl Chloride	1.6		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 14:40	VB23I28A	JLM

Inorganic Anions by IC

Aliquot ID: **A17353-003**

Matrix: **Ground Water**

Method: **EPA 9056A**

Description: **MW-15sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	31000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 18:00	PW23I22B	09/22/23 18:00	W423I22A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 18:00	PW23I22B	09/22/23 18:00	W423I22A	RJM
5. Sulfate	11000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: **A17353-003A**

Matrix: **Ground Water**

Method: **EPA 9060A**

Description: **MW-15sr**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
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Cadillac, MI 49601

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-003

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:35
Sample Comments:					
Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.					

Carbon, Total Organic (TOC)					Aliquot ID:	A17353-003A		Matrix: Ground Water		
Method: EPA 9060A					Description:	MW-15sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init
						P. Date	P. Batch	A. Date	A. Batch	
1. Total Organic Carbon	6200		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A	EZ

Phenolics, Total						Aliquot ID: A17353-003B	Matrix: Ground Water			
Method: EPA 9065						Description: MW-15sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/27/23	W223127A	MJS

Chemical Oxygen Demand (COD)						Aliquot ID: A17353-003C	Matrix: Ground Water			
Method: HACH 8000						Description: MW-15sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init
						P. Date	P. Batch	A. Date	A. Batch	
1. COD	12000		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A	EZ

Alkalinity by Titrimetry						Aliquot ID: A17353-003	Matrix: Ground Water			
Method: SM 2320 B-2011						Description: MW-15sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init
± 1. Bicarbonate Alkalinity	610000		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123126A	AR
± 2. Carbonate Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123126A	AR
± 3. Hydroxide Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123126A	AR

Residue, Filterable (TDS)					Aliquot ID: A17353-003	Matrix: Ground Water				
Method: SM 2540 C-2015					Description: MW-15sr					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	500000		µg/L	50000	1.3	NA	NA	09/22/23	WH23122C	ARC

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID:	A17353-003C		Matrix: Ground Water		
Method: SM 4500-NH3 G-2011						Description:	MW-15sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init	

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-003

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15sr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)
Method: SM 4500-NH3 G-2011

Aliquot ID: A17353-003C Matrix: Ground Water
Description: MW-15sr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	200		µg/L	50	1.0	09/25/23	PW23125B	09/25/23	WU23125A	AVC

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-004

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: A17353-004C Matrix: Ground Water
Method: EPA 0365.3 Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	12		µg/L	10	1.0	NA	NA	09/25/23	W323125A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: A17353-004D Matrix: Ground Water
Method: EPA 3005A (Dissolved)/EPA 6020A Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	5.6		µg/L	5.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
2. Barium	150		µg/L	100	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
4. Calcium	100000		µg/L	1200	50	09/26/23	PT23126C	09/26/23	T423126B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
7. Iron	3100		µg/L	100	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
9. Magnesium	26000		µg/L	400	50	09/26/23	PT23126C	09/26/23	T423126B	RJM
10. Manganese	55		µg/L	50	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
12. Potassium	1300		µg/L	1000	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
14. Sodium	5500		µg/L	1000	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23126C	09/26/23	T423126B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: A17353-004E Matrix: Ground Water
Method: EPA 5030C/EPA 8260D Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23128A	09/28/23 15:07	VB23128A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-004

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A17353-004E **Matrix: Ground Water**
Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM

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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-004

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-004E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
† 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM
† 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 15:07	VB23I28A	JLM

Inorganic Anions by IC

Aliquot ID: A17353-004

Matrix: Ground Water

Method: EPA 9056A

Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	6800		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 18:20	PW23I22B	09/22/23 18:20	W423I22A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 18:20	PW23I22B	09/22/23 18:20	W423I22A	RJM
5. Sulfate	41000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17353-004A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-004

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC) Aliquot ID: A17353-004A Matrix: Ground Water
Method: EPA 9060A Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Organic Carbon	1800		µg/L	1000	1.0	09/25/23	PW23I25D	09/26/23	WS23I25A	EZ

Phenolics, Total Aliquot ID: A17353-004B Matrix: Ground Water
Method: EPA 9065 Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/27/23	W223I27A	MJS

Chemical Oxygen Demand (COD) Aliquot ID: A17353-004C Matrix: Ground Water
Method: HACH 8000 Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	U		µg/L	5000	1.0	09/25/23	PW23I25A	09/25/23	W223I25A	EZ

Alkalinity by Titrimetry Aliquot ID: A17353-004 Matrix: Ground Water
Method: SM 2320 B-2011 Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	350000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC

Residue, Filterable (TDS) Aliquot ID: A17353-004 Matrix: Ground Water
Method: SM 2540 C-2015 Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	440000	*	µg/L	50000	1.3	NA	NA	09/22/23	WH23I22C	ARC

Nitrogen, Ammonia (Auto Analyzer) Aliquot ID: A17353-004C Matrix: Ground Water
Method: SM 4500-NH3 G-2011 Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-004

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15dr	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)
Method: SM 4500-NH3 G-2011

Aliquot ID: A17353-004C Matrix: Ground Water
Description: MW-15dr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	100		ppb	50	1.0	09/25/23	PW2325B	09/25/23	WLP2325A	AWC

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-005

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total					Aliquot ID:	A17353-005C		Matrix: Ground Water		
Method: EPA 0365.3					Description:	MW-10s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	U		µg/L	10	1.0	NA	NA	09/25/23	W323125A	CM

Trace Elements by ICP/MS, Dissolved					Aliquot ID:	A17353-005D		Matrix: Ground Water		
Method: EPA 3005A (Dissolved)/EPA 6020A					Description: MW-10s					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Arsenic	5.4		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
2. Barium	140		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
4. Calcium	130000		µg/L	1200	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
6. Copper	U		µg/L	4.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
7. Iron	2200		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
9. Magnesium	40000		µg/L	400	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
10. Manganese	U		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
12. Potassium	1400		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
14. Sodium	19000		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
15. Zinc	310		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS						Aliquot ID: A17353-005E	Matrix: Ground Water			
Method: EPA 5030C/EPA 8260D						Description: MW-10s				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM

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F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-005

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-005E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-10s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
† 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
† 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
† 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
† 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 15:34	VB23128A	JLM

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F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-005

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-005E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-10s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 15:34	VB23I28A	JLM

Inorganic Anions by IC

Aliquot ID: A17353-005

Matrix: Ground Water

Method: EPA 9056A

Description: MW-10s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	33000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 19:21	PW23I22B	09/22/23 19:21	W423I22A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 19:21	PW23I22B	09/22/23 19:21	W423I22A	RJM
5. Sulfate	35000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17353-005A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-10s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-005

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)						Aliquot ID:	A17353-005A	Matrix:	Ground Water
Method: EPA 9060A						Description:	MW-10s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. Total Organic Carbon	2200		µg/L	1000	1.0	09/25/23	PW23125D	09/26/23	WS23125A
									EZ

Phenolics, Total						Aliquot ID:	A17353-005B	Matrix:	Ground Water
Method: EPA 9065						Description:	MW-10s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/27/23	W223127A
									MJS

Chemical Oxygen Demand (COD)						Aliquot ID:	A17353-005C	Matrix:	Ground Water
Method: HACH 8000						Description:	MW-10s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. COD	U		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A
									EZ

Alkalinity by Titrimetry						Aliquot ID:	A17353-005	Matrix:	Ground Water
Method: SM 2320 B-2011						Description:	MW-10s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
± 1. Bicarbonate Alkalinity	470000		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A
									ARC
± 2. Carbonate Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A
									ARC
± 3. Hydroxide Alkalinity	U		µg CaCO ₃ /L	20000	1.0	NA	NA	09/26/23	W123126A
									ARC

Residue, Filterable (TDS)						Aliquot ID:	A17353-005	Matrix:	Ground Water
Method: SM 2540 C-2015						Description:	MW-10s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch
1. Total Dissolved Solids	600000		µg/L	50000	1.3	NA	NA	09/22/23	WH23122C
									ARC

Nitrogen, Ammonia (Auto Analyzer)						Aliquot ID:	A17353-005C	Matrix:	Ground Water
Method: SM 4500-NH₃ G-2011						Description:	MW-10s		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis	
						P. Date	P. Batch	A. Date	A. Batch

1914 Holloway Drive
11766 E Grand River
8660 S Mackinaw Trail

East, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
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F: (810) 220-3311
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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-005

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10s	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable †: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17353-005C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-10s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Ammonia-N	U		µg/L	50	1.0	09/25/23	PW23125B	09/25/23	WU23125A	AVC

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11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

lab@fibertec.us

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-006

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Phosphorus, Total Aliquot ID: **A17353-006C** Matrix: **Ground Water**
Method: EPA 0365.3 Description: **MW-10d**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Phosphorus	61		µg/L	10	1.0	NA	NA	09/25/23	W323I25A	CM

Trace Elements by ICP/MS, Dissolved Aliquot ID: **A17353-006D** Matrix: **Ground Water**
Method: EPA 3005A (Dissolved)/EPA 6020A Description: **MW-10d**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Arsenic	5.5		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
2. Barium	130		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
3. Cadmium	U		µg/L	1.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
4. Calcium	100000		µg/L	1200	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
5. Chromium	U		µg/L	10	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
6. Copper	7.1		µg/L	4.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
7. Iron	2900		µg/L	100	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
8. Lead	U		µg/L	3.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
9. Magnesium	30000		µg/L	400	50	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
10. Manganese	U		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
11. Nickel	U		µg/L	20	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
12. Potassium	1100		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
13. Selenium	U		µg/L	5.0	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
14. Sodium	4600		µg/L	1000	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM
15. Zinc	U		µg/L	50	5.0	09/26/23	PT23I26C	09/26/23	T423I26B	RJM

Volatile Organic Compounds (VOCs) by GC/MS Aliquot ID: **A17353-006E** Matrix: **Ground Water**
Method: EPA 5030C/EPA 8260D Description: **MW-10d**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-006

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-006E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-10d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
37. Diethyl Ether	U		µg/L	10	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-006

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-006E

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: MW-10d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 16:01	VB23I28A	JLM

Inorganic Anions by IC

Aliquot ID: A17353-006

Matrix: Ground Water

Method: EPA 9056A

Description: MW-10d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Chloride	6000		µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
2. Nitrate-N	U		µg/L	23	1.0	09/22/23 19:41	PW23I22B	09/22/23 19:41	W423I22A	RJM
3. Nitrate-N + Nitrite-N	U		µg/L	53	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM
4. Nitrite-N	U		µg/L	30	1.0	09/22/23 19:41	PW23I22B	09/22/23 19:41	W423I22A	RJM
5. Sulfate	45000	F+	µg/L	1000	1.0	09/22/23	PW23I22B	09/22/23	W423I22A	RJM

Carbon, Total Organic (TOC)

Aliquot ID: A17353-006A

Matrix: Ground Water

Method: EPA 9060A

Description: MW-10d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-006

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Carbon, Total Organic (TOC)					Aliquot ID: A17353-006A	Matrix: Ground Water					
Method: EPA 9060A					Description: MW-10d						
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis			
						P. Date	P. Batch	A. Date	A. Batch	Init.	
1. Total Organic Carbon	1200		µg/L	1000	1.0	09/25/23	PW23125D	09/27/23	WS23125A	EZ	

Phenolics, Total					Aliquot ID:	A17353-006B		Matrix: Ground Water		
Method: EPA 9065					Description:	MW-10d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Phenolics	U		µg/L	50	1.0	NA	NA	09/27/23	W223127A	MJS

Chemical Oxygen Demand (COD)					Aliquot ID:	A17353-006C		Matrix: Ground Water		
Method: HACH 8000					Description:	MW-10d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. COD	U		µg/L	5000	1.0	09/25/23	PW23125A	09/25/23	W223125A	EZ

Alkalinity by Titrimetry					Aliquot ID: A17353-006	Matrix: Ground Water				
Method: SM 2320 B-2011					Description: MW-10d					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Bicarbonate Alkalinity	360000		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
± 2. Carbonate Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC
± 3. Hydroxide Alkalinity	U		µg CaCO3/L	20000	1.0	NA	NA	09/26/23	W123I26A	ARC

Residue, Filterable (TDS)					Aliquot ID: A17353-006	Matrix: Ground Water				
Method: SM 2540 C-2015					Description: MW-10d					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Total Dissolved Solids	440000		µg/L	50000	1.3	NA	NA	09/22/23	WH23I22C	ARC

Nitrogen, Ammonia (Auto Analyzer)					Aliquot ID:	A17353-006C		Matrix: Ground Water		
Method: SM 4500-NH3 G-2011					Description:	MW-10d				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.

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11766 E Grand River
8660 S Mackinaw Trail

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F: (810) 220-3311
F: (231) 775-8584

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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-006

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-10d	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

Nitrogen, Ammonia (Auto Analyzer)

Aliquot ID: A17353-006C

Matrix: Ground Water

Method: SM 4500-NH3 G-2011

Description: MW-10d

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Ammonia-N	110		µg/L	50	1.0	09/25/23	PW23I25B	09/25/23	WU23I25A	AVC

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Cadillac, MI 49601

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

lab@fibertecus.com

Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-007

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	Trip Blank	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Blank: Trip	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-007

Matrix: Blank: Trip

Method: EPA 5030C/EPA 8260D

Description: Trip Blank

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
3. Benzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
4. Bromobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
5. Bromochloromethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
6. Bromodichloromethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
‡ 7. Bromoform (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
8. Bromomethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
9. 2-Butanone	U		µg/L	25	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
10. n-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
11. sec-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
12. tert-Butylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
13. Carbon Disulfide	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
15. Chlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
16. Chloroethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
17. Chloroform	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
18. Chloromethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
21. Dibromochloromethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
22. Dibromomethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
33. 1,3-Dichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
‡ 34. 1,1-Dichloropropene	U		µg/L	1.0	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
35. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM
36. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	09/28/23	VB23128A	09/28/23 16:29	VB23128A	JLM

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
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Analytical Laboratory Report
Laboratory Project Number: A17353
Laboratory Sample Number: A17353-007

Order: A17353
Date: 09/29/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	Trip Blank	Chain of Custody:	N/A
Client Project Name:	Eaton County (926-1422)	Sample No:		Collect Date:	09/22/23
Client Project No:	926-1422	Sample Matrix:	Blank: Trip	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A17353-007

Matrix: Blank: Trip

Method: EPA 5030C/EPA 8260D

Description: Trip Blank

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. Diethyl Ether	U		µg/L	10	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
38. Ethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
39. 2-Hexanone	U	V+	µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
40. Isopropylbenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
42. Methylene Chloride	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
‡ 43. Methyl Iodide	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
‡ 44. 2-Methylnaphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
45. MTBE	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
46. Naphthalene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
47. n-Propylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
48. Styrene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
49. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
50. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
51. Tetrachloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
52. Toluene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
53. 1,2,3-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
54. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
55. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
‡ 56. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
57. Trichloroethene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
58. Trichlorofluoromethane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
59. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
60. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
61. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
62. Vinyl Chloride	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
63. m&p-Xylene	U		µg/L	2.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
64. o-Xylene	U		µg/L	1.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM
‡ 65. Xylenes	U		µg/L	3.0	1.0	09/28/23	VB23I28A	09/28/23 16:29	VB23I28A	JLM

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- *** : Duplicate analysis not within control limits.
F+ : Recovery from the spiked aliquot exceeds the upper control limit (matrix spike or matrix spike duplicate).
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

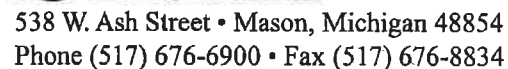
T104704518-23-15 (TX)

1914 Holloway Drive
11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

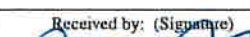


Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

Sampling Personnel: SVS / NP

[illegible]

Received
On Ice

Relinquished by Signature: 	Date 9-22-23	Time 1135	Received by: (Signature) 	Date 9/22/23	Time 11:35	Relinquished by Signature:	Date	Time	Received by: (Signature)	Date	Time
Relinquished by Signature:	Date	Time	Received by: (Signature)	Date	Time	Method of Shipment:			Bill of Lading:		
Received for Laboratory by:	Date	Time	Data Package Relinquished by:	Date	Time	Data Received by:	Date	Time			

ATTACHMENT 4

TABLE 2. Summary of Analytical Results

ANALYTES		TMDL	RL	Updated GRCC DW/GSI	MW-2s	MW-2d	MW-3	MW-7r	MW-8s	MW-8dr	MW-10s	MW-10d
ORGANICS												
1	Acetone	50	25	730/1,700	ND	ND	ND	ND	ND	ND	ND	ND
2	Acrylonitrile	2	1	2.6	ND	ND	ND	ND	ND	ND	ND	ND
3	Benzene	1	1	5/200	ND	ND	ND	ND	ND	ND	ND	ND
4	Bromobenzene	1	1	18	ND	ND	ND	ND	ND	ND	ND	ND
5	Bromochloromethane	1	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
6	Bromodichloromethane	1	1	80	ND	ND	ND	ND	ND	ND	ND	ND
7	Bromoform	1	1	80	ND	ND	ND	ND	ND	ND	ND	ND
8	Bromomethane (Methyl Bromide)	5	5	10	ND	ND	ND	ND	ND	ND	ND	ND
9	2-Butanone (MEK)	25	50	13,000/2,200	ND	ND	ND	ND	ND	ND	ND	ND
10	n-Butylbenzene	1	1	80	ND	ND	ND	ND	ND	ND	ND	ND
11	sec-Butylbenzene	1	1	80	ND	ND	ND	ND	ND	ND	ND	ND
12	tert-Butylbenzene	1	1	80	ND	ND	ND	ND	ND	ND	ND	ND
13	Carbon Disulfide	5	5	800	ND	ND	ND	ND	ND	ND	ND	ND
14	Carbon Tetrachloride	1	1	5/38	ND	ND	ND	ND	ND	ND	ND	ND
15	Chlorobenzene	1	1	100/25	ND	ND	ND	ND	ND	ND	ND	ND
16	Chloroethane	5	2	430/1,100	ND	ND	ND	ND	ND	ND	ND	ND
17	Chloroform	1	1	80/350	ND	ND	ND	ND	ND	ND	ND	ND
18	Chloromethane (Methyl Chloride)	5	5	260	ND	ND	ND	ND	ND	ND	ND	ND
19	2-Chlorotoluene	5	1	150	ND	ND	ND	ND	ND	ND	ND	ND
20	1,2-Dibromo-3-Chloropropane	0.2	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
21	1,2-Dibromoethane (Ethylene Dibromide)	0.05	1	0.05/5.7	---	---	---	---	---	---	---	---
22	Dibromochloromethane	---	1	80	ND	ND	ND	ND	ND	ND	ND	ND
23	Dibromomethane	5	1	80	ND	ND	ND	ND	ND	ND	ND	ND
24	1,2-Dichlorobenzene	1	1	600/13	ND	ND	ND	ND	ND	ND	ND	ND
25	1,3-Dichlorobenzene	1	1	6.6/28	ND	ND	ND	ND	ND	ND	ND	ND
26	1,4-Dichlorobenzene	1	1	75/17	ND	ND	ND	ND	ND	ND	ND	ND
27	trans-1,4-Dichloro-2-Butene	1		NA	---	---	---	---	---	---	---	---
28	Dichlorodifluoromethane	5	1	1,700	ND	ND	ND	ND	ND	ND	ND	ND
29	1,1-Dichloroethane	1	1	880/740	ND	ND	ND	ND	ND	ND	ND	ND
30	1,2-Dichloroethane	1	1	5/360	ND	ND	ND	ND	ND	ND	ND	ND
31	1,1-Dichloroethene	1	1	7/130	ND	ND	ND	ND	ND	ND	ND	ND
32	cis-1,2-Dichloroethene	1	1	70/620	ND	ND	ND	ND	ND	ND	ND	ND
33	trans-1,2-Dichloroethene	1	1	100/1,500	ND	ND	ND	ND	ND	ND	ND	ND
34	1,2-Dichloropropane	1	1	5/230	ND	ND	ND	ND	ND	ND	ND	ND
35	1,3-Dichloropropane	1	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
36	1,1-Dichloropropene	1	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
37	cis-1,3-Dichloropropene	1	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
38	trans-1,3-Dichloropropene	1	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
39	Diethyl Ether	10	10	10	ND	ND	ND	ND	ND	ND	ND	ND
40	Ethylbenzene	1	1	74/18	ND	ND	ND	ND	ND	ND	ND	ND
41	Fluorotrichloromethane (Trichlorofluoromethane)	1		2,600	---	---	---	---	---	---	---	---
42	2-Hexanone (MBK)	50	50	1,000	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 2. Summary of Analytical Results

	ANALYTES	TMDL	RL	Updated GRCC DW/GSI	MW-2s	MW-2d	MW-3	MW-7r	MW-8s	MW-8dr	MW-10s	MW-10d
43	Isopropylbenzene	5	1	800/28	ND	ND	ND	ND	ND	ND	ND	ND
44	Methyl Iodide	1	1	NA	ND	ND	ND	ND	ND	ND	ND	ND
45	Methylene Chloride	5	5	5/1,500	ND	ND	ND	ND	ND	ND	ND	ND
46	2-Methylnaphthalene	5	5	260/19	ND	ND	ND	ND	ND	ND	ND	ND
47	4-Methyl-2-Pentanone (MIBK)	50	50	1,800	ND	ND	ND	ND	ND	ND	ND	ND
48	Methyl tert butyl ether (MTBE)	5	5	40/7,100	ND	ND	ND	ND	ND	ND	ND	ND
49	Naphthalene	5	5	520/11	ND	ND	ND	ND	ND	ND	ND	ND
50	n-Propylbenzene	1	1	80	ND	ND	ND	ND	ND	ND	ND	ND
51	Styrene	1	1	100/80	ND	ND	ND	ND	ND	ND	ND	ND
52	1,1,1,2-Tetrachloroethane	1	1	77	ND	ND	ND	ND	ND	ND	ND	ND
53	1,1,2,2-Tetrachloroethane	1	1	8.5/78	ND	ND	ND	ND	ND	ND	ND	ND
54	Tetrachloroethene	1	1	5/60	ND	ND	ND	ND	ND	ND	ND	ND
55	Toluene	1	1	790/270	ND	ND	ND	ND	ND	ND	ND	ND
56	1,2,3-Trichlorobenzene	---	5	NA	ND	ND	ND	ND	ND	ND	ND	ND
57	1,2,4-Trichlorobenzene	5	5	70/99	ND	ND	ND	ND	ND	ND	ND	ND
58	1,1,1-Trichloroethane	1	1	200/89	ND	ND	ND	ND	ND	ND	ND	ND
59	1,1,2-Trichloroethane	1	1	5/330	ND	ND	ND	ND	ND	ND	ND	ND
60	Trichloroethene	1	1	5/200	ND	ND	ND	ND	ND	ND	ND	ND
61	1,2,3-Trichloropropane	1	1	42	ND	ND	ND	ND	ND	ND	ND	ND
62	1,2,4-Trimethylbenzene	1	5	63/17	ND	ND	ND	ND	ND	ND	ND	ND
63	1,3,5-Trimethylbenzene	1.0	1	72/45	ND	ND	ND	ND	ND	ND	ND	ND
64	Vinyl Acetate	100	5	640	ND	ND	ND	ND	ND	ND	ND	ND
65	Vinyl Chloride	1	1	2/13	ND	ND	ND	1.2	ND	ND	ND	ND
66	Xylenes	3	3	280/49	ND	ND	ND	ND	ND	ND	ND	ND
TRACE ELEMENTS BY ICP/MS												
	Arsenic	5	5	10/10	ND	ND	ND	ND	ND	ND	5.4	5.5
	Barium	100	100	2,000	ND	ND	ND	ND	ND	ND	140	130
	Cadmium	1	1	5	ND	ND	ND	ND	ND	ND	ND	ND
	Calcium	---	60000	NA	110,000	94,000	100,000	120,000	89,000	100,000	130,000	100,000
	Chromium	10	10	100/11	ND	ND	ND	ND	ND	ND	ND	ND
	Copper	4	4	1,000	ND	ND	ND	ND	ND	ND	ND	7.1
	Iron	200	100	300	430	680	260	1,300	ND	ND	2,200	2,900
	Lead	3	3	4	ND	ND	ND	ND	ND	ND	ND	ND
	Magnesium	1000	300	400,000	34,000	25,000	30,000	39,000	20,000	28,000	40,000	30,000
	Manganese	50	50	50	120	ND	ND	220	ND	240	ND	ND
	Nickel	20	20	100	ND	ND	ND	ND	ND	ND	ND	ND
	Potassium	---	1000	NA	1,500	1,000	1,300	ND	1,100	1,300	1,400	1,100
	Selenium	5	5	50/5	ND	ND	ND	ND	ND	ND	ND	ND
	Sodium	1000	1000	230,000	20,000	4,200	7,200	3,400	2,800	22,000	19,000	4,600
	Zinc	50	50	2,400	1,200	1,700	120	ND	340	ND	310	ND
TRACE ELEMENTS BY CVAAS												
	Mercury	0.001	0.2	2/0.0013	---	---	---	---	---	---	---	---

TABLE 2. Summary of Analytical Results

ANALYTES	TMDL	RL	Updated GRCC DW/GSI	MW-2s	MW-2d	MW-3	MW-7r	MW-8s	MW-8dr	MW-10s	MW-10d
ALKALINITY AND INORGANICS											
Total Alkalinity	---	---	NA	350,000	330,000	370,000	530,000	310,000	300,000	470,000	360,000
Bicarbonate Alkalinity	---	20000	NA	350,000	330,000	370,000	530,000	310,000	300,000	470,000	360,000
Carbonate Alkalinity	---	20000	NA	ND	ND	ND	ND	ND	ND	ND	ND
Hydroxide Alkalinity	---	20000	NA	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	10000	1000	250,000	6,600	5,500	2,600	1,900	1,900	70,000	33,000	6,000
Nitrate, as N	100	23	10,000	ND	ND	ND	ND	94	ND	ND	ND
Nitrate + Nitrite (as N)	---	53	NA	ND	ND	ND	ND	94	ND	ND	ND
Nitrite, as N	100	30	1,000	ND	ND	ND	ND	ND	ND	ND	ND
Sulfate	1000	1000	250,000	36,000	39,000	46,000	9,300	5,400	54,000	35,000	45,000
Total Organic Carbon (TOC)	---	1000	NA	1,300	2,000	2,200	1,700	ND	ND	2,200	1,200
Phenols (Colormetric)	---	50	4,400/450	ND	ND	ND	ND	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	---	5000	NA	ND	ND	16,000	ND	ND	ND	ND	ND
Total Dissolved Solids (TDS)	10000	40000	500,000/500,000 (EE)	410,000	420,000	410,000	490,000	330,000	500,000	600,000	440,000
Nitrogen, Ammonia as N	25	50	10,000/CC	ND	ND	ND	ND	ND	ND	ND	110
Phosphorous, Total	10	10	63,000/1,000 (EE)	20	ND	16	ND	42	ND	ND	61

NOTES: All Concentrations reported as ug/L or parts per billion

TMDL: Target Method Detection Limit

RL: Lab Reporting Limit

ND: Not Detected above compound-specific reporting limits

NA or ---: Not Available

CC: Standard is pH and temperature dependent and is approximately 763 ppb

EE: Standard is required by Section 20120(15) of NREPA

Shaded value exceeds DW GRCC

Boxed cell exceeds GSI GRCC

Metal concentrations reported as dissolved for groundwater/monitor well samples

Metal concentrations reported as total for surface water samples

** : Duplicate analysis outside control limits

Surface water value is not compared to DW/GSI GRCC

TABLE 2. Summary of Analytical Results

ANALYTES		TMDL	RL	Updated GRCC DW/GSI	MW-12r	MW-15sr	MW-15dr	MW-16	MW-17sr	MW-17dr	MW-18s	MW-19s
ORGANICS												
1	Acetone	50	25	730/1,700	---	ND	ND	---	ND	ND	ND	ND
2	Acrylonitrile	2	1	2.6	---	ND	ND	---	ND	ND	ND	ND
3	Benzene	1	1	5/200	---	ND	ND	---	ND	ND	ND	ND
4	Bromobenzene	1	1	18	---	ND	ND	---	ND	ND	ND	ND
5	Bromochloromethane	1	1	NA	---	ND	ND	---	ND	ND	ND	ND
6	Bromodichloromethane	1	1	80	---	ND	ND	---	ND	ND	ND	ND
7	Bromoform	1	1	80	---	ND	ND	---	ND	ND	ND	ND
8	Bromomethane (Methyl Bromide)	5	5	10	---	ND	ND	---	ND	ND	ND	ND
9	2-Butanone (MEK)	25	50	13,000/2,200	---	ND	ND	---	ND	ND	ND	ND
10	n-Butylbenzene	1	1	80	---	ND	ND	---	ND	ND	ND	ND
11	sec-Butylbenzene	1	1	80	---	ND	ND	---	ND	ND	ND	ND
12	tert-Butylbenzene	1	1	80	---	ND	ND	---	ND	ND	ND	ND
13	Carbon Disulfide	5	5	800	---	ND	ND	---	ND	ND	ND	ND
14	Carbon Tetrachloride	1	1	5/38	---	ND	ND	---	ND	ND	ND	ND
15	Chlorobenzene	1	1	100/25	---	ND	ND	---	ND	ND	ND	ND
16	Chloroethane	5	2	430/1,100	---	ND	ND	---	ND	ND	ND	ND
17	Chloroform	1	1	80/350	---	ND	ND	---	ND	ND	ND	ND
18	Chloromethane (Methyl Chloride)	5	5	260	---	ND	ND	---	ND	ND	ND	ND
19	2-Chlorotoluene	5	1	150	---	ND	ND	---	ND	ND	ND	ND
20	1,2-Dibromo-3-Chloropropane	0.2	1	NA	---	ND	ND	---	ND	ND	ND	ND
21	1,2-Dibromoethane (Ethylene Dibromide)	0.05	1	0.05/5.7	---	---	---	---	---	---	---	---
22	Dibromochloromethane	---	1	80	---	ND	ND	---	ND	ND	ND	ND
23	Dibromomethane	5	1	80	---	ND	ND	---	ND	ND	ND	ND
24	1,2-Dichlorobenzene	1	1	600/13	---	ND	ND	---	ND	ND	ND	ND
25	1,3-Dichlorobenzene	1	1	6.6/28	---	ND	ND	---	ND	ND	ND	ND
26	1,4-Dichlorobenzene	1	1	75/17	---	ND	ND	---	ND	ND	ND	ND
27	trans-1,4-Dichloro-2-Butene	1		NA	---	---	---	---	---	---	---	---
28	Dichlorodifluoromethane	5	1	1,700	---	ND	ND	---	ND	6.3	ND	ND
29	1,1-Dichloroethane	1	1	880/740	---	4.8	ND	---	ND	ND	ND	ND
30	1,2-Dichloroethane	1	1	5/360	---	1.2	ND	---	ND	ND	ND	ND
31	1,1-Dichloroethene	1	1	7/130	---	ND	ND	---	ND	ND	ND	ND
32	cis-1,2-Dichloroethene	1	1	70/620	---	69	ND	---	ND	ND	ND	ND
33	trans-1,2-Dichloroethene	1	1	100/1,500	---	ND	ND	---	ND	ND	ND	ND
34	1,2-Dichloropropane	1	1	5/230	---	ND	ND	---	ND	ND	ND	ND
35	1,3-Dichloropropane	1	1	NA	---	ND	ND	---	ND	ND	ND	ND
36	1,1-Dichloropropene	1	1	NA	---	ND	ND	---	ND	ND	ND	ND
37	cis-1,3-Dichloropropene	1	1	NA	---	ND	ND	---	ND	ND	ND	ND
38	trans-1,3-Dichloropropene	1	1	NA	---	ND	ND	---	ND	ND	ND	ND
39	Diethyl Ether	10	10	10	---	19	ND	---	ND	14	ND	ND
40	Ethylbenzene	1	1	74/18	---	ND	ND	---	ND	ND	ND	ND
41	Fluorotrichloromethane (Trichlorofluoromethane)	1		2,600	---	---	---	---	---	---	---	---
42	2-Hexanone (MBK)	50	50	1,000	---	ND	ND	---	ND	ND	ND	ND

TABLE 2. Summary of Analytical Results

ANALYTES		TMDL	RL	Updated GRCC DW/GSI	MW-12r	MW-15sr	MW-15dr	MW-16	MW-17sr	MW-17dr	MW-18s	MW-19s
43	Isopropylbenzene	5	1	800/28	---	ND	ND	---	ND	ND	ND	ND
44	Methyl Iodide	1	1	NA	---	ND	ND	---	ND	ND	ND	ND
45	Methylene Chloride	5	5	5/1,500	---	ND	ND	---	ND	ND	ND	ND
46	2-Methylnaphthalene	5	5	260/19	---	ND	ND	---	ND	ND	ND	ND
47	4-Methyl-2-Pentanone (MIBK)	50	50	1,800	---	ND	ND	---	ND	ND	ND	ND
48	Methyl tert butyl ether (MTBE)	5	5	40/7,100	---	ND	ND	---	ND	ND	ND	ND
49	Naphthalene	5	5	520/11	---	ND	ND	---	ND	ND	ND	ND
50	n-Propylbenzene	1	1	80	---	ND	ND	---	ND	ND	ND	ND
51	Styrene	1	1	100/80	---	ND	ND	---	ND	ND	ND	ND
52	1,1,1,2-Tetrachloroethane	1	1	77	---	ND	ND	---	ND	ND	ND	ND
53	1,1,2,2-Tetrachloroethane	1	1	8.5/78	---	ND	ND	---	ND	ND	ND	ND
54	Tetrachloroethene	1	1	5/60	---	ND	ND	---	ND	ND	ND	ND
55	Toluene	1	1	790/270	---	ND	ND	---	ND	ND	ND	ND
56	1,2,3-Trichlorobenzene	---	5	NA	---	ND	ND	---	ND	ND	ND	ND
57	1,2,4-Trichlorobenzene	5	5	70/99	---	ND	ND	---	ND	ND	ND	ND
58	1,1,1-Trichloroethane	1	1	200/89	---	ND	ND	---	ND	ND	ND	ND
59	1,1,2-Trichloroethane	1	1	5/330	---	ND	ND	---	ND	ND	ND	ND
60	Trichloroethene	1	1	5/200	---	ND	ND	---	ND	ND	ND	ND
61	1,2,3-Trichloropropane	1	1	42	---	ND	ND	---	ND	ND	ND	ND
62	1,2,4-Trimethylbenzene	1	5	63/17	---	ND	ND	---	ND	ND	ND	ND
63	1,3,5-Trimethylbenzene	1.0	1	72/45	---	ND	ND	---	ND	ND	ND	ND
64	Vinyl Acetate	100	5	640	---	ND	ND	---	ND	ND	ND	ND
65	Vinyl Chloride	1	1	2/13	---	1.6	ND	---	2.0	11	ND	ND
66	Xylenes	3	3	280/49	---	ND	ND	---	ND	ND	ND	ND
TRACE ELEMENTS BY ICP/MS					---							
	Arsenic	5	5	10/10	---	ND	5.6	---	9.6	9.2	6.8	7.3
	Barium	100	100	2,000	---	140	150	---	210	260	160	190
	Cadmium	1	1	5	---	ND	ND	---	ND	ND	ND	ND
	Calcium	---	60000	NA	---	97,000	100,000	---	110,000	140,000	100,000	120,000
	Chromium	10	10	100/11	---	ND	ND	---	ND	ND	ND	ND
	Copper	4	4	1,000	---	ND	ND	---	ND	ND	ND	ND
	Iron	200	100	300	---	5,600	3,100	---	3,600	5,900	1,500	2,900
	Lead	3	3	4	---	ND	ND	---	ND	ND	ND	ND
	Magnesium	1000	300	400,000	---	46,000	26,000	---	30,000	34,000	31,000	36,000
	Manganese	50	50	50	---	ND	ND	---	52	86	ND	51
	Nickel	20	20	100	---	ND	ND	---	ND	ND	ND	ND
	Potassium	---	1000	NA	---	3,300	1,300	---	1,300	1,700	1,300	1,600
	Selenium	5	5	50/5	---	ND	ND	---	ND	ND	ND	ND
	Sodium	1000	1000	230,000	---	27,000	5,500	---	8,200	12,000	12,000	27,000
	Zinc	50	50	2,400	---	ND	ND	---	ND	ND	240	640
TRACE ELEMENTS BY CVAAS					---							
	Mercury	0.001	0.2	2/0.0013	---	---	---	---	---	---	---	---

TABLE 2. Summary of Analytical Results

ANALYTES	TMDL	RL	Updated GRCC DW/GSI	MW-12r	MW-15sr	MW-15dr	MW-16	MW-17sr	MW-17dr	MW-18s	MW-19s
ALKALINITY AND INORGANICS				---	---	---	---	---	---	---	---
Total Alkalinity	---	---	NA	---	610,000	350,000	---	410,000	520,000	380,000	460,000
Bicarbonate Alkalinity	---	20000	NA	---	610,000	350,000	---	410,000	520,000	380,000	460,000
Carbonate Alkalinity	---	20000	NA	---	ND	ND	---	ND	ND	ND	ND
Hydroxide Alkalinity	---	20000	NA	---	ND	ND	---	ND	ND	ND	ND
Chloride	10000	1000	250,000	---	31,000	6,800	---	9,800	14,000	17,000	39,000
Nitrate, as N	100	23	10,000	---	ND	ND	---	ND	ND	ND	ND
Nitrate + Nitrite (as N)	---	53	NA	---	ND	ND	---	ND	ND	ND	ND
Nitrite, as N	100	30	1,000	---	ND	ND	---	ND	ND	ND	ND
Sulfate	1000	1000	250,000	---	11,000	41,000	---	37,000	28,000	39,000	37,000
Total Organic Carbon (TOC)	---	1000	NA	---	6,200	1,800	---	ND	1,500	1,500	2,200
Phenols (Colormetric)	---	50	4,400/450	---	ND	ND	---	ND	ND	ND	ND
Chemical Oxygen Demand (COD)	---	5000	NA	---	12,000	ND	---	ND	ND	ND	ND
Total Dissolved Solids (TDS)	10000	40000	500,000/500,000 (EE)	---	500,000	440,000	---	490,000	600,000	430,000	460,000
Nitrogen, Ammonia as N	25	50	10,000/CC	---	200	100	---	87	110	110	79
Phosphorous, Total	10	10	63,000/1,000 (EE)	---	740	12	---	20	23	34	ND

NOTES: All Concentrations reported as ug/L or parts per billion

TMDL: Target Method Detection Limit

RL: Lab Reporting Limit

ND: Not Detected above compound-specific reporting limits

NA or ---: Not Available

CC: Standard is pH and temperature dependent and is approximately 763 ppb

EE: Standard is required by Section 20120(15) of NREPA

Shaded value exceeds DW GRCC

Boxed cell exceeds GSI GRCC

Metal concentrations reported as dissolved for groundwater/monitor well samples

Metal concentrations reported as total for surface water samples

**:. Duplicate analysis outside control limits

Surface water value is not compared to DW/GSI GRCC

TABLE 2. Summary of Analytical Results

ANALYTES		TMDL	RL	Updated GRCC DW/GSI	SW-1	SW-2
ORGANICS						
1	Acetone	50	25	730/1,700	ND	ND
2	Acrylonitrile	2	1	2.6	ND	ND
3	Benzene	1	1	5/200	ND	ND
4	Bromobenzene	1	1	18	ND	ND
5	Bromochloromethane	1	1	NA	ND	ND
6	Bromodichloromethane	1	1	80	ND	ND
7	Bromoform	1	1	80	ND	ND
8	Bromomethane (Methyl Bromide)	5	5	10	ND	ND
9	2-Butanone (MEK)	25	50	13,000/2,200	ND	ND
10	n-Butylbenzene	1	1	80	ND	ND
11	sec-Butylbenzene	1	1	80	ND	ND
12	tert-Butylbenzene	1	1	80	ND	ND
13	Carbon Disulfide	5	5	800	ND	ND
14	Carbon Tetrachloride	1	1	5/38	ND	ND
15	Chlorobenzene	1	1	100/25	ND	ND
16	Chloroethane	5	2	430/1,100	ND	ND
17	Chloroform	1	1	80/350	ND	ND
18	Chloromethane (Methyl Chloride)	5	5	260	ND	ND
19	2-Chlorotoluene	5	1	150	ND	ND
20	1,2-Dibromo-3-Chloropropane	0.2	1	NA	ND	ND
21	1,2-Dibromoethane (Ethylene Dibromide)	0.05	1	0.05/5.7	ND	ND
22	Dibromochloromethane	---	1	80	ND	ND
23	Dibromomethane	5	1	80	ND	ND
24	1,2-Dichlorobenzene	1	1	600/13	ND	ND
25	1,3-Dichlorobenzene	1	1	6.6/28	ND	ND
26	1,4-Dichlorobenzene	1	1	75/17	ND	ND
27	trans-1,4-Dichloro-2-Butene	1		NA	---	---
28	Dichlorodifluoromethane	5	1	1,700	ND	ND
29	1,1-Dichloroethane	1	1	880/740	ND	ND
30	1,2-Dichloroethane	1	1	5/360	ND	ND
31	1,1-Dichloroethene	1	1	7/130	ND	ND
32	cis-1,2-Dichloroethene	1	1	70/620	ND	ND
33	trans-1,2-Dichloroethene	1	1	100/1,500	ND	ND
34	1,2-Dichloropropane	1	1	5/230	ND	ND
35	1,3-Dichloropropane	1	1	NA	ND	ND
36	1,1-Dichloropropene	1	1	NA	ND	ND
37	cis-1,3-Dichloropropene	1	1	NA	ND	ND
38	trans-1,3-Dichloropropene	1	1	NA	ND	ND
39	Diethyl Ether	10	10	10	ND	ND
40	Ethylbenzene	1	1	74/18	ND	ND
41	Fluorotrichloromethane (Trichlorofluoromethane)	1		2,600	---	---
42	2-Hexanone (MBK)	50	50	1,000	ND	ND

TABLE 2. Summary of Analytical Results

ANALYTES		TMDL	RL	Updated GRCC DW/GSI	SW-1	SW-2
43	Isopropylbenzene	5	1	800/28	ND	ND
44	Methyl Iodide	1	1	NA	ND	ND
45	Methylene Chloride	5	5	5/1,500	ND	ND
46	2-Methylnaphthalene	5	5	260/19	ND	ND
47	4-Methyl-2-Pentanone (MIBK)	50	50	1,800	ND	ND
48	Methyl tert butyl ether (MTBE)	5	5	40/7,100	ND	ND
49	Naphthalene	5	5	520/11	ND	ND
50	n-Propylbenzene	1	1	80	ND	ND
51	Styrene	1	1	100/80	ND	ND
52	1,1,1,2-Tetrachloroethane	1	1	77	ND	ND
53	1,1,2,2-Tetrachloroethane	1	1	8.5/78	ND	ND
54	Tetrachloroethene	1	1	5/60	ND	ND
55	Toluene	1	1	790/270	ND	ND
56	1,2,3-Trichlorobenzene	---	5	NA	ND	ND
57	1,2,4-Trichlorobenzene	5	5	70/99	ND	ND
58	1,1,1-Trichloroethane	1	1	200/89	ND	ND
59	1,1,2-Trichloroethane	1	1	5/330	ND	ND
60	Trichloroethene	1	1	5/200	ND	ND
61	1,2,3-Trichloropropane	1	1	42	ND	ND
62	1,2,4-Trimethylbenzene	1	5	63/17	ND	ND
63	1,3,5-Trimethylbenzene	1.0	1	72/45	ND	ND
64	Vinyl Acetate	100	5	640	ND	ND
65	Vinyl Chloride	1	1	2/13	ND	ND
66	Xylenes	3	3	280/49	ND	ND
TRACE ELEMENTS BY ICP/MS						
	Arsenic	5	5	10/10	15	ND
	Barium	100	100	2,000	ND	ND
	Cadmium	1	1	5	ND	ND
	Calcium	---	60000	NA	120,000	98,000
	Chromium	10	10	100/11	ND	ND
	Copper	4	4	1,000	ND	ND
	Iron	200	100	300	13,000	2,500
	Lead	3	3	4	ND	ND
	Magnesium	1000	300	400,000	29,000	27,000
	Manganese	50	50	50	270	360
	Nickel	20	20	100	ND	ND
	Potassium	---	1000	NA	6,300	1,700
	Selenium	5	5	50/5	ND	ND
	Sodium	1000	1000	230,000	14,000	3,700
	Zinc	50	50	2,400	ND	ND
TRACE ELEMENTS BY CVAAS						
	Mercury	0.001	0.2	2/0.0013	---	---

TABLE 2. Summary of Analytical Results

ANALYTES	TMDL	RL	Updated GRCC DW/GSI	SW-1	SW-2
ALKALINITY AND INORGANICS					
Total Alkalinity	---	---	NA	410,000	350,000
Bicarbonate Alkalinity	---	20000	NA	410,000	350,000
Carbonate Alkalinity	---	20000	NA	ND	ND
Hydroxide Alkalinity	---	20000	NA	ND	ND
Chloride	10000	1000	250,000	17,000	ND
Nitrate, as N	100	23	10,000	1,500	100
Nitrate + Nitrite (as N)	---	53	NA	1,500	100
Nitrite, as N	100	30	1,000	ND	ND
Sulfate	1000	1000	250,000	6,500	23,000
Total Organic Carbon (TOC)	---	1000	NA	4,600	4,500
Phenols (Colormetric)	---	50	4,400/450	ND	ND
Chemical Oxygen Demand (COD)	---	5000	NA	15,000	8,300
Total Dissolved Solids (TDS)	10000	40000	500,000/500,000 (EE)	470,000	360,000
Nitrogen, Ammonia as N	25	50	10,000/CC	350	23
Phosphorous, Total	10	10	63,000/1,000 (EE)	77	93

NOTES: All Concentrations reported as ug/L or parts per billion

TMDL: Target Method Detection Limit

RL: Lab Reporting Limit

ND: Not Detected above compound-specific reporting limits

NA or ---: Not Available

CC: Standard is pH and temperature dependent and is approximately 763 ppb

EE: Standard is required by Section 20120(15) of NREPA

Shaded value exceeds DW GRCC

Boxed cell exceeds GSI GRCC

Metal concentrations reported as dissolved for groundwater/monitor well samples

Metal concentrations reported as total for surface water samples

**: Duplicate analysis outside control limits

Surface water value is not compared to DW/GSI GRCC



Via Email

December 8, 2023

Chad Powers
Director
Eaton County Physical Plant
1045 Independence Boulevard
Charlotte, MI 48813

Re: **Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)
Semi-Annual Groundwater Sampling, Eaton County Landfill**

Dear Mr. Powers:

Strata Environmental Services, Inc. (Strata) completed the semi-annual sampling of five monitor wells (MW-3s, MW-15sr, MW-15dr, MW-17sr, MW-19s) at the former Eaton County Landfill for perfluoroalkyl and polyfluoroalkyl substances (PFAS). Refer to Figure 1 for well locations.

Sampling procedures followed the Michigan Department of Environment, Great Lakes, and Energy (EGLE) PFAS Sampling Quick Reference Guide (SQRG) to assure the integrity of the samples collected. Strata personnel wore non-water-proof clothing, disposable, powderless nitrile gloves, and personal hygiene followed the recommendations in the SQRG.

Strata personnel were on site November 7, 2023 to conduct the second semi-annual PFAS sampling event of 2023. Prior to sampling each well, the static water level was measured and recorded in the field log book. The water level meter was decontaminated between each use with Liquinox and PFAS-free water (supplied by the laboratory) and rinsed with PFAS-free water. The water samples were collected using low-flow techniques with a peristaltic pump and disposable, high-density, polyethylene (HDPE) tubing. During pumping, the water level was measured at specific volumes (usually at one liter volume) and field measurements of pH, dissolved oxygen (DO), temperature, oxygen reduction potential (ORP), and specific conductance were collected using a YSI Professional Plus combination meter. In addition, the turbidity of the water was monitored at the specific volumes with a Geotech turbidity meter. All readings were recorded on the "Groundwater Monitoring Field Data Sheets" included as Attachment 1. Samples were collected once the field measurements had generally stabilized to within five percent of previous measurements and (when possible) turbidity readings were less than 10 nephelometric turbidity units (NTU). All samples were collected in laboratory prepared containers with trizma buffer. A field blank was collected at a sample location by pouring a bottle of PFAS-free water into the sample container. Strata also collected an equipment blank by pumping PFAS-free water through the HDPE tubing into the sample container. Following collection, the sample containers were placed in a cooler on ice. Samples were delivered to Fibertec Environmental Services in Holt, Michigan following chain-of-custody protocol, and analysis was conducted at APPL, LLC, a subcontract laboratory located in Clovis, California.

The last sampling event (March 2023), samples were analyzed for 31 PFAS compounds (recommended by EGLE). No other compounds have been added since the last event, therefore the samples were analyzed for 31 PFAS compounds by USEPA Method 1633 this event. Analytical results and chain-of-custody record are included as Attachment 2. The following is a list of the PFAS compounds detected in the aforementioned samples:

Perfluorobutanoic acid (PFBA)	Perfluorobutanesulfonic acid (PFBS)	Perfluoroheptanoic acid (PFHpA)
Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFOA)	Perfluoro-n-pentanoic acid (PFPeA)
Perfluoroethylcyclohexane sulfonate (PFECyHS)	Perfluoropentanesulfonic acid (PFPeS)	Perfluorohexanesulfonic acid (PFHxS)

The State of Michigan signed into law maximum contaminant levels (MCLs) for seven PFAS compounds that have been in effect and enforceable since December 2020. Table 1 presents the sample location, PFAS compound detected, concentration, and MCL if published.

TABLE 1
Summary of PFAS Compound Concentrations
Detected in Groundwater
(All concentrations in ng/L)

Sample Location	PFBA	PFBS	PFHpA	PFHxA	PFOA	PFPeA	PFECHS	PFPeS	PFHxS
MW-3	ND	ND	ND	ND	ND	ND	20	ND	ND
MW-15sr	9.3	2.2	5.0	13	8.6	11	ND	1.3	0.82
MW-15dr	ND	ND	0.88	2.0	0.86	2.2	ND	ND	ND
MW-17sr	3.4	ND	0.91	3.5	ND	3.6	ND	ND	ND
MW-19s	12	7.5	2.4	16	1.6	8.8	ND	1.5	ND
Field Blank	ND	ND	ND	ND	ND	ND	ND	ND	ND
Equip. Blank	ND	ND	ND	ND	ND	ND	ND	ND	ND
MCL	NA	420	NA	400,000	8	NA	NA	NA	51

Gray shaded cell denotes concentration exceeds MCL
ND: Not Detected above compound-specific reporting limit
NA: Not Available/Not Applicable
*: Denotes compound detected in field blank

The reported concentrations this sampling event are similar to the last time the wells were sampled in March 2023. The PFAS compounds PFPeS and PFHxS were detected this event and have not been detected in past events. As can be seen in Table 1, of the nine PFAS compounds detected in the groundwater at the former Eaton County Landfill site, only the PFOA concentration in the sample from MW-15sr (8.6 ng/L) just exceeds its MCL of 8 ng/L.

The next scheduled semi-annual PFAS sampling event is scheduled for March 2024. The aforementioned set of wells will be sampled and analyzed.

Should there be any questions regarding the work done or results, please do not hesitate to contact our office at (517) 676-6900.

Sincerely,

STRATA ENVIRONMENTAL SERVICES, INC.



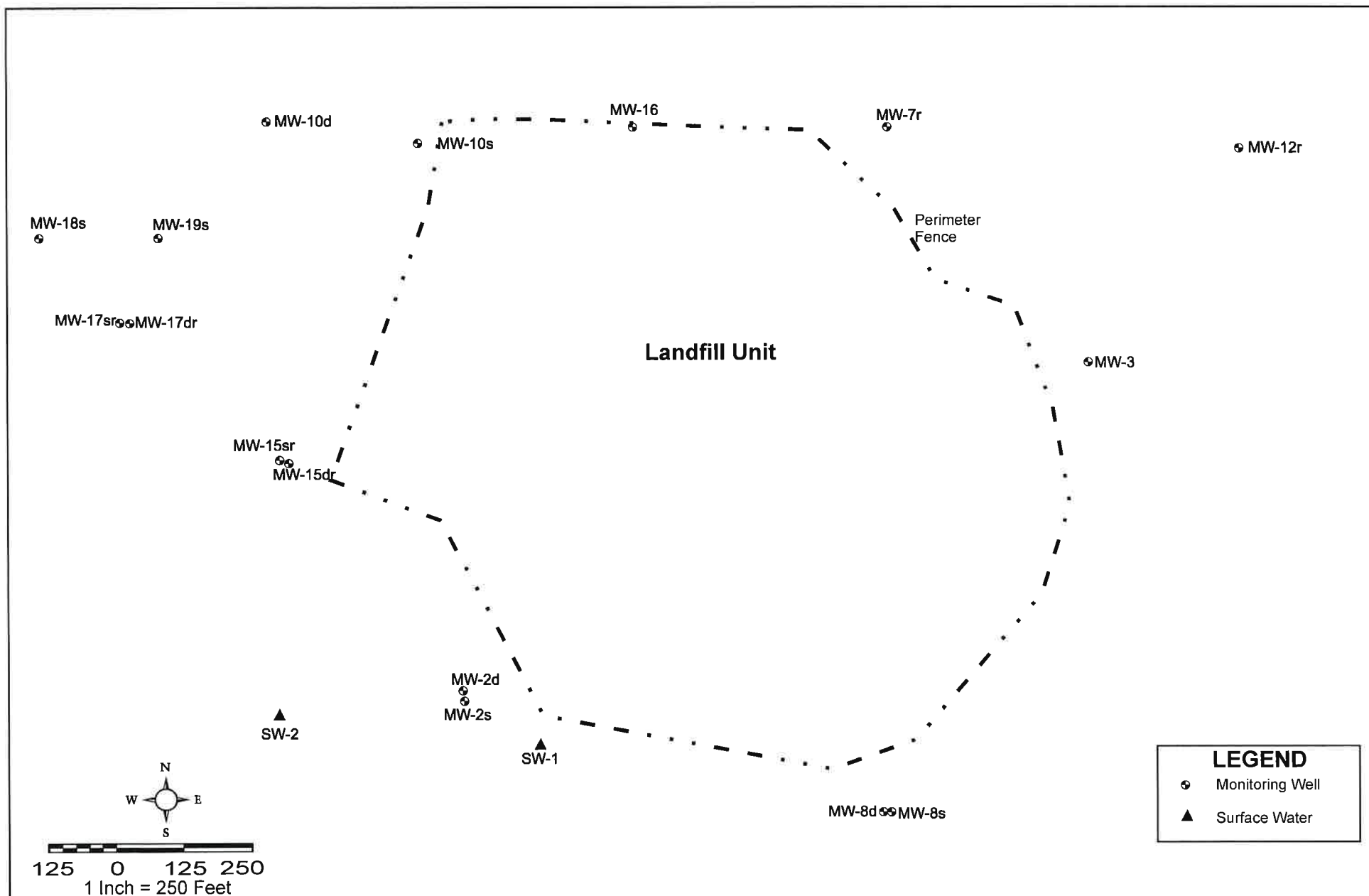
Sophia V. Serafini
Environmental Scientist

Encls.

Cc: Mr. Evin Maguire (EGLE)

R.B. MCS (H)
9261422L.092

FIGURES



SEMI-ANNUAL GROUNDWATER MONITORING

Eaton County Landfill
Section 20, Benton Township
Eaton County, Michigan



FIGURE 1

Monitor Well Locations

ATTACHMENT 1



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill
Well Number: MW-3 Period of Sampling: Nov-23
Facility: Eaton County
Address: 1045 Independence Blvd Charlotte MI 48813
Street Number (PO Box) City State Zip
Contact: Chad Powers (517) 543-7500
Name Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐ TOC Elevation: 912.92
TOC Survey Mark: North Static Water Level (ft.) 10.45
Well Conditions: Good ☒ Fair ☐ Poor ☐ Ground Water Elevation: 902.47 feet
Casing Material: Galvanized Well Depth: TOC Reference 17.20
Casing Diameter: 2"
Concrete Pad: Yes ☒ No ☐ Standing Water: Yes ☐ No ☒
Screen: --- Secured Upon Departure: Yes ☒ No ☐
Frost Heave: Yes ☐ No ☒ Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 11-7-23 Purge Method: ☐ Disposable Bailer
Time of Purge: 0920 Purge Method: ☐ S.S. Submersible Pump
Volume of Water in Casing: _____ gals. Purge Method: ☒ Low Flow (peristaltic)
Purge Volume 3X ☐ 5X ☐ Other ☒ _____ gals. Decon: Yes ☐ No ☒
Purge Water Appearance: faintly milky Type: Liquinox & Water Wash ☐
Fate of Purge Water: ☒ _____ Water Rinse ☐ Distilled Rinse ☐

Ground 10'± Contained

SAMPLING DATA:

Date of Sampling: 11-7-23 Sampling Method: ☐ Bailer ☒ Pump
Time of Sampling: 0930 Decon?: Yes ☐ No ☒
Field Filtration?: Yes ☐ No ☒ Sp. Conductance: 0.68 umohs/cm
Weather: overcast 46°F Temperature °C: 11.8
Sample Appearance: clear pH: 6.54

PURGE DATA:

Volume	SWL	pH	D.O.	Temperature °C	ORP	Specific	Turbidity
Removed			mg/l		mV	Conductance	
						mM Siemens/cm	
1.0 L	10.90	6.63	2.36	11.8	-33.1	0.72	72.2
3.0 L	10.93	6.53	2.16	11.8	-22.5	0.70	20.9
4.0 L	10.93	6.54	2.09	11.8	-17.6	0.69	13.7
5.0 L	10.93	6.54	1.97	11.8	-14.3	0.69	11.2
6.0 L	10.93	6.54	1.99	11.8	-11.7	0.68	9.66
L							
L							
L							

COMMENTS: sample #1
Sept. 2023 PFAS Resample

GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: **MW-15sr**

Period of Sampling: Nov-23

Facility: Eaton County

Address: 1045 Independence Blvd
Street Number (PO Box)

Charlotte MI 48813
City State Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival Yes ☒ No ☐
TOC Survey Mark: North
Well Conditions: Good ☒ Fair ☐ Poor ☐
Casing Material: Galvanized
Casing Diameter: 2"
Concrete Pad: Yes ☒ No ☐
Screen: Yes ☐ No ☒
Frost Heave: Yes ☐ No ☒

TOC Elevation: 869.61
Static Water Level (ft.) 13.73
Ground Water Elevation: 855.88 feet
Well Depth: TOC Reference 43.00
Standing Water: Yes ☐ No ☒
Secured Upon Departure: Yes ☒ No ☐
Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 11-7-23
Time of Purge: 0945
Volume of Water in Casing: _____ gals.
Purge Volume 3X ☐ 5X ☐ Other ☒ _____ gals.
Purge Water Appearance: clear to
Fate of Purge Water: faintly milky
w/ egg smell
Ground 10'+ Contained ☒

Purge Method: ☐ Disposable Bailer
Purge Method: ☐ S.S. Submersible
Purge Method: ☒ Low Flow (peristaltic)
Decon: Yes ☐ No ☒
Liquinox & Water Wash ☐
Water Rinse ☐ Dist. Rinse ☐

SAMPLING DATA:

Date of Sampling: 11-7-23
Time of Sampling: 1030
Field Filtration?: Yes ☐ No ☒
Weather: overcast 46°F
Sample Appearance: clear faintly milky

Sampling Method: ☐ Bailer ☒ Pump
Decon?: Yes ☐ No ☒
Sp. Conductance: 0.99 umohs/cm
Temperature °C: 11.2
pH: 6.83

PURGE DATA:

Volume	SWL	pH	D.O.	Temperature °C	ORP	Specific Conductance	Turbidity
Removed			mg/l		mV	µm Siemens/cm	
1.0 L	15.51	6.76	0.26	10.9	-43.7	1.01	35.9
2.0 L	17.16	6.78	0.18	10.9	-49.8	1.01	53.4
4.0 L	20.03	6.80	0.16	10.9	-56.3	1.02	182
8.0 L	25.68	6.81	0.12	11.0	-69.0	1.00	93.8
12.0 L	30.48	6.83	0.38	11.2	-78.0	0.99	95.1 *
L							
L							
L							

COMMENTS:

Sample #2 | Poor recharge
Sept. 2023 PFAS Resample | *Sampled before reaching ~10 MTV
Turbidity because measurements
tapered off



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: **MW-15dr** Period of Sampling: **Nov-23**

Facility: **Eaton County**

Address **1045 Independence Blvd** **Charlotte** **MI** **48813**
Street Number (PO Box) City State Zip

Contact: **Chad Powers**
Name

(517) 543-7500
Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐ TOC Elevation: **870.16**
TOC Survey Mark: North Static Water Level (ft.) 14.69
Well Conditions: Good ☒ Fair ☐ Poor ☐ Ground Water Elevation: 855.47 feet
Casing Material: Galvanized Well Depth: TOC Reference **58.00'**
Casing Diameter: 2"
Concrete Pad: Yes ☒ No ☐ Standing Water: Yes ☐ No ☒
Screen: --- Secured Upon Departure: Yes ☒ No ☐
Frost Heave: Yes ☐ No ☒ Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 11-7-23 Purge Method: ☐ Disposable Bailer
Time of Purge: 1035 Purge Method: ☐ S.S. Submersible Pump
Volume of Water in Casing: _____ gals. Purge Method: ☒ Low Flow Pump (peristaltic)
Purge Volume 3X ☐ 5X ☐ Other ☒ _____ gals. Decon: Yes ☐ No ☒
Purge Water Appearance: milky Type: Liquinox & Water Wash ☐
Fate of Purge Water: ☒ ☐ Water Rinse ☐ tilled Rinse ☐
Ground 10'+ Contained

SAMPLING DATA:

Date of Sampling: 11-7-23 Sampling Method: ☐ Bailer ☒ Pump
Time of Sampling: 1050 Decon?: Yes ☐ No ☒
Field Filtration?: Yes ☐ No ☒
Weather: overcast 46°F Sp. Conductance 0.73 umohs/cm
Sample Appearance: clear Temperature °C: 11.0
pH: 6.77

PURGE DATA:

Volume	SWL	pH	D.O.	Temperature °C	ORP	Specific Conductance	Turbidity
Removed	<u>14.69</u>		mg/l		mV	mV Siemens/cm	
3.0 L	<u>14.91</u>	<u>6.79</u>	<u>0.31</u>	<u>11.1</u>	<u>-54.9</u>	<u>0.73</u>	<u>156</u>
3.0 L	<u>14.92</u>	<u>6.76</u>	<u>0.33</u>	<u>11.1</u>	<u>-50.4</u>	<u>0.73</u>	<u>66.0</u>
5.0 L	<u>14.92</u>	<u>6.76</u>	<u>0.34</u>	<u>11.0</u>	<u>-48.7</u>	<u>0.73</u>	<u>22.9</u>
6.0 L	<u>14.92</u>	<u>6.76</u>	<u>0.33</u>	<u>11.0</u>	<u>-48.1</u>	<u>0.72</u>	<u>11.9</u>
7.0 L	<u>14.92</u>	<u>6.77</u>	<u>0.36</u>	<u>11.0</u>	<u>-47.7</u>	<u>0.73</u>	<u>10.1</u>
L							
L							
L							

COMMENTS:

sample #3
Sept. 2023 PFAS Resample



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: MW-17sr

Period of Sampling: Nov-23

Facility: Eaton County

Address: 1045 Independence Blvd
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: ---

Frost Heave: Yes ☐ No ☒

TOC Elevation: 860.41

Static Water Level (ft.) 6.11

Ground Water Elevation: 854.30 feet

Well Depth: TOC Reference 43.00

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Time of Purge: 11:00

Volume of Water in Casing: 1100 gals.

Purge Volume 3X ☐ 5X ☐ Other ☒ clear gals.

Purge Water Appearance: clear

Fate of Purge Water: ☒ Ground 10'+ Contained

Purge Method: ☐ Disposable Bailer

Purge Method: ☐ S.S. Submersible Pump

Purge Method: ☒ Low Flow (peristaltic)

Decon: Yes ☐ No ☒

Type: ☐ Liquinox & Water Wash

Water Rinse ☐ Distilled Rinse ☐

SAMPLING DATA:

Time of Sampling: 11:10

Field Filtration?: Yes ☐ No ☒

Weather: overcast 47°F

Sample Appearance: clear

Sampling Method: ☐ Bailer ☒ Pump

Decon?: Yes ☐ No ☒

Sp. Conductance: 0.81 umohs/cm

Temperature °C: 11.0

pH: 6.65

PURGE DATA:

Volume Removed	SWL	pH	D.O. mg/L	Temperature °C	ORP mV	Specific Conductance mV/Siemens/cm	Turbidity
1.0 L	6.12	6.63	1.57	11.1	-18.2	0.82	28.7
2.0 L	6.12	6.64	1.27	11.0	-20.4	0.82	30.6
3.0 L	6.12	6.65	1.10	11.0	-21.3	0.81	17.8
4.0 L	6.12	6.65	1.04	11.0	-21.7	0.81	10.3
L							
L							
L							
L							

COMMENTS:

sample # 4

Sept. 2023 PFAS Resample



GROUNDWATER MONITORING FIELD DATA SHEET

SITE LOCATION: Eaton County Landfill

Well Number: **MW-19s**

Period of Sampling: Nov-23

Facility: Eaton County

Address: 1045 Independence Blvd
Street Number (PO Box)

Charlotte
City

MI
State

48813
Zip

Contact: Chad Powers
Name

(517) 543-7500
Telephone

Personnel Present: SVS/NP

WELL DATA:

Well Secure Upon Arrival: Yes ☒ No ☐

TOC Survey Mark: North

Well Conditions: Good ☒ Fair ☐ Poor ☐

Casing Material: Galvanized

Casing Diameter: 2"

Concrete Pad: Yes ☒ No ☐

Screen: Yes ☐ No ☒

Frost Heave: Yes ☐ No ☒

TOC Elevation: 860.87

Static Water Level (ft.): 6.57

Ground Water Elevation: feet

Well Depth: TOC Reference 39.20

Standing Water: Yes ☐ No ☒

Secured Upon Departure: Yes ☒ No ☐

Well ID Present/Readable: Yes ☒ No ☐

PURGING DATA:

Date of Purge: 11-7-23

Time of Purge: 1115

Volume of Water in Casing: gals.

Purge Volume 3X ☐ 5X ☐ Other ☒ gals.

Purge Water Appearance: faintly milky

Fate of Purge Water: to milky

Ground 10'+ Contained

Purge Method:

Purge Method:

Purge Method:

Decon:

Type:

☐ Disposable Bailer

☐ S. Submersible Pump

☒ Low Flow (peristaltic)

Yes ☐ No ☒

Liquinox & Water Wash ☒

Water Rinse ☐ Distilled Rinse ☐

SAMPLING DATA:

Date of Sampling: 11-7-23

Time of Sampling: 1135

Field Filtration?: Yes ☐ No ☒

Weather: overcast 47°F

Sample Appearance: clear

Sampling Method: ☐ Bailer ☒ Pump

Decon?: Yes ☐ No ☒

Sp. Conductance: 0.98 umhos/cm

Temperature °C: 11.2

pH: 6.76

PURGE DATA:

Volume Removed	SWL	pH	D.O. mg/L	Temperature °C	ORP mV	Specific Conductance mV Siemens/cm	Turbidity
<u>6.57</u>							
1.0 L	<u>6.58</u>	<u>6.79</u>	<u>1.20</u>	<u>11.2</u>	<u>-32.1</u>	<u>0.98</u>	<u>44.3</u>
2.0 L	<u>6.58</u>	<u>6.77</u>	<u>1.30</u>	<u>11.2</u>	<u>-31.2</u>	<u>0.99</u>	<u>22.4</u>
3.0 L	<u>6.58</u>	<u>6.76</u>	<u>1.19</u>	<u>11.2</u>	<u>-29.8</u>	<u>0.99</u>	<u>24.9</u>
4.0 L	<u>6.58</u>	<u>6.75</u>	<u>1.08</u>	<u>11.2</u>	<u>-28.9</u>	<u>0.99</u>	<u>10.2</u>
8.0 L	<u>6.58</u>	<u>6.76</u>	<u>0.98</u>	<u>11.2</u>	<u>-29.0</u>	<u>0.99</u>	<u>15.6</u>
9.0 L	<u>6.58</u>	<u>6.76</u>	<u>0.88</u>	<u>11.2</u>	<u>-29.2</u>	<u>0.98</u>	<u>10.8</u>
L							
L							

COMMENTS: sample #5

Sept. 2023 PFAS Resample

ATTACHMENT 2



A METIRI GROUP COMPANY

Tuesday, December 5, 2023

Fibertec Project Number: A18268
Project Identification: Eaton County Landfill /926-1422
Submission Date: 11/07/2023

Mr. Mike Serafini
Strata Environmental Services, Inc.
538 W. Ash Street
Mason, MI 48854

Dear Mr. Serafini,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

PFAS Analysis was performed by Metiri Group, (Clovis CA). Their report 23K0078 is attached.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Bailey Welch at 10:04 AM, Dec 05, 2023

For Heather L. Smith
Director of Laboratory Operations

Enclosures

1914 Holloway Drive
11766 E Grand River
8660 S Madinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

T: (517) 699-0345
T: (810) 220-3300
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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584



A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-001

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-3	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:	1	Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	09:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow)

Aliquot ID: A18268-001

Matrix: Ground Water

Method: Subcontractor (Misc.)

Description: MW-3

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1, Subcontractor Analysis	complete		complete	NA	1.0	NA	NA	11/22/23	NA	BMW

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A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-002

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15sr	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:	2	Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow) Aliquot ID: A18268-002 Matrix: Ground Water
Method: Subcontractor (Misc.) Description: MW-15sr

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Subcontractor Analysis	complete		complete	NA	1.0	NA	NA	11/22/23	NA	EMW

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A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-003

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-15dr	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:	3	Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	10:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow)					Aliquot ID: A18268-003	Matrix: Ground Water				
Method: Subcontractor (Misc.)					Description: MW-15dr					
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Subcontractor Analysis	complete		complete	NA	1.0	NA	NA	11/22/23	NA	BMW

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T: (517) 699-0345
T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0368
F: (810) 220-3311
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A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-004

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-17sr	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:	4	Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:10

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow)					Aliquot ID:	A18268-004		Matrix: Ground Water		
Method: Subcontractor (Misc.)					Description:	MW-17sr				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
± 1. Subcontractor Analysis	complete		complete	NA	1.0	NA	NA	11/22/23	NA	BMW

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Hbt, MI 48842
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A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-005

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	MW-19s	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:	5	Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Ground Water	Collect Time:	11:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow) Aliquot ID: A18268-005 Matrix: Ground Water
Method: Subcontractor (Misc.) Description: MW-19s

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Subcontractor Analysis	complete		complete	NA	1.0	NA	NA	11/22/23	NA	BMW

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A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-006

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	Equipment Blank	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:		Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Blank: Equipment	Collect Time:	11:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow)

Aliquot ID: A18268-006

Matrix: Blank: Equipment

Method: Subcontractor (Misc.)

Description: Equipment Blank

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± Subcontractor Analysis	complete		complete	NA	1:0	NA	NA	11/22/23	NA	BMW

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F: (231) 775-8584



A METIRI GROUP COMPANY

Analytical Laboratory Report
Laboratory Project Number: A18268
Laboratory Sample Number: A18268-007

Order: A18268
Date: 12/05/23

Client Identification:	Strata Environmental Services, Inc.	Sample Description:	Field Blank	Chain of Custody:	N/A
Client Project Name:	Eaton County Landfill	Sample No:		Collect Date:	11/07/23
Client Project No:	926-1422	Sample Matrix:	Blank: Field	Collect Time:	11:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ±: Parameter not included in NELAC Scope of Analysis.

PFAS (Overflow)

Aliquot ID: A18268-007

Matrix: Blank: Field

Method: Subcontractor (Misc.)

Description: Field Blank

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
± 1. Subcontractor Analysis	complete		complete	NA	1.0	NA	NA	11/22/23	NA	BMW

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Definitions/Qualifiers:

- A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
*: Value reported is outside QC limits

Exception Summary:

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-23-15 (TX)

1914 Holloway Drive
11766 E Grand River
8660 S Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
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T: (517) 699-0345
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Thursday, December 7, 2023

Fibertec Project Number: A18268 Amended
Project Identification: Eaton County Landfill /926-1422
Submittal Date: 11/07/2023

Mr. Mike Serafini
Strata Environmental Services, Inc.
538 W. Ash Street
Mason, MI 48854

Dear Mr. Serafini,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

PFAS Analysis was performed by Metiri Group, (Clovis CA). Their report 23K0078 is attached.

This report was amended to add additional compounds. This replaces the report issued on 12/5/23.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



By Rikki Lott at 4:52 PM, Dec 07, 2023

For Heather L. Smith
Director of Laboratory Operations

Enclosures



908 N. Temperance Ave., Clovis, CA 93611 - Phone 559-275-2175 - www.metirigroup.com

NELAP Certification Number: CA00046

DoD-ELAP Certification Number: 4064.01

State Certification Number:

December 07, 2023

Rikki Lott
Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

RE: PFAS Testing
23K0078

Enclosed are the results of analyses for samples received by our laboratory on 11/9/2023. If you have any questions concerning this report, please feel free to contact me.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or designee, as verified by the following signature.

Sincerely,

Chue Moua
Project Manager

chue.moua@metirigroup.com
559-862-2155

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Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Analysis Case Narrative

EPA 1633: Manual integrations were performed for this method in accordance with APPL's SOP. Abbreviated flags for technical justification are provided as data qualifiers.

Revision 2023-12-07: The analytes PFSBA, PFHxSA, and PFECHS have been added to this report. To comply with certifying bodies the analysis has been switched to EPA 1633.

Samples in this Report

Lab ID	Sample	Matrix	Date Sampled	Date Received
23K0078-01	MW-3	Water	11/07/2023 09:30	11/09/2023
23K0078-02	MW-15sr	Water	11/07/2023 10:30	11/09/2023
23K0078-03	MW-15dr	Water	11/07/2023 10:50	11/09/2023
23K0078-04	MW-17sr	Water	11/07/2023 11:10	11/09/2023
23K0078-05	MW-19s	Water	11/07/2023 11:35	11/09/2023
23K0078-06	Equipment Blank	Water	11/07/2023 11:45	11/09/2023
23K0078-07	Field Blank	Water	11/07/2023 11:50	11/09/2023

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Sample Results

Sample: MW-3
23K0078-01 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
---------	--------------	-----	-----	-------	---------------	----	--------	------------

Per- and Polyfluoroalkyl Substances

PFBA	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTTrDA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND	0.81		ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
9Cl-PF3ONS	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
11Cl-PF3OUDS	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	20	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264

Surrogate: 13C4-PFBA	88.1%	10-130	11/22/23	1	EPA 1633
Surrogate: 13C5-PFPEA	108%	35-150	11/22/23	1	EPA 1633
Surrogate: 13C5-PFHXA	113%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C4-PFHPA	116%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C8-PFOA	117%	60-140	11/22/23	1	EPA 1633
Surrogate: 13C9-PFNA	110%	55-140	11/22/23	1	EPA 1633
Surrogate: 13C6-PFDA	93.0%	50-140	11/22/23	1	EPA 1633
Surrogate: 13C7-PFUnA	71.5%	30-140	11/22/23	1	EPA 1633
Surrogate: 13C2-PFDOA	57.9%	10-150	11/22/23	1	EPA 1633
Surrogate: 13C2-PFTEDA	56.7%	10-130	11/22/23	1	EPA 1633
Surrogate: 13C3-PFBS	125%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C3-PFHXS	112%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C8-PFOS	90.4%	45-140	11/22/23	1	EPA 1633
Surrogate: 13C2-4:2FTS	148%	60-200	11/22/23	1	EPA 1633
Surrogate: 13C2-6:2FTS	149%	60-200	11/22/23	1	EPA 1633

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Sample Results (Continued)

Sample: MW-3 (Continued)
23K0078-01 (Water)

Analyte	Result/Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
---------	-------------	-----	-----	-------	---------------	----	--------	------------

Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	97.4%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	74.8%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	67.1%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	67.8%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	121%	25-160			11/22/23	1	EPA 1633	

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Sample Results (Continued)

Sample: MW-15sr
23K0078-02 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
---------	--------------	-----	-----	-------	---------------	----	--------	------------

Per- and Polyfluoroalkyl Substances

PFBA	9.3		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	11		1.6	ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	13	MI4	0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	5.0	MI4	0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	8.6		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFTTrDA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	2.2		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	1.3	MI4	0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	0.82	MI4	0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	MI4,	0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND		0.79	ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND		1.6	ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND		1.6	ng/L	11/22/23	1	EPA 1633	BCK0264
9Cl-PF3ONS	ND		1.6	ng/L	11/22/23	1	EPA 1633	BCK0264
11Cl-PF3OUDS	ND		1.6	ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	ND		3.2	ng/L	11/22/23	1	EPA 1633	BCK0264

Surrogate: 13C4-PFBA	91.6%	10-130	11/22/23	1	EPA 1633
Surrogate: 13C5-PFPEA	88.6%	35-150	11/22/23	1	EPA 1633
Surrogate: 13C5-PFHXA	109%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C4-PFHFA	104%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C8-PFOA	119%	60-140	11/22/23	1	EPA 1633
Surrogate: 13C9-PFNA	102%	55-140	11/22/23	1	EPA 1633
Surrogate: 13C6-PFDA	101%	50-140	11/22/23	1	EPA 1633
Surrogate: 13C7-PFUnA	91.1%	30-140	11/22/23	1	EPA 1633
Surrogate: 13C2-PFDOA	69.8%	10-150	11/22/23	1	EPA 1633
Surrogate: 13C2-PFTEDA	61.4%	10-130	11/22/23	1	EPA 1633
Surrogate: 13C3-PFBS	139%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C3-PFHXS	92.0%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C8-PFOS	104%	45-140	11/22/23	1	EPA 1633
Surrogate: 13C2-4:2FTS	159%	60-200	11/22/23	1	EPA 1633
Surrogate: 13C2-6:2FTS	136%	60-200	11/22/23	1	EPA 1633

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Sample Results (Continued)

Sample: MW-15sr (Continued)
23K0078-02 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	103%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	91.2%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	65.5%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	68.6%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	108%	25-160			11/22/23	1	EPA 1633	

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Sample Results (Continued)

Sample: MW-15dr
23K0078-03 (Water)

Analyte	Result/Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances

PFBA	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	2.2	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	2.0 MI4	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	0.88 MI4	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	0.86 MI4	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	ND IR2,	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND	0.78		ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
9Cl-PF3ONS	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
11Cl-PF3OUDS	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264

Surrogate: 13C4-PFBA	114%	10-130	11/22/23	1	EPA 1633
Surrogate: 13C5-PFPEA	112%	35-150	11/22/23	1	EPA 1633
Surrogate: 13C5-PFHXA	129%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C4-PFHFA	108%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C8-PFOA	113%	60-140	11/22/23	1	EPA 1633
Surrogate: 13C9-PFNA	109%	55-140	11/22/23	1	EPA 1633
Surrogate: 13C6-PFDA	75.5%	50-140	11/22/23	1	EPA 1633
Surrogate: 13C7-PFUnA	63.1%	30-140	11/22/23	1	EPA 1633
Surrogate: 13C2-PFDOA	42.7%	10-150	11/22/23	1	EPA 1633
Surrogate: 13C2-PFTEDA	42.4%	10-130	11/22/23	1	EPA 1633
Surrogate: 13C3-PFBS	159%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C3-PFHXS	114%	55-150	11/22/23	1	EPA 1633
Surrogate: 13C8-PFOS	91.4%	45-140	11/22/23	1	EPA 1633
Surrogate: 13C2-4:2FTS	164%	60-200	11/22/23	1	EPA 1633
Surrogate: 13C2-6:2FTS	141%	60-200	11/22/23	1	EPA 1633

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Sample Results (Continued)

Sample: MW-15dr (Continued)
23K0078-03 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	84.7%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	87.7%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	60.0%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	53.3%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	120%	25-160			11/22/23	1	EPA 1633	

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Sample Results (Continued)

Sample: **MW-17sr**
23K0078-04 (Water)

Analyte	Result/Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
Per- and Polyfluoroalkyl Substances								
PFBA	3.4	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	3.6	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	3.5 MI4	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	0.91 MI4	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	ND MI4,	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND	0.77		ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
9CI-PF3ONS	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
11CI-PF3OUDS	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	ND	3.1		ng/L	11/22/23	1	EPA 1633	BCK0264
Surrogate: 13C4-PFBA	95.9%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFPEA	148%	35-150			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFHXA	126%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C4-PFHHPA	129%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	116%	60-140			11/22/23	1	EPA 1633	
Surrogate: 13C9-PFNA	94.2%	55-140			11/22/23	1	EPA 1633	
Surrogate: 13C6-PFDA	92.5%	50-140			11/22/23	1	EPA 1633	
Surrogate: 13C7-PFUnA	69.1%	30-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFDOA	47.5%	10-150			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFTEDA	50.3%	10-130	MI6		11/22/23	1	EPA 1633	
Surrogate: 13C3-PFBS	108%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFHXS	129%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOS	96.5%	45-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-4:2FTS	135%	60-200			11/22/23	1	EPA 1633	
Surrogate: 13C2-6:2FTS	129%	60-200			11/22/23	1	EPA 1633	

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Sample Results (Continued)

Sample: MW-17sr (Continued)
23K0078-04 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	98.4%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	90.2%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	59.6%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	50.5%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	128%	25-160			11/22/23	1	EPA 1633	

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Sample Results (Continued)

Sample: MW-19s
23K0078-05 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
Per- and Polyfluoroalkyl Substances								
PFBA	12	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	8.8	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	16 MI4	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	2.4 MI4	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	1.6 MI4	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	7.5	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	1.5 MI4	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND	0.74		ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
9CI-PF3ONS	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
11CI-PF3OUDS	ND	1.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	ND	3.0		ng/L	11/22/23	1	EPA 1633	BCK0264
Surrogate: 13C4-PFBA	93.6%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFPEA	106%	35-150			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFHXA	96.2%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C4-PFHPA	103%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	116%	60-140			11/22/23	1	EPA 1633	
Surrogate: 13C9-PFNA	98.8%	55-140			11/22/23	1	EPA 1633	
Surrogate: 13C6-PFDA	92.1%	50-140			11/22/23	1	EPA 1633	
Surrogate: 13C7-PFUnA	79.3%	30-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFDOA	50.5%	10-150			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFTEDA	51.7%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFBS	107%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFHXS	110%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOS	90.8%	45-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-4:2FTS	147%	60-200			11/22/23	1	EPA 1633	
Surrogate: 13C2-6:2FTS	131%	60-200			11/22/23	1	EPA 1633	

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Sample Results (Continued)

Sample: MW-19s (Continued)
23K0078-05 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	85.9%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	84.9%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	61.2%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	52.0%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	95.4%	25-160			11/22/23	1	EPA 1633	

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Sample Results (Continued)

**Sample: Equipment Blank
23K0078-06 (Water)**

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
Per- and Polyfluoroalkyl Substances								
PFBA	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	ND	1.7		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND	0.87		ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND	1.7		ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND	1.7		ng/L	11/22/23	1	EPA 1633	BCK0264
9CI-PF3ONS	ND	1.7		ng/L	11/22/23	1	EPA 1633	BCK0264
11CI-PF3OUDS	ND	1.7		ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	ND	3.5		ng/L	11/22/23	1	EPA 1633	BCK0264

Surrogate: 13C4-PFBA	110%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFPeA	142%	35-150			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFHxA	145%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C4-PFHpA	119%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	124%	60-140			11/22/23	1	EPA 1633	
Surrogate: 13C9-PFNA	106%	55-140			11/22/23	1	EPA 1633	
Surrogate: 13C6-PFDA	117%	50-140			11/22/23	1	EPA 1633	
Surrogate: 13C7-PFUnA	109%	30-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFDoA	105%	10-150			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFTEDA	96.5%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFBS	116%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFHxS	115%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOS	113%	45-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-4:2FTS	142%	60-200			11/22/23	1	EPA 1633	
Surrogate: 13C2-6:2FTS	162%	60-200			11/22/23	1	EPA 1633	

Fibertec Environmental Services
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Sample Results (Continued)

Sample: Equipment Blank (Continued) 23K0078-06 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	122%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	56.4%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	101%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	112%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	115%	25-160			11/22/23	1	EPA 1633	

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Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

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Sample Results (Continued)

Sample: Field Blank
23K0078-07 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
Per- and Polyfluoroalkyl Substances								
PFBA	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFUnA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDoA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFTeDA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFPeS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHpS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFNS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
PFDS	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
4:2FTS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
6:2FTS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
8:2FTS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFBSA	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFHxSA	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
PFOSA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
NMeFOSAA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
NEtFOSAA	ND	0.79		ng/L	11/22/23	1	EPA 1633	BCK0264
HFPO-DA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
ADONA	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
9CI-PF3ONS	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
11CI-PF3OUDS	ND	1.6		ng/L	11/22/23	1	EPA 1633	BCK0264
PFECHS	ND	3.2		ng/L	11/22/23	1	EPA 1633	BCK0264
Surrogate: 13C4-PFBA	103%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFPEA	144%	35-150			11/22/23	1	EPA 1633	
Surrogate: 13C5-PFHXA	108%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C4-PFHFA	121%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	105%	60-140			11/22/23	1	EPA 1633	
Surrogate: 13C9-PFNA	102%	55-140			11/22/23	1	EPA 1633	
Surrogate: 13C6-PFDA	110%	50-140			11/22/23	1	EPA 1633	
Surrogate: 13C7-PFUnA	102%	30-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFDOA	98.5%	10-150			11/22/23	1	EPA 1633	
Surrogate: 13C2-PFTEDA	83.5%	10-130			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFBS	108%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C3-PFHXS	93.1%	55-150			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOS	110%	45-140			11/22/23	1	EPA 1633	
Surrogate: 13C2-4:2FTS	135%	60-200			11/22/23	1	EPA 1633	
Surrogate: 13C2-6:2FTS	127%	60-200			11/22/23	1	EPA 1633	

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Sample Results (Continued)

Sample: Field Blank (Continued)
23K0078-07 (Water)

Analyte	Result /Qual	PQL	MDL	Units	Date Analyzed	DF	Method	Prep Batch
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Per- and Polyfluoroalkyl Substances (Continued)

Surrogate: 13C2-8:2FTS	110%	50-200			11/22/23	1	EPA 1633	
Surrogate: 13C8-PFOA	56.9%	30-130			11/22/23	1	EPA 1633	
Surrogate: D3-NMEFOSAA	95.7%	45-200			11/22/23	1	EPA 1633	
Surrogate: D5-NETFOSAA	102%	10-200			11/22/23	1	EPA 1633	
Surrogate: 13C3-HFPO-DA	109%	25-160			11/22/23	1	EPA 1633	

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PREPARATION BATCH SUMMARY

EPA 1633

Laboratory: APPL, LLC

Client: Fibertec Environmental Services

Batch: BCK0264 Batch Matrix: Water Preparation: EPA 1633

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT mL	FINAL VOL. mL
MW-3	23K0078-01	11/13/23 14:20	246.73	2.00
MW-15sr	23K0078-02	11/13/23 14:20	251.82	2.00
MW-15dr	23K0078-03	11/13/23 14:20	257.97	2.00
MW-17sr	23K0078-04	11/13/23 14:20	258.16	2.00
MW-19s	23K0078-05	11/13/23 14:20	269.25	2.00
Equipment Blank	23K0078-06	11/13/23 14:20	230.51	2.00
Field Blank	23K0078-07	11/13/23 14:20	252.47	2.00
Blank	BCK0264-BLK1	11/13/23 14:20	250.00	2.00
LCS	BCK0264-BS1	11/13/23 14:20	250.00	2.00
LCS Dup	BCK0264-BSD1	11/13/23 14:20	250.00	2.00
MRL Check	BCK0264-MRL1	11/13/23 14:20	250.00	2.00

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Quality Control

Per- and Polyfluoroalkyl Substances

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Method: EPA 1633

Batch: BCK0264 - EPA 1633

Blank (BCK0264-BLK1)

Prepared: 11/13/23 14:20 Analyzed: 11/22/23 17:45

PFBA	ND	3.2	ng/L
PFPeA	ND	1.6	ng/L
PFHxA	ND	0.80	ng/L
PFHpA	ND	0.80	ng/L
PFOA	ND	0.80	ng/L
PFNA	ND	0.80	ng/L
PFDA	ND	0.80	ng/L
PFUnA	ND	0.80	ng/L
PFDoA	ND	0.80	ng/L
PFTTrDA	ND	0.80	ng/L
PFTeDA	ND	0.80	ng/L
PFBS	ND	0.80	ng/L
PFPeS	ND	0.80	ng/L
PFHxS	ND	0.80	ng/L
PFHpS	ND	0.80	ng/L
PFOS	ND MI2,	0.80	ng/L
PFNS	ND	0.80	ng/L
PFDS	ND	0.80	ng/L
4:2FTS	ND	3.2	ng/L
6:2FTS	ND	3.2	ng/L
8:2FTS	ND	3.2	ng/L
PFBSA	ND	3.2	ng/L
PFHxSA	ND	3.2	ng/L
PFOSA	ND	0.80	ng/L
NMeFOSAA	ND	0.80	ng/L
NEtFOSAA	ND	0.80	ng/L
HFPO-DA	ND	1.6	ng/L
ADONA	ND	1.6	ng/L
9CI-PF3ONS	ND	1.6	ng/L
11CI-PF3OUDS	ND	1.6	ng/L
PFECHS	ND	3.2	ng/L

Surrogate: 13C4-PFBA	74.6	ng/L	64.0	117	10-130
Surrogate: 13C5-PFPEA	49.4	ng/L	32.0	154	35-150
Surrogate: 13C5-PFHXA	19.0	ng/L	16.0	119	55-150
Surrogate: 13C4-PFHPA	18.9	ng/L	16.0	118	55-150
Surrogate: 13C8-PFOA	19.9	ng/L	16.0	124	60-140
Surrogate: 13C9-PFNA	8.63	ng/L	8.00	108	55-140
Surrogate: 13C6-PFDA	9.63	ng/L	8.00	120	50-140
Surrogate: 13C7-PFUnA	8.76	ng/L	8.00	109	30-140
Surrogate: 13C2-PFDOA	8.53	ng/L	8.00	107	10-150
Surrogate: 13C2-PFTEDA	7.49 MI6	ng/L	8.00	93.6	10-130
Surrogate: 13C3-PFBS	21.2	ng/L	16.0	133	55-150
Surrogate: 13C3-PFHXS	17.4	ng/L	16.0	109	55-150
Surrogate: 13C8-PFOS	18.9	ng/L	16.0	118	45-140
Surrogate: 13C2-4:2FTS	52.3	ng/L	32.0	163	60-200
Surrogate: 13C2-6:2FTS	43.7	ng/L	32.0	137	60-200
Surrogate: 13C2-8:2FTS	37.6	ng/L	32.0	118	50-200

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Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Blank (BCK0264-BLK1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 17:45					
Surrogate: 13C8-PFOA	10.2			ng/L	16.0		63.6	30-130		
Surrogate: D3-NMEFOSAA	34.4			ng/L	32.0		107	45-200		
Surrogate: D5-NETFOSAA	37.8			ng/L	32.0		118	10-200		
Surrogate: 13C3-HFPO-DA	81.4			ng/L	64.0		127	25-160		
LCS (BCK0264-BS1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 18:06					
PFBA	38.3			ng/L	32.0		120	58-148		
PFPeA	19.3			ng/L	16.0		121	54-152		
PFHxA	8.05			ng/L	8.00		101	55-152		
PFHpA	9.26			ng/L	8.00		116	54-154		
PFOA	8.86			ng/L	8.00		111	52-161		
PFNA	9.14			ng/L	8.00		114	59-149		
PFDA	7.55			ng/L	8.00		94.3	52-147		
PFUnA	8.22			ng/L	8.00		103	48-159		
PFDoA	8.57			ng/L	8.00		107	64-142		
PFTeDA	8.15			ng/L	8.00		102	49-148		
PFTeDA	8.23			ng/L	8.00		103	47-161		
PFBS	7.84			ng/L	7.08		111	62-144		
PFPeS	7.73			ng/L	7.52		103	59-151		
PFHxS	8.42			ng/L	7.32		115	57-146		
PFHpS	8.07			ng/L	7.64		106	55-152		
PFOS	7.69			ng/L	7.44		103	58-149		
PFNS	7.09			ng/L	7.68		92.3	52-148		
PFDS	7.32			ng/L	7.72		94.9	51-147		
4:2FTS	38.2			ng/L	30.0		127	67-146		
6:2FTS	30.3			ng/L	30.4		99.7	61-151		
8:2FTS	32.3			ng/L	30.7		105	63-152		
PFBSA	10.9			ng/L	8.00		136	40-150		
PFHxSA	9.04			ng/L	8.00		113	40-150		
PFOSA	10.3			ng/L	8.00		129	61-148		
NMeFOSAA	7.80			ng/L	8.00		97.5	58-144		
NEtFOSAA	8.24			ng/L	8.00		103	59-146		
HFPO-DA	9.03			ng/L	8.00		113	63-144		
ADONA	9.07			ng/L	7.56		120	68-146		
9CI-PF3ONS	6.40			ng/L	7.48		85.6	56-156		
11CI-PF3OUDS	5.13			ng/L	7.56		67.9	46-156		
PFECHS	7.17			ng/L	7.40		96.9	40-150		
Surrogate: 13C4-PFBA	70.0			ng/L	64.0		109	10-130		
Surrogate: 13C5-PFPEA	27.4			ng/L	32.0		85.5	35-150		
Surrogate: 13C5-PFHXA	17.6			ng/L	16.0		110	55-150		
Surrogate: 13C4-PFHFA	17.5			ng/L	16.0		109	55-150		
Surrogate: 13C8-PFOA	18.5			ng/L	16.0		116	60-140		
Surrogate: 13C9-PFNA	8.76			ng/L	8.00		109	55-140		
Surrogate: 13C6-PFDA	10.1			ng/L	8.00		126	50-140		
Surrogate: 13C7-PFUnA	8.88			ng/L	8.00		111	30-140		
Surrogate: 13C2-PFDOA	8.00			ng/L	8.00		100	10-150		
Surrogate: 13C2-PFTEDA	7.38			ng/L	8.00		92.2	10-130		
Surrogate: 13C3-PFBS	17.8			ng/L	16.0		111	55-150		
Surrogate: 13C3-PFHXS	19.0			ng/L	16.0		119	55-150		
Surrogate: 13C8-PFOS	17.7			ng/L	16.0		110	45-140		

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Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS (BCK0264-BS1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 18:06					
Surrogate: 13C2-4:2FTS	36.9			ng/L	32.0		115	60-200		
Surrogate: 13C2-6:2FTS	51.2			ng/L	32.0		160	60-200		
Surrogate: 13C2-8:2FTS	40.7			ng/L	32.0		127	50-200		
Surrogate: 13C8-PFOA	9.65			ng/L	16.0		60.3	30-130		
Surrogate: D3-NMEFOSAA	32.4			ng/L	32.0		101	45-200		
Surrogate: D5-NETFOSAA	33.3			ng/L	32.0		104	10-200		
Surrogate: 13C3-HFPO-DA	70.7			ng/L	64.0		110	25-160		

LCS Dup (BCK0264-BSD1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 18:27					
PFBA	39.6			ng/L	32.0		124	58-148	3.34	30
PFPeA	16.6			ng/L	16.0		104	54-152	14.8	30
PFHxA	7.21			ng/L	8.00		90.1	55-152	11.1	30
PFHpA	8.15			ng/L	8.00		102	54-154	12.8	30
PFOA	8.68			ng/L	8.00		109	52-161	2.06	30
PFNA	8.46			ng/L	8.00		106	59-149	7.70	30
PFDA	7.94			ng/L	8.00		99.3	52-147	5.08	30
PFUnA	8.62			ng/L	8.00		108	48-159	4.77	30
PFDoA	8.29			ng/L	8.00		104	64-142	3.29	30
PFTTrDA	8.07			ng/L	8.00		101	49-148	0.942	30
PFTeDA	8.49			ng/L	8.00		106	47-161	3.15	30
PFBS	8.09			ng/L	7.08		114	62-144	3.07	30
PFPeS	8.03			ng/L	7.52		107	59-151	3.89	30
PFHxS	8.48			ng/L	7.32		116	57-146	0.786	30
PFHpS	8.20			ng/L	7.64		107	55-152	1.59	30
PFOS	7.60 M14			ng/L	7.44		102	58-149	1.22	30
PFNS	7.60			ng/L	7.68		98.9	52-148	6.92	30
PFDS	7.44			ng/L	7.72		96.4	51-147	1.56	30
4:2FTS	34.2			ng/L	30.0		114	67-146	11.0	30
6:2FTS	33.6			ng/L	30.4		110	61-151	10.2	30
8:2FTS	33.1			ng/L	30.7		108	63-152	2.31	30
PFBSA	10.8			ng/L	8.00		135	40-150	0.627	30
PFHxSA	9.24			ng/L	8.00		115	40-150	2.16	30
PFOSA	10.4			ng/L	8.00		130	61-148	0.239	30
NMeFOSAA	8.29			ng/L	8.00		104	58-144	6.14	30
NEtFOSAA	8.39			ng/L	8.00		105	59-146	1.84	30
HFPO-DA	8.18			ng/L	8.00		102	63-144	9.88	30
ADONA	8.05			ng/L	7.56		106	68-146	11.9	30
9Cl-PF3ONS	6.66			ng/L	7.48		89.0	56-156	3.84	30
11Cl-PF3OUDS	5.60			ng/L	7.56		74.0	46-156	8.71	30
PFECHS	7.93			ng/L	7.40		107	40-150	10.1	30
Surrogate: 13C4-PFBA	74.8			ng/L	64.0		117	10-130		
Surrogate: 13C5-PFPEA	43.7			ng/L	32.0		137	35-150		
Surrogate: 13C5-PFHXA	19.0			ng/L	16.0		119	55-150		
Surrogate: 13C4-PFHFA	19.2			ng/L	16.0		120	55-150		
Surrogate: 13C8-PFOA	19.6			ng/L	16.0		123	60-140		
Surrogate: 13C9-PFNA	9.02			ng/L	8.00		113	55-140		
Surrogate: 13C6-PFDA	9.91			ng/L	8.00		124	50-140		
Surrogate: 13C7-PFUnA	8.60			ng/L	8.00		108	30-140		
Surrogate: 13C2-PFDOA	8.68			ng/L	8.00		109	10-150		
Surrogate: 13C2-PFTEDA	7.56			ng/L	8.00		94.5	10-130		

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
LCS Dup (BCK0264-BSD1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 18:27					
Surrogate: 13C3-PFBS	18.9			ng/L	16.0		118	55-150		
Surrogate: 13C3-PFHXS	19.0			ng/L	16.0		119	55-150		
Surrogate: 13C8-PFO5	17.5			ng/L	16.0		110	45-140		
Surrogate: 13C2-4:2FTS	41.0			ng/L	32.0		128	60-200		
Surrogate: 13C2-6:2FTS	49.3			ng/L	32.0		154	60-200		
Surrogate: 13C2-8:2FTS	41.6			ng/L	32.0		130	50-200		
Surrogate: 13C8-PFO5A	9.95			ng/L	16.0		62.2	30-130		
Surrogate: D3-NMEFOSAA	32.4			ng/L	32.0		101	45-200		
Surrogate: D5-NETFOSAA	33.8			ng/L	32.0		106	10-200		
Surrogate: 13C3-HFPO-DA	69.7			ng/L	64.0		109	25-160		

MRL Check (BCK0264-MRL1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 18:48					
PFBA	6.47			ng/L	6.40		101	44-157		
PFPeA	2.73			ng/L	3.20		85.4	57-148		
PFHxA	1.42			ng/L	1.60		88.8	62-149		
PFHpA	1.60			ng/L	1.60		100	56-150		
PFOA	1.53			ng/L	1.60		95.7	57-161		
PFNA	1.39			ng/L	1.60		86.8	53-157		
PFDA	1.45			ng/L	1.60		90.6	43-158		
PFUnA	1.34			ng/L	1.60		84.0	50-155		
PFDoA	1.48			ng/L	1.60		92.7	60-141		
PFTTrDA	1.28			ng/L	1.60		80.1	52-140		
PFTeDA	1.43			ng/L	1.60		89.5	52-156		
PFBS	1.31			ng/L	1.42		92.3	63-145		
PFPeS	1.26			ng/L	1.50		84.0	58-144		
PFHxS	1.42 MI4			ng/L	1.46		96.7	44-158		
PFHpS	1.46			ng/L	1.53		95.6	51-150		
PFOS	1.51			ng/L	1.49		101	43-162		
PFNS	1.32 MI6			ng/L	1.54		85.8	46-151		
PFDS	1.34 MI6			ng/L	1.54		86.7	50-144		
4:2FTS	6.84			ng/L	6.00		114	52-158		
6:2FTS	6.21			ng/L	6.08		102	48-158		
8:2FTS	5.70			ng/L	6.14		92.8	46-165		
PFBSA	1.84 , J			ng/L	1.60		115	40-150		
PFHxSA	1.53 , J			ng/L	1.60		95.8	40-150		
PFOSA	1.77			ng/L	1.60		111	47-163		
NMeFOSAA	1.52			ng/L	1.60		94.7	32-160		
NEtFOSAA	1.20			ng/L	1.60		75.2	51-154		
HFPO-DA	1.45 , J			ng/L	1.60		90.7	58-154		
ADONA	1.30 , J			ng/L	1.51		85.8	61-148		
9CI-PF3ONS	1.06 , J			ng/L	1.50		70.6	44-167		
11CI-PF3OUDS	0.964 MI6, , J			ng/L	1.51		63.7	36-158		
PFECHS	1.28 , J			ng/L	1.48		86.5	40-150		
Surrogate: 13C4-PFBA	69.9			ng/L	64.0		109	10-130		
Surrogate: 13C5-PFPEA	32.9			ng/L	32.0		103	35-150		
Surrogate: 13C5-PFHXA	19.1			ng/L	16.0		120	55-150		
Surrogate: 13C4-PFHFA	14.2			ng/L	16.0		89.0	55-150		
Surrogate: 13C8-PFOA	18.8			ng/L	16.0		118	60-140		
Surrogate: 13C9-PFNA	8.79			ng/L	8.00		110	55-140		
Surrogate: 13C6-PFDA	8.93			ng/L	8.00		112	50-140		

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Quality Control (Continued)

Per- and Polyfluoroalkyl Substances (Continued)

Analyte	Result/ Qual	PQL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MRL Check (BCK0264-MRL1)					Prepared: 11/13/23 14:20 Analyzed: 11/22/23 18:48					
Surrogate: 13C7-PFUnA	8.84			ng/L	8.00		111	30-140		
Surrogate: 13C2-PFDOA	8.12			ng/L	8.00		101	10-150		
Surrogate: 13C2-PFTEDA	7.39			ng/L	8.00		92.3	10-130		
Surrogate: 13C3-PFBS	17.2			ng/L	16.0		107	55-150		
Surrogate: 13C3-PFHXS	17.2			ng/L	16.0		107	55-150		
Surrogate: 13C8-PFOS	17.5			ng/L	16.0		110	45-140		
Surrogate: 13C2-4:2FTS	38.6			ng/L	32.0		121	60-200		
Surrogate: 13C2-6:2FTS	44.4			ng/L	32.0		139	60-200		
Surrogate: 13C2-8:2FTS	40.9			ng/L	32.0		128	50-200		
Surrogate: 13C8-PFOSA	9.29			ng/L	16.0		58.1	30-130		
Surrogate: D3-NMEFOSAA	32.7			ng/L	32.0		102	45-200		
Surrogate: D5-NETFOSAA	38.1			ng/L	32.0		119	10-200		
Surrogate: 13C3-HFPO-DA	71.8			ng/L	64.0		112	25-160		

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

Notes and Definitions

Item	Definition
IR2	Ion ratio above the upper control limit
J	Estimated value
MI2	Manual integration, non-target peak interference
MI4	Manual integration, peak unsplit
MI6	Manual integration, wrong peak integrated
U	Not detected
Dry	Sample results reported on a dry weight basis.
MDL	Method Detection Limit (only displays if reported to the MDL)
ND	Analyte NOT DETECTED at or above the reporting limit.
DF	Dilution Factor
DL	Detection Limit
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
PQL, Practical Quantitation Limit = Method Reporting Limit (MRL).	

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41



AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES

 A METIRI GROUP COMPANY
WORK ORDER**23K0078**

Printed: 12/07/2023 1:42 pm

Project: PFAS Testing
Project Number: A18268
Project Manager: Chue Moua
PO Number: NA

Report To:

Fibertec Environmental Services
Rikki Lott
1914 Holloway Drive
Holt, MI 48842
Phone: (517) 699-0345
Fax: (517) 699-0388

Invoice To:

Fibertec Environmental Services
Kathy Jones
1914 Holloway Drive
Holt, MI 48842
Phone: (517) 699-0345
Fax: (517) 699-0388

Date Received: 11/09/2023 09:20 AM
Date Due: 11/27/2023 (10.00 day TAT)

Logged In By: Sophia Herrera
Received By: Terry Moren

Analysis	Comments
23K0078-01 MW-3 [Water] Sampled 11/7/2023 9:30:00AM	
1633 31-compounds	
23K0078-02 MW-15sr [Water] Sampled 11/7/2023 10:30:00AM	
1633 31-compounds	
23K0078-03 MW-15dr [Water] Sampled 11/7/2023 10:50:00AM	
1633 31-compounds	
23K0078-04 MW-17sr [Water] Sampled 11/7/2023 11:10:00AM	
1633 31-compounds	
23K0078-05 MW-19s [Water] Sampled 11/7/2023 11:35:00AM	
1633 31-compounds	
23K0078-06 Equipment Blank [Water] Sampled 11/7/2023 11:45:00AM	
1633 31-compounds	
23K0078-07 Field Blank [Water] Sampled 11/7/2023 11:50:00AM	
1633 31-compounds	

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842

Project: PFAS Testing
Project Number: A18268
Project Manager: Rikki Lott

Reported: 12/07/2023 13:41

23K0078

Sample Receipt Log

Default Cooler

Samples Received at: 5.0°C

Custody Seals	Yes	Were all containers sealed in separate bags?	Yes
Containers Intact	Yes	Did all containers arrive in good condition?	Yes
COC/Labels Agree	Yes	Correct containers/preserv. for tests indicated?	Yes
Preservation Confirmed	Yes	Sufficient volume sent for tests requested?	Yes
Received On Ice	Yes	Were bubbles absent in volatile samples?	No
Was a chain of custody received?	Yes	Sufficient remaining holding time for analyses?	Yes
COCs complete/signed in the appropriate places?	Yes	pH of non-VOA preserved containers documented?	No
Sample labels complete? Sample ID, date/time, etc.	Yes	Unpreserved vials received for VOA analysis?	No
Did all container labels agree with COCs?	Yes	If "yes", are unpreserved VOA vials noted on Work	No



Analytical Laboratory
1914 Holloway Drive
Holt, MI 48842
Phone: 517 699 0345
Fax: 517 699 0388
email: lab@fibertec.us

8660 S. Mackinaw Trail
Cadillac, MI 49601
Phone: 231 775 8368
Fax: 231 775 8584

2340078

Geoprobe
11766 E. Grand River Rd.
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody #
A18268-S
PAGE 1 of 1

Client Name: Metiri Group Holt (Fibertec)				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	537.1 Modified*	PARAMETERS												Matrix Code		Deliverables	
Contact Person: Rikki Lott							HOLD SAMPLE	S	Soil	GW	Ground Water		Level 2									
Project Name/ Number: A18268								A	Air	SW	Surface Water		Level 3									
Email distribution list: lab.holt@metirigroup.com								O	Oil	WW	Waste Water		Level 4									
Quote#								P	Wipe	X	Other: Specify		EDD									
Purchase Order#				X=Equipment Blank X1=Field Blank																		
Remarks:																						
Date	Time	Sample #	Client Sample Descriptor																			
11/7/23	0930	1	MW-3	GW	3	✓																
11/7/23	1030	2	MW-15sr	GW	3	✓																
11/7/23	1050	3	MW-15dr	GW	3	✓																
11/7/23	1110	4	MW-17sr	GW	3	✓																
11/7/23	1135	5	MW-19s	GW	3	✓																
11/7/23	1145		Equipment Blank	X	3	✓																
11/7/23	1150		Field Blank	X1	1	✓																
Comments: See attached*																						
Sampled/Relinquished By:				Date/Time: 11/8/23 1500				Received By: Fedex														
Relinquished By:				Date/Time: 11/9/23 9:20				Received By: Jerry Moore														
Relinquished By:				Date/Time: 11/9/23 9:20				Received By Laboratory: Jerry Moore														
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY																LAB USE ONLY						
____ 1 bus. day ____ 2 bus. days ____ 3 bus. days ____ 4 bus. days																Fibertec project number:						
____ 5-7 bus. days (standard) Other (specify time/date requirement): Standard																Temperature upon receipt at Lab: 1 RB 5.3/5						
Please see back for terms and conditions																						

RL
11/8/23

Fibertec		
Foam & Non-Potable Water		
EPA 537.1 M (Modified)		
Test Name PFAS-TZM		
Parameter	RDL ng/L	
1 11CI-PF3OUdS	1	
2 9CI-PF3ONS	1	
3 ADONA	1	
4 FtS 4:2	1	
5 FtS 6:2	1	
6 FtS 8:2	1	
7 HFPO-DA	1	
8 N-EtFOSAA	1	
9 N-MeFOSAA	1	
10 PFBA	1	
11 PFBS	1	
12 PFDA	1	
13 PFDoA	1	
14 PFDS	1	
15 PFHpA	1	
16 PFHpS	1	
17 PFHxA	1	
18 PFHxS-Total	1	
19 PFNA	1	
20 PFNS	1	
21 PFOA	1	
22 PFOS-Total	1	
23 PFOSA	1	
24 PFPeA	1	
25 PFPeS	1	
26 PFTeA (PFTeDA)	1	
27 PFTriA (PFTriDA)	1	
28 PFUnA	1	

Total: 28

Appl		
Non-Potable Water		
EPA 537.1 Modified		
Test Name: PFAS		
Parameter	RDL ng/L	
1 11CI-PF3OUdS	1.6	
2 9CI-PF3ONS	1.6	
3 ADONA	1.6	
4 FtS 4:2	3.2	
5 FtS 6:2	3.2	
6 FtS 8:2	3.2	
7 HFPO-DA	1.6	
8 N-EtFOSAA	0.8	
9 N-MeFOSAA	0.8	
10 PFBA	3.2	
11 PFBS	0.8	
12 PFDA	0.8	
13 PFDoA	0.8	
14 PFDS	0.8	
15 PFHpA	0.8	
16 PFHpS	0.8	
17 PFHxA	0.8	
18 PFHxS-Total	0.8	
19 PFNA	0.8	
20 PFNS	0.8	
21 PFOA	0.8	
22 PFOS-Total	0.8	
23 PFOSA	0.8	
24 PFPeA	1.6	
25 PFPeS	0.8	
26 PFTeA (PFTeDA)	0.8	
27 PFTriA (PFTriDA)	0.8	
28 PFUnA	0.8	

Total: 28

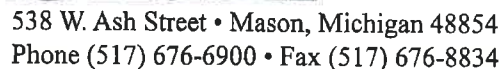
APPL: Please reference 537.1 Modified on the Case Narrative.

Verbiage: Samples have been processed using methodologies compliant with DoD QSM Table B-15, which is an equivalent to EPA 537.1 Modified.

Fibertec's LIMS test name is: CLO-B-15DOD.

*We have also requested APPL's 250mL nonpreserved PFAS free bottles for a client who wants 537.1M. The holdtime for NONpreserved is 28 days to extractions / 90 days after extraction. Ideally, we will switch over to Method 1633, and not need B-15 anymore. 'per Chue on 6/2/23

No Custody Seal



Air	A
Drinking Water	D
Groundwater	W
Soil	S
Sludge	L
Oil	O
Other	X

Sampling Personnel: SVS/NP

CHAIN OF CUSTODY

[illegible]

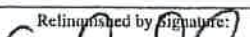
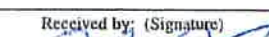
Comments: September 2023 Resample

PO # 10252

Received
On Ice

Initials: UG

Project # A18268 Temp: 4.3°C

Relinquished by Signature: 	Date 11-7-23	Time 12:45	Received by: (Signature) 	Date 11/7/23	Time 12:45	Relinquished by Signature:	Date	Time	Received by: (Signature)	Date	Time
Relinquished by Signature: 	Date	Time	Received by: (Signature) 	Date	Time	Method of Shipment:			Bill of Lading:		
Received for Laboratory by:	Date	Time	Data Package Relinquished by:	Date	Time	Data Received by:	Date	Time			