

Consulting  
Engineers and  
Scientists

January 14, 2020

Kelsey Krupp  
Environmental Quality Analyst  
Department of Environment, Great Lakes, and Energy  
Water Resources Division – Grand Rapids District

RE: Countersignature Permit; Submission Number HNR-EXFE-SV4Z9  
Question and Clarifications

Dear Ms. Krupp:

The Barry County Drain Commissioner (Applicant) has reviewed the Draft Countersignature Permit sent on December 23, 2020 for Site 08-Delton Rd-Delton. The Authorized Activities capture the proposed work items, however there are some apparent typographic errors that should be corrected. The Applicant is also agreeable to all of the additional permit conditions (Y.1 through Y.36), with the exception of four limitations which would be acceptable with some level of modification and/or clarification. These items are discussed below.

### **Minor Corrections to the Authorized Activities**

The Draft Permit is included in Appendix I with two proposed minor corrections illustrated. These corrections are as follows:

- Under the Authorized Activities for Page 5 of the plan set, the 24-inch storm sewer is listed as outletting into Jones Lake. “Jones Lake” should be replaced with “Long Lake”.
- Under the Authorized Activities for Page 6 of the plan set, the box culvert length is listed as 9 feet. The correct total culvert length is 24 feet. 9 feet is the length of the portion of the culvert located within wetlands.

### **Requests for Clarifications and/or Revisions**

There are several items in the Limitations listed as part of the Draft Permit language for which the Applicant requests clarification so that there are no discrepancies, since some of these Limitations would greatly impact the overall intent of the project.

#### ***Limitation Y.12.***

##### As written:

No work within regulated Part 303 or Part 301 areas is allowed or authorized by this permit from October 15 to May 1 to protect the riparian area, public and private property, and populations of turtles, frogs, and other organism that burrow into sediments overwinter or from March 15 to June 30 due to critical spawning, migration, and/or recreational use periods.

##### Applicant’s Response:

The Applicant proposes that the Limitation be rewritten as shown below. Proposed additions and deletions are indicated with bold and strikethrough text, respectively.

*“No work within regulated Part 303 or Part 301 areas is allowed or authorized by this permit from October 15 to May 1 to protect the riparian area, public and private property, and populations of*

*turtles, frogs, and other organism that burrow into sediments overwinter or from March 15 to June 30 due to critical spawning, migration, and/or recreational use periods **except where authorized by MDNR Wildlife and Fishery Division staff for a given time period.***”

This language revision would allow the Applicant to discuss the work areas with MDNR staff and potentially receive clearance to begin work before June 30<sup>th</sup> in certain areas based upon target fish species. The Applicant recognizes that certain fish species, such as northern pike, largemouth bass and bluegill/sunfish, spawn during this time period and may be impacted by small lake level fluctuations. The Applicant would like to review the specific work areas with MDNR staff to assess the suitability of these areas for bedding and spawning habitat for target species. As written, no project activities could begin until July 2021. This would mean Cloverdale Lake would not receive water level relief until after the wet Spring season. For reference, Cloverdale Lake has peaked on the following dates in 2019 and 2020:

- 2019 Date of Maximum Water Level on Cloverdale Lake: 6/24/19 at elevation 924.27
- 2020 Date of Maximum Water Level on Cloverdale Lake: 5/26/19 at elevation 924.59

If construction can begin at the Long Lake and Cloverdale Lake outlets earlier in the year, peak water levels on Cloverdale Lake could be attenuated by the project activities and damage to riparian properties could be lessened. It should be noted, though, that even if construction at the Long Lake and Cloverdale Lake outlets were allowed to occur in May, pumping from Upper Crooked Lake would almost certainly be infeasible until at least July of 2021.

#### ***Limitation Y.30.a.***

##### As written:

The Permittee shall stop pumping for any of the following reasons:

- a. Upper Crooked Lake is 926 feet in elevation or lower.

##### Applicant's Response:

The Applicant proposes that the Limitation be rewritten as shown below. Proposed additions and deletions are indicated with bold and strikethrough text, respectively.

*“The Permittee shall stop pumping for any of the following reasons:*

- a. Upper Crooked Lake is ~~926~~ **925.20** feet in elevation or lower.”

The exhibit in Appendix II was submitted with the July 2020 Correction Request Response and shows the elevation of the ground surface adjacent to the lowest lying permanent infrastructure along Upper Crooked Lake. As can be seen in the exhibit, these critical elevations adjacent to dwellings on the lake range from 926.18' to 927.19.' As written, the permit would not allow for any pumping once the lake was at elevation 926.00,' which is only about 3-inches below the ground elevation adjacent to the dwelling at 10894 E. Shore Drive. It is also worth noting that the surveyed elevations are only the ground surface adjacent to the structures; the structure foundations likely lie a minimum of 12” below the ground surface. Thus, the minimum pumping elevation of 926.00,' would leave the lake extents mere feet from the lowest lying homes and likely result in water above the foundation level. Further, during the wet spring season, the Upper Crooked Lake water level will inevitably rise due to precipitation, runoff and groundwater inputs. A minimum pumping elevation of 926.00' would allow very little freeboard to protect from a precipitation event. For example, between May 13<sup>th</sup> and May 19<sup>th</sup>, 2020, the Michigan State University MAWN Station at Pierce Cedar Creek Institute in Hastings recorded 4.97” of precipitation. According to NOAA Atlas 14 data, this is equivalent to between a 5-year and 10-year event for a 7-day period.

The Upper Crooked Lake water level before and after this 7-day period was recorded as follows:

- May 12<sup>th</sup> – 927.98’
- May 19<sup>th</sup> – 928.36’

This 4-5” water level rise was in spite of on-going pumping from the lake to the Delton Road Infiltration Basin at approximately 6,000 gallons per minute. This data indicates how sensitive the Upper Crooked Lake water level is to periods of increased precipitation and how a freeboard is necessary to allow time for the pumping to draw down the lake following precipitation events without the flooding of permanent infrastructure adjacent to the lake. If the permit were issued as written and no pumping were allowed when Upper Crooked Lake is below elevation 926.00,’ the May 2020 rainfall event described above would have resulted in the flooding of permanent dwellings at 10894 E. Shore Drive and 11333 Oak Drive. A minimum pumping elevation of 925.20’ on Upper Crooked Lake would allow nearly a foot of freeboard from the lowest permanent structure adjacent to the lake. It should also be noted that existing lake level structure between Upper Crooked Lake and Lower Crooked Lake at Parker Road, meant to control the low-water level on Upper Crooked Lake, is set at a court ordered elevation of 922.75’. Thus, the minimum pumping elevation proposed by the Applicant (925.20’) is still nearly 2.5 feet above the court ordered minimum lake level.

### ***Limitation Y.31.***

#### As written:

Within 45 days from issuance of this permit, the permittee shall develop, submit for EGLE approval, and then implement plans for monitoring water chemistry, aquatic invasive species, impacts to wetlands especially the bog systems and zooplankton using EGLE approved methods, in the Wilkinson Lake, Cloverdale Lake, Long Lake, and the unnamed stream/Fall Creek. **One calendar year of baseline requirements for these parameters are required before construction begins.**

#### Applicant’s Response:

The Applicant has performed baseline data collection on the involved lakes and would like to confirm that this existing data and planned baseline data collections for 2021 are collectively sufficient to meet the last sentence of Limitation Y.31. (bolded above). The existing baseline data already collected by the Applicant is as follows:

- Water Chemistry and Aquatic Vegetation – May 2019 and August 2019 Progressive AE Evaluations of Upper Crooked Lake, Lower Crooked Lake, Cloverdale Chain of Lakes, and Long Lake
- Zooplankton – Veliger sampling on Cloverdale Lake and Long Lake in July 2020 and Upper Crooked Lake and the Delton Road Infiltration Basin in October 2020
- Surface Water Levels - Weekly water level data since Spring 2018 (excluding winter) for all project waterbodies including Upper Crooked Lake, Delton Marsh, Cloverdale Chain of Lakes, Long Lake and Fall Creek

This data has been shared with EGLE during the application process and can be resent if necessary. The Applicant plans to augment the existing baseline data with the following data to be collected before the Cloverdale Lake outlet improvements take place pursuant to this permit:

- Water Chemistry and Aquatic Vegetation – The Applicant will perform evaluations on Upper Crooked Lake, Cloverdale Chain of Lakes, and Long Lake similar to the 2019 Progressive AE Evaluations. These evaluations would likely occur in April or early May 2021.

- Zooplankton – The Applicant will collect veliger samples at the Cloverdale Lake and Long Lake outlets and from the surface waters of Upper Crooked Lake. Sample collection will be delayed as long as possible into the year, so as to allow lake water temperatures to rise into typical ranges for veliger production.
- Surface Water Levels – The Applicant is collecting surface water levels from the project water bodies twice a month over winter as ice conditions allow. Once ice has cleared from project water bodies, weekly observations will continue.

***Limitation Y.36.***As written:

Permittee shall conduct wetland inspection once per month at the Delton Marsh and Cloverdale chain bog wetlands for the duration of pumping. EGLE may establish additional wetland monitoring sites later based on monitoring information submitted and site inspections. Progression and encroachment of any project-related surface water into these sensitive wetlands, as well as first signs of vegetation stress during the growing season, shall be documented. Monitoring shall include:

- a) A rapid general assessment of vegetation, soil saturation, and current water levels and inundation distribution at and near each monitoring site.
- b) Photo documentation from permanent photo station in cardinal directions, orientated towards the ground surface (i.e., a photo view of ground surface at a shallow viewing angle that shows approximately 5 feet from the plot center outward to potentially 30+ feet from the plot center)
- c) Staff gauge measurement of inundation (i.e., water depth) at plot center point, as well as water depth measurements at the base of all nearby woody vegetation (i.e., trees and large shrubs within 15-ft radius). The permittee shall install staff gauges for WSE readings and submit documentation of their locations on a map in site plan view and shall remain in the same locations after installation. Reports shall show any changes in WSE in collected data and cross section and include elevations of the existing wetland ground surface and previously collected water levels.
- d) Evidence of stunted or stressed woody or herbaceous vegetation
- e) Summary of any other relative changes (i.e., changes noted since previous wetland monitoring inspection and since commencement of the project).

The permittee shall hire a qualified wetland professional to conduct the wetland monitoring. A concise report of the wetland monitoring shall be provided to MDEQ no longer than 3 business days after the date of the wetland monitoring.

Applicant's Response:

The Applicant proposes that the Limitation be rewritten as shown below. Proposed additions and deletions are indicated with bold and strikethrough text, respectively.

*“Permittee shall conduct wetland inspection once per month at the Delton Marsh and ~~Cloverdale chain~~ **Long Lake** bog wetlands for the duration of pumping **for the first year of pumping and biannually thereafter.** **The first year of pumping is to be defined as 12 months after pumping begins.** For example, if pumping begins in August 2021, monthly inspections (when pumping is occurring) would continue until July 2022 and then begin biannually starting in 2023. Inspections of the wetland areas during the winter months (non-growing season when snow and ice are covering the wetlands) are not required, but requested where possible, due to safety limitations of accessing these areas, walking across thin ice, and that vegetation and signs of water level changes or impacts may be difficult to assess under snow and ice. EGLE may establish*

*additional wetland monitoring sites later based on monitoring information submitted and site inspections. Progression and encroachment of any project-related surface water into these sensitive wetlands, as well as first signs of vegetation stress during the growing season, shall be documented. Monitoring shall include.....The permittee shall hire a qualified wetland professional to conduct the wetland monitoring. A concise report of the wetland monitoring shall be provided to ~~MDEQ~~ **EGLE** no longer than ~~3~~ **10** business days after the date of the wetland monitoring. **Any issues of immediate concern will be reported to EGLE within 1 business day**"*

The Applicant's justification for the proposed language revisions are as follows:

- 1<sup>st</sup> Proposed Revision – Change “Cloverdale Chain” to “Long Lake”
  - Justification: The Applicant is not aware of any bog wetlands on the Cloverdale Chain of Lakes but has documented bog wetlands at the north end of Long Lake. It is assumed that EGLE meant to reference Long Lake in this location.
- 2<sup>nd</sup> Proposed Revision – Change frequency of wetland inspections after 1<sup>st</sup> year
  - Justification: It is anticipated that the first year of pumping activities would be most likely to result in additional stresses to wetland areas. In subsequent years, it is expected that stresses will be less significant than those that have occurred naturally during the on-going period of increased water levels on the Delton Marsh and Long Lake. Therefore, the applicant proposed that the frequency of inspection be reduced after the first full year of pumping.
- 3<sup>rd</sup> Revision – Change reporting deadline after inspections
  - Justification: The proposed revisions would provide immediate notification to EGLE in case of an identified issue and allow the Applicant more time to complete an official report.

We appreciate your continued efforts in reviewing this application.

Sincerely,

GEI CONSULTANTS, INC.



Brian Cenci, P.E.  
Senior Project Manager



Stu Kogge, PWS  
Senior Wetland/Aquatic Biologist

#### Appendices

- I) Draft Permit with Corrections to Authorized Activities
- II) Low-Lying Structures near Upper Crooked Lake

c: Jim Dull, Barry County Drain Commissioner

# **APPENDIX I**

## **Draft Permit with Corrections to Authorized Activities**



GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
GRAND RAPIDS



LIESL EICHLER CLARK  
DIRECTOR

December 23, 2020

Watson Drain Drainage District & Cloverdale Drain Drainage District c/o Barry County Drain  
Commissioner  
220 W State St  
Hastings, MI 49058

Dear Watson Drain Drainage District & Cloverdale Drain Drainage District c/o Barry County  
Drain Commissioner:

SUBJECT: Draft Permit for Countersignature; Submission Number: HNR-EXFE-SV4Z9;  
County: Barry; Project Name: 08-Delton Rd.-Delton

The Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division (WRD), has reviewed the above-referenced application for permit pursuant to Part 301, Inland Lakes and Streams, and Part 303, Wetlands Protection of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The purpose of the project, as depicted in your application, is to:

Authorized activity shown on Pg. 2-3: Install a lake level gauge in Upper Crooked Lake. Install a 12-inch pressure-pipe in the Delton Road Infiltration Basin to facilitate pumping to the Delton Marsh on a temporary basis for the alleviation of floodwaters on Upper Crooked Lake in the absence of a permanent solution. This pump system includes a screen filter (ALT1: AMIAD EBS 10K (4-Micron Screen) or ALT2: Filtersafe BS-400E (25-Micron Screen)). The 12 inch pressure-pipe will temporarily discharge water into the Delton Marsh through riprap to be installed in upland before entering the Delton Marsh. Install lake level gauges in front of the screened intake structure for the suction line. This permit does not authorize additional wetland impacts in this location.

Authorized activity shown on Pg. 4: Install a total of 2 lake level gauges, one on either side of Stevens Road.

LONG LAKE

Authorized activity shown on Pg. 5: Install a lake level gauge in Cloverdale Lake. Remove most of the existing 10 inch storm pipe between Cloverdale Lake and Long Lake and install a 36 inch intake pipe to a fixed weir control structure that connects to a 24 inch storm sewer under Guernsey Lake Road and outlets into ~~Jones Lake~~. A gradual controlled drawdown of Cloverdale Lake using multiple 6-inch tall stoplogs in the control structure is authorized down to the fixed concrete elevation of 922.00 feet. Once removed, the stoplogs cannot be added back to the control structure without an additional permit giving authorization for that activity. The intake pipe from Cloverdale Lake will include a 1 mm cylindrical wedge wire screen and dredging of a 15 foot by 1 foot area totaling 17 cubic yards sediment dredged from wetland. To facilitate construction, 40 feet of sheet pile will be installed in the area of the intake structure and pumped water will be discharged through a dewatering bag in upland. The dewatering bag shall be removed upon completion of construction. Install a lake level gauge in Long Lake. Place 14 cubic yards of MDOT heavy riprap 20 feet long, 15 feet wide, over geotextile fabric in wetland along the ordinary high-water mark of Long Lake below the storm sewer to prevent erosion at the culvert outlet.

December 23, 2020

Page 2

24 feet

Authorized activity shown on Pg. 6: Install a total of 2 lake level gauges, one on either side of North Shore Drive. Install a 4 foot wide by 3 foot deep box culvert ~~9 feet~~ long between Long Lake and an unnamed stream that ultimately becomes the West Branch of Fall Creek to replace existing side by side culverts that are 24 inch and 21 inch diameter. Place fill 20 feet wide, 60 feet long for a temporary access drive through 0.039 acres of wetland on the North side of North Shore Drive which will be removed after construction of the new road. Install 40 linear feet of steel sheet pile in front of the culvert to facilitate construction, that shall be removed upon completion.

We have determined that the project can be permitted. Enclosed is a draft permit that requires a countersignature.

Carefully review and fully understand the draft permit and all of its associated terms and conditions. As the permittee, you are responsible for assuring that the project is completed as authorized and in compliance with permit requirements. If you agree to all of the terms and conditions, sign the draft permit in the space provided, initial each of the drawings, and return the entire document to our office within 30 days of the date of this letter.

This permit is not valid until signed by an official of the WRD. Upon return of the signed and initialed document from you, the WRD will issue the permit in a timely manner and return a signed copy to you. Construction activity is not authorized to begin until a valid permit is held at the project site. If you do not return the signed and initialed document by the required date, an application denial letter will be sent to you.

If you have any questions regarding the specifics of this draft permit, please contact me at 616-401-1201; kruppk1@michigan.gov; or EGLE, WRD, Grand Rapids District Office, State Office Building, Fifth Floor, 350 Ottawa Ave NW, Unit 10, Grand Rapids, MI, 49503-2341. Please include your submission number, HNR-EXFE-SV4Z9, in your response.

Sincerely,



Kelsey Krupp  
Grand Rapids District Office  
Water Resources Division

Enclosure

cc: Hope Township Clerk  
Barry Township Clerk  
Barry County Drain Commission  
Barry County  
Brian Cenci, Agent  
Nick DeSimpelare, Agent  
EGLE, Audrie Kirk  
EGLE, Amy Barry





MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
WATER RESOURCES DIVISION  
PERMIT

Issued To:

Watson Drain Drainage District & Cloverdale Drain Drainage District c/o Barry County Drain Commissioner  
220 W State St  
Hastings, MI 49058

Permit No: WRP026548 v.1  
Submission No.: HNR-EXFE-SV4Z9  
Site Name: 08-Delton Road-Delton  
Issued: DRAFT  
Expires: DRAFT

This permit is being issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Water Resources Division, under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA); specifically:

Part 301, Inland Lakes and Streams  Part 303, Wetlands Protection

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

Authorized Activity:

Authorized activity shown on Pg. 2-3: Install a lake level gauge in Upper Crooked Lake. Install a 12 inch pressure-pipe in the Delton Road Infiltration Basin to facilitate pumping to the Delton Marsh on a temporary basis for the alleviation of floodwaters on Upper Crooked Lake in the absence of a permanent solution. This pump system includes a screen filter (ALT1: AMIAD EBS 10K (4-Micron Screen) or ALT2: Filtersafe BS-400E (25-Micron Screen)). The 12 inch pressure-pipe will temporarily discharge water into the Delton Marsh through riprap to be installed in upland before entering the Delton Marsh. Install lake level gauges in front of the screened intake structure for the suction line. This permit does not authorize additional wetland impacts in this location.

Authorized activity shown on Pg. 4: Install a total of 2 lake level gauges, one on either side of Stevens Road.

LONG LAKE

Authorized activity shown on Pg. 5: Install a lake level gauge in Cloverdale Lake. Remove most of the existing 10 inch storm pipe between Cloverdale Lake and Long Lake and install a 36 inch intake pipe to a fixed weir control structure that connects to a 24 inch storm sewer under Guernsey Lake Road and outlets into ~~Jones Lake~~. A gradual controlled drawdown of Cloverdale Lake using multiple 6 inch tall stoplogs in the control structure is authorized down to the fixed concrete elevation of 922.00 feet. Once removed, the stoplogs cannot be added back to the control structure without an additional permit giving authorization for that activity. The intake pipe from Cloverdale Lake will include a 1 mm cylindrical wedge wire screen and dredging of a 15 foot by 10 foot area totaling 17 cubic yards sediment dredged from wetland. To facilitate construction, 40 feet of sheet pile will be installed in the area of the intake structure and pumped water will be discharged through a dewatering bag in upland. The dewatering bag shall be removed upon completion of construction. Install a lake level gauge in Long Lake. Place 14 cubic yards of MDOT heavy riprap 20 feet long, 15 feet wide, over geotextile fabric in wetland along the ordinary high-water mark of Long Lake below the storm sewer to prevent erosion at the culvert outlet.

**Authorized activity shown on Pg. 6: Install a total of 2 lake level gauges, one on either side of North Shore Drive. Install a 4 foot wide by 3 foot deep box culvert ~~9 feet~~ long between Long Lake and an unnamed stream that ultimately becomes the West Branch of Fall Creek to replace existing side by side culverts that are 24 inch and 21 inch diameter. Place fill 20 feet wide, 60 feet long for a temporary access drive through 0.039 acres of wetland on the North side of North Shore Drive which will be removed after construction of the new road. Install 40 linear feet of steel sheet pile in front of the culvert to facilitate construction, that shall be removed upon completion.**

**All work shall be done in accordance with attached plans and permit specifications.**

Waterbody Affected: Crooked Lake, Wilkinson Lake, Cloverdale Lake, Long Lake, and an unnamed stream

Property Location: Barry County, Hope and Barry Township, Town/Range/Section 01N/09W/06

**Authority granted by this permit is subject to the following limitations:**

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31 of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with 2013 PA 174 (Act 174) and comply with each of the requirements of Act 174.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
- I. Permittee shall notify EGLE within one week after the completion of the activity authorized by this permit.
- J. This permit shall not be assigned or transferred without the written approval of EGLE.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31 of the NREPA, and wetlands).
- M. In issuing this permit, EGLE has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, EGLE may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the state: (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the state, and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act, 1969 PA 306, as amended, challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.

- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, EGLE may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from EGLE. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by EGLE prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of EGLE. The permittee must submit a written request to EGLE to transfer the permit to the new owner. The new owner must also submit a written request to EGLE to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties that includes all the above information may be provided to EGLE. EGLE will review the request and, if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent (CEA).
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the water body are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the Michigan Department of Natural Resources, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
  - 1. Authority granted by this permit does not waive permit or program requirements under Part 91 of the NREPA or the need to acquire applicable permits from the CEA. To locate the Soil Erosion Program Administrator for your county, visit [www.mi.gov/eglestormwater](http://www.mi.gov/eglestormwater) and select "Soil Erosion and Sedimentation Control Program" under "Related Links."
  - 2. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state, or federal approval or authorization necessary to conduct the activity, including but not limited to explicit landowner easements and authorizations required on property where the permitted activities take place.
  - 3. No fill, excess soil, or other material shall be placed in any wetland, floodplain, or surface water area not specifically authorized by this permit, its plans, and specifications.
  - 4. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.

5. The permit placard shall be kept posted at the work site in a prominent location at all times for the duration of the project or until permit expiration.
6. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. The permit, when signed by EGLE, will be for a five-year period beginning on the date of issuance. If the project is not completed by the expiration date or continuation of the authorized activities mentioned above is required, a new permit must be sought.
7. The authorizations in this permit are limited to those identified above. This permit does not remove the permittee's liability or responsibility regarding any damage to adjacent properties, groundwater levels, or water wells in the vicinity of the project. Projects which include the pumping or discharge of water may require a National Pollution Discharge Elimination System (NPDES) permit under Part 31, Water Resources Protection, of the NREPA. Also, removal or pumping of groundwater that interferes with drinking water wells in the area are subject to dispute resolution as outlined in Part 317 Aquifer Protection and Dispute Resolution, of the NREPA. Water shall not be withdrawn from a lake, wetland, or stream in such quantity and/or duration so as to adversely impact or degrade water quality standards, aquatic life, riparian rights or uses. In addition, large quantity water withdrawal may require a permit be obtained from or an annual report be submitted to EGLE's Water Resource Division under the authority of Part 327, Great Lakes Preservation, of the NREPA.
8. All raw areas in uplands resulting from the permitted construction activity shall be effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands. Temporary stabilization measures shall be installed before or upon commencement of the permitted activity and shall be maintained until permanent measures are in place. Permanent measures shall be in place within five (5) days of achieving final grade.
9. All raw earth within 100 feet of a lake, stream, or wetland that is not brought to final stabilization by the end of the active growing season shall be temporarily stabilized with mulch blankets in accordance with the following dates: September 20<sup>th</sup> for the Upper Peninsula, October 1<sup>st</sup> for the Lower Peninsula north of US-10, and October 10<sup>th</sup> for the Lower Peninsula south of US-10.
10. All fill/backfill shall consist of clean inert material that will not cause siltation nor contain soluble chemicals, organic matter, pollutants, or contaminants.
11. All fill shall be contained in such a manner so as not to erode into any surface water, floodplain, or wetland. All raw areas associated with the permitted activity shall be stabilized with sod and/or seed and mulch, riprap, or other technically effective methods as necessary to prevent erosion.
12. No work within regulated Part 303 or Part 301 areas is allowed or authorized by this permit from October 15 to May 1 to protect the riparian area, public and private property, and populations of turtles, frogs, and other organisms that burrow into sediments overwinter or from March 15 to June 30 due to critical spawning, migration, and/or recreational use periods.
13. This permit is limited to authorizing the construction as specified above and carries with it no assurances or implications that associated lake, stream, wetland or floodplain areas can be developed and serviced by the structures authorized by this permit.
14. Prior to the start of construction, all adjacent non-work wetland areas shall be protected by properly trenched sedimentation barrier to prevent sediment from entering the wetland. Orange construction fencing shall be installed as needed to prohibit construction personnel and equipment from entering or performing work in these areas. Fence shall be maintained daily throughout the construction process. Upon project completion, the accumulated materials shall be removed and disposed of at an upland site, the sedimentation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.
15. All riprap shall be properly sized and graded based on wave action and velocity and shall consist of natural field stone or rock (free of paint, soil or other fines, asphalt, soluble chemicals, or organic material). Broken concrete is not allowed.

**Conditions Specific to the Dredging Activities Shown on Page 5 of the Approved Plans**

16. All dredge/excavated spoils including organic and inorganic soils, vegetation, and other material removed shall be placed on upland (non-wetland, non-floodplain or non-bottomland), prepared for stabilization, and stabilized with sod and/or seed and mulch in such a manner to prevent and ensure against erosion of any material into any waterbody, wetland, or floodplain.
17. Prior to commencement of any dredging authorized by this permit, the entire dredged area shall be enclosed with a turbidity curtain to prevent off-site siltation. The turbidity curtain shall be installed to extend from the bed of the waterbody to a point above the existing water's surface. The turbidity curtain shall be maintained for the duration of the project and shall be left in place after completion of dredging until all disturbed sediments have settled.
18. The permittee is cautioned that excessive dredging resulting in the impairment of the structural integrity of seawalls on neighboring riparian properties is subject to civil damage litigation.

**Conditions Specific to the Temporary Access Drive in Wetlands Shown on Page 6 of the Approved Plans**

19. The permittee shall provide a restoration plan, including a construction sequence and timeline, defining how any permitted wetland fill will be removed and the site restored. The permittee shall notify EGLE Water Resources Division prior to initiation of the restoration plan.
20. Prior to the initiation of any permitted construction activity, a sedimentation barrier shall be installed along the entire route of the disturbed wetland area and maintained in good working order until permanent stabilization and re-vegetation of all disturbed areas has occurred. The sedimentation barrier shall be removed after re-vegetation.
21. Construction must be undertaken and completed during the dry period of the wetland, or when frozen.
22. If the area does not dry out or freeze, construction shall be done on equipment mats to prevent compaction of the soil.
23. Upon completion of the project, the disturbed wetland areas shall be restored to the original contour elevation, revegetated and reseeded with species native to Michigan appropriate to the site, and mulched to prevent erosion. Pictures need to be submitted from during the growing season post restoration showing the area as wetland.

**Conditions Specific to the Authorized Intake Pipe and Box Culvert Shown on Page 5 and 6 of the Approved Plans**

24. No work shall be done in the stream during periods of above-normal flows except as necessary to prevent erosion.
25. The existing culverts shall be kept open to pass the stream flow during removal of the existing road fill.
26. The placement of the new culvert and the initial placement of fill in the stream shall be done immediately after removal of the existing culvert. The placement shall be conducted in such a manner that all flow is immediately passed through the new culverts, allowing the major placement of fill to be done in the dry or in still water where erosion and siltation will be minimized. The fill material used in this initial placement shall be washed gravel, coarse aggregate, or rock and shall be placed at both ends of the culvert to a level above normal water level before backfill material is placed.
27. During work shown on page 6 of the approved plans, and until the site is stabilized, the stream shall be blocked off with clean stone, gravel bags, or other acceptable materials, and the water pumped around the crossing. Water shall be discharged into the watercourse with appropriate treatments to remove suspended particles and to dissipate energy. An extra pump shall be kept on site in the event of failure.
28. The culvert shall be installed to align with the center line of the existing stream at both the inlet and outlet ends and must be buried below the stream bed to provide a natural channel substrate through the structure as shown on the approved plans.

29. If the project, or any portion of the project, is stopped and lies incomplete for any length of time other than that encountered in a normal work week, every precaution shall be taken to protect the incomplete work from erosion, including the placement of temporary gravel bag riprap, temporary seed and mulch, or other acceptable temporary protection.

### **Flood Relief Pumping Restrictions**

30. The Permittee shall stop pumping for any of the following reasons:
- a. Upper Crooked Lake level is 926 feet in elevation or lower.
  - b. Water levels at Cloverdale Lake outlet reach above 923.15 feet in elevation.
  - c. Water levels at Long Lake outlet reach above 908 feet in elevation.
  - d. Erosive forces are experienced at any of the outlet locations.
  - e. Stress on any of the impacted wetlands due to the pumping especially the bog system located on the opposite side of a private road (two track) crossing Delton Marsh.
  - f. Monitoring shows any adverse effects to any of the waterbodies within the receiving waters.

### **Monitoring**

31. Within 45 days from issuance of this permit, the permittee shall develop, submit for EGLE approval, and then implement plans for monitoring water chemistry, aquatic invasive species, impacts to wetlands especially the bog systems and zooplankton using EGLE approved methods, in the Wilkinson Lake, Cloverdale Lake, Long Lake, and the unnamed stream/Fall Creek. One calendar year of baseline requirements for these parameters are required before construction begins.
32. Permittee agrees to record/collect water surface elevation (WSE) readings at least once per week, while pumping and for one week after pumping ceases, at the following locations:
- a. Delton Marsh outlet at Stevens Road on the upstream end. Vertical measurement from the culvert crown to the WSE shall be taken at each monitoring event.
  - b. Within Delton Marsh on both sides of the private road (two track) crossing. Vertical measurement in reference to the road surface elevation shall be taken at each monitoring event.
  - c. Cloverdale Lake outlet at Guernsey Lake Road on the upstream end. Vertical measurement from the culvert crown to the WSE shall be taken at each monitoring event.
  - d. Long Lake outlet on the upstream end. Vertical measurement from the culvert crown to the WSE shall be taken at each monitoring event.
- Measurements shall be taken with the use of a rigid measuring device in units of one tenth of one foot. If ice is present directly below the culvert crown, it shall be removed before sampling current WSE. If no water is present under the ice, or the ice cannot be removed, this shall be noted and a measurement to the surface of the ice shall be taken. A photo shall be taken depicting the measurement to WSE.
33. The permittee shall perform inspections of the intake pumps and the discharge site into Delton Marsh daily. The contractor shall also perform weekly inspection of the pipe route.
34. The permittee shall monitor gauged stream flows at the outlet of the project to ensure that flow rates and velocities are such that erosion to receiving stream system is not occurring. If erosion potential is detected, then pumping shall cease until flows are to an acceptable level to protect downstream waters. Any erosion shall be noted, reported to EGLE, and a corrective action plan submitted.
35. Monitoring as required in permit conditions above may be performed either by the permittee or by a designated third-party representative of the permittee. For any required monitoring that is to be conducted by a third-party, the permittee agrees to submit written documentation of any monitoring agreement/arrangement with the third party.

36. Permittee shall conduct wetland inspection once per month at the Delton Marsh and Cloverdale chain bog wetlands for the duration of pumping. EGLE may establish additional wetland monitoring sites later based on monitoring information submitted and site inspections. Progression and encroachment of any project-related surface water into these sensitive wetlands, as well as first signs of vegetation stress during the growing season, shall be documented. Monitoring shall include:
- a. A rapid general assessment of vegetation, soil saturation, and current water levels and inundation distribution at and near each monitoring site.
  - b. Photo documentation from permanent photo station in cardinal directions, orientated towards the ground surface (i.e., a photo view of ground surface at a shallow viewing angle that shows approximately 5 feet from the plot center outward to potentially 30+ feet from the plot center)
  - c. Staff gauge measurement of inundation (i.e., water depth) at plot center point, as well as water depth measurements at the base of all nearby woody vegetation (i.e., trees and large shrubs within 15-ft radius). The permittee shall install staff gauges for WSE readings and submit documentation of their locations on a map in site plan view and shall remain in the same locations after installation. Reports shall show any changes in WSE in collected data and cross section and include elevations of the existing wetland ground surface and previously collected water levels.
  - d. Evidence of stunted or stressed woody or herbaceous vegetation
  - e. Summary of any other relative changes (i.e., changes noted since previous wetland monitoring inspection and since commencement of the project).
- The permittee shall hire a qualified wetland professional to conduct the wetland monitoring. A concise report of the wetland monitoring shall be provided to MDEQ no longer than 3 business days after the date of the wetland monitoring.

Upon signing by the permittee named herein, this permit must be returned to EGLE, Water Resources Division, 350 Ottawa Avenue NW Unit 10, Grand Rapids, MI 49503-2341 for final execution. This permit shall become effective on the date of EGLE representative's signature. Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.

\_\_\_\_\_  
Permittee Date

\_\_\_\_\_  
Printed Name and Title of Permittee

Issued By: \_\_\_\_\_  
Kelsey Krupp  
Grand Rapids District Office  
Water Resources Division  
616-401-1201

- cc: Hope Township Clerk  
Barry Township Clerk  
Barry County Drain Commissioner  
Barry County Clerk  
Brian Cenci, Agent  
Nick DeSimpelare, Agent  
EGLE, Audrie Kirk  
EGLE, Amy Berry

# **APPENDIX II**

**Low-Lying Structures near Upper Crooked Lake**





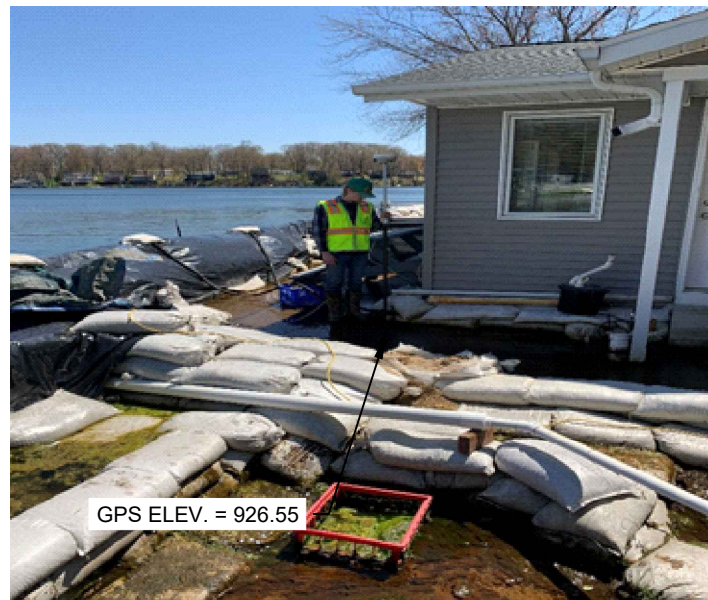
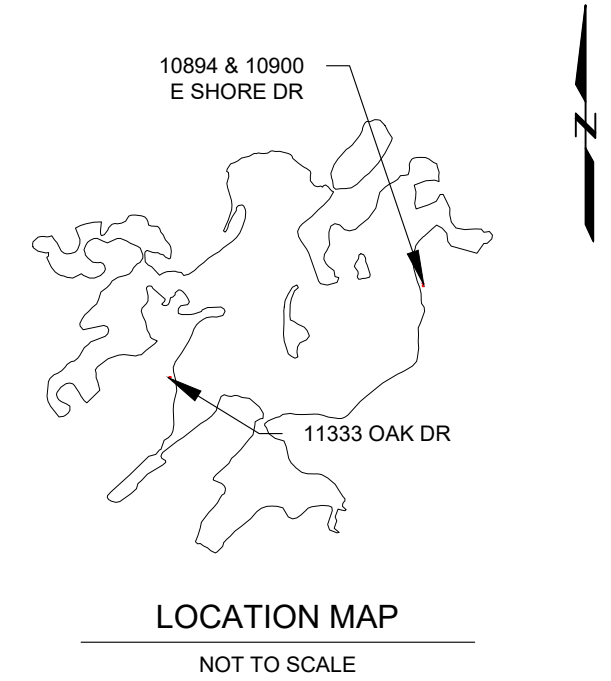
11333 OAK DR



10894 E. SHORE DR



10900 E. SHORE DR



**SOURCE:**

1. LAKE BOTTOM ELEVATIONS MEASURED VIA GPS SURVEY 5/13/20
2. UPPER CROOKED LAKE WSEL (5/12/20) = 927.98
3. ELEVATION REFERENCE DATUM: NAVD88
4. ELEVATION UNITS: FEET ABOVE MEAN SEA LEVEL



CORRECTION REQUEST RESPONSE EXHIBITS  
 WATSON DRAIN DRAINAGE DISTRICT  
 CLOVERDALE DRAIN DRAINAGE DISTRICT  
 BARRY COUNTY DRAIN COMMISSIONER  
 220 W. STATE ST. HASTINGS, MI 49058

**GEI** Consultants  
 Project 2000140

UPPER CROOKED LAKE  
 LOW-LYING PROPERTIES  
 6/24/2020 EXHIBIT 2