



## **Mastodon Lake Aurora, IL**

### **Supernatant Testing for Dredging December 11, 2020**



Prepared For: Logan Gilbertsen  
HR Green  
323 Alana Drive  
New Lenox IL 60451

Prepared By: Sandy Kubillus  
ILM  
110 LeBaron St.  
Waukegan, IL 60085  
(847)244-6662



## Mastodon Lake

### Sediment Supernatant Testing

On December 11, 2020, ILM staff visited Mastodon Lake to perform sediment sampling of the lake in preparation for applying for dredging permits. Four sites on the lake were sampled at points designed on the following map, as directed by the client. Sample sites were named by location ML E (east), ML SE (southeast), ML NW (northwest), and ML SW (southwest).

The samples were mixed based on the IEPA Material Analysis for Dredge and Fill Activities #2a (last page). Supernatants of the 4:1 lake water to sediment mixture were tested immediately upon mixing (0-hr), then after 4 hours, and then again at 24 hours. Testing included total solids, total suspended solids, total volatile solids, ammonia -N, lead, zinc, and phosphorus. Sediment samples were sifted through a #230 US sieve to determine the amount of fine material present.



Photo 1: Sediment sample at site the east site (ML E).



Photo 2: Sediment sample at southeast site (ML SE).



Photo 3: Sediment at the southwest site (ML SW).



Photo 4: Sediment corer.

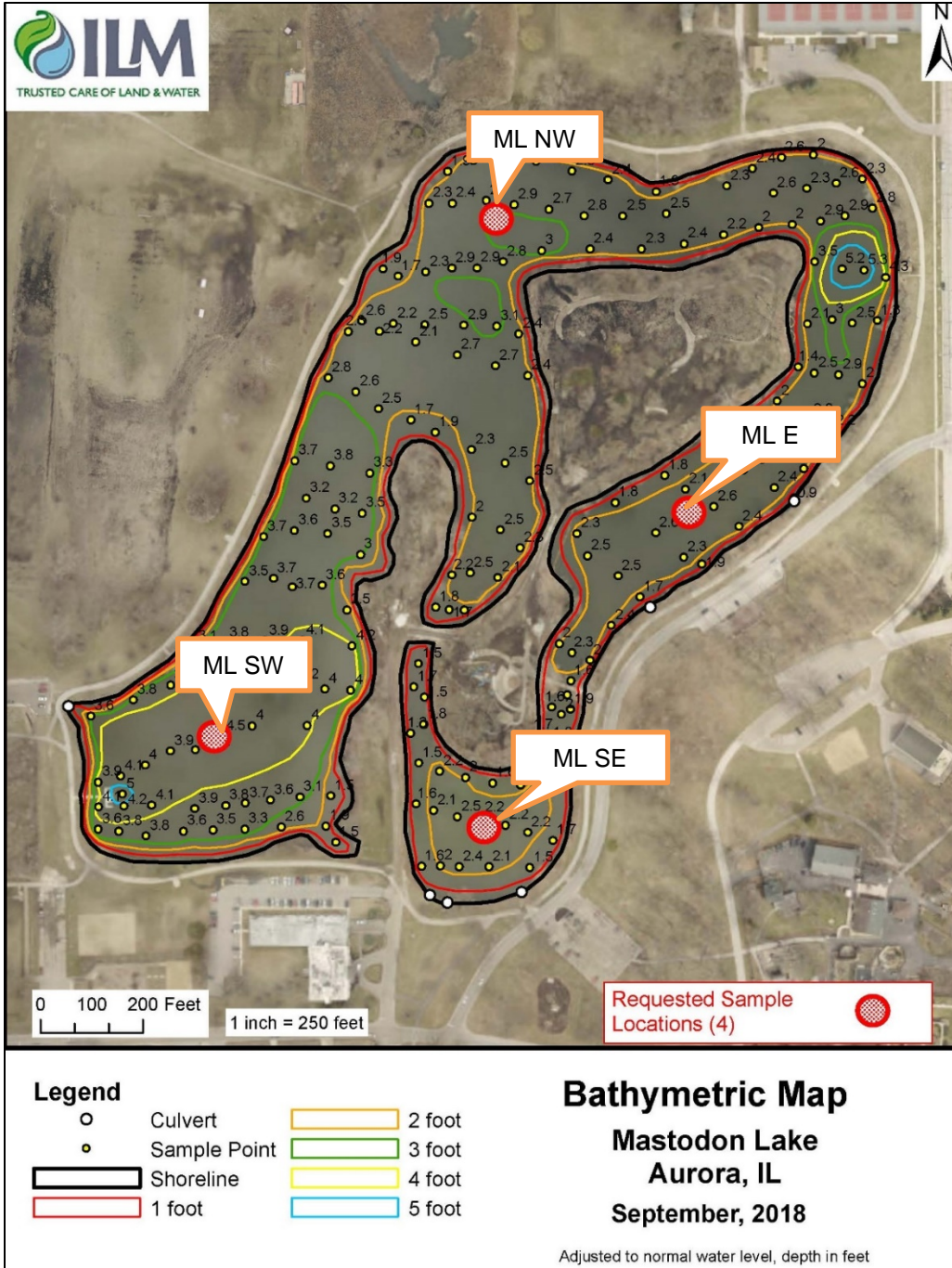


Figure 1: Sample site locations

Mastodon Lake Sediment Sample Locations		
Location	Latitude	Longitude
ML SW	41.737364	-88.299692
ML SE	41.736926	-88.297663
ML E	41.738636	-88.296155
ML NW	41.740233	-88.297541

Sediment was collected using a core sampler, and when sample volume was inadequate, an Eckman Dredge sampling tool was then used to gather more sample volume. Samples were made into a composite for each sampling site.

Weather conditions were windy (NE 16 mph) which may have accounted for the turbid water samples. The lake had been frozen and had thawed the day prior to the site visit. The temperature was 40 degrees and cloudy.

<b>Supernatant Sampling Results for Mastodon Lake (12/11/20)</b>					
	Lake Water	Site 1 SW	Site 2 NW	Site 3 E	Site 4 SE
% passing #260 sieve	NA	77	66	91	89
<b>Total Solids (mg/L)</b>					
	460				
0 Hr. Supernatant TS		34,000	33,000	46,000	36,000
4 Hr. Supernatant TS		650	530	590	690
24 Hr. Supernatant TS		550	490	620	550
<b>Total Suspended Solids (mg/L)</b>					
	110				
0 Hr. Supernatant TSS		20,000	6,800	19,000	19,000
4 Hr. Supernatant TSS		510	580	330	150
24 Hr. Supernatant TSS		140	180	110	120
<b>Total Volatile Solids (mg/L)</b>					
	270				
0 Hr. Supernatant TVS		7,700	9,900	8,100	4,700
4 Hr. Supernatant TVS		190	150	190	200
24 Hr. Supernatant TVS		210	170	170	210
<b>Ammonia-N (mg/L)</b>					
	0.96				
0 Hr. Supernatant Ammonia-N		8.4	3.8	8.4	2.0
4 Hr. Supernatant Ammonia-N		2.4	4.9	3.1	2.2
24 Hr. Supernatant Ammonia-N		2.1	4.1	3.3	1.3
<b>Lead (mg/L)</b>					
	< 0.010				
0 Hr. Supernatant Lead		4.1	1.8	6.3	2.9
4 Hr. Supernatant Lead		< 0.050	0.076	< 0.050	< 0.050
24 Hr. Supernatant Lead		< 0.050	< 0.050	< 0.050	< 0.050
<b>Phosphorus (mg/L)</b>					
	0.11				
0 Hr. Supernatant Phosphorus		26	17	27	29
4 Hr. Supernatant Phosphorus		0.41	0.57	0.30	< 0.25
24 Hr. Supernatant Phosphorus		0.29	< 0.25	< 0.25	< 0.25
<b>Zinc (mg/L)</b>					
	< 0.010				
0 Hr. Supernatant Zinc		6.9	5.4	9.0	7.9
4 Hr. Supernatant Zinc		0.088	0.16	0.075	< 0.050
24 Hr. Supernatant Zinc		0.058	< 0.050	< 0.050	< 0.050



January 04, 2021

Sandy Kubillus  
ILM  
110 LeBaron Street  
Waukegan, IL 60085

RE: ILM Dredging Projects 2020

Dear Sandy Kubillus:

Please find enclosed the **revised** analytical results for the **17** sample(s) the laboratory received on **12/11/20 1:40 pm** and logged in under work order **0122528**. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lgrant@pdclab.com.

Sincerely,

Kurt Stepping  
Senior Project Manager  
(309) 692-9688 x1719  
kstepping@pdclab.com





**SAMPLE RECEIPT CHECK LIST**

**Items not applicable will be marked as in compliance**

---

Work Order 0122528

---

YES	Samples received within temperature compliance when applicable
YES	COC present upon sample receipt
YES	COC completed & legible
NO	Sampler name & signature present
YES	Unique sample IDs assigned
YES	Sample collection location recorded
YES	Date & time collected recorded on COC
YES	Relinquished by client signature on COC
YES	COC & labels match
YES	Sample labels are legible
YES	Appropriate bottle(s) received
YES	Sufficient sample volume received
YES	Sample containers recieved undamaged
NO	Zero headspace, <6 mm present in VOA vials
NO	Trip blank(s) received
YES	All non-field analyses received within holding times
NO	Short hold time analysis
YES	Current PDC COC submitted
NO	Case narrative provided



ANALYTICAL RESULTS

Sample: 0122528-01
Name: Sediment 1
Alias: ML SW 12-11-20

Sampled: 12/11/20 11:45
Received: 12/11/20 13:40
Matrix: Solid - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Row 1: Particle Size, 77, %, 12/17/20 10:25, 1, 0.50, 12/17/20 10:25, CRD, ASTM D1140\*

Sample: 0122528-02
Name: Sediment 2
Alias: ML NW 12-11-20

Sampled: 12/11/20 11:15
Received: 12/11/20 13:40
Matrix: Solid - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Row 1: Particle Size, 66, %, 12/17/20 10:25, 1, 0.50, 12/17/20 10:25, CRD, ASTM D1140\*

Sample: 0122528-03
Name: Sediment 3
Alias: ML E 12-11-20

Sampled: 12/11/20 10:30
Received: 12/11/20 13:40
Matrix: Solid - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Row 1: Particle Size, 91, %, 12/17/20 10:25, 1, 0.50, 12/17/20 10:25, CRD, ASTM D1140\*

Sample: 0122528-04
Name: Sediment 4
Alias: ML SE 12-11-20

Sampled: 12/11/20 10:55
Received: 12/11/20 13:40
Matrix: Solid - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Row 1: Particle Size, 89, %, 12/17/20 10:25, 1, 0.50, 12/17/20 10:25, CRD, ASTM D1140\*



ANALYTICAL RESULTS

Sample: 0122528-05
Name: Supernatant 1 0 HOURS
Alias: ML SW 12-11-20

Sampled: 12/18/20 11:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.

Sample: 0122528-06
Name: Supernatant 1 4 HOURS
Alias: ML SW 12-11-20

Sampled: 12/16/20 13:55
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.



ANALYTICAL RESULTS

Sample: 0122528-07
Name: Supernatant 1 24 HOURS
Alias: ML SW 12-11-20

Sampled: 12/17/20 14:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.

Sample: 0122528-08
Name: Supernatant 2 0 HOURS
Alias: ML NW 12-11-20

Sampled: 12/18/20 11:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.



ANALYTICAL RESULTS

Sample: 0122528-09
Name: Supernatant 2 4 HOURS
Alias: ML NW 12-11-20

Sampled: 12/16/20 13:55
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.

Sample: 0122528-10
Name: Supernatant 2 24 HOUR
Alias: ML NW 12-11-20

Sampled: 12/17/20 14:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.



## ANALYTICAL RESULTS

**Sample:** 0122528-11  
**Name:** Supernatant 3 0 HOURS  
**Alias:** ML E 12-11-20

**Sampled:** 12/18/20 11:00  
**Received:** 12/11/20 13:40  
**Matrix:** Waste Water - Regular Sample

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
<b>General Chemistry - PIA</b>									
Solids - total solids (TS)	46000	mg/L	X	12/28/20 09:02	1	34	12/28/20 09:41	BCR	*** DEFAULT SPECIFIC METHOD ***
Solids - total suspended solids (TSS)	19000	mg/L		12/22/20 16:06	1	100	12/22/20 16:27	BCR	SM 2540 D 1997
Solids - total volatile solids (TVS)	8100	mg/L	X	12/28/20 09:02	1	17	12/28/20 09:41	BCR	SM 2540E*
<b>Nutrients - PIA</b>									
Ammonia-N	8.4	mg/L		12/24/20 09:40	1	0.10	12/24/20 09:40	CRS1	EPA 350.1 REV2
<b>Total Metals - PIA</b>									
Lead	6.3	mg/L		12/21/20 14:21	20	1.0	12/29/20 15:49	TJJ	EPA 200.7 REV 4.4
Phosphorus	27	mg/L		12/21/20 14:21	20	5.0	12/29/20 15:49	TJJ	EPA 200.7 REV 4.4
Zinc	9.0	mg/L		12/21/20 14:21	20	1.0	12/29/20 15:49	TJJ	EPA 200.7 REV 4.4

**Sample:** 0122528-12  
**Name:** Supernatant 3 4 HOURS  
**Alias:** ML E 12-11-20

**Sampled:** 12/16/20 13:55  
**Received:** 12/11/20 13:40  
**Matrix:** Waste Water - Regular Sample

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
<b>General Chemistry - PIA</b>									
Solids - total solids (TS)	590	mg/L		12/28/20 09:02	1	34	12/28/20 09:41	BCR	*** DEFAULT SPECIFIC METHOD ***
Solids - total suspended solids (TSS)	330	mg/L		12/21/20 08:40	1	11	12/21/20 11:43	BCR	SM 2540 D 1997
Solids - total volatile solids (TVS)	190	mg/L		12/28/20 09:02	1	17	12/28/20 09:41	BCR	SM 2540E*
<b>Nutrients - PIA</b>									
Ammonia-N	3.1	mg/L		12/24/20 09:41	1	0.10	12/24/20 09:41	CRS1	EPA 350.1 REV2
<b>Total Metals - PIA</b>									
Lead	< 0.050	mg/L		12/21/20 14:21	1	0.050	12/29/20 15:54	TJJ	EPA 200.7 REV 4.4
Phosphorus	0.30	mg/L		12/21/20 14:21	1	0.25	12/29/20 15:54	TJJ	EPA 200.7 REV 4.4
Zinc	0.075	mg/L		12/21/20 14:21	1	0.050	12/29/20 15:54	TJJ	EPA 200.7 REV 4.4



ANALYTICAL RESULTS

Sample: 0122528-13
Name: Supernatant 3 24 HOURS
Alias: ML E 12-11-20

Sampled: 12/17/20 14:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.

Sample: 0122528-14
Name: Supernatant 4 0 Hours
Alias: ML SE 12-11-20

Sampled: 12/18/20 11:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.



ANALYTICAL RESULTS

Sample: 0122528-15
Name: Supernatant 4 4 Hours
Alias: ML SE 12-11-20

Sampled: 12/16/20 13:55
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.

Sample: 0122528-16
Name: Supernatant 4 24 Hours
Alias: ML SE 12-11-20

Sampled: 12/17/20 14:00
Received: 12/11/20 13:40
Matrix: Waste Water - Regular Sample

Table with 10 columns: Parameter, Result, Unit, Qualifier, Prepared, Dilution, MRL, Analyzed, Analyst, Method. Includes sections for General Chemistry - PIA, Nutrients - PIA, and Total Metals - PIA.



### ANALYTICAL RESULTS

**Sample:** 0122528-17  
**Name:** Background Water  
**Matrix:** Waste Water - Regular Sample

**Sampled:** 12/11/20 10:00  
**Received:** 12/11/20 13:40

Parameter	Result	Unit	Qualifier	Prepared	Dilution	MRL	Analyzed	Analyst	Method
<b>General Chemistry - PIA</b>									
Solids - total solids (TS)	460	mg/L		12/16/20 09:29	1	17	12/16/20 09:45	BCR	*** DEFAULT SPECIFIC METHOD ***
Solids - total suspended solids (TSS)	110	mg/L		12/17/20 08:52	1	5.3	12/17/20 14:22	BCR	SM 2540 D 1997
Solids - total volatile solids (TVS)	270	mg/L		12/16/20 09:29	1	17	12/16/20 09:45	BCR	SM 2540E*
<b>Nutrients - PIA</b>									
Ammonia-N	0.96	mg/L		12/17/20 10:57	1	0.10	12/17/20 10:57	CRS1	EPA 350.1 REV2
<b>Total Metals - PIA</b>									
Lead	< 0.010	mg/L		12/17/20 11:14	1	0.010	12/23/20 14:34	TJJ	EPA 200.7 REV 4.4
Phosphorus	0.11	mg/L		12/17/20 11:14	1	0.050	12/23/20 14:34	TJJ	EPA 200.7 REV 4.4
Zinc	< 0.010	mg/L		12/17/20 11:14	1	0.010	12/23/20 14:34	TJJ	EPA 200.7 REV 4.4



### NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

\* Not a TNI accredited analyte

#### Memos

Revised Report - corrected sample alias

#### Certifications

CHI - McHenry, IL - 4314-A W. Crystal Lake Road, McHenry, IL 60050

TNI Accreditation for Drinking Water and Wastewater Fields of Testing through IL EPA Accreditation No. 100279  
Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W. Altorfer Drive, Peoria, IL 61615

TNI Accreditation for Drinking Water, Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. 100230

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory Registry No. 17553

Drinking Water Certifications/Accreditations: Iowa (240); Kansas (E-10338); Missouri (870)

Wastewater Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

Solid and Hazardous Material Certifications/Accreditations: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807

USEPA DMR-QA Program

STL - Hazelwood, MO - 944 Anglum Rd, Hazelwood, MO 63042

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through KS KDHE Certification No. E-10389

TNI Accreditation for Wastewater, Solid and Hazardous Material Fields of Testing through IL EPA Accreditation No. - 200080

Illinois Department of Public Health Bacterial Analysis in Drinking Water Approved Laboratory, Registry No. 171050

Missouri Department of Natural Resources - Certificate of Approval for Microbiological Laboratory Service - No. 1050

#### Qualifiers

- M Analyte failed to meet the required acceptance criteria for duplicate analysis.
- X Sample weigh back criteria not met due to high TSS level.

*Gail Schindler*



Certified by: Gail Schindler For Kurt Stepping, Senior Project Manager



REGULATORY PROGRAM (CIRCLE):	NPDES
MORBCA	RCRA
CCDD	TACO: RES OR IND/COMM

ALL HIGHLIGHTED AREAS MUST BE COMPLETED BY CLIENT (PLEASE PRINT)

CLIENT INTEGRATED LAKES MANAGEMENT ADDRESS 110 LEBARON STREET CITY WAUKEGAN STATE <b>IL</b> ZIP 60085 CONTACT PERSON <b>SANDY KUBILLUS</b>	PROJECT NUMBER PHONE NUMBER 847-244-6662 SAMPLER (PLEASE PRINT) SANDY KUBILLUS SAMPLER'S SIGNATURE	PROJECT LOCATION MASTADON LAKE E-MAIL SKUBILLUS@ILMENVIRONME NTS.COM	PURCHASE ORDER # DATE SHIPPED 12/2/20 MATRIX TYPES: WW-WASTEWATER DW-DRINKING WATER WW-SLUDGE WW-SL-SLUDGE MAS-NON AQUEOUS SOLID CHT-LEACHATE SO-SOIL SOL-SOLID
	SAMPLE DESCRIPTION (UNIQUE DESCRIPTION AS IT WILL APPEAR ON THE ANALYTICAL REPORT) MSLW 12-11-20 ML NW 12-11-20 MLE 12-11-20 ML SE 12-11-20	DATE COLLECTED 12-11-20 12-11-20 12-11-20 12-11-20 TIME COLLECTED 1145 1115 1030 1055 BOTTLE COUNT 3 3 3 3	MATRIX TYPE SOL SOL SOL SOL
ANALYSIS REQUESTED Particle size #230 Supernatant 0 hours Supernatant 4 hours Supernatant 24 hours			
REMARKS Sample supernatant at 0 hours 4-hours and 24-hours after passing Through #230 sieve for tests on page 1 See Kurt Stepping in Peoria lab			

4 (FOR LAB USE ONLY)  
 LOGIN # 012258  
 LOGGED BY: BK  
 CLIENT: \_\_\_\_\_  
 PROJECT: \_\_\_\_\_  
 PROJ. MGR.: \_\_\_\_\_  
 CUSTODY SEAL #: \_\_\_\_\_

3  
 6  
 I understand that by initialing this box I give the lab permission to proceed with analysis, even though it may not meet all sample conformance requirements as defined in the receiving facility's Sample Acceptance Policy and the data will be qualified. Qualified data may NOT be acceptable to report to all regulatory authorities.  
 PROCEED WITH ANALYSIS AND QUALIFY RESULTS: (INITIALS) \_\_\_\_\_

RECEIVED BY: (SIGNATURE)	DATE 12-11-20	TIME 13:40
RECEIVED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE)	DATE	TIME

COMMENTS: (FOR LAB USE ONLY)  
 SAMPLE TEMPERATURE UPON RECEIPT 12.0 °C  
 CHILL PROCESS STARTED PRIOR TO RECEIPT  
 SAMPLE(S) RECEIVED ON ICE  
 SAMPLE ACCEPTANCE NONCONFORMANT  
 REPORT IS NEEDED  
 DATE AND TIME TAKEN FROM SAMPLE BOTTLE



# ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

217/782-3362

## MATERIAL ANALYSIS FOR DREDGE AND FILL ACTIVITIES Section 401 Water Quality Certification

Generally, a particle size analysis (sand/fine split) is required for all projects or activities involving the movement of any material. This analysis is necessary for the issuance of a Section 401 Water Quality Certification in conjunction with the US Army Corps of Engineers Section 404 Dredge and Fill permit. Excluded from the following analysis are concrete, commercially graded sand and gravel, and other nondegradable, nontoxic, clean fill materials. Testing is not necessary for mechanically excavated material used for fill in upland areas, which is nonpollutional, placed away from public water supplies, and is prevented from returning to the waterway. For further clarification on these exclusions, contact the IEPA. IF YOUR PROPOSED PROJECT INVOLVES THE MOVEMENT OF MATERIAL INTO OR OUT OF A WATERWAY, YOU MUST PROVIDE THE FOLLOWING INFORMATION:

1. Provide the results of **PARTICLE SIZE ANALYSIS (SAND/FINE SPLIT)**. The analysis will follow procedures detailed below for the separation of sand from fines, and results will be reported as the percentage by weight passing a 62-micron sieve (#230 US sieve). The physical characteristics of the material should be noted.
  - a. Significant organic matter should be removed as follows: Add 5ml of 6% solution of hydrogen peroxide for each gram of dry sample which is in 40 ml water. Stir and cover. Large fragments may be skimmed off if they are free of sediment. If oxidation is slow or has slowed, the mixture is heated to 93°C and stirred. More hydrogen peroxide solution may be necessary to complete oxidation. After the reaction has completely stopped, wash with distilled water.
  - b. The composited sediment is placed in the soil dispersion cup and diluted to 250-300 ml with distilled water. Mix for 5 minutes at 10,000 RPM.
  - c. The sediment is then wet-sieved using distilled water and a #230 US sieve (62 micron mesh). Washing should be continued until no sediment passes the screen. Material is then oven-dried at 100°-105°C prior to weighing.
  
2. If the particle size analysis shows 20% or greater passage of material through a #230 US sieve (or 20% of the material has settling velocities of particles with diameters of 62 microns or less), chemical constituent testing of the sediment and receiving disposal waters will be required and must demonstrate that the sediment does not contain significant levels of toxic materials.
  - a. For hydraulically moved material, a **SUPERNATANT TEST** for nonsettleable material from 2540 (f) of Standard Methods for Water and Wastewater Analysis (20<sup>th</sup> edition, 1998) is required. This analysis for a four-hour settling of 1:4 sediment to natural background water slurry (vol./vol.) is to be compared to the receiving waters. Provide laboratory analysis on the sediment/background water slurry and the receiving water for the following parameters: total suspended solids (TSS), total volatile solid (TVS), ammonia-nitrogen (as N), lead (total), and zinc. Additional parameters may be required based on documented sediment contamination. If supernatant test results exceed background TSS or the TSS standard of 35 Ill. Adm. Code, Subtitle C: Water Pollution, additional supernatant tests are required. These detailed tests should be conducted with the same settling time(s) as the proposed disposal facilities. Consideration should be given to background variability with differences in flow volume and flow rate, and subsequent project scheduling. Contact the Illinois EPA (Watershed Management Section at 217/782-3362) for further information concerning additional suspended phase testing.
  - b. For mechanically moved material placed out of the water, an **ELUTRIATE TEST** using 2540(f) of Standard Methods is required for lead, zinc, and ammonia-nitrogen as N. Additional testing and/or additional parameters may be required.
  - c. For mechanically moved material placed in a waterway, follow procedures in 2a.

[Revised: 10/2000] dredgfil.ms

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 2021-66294  
Bureau ID#: W0898000037  
FINAL PLANS, SPECIFICATIONS, APPLICATION  
AND SUPPORTING DOCUMENTS  
PREPARED BY: HR Green, Inc.

PERMIT NO.: 2021-EA-66294  
DATE ISSUED: July 2, 2021

SUBJECT: MASTODON LAKE DREDGING  
PERMITTEE TO CONSTRUCT, OWN AND OPERATE

City of Aurora  
77 S. Broadway  
Aurora, IL 60507

Permit is hereby granted to the above designated permittee(s) to construct and/or operate the water pollution control facilities referred to in the above heading, and described as follows:

The facility includes two (2) temporary sediment dewatering locations within Phillips Park in the SW 1/4 of Section 26, Township 38-West, Range 8-East, of the 3rd Principle Meridian in Kane County. Proposed hydraulic dredging will produce approximately 50,000 cubic yards of dredged material from Mastodon Lake. The hydraulically dredged material will be pumped into geotextile bags at one of two temporary sediment dewatering and stockpiling locations, Site #1 (Parking Lot) and Site #2 (Peninsula). When sufficiently dried, the material will be taken to a stockpile location at a nearby golf course without discharge to waters of the State. Impermeable liners and strawbales or similar will be used to direct geotextile filtrate to a single outfall at each dewatering location. The applicant will utilize a flocculant in accordance with the application and Special Condition #3 of this permit to ensure the discharged effluent meets 15 mg/l of total suspended solids prior to discharge to Mastodon Lake.

This construction and operating permit expires on May 31, 2026.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

SPECIAL CONDITION 1: The permittee shall monitor the effluent from each dewatering location (Site #1 and Site #2) for total suspended solids, ammonia-nitrogen (as N), pH, and temperature. Samples shall be collected once per week and results shall be submitted to the Agency once per month, by the 15th day of the month following sampling. The permittee shall send the monitoring reports to the below address:

Illinois Environmental Protection Agency  
Bureau of Water  
Permit Section  
1021 North Grand Avenue East

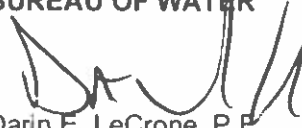
Page 1 of 2

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

DEL: DRG:2021-66294\_State Permit\_05Apr21.docx

cc: IEPA, DWPC, FOS, DesPlaines  
Records  
Binds  
HR Green, Inc., Attn: Logan Gilbertsen, P.E., 323 Alana Dr.,  
New Lenox, IL 60451

BUREAU OF WATER

  
Darin E. LeCrone, P.E.  
Manager, Permit Section  
Division of Water Pollution Control  
Illinois Environmental Protection Agency

**READ ALL CONDITIONS CAREFULLY:  
STANDARD CONDITIONS**

The Illinois Environmental Protection Act (Illinois Revised Statutes Chapter 111-12, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire: (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials:
  - a. to enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
  - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;
  - c. To inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated, and maintained under this permit;
  - d. To obtain and remove at reasonable times samples of any discharge or emission of pollutants;
  - e. To enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
  - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
  - e. in no manner implies or suggests that the Agency (or its officers, agents, or employees) assume any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the Agency before the facility or equipment covered by this permit is placed into operation.
7. These standard conditions shall prevail unless modified by special conditions.
8. The Agency may file a complaint with the Board for suspension or revocation of a permit:
  - a. upon discovery that the permit application contained misrepresentation, misinformation or false statement or that all relevant facts were not disclosed; or
  - b. upon finding that any standard or special condition have been violated; or
  - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
WATER POLLUTION CONTROL PERMIT**

**LOG NUMBERS:** 2021-66294  
**BUREAU ID#:** W0898000037  
**FINAL PLANS, SPECIFICATIONS, APPLICATION  
AND SUPPORTING DOCUMENTS**  
**PREPARED BY:** HR Green, Inc.

**PERMIT NO.:** 2021-EA-66294

**DATE ISSUED:** July 2, 2021

**SUBJECT:** MASTODON LAKE DREDGING

Post Office Box 19276  
Springfield, Illinois 62794-9276

**SPECIAL CONDITION 2:** The permittee shall operate the dredge and the disposal facilities such that the effluent does not exceed 15 mg/L total suspended solids, and otherwise complies with the water quality standards of 35 Il. Adm. Code, Subtitle C.

**SPECIAL CONDITION 3:** The use of flocculants and/or coagulants is authorized providing that dosing rates are minimized to the extent necessary to achieve solids removal and meet TSS or chemical-specific permit limits. The products must be applied in strict accordance with the manufacturer's recommended application rates with respect to solids content, which must be verified through TSS measurements of the water or jar/bench testing of the products using site-water. The permittee must keep records of the amount (kg) of product added and an estimated dosage rate (mg/L) at the time of product application. Application of a product at concentrations exceeding the manufacturer's recommendations is not authorized.

**SPECIAL CONDITION 4:** The permittee shall be responsible for obtaining an NPDES stormwater permit prior to initializing construction, including upland placement of dredged material, if the construction will result in the disturbance of 1 (one) or more acres of total land area.

**READ ALL CONDITIONS CAREFULLY:  
STANDARD CONDITIONS**

The Illinois Environmental Protection Act (Illinois Revised Statutes Chapter 111-12. Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire: (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.
2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.
3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.
4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials:
  - a. to enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;
  - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;
  - c. To inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated, and maintained under this permit;
  - d. To obtain and remove at reasonable times samples of any discharge or emission of pollutants;
  - e. To enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
  - a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;
  - b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;
  - c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;
  - d. does not take into consideration or attest to the structural stability of any units or parts of the project;
  - e. in no manner implies or suggests that the Agency (or its officers, agents, or employees) assume any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the Agency before the facility or equipment covered by this permit is placed into operation.
7. These standard conditions shall prevail unless modified by special conditions.
8. The Agency may file a complaint with the Board for suspension or revocation of a permit:
  - a. upon discovery that the permit application contained misrepresentation, misinformation or false statement or that all relevant facts were not disclosed; or
  - b. upon finding that any standard or special condition have been violated; or
  - c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.