ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES MEETING AGENDA

Monday, December 15, 2025, at 7:30 PM
Township Office, 3792 Pontiac Trail, Ann Arbor MI 48105

To participate via video conference call - Click here to register or Visit aatwp.org

I. CALL TO ORDER ESTABLISH QUORUM

II. APPROVAL OF BOARD OF TRUSTEES MINUTES

A. October 20, 2025, Special Meeting

B. November 17, 2025
C. December 3, 2025

III. CITIZEN PARTICIPATION Citizen Participation on Agenda items only. Public Comment regarding non-agenda items is at the end of the meeting.

IV. TRUSTEE COMMENTS ON CITIZEN PARTICIPATION

V. APPROVE THE AGENDA AND CONSENT AGENDA

A. Claims Listings:11/14/2025 – 12/11/2025 for $563,780.69

B. Approve Decker Agency Par Plan Renewal

C. Approve repair cost for Fire Station 2' rooftop HVAC unit for $5,650.

VI. ANNEXATIONS, ORDINANCES, ZONING, RESOLUTION

A. Fourth Quarter Budget Amendments – Comptroller Colleen Coogan

B. Discussion of the report: Impacts of Sediment Discharge on Massey Lake

C. Consider approval of the Resolution to Adopt Fee Schedule

D. Consider adoption of the 2026 Meeting Dates Calendar

VII. REPORTS, DISCUSSIONS

A. Supervisor's Report

B. Clerk's Report

C. Treasurer's Report

D. Planning Commission Report – December 1, 2025

E. Committee Reports

1) **Farmland Open Space and Preservation Board Report – November 24, 2025**
2) **Utility Committee**
3) **Climate Resilience Committee – December 8, 2025**
4) **Zoning Board of Appeals – December 16, 2025**
5) **Public Safety Committee – November 11, 2025**
6) **Farm Policy and Communication – December 2, 2025**
7) **Roads Committee**

F. Utilities Department Report

G. Public Safety Report

1) **Washtenaw County Sheriff's Department**
2) **Fire Department – Chief Mark Nicholai**

H. Building Department Report

VIII. INFORMATION ONLY ITEMS

IX. NON-AGENDA ITEMS

X. PUBLIC COMMENT

XI. ADJOURNMENT

ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES SPECIAL MEETING MINUTES
October 20, 2025
TOWNSHIP OFFICES, 3792 PONTIAC TRAIL, ANN ARBOR MI
6:00 PM

I. CALL TO ORDER, ESTABLISH QUORUM

Supervisor O'Connell called the Ann Arbor Charter Township Board of Trustees meeting to order at 6:04 pm on October 20, 2025.

Present: Supervisor Diane O'Connell
Clerk Kristine Bolhuis
Treasurer Carlene Colvin-Garcia
Trustee John Allison
Trustee Della DiPietro
Trustee Eric Kaldjian
Trustee Peter Kotila

Absent: n/a

Also Present: Comptroller Colleen Coogan
Deputy Treasurer Iomar Whitt

II. CITIZEN PARTICIPATION - none

III. OPEN SESSION

A. 2026 Budget Discussion – Comptroller Colleen Coogan
Comptroller Coogan and Deputy Treasurer Iomar Whitt gave a presentation of township funding sources.

IV. NON-AGENDA ITEMS - none

V. PUBLIC COMMENT – none

VI. ADJOURNMENT

MOTION by Colvin-Garcia, supported by DiPietro to adjourn the meeting. Motion passed.
The meeting was adjourned at 7:04 pm.

MOTION by Colvin-Garcia, supported by DiPietro to resume the meeting
Motion passed and the meeting resumed at 7:06 pm.

The board discussed the Fire/Safety millage with Colleen Coogan

MOTION by Bolhuis, supported by DiPietro to adjourn the meeting. Motion passed.

The meeting was adjourned at 7:29 pm.

ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES MEETING
MINUTES OF MEETING – MONDAY, November 17, 2025
TOWNSHIP OFFICES
3792 PONTIAC TRAIL, ANN ARBOR MI
7:30 PM

I. CALL TO ORDER, ESTABLISH QUORUM

Supervisor O'Connell called the Ann Arbor Charter Township Board of Trustees meeting to order at 7:35 PM on November 17, 2025.

Present: Supervisor Diane O'Connell
Clerk Kristine Bolhuis
Trustee John Allison
Trustee Della DiPietro
Trustee Eric Kaldjian
Trustee Peter Kotila

Absent: Treasurer Carlene Colvin-Garcia

Also Present: Jeffrey May, Township Attorney (Bodman PLC)
Rick Judkins, Utilities Director
Mark Nicholai, Fire Chief
Colleen Coogan, Comptroller
Lieutenant Thompson, Washtenaw County Sheriff's Department
State Representative Jason Morgan
Gene Ragland, Compensation Commission Chair

STATE REPRESENTATIVE REPORT

Before proceeding to the regular agenda, Supervisor O'Connell invited State Representative Jason Morgan to provide updates from Lansing.

Representative Morgan, who represents part of Ann Arbor Township, provided a comprehensive update on the state budget and legislative activities. Key highlights included:

Education Budget:

- Ann Arbor Schools will receive an additional $8 million per year, bringing per-pupil funding to over $10,000
- Shifted categorical line items to provide more flexibility for school districts
- Made public safety and mental health funding stable and ongoing rather than one-time funding
- Increased funding for at-risk and special education students

- Protected free breakfast and lunch programs for all students
- Secured a 3% increase for the University of Michigan, Michigan State University, and all other state universities, after initial proposals would have cut UM by 92%

Road Funding:

- Bipartisan deal provides approximately $2 billion for local roads statewide
- Washtenaw County Road Commission will receive $13 million annually, a 33% increase
- Intent was to eliminate match requirements from townships for road projects, though some clarification may be needed with road commissions

Public Transportation:

- $160 million annual investment in public transit statewide, the largest in state history
- $65 million annually for expanding passenger rail throughout Michigan
- State funding will allow expansion of park-and-ride systems and bus services beyond traditional millage-funded areas

Representative Morgan noted the budget process was delayed beyond the July 1 deadline but ultimately resulted in a balanced, bipartisan product. He thanked the Township for its partnership and emphasized that the state and township share constituents and appreciate ongoing communication.

The Board thanked Representative Morgan for his update and advocacy work in Lansing.

II. APPROVAL OF BOARD OF TRUSTEES MINUTES

A. Regular Meeting October 20, 2025

MOTION by Kotila, supported by Kaldjian to approve the minutes of the October 20, 2025, regular meeting with the following corrections:

- P3 – Section V.A, correct the term “water tower” to “water tank” throughout the section.
- P3 – Section III, last paragraph, correct to “all written comments”
- P6 – Section VI.E.1, third sentence, correct to “The Board authorized the supervisor to pursue a property appraisal, which was approved in the consent agenda.”
- P7 – Section VI.E.2, second sentence, correct to ”The Committee held a pre-meeting to discuss contract issues before meeting with City officials.”

Motion passed unanimously by voice vote.

III. CITIZEN PARTICIPATION

None

IV. APPROVE THE AGENDA AND CONSENT AGENDA

MOTION by Allison, supported by Kotila, to approve the Agenda and Consent Agenda moving Item E to 6H.

Motion passed unanimously by voice vote.

Consent Agenda:

- **A.** Claims Listings: 10-16-25 to 11-13-25 for $1,065,000.16
- **B.** Appoint Tom Schultz to serve on the Board of Review for a term ending Jan 1, 2028.
- **C.** City of Ann Arbor-Ann Arbor First Renewed and Amended Water Supply Agreement
- **D.** Approve adding overdue utility charges of $1,197.72 for the property at 4050 E. Huron River Service Drive to the 2025 tax roll.
- **F.** Purchase Request for Engine 2 Report in the amount of $16,649.30.
- **G.** Purchase Request for Fire Department RMS Software Annual Fee for an amount not to exceed $9,000.

V. ANNEXATIONS, ORDINANCES, ZONING, RESOLUTIONS

A. Public Hearing 2026 Budget -- Comptroller Colleen Coogan

Presentation

Comptroller Coogan joined the meeting remotely and provided background information on the 2026 budget. She noted that the board had a substantive conversation in October, and the current submission reflects corrections based on past comments from the board:

- Corrected explanation on fire apparatus cost in the narrative
- Removed $400,000 from the Utility Fund capital outlay
- Researched IT costs for web design and engineering for the water tank; both are 2025 expenditures and will be included with the 4th quarter 2025 budget amendment request

Comptroller Coogan explained that the budget resolution breaks down appropriations in three categories: regular operating expenses, transfers from funds (such as the public safety fund transferring to fire and capital), and capital expenditures (one-time use of reserves or revenue). She noted that the Township has a structurally sound budget, meaning normal revenue adequately covers normal expenditures.

Public Hearing Open at 8:30 PM

A resident asked how the township is doing financially.

No other public comments.

Public Hearing Closed at 8:32 PM

Board Action -- 2026 General Appropriations Act Resolution

Comptroller Coogan explained the resolution and noted that in the general fund, the Township restricts itself department by department. If money needs to be moved from one department to another, staff come back to the board for approval.

MOTION by DiPietro, supported by Kaldjian, to approve the 2026 General Appropriations Act Resolution.

Motion passed unanimously by voice vote.

B. Consider Approval of 2026 Capital Improvement Plan - Colleen

Comptroller Coogan noted that tabling the item would allow the Public Safety Committee additional time to review the plan.

MOTION by DiPietro, supported by Kotila, to table the discussion about the 2026 Capital Improvement Plan until the December meeting.

Motion passed unanimously by voice vote.

C. Consider Approval of Resolution Approving Conditional Use Permit for NSK Americas Inc. – Christian Groesbeck, Harvest Solar

Christian Groesbeck with Harvest Solar, developer for the project, gave background information – rooftop solar project for NSK will offset about 10% of their usage – provided location of the panels – available for questions

Trustee asked whether they would sell any electricity back to the grid? Response, no with only 10% offset it wouldn't be sold back.

MOTION by Allison, supported by DiPietro to approve Resolution Approving Conditional Use Permit for NSK Americas Inc. – Christian Groesbeck, Harvest Solar.

Motion passed unanimously by voice vote.

D. Proposed changes to the Ann Arbor Township Fee Schedule – Planning Department Fees, pages 2 to 4.

Supervisor O'Connell explained that the fees are being updated to be consistent and reasonable. Administrative fees were out of date and are being increased from $650 to $1,000. The Township previously had a complicated system of non-refundable and refundable deposits that was difficult to track. This has been simplified by combining them into an escrow account, which allows consultants to have sufficient funds available for project reviews. The escrow is treated like a pool of money from which consultant fees can be drawn to ensure the Township can recover consultant costs.

Discussion ensued about adding clarifying language to explain what the escrow deposit is used for and that it is refundable if not used. The Board agreed to add language indicating the escrow covers additional consultant fees.

MOTION by DiPietro, supported by Allison to approve proposed changes to the Ann Arbor Township Fee Schedule – Planning Department Fees, pages 2 to 4 with the addition of clarifying language regarding the escrow.

Motion passed unanimously by voice vote.

E. Compensation Commission Report – Gene Ragland, Chair, Compensation Commission

Gene Ragland, Chair of the Compensation Commission, presented the Commission's report dated October 20, 2025. The Commission held a public meeting to review and evaluate salaries of the Supervisor, Clerk, and Treasurer, as well as per-meeting compensation for Trustees. The Commission's review included the Township Compensation Ordinance, comparison of compensation data from Washtenaw County Townships, historical Consumer Price Index changes, and extensive interviews with Supervisor O'Connell and Clerk Bolhuis.

The Commission's unanimous recommendations are:

2026:
Supervisor: $110,250
Clerk: $105,000
Treasurer: $63,350
Trustee: $250.00 per meeting (scheduled meetings only)

2027:
Supervisor: $110,250
Clerk: $105,000
Treasurer: $63,350
Trustee: $275.00 per meeting (including special meetings)

These are salaries only and exclude Retirement or Health Coverage Benefits. The Commission elected Ryan T. Ball as Chairperson for 2026-2027. The Board thanked Mr. Ragland for the presentation.

F. Consider approval of Resolution to accept the Michigan Natural Features Trust Fund Grant in the amount of $300,000.

Supervisor O'Connell provided background information on the grant for the Dixboro Trail project.

MOTION by Allison, supported by Bolhuis to approve the Resolution to accept the Michigan Natural Features Trust Fund Grant project agreement for the Dixboro Trail grant in the amount of $300,000.

Motion passed unanimously by voice vote

G. Washtenaw Regional Resource Management Authority (WRRMA)

1) Resolution to appoint 2025 WRRMA delegate and alternate delegate
2) Review and provide any objections to 2025 WRRMA budget
3) Approve 2025 WRRMA membership dues of $5,000

Trustee DiPietro provided background. The Board needs to approve the WRRMA minutes and appoint delegates. Treasurer Colvin-Garcia will serve as the delegate and Trustee DiPietro will serve as the alternate delegate.

MOTION by Kaldjian, supported by Allison, to approve the resolution to appoint Treasurer Colvin-Garcia as the 2025 WRRMA delegate and Trustee DiPietro as the alternate delegate.

Motion passed unanimously by voice vote.

MOTION by DiPietro, supported by Allison, to approve the 2025 WRRMA membership dues of $5,000.

Motion passed unanimously by voice vote

H. Resolution of Ann Arbor Charter Township electing exemption from the Requirements of the Publicly Funded Health Insurance Contribution Act.

(This item was moved from the Consent Agenda as it requires a roll call vote.)

MOTION by Allison, supported by Bolhuis, to approve the Resolution of Ann Arbor Charter Township electing exemption from the Requirements of the Publicly Funded Health Insurance Contribution Act.

Roll call vote in alphabetical order:
Allison - Yes
Bolhuis - Yes
DiPietro - Yes
Kaldjian - Yes
Kotila - Yes
O'Connell - Yes

Motion passed unanimously 6-0

VI. REPORTS, DISCUSSIONS

A. Supervisor's Report

MidMichigan Lights: A resident complaint was received about security lights that are visible from neighboring properties. These lights have been in place for years. The Supervisor will explore with Rob Wilson why the lights would be visible now when they weren't before, including whether trees were removed or if there's been a shielding change.

Water Quality Issues: The Board has been receiving reports about water quality problems including iron, manganese, sulfides producing odors, and other issues. The Supervisor has created a folder on the shared drive to collect resident comments and combined this with Google Docs information from residents . Approximately 15 residents have reported water quality issues. The Township is working to determine what testing has already been done and develop a strategy for additional testing. There was extensive discussion about the appropriate approach to testing, including chain of custody concerns and the Township's responsibility if contaminants are found. The Supervisor will send an email to residents requesting any existing test results.

Other Updates:

- **EPA/Superfund Site:** Letters have been sent to the EPA regarding frustration that the Township is supposed to be on the Superfund site but it's not getting listed. Congresswoman Dingell has also sent letters.
- **SEMCOG and Non-Motorized Transportation Plan:** The Supervisor reported on the SEMCOG General Assembly meeting, which included examples of planning assistance grant projects from other communities. The Township received $40,000 for its non-motorized transportation plan (originally requested $30,000). The Supervisor is exploring whether SEMCOG funds could be used for mini-implementation pieces.
- **Older Adult Transportation Program:** The Supervisor reported on hosting a supervisors meeting with three contracting entities (WAVE, JFS, and People's Express) for older adult transportation services through the county millage. The program provides free point-to-point transportation for seniors anywhere in the county through March. The county is hiring a director for the older adults office.
- **Data Centers:** The Supervisor discussed concerns about data centers and their projected energy consumption.

B. Clerk's Report – Bolhuis

- The November election went well and was very quiet compared to statewide or federal elections
- Records management is ongoing with continuous cleanup
- Website migration is in progress with the company handling the technical work
- Following Iomar Whitt's departure, the Clerk has been taking over many additional responsibilities including new account setups, logins, health insurance administration, and other duties

- Two annexations are coming: one property north of Geddes (an island property that needs water/sewer), and another vacant lot west of Pontiac Trail where soil is not suitable for septic systems

C. Treasurer's Report – Colvin-Garcia
Written report was provided in the packet

D. Planning Commission Report – Allison

- The Planning Commission recommended approval of the NSK solar conditional use permit
- The Master Plan public hearing was held with one written comment received
- Comments were received from the Farmland Board, and Peter Kotila attended to discuss data centers
- Modifications were made including adding a provision to study data centers in the next five-year plan
- The Master Plan has been approved by the Planning Commission and will come to the Board in the next packet pending final editorial work
- Bylaws updates were completed to address conflict of interest requirements and conform to township standards

E. Committee Reports

1) Farmland Open Space and Preservation Board Report – Kotila
Trustee Kotila reported that there was no meeting last month. The Board will meet on November 24th.

2) Utility Committee
Supervisor O'Connell reported that the Utility Committee met to discuss the water agreement with the City of Ann Arbor.

3) Climate Resilience Committee
Supervisor O'Connell reported that the Climate Resilience Committee met and is continuing to work on upcoming projects focused on education and seminars.

4) Zoning Board of Appeals
The Zoning Board of Appeals did not hold a meeting in October with no agenda items.

5) Public Safety Committee
Supervisor O'Connell reported that the Public Safety Committee has been meeting with Fire Chief Nicholai to review the Capital Improvement Plan and long-term vehicle purchases, working to stretch out and manage the timeline for fire apparatus acquisitions.

6) Farm Policy and Communication
Trustee Allison reported that the Committee has developed a draft policy for agricultural structures addressing mechanical, electrical, and plumbing permitting

requirements. The policy encourages voluntary no-cost permitting and provides for informational meetings with the Building Department. The Committee will meet with the Township Attorney and Building/Zoning Official to review the policy before finalizing.

7) Roads Committee
No report

F. Utilities Department Report – Judkins
Utilities Director Rick Judkins' report was included in the packet. He was available for questions and noted that there have been no water main breaks recently. There was one sewer leak reported, but it was a customer's own service line, not the Township's sewer system. The issue was on a service line going from a house to the city sewer. Judkins notified the city.

Discussion included the Gabriel Sharn athletic fields improvements plan review, which is still in progress with weekly questions from the applicant regarding retaining wall heights, traffic studies, and other requirements. The applicant is working to get all information ready for the next Planning Commission submission

G. Public Safety Report

1) Washtenaw County Sheriff's Department
Lieutenant Thompson from the Washtenaw County Sheriff's Department was present and provided a detailed report. Earlier in the meeting, she discussed the Shop with a Cop program, which hosts four events per year, with upcoming Christmas events scheduled for December 9th (west side) and December 16th (east side) serving approximately 120 kids each. The Board expressed appreciation for the improved format. The Board expressed appreciation for the improved format of the reports with better geographic detail. Discussion included semi-truck enforcement, stop sign enforcement (which will appear in next month's report), and timing of enforcement activities. The Board thanked the Sheriff's Department for their ongoing work.

2) Fire Department – Chief Mark Nicholai
Chief Nicholai's report was included in the packet. He noted that the department has started including major and significant incidents in the report to give the Board a better feel for what's happening in the Township on a larger scale. The Board appreciated the addition of photographs to the report.

Extensive discussion followed regarding the joint fire department/utilities department report on the water main break during fire training. The report detailed findings about a water hammer incident and a bent hydrant stem. Discussion covered whether the incident was due to the training exercise or a pre-existing weakness in the water main, the condition of the pipe, and training protocols. The Board thanked both departments for their thorough investigation and collaborative work on policies related to water mains and fire hydrant

operations. The utilities department will conduct additional training on proper hydrant operation techniques.

H. Building Department Report

Report included in packet.

VII. INFORMATION ONLY ITEMS

None

VIII. NON-AGENDA ITEMS

None

IX. PUBLIC COMMENT

Utilities Director Rick Judkins provided an informal update on road construction projects:

- Warren Road culvert is now wide open with guardrails in place; residents can travel down Warren Road all the way to Dixboro
- Joy Road should be opening shortly
- Construction equipment is being moved to staging areas
- Warren Road bridge work will begin in April 2026
- Meeting scheduled for the following day with Joy Bridge construction team
- Lake Road work in progress: leveling dirt, berm opened to restore natural water flow, grading being completed

Regarding Toll Brothers' Maple Ridge/Barton Ridge development: They are attempting to get the wastewater treatment facility tested and online. Judkins advised about freeze protection concerns given the unheated building. The development has 57 homes with 28 sold. The facility requires 15-20 homes online to have adequate flow for proper treatment operation. Until then, sewage is pumped to lift station and hauled away by tanker trucks. The facility likely won't be fully operational until mid-summer 2026.

Regarding electrical system complications: The developer wanted to switch from three-phase to single-phase power with specialized equipment, which would have increased resident power costs by 30% and created potential equipment failure issues with long replacement times (1-3 months). After consultation with Stantec and Greg Schofer, the decision was made to return to three-phase power. DTE Edison was engaged to install three-phase service, which could take six months.

X. ADJOURNMENT

MOTION by Kaldjian, supported by DiPietro, to adjourn the meeting.

Motion passed unanimously by voice vote.

The meeting was adjourned at 10:04 PM.

ANN ARBOR CHARTER TOWNSHIP
BOARD OF TRUSTEES SPECIAL MEETING MINUTES
Wednesday December 3, 2025
TOWNSHIP OFFICES - 3792 PONTIAC TRAIL, ANN ARBOR, MI

I. CALL TO ORDER, ESTABLISH QUORUM

Supervisor O'Connell called the Ann Arbor Charter Township Board of Trustees meeting to order at 1:05 pm on December 3, 2025.

Present:
Supervisor Diane O'Connell
Clerk Kristine Bolhuis
Treasurer Carlene Colvin-Garcia
Trustee John Allison
Trustee Della DiPietro
Trustee Peter Kotila

Absent: Trustee Eric Kaldjian

Also Present: Township Attorneys Nathan Dupes, Sarah Gabis

II. CLOSED SESSION

MOTION by Colvin-Garcia, supported by DiPietro, to enter into closed session pursuant to Section 8(1)(c) of the Open Meetings Act to consult with Township attorneys regarding trial or settlement strategy in connection with the litigation in the Washtenaw County Circuit Court, Ann Arbor Charter Township vs. WSG Properties LLC, AMC-WSG LLC, AMC-Mid Michigan Materials LLC, Case No. 23-001234-CE.

Roll call vote:
Allison – yes
Bolhuis – yes
Colvin-Garcia – yes
DiPietro – yes
Kotila -- yes
O'Connell - yes

The Board of Trustees moved into closed session at 1:07 pm and left the meeting room.

III. OPEN SESSION

At 3:35 pm the Board, minus DiPietro who had to leave, re-entered the Township meeting room and the following motion was offered:

MOTION by Colvin-Garcia, support by Kotila, that closed session be adjourned. Motion passed.

MOTION by Colvin-Garcia, support by Kotila that the Board move back into open session. Motion passed.

At 3:36 pm the Board resumed meeting in Open Session.

Bolhuis moved to authorize the Supervisor to publish Limnotech reports when complete. Seconded by Allison.

Roll call vote:
Allison – yes
Bolhuis – yes
Colvin-Garcia – yes
Kotila – yes
O'Connell - yes

Motion passes.

II. NON-AGENDA ITEMS

Diane O'Connell reported that at the December 2 Planning Workshop, a resident suggested that a proposed township park should be named after John Allison due to all his work on land preservation.

V. PUBLIC COMMENT - none

VI. ADJOURNMENT

MOTION by Colvin-Garcia, support by Kotila to adjourn the meeting. Motion passed by voice vote.

The meeting adjourned at 3:43 pm.

INVOICE GL DISTRIBUTION REPORT FOR ANN ARBOR CHARTER TOWNSHIP
EXP CHECK RUN DATES 11/14/2025 - 12/11/2025
BOTH JOURNALIZED AND UNJOURNALIZED
BOTH OPEN AND PAID

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND						
Dept 000 OTHER REVENUE ACCOUNT						
101-000-001.003		POOLED #1048 & #1253	HARVEST SOLAR	ESCROW REFUND	350.00	38922
101-000-202.002		BCN ACCRUED LIABILITIES	BLUE CARE NETWORK	HEALTH INSURANCE	7,975.49	2089701174
101-000-202.003		BCBS ACCRUED LIAB	BLUE CROSS & BLUE	HEALTH INSURANCE	16,078.95	2089701175
101-000-202.005		HARTFORD LIAB	HARTFORD LIFE &	Life & Disability Insurance	2,318.75	2089701177
101-000-202.006		DELTA DENTAL LIAB	DELTA DENTAL PLAN OF	DELTA INSURANCE	1,435.22	2089701176
101-000-232.000		EMPLOYEE REIMBURSEMENT	VERIZON WIRELESS	CELLPHONES	40.01	2089701182
			Total For Dept 000 OTHER REVENUE ACCOUNT		28,198.42	
Dept 171 SUPERVISOR						
101-171-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	37.59	38924
			Total For Dept 171 SUPERVISOR		37.59	
Dept 215 CLERK						
101-215-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	62.65	38924
			Total For Dept 215 CLERK		62.65	
Dept 228 TECHNOLOGY						
101-228-818.000		SERVICE CONTRACTS	JCM MEDIA GROUP LLC	AATWP WEBSITE SUPPORT	300.00	2089701178
			Total For Dept 228 TECHNOLOGY		300.00	
Dept 253 TREASURER						
101-253-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	62.65	38924
			Total For Dept 253 TREASURER		62.65	
Dept 257 ASSESSOR						
101-257-957.100		GENERAL OPERATING	KENT COMMUNICATIONS	ESTIMATED POSTAGE FOR 2026 MAILING	30.53	38923
			Total For Dept 257 ASSESSOR		30.53	
Dept 261 OPERATIONS						
101-261-728.000		PRINTING/BINDING	LEAF	COPIER LEASE	302.50	2089701180
101-261-818.002		BANK/MANAGEMENT FEES	BANK OF ANN ARBOR	BANK FEES	68.01	2089701173
101-261-851.000		TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	181.54	2089701182
			Total For Dept 261 OPERATIONS		552.05	
Dept 262 ELECTION						
101-262-799.004		NOV ELECTION	SOLID ROCK CHURCH	RENTAL OF SOLID ROCK CHURCH FOR	300.00	38925
			Total For Dept 262 ELECTION		300.00	
Dept 265 BUILDINGS AND GROUNDS						
101-265-818.000		SERVICE CONTRACTS	JNS FACILITY	JANITORIAL SERVICES	695.00	2089701179
101-265-920.000		UTILITIES	DTE Energy Company	Gas Charges : 3792 Pontiac Trl	70.96	
101-265-920.000		UTILITIES	DTE Energy Company	Electric Charges : 3792 Pontiac	386.77	
			Total For Dept 265 BUILDINGS AND GROUNDS		1,152.73	
Dept 266 LEGAL & PROFESSIONAL						
101-266-802.000		ENGINEERING FEES	Stantec Consulting	Task-200-General-Consultation-AAT-	2,486.20	38932

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND						
Dept 266 LEGAL & PROFESSIONAL						
101-266-806.000		CONSULTANTS - OTHER	ANN BURKE	GENERAL CONSULTING - OCTOBER 2025	100.00	
101-266-811.000		LEGAL FEES	Bodman PLC	General	2,925.00	38927
101-266-811.010		LITIGATION- MID MICHIGAN	Bodman PLC	Litigation - Mid Michigan Material	25,545.00	38927
101-266-811.010		LITIGATION- MID MICHIGAN	CARLISLE-WORTMAN	Gravel Pit v A2 Twp	67.50	38929
			Total For Dept 266 LEGAL & PROFESSIONAL		31,123.70	
Dept 272 FARMLAND SUPPORT						
101-272-920.001		UTILITIES-TOWNSHIP FARM	DTE Energy Company	4400 Pontiac Trl/Tilian Farm	56.14	
			Total For Dept 272 FARMLAND SUPPORT		56.14	
Dept 701 PLANNING COMMISSION						
101-701-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	37.58	38924
101-701-801.000		PLANNER FEES	CARLISLE-WORTMAN	24 MP Update	2,150.00	38929
101-701-801.000		PLANNER FEES	CARLISLE-WORTMAN	Plan Consult	540.00	38929
101-701-801.000		PLANNER FEES	CARLISLE-WORTMAN	Toyota Design Ctr	135.00	38929
101-701-801.000		PLANNER FEES	CARLISLE-WORTMAN	Warren Rd Study	1,282.50	38929
101-701-802.001		PREAPP MEETING EXPENSES	CARLISLE-WORTMAN	DF Land - Warrant	405.00	38929
101-701-802.001		PREAPP MEETING EXPENSES	CARLISLE-WORTMAN	Toyota Pathway	382.50	38929
101-701-811.000		LEGAL FEES	Bodman PLC	Planning Commission	2,925.00	38927
101-701-811.019		LEGAL FEES :	Bodman PLC	Dawson Whitmore/Stein Development	840.00	38927
			Total For Dept 701 PLANNING COMMISSION		8,697.58	
Dept 702 ZONING						
101-702-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Zoning Admin	1,012.50	38929
			Total For Dept 702 ZONING		1,012.50	
			Total For Fund 101 GENERAL FUND		71,586.54	
Fund 206 FIRE FUND						
Dept 261 OPERATIONS						
206-261-728.000		PRINTING/BINDING	LEAF	COPIER LEASE	302.50	2089701180
206-261-851.000		TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	482.40	2089701182
			Total For Dept 261 OPERATIONS		784.90	
Dept 265 BUILDINGS AND GROUNDS						
206-265-920.000		UTILITIES	DTE Energy Company	Gas Charges : 3792 Pontiac Trl	70.95	
206-265-920.000		UTILITIES	DTE Energy Company	4319 Goss Rd	835.56	
206-265-920.000		UTILITIES	DTE Energy Company	Electric Charges : 3792 Pontiac	386.77	
206-265-920.000		UTILITIES	DTE Energy Company	Fire Station 4301 GOSS RD BLDG B	20.37	
			Total For Dept 265 BUILDINGS AND GROUNDS		1,313.65	
Dept 266 LEGAL & PROFESSIONAL						
206-266-811.000		LEGAL FEES	Bodman PLC	Fire Department	375.00	38927
			Total For Dept 266 LEGAL & PROFESSIONAL		375.00	

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 206 FIRE FUND						
Dept 270 PERSONNEL						
206-270-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	6,976.05	38924
			Total For Dept 270 PERSONNEL		6,976.05	
Dept 596 TRANSPORTATION						
206-596-748.000		GASOLINE & DIESEL	BP PRODUCTS NORTH	BP GAS`	280.07	38945
			Total For Dept 596 TRANSPORTATION		280.07	
			Total For Fund 206 FIRE FUND		9,729.67	
Fund 211 GRANTS FUND						
Dept 261 OPERATIONS						
211-261-955.002	**CEM**	COMMUNITY ENERGY	HOWLETT LOCK & DOOR,	FINAL PAYMENT FOR DOOR	11,679.07	38948
			Total For Dept 261 OPERATIONS		11,679.07	
Dept 751 PARKS AND RECREATION						
211-751-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	SEMCOG Grant	5,040.00	38929
211-751-806.000	**SEMCOG- '**	CONSULTANTS - OTHER	ANN BURKE	CONSULTING FOR SEMCOG GRANT	112.50	
			Total For Dept 751 PARKS AND RECREATION		5,152.50	
			Total For Fund 211 GRANTS FUND		16,831.57	
Fund 219 STREET LIGHTING FUND						
Dept 265 BUILDINGS AND GROUNDS						
219-265-920.000		UTILITIES	DTE Energy Company	FC streetlights	412.06	
			Total For Dept 265 BUILDINGS AND GROUNDS		412.06	
			Total For Fund 219 STREET LIGHTING FUND		412.06	
Fund 249 BUILDING DEPARTMENT FUND						
Dept 000 OTHER REVENUE ACCOUNT						
249-000-277.000		#03 GAS/OIL BURN	HALEY MECHANICAL	BD Payment Refund	155.00	38931
			Total For Dept 000 OTHER REVENUE ACCOUNT		155.00	
Dept 261 OPERATIONS						
249-261-812.000		INSPECTOR COSTS	GARY WOELKE	175 INSPECTIONS	7,000.00	38947
249-261-812.000		INSPECTOR COSTS	JAMES RATLIFF	96INSPECTIONS	3,840.00	38949
249-261-812.000		INSPECTOR COSTS	RICK PLISKO	40 INSPECTIONS	1,600.00	38950
249-261-812.000		INSPECTOR COSTS	STEPHEN HOWARD BROWN	23 INSPECTIONS	920.00	38951
249-261-851.000		TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	82.29	2089701182
			Total For Dept 261 OPERATIONS		13,442.29	
Dept 266 LEGAL & PROFESSIONAL						
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 4200 Whitehall	405.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 4200 Whitehall	67.50	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 137 Samara Ct	370.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 153 Acer Ct	135.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 209 Samara Ct	202.50	38920

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 249 BUILDING DEPARTMENT FUND						
Dept 266 LEGAL & PROFESSIONAL						
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 263 Samara Ct	235.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 4800 Huron	1,012.50	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 484 Barton North	405.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- 730 Country Club	405.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- Bldg Inspections	560.00	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- WCC EV Lab	202.50	38920
249-266-806.000		CONSULTANTS - OTHER	CARLISLE-WORTMAN	Code Enforcement- WCC - Occupation	32.50	38920
			Total For Dept 266 LEGAL & PROFESSIONAL		4,032.50	
Dept 270 PERSONNEL						
249-270-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	62.65	38924
			Total For Dept 270 PERSONNEL		62.65	
Dept 596 TRANSPORTATION						
249-596-748.000		GASOLINE & DIESEL	BP PRODUCTS NORTH	BP GAS`	20.39	38945
			Total For Dept 596 TRANSPORTATION		20.39	
			Total For Fund 249 BUILDING DEPARTMENT FUND		17,712.83	
Fund 592 UTILITIES FUND						
Dept 261 OPERATIONS						
592-261-818.000		SERVICE CONTRACTS	PARKWAY SERVICES, INC	PORTABLE TOILET	130.00	
592-261-851.000		TELECOMMUNICATIONS	VERIZON WIRELESS	CELLPHONES	173.42	2089701182
592-261-933.000		REPAIR & MAINTENANCE	BREVALLE PROPERTIES	WATER MAIN REPAIR : THE HAVEN	29,420.00	38919
592-261-933.000		REPAIR & MAINTENANCE	E T MACKENZIE COMPANY	WATER MAIN REPAIR - 4600 ARROWHEAD	45,422.48	38921
592-261-933.000		REPAIR & MAINTENANCE	TRACTOR SUPPLY CREDIT	PESTICIDE, PAINT AND TARP	31.44	2089701181
592-261-933.000		REPAIR & MAINTENANCE	EJ USA, INC	HYDRANT AND VALVE PARTS	2,583.36	38946
592-261-933.000		REPAIR & MAINTENANCE	EJ USA, INC	VALVE PARTS	1,797.48	38946
			Total For Dept 261 OPERATIONS		79,558.18	
Dept 265 BUILDINGS AND GROUNDS						
592-265-920.000		UTILITIES	DTE Energy Company	4620 E Huron Dr	99.74	
592-265-920.000		UTILITIES	DTE Energy Company	3701 Plymouth Rd	20.80	
592-265-920.000		UTILITIES	DTE Energy Company	4231 Whitehall Dr	1,064.50	
592-265-920.000		UTILITIES	DTE Energy Company	1300 Earhart Rd	29.77	
592-265-920.000		UTILITIES	DTE Energy Company	1947 N Dixboro Rd	305.81	
592-265-920.000		UTILITIES	DTE Energy Company	1343 Stark Strasse	158.81	
592-265-920.000		UTILITIES	DTE Energy Company	3695 Washtenaw	126.39	
			Total For Dept 265 BUILDINGS AND GROUNDS		1,805.82	
Dept 266 LEGAL & PROFESSIONAL						
592-266-802.000		ENGINEERING FEES	Stantec Consulting	Task-201-Utilities-Consultation-	7,634.50	38932
592-266-811.000		LEGAL FEES	Bodman PLC	Utilities	1,125.00	38927

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 592 UTILITIES FUND						
Dept 266 LEGAL & PROFESSIONAL						
			Total For Dept 266 LEGAL & PROFESSIONAL		8,759.50	
Dept 270 PERSONNEL						
592-270-715.009		WORKERS COMP INSURANCE	MICHIGAN MUNICIPAL	Q3 WORKERS COMPENSATION	776.83	38924
			Total For Dept 270 PERSONNEL		776.83	
Dept 537 SALES/PURCHASES OF W&S						
592-537-633.000		CONNECTION FEES W&S	BESTEK ALL SEASONS	REFUND OF CONNECTION FEE DUE TO	132,907.00	38926
			Total For Dept 537 SALES/PURCHASES OF W&S		132,907.00	
Dept 596 TRANSPORTATION						
592-596-748.000		GASOLINE & DIESEL	BP PRODUCTS NORTH	BP GAS`	660.33	38945
			Total For Dept 596 TRANSPORTATION		660.33	
			Total For Fund 592 UTILITIES FUND		224,467.66	
Fund 702 ESCROW FUND						
Dept 000 OTHER REVENUE ACCOUNT						
702-000-249.077		CP-01-23 BECKWITH	Stantec Consulting	Enginereering Fees	87.50	38932
702-000-249.080		CP-01-24 ALL SEASONS OF	Stantec Consulting	Enginereering Fees	4,691.50	38932
702-000-249.081		CP-02-24 MAPLE RIDGE	Stantec Consulting	Enginereering Fees	27,468.70	38932
702-000-262.079		SOI-28-20 MID MICHIGAN	Stantec Consulting	Enginereering Fees	831.40	38932
702-000-262.085		SOI-11-23 BECKWITH	Stantec Consulting	Enginereering Fees	643.20	38932
702-000-262.088		SOI-06-24 MAPLE RIDGE	Stantec Consulting	Enginereering Fees	2,103.10	38932
702-000-262.091		SOI-08-24 ALL SEASONS OF	Stantec Consulting	Enginereering Fees	965.50	38932
702-000-280.136		CUP-02-15 WASHTENAW FOOD	CARLISLE-WORTMAN	Planning Fees	480.00	38929
702-000-280.161		PR-01-17 CF NORFOLK	Stantec Consulting	Enginereering Fees	176.00	38932
702-000-280.203		SP-05-20 MAPLE RIDGE	Bodman PLC	Legal Fees	990.00	38927
702-000-280.229		PWS-01-23 MAPLE RIDGE	Stantec Consulting	Enginereering Fees	2,169.00	38932
702-000-280.238		SP-02-24 TOYOTA 1555	Stantec Consulting	Enginereering Fees	535.00	38932
702-000-280.244		OPTALIS HEALTH &	CARLISLE-WORTMAN	Planning Fees	405.00	38929
702-000-280.245		SP-06-24 FGRHS - AREA	CARLISLE-WORTMAN	Planning Fees	405.00	38929
702-000-280.245		SP-06-24 FGRHS - AREA	Stantec Consulting	Enginereering Fees	437.50	38932
702-000-280.248		BA-01-25 3010 WARREN RD.	CARLISLE-WORTMAN	Plan Consult	270.00	38929
702-000-280.257		CUP-01-25 NSK SOLAR	CARLISLE-WORTMAN	Planning Fees	675.00	38929
702-000-280.263		SP-01-25 NSK SOLAR	HARVEST SOLAR	ESCROW REFUND	700.00	38922
			Total For Dept 000 OTHER REVENUE ACCOUNT		44,033.40	
			Total For Fund 702 ESCROW FUND		44,033.40	
Fund 703 CURRENT TAX COLLECTION FUND						
Dept 000 OTHER REVENUE ACCOUNT						
703-000-274.000		TAX COLLECTIONS TO	ANN ARBOR DISTRICT	TAX COLLECTIONS TO DISBURSE	11,722.87	4892
703-000-274.000		TAX COLLECTIONS TO	WASHTENAW COMMUNITY	TAX COLLECTIONS TO DISBURSE	21,564.19	4893
703-000-274.000		TAX COLLECTIONS TO	ANN ARBOR PUBLIC	TAX COLLECTIONS TO DISBURSE-OPER	43,756.67	84

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 703 CURRENT TAX COLLECTION FUND						
Dept 000 OTHER REVENUE ACCOUNT						
703-000-274.000		STATE ED TAX	WASHTENAW COUNTY	STATE ED TAX	66,669.20	85
703-000-274.000		TAX COLLECTIONS TO	WASHTENAW INTERMEDIATE	TAX COLLECTIONS TO DISBURSE	35,294.03	86
			Total For Dept 000 OTHER REVENUE ACCOUNT		179,006.96	
			Total For Fund 703 CURRENT TAX COLLECTION FUND		179,006.96	

GL Number	Grant	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #

Fund Totals:

Fund 101 GENERAL FUND	71,586.54
Fund 206 FIRE FUND	9,729.67
Fund 211 GRANTS FUND	16,831.57
Fund 219 STREET LIGHTIN(	412.06
Fund 249 BUILDING DEPAR1	17,712.83
Fund 592 UTILITIES FUND	224,467.66
Fund 702 ESCROW FUND	44,033.40
Fund 703 CURRENT TAX COI	179,006.96
Total For All Funds:	563,780.69

Memo

To: Ann Arbor Charter Township Board
From: Mark Nicholai – Fire Chief
Date: December 12, 2025
Re: Station 2 – HVAC System Repair

Fire Station 2's rooftop HVAC units began malfunctioning, causing elevated levels of carbon monoxide to enter the station. Jetstream Mechanical investigated the cause of the elevated levels of carbon monoxide, and determined that both units required replacement of their heat exchangers. The contractor provided a repair estimate, and all corrective work was completed on December 11, 2025.

The total cost of the repairs is $5,650. I recommend that the Board authorize payment to Jetstream Mechanical in an amount not to exceed $5,650. I further recommend that this expenditure be charged to line item 206-265-933.000 – Repair & Maintenance – Buildings and Grounds.

Mark A. Nicholai
Fire Chief

To: Ann Arbor Township Board of Trustees
From: Colleen M Coogan, Comptroller
Date: December 11, 2025

4th Quarter 2025 Budget Amendment Requests

Fund	Account #	Description			
GENERAL FUND #101					
Budget Amendment Effect on Fund Balance			Original 2025 Budget	Amended 2025 Budget	Change
		Beginning Fund Balance	2,636,602.69	2,636,602.69	-
		Revenues	1,424,762.00	1,424,762.00	-
		Expenditures	1,439,104.00	1,613,814.00	174,710.00
		Ending Fund Balance	2,622,260.69	2,447,550.69	(174,710.00)
Detail Budget Amendments				**Increase**	**Decrease**
1)	Study of Massey Lake (34,000 Approved in May and $50,000 approved in September)				
Expense	101-266-811.010	Litigation- Mid Michigan Materials		84,000.00	
2)	New Website Provider and Platform				
Expense	101-228-980.000	Purchases		24,750.00	
3)	Closing Costs and 2025 Property Taxes for Donated Land				
Expense	101-901-971.000	Land Purchase		50,700.00	
4)	Transfer to Grant Fund for Match for SEMCOG Grant Non-Motorized Facilities Plan				
Expense	101-931-995.000	Transfer Out		7,260.00	
5)	Transfer to Grant Fund for the CEM Grant Project				
Expense	101-931-995.000	Transfer Out		8,000.00	
FIRE DEPARTMENT FUND #206					
Budget Amendment Effect on Fund Balance			Original 2025 Budget	Amended 2025 Budget	Change
		Beginning Fund Balance	1,322,158.45	1,322,158.45	-
		Revenues	2,406,000.00	2,406,000.00	-
		Expenditures	2,537,663.00	2,669,163.00	131,500.00
		Ending Fund Balance	1,190,495.45	1,058,995.45	(131,500.00)
Detail Budget Amendments					
Expenditure				**Increase**	**Decrease**
1)	Roof Repair				
Expense	206-901-930.000	Building Repair		131,500.00	
GRANT FUND #211					
Budget Amendment Effect on Fund Balance			Original 2025 Budget	Amended 2025 Budget	Change
		Beginning Fund Balance	-	-	-
		Revenues	144,012.53	344,462.53	200,450.00
		Expenditures	144,012.53	344,462.53	200,450.00
		Ending Fund Balance	-	-	-
Detail Budget Amendments				**Increase**	**Decrease**
1)	SEMCOG Grant Non-Motorized Facilities Plan				
Revenue	211-000-502.000	Federal Grant Funds		32,740.00	
Revenue	211-931-699.00	Transfers In		7,260.00	
Expense	211-751-806.000	CONSULTANTS-OTHER		40,000.00	
2)	MPSC Grant for the Solar and Battery Storage project				
Revenue	211-000-540.000	State and Local Grant		152,450.00	
Expense	211-901-976.001	Equipment Over $5k		152,450.00	
3)	CEM Grant (Forecasted excess over budget)				
Revenue	211-931-699.00	Transfers In		8,000.00	
Expense	211-261-955.002	Community Energy Management Expense		8,000.00	

BUILDING DEPARTMENT FUND #249

Budget Amendment Effect on Fund Balance	Original 2025 Budget	Amended 2025 Budget	Change
Beginning Fund Balance	1,722,435.76	1,722,435.76	-
Revenues	193,060.00	193,060.00	-
Expenditures	371,982.00	398,482.00	26,500.00
Ending Fund Balance	1,543,513.76	1,517,013.76	(26,500.00)

Detail Budget Amendments			**Increase**	**Decrease**
1)	Improvement to Building Office			
Expense	249-901-973.000		26,500.00	

CIP FUND #402

Budget Amendment Effect on Fund Balance	Original 2025 Budget	Amended 2025 Budget	Change
Beginning Fund Balance	3,340,322.00	3,340,322.00	-
Revenues	922,000.00	1,032,000.00	110,000.00
Expenditures	1,766,000.00	1,778,000.00	12,000.00
Ending Fund Balance	2,496,322.00	2,594,322.00	98,000.00

Detail Budget Amendments			**Increase**	**Decrease**
1)	2025 Road Agreement with WCRC (Forecasted excess over budget)			
Expense	402-446-818.000	Service Contracts	12,000.00	
2)	Investment income projection			
Revenue	592-000-666.000		110,000.00	

UTILITY FUND #592

Budget Amendment Effect on Fund Balance	Original 2025 Budget	Amended 2025 Budget	Change
Beginning Fund Balance - Unrestricted	11,719,324.00	11,719,324.00	-
Revenues	3,118,930.00	3,402,230.00	283,300.00
Expenditures	3,018,333.00	3,787,333.00	769,000.00
Ending Fund Balance	11,819,921.00	11,334,221.00	(485,700.00)

Detail Budget Amendments			**Increase**	**Decrease**
1)	Repair of Water Main Breaks			
Expense	592-901-976.002		150,000.00	
2.)	Connection Fee Revenue (All Seasons)			
Revenue	592-537-633.000	Connection Fees	143,300.00	
3)	Water Tank Design Engineering			
Expense	592-901-976.002	CIP	619,000.00	
4)	Investment income projection			
Revenue	592-000-666.000		140,000.00	

Impacts of Sediment Discharge on Massey Lake

Results from 2025 Investigation

Prepared for:

Ann Arbor Charter Township

December 8, 2025

Photo taken August 24, 2023

LimnoTech

Cover image: drone photo of Massey Lake taken on August 24, 2023, showing turbid water entering the lake from gravel pit dewatering discharge upstream of the lake (photo credit: Michael Watts). Turbid conditions in the lake ceased after pit dewatering discharge stopped.

Impacts of Sediment Discharge on Massey Lake

Results from 2025 Investigation

Prepared by:
LimnoTech

December 8, 2025

Under contract to:
Ann Arbor Charter Township

EXECUTIVE SUMMARY

Ann Arbor Charter Township retained the consulting firm, LimnoTech, to conduct a study focused on Massey Lake. The primary objective was to document and assess any persistent environmental impacts resulting from the discharge of turbid water originating from recent (last three years) dewatering operations at an adjacent gravel pit. In the summer of 2025, LimnoTech performed a field investigation, collecting and analyzing bottom sediment samples. The analysis focused on concentrations of 10 metals, grain size distribution, and water column properties across six sites, including a reference location near the lake's center. These data, combined with a review of relevant scientific literature and hydrogeological reports, were used to assess the impact of recent discharges on the lake.

The investigation did not yield evidence of distinct impacts from recent dewatering operations on Massey Lake, although baseline data were not available for comparison with current conditions. Measured sediment concentrations are at or near background levels at all sites, suggesting no unnatural impacts from metal toxicity on the lake ecosystem's health. Comparisons between samples of the recent surface sediments and deeper, older sediments deposited prior to recent pit discharges revealed slightly higher average concentrations for 3 of the 10 metals analyzed (cadmium, chromium, and zinc). There were minimal differences in shallow and deep sediment grain sizes, although distinctive coarser sediment (i.e., sand) would not be carried as far into the lake as silt and clay. During sampling, the open lake waters were strongly stratified with respect to temperature and dissolved oxygen (higher at the surface).

While the metal concentrations and grain size data do not provide proof of distinct sediment impacts, the discharge likely resulted in the deposition of a higher-than-normal volume of sediment in the lake. This new sediment likely altered the lake's bathymetry (depth contours) slightly, though the absence of pre-discharge baseline data precludes quantification based on data from this study. Furthermore, available hydrogeological data are consistent with anecdotal reports of decreased groundwater discharge and subsequent relative warming of surface waters. These impacts would have been most acute during the active dewatering period.

The surface metals concentrations were below the established background soil concentration thresholds listed in State of Michigan guidance for soils and clay, except for slight exceedances for barium, copper, and zinc in a few isolated samples, including deep samples. The minor increase in surface relative to deep metal concentrations in sediments, when observed, can be attributed to several factors, including diagenesis (the natural chemical alteration of sediments after deposition, including impacts of low oxygen concentrations), seasonal variations (such as sediment disturbance by wind waves or biological activity), sediment focusing and water column scavenging (more deposition and higher concentrations in a deeper depression or offshore, as at ML-6) or, potentially, enrichment from the gravel pit's turbid discharge.

Options for mitigation include dredging to remove surface sediment, restocking impacted fauna and enhancing habitat, or the strategic installation of a weir or check dam at the creek inlet to reduce potential movement of remaining sediment in upstream wetlands into the lake. Based on available information and professional judgement, we recommend implementing biological measures (i.e., restocking and habitat enhancement) over more disruptive direct sediment mitigation. Expanded monitoring of groundwater between the lake and the gravel pit to track the recovery of natural flow would also be appropriate.

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1 BACKGROUND & INTRODUCTION

Massey Lake (Figure 1) in Ann Arbor Charter Township, Michigan, is a glacial kettle pond approximately 20 feet deep and covering about 12 acres, including a central basin on the eastern side with a small island, and a larger island and channels on the western side. A small dam in the southeast corner that discharges to an unnamed tributary of Fleming Creek regulates the lake level. Additional geological information and references are included in Appendix A.

Previous observations, investigations, and inspections have documented the discharge of turbid water into Massey Lake from the adjoining gravel pit to the west, as well as potential impacts on groundwater discharge to the lake. A berm failure at the gravel pit has also impacted the area near the lake. The turbid discharge to the lake, along with other issues, resulted in the issuance of a violation notice to the gravel pit operator, dated September 14, 2023, by the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Separately, Ann Arbor Charter Township filed a lawsuit against the gravel pit operator, which resulted in an injunction issued in October 2023, prohibiting further dewatering and discharge from the pit.

LimnoTech was contracted by Ann Arbor Charter Township to investigate the impacts of sediment from the discharge of turbid water into the lake (see report cover photo). The LimnoTech investigation, which took place in the summer of 2025, consisted of collecting and analyzing sediment samples. Specifically, the study included the following elements:

- Sediment sampling using cores, grab samplers, and shovels to recover material from the submerged and exposed lake bed to investigate the thickness and areal extent of recent deposits.
- Chemical analysis to understand the composition of shallow, surficial sediment, in comparison with deeper natural sediment.
- Assessment of the impact of sedimentation on a reported underwater artesian spring that feeds Massey Lake, in addition to creek inflow.
- Assessment of the impacts of pit-derived sediments and altered groundwater discharge on biology and aquatic life in Massey Lake, including in the benthic zone (lake bottom).

Figure 1. Massey Lake location map.

2 METHODS

Here, we provide an overview of the approach taken to collect and analyze sediment samples from the lake, establishing the potential impacts of gravel pit sediment discharges. We also document the methods used for water column measurements. LimnoTech developed a Sampling and Analysis Plan (SAP) that outlined the fieldwork, sampling activities, and sample analysis to be performed as part of the study. Additionally, the SAP outlined the procedural and analytical requirements of the sediment sampling survey. A table of the analytical results is attached as Appendix B, field photos are in Appendix C, and a copy of the SAP is included as Appendix D, along with copies of LimnoTech's Standard Operating Procedures for sediment sampling and the use of water quality sensors.

2.1 Sampling Locations

Sampling locations (Figure 2) were selected with consideration for where the signal of potential impacts would be strongest. That is, most samples were collected in the area of the lake west of the large island that received direct influx of sediment from the creek into which gravel pit effluent was discharged (see the report cover photo). Paired samples were collected at each site to compare recent sediments at the lake bed with older sediments that were more deeply buried and unlikely to be impacted by gravel pit discharges. Surface (S) and subsurface sediments (D for "deep") were sampled at six Massey Lake (ML) locations, with sediment depths, water depths, and site coordinates shown in Table 1 and depicted on Figure 2. Five of the sites were near the creek inlet (ML-1 through ML-5, Figure 2). A reference site, ML-6, was located in the center of the lake on the east side of the large island in an area less likely to be strongly influenced by sediment deposits from gravel pit discharges due to settling of particles closer to the inlet. This site was included for comparison purposes with sediment analyses from the other sites, as well as to provide information on the water column properties in the open lake.

Table 1. Sample locations.

Station ID and Sample Depth Intervals (Inches)	Water Depth (Feet)	Location Description	Approx. Longitude in Decimal Degrees	Approx. Latitude in Decimal Degrees
ML-1 S: 0-3", D: 12-15"	5.5'	Downstream of the inlet, upstream of the channel fork	83.67141°W	42.34284°N
ML-2 S: 2.4-5.4", D: 21-24"	NA	Near fork, on exposed lakebed (shore), submerged under high water conditions	83.67108°W	42.34297°N
ML-3 S: 0-3", D: 21-24"	5.2'	At the channel fork	83.67054°W	42.34279°N
ML-4 S: 0-3", D: 21-24"	8.3'	Northeastern channel downstream of the channel fork	83.67022°W	42.34306°N
ML-5 S: 0-3", D: 21-24"	7.2'	Southwestern channel downstream of the fork	83.67037°W	42.34242°N
ML-6 S: 0-1", D: 2-3"	18.4'	Open lake background reference site	83.66838°W	42.34203°N

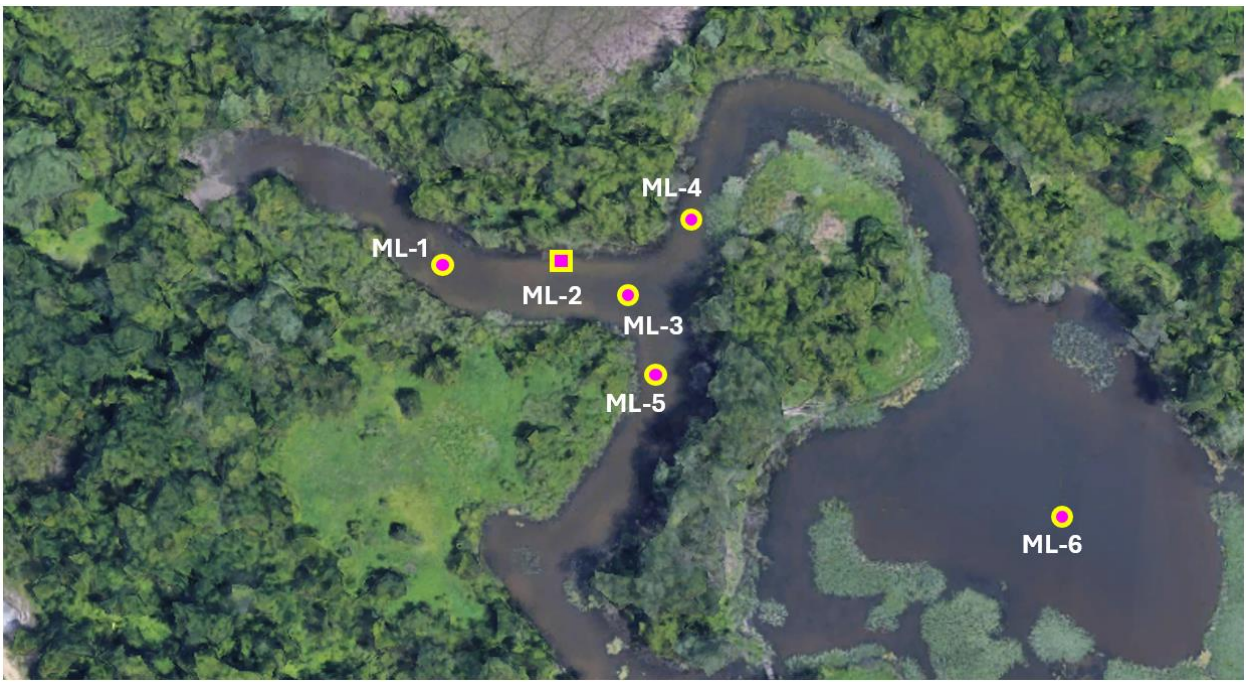

Figure 2. 2025 sediment sampling locations (approximate).

2.2 Sediment Sample Collection

LimnoTech staff conducted the sediment sampling from a small boat (Appendix C) on August 21 and 22, 2025, after completing a prior site reconnaissance on July 3, 2025. Sites ML-4, ML-3, ML-5, and ML-6 were sampled on the 21st, and sites ML-1 and ML-2 were sampled on the 22nd. The field blank was collected on the 22nd after the sampling had been completed. A Ponar grab sampler deployed with a rope was used to collect sediment at site ML-6 due to the greater water depth, which made the collection of a push core challenging. The top 1" of the Ponar sample was composited and homogenized for the shallow sample, and the sediment between 2" and 3" in depth was similarly composited and homogenized as the deep sample. For sites ML-1, ML-3, ML-4, and ML-5, an acrylic core tube was inserted into the sediment approximately two feet and removed to collect an intact sediment core. Overlying water was decanted and the sediment was extruded from the core barrel. The extruded sediment between the surface and 0.25' was composited as the shallow sample, and the sediment from between 1.75' and 2.0' was composited as the deep sample. Site ML-2 was located on a portion of the lakebed that was exposed due to seasonally low water levels. A small hand shovel was used to collect sediment at this location. The shallow sample at ML-2 consisted of sediment from 0.2' to 0.45', and the deep portion was from 0.45' to 1.25'. Samples were stored on ice or refrigerated until they were delivered to the analytical laboratories on August 22.

2.3 Water Column Profiles

At ML-1, ML-3, ML-4, ML-5, and ML-6, a YSI EXO multi-parameter water quality sonde was used to measure dissolved oxygen, conductivity, temperature, turbidity, and pH throughout the water column. Vertical data profiles were developed by setting the sonde to take a measurement every second and slowly lowering and raising the sonde through the water column. An integrated depth sensor also recorded the sonde's vertical position in the water column.

2.4 Sample Analysis

Samples were received by the laboratories on August 22. Sediment was analyzed by Brighton Analytical for the "Michigan 10 metals": total arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc, as well as percent solids, as described in the SAP. Additionally, sediment grain size was determined by Materials Testing Consultants (MTC) in Dexter, Michigan, using wet sieve analysis.

3 RESULTS

Here, we present the analytical results for sediment samples from the lake, which aim to document the potential impacts of gravel pit sediment discharges. We also summarize the results of the water column profiling.

3.1 Metals in Sediment

The sediment samples were analyzed for metals at Brighton Analytical, and concentrations were reported in micrograms per kilogram of sediment (µg/Kg or parts per billion [ppb]) and then converted to milligrams per kilogram (mg/Kg or parts per million [ppm]). On average, for the sites of interest (ML-1, ML-2, ML-3, ML-4, and ML-5), there were minor differences in metal concentrations between the surface and deep samples (see Figure 3; note the logarithmic vertical axis). Out of the ten metals analyzed, three had slightly higher concentrations on average in the surface samples (cadmium, chromium, and zinc) than in the deeper samples, which would not have been impacted by recent gravel pit discharges. Still, the differences were not deemed to be significant. Arsenic appears elevated in the surface sample relative to the deep sample at ML-5; chromium is elevated at ML-3, ML-4, and ML-5; and zinc is elevated at ML-5. Silver was not present above detection limits (<0.10 mg/Kg) in any sample, and selenium in the deep ML-6 sample was also not detected (<0.20 mg/Kg). Mercury was only detected in four of the twelve samples analyzed. The maximum detection, however, was only 0.064 mg/Kg in the deep ML-6 sample, compared to the detection limit of 0.050 mg/Kg, which is well within the background range (Table 2). Tables of all analytical data for individual samples are included in Appendix B.

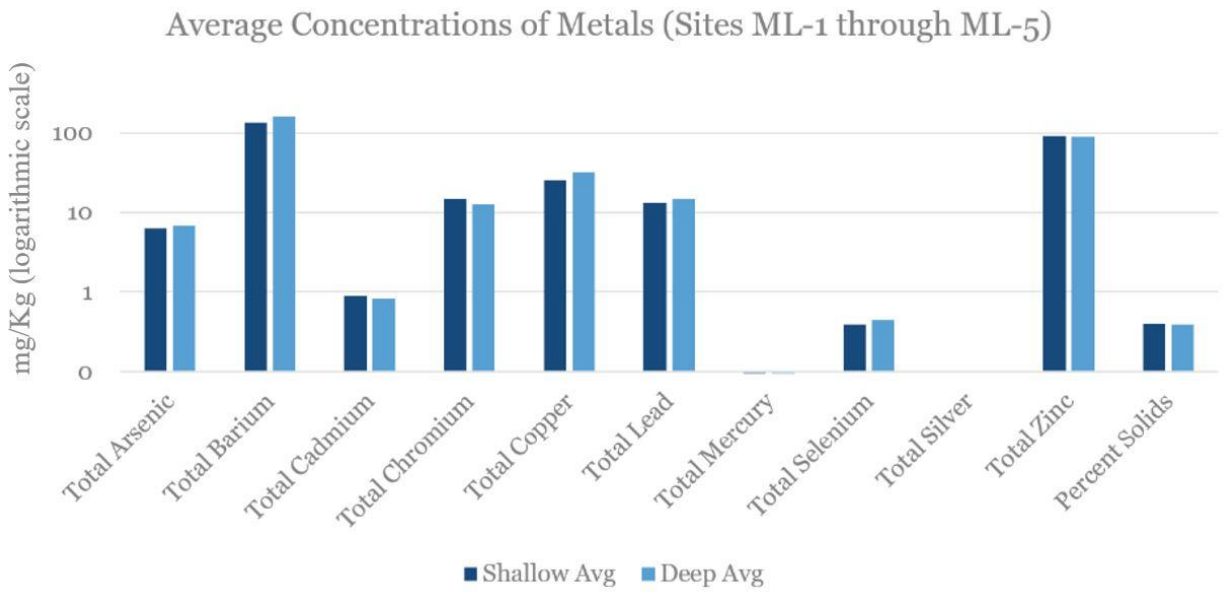

Figure 3. Average concentrations of metals in surface/shallow and deep samples for the sites of interest near the lake inlet (ML-1, ML-2, ML-3, ML-4, and ML-5).

For the reference site (Figure 4), there were minimal differences in metal concentrations between the surface and deep samples. Out of the ten metals analyzed, four had higher concentrations in the surface sample (arsenic, barium, cadmium, and chromium). For all sites, the metal concentrations fell within the range of background concentrations for metals in clay within southeast Michigan (Appendix A; EGLE, 2023a), with a few minor exceptions (Table 2): the ML-6S barium concentration was 230 mg/Kg (background limit in Appendix Table A-1 = 227 mg/Kg); the ML-4D copper value was 54.0 mg/Kg (background limit in Appendix Table A-1 = 46.9 mg/Kg); and the ML-6S and ML-6D zinc values were both 120 mg/Kg (Appendix Table A-1 limit = 102 mg/Kg). No metals exceeded direct contact cleanup criteria for residential soil (Table 2; EGLE, 2023b). All duplicate values were within 10% of the measured value, and no metals were detected in the field blank.

The sediment metal concentration data do not reveal patterns that indicate distinct impacts from gravel pit discharges, although they neither confirm nor exclude such impacts in terms of physical deposition. That is, sediment originating from the gravel pit is still likely present in the lakebed deposits. Still, it does not appear to be distinct in terms of metal concentrations from natural lake sediment. The concentrations are at or near background levels at all sites, suggesting no unnatural impacts from metal toxicity on the lake ecosystem's health. The relatively higher concentrations of several metals at the reference site, ML-6 (Figure 4), compared with the other sites, may indicate the influence of different natural geochemical processes associated with low oxygen concentrations during the summer at the reference site in the deep area of the lake (Section 3.3).

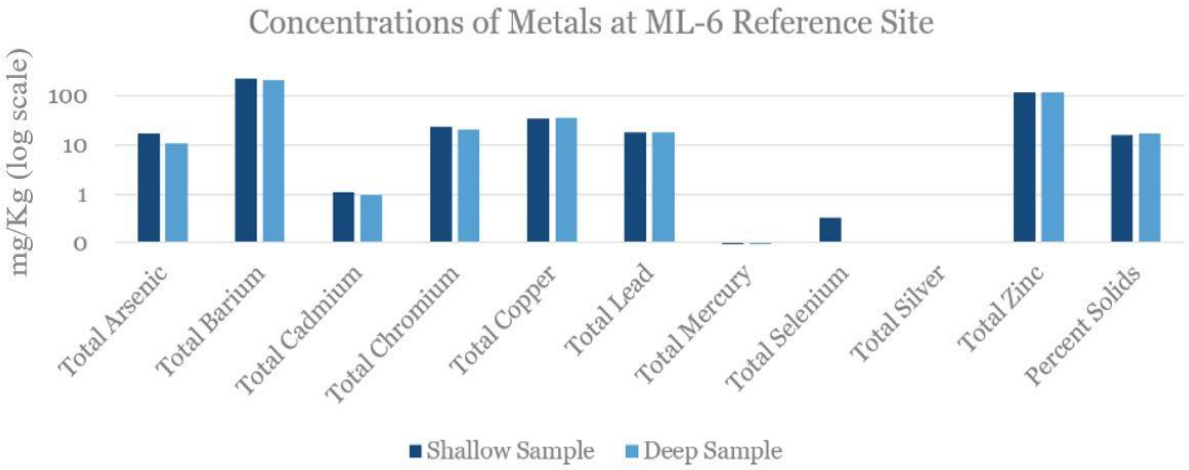

Figure 4. Surface (shallow) and subsurface (deep) metal concentrations in sediment from reference site, ML-6 (center of lake).

Table 2. Comparison of maximum and average sediment concentrations from Massey Lake with Michigan cleanup criteria for metals in contaminated soil and background values (see Appendix A). Results above background ranges are shaded.

Metal	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Massey Lake Highest Sediment Concentrations (mg/Kg)	17.0 @ ML-6S	230.0 @ ML-6S	1.1 @ ML-4S and ML-6S	23.0 @ ML-6S	54.0 @ ML-4D	18.0 @ ML-4D and ML-6S/6D	0.064 @ ML-6D	0.50 @ ML-5D	All <0.10	120.0 @ ML-6S/6D
Average Sediment Concentrations for All Samples (mg/Kg) and Standard Deviation (SD = #)	7.6 (4.0)	156.9 (32.5)	0.9 (0.1)	14.8 (3.9)	29.4 (9.8)	14.6 (2.7)	0.056 (0.006)	0.39 (0.09)	NA	93.2 (21.2)
Average Sediment Concentrations for Surface Samples from Sites 1-5 (mg/Kg) and Standard Deviation (SD = #)	6.1 (3.4)	133.3 (12.1)	0.9 (0.1)	14.2 (3.1)	24.8 (5.5)	13.2 (2.0)	0.051 (NA)	0.36 (0.10)	NA	87.8 (21.7)
Average Sediment Concentrations for Deep Samples from Sites 1-5 (mg/Kg) and Standard Deviation (SD = #)	6.8 (1.7)	160.0 (10.0)	0.8 (0.1)	12.6 (1.1)	32.4 (13.8)	15.0 (2.7)	0.052 (NA)	0.45 (0.05)	NA	88.8 (18.5)
EGLE (2023b) Direct Contact* Residential Soil Criteria (mg/Kg)	37	130,000	2,100	1,000,000	73,000	900	160	9,600	9,000	630,000
Appendix Table A-1 Upper Background Limit (mg/Kg)	31.4	227.0	3.1	77.0	46.9	26.2	0.58	1.20	6.0	102.0

**"Direct contact" means exposure to hazardous substances through ingestion or dermal contact.*

3.2 Sediment Grain Size

The grain size and percent solids of sediments sampled showed few differences between shallow and deep samples, except at the sites closest to the lake inlet (Figures 5 and 6). Deeper sediments at sites ML-1 and ML-2 (exposed on shore) were slightly finer (i.e., greater percentages of silt and clay) than shallow sediments. The pattern at these sites is consistent with their location closer to the lake inlet, where flowing water would be expected to carry coarser sediment to the lake, which would subsequently drop out of the water once it encountered the low-energy lake environment. Finer particles would stay in suspension for days to weeks.

The lake area near the inlet will gradually fill with sediment in the vicinity of a “creek mouth delta”. In addition, wave winnowing would be expected at the exposed site, ML-2, removing finer sediment and leaving coarser sediment as the lake level dropped over the summer and the shoreline position migrated out from the spring shoreline contour. The sand fraction of sediment from the sampling sites is dominated by fine sand (Appendix B; 59-90% of the total sand fraction, except at ML-6), with lesser amounts of medium sand, and

little or no coarse sand. The trace amount of sand at ML-6 (0.2-0.7%) is coarser than at the other sites, suggesting possible ice rafting or wind transport. A trace of fine gravel (0.1-0.2%) was found in samples ML-1S, ML-2S, and ML-3D.

Without baseline data for comparison, it is not possible to determine whether the natural process of delta formation at the creek mouth has been accelerated by the input of gravel pit sediment based on the new grain size data. The percent solids value at site ML-2 was higher for the shallow sample than the deep sample due to evaporation from the exposed sediment surface and natural seasonal lowering of the water table over the summer as the lake surface dropped.

Most samples contained more than 90% silt and clay, with the values in samples from the center of the lake greater than 99% of the total sediment composition. The sediment color was consistently gray or tan in the shallow interval at sites ML-1, ML-2, ML-3, ML-4, and ML-5 (Appendix C), and dark gray to black in deeper sediments and at ML-6 (both shallow and deep). The black color is a result of the formation of iron sulfides in deeper, oxygen-free sediment layers and the accumulation of undecomposed organic debris, such as dead algae and leaf fragments (Wersin et al., 1991). The color difference between shallow and deep sediments at most sites is typical, and not necessarily indicative of a difference in recent sediment sources (e.g., the lighter gray color in surface sediments [Appendix C] is not likely diagnostic of sediment derived from gravel pit discharges versus natural sediment).

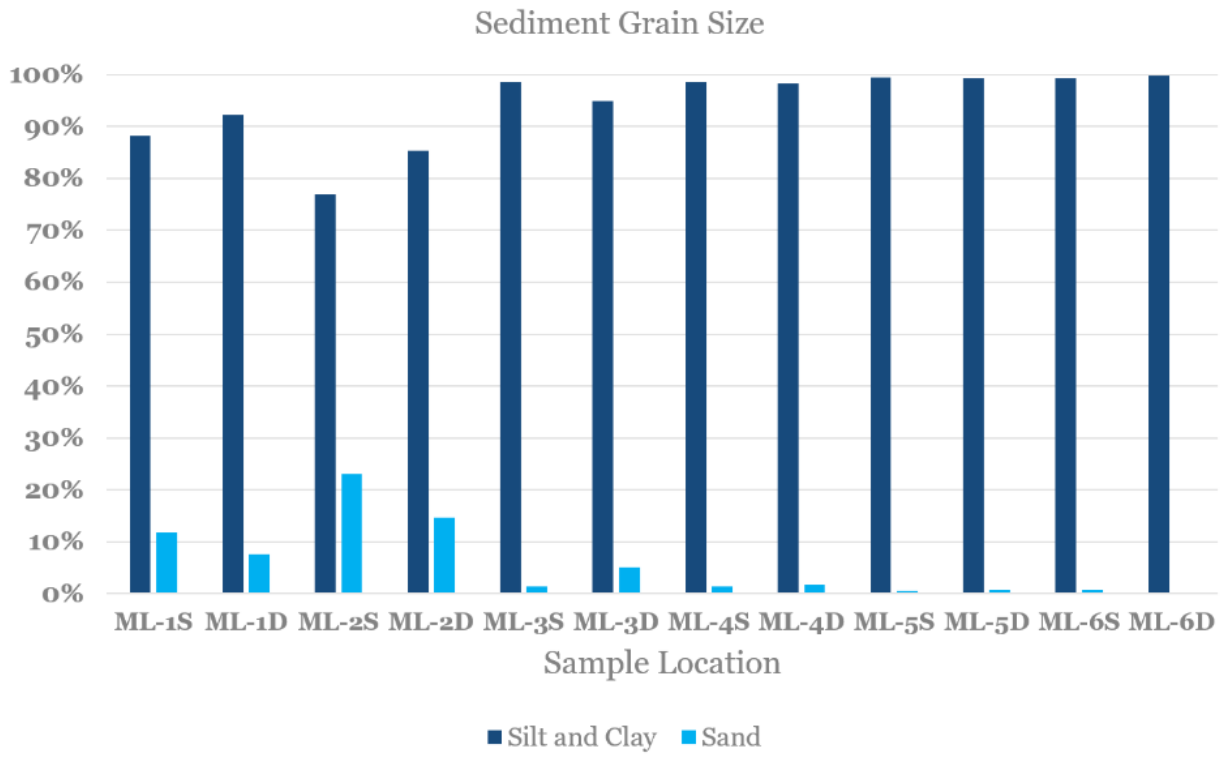

Figure 5. Results of sediment grain size analyses.

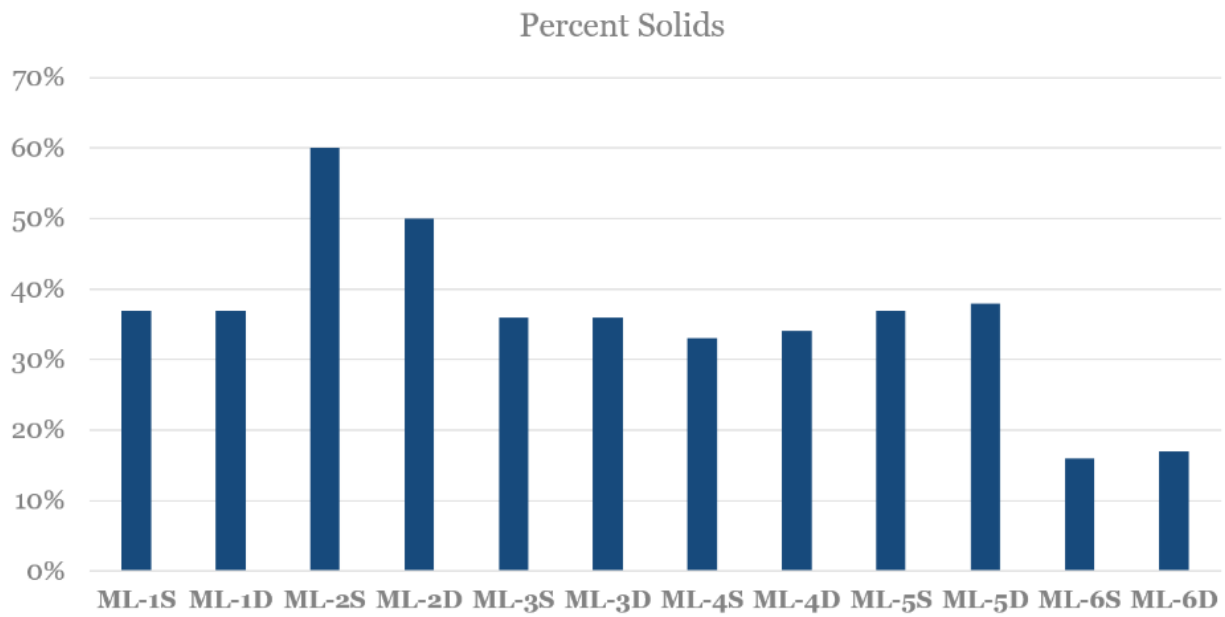

Figure 6. The results of the sediment percent solids analysis indicate that the water content exceeds 60% by weight in most samples.

3.3 Water Column Properties

Profiles of water quality parameters in the lake water column (Figures 7 and 8) were taken at all sampling sites except ML-2, which was located on shore above the water level during the sampling event. Water temperatures at the sites of interest (Figure 7) were typical for late summer, ranging from 20.1°C (68.2°F) to 22.3°C (72.3°F), with warmer water at the surface. The deepest core sampling site was ML-4 at 2.3 m (7.5 feet). The reference site (Figure 8, note different axis scales from Figure 7) was substantially deeper, 5.6 m (18.4 feet), and the bottom temperature was only 10.4 °C (50.7 °F), indicating stratification and likely groundwater influence. The mixed layer at the top of the ML-6 site was approximately 2.5 m (8.2 feet) thick, with elevated turbidity layers located just below the mixed layer and near the bottom, and a rapid decrease in oxygen saturation below the mixed layer.

The parameters other than temperature and oxygen concentration (not included in the figures below) generally exhibited less vertical variation in other water quality parameters (e.g., turbidity, specific conductance, pH) at the shallower sites (ML-1, ML-3, ML-4, and ML-5) compared to the deep reference site, ML-6. Water properties at these sites appeared to be influenced by the time of day when they were sampled, due to the varying hours of sunlight exposure they received, resulting in warming over time and oxygen production by macroalgae. Water column profiles were measured at the following times at these sites: ML-1, 9:45 AM; ML-3, 2:35 PM; ML-4, 2:01 PM; and ML-5, 4:02 PM. Site ML-1 profile data were collected early in the day on the second day of sampling. The site was also located closest to the point of creek discharge to the lake, which may have influenced the water temperature there. The oxygen saturation and pH were also higher at that site. Overall, water temperatures measured from top to bottom decreased by only 1 to 2°C at these sites. The ranges of water column values for the shallower sites above the deep turbidity layer or

"nepheloid layer" were as follows: oxygen saturation = 3-44%, oxygen concentration = 0.3-4.0 mg/L (low for most fish species), specific conductance = 420-560 µS/cm, turbidity = 1-8 NTU (light transmission measurements), and pH = 6.9-7.6. The lowest oxygen saturation and concentrations were observed near the surface of the ML-4 site.

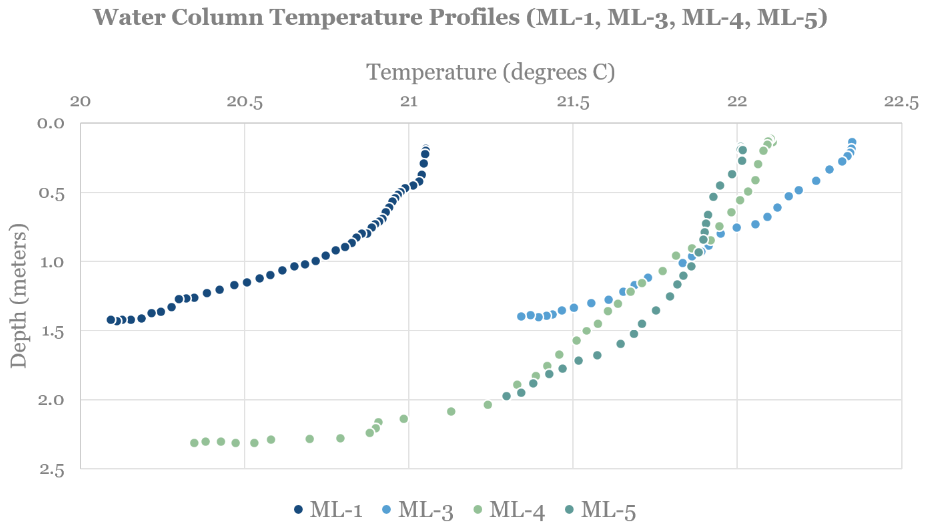

Figure 7. Water column temperature profiles for sites ML-1, ML-3, ML-4, and ML-5. Different profile lengths reflect differences in water depths among the four sites. Site ML-2 was on the exposed bank of the lake, so it has no water column profile. The observed temperatures are typical of late summer conditions in similar Michigan lakes.

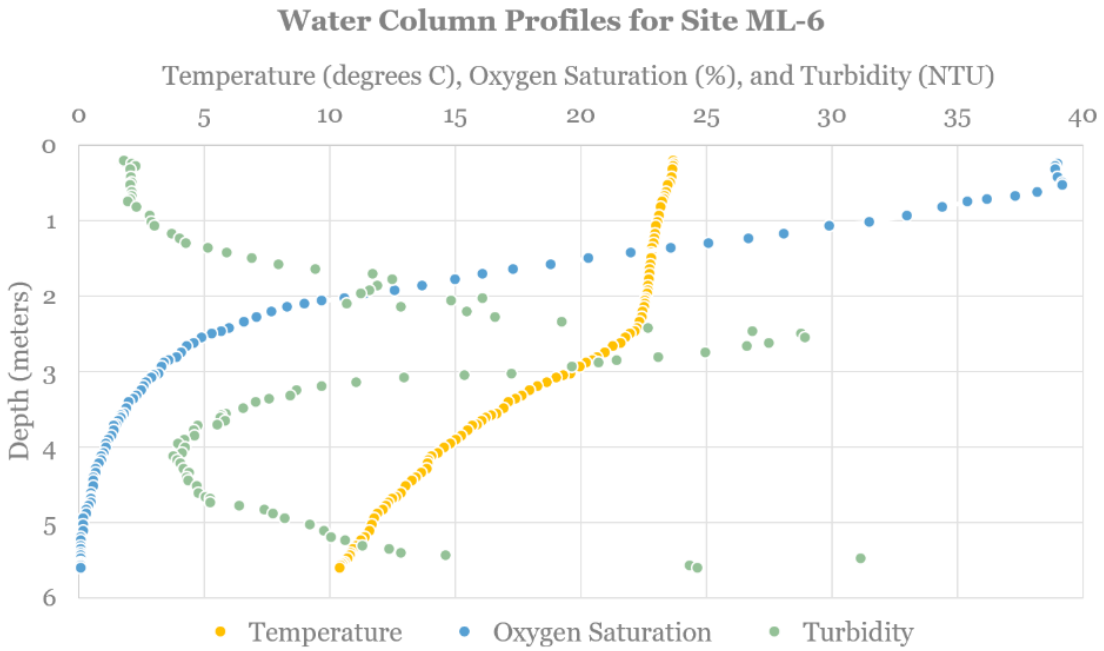

Figure 8. Water column profiles for reference site, ML-6. Turbidity units (NTU) are a measure of light transmission that is related to the amount of suspended solids and plankton in the water. Water temperatures in the deep part of the lake (10°C or 50°F) are similar to typical groundwater temperatures. Most fish require oxygen saturation over 64% or 5 mg/L for optimum health.

While water column profiles can be quite dynamic on daily and seasonal timeframes, the data collected are helpful in understanding certain aspects of how Massey Lake behaves. A primer on lake science and ecology is available at: https://mymlsa.org/wp-content/uploads/2011/06/Understanding_Lake_Ecology.pdf
The ML-6 profile provides a snapshot of summer conditions in the open lake, and the other profiles give a sense of the behavior of the channels near the lake's inlet. The open lake is strongly stratified (Boehrer and Schulze, 2008) into an upper oxygen-rich mixed layer (epilimnion, mixed by wind), where fish can thrive, and a lower unmixed layer (hypolimnion); however, the channels are not stratified. Oxygen concentrations are highest at the surface in the open lake, due to dissolved atmospheric oxygen and photosynthesis by phytoplankton. In contrast, the channels tend to have more oxygen near the bottom, primarily due to photosynthesis by benthic algae. There are no benthic algae in the deep parts of the lake due to low light penetration, and there are no fish due to the low oxygen concentrations. Oxygen declines rapidly with depth in the bottom layer of the open lake because it is consumed by decaying organic matter and is not renewed by atmospheric mixing or aquatic plants.

The turbidity maximum in the middle of the water column in the open lake around a depth of 2.5 meters (8 feet), near the sharp change in the temperature profile (the "thermocline"), is a natural phenomenon observed in many stratified lakes. This phenomenon is due to the trapping of sinking particles and chemical processes at this sharp change in water density and oxygen concentration. The lake likely mixes in the spring and fall due to density instabilities, as water has a maximum density at 4°C (39.2°F). These instabilities cause cooled surface water to sink in the fall and warmed surface water to sink in the spring, effectively "flipping" the lake. This overturning temporarily aerates the lake and disturbs the layering. Due to this seasonal mixing, it is unlikely that any lingering impacts on the water column from turbid water inputs to the lake from gravel pit sources in 2022 and 2023 remain. Ongoing groundwater impacts are less clear.

4 IMPACTS

Here, we briefly describe past impacts on Massey Lake from gravel mining operations.

4.1 Sediment Impacts

Except for runoff from the unpaved Joy Road, located to the north of the lake, the natural surface water inputs would be expected to be low in suspended sediment due to the small size of the creek that flows into the lake, the forested slopes and minimal development of the upstream watershed, and passage of the creek through wetlands before entering the lake. The input of turbid water to the lake from gravel pit dewatering discharge and berm failure has been documented by photographic and analytical evidence (see report cover). Turbid water discharges and lake inputs stopped approximately two years ago. However, fine-grained sediment deposited in the wetlands upstream of the lake, as well as sediment derived from the berm failure, could have continued to be mobilized into the lake for some time after pit discharge ceased.

Analytical data, as well as boat-based and land-based field observations, do not reveal distinct sediment deposits from gravel pit discharges. The two-year separation in time between the cessation of discharges and the sampling event reduces the likelihood that a distinct sediment layer can be recognized due to bioturbation of the sediment by organisms, sediment resuspension by storm waves and surface water inflows, and geochemical alteration of deposited sediments by interaction with underlying sediments. The upper layer sampled (typically 1 to 3 inches) may also have blended thinner sediment layers originating from settled gravel pit discharge (e.g., less than 1 inch thick) with older sediments or more recent sediments, diluting any gravel pit signature. Any deposition of sediments would likely be most substantial near the creek inlet, with decreasing deposition with distance, and transport across and out of the lake of much of the suspended silt and clay that discolored the lake surface water. Alternatively, less sediment may have reached the lake to date from pit discharges than some have suggested.

4.2 Groundwater Impacts

Based on anecdotal reports and a reasonable interpretation of available hydrogeological data, Massey Lake is fed by a combination of groundwater springs, seepage, and surface water inputs. Discharge of groundwater to the lake likely decreased during gravel pit dewatering operations, as indicated by anecdotal reports of lake water warming compared to prior years and other changes. These changes may have impacted lake biology (e.g., fish, wildlife, and plant communities). However, there is insufficient baseline data and information from during and after the dewatering period to make that determination.

Once dewatering operations ceased, groundwater inputs to the lake appear to have increased, based on anecdotal reports; however, it is unclear whether they have returned to their undisturbed state due to a lack of baseline data. As observed during LimnoTech's field activities, the water temperature of the deep layer in the lake below the surface mixed layer is consistent with that of regional groundwater (about 10 degrees C). Pre-2020 pond elevations in the gravel pit were reported as follows: Pond 1 @ 898 feet, Pond 2 @ 900 feet, and Pond 4 @ 892 feet (Haley & Aldrich, 2024; Sheet C-10). These same water levels, along with a water surface elevation for Pond 3 of 867 feet, are shown on an "Existing Conditions" figure dated October 23, 2023 (Haley & Aldrich, 2024; Sheet C-100). The water surface elevation of Massey Lake is approximately 865 feet

(Haley & Aldrich, 2024; Attachment 5, p. 2), or 27 feet below the reported baseline elevation of Pond 4 and 2 feet below the reported Pond 3 elevation in October 2023. These elevation data indicate that a variable hydraulic gradient has existed between the gravel pit ponds (at a higher elevation) and the lake.

There is limited information available on the seasonal fluctuations in lake and pond water level elevations. The elevations of water within the gravel pit ponds regularly change due to within-pit pumping. That said, the elevation difference of the ponds appears to be typically higher than the lake level. During field sampling, groundwater seepage along the lake's shoreline was observed at numerous sites, as evidenced by trickling water, iron staining, and bacterial films. This type of seepage is common during late summer, when lake levels are typically low, and shallow groundwater is flowing from surrounding saturated ground into the lake's depression. The iridescent bacterial films are sometimes mistaken for oil sheens, but they are harmless and behave differently when disturbed, breaking into angular pieces. For additional information, see this website: **https://www.michigan.gov/egle/about/organization/water-resources/glwarm/naturally-occurring-phenomena/bacteria** . Common and naturally occurring bacteria that produce these films, such as the genera *Gallionella*, *Leptothrix*, and *Crenothrix*, gain energy by the oxidation of reduced iron in groundwater, producing rusty iron oxides from iron sulfides, mixed with their slimy filaments.

There is some uncertainty about the degree of interconnection between the aquifer underlying the gravel pit and Massey Lake. No monitoring wells exist between the pit and the lake. Subsurface information compiled by Haley & Aldrich (2024), however, shows clear evidence of the extension of the upper aquifer to the east of the pit below and potentially around Massey Lake (Figures 9, 10, 11, and 12 below). The elevation of the base of the gravel layer at the east end of the pit appears to be approximately 855 feet (Figure 10), or 10 feet below the reported level of Massey Lake; the lower gravel-till contact, however, seems to be dipping upward to the east here based on limited data. Given the overall subsurface stratigraphic evidence, it is not surprising that past pit dewatering would impact groundwater discharge to Massey Lake, even if the hydraulic gradients between the pit and the lake were only reduced or made less steep rather than reversed (i.e., flow directed back toward the pit) during dewatering.

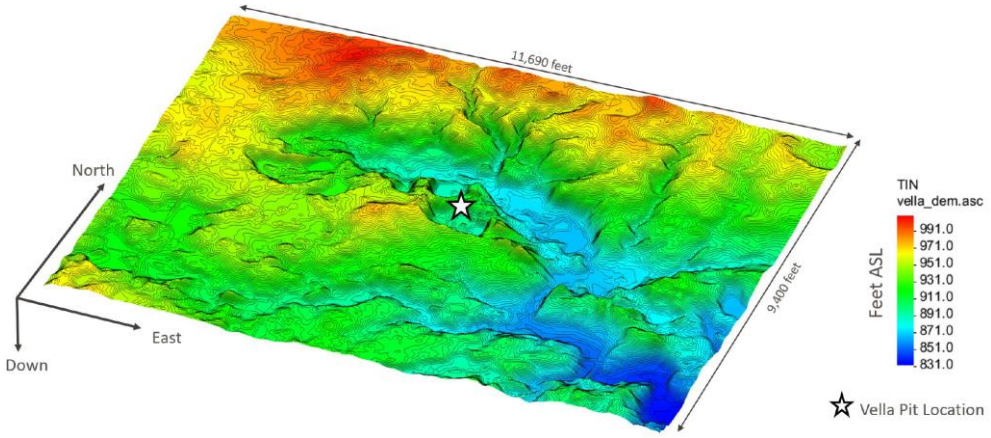

Figure 9. Reproduction of Figure 3 from the Haley & Aldrich (2024) report showing a three-dimensional perspective view of the topographic surface in the vicinity of the gravel pit and Massey Lake (to the right of the white star), with a vertical exaggeration of 5:1.

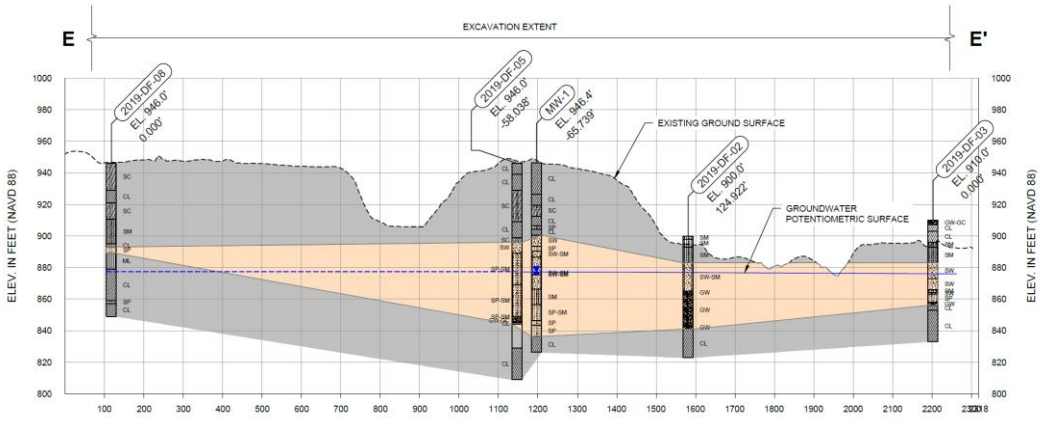

Figure 10. Reproduction of cross-section oriented from west (left side) to east (right side) from the Haley & Aldrich (2024) report, Figure 5E, showing the continuation of the sand and gravel layer (tan color) from the gravel pit toward Massey Lake.

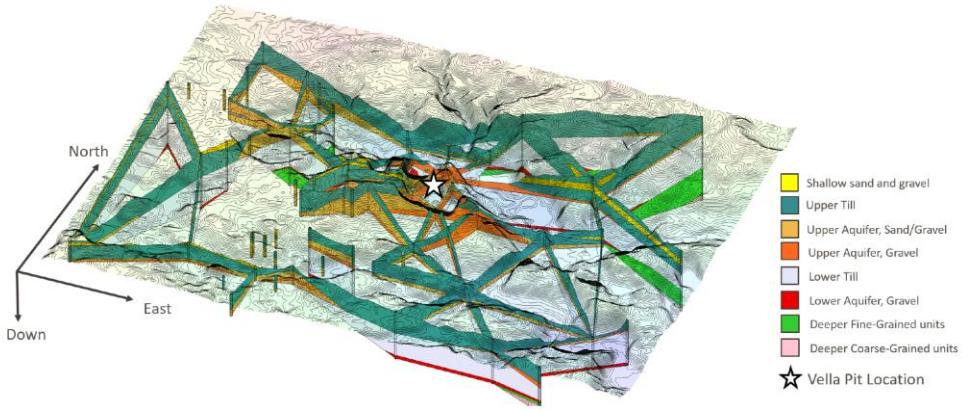

Figure 11. Reproduction of Figure 4 from the Haley & Aldrich (2024) report showing upper aquifer sand and gravel (orange layers) extending from the gravel pit beyond Massey Lake to the east (just right of the white star).

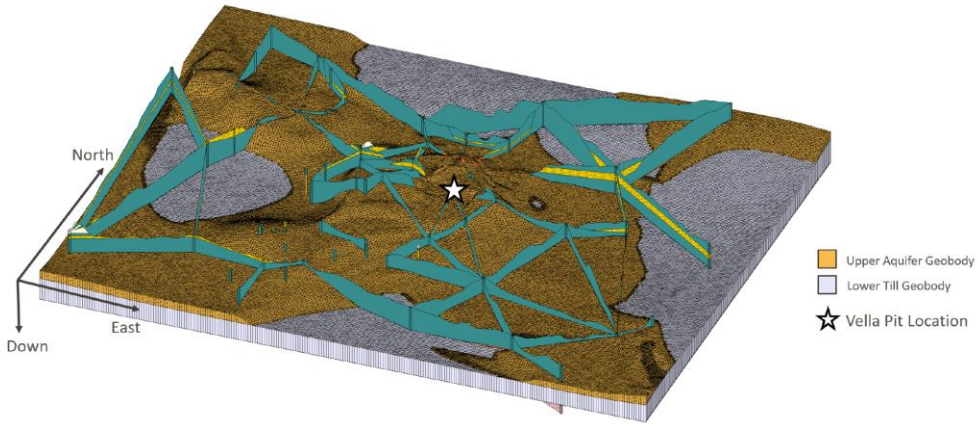

Figure 12. Reproduction of Figure 6 from the Haley & Aldrich (2024) report showing the upper aquifer "geobody" (orange layer) extending from the gravel pit beyond and beneath Massey Lake to the east (just right of the white star).

4.3 Biological Impacts

Increased turbidity and sediment deposition in Massey Lake, as well as decreased groundwater input, during the recent period of active gravel pit dewatering and discharge, would be expected to have a variety of impacts on the lake's ecosystem. Mobile lakebed organisms like crayfish, snails, clams, or worms that live in the sediment, could easily adapt to a slight increase in sediment deposition. Submerged aquatic vegetation would be impacted by sediment shading of leaves and reduced light penetration from feet to inches due to more turbid water, resulting in reduced photosynthesis and oxygen production, as well as plant death in deeper water. Lower oxygen levels in the water due to reduced photosynthesis and warmer water from reduced groundwater inflow (colder water can hold more dissolved oxygen) could impact mobile organisms like fish and tadpoles, which depend on gills for respiration. This would drive them to shallower water or surface water, where oxygen would be more abundant. Certain life stages of fish and amphibians, including eggs and juveniles, would be more vulnerable to changing water quality conditions and oxygen depletion, or thinning of the upper oxygenated zone in the lake. Turbid water could impact the feeding success of fish, birds, turtles, and other organisms that rely on clear water for effective hunting of prey.

Although the lake is naturally stratified in the summer, it is still subject to brief periods of lower water quality during the spring and fall when the lake overturns, and seasonal fluctuations in lake levels. Lake-dwelling organisms are adapted to these fluctuations. A sustained alteration of lake turbidity and dissolved oxygen, however, during the period of turbid water inflows from gravel pit discharges, would stress or kill some lake vegetation and organisms, as well as affecting their reproductive success due to impacts on eggs and juveniles. The net result would be a compression or thinning of the lake's oxygen-rich surface zone, where lake life is naturally concentrated, and potential longer-term effects on populations of fish, amphibians, and benthic organisms due to mortality, stress, and reduced reproduction during the turbid water discharge period. These stressors are consistent with anecdotal reports of declining frog and toad populations and with observations of fish concentrated near the lake surface.

5 RECOMMENDATIONS

Here, we briefly describe mitigation considerations for the lake impacts discussed above and provide our mitigation recommendations, summarized as follows:

- We do not recommend dredging of sediment or upstream dam construction to reduce the input of new sediment from wetland areas that drain to the lake.
- We recommend additional investigation of the influences of groundwater on Massey Lake.
- We recommend enhancing Massey Lake habitat quality and populations of native fish, wildlife, and vegetation.

5.1 Sediment Mitigation

One way to address sediment deposited in a wetland or lake is to remove it, restoring the natural sediment contours and chemistry, and improving lake-aquifer interconnections. If removal of sediments deposited during the recent pit discharge period is desired for ecological, bathymetric, or other reasons, the associated work duration and expense can be estimated. As the deposited sediments do not appear to be distinct from underlying sediments in terms of chemical composition or grain size, one would need to assume a sediment thickness for removal. A typical minimum sediment thickness for dredging by either mechanical or hydraulic (suction) methods would be 12 inches. This would be an overdredging of deposited sediment from turbid water discharges to the lake, which would only be a thin surface layer, mixed with underlying native sediment.

Removal of this much sediment over an approximate area of 12 acres would equate to 19,000 cubic yards of sediment. Given the water content of the sediment exceeding 60%, dewatering would be necessary prior to off-site disposal using Geotubes, sludge presses, or other methods. Dewatering would reduce the volume by approximately 50%. The magnitude and duration of disturbances to the lake (likely project duration of 4 to 6 months) and surrounding properties of such an operation involving heavy equipment and operations on land and water would be substantial. Ecosystem impacts of sediment removal would also be severe, likely requiring restocking of fish and replanting of lake vegetation. These negative impacts are important considerations when weighing the potential benefits of dredging.

Mitigation measures for sediment that has been deposited upstream of the lake by recent gravel pit operations may also be appropriate, including removal, or trapping through the construction of a small dam, weir, or another type of barrier upstream of the lake. Like lake dredging, sediment removal, or dam construction, these would be expensive and disruptive, possibly resulting in the movement of new sediment into the lake.

5.2 Groundwater Mitigation

In addition to past impacts on the Massey Lake water budget and thermal conditions, it is worth noting that within-pit pumping and movement of water from one pond to another can also affect current groundwater flow to Massey Lake, even with no discharge of water outside the pit. Further consideration of the impacts of past and ongoing pit operations on Massey Lake groundwater-surface water interactions, including potential

installation of one or more monitoring wells between the pit and the lake, is warranted. Although fine-grained sediments in Massey Lake likely influence the degree of direct interactions between surface water in the lake and groundwater in the upper aquifer, the measured properties and geometry of the aquifer, along with anecdotal reports of springs in the lake, suggest that the two may be strongly linked. Hypothesized plugging of the spring or springs that discharge to Massey Lake during the period of dewatering and active discharge of turbid water to the lake from the pit is considered unlikely. Even moderate flow velocities of discharging groundwater from a spring in the lake bed would be sufficient to prevent fine-grained sediment from depositing in the spring vent and sealing it. A more comprehensive characterization of groundwater influences on Massey Lake would be necessary to quantify past and current impacts on the lake from gravel pit operations. We recommend a hydrogeological characterization of the upper aquifer near the lake through the installation and monitoring of one or more well clusters installed at different depths between the lake and the gravel pit.

5.3 Ecological Mitigation

Enhancing the existing habitat quality and populations of fish and wildlife in the lake and wetlands could address past biological impacts of gravel pit discharges. Examples of such actions would include stocking of young native fish (likely sunfish and bass), tadpoles, and frogs, and improving sand and gravel spawning substrate. A detailed plan laying out tiered ranges of habitat and species enhancements would be helpful in determining the level of effort desired and the goals of the stocking and enhancement program (i.e., what success would look like). Note that this type of mitigation would also be necessary for the sediment mitigation measures described above (dredging, dam construction), possibly on a larger scale.

5.4 Mitigation Recommendations

Based on field observations and reviewed data, the magnitude of past impacts on Massey Lake and upstream wetlands from turbid water inputs associated with gravel pit dewatering and berm failure would not justify intensive mitigation measures, such as dredging and upstream dam or barrier construction. A “no action” approach would be less disruptive of natural lake and wetland recovery, but it would also accept prior impacts to the lake without addressing concerns expressed by township residents about degraded conditions such as changes in water temperature, clarity, or populations of fish and frogs. Note that frog and toad populations in the Rouge River headwaters a few miles east of Massey Lake appear to be healthy, although some species that start calling earlier in the spring may be declining (Friends of the Rouge, 2025).

The additional disturbance of soil, sediment, vegetation, and surrounding properties that would be necessary to undertake such mitigation measures as dredging or dam construction would likely negatively impact the wetlands and lake for several years after construction activities were completed. In addition, the lack of baseline data would make it challenging to set restoration targets for ecosystem recovery. To be effective, a dam would have to be maintained and actively operated during storms to minimize sediment transport and prevent wetland destruction from extended periods of water ponding behind the dam. Permitting may also be an issue.

Instead of dredging or dam construction, a better approach is to enhance the existing habitat quality and populations as described above. This would consist of restocking aquatic organisms, and enhancing aquatic habitat for spawning, feeding, or protection from predators.

There are insufficient data available to quantify the impacts of past gravel pit dewatering on groundwater discharge to the lake, so appropriate mitigation measures are unclear. Regional recovery of the water table after the cessation of pit discharge appears to have led to a return of more natural groundwater discharge to the lake, according to anecdotal reports. Regarding the impacts of ongoing pumping within the gravel pit on the lake, the first step would be to delineate the hydrogeological connections between the lake and the gravel pit more thoroughly.

This type of delineation would involve, at a minimum, the installation of a closely logged soil boring and monitoring well between the lake and the pit, screened in the upper aquifer, which would allow for the measurement of water table elevations over time. Additional siting considerations would include avoiding areas that nearby domestic water supply wells may impact. A better approach than installing a single well is to install clusters of multiple wells, each screened at different depths, at two or more sites between the lake and the pit, along with a surveyed staff gauge in the lake. Ongoing within-pit pumping of water from one pond to another is likely to result in ongoing alteration of vertical and horizontal groundwater gradients between the lake and the pit, including mounding of groundwater under the northeast corner of the pit and surrounding areas, and depression of the water table in areas of active dewatering and excavation further south. If water table elevations and groundwater flow beyond the pit boundaries appear to be impacted by ongoing operations, it may be appropriate to negotiate stricter conditions on within-pit pumping.

6 CONCLUSIONS

The primary interest of Ann Arbor Charter Township in authorizing this study was to document the impacts of the discharge of turbid water to Massey Lake from the recent period of active dewatering discharge originating at the adjacent gravel pit. The LimnoTech investigation in the summer of 2025 collected and analyzed sediment samples from Massey Lake. The results of the field observations and laboratory analyses, as well as a review of scientific journal articles and other hydrogeological reports and studies, were used to assess the degree of impact from prior discharges on the lake. Water column properties were also measured to support interpretation of other data.

Results of metals concentration and grain size analyses from five sites near the creek inlet in the northwest corner of the lake, as well as a reference site near the center of the lake, showed no evidence of impacts. Comparisons of analyses of surface sediments with deeper samples at the six sites revealed evidence of slightly elevated average concentrations of a subset of the analyzed metals (i.e., cadmium, chromium, and zinc), and little contrast in sediment grain size between surface and deep samples. Concentrations of metals that were elevated in surface samples relative to deeper samples were still well below background concentration thresholds based on State of Michigan guidance.

Although metal and grain size data do not provide proof of distinct impacts of turbid water discharge on the lake, it is probable that the discharge did result in the deposition of higher-than-normal amounts of sediment in the lake. This sediment likely had a different composition than natural sediments from the undisturbed watershed upstream of the lake, even if the differences are minor or broadly within background thresholds. The sediments deposited also likely changed the bathymetry of the lake. However, the lack of a baseline bathymetric dataset for comparison and the probability that any changes were small make quantifying the changes difficult without more extensive sampling and analysis, or numerical modeling.

Prior analysis of the monitoring reports from the period of active gravel pit dewatering, July 2022 to October 2023, yielded an estimated sediment discharge mass of 76 tons (total monthly average flow x monthly average suspended solids). This estimate did not include mobilized berm failure material. Assuming a mass of approximately 2.25 tons per cubic yard of solids (sand, silt, clay), this equates to 33.8 cubic yards total. Assuming that none of the discharged sediment was trapped in the wetlands between the point of discharge and the lake, and that no discharged sediment passed through the lake and out the creek downstream, this would amount to approximately one 50th of an inch of new sediment over the 12-acre lakebed if it were evenly deposited. This is the thickness of 33.8 cubic yards of solids distributed over approximately 58,000 square yards. These rough calculations are overly conservative and simplified, but this estimate gives a sense of the potential magnitude of overall deposition from turbid water that reached the lake in the past from gravel pit discharges. Deposition could be much thicker near the lake inlet, and even thinner near the outlet, although distinctive deposition layers were not observed during sediment sampling activities.

The available hydrogeological data are consistent with anecdotal reports of decreased groundwater discharge to the lake and a relative warming of surface waters. These impacts would have been most significant during active dewatering at the adjacent gravel pit. They would have decreased (i.e., groundwater

discharge to the lake would have increased, approaching its normal state) during subsequent water table recovery after active dewatering ceased at the pit.

Beyond a "no action" alternative, we considered the following options for addressing the impacts of sediment from turbid water discharge to Massey:

- Dredging and removal of surface sediment from the lake and upstream wetlands.
- Habitat enhancement and restocking of fish and frogs that may have been impacted by water temperature and chemistry changes during the period of turbid water inputs to the lake and reduced groundwater discharge.
- Installation of a weir or check dam at the creek inlet to the lake to help trap any additional sediment from recent gravel pit discharges and slope failures. Such sediment has likely been deposited in the wetlands upstream from the lake. It may be gradually being transported into the lake through normal creek flow and episodic storm pulses or snowmelt.

Of these options, we recommend habitat enhancement and restocking because they are the most effective approaches to minimizing future disturbance and maximizing ecosystem benefits.

Because past impacts on groundwater discharge to the lake from gravel pit dewatering are not well constrained, and regional water table recovery may be reducing any groundwater deficit over time, specific and practical mitigation measures are not obvious. That said, enhanced characterization and monitoring of hydrogeological conditions, including water table elevations between the lake and the pit, is warranted. Enhanced monitoring could track ongoing recovery from past dewatering, as well as detect current or future impacts of active within-pit pumping and movement of water. To accomplish this characterization, we recommend installation and monitoring of well clusters at two or more sites between the lake and the gravel pit, along with installation and monitoring of a surveyed staff gauge in the lake.

Appendices

A. Supplemental Geological Information and References

B. Sediment Analytical Data

C. Field Photos

D. Water Column Profile Data

E. Sampling and Analysis Plan (SAP)

APPENDIX A
Supplemental Geological Information and References

Massey Lake is located within a larger northwest-southeast trending subglacial tunnel valley (Kehew et al., 1999 and 2013) within the Defiance Moraine. The moraine was deposited by the Huron-Erie Glacial Lobe of the Laurentide ice sheet about 14,000 years ago. The irregularly shaped island and the ridge to the northeast of the lake may be partial exposures of a subglacial esker.

Table A-1. A portion of Table 4 from EGLE (2023a) listing background concentration values for clay within the Huron-Erie Glacial Lobe area of Michigan, which includes the Massey Lake area. Clay would be expected to have higher concentrations of many metals than other grain sizes like sand or silt.

	Dist.	Part 201 Statewide Default Background	Table 1 Upper Range Value	HURON - ERIE		
				n	2 SD	97.5 Quantiles
Aluminum (Al)	L	6,900	16,014	56	**19,049**	#
Antimony (Sb)	Np	NA	11.5	42	#	**13**
Arsenic (As)	L	5.8	22.8	237	**31.4**	#
Barium (Ba)	L	75	172	166	**227**	#
Beryllium (Be)	V	NA	1	35	**1.43**	#
Cadmium (Cd)	Np	1.2	2	196	#	**3.1**
Chromium (Cr)	L	18	55.6	139	**77**	#
Cobalt (Co)	CL	6.8	26.8	98	**27.4**	#
Copper (Cu)	L	32	50.6	192	**46.9**	#
Iron (Fe)	L	12,000	34,311	59	**36,908**	#
Lead (Pb)	CL	21	38.9	196	**26.2**	#
Lithium (Li)	L	9.8	37.9	32	**40.4**	#
Magnesium (Mg)	L	NA	36,049	20	**93,692**	#
Manganese (Mn)	L	440	1,212	53	**935**	#
Mercury (Hg)	Np	0.13	0.5	168	#	**0.58**
Molybdenum (Mo)	Np	NA	5	14	#	**5**
Nickel (Ni)	V	20	55.2	140	**43.4**	#
Selenium (Se)	V	0.41	1.3	189	**1.2**	#
Silver (Ag)	Np	1	1.4	139	#	**6**
Sodium (Na)	V	NA	519	10	**594**	#
Strontium (Sr)	Np	NA	150	6	#	**150**
Thallium (Tl)	Np	NA	2.7	39	#	**1.7**
Titanium (Ti)	N	MNL	208	1	--	--
Vanadium (V)	L	NA	59.6	28	**95.1**	#
Zinc (Zn)	L	47	118	218	**102**	#

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[EGLE, 2023b] Michigan Department of Environment, Great Lakes, and Energy, 2023. Table 2. Soil: Residential; Part 201 Generic Cleanup Criteria And Screening Levels/Part 213 Risk-Based Screening Levels. Accessed at **https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Programs/RRD/Remediation/Rules---Criteria/table-2-soil-residential-pdf.pdf?rev=8168e1208fc24ecda3b7caecee1d3732&hash=EE21014E931B41B397676FA2EC1ADC4F**

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APPENDIX B
Sediment Analytical Data

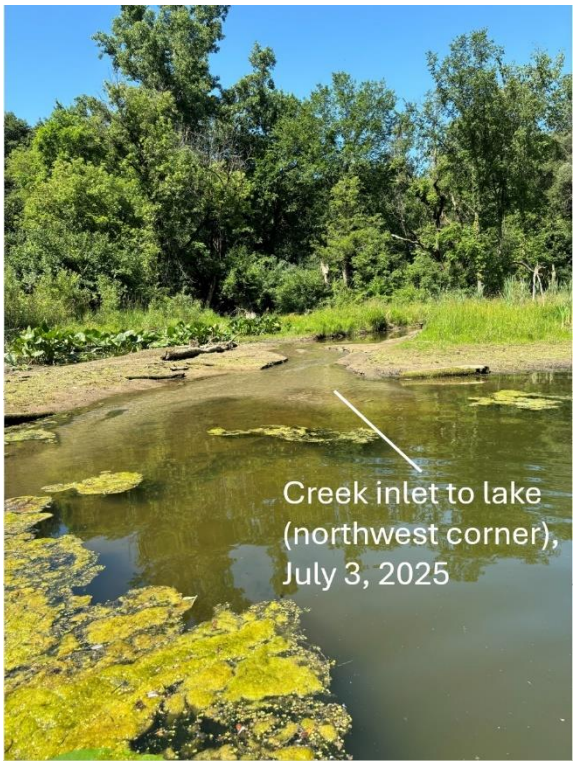
Sediment Metals Concentration and Percent Solids Data

Sample ID	Total Arsenic (mg/Kg)	Total Barium (mg/Kg)	Total Cadmium (mg/Kg)	Total Chromium (mg/Kg)	Total Copper (mg/Kg)	Total Lead (mg/Kg)	Total Mercury (mg/Kg)	Total Selenium (mg/Kg)	Total Silver (mg/Kg)	Total Zinc (mg/Kg)	Percent Solids
ML-1S	5.9	130.0	0.78	12.0	21.0	11.0	Not Detected	Not Detected	Not Detected	74.0	37%
ML-1S Duplicate	5.4	120.0	0.77	11.0	21.0	12.0	Not Detected	0.25	Not Detected	74.0	39%
ML-1D	8.0	150.0	0.76	12.0	23.0	14.0	Not Detected	Not Detected	Not Detected	85.0	37%
ML-2S	4.4	150.0	0.73	11.0	18.0	11.0	Not Detected	0.46	Not Detected	59.0	60%
ML-2D	4.0	150.0	0.78	13.0	18.0	11.0	Not Detected	0.44	Not Detected	61.0	50%
ML-3S	8.7	140.0	0.93	17.0	28.0	15.0	0.051	Not Detected	Not Detected	100.0	36%
ML-3D	7.7	170.0	0.84	13.0	34.0	17.0	Not Detected	Not Detected	Not Detected	100.0	36%
ML-4S	1.1	140.0	1.10	17.0	31.0	15.0	Not Detected	0.30	Not Detected	110.0	33%
ML-4D	7.7	170.0	0.94	14.0	54.0	18.0	0.052	0.40	Not Detected	110.0	34%
ML-5S	11.0	120.0	0.96	17.0	30.0	15.0	Not Detected	0.43	Not Detected	110.0	37%
ML-5D	6.5	160.0	0.75	11.0	33.0	15.0	Not Detected	0.50	Not Detected	88.0	38%
ML-6S	17.0	230.0	1.10	23.0	35.0	18.0	0.055	0.33	Not Detected	120.0	16%
ML-6D	11.0	210.0	1.00	21.0	36.0	18.0	0.064	Not Detected	Not Detected	120.0	17%
Field Blank	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected	Not Applicable
Detection Limit	0.10	1.00	0.05	0.50	1.00	1.00	0.050	0.20	0.10	1.00	Not Applicable

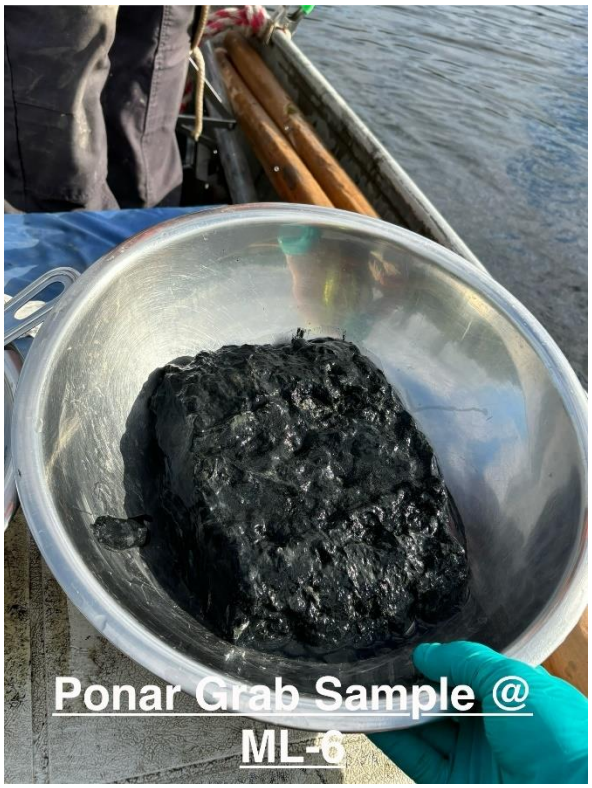
Sediment Grain Size Data

Sample ID	Fine Gravel (%)	Coarse Sand (%)	Medium Sand (%)	Fine Sand (%)	Total Sand (%)	Fines – Total Silt & Clay (%)
ML-1S	0.2	0.4	1.3	9.9	11.6	88.2
ML-1S dup	0.5	0.5	1.2	9.1	10.8	88.7
ML-1D	0.0	0.3	0.5	6.9	7.7	92.3
ML-2S	0.1	0.6	3.3	19.1	23.0	76.9
ML-2D	0.0	1.0	2.7	10.9	14.6	85.4
ML-3S	0.0	0.2	0.3	0.9	1.4	98.6
ML-3D	0.1	0.2	0.6	4.2	5.0	94.9
ML-4S	0.0	0.0	0.5	0.9	1.4	98.6
ML-4D	0.0	0.2	0.5	1.0	1.7	98.3
ML-5S	0.0	0.0	0.1	0.4	0.5	99.5
ML-5D	0.0	0.0	0.1	0.6	0.7	99.3
ML-6S	0.0	0.4	0.2	0.1	0.7	99.3
ML-6D	0.0	0.0	0.1	0.1	0.2	99.8

APPENDIX C
Field Photos



Deep (Left) and Shallow (Right) Composite Samples @ ML-5



Ponar Grab Sample @ ML-6

APPENDIX D
Water Column Profile Data

Water column profiling data from sites ML-1, ML-3, ML-4, ML-5, and ML-6 are included in the following table, along with combined plots of data from all five sites for dissolved oxygen (percent saturation and mg/L), specific conductance, turbidity, pH, and temperature. No water column data were collected from site ML-2, as this was an area of exposed lakebed.

2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/22	9:45:27	ML-1	0.203	44.2	3.93	520.3	2.73	7.62	21.056	42.34285	-83.67141	741.2
8/22	9:45:28	ML-1	0.200	44.1	3.92	520.3	2.58	7.62	21.055	42.34285	-83.67141	741.2
8/22	9:45:29	ML-1	0.198	44.1	3.92	520.2	2.54	7.62	21.055	42.34285	-83.67141	741.3
8/22	9:45:30	ML-1	0.199	44.0	3.92	520.3	2.57	7.61	21.054	42.34285	-83.67141	741.3
8/22	9:45:31	ML-1	0.200	44.0	3.91	520.2	2.46	7.62	21.055	42.34285	-83.67141	741.2
8/22	9:45:32	ML-1	0.196	44	3.91	520.2	2.47	7.62	21.055	42.34285	-83.67141	741.3
8/22	9:45:33	ML-1	0.195	43.9	3.91	520.2	2.55	7.61	21.055	42.34285	-83.6714	741.4
8/22	9:45:34	ML-1	0.196	43.9	3.91	520.2	2.51	7.61	21.055	42.34284	-83.6714	741.3
8/22	9:45:35	ML-1	0.180	43.9	3.9	520	2.69	7.61	21.055	42.34284	-83.6714	741.2
8/22	9:45:36	ML-1	0.181	43.8	3.9	520.1	2.78	7.61	21.054	42.34284	-83.6714	741.2
8/22	9:45:37	ML-1	0.19	43.8	3.89	520.2	2.67	7.61	21.053	42.34284	-83.6714	741.3
8/22	9:45:38	ML-1	0.201	43.7	3.89	520.1	2.82	7.61	21.052	42.34284	-83.6714	741.2
8/22	9:45:39	ML-1	0.228	43.7	3.88	520	2.94	7.61	21.05	42.34284	-83.6714	741.3
8/22	9:45:40	ML-1	0.292	43.6	3.88	519.6	2.87	7.61	21.047	42.34284	-83.6714	741.3
8/22	9:45:41	ML-1	0.375	43.5	3.87	519.5	2.85	7.61	21.04	42.34284	-83.6714	741.3
8/22	9:45:42	ML-1	0.422	43.4	3.86	519.3	2.73	7.61	21.032	42.34284	-83.6714	741.3
8/22	9:45:43	ML-1	0.452	43.3	3.85	518.6	2.36	7.61	21.014	42.34284	-83.6714	741.3
8/22	9:45:44	ML-1	0.473	43.2	3.84	518.6	2.21	7.61	20.99	42.34284	-83.6714	741.2
8/22	9:45:45	ML-1	0.499	43.1	3.84	518.8	2.32	7.61	20.975	42.34284	-83.6714	741.3
8/22	9:45:46	ML-1	0.52	43	3.83	518.8	2.26	7.61	20.967	42.34284	-83.6714	741.4
8/22	9:45:47	ML-1	0.545	43	3.83	518.8	2.21	7.61	20.958	42.34284	-83.6714	741.3
8/22	9:45:48	ML-1	0.571	43	3.83	518.9	2.1	7.61	20.95	42.34284	-83.6714	741.3
8/22	9:45:49	ML-1	0.613	42.9	3.82	518.9	2.13	7.61	20.94	42.34284	-83.6714	741.2
8/22	9:45:50	ML-1	0.646	42.8	3.82	519.3	2.23	7.6	20.931	42.34284	-83.6714	741.2
8/22	9:45:51	ML-1	0.694	42.7	3.81	520.4	2.22	7.6	20.92	42.34284	-83.6714	741.3
8/22	9:45:52	ML-1	0.713	42.5	3.79	521.9	2.35	7.59	20.91	42.34284	-83.6714	741.2
8/22	9:45:53	ML-1	0.735	42.2	3.77	523	2.63	7.59	20.898	42.34284	-83.6714	741.3
8/22	9:45:54	ML-1	0.759	42	3.75	524.3	2.73	7.59	20.888	42.34284	-83.6714	741.2
8/22	9:45:55	ML-1	0.799	41.8	3.73	526.8	2.66	7.59	20.874	42.34284	-83.6714	741.3

2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/22	9:45:56	ML-1	0.803	41.6	3.72	528.3	3.03	7.59	20.858	42.34284	-83.6714	741.3
8/22	9:45:57	ML-1	0.828	41.5	3.7	528.7	4.33	7.59	20.84	42.34284	-83.6714	741.3
8/22	9:45:58	ML-1	0.867	41.4	3.7	530	7.27	7.6	20.826	42.34284	-83.6714	741.2
8/22	9:45:59	ML-1	0.895	41.3	3.69	531.3	8.69	7.6	20.807	42.34285	-83.67141	741.3
8/22	9:46:00	ML-1	0.921	41.2	3.68	532.5	7.7	7.6	20.777	42.34285	-83.67141	741.3
8/22	9:46:01	ML-1	0.961	41.1	3.67	533.4	7.56	7.6	20.747	42.34285	-83.67141	741.2
8/22	9:46:02	ML-1	0.997	40.9	3.66	533.9	7.03	7.6	20.717	42.34285	-83.67141	741.3
8/22	9:46:03	ML-1	1.021	40.9	3.66	534.7	6.05	7.6	20.685	42.34285	-83.67141	741.3
8/22	9:46:04	ML-1	1.039	40.9	3.66	535.3	5.33	7.6	20.651	42.34285	-83.67141	741.3
8/22	9:46:05	ML-1	1.064	40.9	3.67	535.7	4.98	7.6	20.616	42.34285	-83.67141	741.2
8/22	9:46:06	ML-1	1.099	40.9	3.67	536.2	4.97	7.6	20.578	42.34285	-83.67141	741.3
8/22	9:46:07	ML-1	1.126	40.8	3.66	537.1	5.15	7.6	20.546	42.34285	-83.67141	741.3
8/22	9:46:08	ML-1	1.155	40.8	3.67	538.3	5.22	7.6	20.508	42.34285	-83.67141	741.2
8/22	9:46:09	ML-1	1.171	40.8	3.67	539.3	4.98	7.6	20.469	42.34285	-83.67141	741.3
8/22	9:46:10	ML-1	1.207	40.8	3.67	540.6	5.22	7.6	20.424	42.34285	-83.67141	741.3
8/22	9:46:11	ML-1	1.232	40.8	3.68	542.2	5.82	7.6	20.386	42.34285	-83.67141	741.3
8/22	9:46:12	ML-1	1.266	40.8	3.67	543.3	6.6	7.6	20.347	42.34284	-83.67142	741.3
8/22	9:46:13	ML-1	1.27	40.7	3.67	544.4	6.8	7.6	20.322	42.34284	-83.67141	741.2
8/22	9:46:14	ML-1	1.273	40.7	3.67	545.7	6.88	7.6	20.3	42.34284	-83.67141	741.3
8/22	9:46:15	ML-1	1.331	40.6	3.67	546.7	8.27	7.6	20.279	42.34284	-83.67141	741.3
8/22	9:46:16	ML-1	1.367	40.5	3.66	547.4	8.23	7.6	20.246	42.34284	-83.67141	741.3
8/22	9:46:17	ML-1	1.376	40.4	3.65	547.9	8.32	7.6	20.217	42.34284	-83.67141	741.3
8/22	9:46:18	ML-1	1.413	40.3	3.65	548.4	10.17	7.6	20.186	42.34284	-83.67141	741.2
8/22	9:46:19	ML-1	1.422	40.3	3.65	548.8	11.78	7.6	20.154	42.34284	-83.67141	741.2
8/22	9:46:20	ML-1	1.424	40.3	3.64	548.9	16.81	7.61	20.128	42.34284	-83.67141	741.2
8/22	9:46:21	ML-1	1.431	40.1	3.63	549.4	13.09	7.61	20.112	42.34284	-83.67141	741.2
8/21	14:34:12	ML-3	0.158	28.5	2.47	507.6	1.99	7.44	22.392	42.34277	-83.67057	740.6
8/21	14:34:13	ML-3	0.155	28.5	2.47	508.2	2.13	7.44	22.377	42.34277	-83.67057	740.6
8/21	14:34:14	ML-3	0.151	28.5	2.47	506.8	2.18	7.44	22.368	42.34277	-83.67057	740.6
8/21	14:34:15	ML-3	0.136	28.6	2.48	506.7	2	7.45	22.357	42.34277	-83.67057	740.6
8/21	14:34:16	ML-3	0.139	28.5	2.48	505.7	1.97	7.45	22.35	42.34277	-83.67057	740.6
8/21	14:34:17	ML-3	0.186	28.5	2.47	506.2	2	7.44	22.348	42.34277	-83.67057	740.6
8/21	14:34:18	ML-3	0.219	28.4	2.47	507.5	2.23	7.44	22.345	42.34277	-83.67057	740.6
8/21	14:34:19	ML-3	0.239	28.3	2.45	506.2	2.12	7.43	22.337	42.34278	-83.67057	740.6
8/21	14:34:20	ML-3	0.28	28.0	2.43	509	2.12	7.43	22.32	42.34278	-83.67058	740.6
8/21	14:34:21	ML-3	0.336	27.7	2.41	516	2.6	7.43	22.281	42.34278	-83.67058	740.6
8/21	14:34:22	ML-3	0.419	27.4	2.38	527.9	2.85	7.43	22.24	42.3428	-83.67059	740.6
8/21	14:34:23	ML-3	0.487	27.1	2.36	532.6	2.87	7.44	22.188	42.3428	-83.67059	740.6
8/21	14:34:24	ML-3	0.531	27.1	2.36	533.7	3.09	7.46	22.157	42.3428	-83.67058	740.6

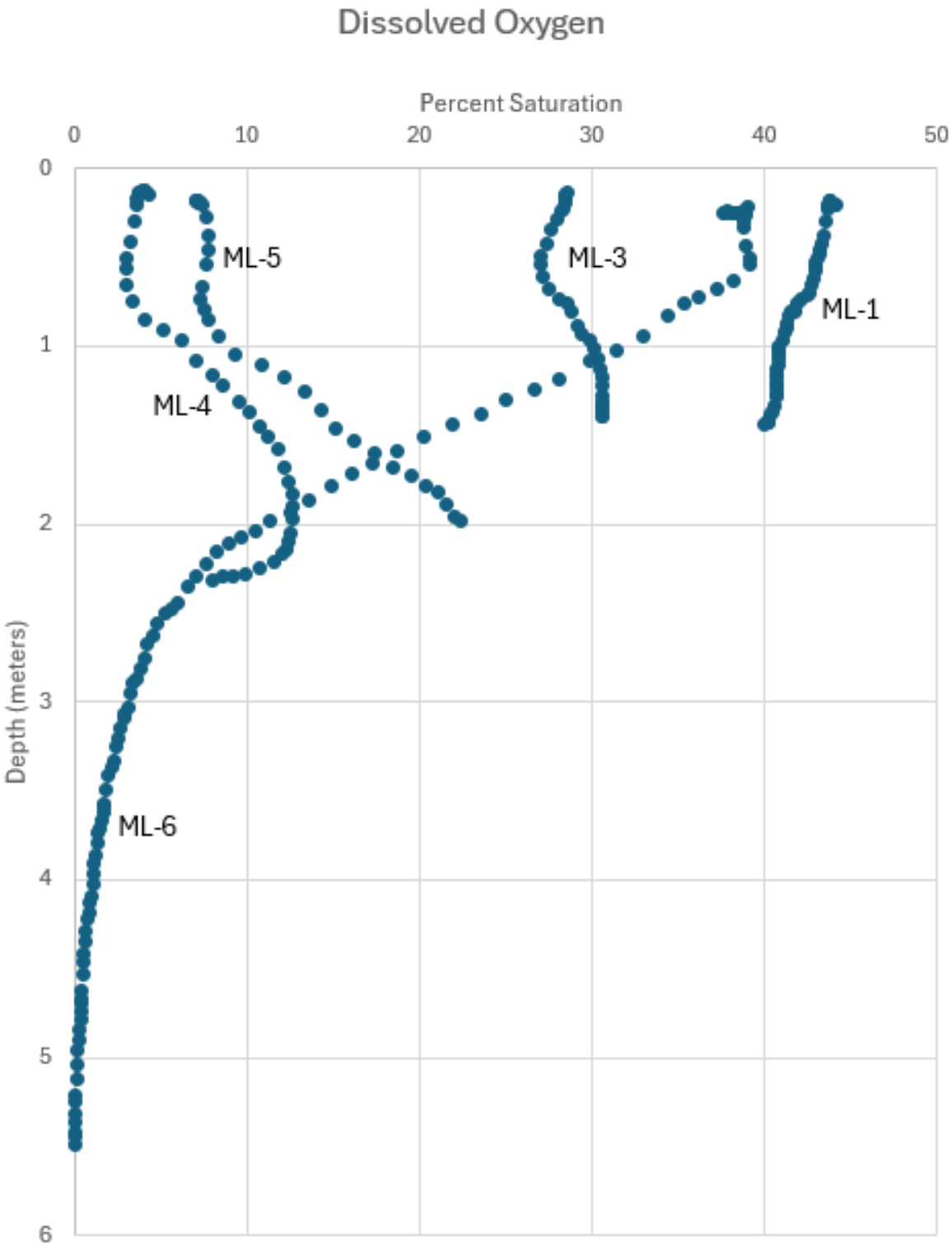
2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/21	14:34:25	ML-3	0.611	27.2	2.37	536.7	3.23	7.47	22.124	42.34279	-83.67058	740.6
8/21	14:34:26	ML-3	0.679	27.6	2.4	539.7	3.31	7.47	22.092	42.34279	-83.67057	740.6
8/21	14:34:27	ML-3	0.734	28.1	2.45	542.2	3.5	7.49	22.055	42.3428	-83.67057	740.6
8/21	14:34:28	ML-3	0.757	28.6	2.49	544.2	3.57	7.5	21.999	42.34279	-83.67057	740.5
8/21	14:34:29	ML-3	0.803	28.9	2.52	545.2	3.54	7.51	21.951	42.34279	-83.67056	740.6
8/21	14:34:30	ML-3	0.886	29.2	2.55	545.9	3.48	7.51	21.914	42.3428	-83.67056	740.6
8/21	14:34:31	ML-3	0.929	29.5	2.58	546.7	3.48	7.51	21.891	42.3428	-83.67056	740.6
8/21	14:34:32	ML-3	0.965	29.9	2.62	547.2	3.95	7.51	21.863	42.3428	-83.67056	740.6
8/21	14:34:33	ML-3	1.013	30.2	2.64	548.6	4.49	7.51	21.835	42.3428	-83.67056	740.6
8/21	14:34:34	ML-3	1.069	30.4	2.66	549.7	4.72	7.51	21.778	42.3428	-83.67055	740.6
8/21	14:34:35	ML-3	1.121	30.5	2.68	550.6	5.71	7.51	21.728	42.3428	-83.67055	740.6
8/21	14:34:36	ML-3	1.173	30.6	2.69	551.2	6.87	7.51	21.688	42.3428	-83.67055	740.6
8/21	14:34:37	ML-3	1.222	30.7	2.7	551.6	7.61	7.51	21.653	42.34279	-83.67056	740.6
8/21	14:34:38	ML-3	1.277	30.7	2.7	552	8.27	7.51	21.608	42.34279	-83.67056	740.6
8/21	14:34:39	ML-3	1.304	30.7	2.7	552.7	7.91	7.5	21.557	42.34278	-83.67056	740.6
8/21	14:34:40	ML-3	1.336	30.7	2.7	553.1	8.43	7.5	21.504	42.34277	-83.67056	740.6
8/21	14:34:41	ML-3	1.355	30.6	2.7	553.4	9.05	7.5	21.467	42.34277	-83.67057	740.6
8/21	14:34:42	ML-3	1.385	30.6	2.7	553.7	9.28	7.49	21.439	42.34276	-83.67057	740.6
8/21	14:34:43	ML-3	1.393	30.6	2.7	553.8	16.7	7.49	21.42	42.34276	-83.67057	740.7
8/21	14:01:04	ML-4	0.14	4.4	0.38	480.3	1.07	7.26	22.109	42.343	-83.67028	740.9
8/21	14:01:05	ML-4	0.116	4.1	0.36	480.1	1.18	7.26	22.103	42.343	-83.67028	740.9
8/21	14:01:06	ML-4	0.126	4.0	0.35	480.2	1.23	7.26	22.097	42.343	-83.67028	740.9
8/21	14:01:07	ML-4	0.137	3.8	0.34	480.6	1.15	7.26	22.095	42.343	-83.67027	740.9
8/21	14:01:08	ML-4	0.161	3.7	0.33	480.3	1.14	7.26	22.093	42.343	-83.67027	740.9
8/21	14:01:09	ML-4	0.201	3.7	0.32	479.3	1.19	7.26	22.081	42.34301	-83.67027	740.8
8/21	14:01:10	ML-4	0.298	3.5	0.3	479.4	1.24	7.25	22.065	42.34301	-83.67027	740.8
8/21	14:01:11	ML-4	0.414	3.3	0.29	480.7	1.36	7.25	22.057	42.343	-83.67027	740.8
8/21	14:01:12	ML-4	0.498	3.1	0.27	485.1	2.07	7.25	22.033	42.343	-83.67027	740.8
8/21	14:01:13	ML-4	0.558	3.1	0.27	500.6	2.93	7.26	22.01	42.343	-83.67027	740.8
8/21	14:01:14	ML-4	0.647	3.1	0.27	515.7	3.08	7.28	21.983	42.343	-83.67027	740.8
8/21	14:01:15	ML-4	0.746	3.4	0.29	526.1	4.41	7.33	21.946	42.34299	-83.67028	740.7
8/21	14:01:16	ML-4	0.847	4.1	0.36	539.1	4.67	7.38	21.92	42.34299	-83.67028	740.7
8/21	14:01:17	ML-4	0.909	5.2	0.45	544.1	4.51	7.39	21.863	42.343	-83.67028	740.8
8/21	14:01:18	ML-4	0.959	6.3	0.55	546.3	4.48	7.42	21.815	42.343	-83.67028	740.9
8/21	14:01:19	ML-4	1.073	7.1	0.62	550.6	4.62	7.43	21.774	42.343	-83.67028	740.8
8/21	14:01:20	ML-4	1.157	8.0	0.7	553.9	4.79	7.44	21.71	42.343	-83.67028	740.7
8/21	14:01:21	ML-4	1.221	8.7	0.77	554.3	4.93	7.44	21.676	42.343	-83.67028	740.8
8/21	14:01:22	ML-4	1.305	9.6	0.84	556.1	5.22	7.45	21.638	42.343	-83.67028	740.8
8/21	14:01:23	ML-4	1.362	10.2	0.90	556.4	5.23	7.45	21.607	42.343	-83.67028	740.8

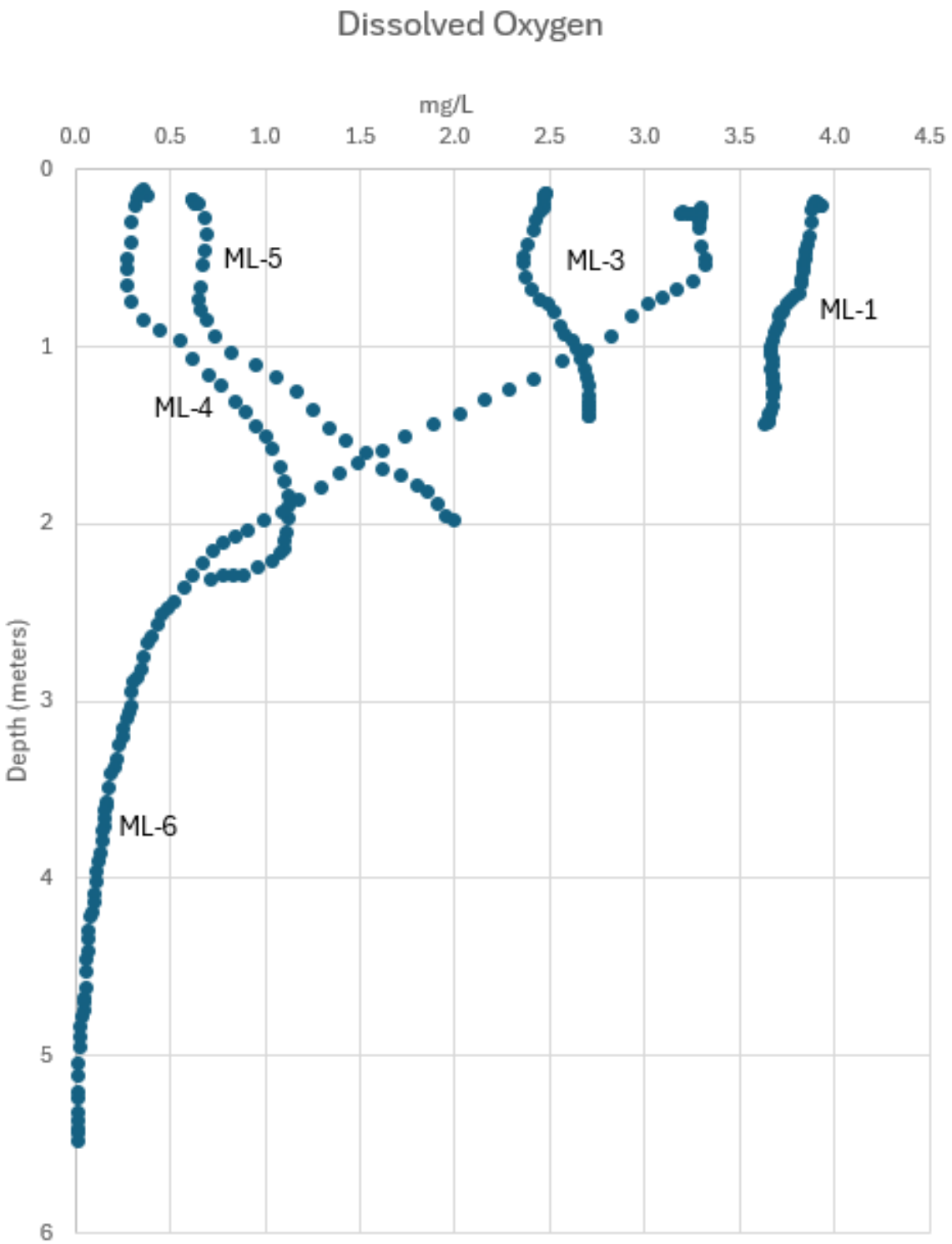
2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/21	14:01:24	ML-4	1.451	10.8	0.95	556.9	5.19	7.46	21.577	42.343	-83.67028	740.8
8/21	14:01:25	ML-4	1.506	11.3	1.00	559.4	6.59	7.46	21.542	42.343	-83.67028	740.8
8/21	14:01:26	ML-4	1.577	11.8	1.04	560.9	7.18	7.46	21.511	42.343	-83.67028	740.8
8/21	14:01:27	ML-4	1.678	12.2	1.08	561.8	7.43	7.46	21.458	42.343	-83.67028	740.9
8/21	14:01:28	ML-4	1.759	12.5	1.1	562.2	9.08	7.45	21.423	42.343	-83.67028	740.8
8/21	14:01:29	ML-4	1.834	12.7	1.12	563	11.29	7.45	21.387	42.343	-83.67028	740.9
8/21	14:01:30	ML-4	1.895	12.7	1.12	567.9	12.73	7.44	21.331	42.343	-83.67028	740.9
8/21	14:01:31	ML-4	1.971	12.7	1.12	574.7	13.71	7.43	21.301	42.343	-83.67028	740.9
8/21	14:01:32	ML-4	2.042	12.6	1.11	589.4	16.21	7.28	21.241	42.343	-83.67028	740.7
8/21	14:01:33	ML-4	2.091	12.5	1.1	620.9	19.76	7.13	21.13	42.343	-83.67029	740.8
8/21	14:01:34	ML-4	2.143	12.3	1.1	630	20.45	7.03	20.985	42.343	-83.67029	740.8
8/21	14:01:35	ML-4	2.167	12.1	1.08	642.4	20.92	7.01	20.909	42.343	-83.67029	740.8
8/21	14:01:36	ML-4	2.211	11.6	1.04	660.9	22.42	6.96	20.899	42.343	-83.67029	740.8
8/21	14:01:37	ML-4	2.245	10.8	0.96	678.4	24.86	6.93	20.882	42.343	-83.67029	740.8
8/21	14:01:38	ML-4	2.284	10.0	0.89	680.4	25.55	6.92	20.793	42.343	-83.67029	740.8
8/21	14:01:39	ML-4	2.287	9.3	0.83	683.2	26.62	6.89	20.698	42.343	-83.67029	740.8
8/21	14:01:40	ML-4	2.29	8.7	0.78	697	27.45	6.89	20.581	42.34299	-83.67029	740.8
8/21	14:01:41	ML-4	2.317	8.0	0.71	704.2	27.53	6.89	20.531	42.34299	-83.67029	740.8
8/21	16:02:10	ML-5	0.174	7.1	0.62	419.2	1.72	7.38	22.013	42.34237	-83.67049	740.4
8/21	16:02:11	ML-5	0.174	7.1	0.62	419.5	1.72	7.38	22.012	42.34237	-83.67049	740.4
8/21	16:02:12	ML-5	0.175	7.2	0.63	419.8	1.8	7.38	22.011	42.34237	-83.67049	740.4
8/21	16:02:13	ML-5	0.186	7.2	0.63	419.8	2.01	7.38	22.011	42.34237	-83.67049	740.4
8/21	16:02:14	ML-5	0.194	7.3	0.64	420.5	1.94	7.37	22.011	42.34237	-83.67049	740.4
8/21	16:02:15	ML-5	0.196	7.5	0.65	420.4	1.8	7.37	22.018	42.34237	-83.67049	740.4
8/21	16:02:16	ML-5	0.276	7.7	0.68	420.3	1.73	7.37	22.015	42.34237	-83.67049	740.5
8/21	16:02:17	ML-5	0.37	7.8	0.69	421.8	1.57	7.36	21.984	42.34237	-83.67049	740.5
8/21	16:02:18	ML-5	0.452	7.8	0.68	428.8	1.9	7.35	21.949	42.34238	-83.6705	740.5
8/21	16:02:19	ML-5	0.534	7.7	0.67	444.9	2.69	7.35	21.927	42.34238	-83.6705	740.5
8/21	16:02:20	ML-5	0.667	7.5	0.66	530.4	3.74	7.36	21.911	42.34238	-83.6705	740.3
8/21	16:02:21	ML-5	0.73	7.4	0.65	521.1	3.91	7.37	21.905	42.34238	-83.67049	740.5
8/21	16:02:22	ML-5	0.791	7.6	0.66	504.9	3.77	7.39	21.901	42.34238	-83.67049	740.3
8/21	16:02:23	ML-5	0.844	7.8	0.69	539.7	3.76	7.42	21.897	42.34238	-83.67049	740.4
8/21	16:02:24	ML-5	0.936	8.4	0.74	538.9	3.91	7.45	21.884	42.34238	-83.67049	740.3
8/21	16:02:25	ML-5	1.038	9.4	0.82	540.2	3.93	7.47	21.86	42.34238	-83.67049	740.4
8/21	16:02:26	ML-5	1.107	10.9	0.95	544.4	4.08	7.48	21.837	42.34238	-83.67049	740.4
8/21	16:02:27	ML-5	1.168	12.2	1.06	546.1	4.27	7.48	21.818	42.34238	-83.67049	740.4
8/21	16:02:28	ML-5	1.253	13.4	1.17	549.2	4.57	7.49	21.795	42.34238	-83.67048	740.4
8/21	16:02:29	ML-5	1.354	14.3	1.25	552.1	4.69	7.5	21.754	42.34238	-83.67048	740.4
8/21	16:02:30	ML-5	1.454	15.2	1.34	552.4	4.78	7.51	21.711	42.34238	-83.67048	740.4

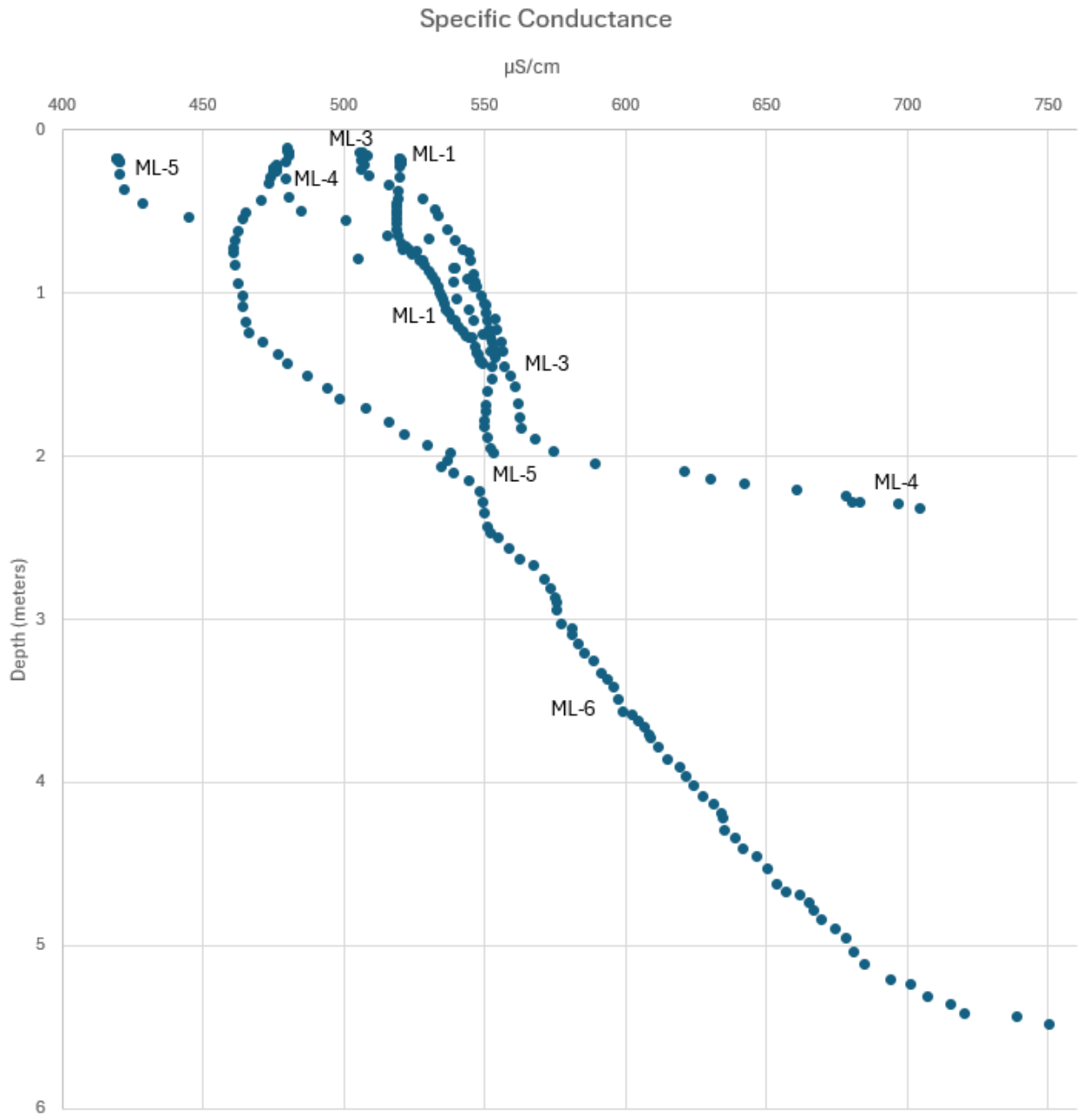
2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/21	16:02:31	ML-5	1.527	16.2	1.42	552.4	5.37	7.51	21.686	42.34238	-83.67048	740.4
8/21	16:02:32	ML-5	1.601	17.4	1.53	550.8	5.67	7.51	21.645	42.34238	-83.67048	740.5
8/21	16:02:33	ML-5	1.684	18.5	1.62	550.4	5.9	7.51	21.574	42.34238	-83.67047	740.3
8/21	16:02:34	ML-5	1.721	19.6	1.72	550.5	6.42	7.51	21.517	42.34238	-83.67047	740.4
8/21	16:02:35	ML-5	1.781	20.4	1.8	549.9	7.16	7.51	21.469	42.34238	-83.67047	740.5
8/21	16:02:36	ML-5	1.821	21.1	1.86	549.8	8.25	7.51	21.428	42.34238	-83.67047	740.3
8/21	16:02:37	ML-5	1.886	21.6	1.91	550.7	10.75	7.5	21.379	42.34238	-83.67047	740.4
8/21	16:02:38	ML-5	1.954	22.1	1.95	551.9	14.24	7.5	21.343	42.34238	-83.67046	740.4
8/21	16:02:39	ML-5	1.98	22.5	1.99	553.1	18.59	7.49	21.298	42.34238	-83.67047	740.5
8/21	17:36:51	ML-6	0.244	37.7	3.19	475.3	2.07	7.56	23.673	42.34205	-83.66839	740.1
8/21	17:36:52	ML-6	0.253	37.8	3.19	474.9	1.84	7.55	23.672	42.34205	-83.66839	740.1
8/21	17:36:53	ML-6	0.236	37.9	3.2	474.9	1.74	7.55	23.672	42.34205	-83.66839	740.2
8/21	17:36:54	ML-6	0.244	38.1	3.22	475.3	1.95	7.55	23.671	42.34205	-83.66839	740.3
8/21	17:36:55	ML-6	0.25	38.3	3.24	475.6	2.12	7.55	23.667	42.34205	-83.66839	740.1
8/21	17:36:56	ML-6	0.25	38.5	3.26	475.9	1.88	7.54	23.664	42.34205	-83.66839	740.2
8/21	17:36:57	ML-6	0.244	38.6	3.27	476	1.9	7.54	23.666	42.34205	-83.66839	740.1
8/21	17:36:58	ML-6	0.24	38.9	3.29	476	1.85	7.54	23.671	42.34204	-83.66839	740.2
8/21	17:36:59	ML-6	0.231	39.0	3.3	476.2	1.82	7.54	23.679	42.34204	-83.66839	740.2
8/21	17:37:00	ML-6	0.216	39.1	3.3	476.4	1.81	7.55	23.696	42.34204	-83.66839	740.1
8/21	17:37:01	ML-6	0.259	39.0	3.3	475	2.12	7.55	23.711	42.34204	-83.66839	740.1
8/21	17:37:02	ML-6	0.29	38.9	3.29	474	2.27	7.55	23.698	42.34203	-83.66839	740.1
8/21	17:37:03	ML-6	0.328	38.9	3.29	473.2	2.07	7.56	23.666	42.34203	-83.66839	740.1
8/21	17:37:04	ML-6	0.432	39.0	3.3	470.8	2.1	7.58	23.625	42.34203	-83.66839	740.1
8/21	17:37:05	ML-6	0.506	39.2	3.32	465.4	2.13	7.57	23.554	42.34203	-83.66839	740.1
8/21	17:37:06	ML-6	0.541	39.2	3.32	464.1	2.06	7.55	23.465	42.34203	-83.66839	740.1
8/21	17:37:07	ML-6	0.625	38.2	3.25	462.3	2.13	7.53	23.409	42.34203	-83.66839	740.1
8/21	17:37:08	ML-6	0.68	37.3	3.17	461.6	2.11	7.51	23.347	42.34203	-83.66839	740.1
8/21	17:37:09	ML-6	0.724	36.2	3.09	461.1	2.07	7.5	23.297	42.34203	-83.66839	740.1
8/21	17:37:10	ML-6	0.752	35.4	3.02	460.9	1.97	7.49	23.238	42.34202	-83.66839	740.1
8/21	17:37:11	ML-6	0.829	34.4	2.93	461.4	2.32	7.48	23.19	42.34202	-83.66839	740.2
8/21	17:37:12	ML-6	0.942	33.0	2.82	462.7	2.84	7.46	23.121	42.34202	-83.66839	740.1
8/21	17:37:13	ML-6	1.021	31.5	2.69	463.9	2.9	7.44	23.058	42.34202	-83.66839	740.1
8/21	17:37:14	ML-6	1.081	29.9	2.56	464.3	3.02	7.43	23.002	42.34202	-83.66839	740.1
8/21	17:37:15	ML-6	1.18	28.1	2.41	465	3.72	7.42	22.964	42.34202	-83.66838	740.1
8/21	17:37:16	ML-6	1.241	26.7	2.29	466.3	4.02	7.41	22.924	42.34202	-83.66838	740.1
8/21	17:37:17	ML-6	1.302	25.1	2.16	471.1	4.29	7.38	22.895	42.34202	-83.66838	740.1
8/21	17:37:18	ML-6	1.374	23.6	2.03	476.9	5.15	7.35	22.854	42.34202	-83.66838	740.1
8/21	17:37:19	ML-6	1.434	22.0	1.89	480.1	5.89	7.34	22.822	42.34201	-83.66838	740
8/21	17:37:20	ML-6	1.508	20.3	1.74	487	6.89	7.31	22.796	42.34202	-83.66838	740.1

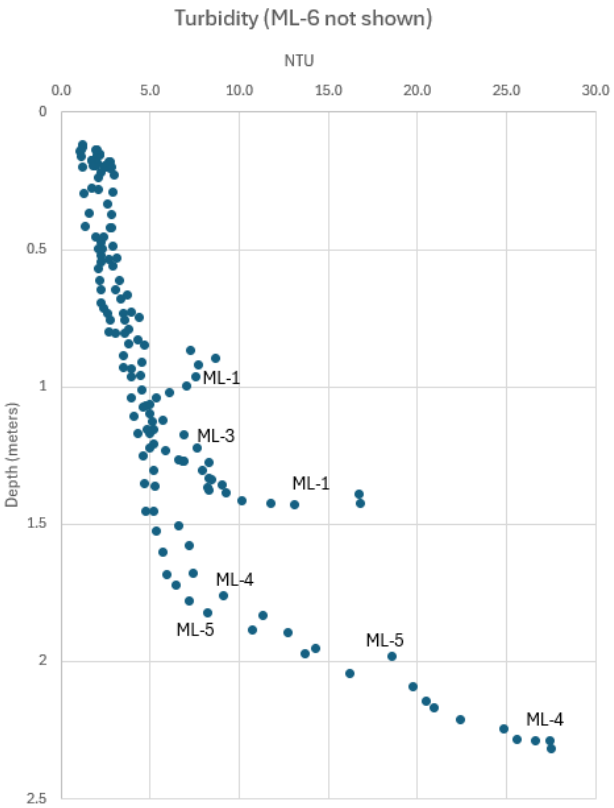
2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/21	17:37:21	ML-6	1.585	18.8	1.62	493.9	7.98	7.29	22.774	42.34202	-83.66838	740.1
8/21	17:37:22	ML-6	1.651	17.3	1.49	498.5	9.42	7.28	22.756	42.34201	-83.66839	740.1
8/21	17:37:23	ML-6	1.711	16.1	1.39	507.8	11.71	7.27	22.739	42.34201	-83.66839	740.1
8/21	17:37:24	ML-6	1.788	15.0	1.29	516.1	12.49	7.26	22.72	42.34201	-83.66839	740.1
8/21	17:37:25	ML-6	1.865	13.7	1.18	521.4	11.9	7.24	22.696	42.34201	-83.66839	740.1
8/21	17:37:26	ML-6	1.932	12.6	1.09	529.4	11.59	7.22	22.676	42.34201	-83.66839	740.1
8/21	17:37:27	ML-6	1.976	11.4	0.99	537.9	11.24	7.22	22.639	42.34201	-83.66839	740.2
8/21	17:37:28	ML-6	2.032	10.6	0.91	536.8	16.08	7.23	22.592	42.34201	-83.66839	740.2
8/21	17:37:29	ML-6	2.068	9.7	0.84	534.7	14.83	7.24	22.563	42.34201	-83.66839	740.2
8/21	17:37:30	ML-6	2.106	9.0	0.78	538.7	10.67	7.23	22.547	42.34201	-83.66839	740.1
8/21	17:37:31	ML-6	2.154	8.3	0.72	544.2	12.84	7.17	22.516	42.34201	-83.6684	740
8/21	17:37:32	ML-6	2.216	7.7	0.67	548	15.47	7.12	22.477	42.34201	-83.6684	740.2
8/21	17:37:33	ML-6	2.287	7.1	0.62	549.2	16.6	7.07	22.428	42.34201	-83.6684	740.1
8/21	17:37:34	ML-6	2.353	6.6	0.57	549.9	19.24	7.02	22.35	42.34201	-83.6684	740.1
8/21	17:37:35	ML-6	2.436	6.0	0.52	550.7	22.67	6.98	22.258	42.34201	-83.6684	740.2
8/21	17:37:36	ML-6	2.472	5.7	0.49	552.3	26.83	6.95	22.15	42.34201	-83.6684	740.1
8/21	17:37:37	ML-6	2.503	5.3	0.46	554.7	28.78	6.93	21.955	42.34201	-83.6684	740.1
8/21	17:37:38	ML-6	2.561	4.9	0.43	558.7	28.95	6.92	21.794	42.34201	-83.6684	740.1
8/21	17:37:39	ML-6	2.629	4.6	0.4	562.5	27.5	6.89	21.585	42.34201	-83.6684	740.1
8/21	17:37:40	ML-6	2.673	4.3	0.38	567.1	26.63	6.87	21.271	42.34201	-83.6684	740.1
8/21	17:37:41	ML-6	2.751	4.1	0.36	571	24.96	6.85	20.962	42.34201	-83.6684	740.1
8/21	17:37:42	ML-6	2.815	3.9	0.35	573.1	23.08	6.85	20.665	42.34201	-83.6684	740.1
8/21	17:37:43	ML-6	2.863	3.6	0.33	574.8	21.42	6.85	20.458	42.34201	-83.6684	740.1
8/21	17:37:44	ML-6	2.892	3.4	0.31	575.6	20.72	6.84	20.219	42.34201	-83.6684	740.1
8/21	17:37:45	ML-6	2.945	3.3	0.3	575.6	19.66	6.84	19.956	42.34201	-83.6684	740.2
8/21	17:37:46	ML-6	3.032	3.2	0.29	577.3	17.26	6.83	19.607	42.34202	-83.6684	740.2
8/21	17:37:47	ML-6	3.06	3.0	0.28	580.9	15.36	6.82	19.326	42.34202	-83.6684	740.1
8/21	17:37:48	ML-6	3.091	2.9	0.27	581.2	12.98	6.82	19.026	42.34202	-83.6684	740.1
8/21	17:37:49	ML-6	3.149	2.7	0.25	583.2	11.07	6.82	18.663	42.34202	-83.6684	740.1
8/21	17:37:50	ML-6	3.205	2.6	0.25	585.3	9.7	6.83	18.283	42.34202	-83.6684	740.1
8/21	17:37:51	ML-6	3.25	2.5	0.23	588.5	8.68	6.83	17.954	42.34202	-83.6684	740.1
8/21	17:37:52	ML-6	3.331	2.3	0.22	591.6	8.43	6.84	17.644	42.34202	-83.6684	740.2
8/21	17:37:53	ML-6	3.368	2.2	0.21	593.3	7.59	6.84	17.396	42.34202	-83.6684	740.1
8/21	17:37:54	ML-6	3.412	2	0.19	595.8	7.07	6.85	17.109	42.34202	-83.6684	740.1
8/21	17:37:55	ML-6	3.493	1.9	0.18	597.3	6.56	6.85	16.925	42.34202	-83.6684	740
8/21	17:37:56	ML-6	3.57	1.8	0.17	599.2	5.87	6.85	16.658	42.34202	-83.6684	740
8/21	17:37:57	ML-6	3.586	1.7	0.17	602.3	5.68	6.86	16.432	42.34202	-83.6684	740.1
8/21	17:37:58	ML-6	3.619	1.7	0.16	604.7	5.66	6.87	16.228	42.34202	-83.6684	740.1
8/21	17:37:59	ML-6	3.663	1.6	0.16	606.8	5.84	6.88	16.073	42.34202	-83.6684	740.1
8/21	17:38:00	ML-6	3.708	1.5	0.15	608.4	5.53	6.9	15.875	42.34203	-83.66839	740.1

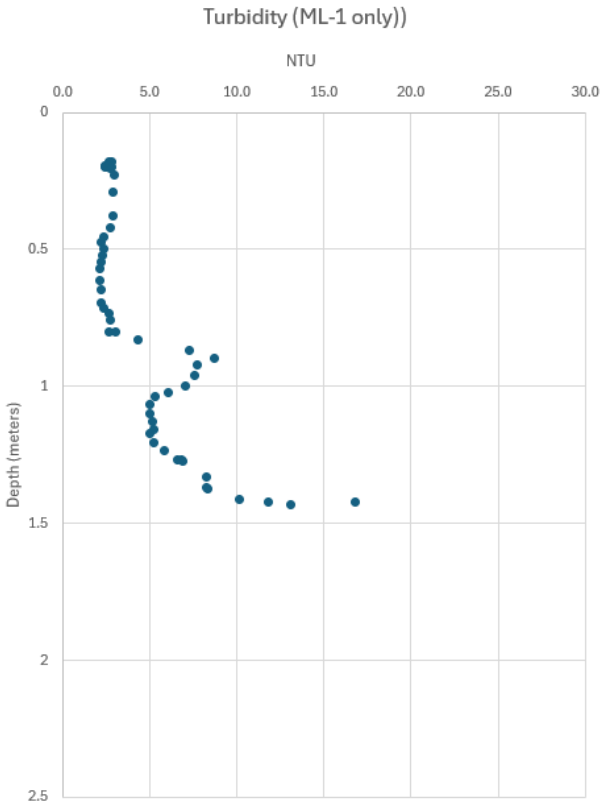
2025 Date (MM/DD)	Time (H:m:s)	Site Name	Depth m	Diss. Ox. % sat	Diss. Ox. mg/L	Spec Cond. µS/cm	Turb. NTU	pH	Temp °C	GPS Lat. °	GPS Long. °	Barom. mmHg
8/21	17:38:01	ML-6	3.728	1.4	0.14	609	4.75	6.92	15.674	42.34203	-83.66839	740.1
8/21	17:38:02	ML-6	3.787	1.4	0.14	611.8	4.6	6.93	15.484	42.34203	-83.66839	740.1
8/21	17:38:03	ML-6	3.856	1.3	0.13	615.1	4.61	6.94	15.249	42.34203	-83.66839	740.1
8/21	17:38:04	ML-6	3.906	1.2	0.12	619.2	4.22	6.95	15.027	42.34203	-83.66839	740.1
8/21	17:38:05	ML-6	3.964	1.1	0.11	621.2	3.98	6.96	14.797	42.34203	-83.66839	740.1
8/21	17:38:06	ML-6	4.018	1.1	0.11	624.4	4.25	6.97	14.569	42.34203	-83.6684	740
8/21	17:38:07	ML-6	4.085	1.0	0.1	627.4	4.11	6.98	14.299	42.34203	-83.6684	740.2
8/21	17:38:08	ML-6	4.128	0.9	0.1	631.2	3.79	6.99	14.072	42.34203	-83.6684	740.1
8/21	17:38:09	ML-6	4.187	0.9	0.09	634.2	3.93	7	13.927	42.34203	-83.6684	740.1
8/21	17:38:10	ML-6	4.219	0.8	0.08	634.6	4.06	7.02	13.902	42.34203	-83.6684	740.1
8/21	17:38:11	ML-6	4.292	0.7	0.07	635.1	4.19	7.03	13.861	42.34203	-83.6684	740.1
8/21	17:38:12	ML-6	4.344	0.7	0.07	638.7	4.4	7.04	13.651	42.34203	-83.6684	740.1
8/21	17:38:13	ML-6	4.408	0.6	0.07	641.9	4.31	7.06	13.447	42.34203	-83.6684	740.1
8/21	17:38:14	ML-6	4.455	0.6	0.06	646.3	4.36	7.07	13.275	42.34203	-83.6684	740.1
8/21	17:38:15	ML-6	4.525	0.6	0.06	650.5	4.73	7.07	13.031	42.34203	-83.6684	740.1
8/21	17:38:16	ML-6	4.622	0.5	0.06	653.7	4.78	7.05	12.846	42.34203	-83.6684	740.1
8/21	17:38:17	ML-6	4.67	0.5	0.05	657.2	5.07	7.04	12.647	42.34203	-83.6684	740.1
8/21	17:38:18	ML-6	4.694	0.5	0.05	661.6	5.24	7.04	12.483	42.34203	-83.6684	740.1
8/21	17:38:19	ML-6	4.74	0.5	0.05	665.1	5.25	7.04	12.335	42.34203	-83.66839	740.1
8/21	17:38:20	ML-6	4.783	0.4	0.04	666.6	6.39	7.05	12.253	42.34203	-83.6684	740.1
8/21	17:38:21	ML-6	4.84	0.3	0.03	669.6	7.41	7.05	12.112	42.34203	-83.6684	740.1
8/21	17:38:22	ML-6	4.893	0.3	0.03	674.4	7.76	7.06	11.915	42.34203	-83.6684	740.2
8/21	17:38:23	ML-6	4.95	0.2	0.03	678.1	8.21	7.06	11.782	42.34203	-83.6684	740.3
8/21	17:38:24	ML-6	5.04	0.2	0.02	680.9	9.23	7.07	11.681	42.34203	-83.6684	740.2
8/21	17:38:25	ML-6	5.118	0.2	0.02	684.8	9.78	7.07	11.577	42.34203	-83.66839	740.2
8/21	17:38:26	ML-6	5.207	0.1	0.01	693.9	10.06	7.06	11.405	42.34203	-83.66839	740.1
8/21	17:38:27	ML-6	5.24	0.1	0.01	700.9	10.62	7.05	11.25	42.34203	-83.66839	740
8/21	17:38:28	ML-6	5.316	0.1	0.02	707.3	11.31	7.05	11.066	42.34203	-83.66839	740.1
8/21	17:38:29	ML-6	5.362	0.1	0.02	715.3	12.37	7.06	10.941	42.34203	-83.66839	740.1
8/21	17:38:30	ML-6	5.415	0.1	0.01	720.3	12.83	7.06	10.849	42.34203	-83.66839	740
8/21	17:38:31	ML-6	5.438	0.1	0.01	738.7	14.61	7.05	10.802	42.34203	-83.66839	740.1
8/21	17:38:32	ML-6	5.485	0.1	0.01	750.1	31.16	6.98	10.708	42.34202	-83.6684	740.1

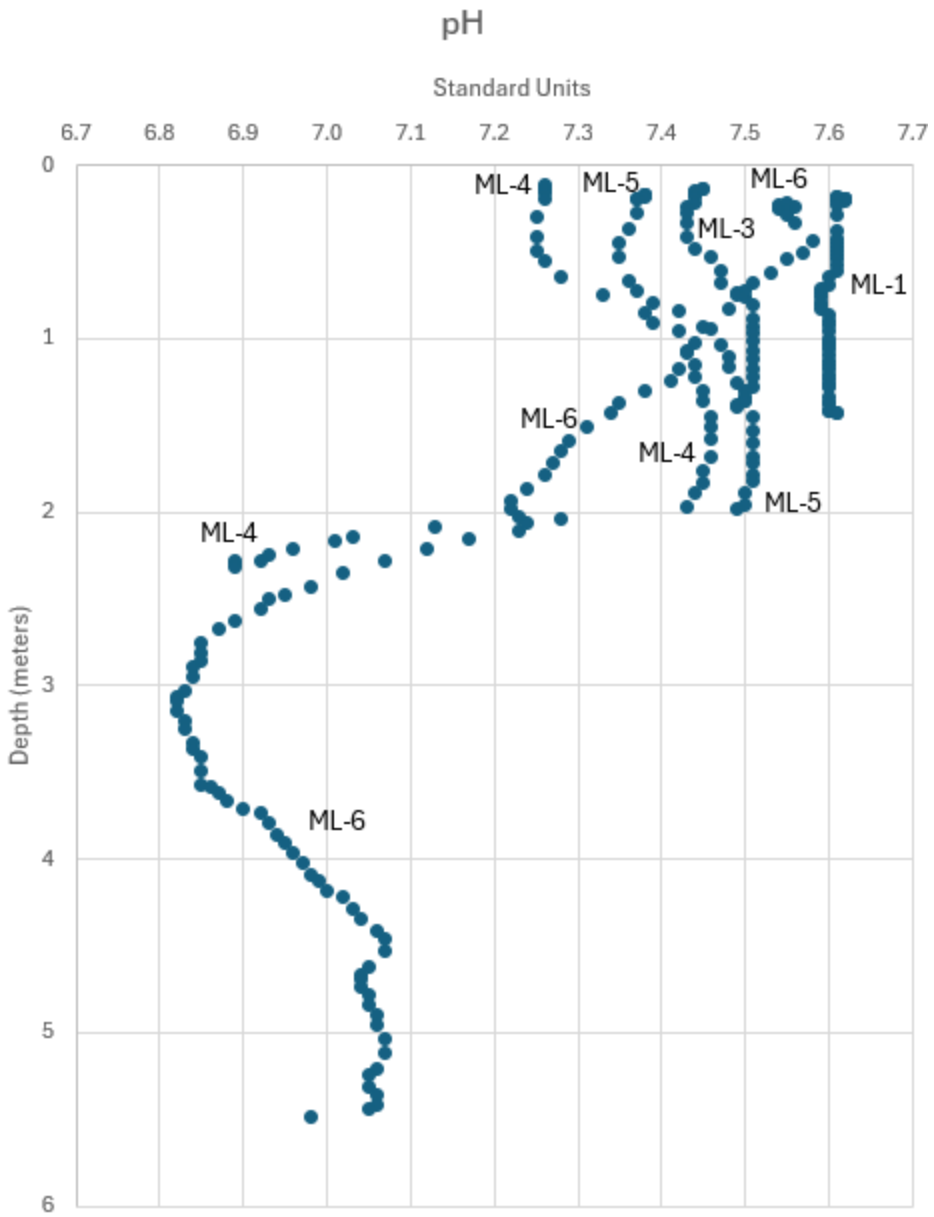

Dissolved Oxygen
Percent Saturation
0
10
20
30
40
50
Depth (meters)
0
1
2
3
4
5
6
ML-5
ML-3
ML-1
ML-4
ML-6

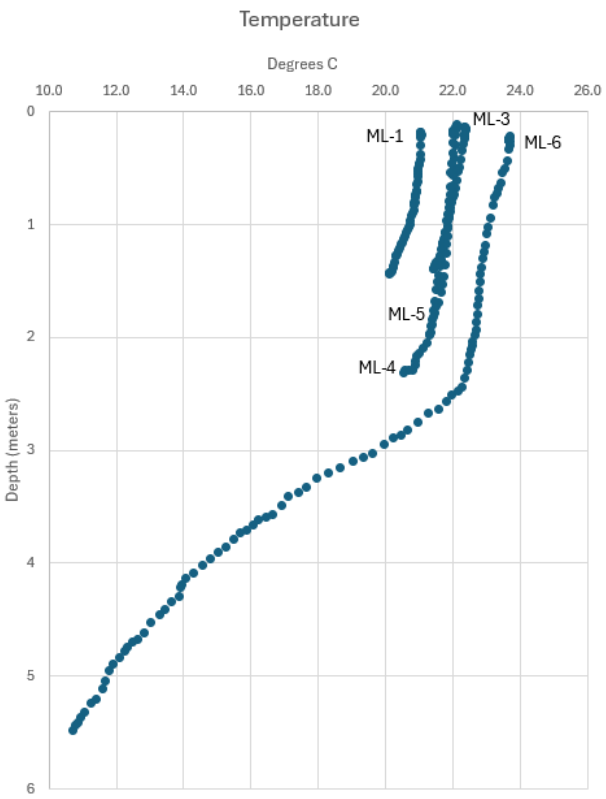

Dissolved Oxygen
mg/L
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
0
1
2
3
4
5
6
Depth (meters)
ML-5
ML-3
ML-1
ML-4
ML-6

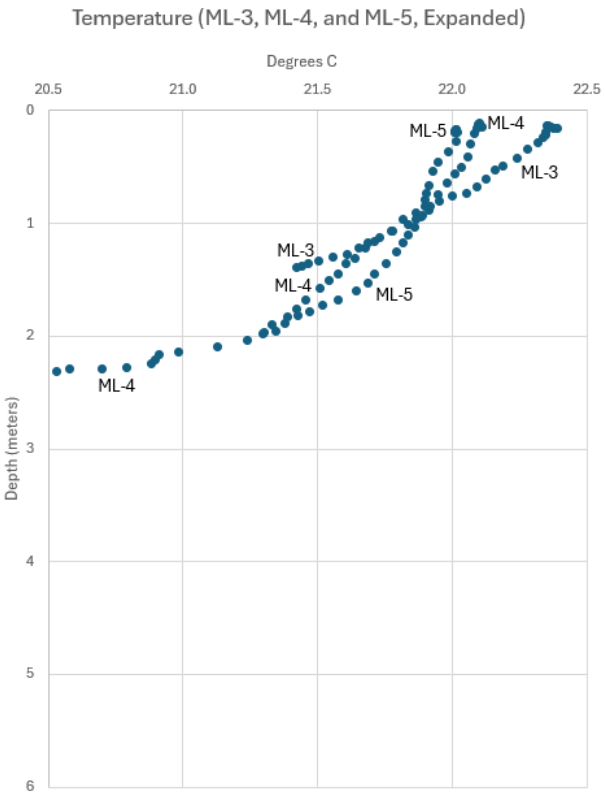

Specific Conductance
µS/cm
400
450
500
550
600
650
700
750
0
1
2
3
4
5
6
Depth (meters)
ML-5
ML-4
ML-3
ML-1
ML-1
ML-3
ML-5
ML-4
ML-6


Turbidity (ML-6 not shown)
NTU
0.0
5.0
10.0
15.0
20.0
25.0
30.0
0
0.5
1
1.5
2
2.5
Depth (meters)
ML-1
ML-3
ML-1
ML-4
ML-5
ML-5
ML-4


Turbidity (ML-1 only))
NTU
0.0
5.0
10.0
15.0
20.0
25.0
30.0
0
0.5
1
1.5
2
2.5
Depth (meters)


pH
Standard Units
6.7
6.8
6.9
7.0
7.1
7.2
7.3
7.4
7.5
7.6
7.7
0
1
2
3
4
5
6
Depth (meters)
ML-4
ML-5
ML-6
ML-3
ML-1
ML-6
ML-4
ML-5
ML-4
ML-6


Temperature
Degrees C
10.0
12.0
14.0
16.0
18.0
20.0
22.0
24.0
26.0
0
1
2
3
4
5
6
Depth (meters)
ML-1
ML-3
ML-6
ML-5
ML-4


Temperature (ML-3, ML-4, and ML-5, Expanded)
Degrees C
20.5
21.0
21.5
22.0
22.5
0
1
2
3
4
5
6
Depth (meters)
ML-5
ML-4
ML-3
ML-3
ML-4
ML-5
ML-4

APPENDIX E
Sampling and Analysis Plan

Available under separate cover.

FEE SCHEDULE AND POLICY - EDITED

The Ann Arbor Charter Township Board of Trustees adopts the following Fee Schedule on _____ , 2025. This Fee Schedule and Policy is designed to defray the cost of processing and evaluating licenses, permits, requests as well as applications for approvals pursuant to Township ordinances and to impose those fees as may be required by Ordinance(s).

All Licenses, permits, requests and applications are subject to application and permit fees as set forth below to pay the cost of administrative processing and any public hearings required by the Ordinance. All public hearing notices required by Ordinance must be paid by the Applicant within 15 days after the Applicant receives the Township's Invoice.

Certain applications require outside consultant services, including, but not limited to, planning, engineering, wetland, natural features and attorney review. Outside service expenses are the responsibility of the applicant. These will be reimbursed to the Township via additions to the normal fees or requirement of an Escrow for the cost of the review of the license, permit, request, or application, and related information by the Township's consultants.

Applicants will be notified if an Escrow is required and the initial deposit amount.

When deductions are made to the Escrow the applicant shall be notified by statement. Deductions will be applied to the Escrow until it reaches the Minimum Balance. The Minimum Balance will be equal to 30% of the initial deposit. The Escrow must be brought up to this Minimum Balance within Thirty (30) days of notification. No further review or processing of the application shall occur until the Escrow is restored to its Minimum Balance.

Any unused portion of the Escrow shall be returned to the applicant six (6) months after final action and/or review by the Township.

This Fee Schedule is reviewed annually and fees may change without notification.

I.	**SPECIAL MEETINGS**	**Township Fee**
	Board of Trustees	**$2,500**
	Planning Commission	**$2,500**
	Zoning Board of Appeals	**$2,000**

II.	**LICENSES**	**Township Fee**
	Used car	$350
	Junk yard	$350

III.	**ANNEXATION RELEASE FEES (PER PARCEL)**	**Township Fee**
	Less than 5 acres	$400
	5 to 10 acres	$600
	11 to 25 acres	$900
	26 to 49 acres	$1,500
	50 or more acres	$ 1500 + $20/acre each acre above 50

IV. BUILDING DEPARTMENT FEES

A	**Building Permit Fee Schedule (Includes 2 Building Inspections)**	**Township Fee**

B	Total Valuation $1 to $3,000	$60
	$3,001 to $10,000	$60 for the first $3,000 plus $10 for each $1,000 over $3,000
	$10,001 to $50,000	$130 for the first $10,000 plus $6 for each $1,000 over $10,000
	$50,001 to $250,000	$370 for the first $50,000 plus $5 for each $1,000 over $50,000
	$250,001 to $1,000,000	$1,370 for the first $250,000 plus $4 for each $1,000 over $250,000
	$1,000,001 and above	$4,370 for the first $1,000,000 plus $3 for each $1,000 over $1,000,000
	Additional Inspections	$50

C	**Miscellaneous Building Permit fees:**	**Township Fee**
	Re-roof over existing:	$100
	Window/Door replacement:	$100
	Permit Extension (one time)	$100
	Tear-off Re-roof:	$125
	Siding/ Residing:	$125
	Demolitions: Residential:	$150
	Demolitions:Commercial:	$300
	Fence (includes 2 inspections)	$60

	Plan Review fees for Residential Building projects :	**Township Fee**
	Small projects: Deck, porch, pool, gazebo, shed, garage, etc.:	$30
	Additions & interior renovations (all habitable spaces): New construction (under $1,000,000)	$75
	Submission Fee	$300 includes initial four-hour plan review
	Full Plan Review	$75 for each additional hour
	Residential projects valued at $1,000,000 & over:	
	Submission Fee	$300
	Full Plan Review	20% of building permit fee

Plan Review Fees for Commercial Building Projects

Submission Fee	$400
Full Plan Review	20% of building permit fee

Notice:

If the permit is not approved or is canceled, the submission fee is retained, and any additional consultant expenses incurred are also due.If required Building Permit Application plan revisions are not received within 30 days, the application will be voided and a new application must be submitted with required fees.

D	**Certificate of Occupancy:**	**Township Fee**
	Final C of O – Commercial projects	$100
	Temporary C of O – Commercial projects	$200
	Final C of O – Residential projects	$100
	Temporary C of O – Residential projects	$200
	30-day extension of all temporary C of O	$75

E	**Registration Fees (For the term of the license)** Included in Building Permit Fee	**Township Fee**
	Building/Mechanical/Electrical/Plumbing	$10 per term
	Pavement sealant applicator	$45 per year

F	**Rental Property Inspection Cycle**	**Township Fee**
Registration Every Two Years	$50 1 or 2 family detached	$100 multiple unit structures
Inspection: Per Building Certification	$100 multiple unit structures	Inspection: Per Unit Certification $50 multiple unit structures
Inspection: 1 or 2 Family Detached Certification		$50
Re-Inspection		$50 per dwelling or per structure
Re-Inspection		$50 1or 2 family detached
Broken Appointment $50 Failure to Register	$150	
Search Warrant Administration Fee		All Costs Incurred

Fines / Costs: In addition, the Owner of a Residential Rental Structure shall be responsible for all direct and indirect costs incurred by the Township in connection with the violation of the Property Maintenance Code, including reasonable consultants fees, attorneys fees, fees for service of process, fees for obtaining and enforcing search warrants, and shall be subject to a civil fine as set forth in Section 1-7 of the Township Code of Ordinances.

G	**Electrical Permit Fee Chart**	**Township Fee**
	Application Fee	$40
	Service Installation Type	
	Temporary Thru 200 AMP	$25 Per Unit
	Over 200 Amp Thru 600 Amp	$35 Per Unit
	Over 600 Amp Thru 800 Amp	$50 Per Unit
	Over 800 Amp Thru 1200 Amp	$75 Per Unit
	Over 1000 Amp GFI Only	$100 Per Unit
	Circuits	$6 Per Unit
	Lighting Fixtures	$10 per 25 units
	Dishwasher/Disposal	$6 Per Unit
	Furnace - Unit Heater	$10 Per Unit
	Electrical Heating Unit (baseboard / room)	$5 Per Unit

Power Outlets (Ranges, Dryers, etc.)	$10 Per Unit
Signs	$35 Per Unit
Air Conditioning	$25 Per Unit
Lift pumps / Well / Sump	$10 Per Unit
Feeder-Bus Ducts, etc.	$10 per 25 units
Electric Waterless Hot Water Heater	$5 Per Unit
Units up to 20 K.V.A. or H.P. Generator or Motor	$25 Per Unit
Units 21 to 50 K.V.A. or H.P. Generator or Motor	$35 Per Unit
Units 51 K.V.A. or H.P. or Over Generator or Motor	$50 Per Unit
Fire Alarms	$5 Per Device - $65 minimum
Energy Retrofit-Temp Control	$45 Per Unit
Conduit only; or grounding only	$45 Per Unit
Swimming Pools/Hot Tubs	$50 Per Unit
Mobile Home Park Site Feeder Connection	$35 Per Unit
Pedestals Only	$20 Per Unit
Smoke Detectors / co2	$5 Per Unit
Solar System	$50 Per Unit
EV Charger Level 1 (120 volt) - residence	$50 Per Unit
EV Charger Level 2 (240 volt) - residence	$75 Per Unit
Rough/ Special Inspection	$50 Per inspection
Final Inspection	$50 Per inspection
Plan Review	
GENERATORS	$40 Per Unit
All Others	$60 for the first hour. Then $50 for each additional hour

*Permit fees are calculated per unit installed and include inspection and plan review costs.

H	**Mechanical Permit Fee Chart**	**Township Fee**
	Application Fee	$40
	Residential Heating System (includes duct & pipe fees). This item is used for the installation of a heating system in a new residential structure	$75 Per Unit
	Piping (This fee is not charged if the $75 Residential Heat System is paid)	$0.05 per feet - minimum $25
	Duct (This fee is not charged if the $75 Residential Heat System is paid)	$0.10 per feet - minimum $25
	Gas/Oil Burning Equipment (Furnace) New and/or Conversion Units	$50 Per Unit
	Residential Boiler - must be installed by a licensed boiler installer	$50 Per Unit
	Water Heater	$35 Per Unit
	Solid Fuel Equipment (Chimney / Gas burning fireplace)	$30 Per Unit
	Chimney, Factory built- installed separately $40 Per Unit Gas Piping; each opening-new installation (Residential)	$5 Per Unit
	Air Conditioning (Includes split system)	$30 Per Unit
	Fans; Bath & Kitchen exhaust	$15 Per Unit
	Tanks- * LP Requires pressure test #10 (Above ground/Underground)	$25 Per Unit
	Heat pumps	$30 Per Unit
	Humidifiers/Air Cleaner	$10 Per Unit
	Commercial Hoods	$35 Per Unit
	Air Handlers	
	Under 10,000 CFM	$30 Per Unit
	Over 10,000 CFM	$75 Per Unit
	Fire Suppression / Protection	$1 per head - Minimum $45
	Heat Recovery Unit	$10 Per Unit
	V.A.V. Boxes	$20 Per Unit
	Unit Ventilators	$10 Per Unit
	Unit Heaters (Terminal Units)	$25 Per Unit
	Evaporator Coils	$30 Per Unit
	Refrigeration (Split Systems)	$30 Per Unit
	Chiller	$30 Per Unit
	Cooling Towers	$30 Per Unit
	Compressor	$30 Per Unit
	Mobile Home Park – Each Site	$30 Per Unit
	Special Safety Inspection	$50 Per Inspection
	Pressure Test (Req. for Natural and LP)	$50 Per Inspection
	Rough / Additional Inspection	$50 Per Inspection
	Final Inspection	$50 Per Inspection
	Plan Review Fee	$60 for the first hour. Then $50 for each additional hour

*Permit fees are calculated per unit installed and include inspection and plan review costs.

I	**Plumbing Permit Fee Chart**	**Township Fee**
	Application Fee (non-refundable)	$40
	Fixtures, floor drains, special drains, water connected appliances	$5 Per Unit
	Water treatment /filtering system* $27 Per Unit Stacks (soil, waste, vent and conductor)	$5 Per Unit

Sewage ejectors, sumps $5 Per Unit Water Heater $27 Per Unit
Main Water Service:
2” or less copper only $27 Per Unit
Over 2” ductile only $50 Per Unit
Connection - bldg. drain – bldg. sewers $5 Per Unit Sewers; (sanitary, storm, or combined) $27 Per Unit Manholes,
Catch Basins $5 Per Unit
Water Distributing Pipe (system):
¾” Water Distribution Pipe $5 Per Unit 1” Water Distribution Pipe $10 Per Unit
1-1/4” Water Distribution Pipe $15 Per Unit
1-1/2” Water Distribution Pipe $20 Per Unit
2” Water Distribution Pipe $25 Per Unit
Over 2” Water Distribution Pipe $30 Per Unit
Back-flow preventer $5 Per Unit Medical Gas System $50 Per Unit
Mobile Home Park – Each Site* $30 Per Unit Pressure Test (Water & DWV) $6 Per Test
Special Safety Inspection $50 Per Inspection
Shower Pan Inspection $50 Per Inspection
Rough / Additional Inspection $50 Per Inspection
Final Inspection $50 Per Inspection
Plan Review Fee $60 for the first hour. Then $50 for each additional hour

*Permit fees are calculated per unit installed and include inspection and plan review costs.

V ZONING FEES

A Rezoning Fees Township Fee Escrow Deposit

	From any zoning to agricultural or residential		
	1. Less than 10 acres	$1,000	$1,500
	2. More than 10 acres	$1,000	$3,000
	From any zoning to non-residential all sizes:		
	1. C-1 Convenience Commercial	$1,000	$3,600
B	2. PL Public Lands	$1,000	$3,600
	3. O Office	$1,000	$3,600
	4. R-D Research & Development	$1,000	$3,600
	5. I-1 Limited Industrial	$1,000	$3,600
	From any zoning to Special Districts: 1. PUD		
	Planned Unit Development*	$1,000	$6,900
C	2. RRA Research & Research Application*	$1,000	$6,900
	3. OP Office Park*	$1,000	$6,900
	From any Special District to another: 1. PUD		
	Planned Unit Development*	$1,000	$6,900
	2. RRA Research & Research Application*	$1,000	$6,900
	3. OP Office Park*	$1,000	$6,900
	Petition to change Zoning Ordinance text	$1,000	$1,500
	Planning Commission review & recommendation		

Also considered the area plan or preliminary site plan.

VI

	Agricultural Business	**Township Fee**	**Escrow Deposit**
A	Pre-application Fee for administrative zoning compliance review for agricultural business uses not requiring a site plan/ Planning Commission review: farm markets, CSA distribution sites, agricultural storage facilities, wash and pack facilities, agricultural commercial kitchens, and agricultual education facilities.	$250	

Micellaneous Permits and Fees	**Township Fee**	**Escrow Deposit**
Land Division	$200 per parcel	
Combining Land	$200 per parcel	
Conditional Use Permit	$400	$3,000
Variance by Board of Trustees	$750	
Shared Driveway	$95	

*Permit fees are calculated per unit installed and include inspection and plan revie ' costs.

PLANNING FEES

Special Meetings	**Township Fee**	**Escrow Deposit**
Meeting/Special Conferences	$1,500	

(Developer or agent conference prior to or during consideration of a site plan, not held at a regular Township Board or Planning Commission meeting.)

B	**Subdivision Review**	**Township Fee**	**Escrow Deposit**
	Preliminary Site Plan	$1,000	$5,600
	Final Site Plan	$1,000	$14,800

C	**Site Condo, Condominium, PUD Review**	**Township Fee**	**Escrow Deposit**
	Preliminary Site Plan	$1,000	$5,600
	Final Site Plan	$1,000	$14,800
	Revision or redesign submitted by original applicant		
	Review fees will equal to 50% of the base review for the original submittal, if received by the Twp within 6 months of original submittal date		

D	**Single Family Residential Review (over 5000 sq ft)**	**Township Fee**	**Escrow Deposit**
	Preliminary Site Plan	$1,000	$2,800
	Final Site Plan	$1,000	$4,000

E	**Multiple Family Residential Developments Review**	**Township Fee**	**Escrow Deposit**
	Preliminary Site Plan		
	1. First 20 units	$1,000	$3,000
	2. More than 20 units	$1,000	$3,000 + $10/unit
	Final Site Plan		
	1. First 20 units	$1,000	$6,300
	2. More than 20 units	$1,000	$6,300 + $10/unit
	Revision or redesign from original applicant		50% of the base review for the original submittal, if received within 6 months

F	**Institutions, Schools, Churches Review Fees**	**Township Fee**	**Escrow Deposit**
	Preliminary Site Plan	$1,000	$3,000
	Final Site Plan	$1,000	$6,300
	Revision or redesign from original applicant		
	Review fees will equal to 50% of the base review for the original submittal, if received by the Twp within 6 months of original submittal date		

G	Office, Research, Commercial & Industrial Review Fees	Township Fee	Escrow Deposit
	Preliminary Site Plan	$1,000	$4,200
	Final Site Plan	$1,000	$11,100

Revision or redesign from original application

Review fees will equal to 50% of the base review for the original submittal, if received by the Twp within 6 months of original submittal date

H	Co-Location on Existing Cellular Tower Review	Township Fee	Escrow Deposit
	Permit for Engineer, Planning, Legal and Calculation review and processing of permit.	$750	
	Projects which require Planning Commission review.	$1,000	

I	Major or Minor Site Plan Change, Area Plan or Township Master Plan Review	Township Fee	Escrow Deposit
	Planning Commission Review	$700	$1,000
	Board of Trustees Review and Approval	$700	$1,000
	(Review and determination of major/minor change)		
	Petition to Amend Master Plan	$700	$3,600

J	Mobile Home Park Review Fees	Township Fee	Escrow Deposit
	Site Plan	$650	$11,100
	(After final # of lots is determined, add $6/lot)		+ $6/lot

Revision or redesign from original applicant

Review fees will equal to 50% of the base review for the original submittal, if received by the Twp within 6 months of original submittal date

K	Private Road Review Fees	Township Fee	Escrow Deposit
	Permit - fees revised by Board 1/20/14	$700	$5,100

Revision or redesign from original applicant

Review fees will equal to 50% of the base review for the original submittal, if received by the Twp within 6 months of original submittal date

L	Legal Review Fees	Township Fee	Escrow Deposit

Any and all Ann Arbor Township legal fees associated with proposed projects must be paid by the applicant.

VII INFRASTRUCTURE PERMIT APPLICATION

Infrastructure Permit - Applies to Stormwater Systems, Public Sanitary Sewer Mains and Leads, Public Water Main and Water Service Leads, and Private Roads. The applicant must provide Ann Arbor Township with construction cost estimates for improvements. Inspection deposit fees will be based on the following schedule:

Construction Cost	Township Fee	Escrow Deposit
$0 - $125,000.00	$1,000	$15,000
$125,000.00 - $500,000.00	$1,000	12% of Construction cost
Over $500,000.00	$1,000	10% of Construction cost

VIII	CONSTRUCTION IN RIGHT-OF WAY PERMIT	Township Fee	Escrow Deposit
	Permit	$100	3% of construction cost. Min $500

IX	TAX ABATEMENTS	Township Fee	Escrow Deposit
	Industrial Development District	$650	$3,600.00
	Industrial Tax Abatement	$650	$3,600.00

X	WETLAND PERMIT FEES	Township Fee	Escrow Deposit
	2 acres or less	$700	$ 600
	Greater than 2 acres to 10 acres	$700	$ 900
	Greater than 10 acres to 25 acres	$700	$ 2,100
	Greater than 25 acres to 50 acres	$700	$ 3,600
	Over 50 acres	$700	$ 5,100

XI	NATURAL FEATURES PERMIT FEES	Township Fee	Escrow Deposit
	2 acres or less	$700	$ 600
	Greater than 2 acres to 10 acres	$700	$ 900
	Greater than 10 acres to 25 acres	$700	$ 2,100
	Greater than 25 acres to 50 acres	$700	$ 3,600
	Over 50 acres	$700	$ 5,100

XII	SOIL EROSION AND SEDIMENTATION CONTROL PERMIT	Township Fee	Escrow Deposit	Performance Guarantee
				$500.00 per acre disturbed: min: $10,000.00
	Major Project	$250		$2000,00
	Minor Project	$250	$5,000.00	

	Single Family Residential Project *	$500	
	Grading Permit	$250	
	Permit Waiver (for <225 sqft disturbed)	$35	

XIII RENEWABLE ENERGY (See Building Permit fees for related construction costs)

A	**Wind Energy Conservation System**	**Township Fee**	**Escrow Deposit**
	Small-Scale WECS or TMT without Site Plan		
	Conditonal Use Permit Only	$400	$1,900.00
	Small-Scale WECS or TMT with Site Plan		
	Conditional Use Permit	$400	$1,900.00
	Preliminary Site Plan	$650	$3,650.00
	Final Site Plan	$650	$6,950.00
	Large-Scale WECS or TMT with Site Plan		
	Conditional Use Permit	$400	$1,900.00
	Preliminary Site Plan	$650	$3,650.00
	Final Site Plan	$650	$6,950.00

B	**Solar Arrays**	**Township Fee**	**Escrow Deposit**
	Solar Array on Residential Building or Ground	$150	
	Solar Array on Commercial Building	$400	
	Solar Array on Commercial Ground	$400	

XIV TREE/WOODLAND REMOVAL FEES

	Township Fee	**Escrow Deposit**
Plan Review Fee	$250	
Permits: Parcel size		
1-2 acres	$900	
3-25 acres	$1,000	$1,500.00
25 + acres	$1,000	$3,000.00
Permit Amendment (received within 6 mos of original)	50% of base review on original submittal fee	

XV Sewer and Water Rates and Connection Charges

Wastewater Rates and Connection Charges
Effective Dates 7/1/25- 6/30/26

Commodity Charge - Per 100 Cubic Feet

Community	Rate
AATWP rates to AATWP customers	$9.54
AATWP rates to Superior Township	$9.54

Connection Fees*

Tap Size	Fee per tap*
1”	$1,300
1-1/2”	$2,925
2”	$5,200
4”	$20,800
6”	$46,801
8”	$83,202
10”	$130,003
12”	$187,204

* Exclusive of City of Ann Arbor connection and other related fees, all of which will be added to the fee.

Metered Water Rates and Connection Charges
Effective Dates 7/1/25 - 6/30/26

Commodity Charge - Per 100 Cubic Feet

Community	Rate
AATWP rates to AATWP customers	$9.54
AATWP rates to Superior Township	$9.54

Connection Fees*

Tap Size	Fee Per Tap*
1"	$7,169
1-1/2"	$16,130
2"	$28,675
4"	$114,701
6"	$258,077
8"	$458,803
10"	$716,880
12"	$1,032,307

* Exclusive of City of Ann Arbor connection and other related fees, all of which will be added to the fee.

Service Charges	**Township Fee**
Water Meter Installation and Inspection Fee	$150

XVI FIRE DEPARTMENT FEES

Fire Department Charges for Services or Incidents	Township Fee
A) MOTOR VEHICLE INCIDENTS – Per Incident	
Level 1 -Provide hazardous materials assessment and scene stabilization.	$1,376
Level 2: Includes Level 1 services as well as clean up and material used (sorbents) for hazardous fluid clean up.	$1,415
Level 3-Vehicle Fire: Provide scene safety, fire suppression, breathing air, rescue tools, hand tools, hose, small quantities of foam, structure protection, and clean up gasoline or other automotive fluids that may result from the vehicle fire.	$1,806
ADD-ON SERVICES:*	
Extrication: Including other specialty rescue equipment	$738
B) HAZMAT INCIDENTS	$1,415
HAZMAT- Level 1 - Basic Response: Claim will include fire apparatus response, first responder assignment, perimeter establishment, potential evacuations, set-up and command.	
C) ILLEGAL FIRES - PER INCIDENT	Itemized Invoice
D) TECHNICAL RESCUE INCIDENTS	$1,468
Level 1 - Basic Response: Will include apparatus response, first responder assignment, perimeter establishment, evacuations, first responder set-up and command, scene safety and investigation (including possible patient contact, hazard control).	
E) ITEMIZED INCIDENT RESPONSE OPTION	Itemized Invoice
For any incidents that exceed the normal limits of the identified services provided, the Township has the option of creating an itemized invoice which would per apparatus, per personnel, plus products and equipment used.	
F) SCHEDULE OF CHARGES FOR FIRE DEPARTMENT SERVICES PER HOUR	Township Fee
Firefighter Hours (per hour/per firefighter)	$60
Fire Apparatus	$772
Vehicles (Squad, Command, Utility)	$53
Rescue Truck	$387
ATV	$224

G **Fire Department Permit Fees**	**Township Fee**
Special Event/ Place of assembly	$250
Pyrotechnial special effects material	
Fireworks- Public display inspection and permit	$250
Tents,canopies and temporary membrane structures	$50

BOARD OF TRUSTEES ANN ARBOR CHARTER TOWNSHIP
WASHTENAW COUNTY, MICHIGAN

RESOLUTION AMENDING TOWNSHIP FEE SCHEDULE

Resolution adopted at a regular meeting of the Board of Trustees of the Charter Township of Ann Arbor, Washtenaw County, Michigan, held at the Township Hall, 3792 Pontiac Trail, Ann Arbor, Michigan on December 15, 2025 at 7:30 p.m.

Present: John Allison, Kristine Bolhuis, Carlene Colvin-Garcia, Della DiPietro, Eric Kaldjian, Peter Kotila, Diane O'Connell

Absent:

Resolution by _____ ; supported by _____

WHEREAS, Ann Arbor Charter Township previously established a policy to set fees by Resolution,

AND WHEREAS, certain of those fees need to be adjusted to recover the Township's costs;

NOW, THEREFORE, the Board of Trustees of the Charter Township of Ann Arbor adopts the following attached Fee Schedule.

RESOLUTION DECLARED ADOPTED

I certify that the foregoing is a true and complete copy of a resolution adopted by the Ann Arbor Charter Township Board, County of Washtenaw, State of Michigan, at a regular meeting held on December 15, 2025, that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

_____
Diane O'Connell, Township Supervisor

_____
Kristine Bolhuis, Township Clerk

_

DRAFT

ANN ARBOR TOWNSHIP MEETING DATES
2026 CALENDAR YEAR

PLANNING COMMISSION	SUBMITTAL DEADLINE
1st Monday of most months @ 7:00 p.m.	**By 2:00 pm**
Monday, January 5, 2026	Tuesday, December 16, 2025
Monday, February 2, 2026	Tuesday, January 13, 2026
Monday, March 2, 2026	Tuesday, February 10, 2026
Monday, April 6, 2026	Tuesday, March 17, 2026
Thursday, May 7, 2026	Friday, April 17, 2026
Monday, June 1, 2026	Tuesday, May 12, 2026
Monday, July 6, 2026	Tuesday, June 16, 2026
Thursday, August 6, 2026	Friday, July 17, 2026
Tuesday, September 8, 2026	Wednesday, August 19, 2026
Monday, October 5, 2026	Tuesday, September 15, 2026
Thursday, November 5, 2026	Friday, October 16, 2026
Monday, December 7, 2026	Tuesday, November 17, 2026
Monday, January 4, 2027	Tuesday, December 15, 2026
Note: Planning Commission workshops held as needed.	

BOARD OF TRUSTEES	SUBMITTAL DEADLINE
3rd Monday of most months @ 7:30 p.m.	**By 2:00 pm**
Tuesday, January 20, 2026	Monday, January 12, 2026
Monday, February 16, 2026	Monday, February 9, 2026
Monday, March 16, 2026	Monday, March 9, 2026
Monday, April 20, 2026	Monday, April 13, 2026
Monday, May 18, 2026	Monday, May 11, 2026
Monday, June 15, 2026	Monday, June 8, 2026
Monday, July 20, 2026	Monday, July 13, 2026
Monday, August 17, 2026	Monday, August 10, 2026
Monday, September 21, 2026	Monday, September 14, 2026
Monday, October 19, 2026	Monday, October 12, 2026
Monday, November 16, 2026	Monday, November 9, 2026
Monday, December 21, 2026	Monday, December 14, 2026

ZONING BOARD OF APPEALS	SUBMITTAL DEADLINE
One Tuesday each month @ 4:00 p.m.	**By 2:00 pm**
Tuesday, January 20, 2026	Tuesday, December 9, 2025
Tuesday, February 17, 2026	Tuesday, January 6, 2026
Tuesday, March 17, 2026	Tuesday, February 3, 2026
Tuesday, April 21, 2026	Tuesday, March 10, 2026
Tuesday, May 19, 2026	Tuesday, April 7, 2026
Tuesday, June 16, 2026	Tuesday, May 5, 2026
Tuesday, July 21, 2026	Tuesday, June 9, 2026
Tuesday, August 18, 2026	Tuesday, July 7, 2026
Tuesday, September 15, 2026	Tuesday, August 4, 2026
Tuesday, October 20, 2026	Tuesday, September 8, 2026
Tuesday, November 17, 2026	Tuesday, October 6, 2026
Tuesday, December 15, 2026	Tuesday, November 3, 2026

Shaded means moved for holiday or election conflict

DRAFT

ANN ARBOR TOWNSHIP MEETING DATES
2026 CALENDAR YEAR

BOARD OF REVIEW	
TBD	9 am - 10 am (Organizational meeting)
TBD	9 am - 4:30 pm
TBD	1:30 pm - 4:30 pm and 6 pm - 9 pm
COMPENSATION COMMISSION	
TBD - meets odd years, typically in October	
FARMLAND & OPEN SPACE PRESERVATION BOARD	
4th Monday of every other month @ 7:30 p.m.	
Monday, January 26, 2026	
Monday, March 23, 2026	
Tuesday, May 26, 2026	
Monday, July 27, 2026	
Monday, September 28, 2026	
Monday, November 23, 2026	
ELECTION COMMISSION	
TBD	

Shaded means moved for holiday or election conflict

N:\CLERKS\Open Meetings\2026 Revised Meeting Dates_DRAFT

Rev . 12/9/2025

December 2025 | Consultant Report

Ann Burke

Completed Work

- Newsletter distributed end of November
- Continued feedback to SEMCOG survey and community event to be implemented in Spring 2026
- End-of-year check in with Supervisor O'Connell

In progress:

- Steering committee meetings for SEMCOG Planning Assistance Grant

Next steps

- Provide ongoing support for communications, upcoming events, grants as needed

Clerk's Report – December 15, 2025

I. Election/Voter Registration Administration

a. Reimbursement for the cost of running the 11/4 special election has been submitted to the County who will bill the Washtenaw County Intermediate School district.

II. Records management/Open meetings/website

a. This month, bad actors took advantage of packet materials we share publicly on our website. They used public information to create very convincing phishing emails that were then sent to applicants with variances or other projects before the planning commission and ZBA. We have been trying to distribute a caution alert by posting a notice on the homepage of the website and by having our Planner email an alert to those with escrow accounts at the Township. In addition, we feel it is necessary to discontinue posting packet materials publicly on the website to put a halt to this phishing scheme. For now, packet materials for the Planning Commission and the ZBA will be available by request to the Clerk or the Planner. We can also make them available for pickup at the Township office by request. We want to stress that these are public documents and we do want to make them easily available, but we also need to protect our residents and applicants from criminal behavior.
b. Website Update: there has been a delay on the Revize end "due to a long line of sites in the queue." Content migration will commence in the second half of this month.
c. Kristine submitted to Municode the next update to the Code of Ordinances – codification of Supplement 8, which will be all of the 2025 passed ordinances.
d. A batch of Large Building Department plans were organized and sent to Intellinetics (formerly Graphic Sciences) for digitization. Those scans are complete and we will upload the files to Laserfiche in the coming weeks.

III. Zoning Board of Appeals

The ZBA was not able to meet in November due to lack of quorum.
December 16 ZBA meeting has two items on the agenda.

a. ZBA-04-25 – Variance request for placement and setbacks to build bump-out addition.
b. ZBA-05-25 – Variance request to accessory uses and buildings or structures requirement for shed.

IV. Other Projects/Responsibilities/

a. Re: potential annexation of 615 Riverview or 2897 Bateson – no action has been taken yet by the petitioners.
b. Working on organizing and administration of HR files/documents/plans (i.e. Health Insurance plans, Pension plans, HSA administration, Disability insurance, etc.)

December 2, 2025

To: Ann Arbor Township Board of Trustees
From: Ann Arbor Township Planning Commission
Subject: Ann Arbor Township Planning Commission Annual Report for 2025

In addition to its regular business of reviewing and taking action on proposed developments, the Planning Commission accomplished the following during 2025:

- Recommended to the Board of Trustees approval of:
  - Tree and Woodland Resource Preservation Ordinance amendments
  - Rezoning of the parcel at 500 Stein Rd
  - Conditional Use Permit for NSK Americas
- Adopted the 2025 Update to the Master Plan and forwarded to the Board of Trustees for endorsement.
- Amended the Planning Commission Bylaws, including the addition of the Conflict of Interest provision.
- Initiated Warren Road Special Study

The Planning Commission's Work Program for 2025 includes the following:

- Address clarifications of various regulations as recommended by staff.
- Develop recommendations for future use of the Township's Warren Road property.

No budget is included in this submittal, as the Planning Commission does not develop its budget.

Respectfully submitted,

Lee Gorman
Secretary
Ann Arbor Township Planning Commission

Ann Arbor Charter Township

UTILITIES DEPARTMENT MONTHLY REPORT

October 2025

MAINTENANCE / PROJECTS

1. Water Samples to EGLE
2. Miss Dig Program
3. Sanitary Sewer Manhole Inspection
4. Generator routine Maintenance
5. Weekly Generator Run Test
6. Locate and Fix Stop Boxes
7. Weekly Station Checks
8. Election Setup and Take Down
9. Fire Hydrant Repair
10. Checked SCADA Alarms
11. Water Samples All seasons
12. Cleaned Shop
13. Soil Erosion Inspections
14. Winterize Fire Hydrants
15. Worked on Sewer and Water Manholes and Water Boxes
16. New Screen on Water Tank Overflow
17. Mowed Grass
18. Cleaned Dixboro Trail
19. Grade Inspections
20. Oil Change F150
21. Tested all Vehicle Antifreeze Levels
22. Oil Change F350
23. Put New Gaskets on Water Tank Lid
24. Checked for Sewer Main Problem (Homeowners Service)
25. Fixed Tie Rod on F350
26. Plow Snow

MEETINGS – SEMINARS

1. Stantec for Water Meter Pit Improvements
2. Barton Ridge Treatment Station Startup
3. Water Survey with EGLE
4. Looked at New Water Tank Being Constructed
5. Stein/Whitmore Lake Rd Property Meeting
6. Ground Storage tank Design Meeting

PLAN REVIEWS

1. FGRHS Athletic Field Improvements
2.
3.
4.

TOPICS TO DISCUSS

1.
2.

ANN ARBOR CHARTER TOWNSHIP

FIRE DEPARTMENT

NOVEMBER 2025 - TOWNSHIP BOARD REPORT

Fire Department Township Board Report
for
November 2025

Incident Summary

The department responded to a total of **103 incidents** during the month of November.

Incident Breakdown:

- Structure Fire – 3 (1 Salem Twp., 1 Dexter, 1 Superior Twp.)
- Smoke Scare - 1
- Fire Alarm - 6
- Haz-Mat/Gas Leak/CO - 3
- Station Coverage - 2
- EMS - 36
- MVC – 27
- Elevator Rescue - 1
- Search & Rescue - 1
- Canceled before Arriving - 10
- Good Intent - 9
- Burning Complaint - 2
- Service Call - 2

Mutual Aid

The department provided mutual aid **15 times** and received mutual aid **4 times**.

Mutual Aid Provided:

- Structure Fire - 3
- Dispatched & Canceled En Route – 2
- Fire Alarm – 1
- EMS – 1
- Motor Vehicle Crash – 4
- Station Coverage – 2
- Unauthorized Burn – 1
- Search and Rescue - 1

Mutual Aid Received:

- EMS - 2
- Motor Vehicle Crash – 2

Paid-On-Call (POC) Activity

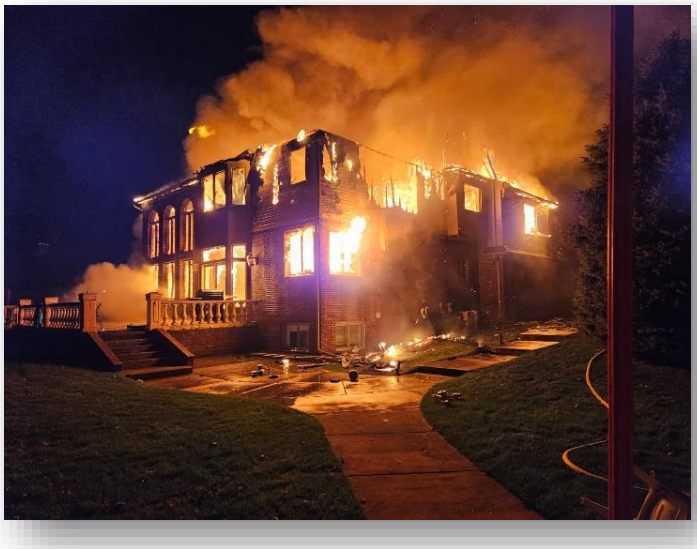
- Total Incidents: **103**
- POC Participation: **66 incidents (64%)**

Recruitment & Retention

- **6 POC Firefighter / EMT applicants** have been hired and have begun their training and orientation program.

Incidents

November 6 – Structure Fire – Superior Twp.



The fire department responded on the first alarm to assist the Superior Twp. Fire Department on the reported house fire. Upon arrival crews found a fully involved house with the exception of the basement. AATFD crews were assigned to search the basement for a missing person. Just prior to crews making entry, the person was found on the exterior of the house, at which time command determined the structural integrity of the house was questionable, at which time crews were assigned to and manned large caliber hose streams and assisted with tanker shuttle

November 20 – Structure Fire – Salem Twp.

AATFD responded on the first alarm assignment to assist the Salem Twp. Fire Department for the report of a house fire. Upon arrival crews found a fire in a rear room of the house. 800’ of large diameter hose was deployed and attack hose lines were pulled and advanced to the fire, which was extinguished. Crews assisted with overhaul and ventilation operations.

November 23 – Structure Fire – Dexter

AATFD responded to the report of a structure fire to assist the Dexter Area Fire Department. Upon arrival, firefighters found a well involved 100’ x 40’ barn. AATFD firefighters were able to establish a water supply by drafting from an area lake. Additionally, AATFD firefighters assisted with tanker shuttle operations, and with fire attack and overhaul operations.

Training & Events

EMT Academy – Class #7

- Dates: November 1, 3, 6, 8, 10, 13, 15, 17, 20, 22, 24
- Topics Covered:
    - Neurologic Emergencies
    - Gastrointestinal and Urologic Emergencies
    - Endocrine and Hematologic Emergencies
    - Allergy and Anaphylaxis
    - Toxicology
    - Behavioral Health Emergencies
    - Autism Spectrum Disorder
    - Gynecologic Emergencies
    - Mid-Term Review
    - Trauma Overview
    - Bleeding
    - Bleeding
    - Soft-Tissue Injuries
    - Face and Neck Injuries

Orientation and Training Program - Class 2025-1

- Dates: November 16, 19, 20, 26
- Topics Covered:
    - Department Email Orientation
    - Station Tour
    - Department Mailbox Issue
    - Station Technology
    - Uniform Maintenance Instruction
    - Accountability System Ops.
    - Compliance Training
        - Blood Borne Pathogen
        - Right-to-Know
        - Lockout / Tagout
        - Safety Glasses
        - Hearing Conservation
        - High Visibility Traffic Vests
    - Department Phone System and Phone Etiquette
    - Roadway Safety
    - Utility Safety
    - Personal Protective Equipment
    - Gear Donning / Doffing

Washtenaw Area Mutual Aid Association – Fire Chiefs Meeting

- November 4: Chief Nicholai attended the monthly county fire chiefs meeting.

CPR Recertification

- November 11: Firefighter / EMT's attended the annual CPR recertification training and certification program.

EMS Continuing Education (CEU) Training Program

- November 18: Firefighter / EMT's attended a State of Michigan EMS CEU training program. Training was conducted on mass casualty incident management and triage techniques.

Respectfully Submitted,

Mark A. Nicholai
Fire Chief

BUILDING REPORT

November 2025

Permit Record Type Totals	Records	Revenue	Records	Revenue
Building	14	43,643	**209**	**314,245**
Electrical	28	6,228	**310**	**83,696**
Mechanical	29	6,464	**396**	**65,501**
Plumbing	23	6,786	**195**	**40,297**
ZONING-LAND USE	-	-	**5**	**375**
Fence Permit	5	300	**7**	**420**
Sign Permit	-	-	**3**	**240**
Special Event	-	-	**13**	**1,825**
Total	**99**	**63,421**	**1,138**	**506,599**

Building				
Ann Arbor Township	12	30,209	**190**	**275,859**
Barton Hills	2	13,434	**19**	**38,386**

Electrical				
Ann Arbor Township	25	4,245	**296**	**79,933**
Barton Hills	3	1,983	**14**	**3,763**

Mechanical				
Ann Arbor Township	21	3,195	**368**	**59,055**
Barton Hills	8	3,269	**28**	**6,446**

Plumbing				
Ann Arbor Township	20	5,579	**184**	**37,347**
Barton Hills	3	1,207	**11**	**2,950**

ZONING-LAND USE				
Ann Arbor Township	-	-	**5**	**375**
Barton Hills	-	-	**-**	**-**

Fence Permit				
Ann Arbor Township	5	300	**7**	**420**
Barton Hills	-	-	**-**	**-**

Sign Permit				
Ann Arbor Township	-	-	**3**	**240**
Barton Hills	-	-	**-**	**-**

Special Event				
Ann Arbor Township	-	-	**12**	**906**
Barton Hills	-	-	**1**	**375**
			-	**-**
Total	**99**	**63,421**	**1,138**	**506,055**