



Renewable World Energies, LLC
100 State Street, P.O. Box 264, Neshkoro, WI 54960 USA
Tel (855) 994-9376 Fax (920) 293-4100
Web www.renewableworldenergies.com

August 7, 2012

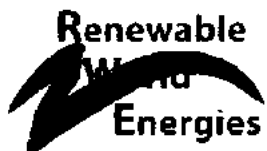
Mr. John Zygaj P.E., Regional Engineer
Federal Energy and Regulatory Commission
230 Dearborn Street, Suite 3130
Chicago, IL 60604

RE: Cataract Hydroelectric Project 10854
UP Hydro, LLC
Cataract Impoundment Drawdown

Dear Mr. Zygaj:

On behalf of UP Hydro, LLC Renewable World Energies, LLC (RWE) is submitting documentation of consultation with the Michigan Department of Natural Resources (MDNR/MDEQ), Michigan State Historic Preservation Office (MSHPO), Reservoir Drawdown Plan and the Drawdown Permit issued from the MDNR/MDEQ. The Drawdown Plan dated March 22, 2012 was developed with the cooperation and guidance of Mr. Paul Piszcek and Mr. Kyle Kruger of MDNR. It is RWE's intent to begin the drawdown of the impoundment as scheduled in the drawdown plan and immediately upon authorization from the Federal Energy Regulatory Commission (FERC) in accordance with the stipulations set forth by the permit. Inspection of the dam and routine concrete repairs if found will begin when the drawdown is complete. Re-fill of the impoundment will begin after the inspection and repairs are complete. The schedule may change slightly depending upon the timing of FERC's response to this submittal. RWE will keep the agencies updated and informed during the drawdown and repairs. RWE is requesting expedience (15 days or less) in this matter.

If you have any questions concerning this submittal, please contact Mr. Gary Rast at the Renewable World Energies, LLC offices @ 855-994-9376 Ext 105. He can also be reached by e-mail at grast@rwehydro.com.



Sincerely,
Renewable World Energies, LLC
Agent for Licensee

A handwritten signature in black ink, appearing to read "J. Kreuzscher", is written over the printed name.

Mr. Jason Kreuzscher
Vice President, Operations

Attachments: MDNR/MDEQ Permit Dated August 02, 2012
MDEQ Public Notice Dated June 20, 2012
MSHPO Determination of No Adverse Effect Dated June 18, 2012
Section 106 Application Dated May 17, 2012
Joint Permit 301 Application Dated May 7, 2012
Cataract Drawdown Plan Dated March 22, 2012

Cc: Corporate, RWE
Mr. Kyle Kruger, MDNR
Mr. Paul Piszcek, MDNR
Mr. Vincent Cavalieri, USFWS
Mr. Jamie Bettaso, USFWS
Mr. Brian Grennell, MSHPO
Mr. Jay Parent, MDEQ
Mr. Tom Gordon, RWE



Michigan Department of Environmental Quality-Water Resources Division

NOTICE OF COMPLETION

I hereby give notice to the Michigan Department of Environmental Quality that the project, which was permitted under applicable statute provisions, has been completed.

PERMIT NUMBER 12-52-0030-P	COUNTY Marquette
PROJECT COMPLETION DATE	AREA CODE & TELEPHONE NUMBER
PERMITTEE'S SIGNATURE	

Non-compliance with reporting requirements may result in monetary penalty.
Completion of this form is required under the authority of the applicable Parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

EQP 2731-1 (Rev. 7/2011)



Notice of Authorization

Permit Number 12-52-0030-P

Issued: 08/02/2012

Expiration Date: 08/02/2017

The Michigan Department of Environmental Quality, Water Resources Division, P.O. Box 30458, Lansing, Michigan 48909-7958, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and specifically:

- Part 31, Floodplain Regulatory Authority of the Water Resources Protection.
- Part 301, Inland Lakes and Streams.
- Part 303, Wetlands Protection.
- Part 315, Dam Safety.
- Part 323, Shorelands Protection and Management.
- Part 325, Great Lakes Submerged Lands.
- Part 353, Sand Dunes Protection and Management.

Authorized activity:

Drawdown the Cataract Basin 7.4 ft at a maximum rate of .5 ft per day, inspect dam and perform repairs as needed. Refill impoundment at a maximum rate of .5 ft per day.

All activities to be conducted in accordance with the attached plans and conditions in this permit dated August 1, 2012.

To be conducted at property located in: Marquette County, Waterbody: Middle Branch Escanaba River, Section 11, Town 45N, Range 26W, Forsyth Township.

Permittee: UP Hydro, LLC
100 State Street
PO Box 264
Neshkoro, WI 54960

A handwritten signature in black ink, appearing to read 'Jay Parent', written over a white background.

Jay Parent
Water Resources Division
906-346-8300

*This notice must be displayed at the site of work.
Laminating this notice or utilizing sheet protectors is recommended.*

Please refer to the above Permit Number with any questions or concerns.



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER RESOURCES DIVISION
PERMIT**

ISSUED TO:

UP Hydro, LLC
100 State Street
PO Box 264
Neshkoro, WI 54960

Permit No.	12-52-0030-P
Issued	August 2, 2012
Extended	
Revised	
Expires	August 2, 2017

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and specifically:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Part 301, Inland Lakes and Streams | <input type="checkbox"/> Part 315, Dam Safety |
| <input type="checkbox"/> Part 325, Great Lakes Submerged Lands | <input type="checkbox"/> Part 323, Shorelands Protection and Management |
| <input type="checkbox"/> Part 303, Wetlands Protection | <input type="checkbox"/> Part 353, Sand Dunes Protection and Management |
| <input type="checkbox"/> Part 31, Floodplain/Water Resources Protection | |

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

Permitted Activity:

Drawdown the Cataract Basin 7.4 ft at a maximum rate of .5 ft per day, inspect dam and perform repairs as needed. Refill impoundment at a maximum rate of .5 ft per day.

All activities to be conducted in accordance with the attached plans and conditions in this permit dated August 1, 2012.

Water Course Affected: Middle Branch Escanaba River

Property Location: Marquette County, Forsyth Township, Section 11 Town/Range 45N, 26W

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, Water Resources Protection, 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 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 Act 53 of the Public Act of 1974 and comply with each of the requirements of that Act.
- 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 the MDEQ within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of the MDEQ.
- 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, and wetland).

JP Hydro, LLC

Permit No. 12-52-0030-P

- M. In issuing this permit, the MDEQ 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, the MDEQ 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 representatives of the permittee undertaken in connection with this 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, the MDEQ 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 the MDEQ. 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 the MDEQ prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to the MDEQ to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ 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.
- 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 waterbody 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 MDNR, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:

Prior to initiating construction, authorized by this permit, 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 this permit are held responsible to ensure the project is constructed in accordance with all drawings and specifications contained in this permit. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by this permit.

The drawdown is not authorized to begin prior to June 15.

Refill is to begin as soon as repairs are complete but no later than December 1. A minimum outflow to the river of 8 cfs shall be maintained during refilling.

Notification of the drawdown shall be published in the local newspaper(s) 20 days prior to the beginning date.

All highly erodable areas shall be identified and protected with temporary erosion controls such as silt fence, riprap, and geotextile fabric.

The applicant will monitor the drawdown for fish and mussel stranding and rescue. A report documenting this activity shall be prepared and made available to the MDEQ within ten (10) days of the drawdown completion for review and inclusion into the subject file.

During drawdown, a ¼ mesh screen is to be placed over the outfall to prevent introduction of coolwater fish species to the coldwater habitat downstream of the impoundment.

UP Hydro, LLC

Permit No. 12-52-0030-P

Unless specifically stated under the "Permitted Activity" of this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the waterbody are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.

In issuing this permit, the MDEQ has relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.

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.

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 representatives of the permittee, undertaken in connection with this 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.

Noncompliance with these terms and conditions, and/or the initiation of other regulated activities not specifically authorized by this permit shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ 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.


If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plan from the MDEQ. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.

This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to accept transfer of the permit. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.

If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plan from the MDEQ. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.

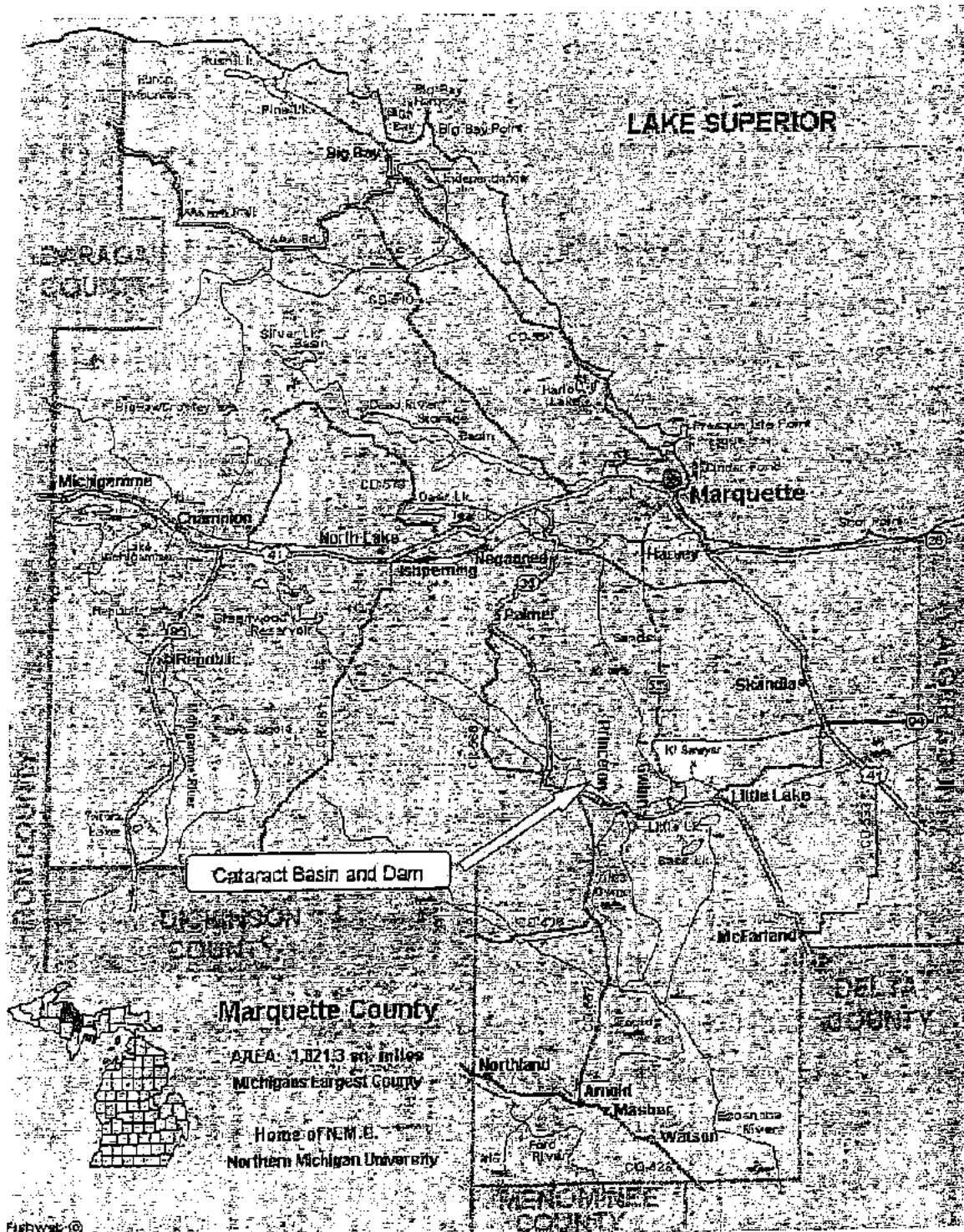
This permit is being issued for the maximum time allowed under Part 301, Inland Lakes and Streams and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended, including all permit extensions allowed under the administrative rules R 281.813 and R 281.923. Therefore, no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning at the date of issuance.

By:



Jay Parent
Water Resources Division
906-346-8557

cc: Forsyth Township Clerk
Marquette CEA



Project Location Map/Marquette County

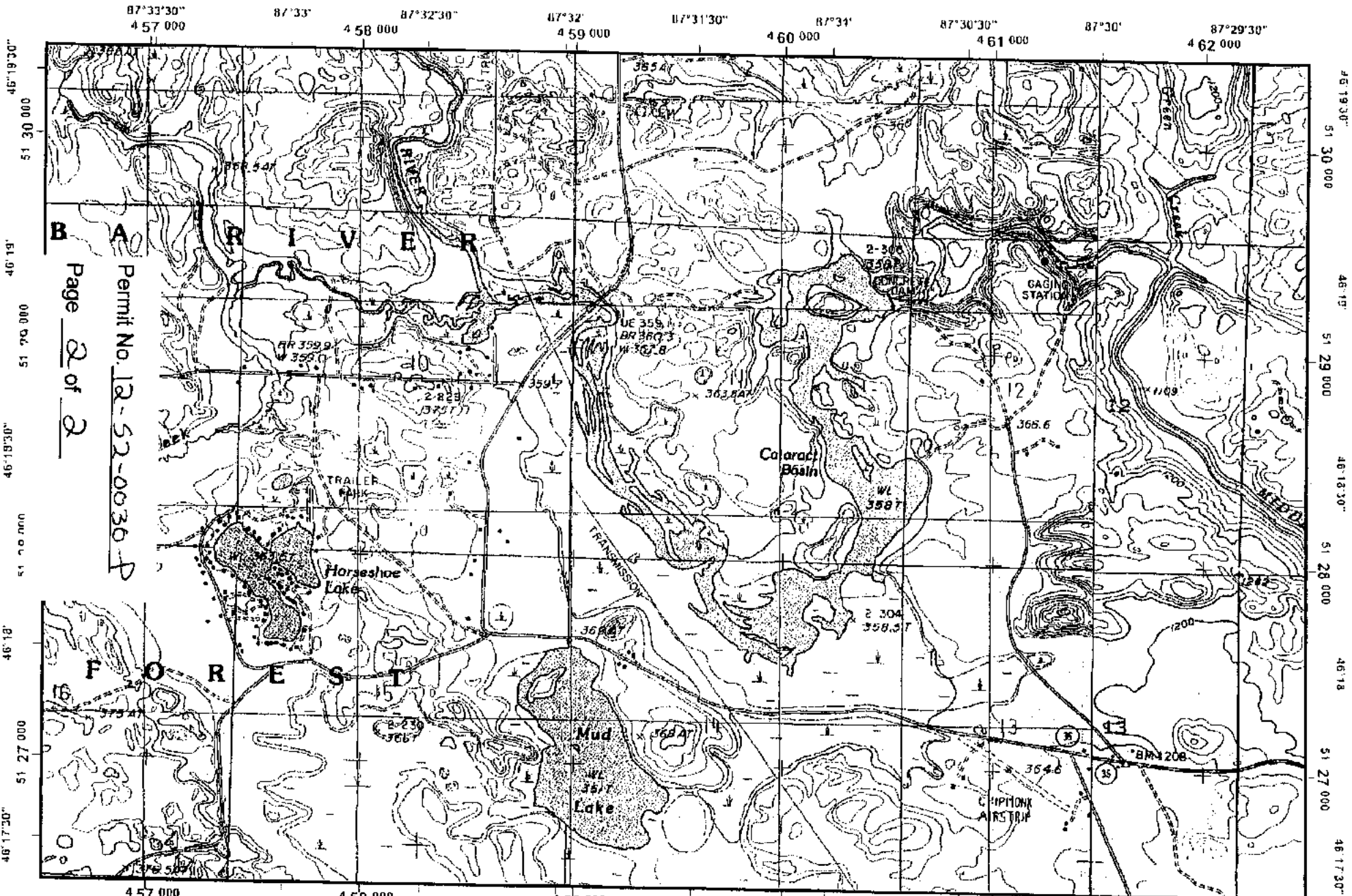
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Permit No. 12-52-0030-P

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 A
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Universal Transverse Mercator (UTM) Projection Zone 18
 North American Datum of 1983
 1000 meter UTM / USNG / MGRS
 Grid Zone Designation 18E
 100 000-m Spheroid US

1:24000 scale

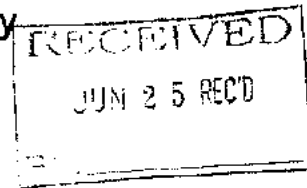


**1:24000 Cataract Bas
Topographic Map**

Meretric north arrow of 34W at center of map
 on March 11, 2011

State of Michigan
Department of Environmental Quality

Water Resources Division
 420 Fifth Street
 Gwinn, MI 49841-3004
 906-346-8300



File Number 12-52-0030-P

Date: June 20, 2012

PUBLIC NOTICE

UP Hydro, LLC, P.O. Box 264, Neshkoro, WI 54960, has applied to this office for a permit under authority of Part 301, Inland Lakes and Streams, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The applicant proposes to drawdown the Cataract Basin impoundment on the Middle Branch of the Escanaba River for the purpose of dam inspection and concrete repairs if needed. The impoundment will be drawn down 7.4 vertical feet at a rate of 6 inches per day during the summer. After inspection and/or repairs the impoundment will be allowed to refill at a rate of 6 inches per day during the fall. The project is located at 1200 North Cataract Road in T45N, R26W, Section 11, Forsyth Township, Marquette County, Michigan, in accordance with plans attached to this notice.

THIS NOTICE IS NOT A PERMIT

The proposed project may also be regulated by one or more additional parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) that are administered by the Water Resources Division (WRD). The requirements of all applicable parts are considered in determining if it is in the public interest to issue a permit.

When a permit application is received requesting authorization to work in or over the inland waters of the State of Michigan, pursuant to Part 301, Inland Lakes and Streams, of the NREPA, the NREPA provides that the department submit copies for review to the department of public health, the city, village or township, and the county where the project is to be located, the local soil conservation district, any local watershed council organized under Part 311, Local River Management, and the local port commission. Additional notification is provided to certain persons as required by statute or determined by the department.

Those persons wanting to make comments on the proposed project shall furnish this office with their written comments no later than 20 days from the date of this notice. Written comments will be made part of the record and should reference the above file number. Objections must be factual, specific, and fully describe the reasons upon which any objection is founded. Unless a written request is filed with the department within the 20-day public comment period, the department may make a decision on the application without a public hearing. The determination as to whether a permit will be issued or a public hearing held will be based on evaluation of all relevant factors defined in Sections 30106 and 30311, or permit criteria defined by other appropriate parts of the NREPA. These Sections address the effect of the proposed work on the public trust or interest including navigation, fish, wildlife, and water quality among other criteria. Public comments received will also be considered.

cc: UP Hydro, LLC, applicant
 DNR, Wildlife, Newberry
 Marquette County Clerk
 Marquette County Drain Commissioner
 see file for adjacent property owners

DNR, Fisheries, Escanaba
 Marquette County Health Department
 Forsyth Township Clerk
 Marquette Conservation District



U.S. Army Corps of Engineers www.lre.usace.army.mil

Michigan Department of Environmental Quality www.mi.gov/jointpermit



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Guinn - Log Permit

DEQ File Number

12-53-0030-1

Fee received \$

5500 CIC 1133

AGENCY USE	Previous USACE File Number
	USACE File Number

Date Received

Validate that all parts of this checklist are submitted with the application package. Fill out application and additional pages as needed.

- All items in Sections 1 through 9 are completed.
- Project-specific Sections 10 through 20 are completed.
- Dimensions, volumes, and calculations are provided for all impact areas.
- All information contained in the headings for the appropriate Sections (1-20) are addressed, and identified attachments (➔) are included.
- Map, site plan(s), cross sections; one set must be black and white on 8 1/2 by 11 inch paper; photographs.
- Application fee is attached.

1 Project Location Information For Latitude, Longitude, and TRS info anywhere in Michigan see www.mcgl.state.mi.us/wetlands/

Project Address (road, if no street address) <i>1200 North Cataract Road</i>	Zip Code <i>49841</i>	Municipality (Township/Village/City) <i>Forsyth Township</i>	County <i>Marquette</i>
Property Tax Identification Number(s) <i>N/A</i>	Latitude <i>45.3167 N</i>	Township/Range/Section (TRS) <i>T 45 N or S; R 26 E or W</i>	
Subdivision/Plat and Lot Number <i>N/A</i>	Longitude <i>-87.5000 W</i>	Sec <i>11</i> OR Private Claim # _____	

2 Applicant and Agent Information

Owner/Applicant (individual or corporate name) <i>UP Hydro, LLC</i>	Agent/Contractor (firm name and contact person)
Mailing Address <i>100 State Street PO Box 264</i>	Mailing Address
City <i>Neshkoro</i> State <i>WI</i> Zip Code <i>54960</i>	City State Zip Code
Contact Phone Number Fax <i>855-994-9378 x 105 920-293-4900</i>	Contact Phone Number Fax
Email	E-mail
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? ➔ If no, attach letter(s) of authorization from all property owners including the owner of the disposal site.	
Property Owner's Name (If different from applicant) <i>N/A</i>	Mailing Address
Contact Phone Number	City State Zip Code

3 Project Description

Project Name <i>Cataract Hydro Project</i>	Preapplication File Number <i>- N/A - -P</i>
Name of Water body <i>Middle Branch Escanaba River</i>	Date project staked/flagged <i>N/A</i>

The proposed project is on, within, or involves (check all that apply)		Project Use
<input checked="" type="checkbox"/> an inland lake (5 acres or more)	<input type="checkbox"/> a Great Lake or Section 10 Waters	<input type="checkbox"/> private
<input type="checkbox"/> a pond (less than 5 acres)	<input checked="" type="checkbox"/> a wetland	<input type="checkbox"/> commercial
<input checked="" type="checkbox"/> a stream, river, ditch or drain	<input checked="" type="checkbox"/> a 100-year floodplain	<input type="checkbox"/> public/government
<input type="checkbox"/> a legally established County Drain	<input checked="" type="checkbox"/> a dam	<input type="checkbox"/> project is receiving federal/state transportation funds
Date Drain was established	<input type="checkbox"/> a designated high risk erosion area	<input type="checkbox"/> Wetland Restoration
<input type="checkbox"/> a channel/canal	<input type="checkbox"/> a designated critical dune area	<input checked="" type="checkbox"/> other <i>Hydroelectric Generation</i>
<input checked="" type="checkbox"/> 500 feet of an existing water body	<input type="checkbox"/> a designated environmental area	

Indicate the type of permit being applied for: General Permit Minor Project Individual (All other projects.) ➔ See Appendix C.

Written Summary of All Proposed Activities *The reason for the drawdown is for the inspection of the dam & routine repairs to the concrete structures if needed based upon the inspection.*

Construction Sequence and Methods *Drawdown is schd. to start June 15, 2012 or upon approval if later than June 15th. Drawdown will be no more than 6" per day & should take 15 days. Inspect dam - Make repairs as needed & time allows - Refill start is October 16th and ends October 31st. However, the refill will not exceed the inflow.*

U.S. Army Corps of Engineers www.lre.usace.army.milMichigan Department of Environmental Quality www.mi.gov/jointpermit

4 Project Purpose, Use and Alternatives <i>Attach additional sheets as necessary.</i>					
Describe the purpose of the project and its intended use; include any new development or expansion of an existing land use. <i>Drawdown the impoundment to inspect the dam & make routine concrete repairs if needed based upon the inspection.</i>					
Describe the alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative locations, project layout and design, and construction technologies. For utility crossings include alternative routes and construction methods. <i>Divers are the alternative for inspection only. For repairs a sheet pile coffer dam would be needed. This would not be feasible based upon environmental concerns, safety considerations, and cost.</i>					
5 Locating Your Project Site <i>Attach a legible black and white map with a North arrow.</i>					
Names of roads of closest intersection <i>CR-577 and M-35</i>					
Directions from main intersection to the project site, with distances from the best and nearest visible landmark and water body <i>East on M-35 0.2 miles. Left (North) on Cataract Rd. 1.4 miles. Road name changes CR-Eaf 0.3 miles.</i>					
Description of buildings on the site (<i>color; 1 or 2 story, other</i>) <i>No buildings - Concrete Gravity Dam</i>			Description of adjacent landmarks or buildings (<i>address; color; etc</i>) <i>None visible from site.</i>		
How can your site be identified if there is no visible address? <i>Project Identification Sign & GPS Coordinates</i>					
6 Easements and Other Permits					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property? * If yes, attach a copy. Provide copies of court orders and legal lake levels if applicable.					
List all other federal, interstate, state, or local agency authorizations including required assurances for Critical Dune Area projects.					
Agency	Type of Approval	Number	Date Applied	Date approved /denied	Reason for denial
<i>FERC</i>	<i>Written Order</i>		<i>To be done after Drawdown Plan & Permit Approval</i>		
7 Compliance					
If a permit is issued, when will the activity begin? (M/D/Y) <i>6/15/12</i>			Proposed completion date (M/D/Y) <i>10/30-31/12</i>		
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Has any construction activity commenced or been completed in a regulated area? * If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s).					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Were the regulated activities conducted under a DEQ and/or USACE permit? * If Yes, list the permit numbers					
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Are you aware of any unresolved violations of environmental law or litigation involving the property? * If Yes, attach explanation.					
8 Adjacent Property Owners <i>Provide current mailing addresses. Attach additional sheets/labels for long lists.</i>					
<input type="checkbox"/> Established Lake Board	Contact Person	Mailing Address	City	State and Zip Code	
<input type="checkbox"/> Lake Association					
List all adjacents. If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.					
Property Owner's Name	Mailing Address	City	State and Zip Code		
<i>See attached list-Appendix A</i>	<i>See attached list-Appendix A</i>	<i>See attached list-Appendix A</i>	<i>See attached list-Appendix A</i>		
9 Applicant's Certification <i>Read carefully before signing.</i>					


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DNRE/WHD
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U.S. Army Corps of Engineers www.lre.usace.army.milMichigan Department of Environmental Quality www.mi.gov/jointpermit

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the DEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

<input type="checkbox"/> Property Owner <input type="checkbox"/> Agent/Contractor <input checked="" type="checkbox"/> Corp. or Public Agency / Title	Printed Name Gary Rast Regulatory/Compliance Manager	Signature 	Date 5/4/12
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**15 Stream, River, or Drain Construction, Relocation and Enclosure Activities**

- Complete Section 10C for riprap activities.
- If side casting or other proposed activities will impact wetlands or floodplains, complete Sections 12 and 13, respectively.
 - ◆ Provide a scaled overall site plan showing existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures and land change activities.
 - ◆ Provide scaled cross-section (elevation) drawings necessary to clearly show existing and proposed conditions.
 - ◆ For activities on legally established county drains, provide original design and proposed dimensions and elevations.

Stream Information

Water elevation (ft) datum NGVD 29 NAVD 88 IGLD 85 (Great Lakes coastal areas) other

◆ Show elevation on plans with description.

Dimensions (ft) of existing stream/drain channel (ft) length width depth

Existing channel average water depth in a normal year (ft)

Proposed Activity enclosure improvement maintenance new drain relocation wetlands otherIf an enclosed structure is proposed, check material type concrete corrugated metal plastic other

Dimensions (ft) of the structure: diameter length Volume of fill (cu yds)

Will old/enclosed stream channel be backfilled to top of bank grade? No Yes

Length of channel to be abandoned (ft) Volume of fill (cu yds)

Dimensions (ft) of improved, maintained, new, relocated or wetland stream/drain channel. Volume of dredge/excavation (cu yds)

length width depth

How will slopes and bottom be stabilized? Proposed side slopes (vertical / horizontal)

Spoils Disposal

Dredged or excavated spoils will be placed on-site landfill USACE confined disposal facility other upland off-site

For disposal, provide a ◆ Detailed spoils disposal area location map and site plan with property lines.

◆ Letter of authorization from property owner of spoils disposal site, if disposed off-site.

16 Drawdown of an Impoundment

- If wetlands will be impacted, complete Section 12.

Type of drawdown over winter temporary one-time event annual event permanent (dam removal) otherReason for drawdown *Inspection & routine repairs to concrete structures of the dam.*Has there been a previous drawdown? No YesIf Yes, provide date (M/D/Y) *The Licensee believes there may have been one done in the past give the age of the dam. However, the date is not known.*Previous DEQ permit number, if known
UnknownDoes waterbody have established legal lake level? No Yes Not SureDam ID Number, if known
FERC #10854

Extent of vertical drawdown (ft) 7.4 Ft.

Impoundment design head (ft) 30

Number of adjacent or impacted property owners 45

Date drawdown would start (M/D/Y) 6/15/12

Date drawdown would stop (M/D/Y) 6/30/12

Rate of drawdown (ft/day) .5 FL/Day

Date refilling would start (M/D/Y) 10/16/12

Date refill would end (M/D/Y) 10/31/12

Rate of refill (ft/day) .5 FL/Day - Not to exceed inflow.

Type of outlet discharge structure to be used
 surface bottom mid-depth

Impoundment area at normal water level (acres) 180

Sediment depth behind impoundment discharge structure (ft) Unknown

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U.S. Army Corps of Engineers www.lra.usace.army.milMichigan Department of Environmental Quality www.mi.gov/jointpermit**17 Dam, Embankment, Dike, Spillway, or Control Structure Activities (See Sample Drawing 15)**

- For more information go to www.mi.gov/damsafety. If wetlands will be impacted, complete Section 12.
- Information on removing a dam is available at www.mi.gov/damsafety and following the Related Link – DEQ Dam Removal web site.
 - ◆ Attach site-specific conceptual plans for construction of a new dam, reconstruction of a failed dam, or enlargement of an existing dam for resource impact review. Detailed engineering plans are required once the activity has been determined to be permissible.
 - ◆ Attach detailed signed and sealed engineering plans for a Part 315 dam repair, dam alteration, dam abandonment, or dam removal.
 - ◆ Part 315 Dam Safety application fees are added to all other application fees.

Proposed Activity abandonment alteration enlargement of an existing dam
 removal repair reconstruction of a failed dam
 new dam construction other *Drawdown for inspection and concrete maint.*

Dam ID Number, if known
FERC #10854

Type of outlet discharge structure surface bottom mid-depth

Will proposed activities require a drawdown of the waterbody to complete the work? No Yes ◆ If Yes, complete Section 16.

Does the structure allow complete drainage of the waterbody? No Yes

Impoundment size (acres) **180**

Benchmark elevation (ft) *Unknown*

Datum NGVD 29 NAVD 88 Local

Describe the benchmark and show on the plans *N/A*

other *MSL*

Dredging/excavation volume (cu yd) *N/A*

Fill volume (cu yd) *N/A*

Riprap volume (cu yd) *N/A*

Have you engaged the services of a Licensed Professional Engineer? No Yes

Engineer's Name

Registration Number

Mailing Address

Thomas N. Gordon

6201029321

RWE Operations

1001 Stephenson Street

Norway, MI 49870

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Will a water diversion during construction be required? No Yes

If Yes, describe how the stream flow will be controlled through the dam construction area during the proposed project activities:

Complete the following for a new dam, reconstruction of a failed dam or enlargement of an existing dam

Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam.

Embankment top elevation (ft)

Streambed elevation at downstream embankment toe (ft)

Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)

Embankment dimensions

length (ft)

top width (ft)

bottom width (ft)

slopes

(vertical / horizontal)

Upstream

Downstream

Proposed normal pool elevation (ft)

Impoundment flood elevation (ft)

Maximum vertical drawdown capability (ft)

Attach operational procedure of the proposed structure, if available.

Have soil borings been taken at dam location?

No Yes

◆ If Yes, attach results.

Will a cold water underspill be provided?

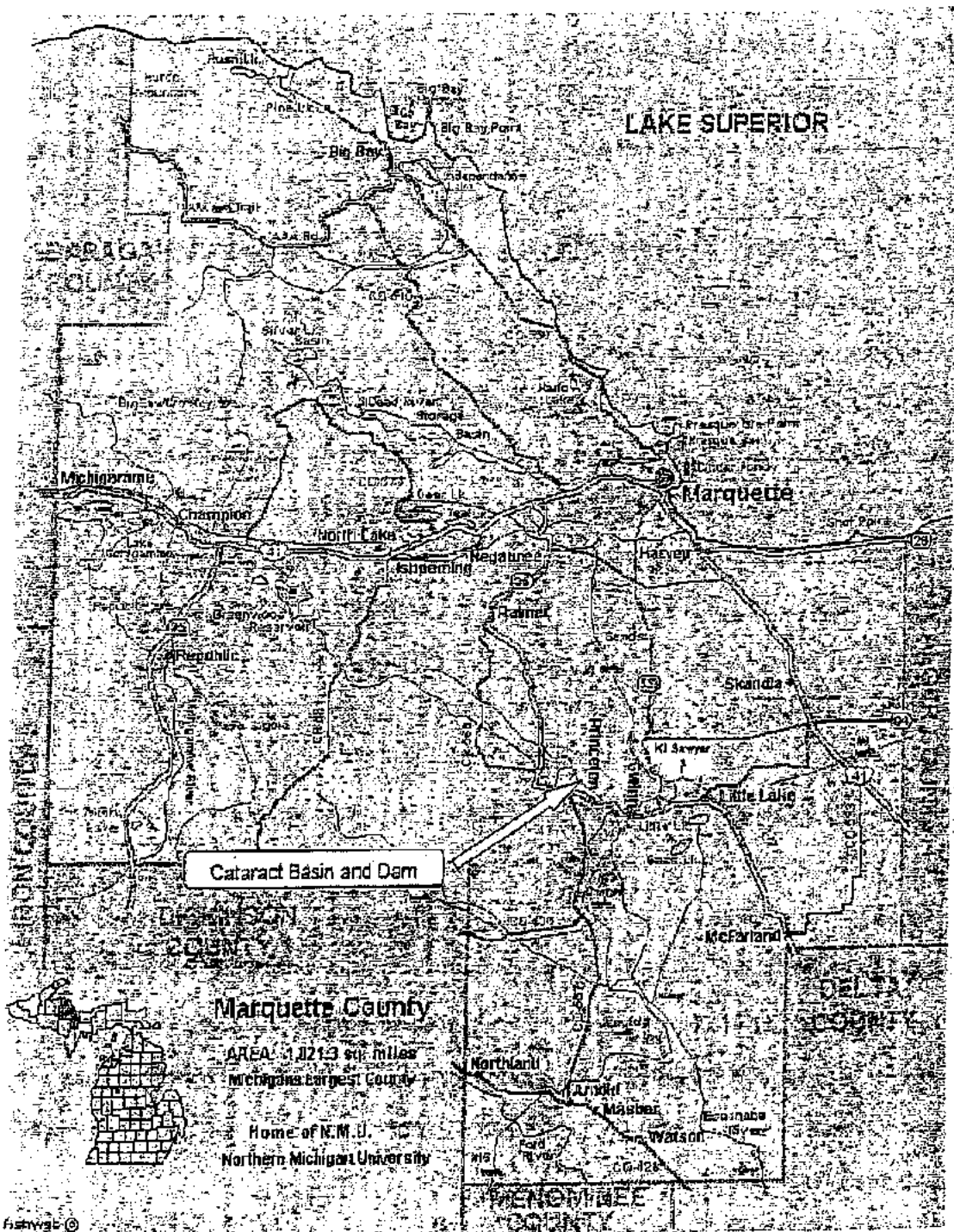
No Yes

◆ If Yes, provide the invert elevation (ft)

Do you have flowage rights to all proposed flooded property at the design flood elevation?

No Yes

◆ If No, provide a letter of authorization from the property owner.

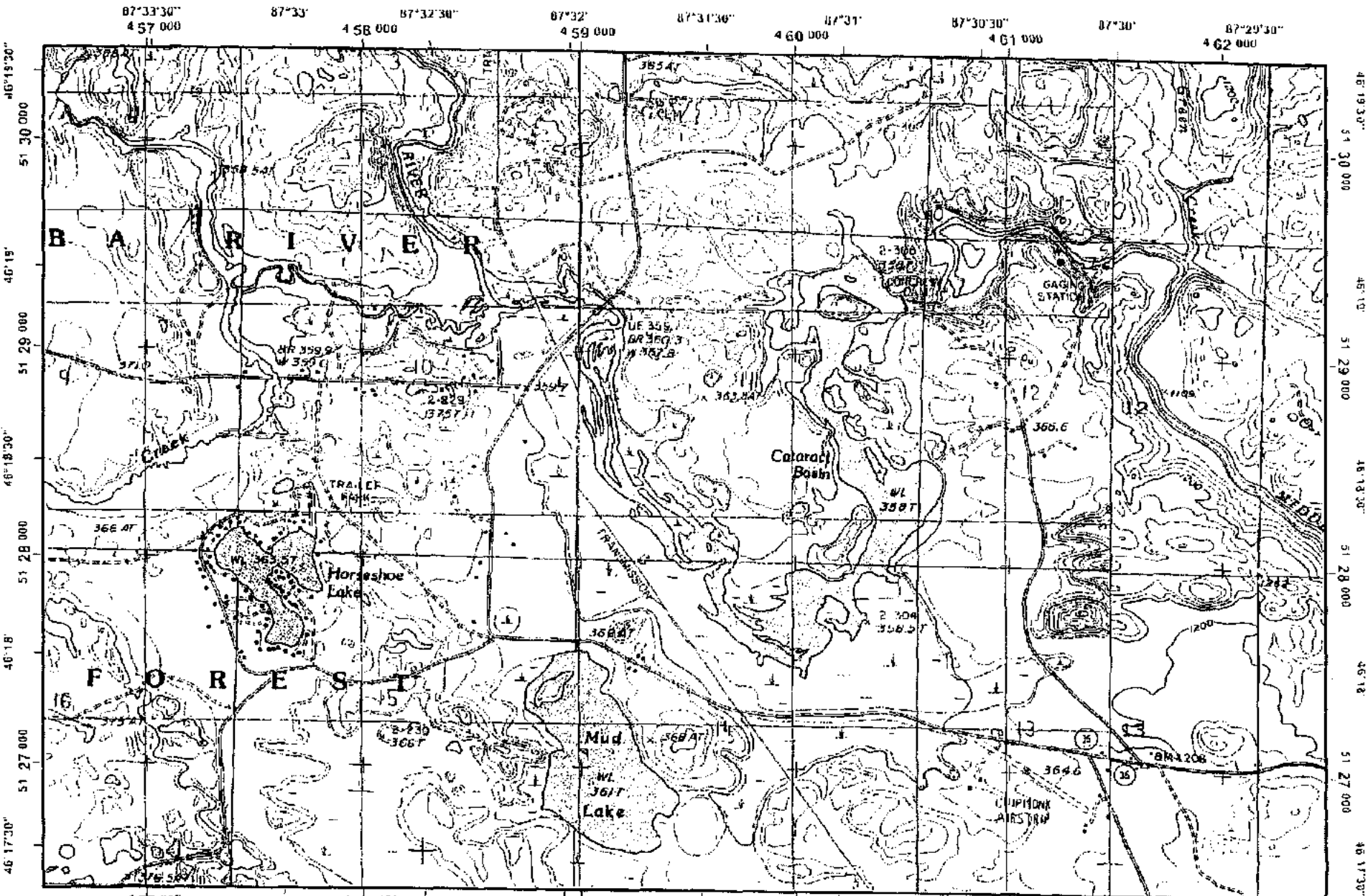


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Project Location Map/Marquette County

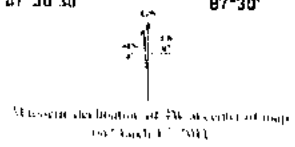
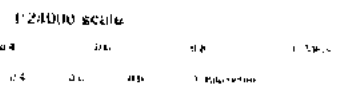


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Universal Transverse Mercator (UTM) Projection Zone 18N
 North American Datum of 1983
 1000 meter UTM / USNG / MGRS
 Grid Zone Designation: 18N
 100,000m Squares DS



1:24000 Cataract Basin
 Topographic Map



JUN 25 2012

RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
MICHIGAN STATE HOUSING DEVELOPMENT AUTHORITY
STATE HISTORIC PRESERVATION OFFICE

GARY HEIDEL
EXECUTIVE DIRECTOR

June 18, 2012

HENRY ECTON
FEDERAL ENERGY REGULATORY COMMISSION
888 FIRST STREET NE
WASHINGTON DC 20426

RE: ER-880646 Impoundment Drawdown, Inspection & Repair - Cataract Hydroelectric Project,
(FERC 10854), 1200 North Cataract Road, Section 11, T45N, R26W, Forsyth
Township, Marquette County (FERC)

Dear Mr. Ecton

Under the authority of Section 106 of the National Historic Preservation Act of 1966, as amended, we have reviewed the above-cited undertaking at the location noted above. Based on the information provided for our review, it is the opinion of the State Historic Preservation Officer (SHPO) that the effects of the proposed undertaking do not meet the criteria of adverse effect [36 CFR § 800.5(a)(1)]. Therefore, the project will have no adverse effect [36 CFR § 800.5(b)] on the Escanaba River Hydroelectric Project (Cataract Hydroelectric Project), which appears to meet the criteria for listing in the National Register of Historic Places.

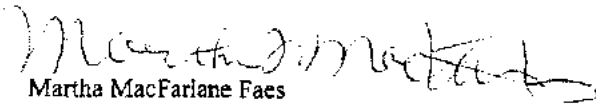
The views of the public are essential to informed decision making in the Section 106 process. Federal Agency Officials or their delegated authorities must plan to involve the public in a manner that reflects the nature and complexity of the undertaking, its effects on historic properties and other provisions per 36 CFR § 800.2(d). We remind you that Federal Agency Officials or their delegated authorities are required to consult with the appropriate Indian tribe and/or Tribal Historic Preservation Officer (THPO) when the undertaking may occur on or affect any historic properties on tribal lands. In all cases, whether the project occurs on tribal lands or not, Federal Agency Officials or their delegated authorities are also organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties per 36 CFR § 800.2(c).

This letter evidences FERC's compliance with 36 CFR § 800.4 "Identification of historic properties" and 36 CFR § 800.5 "Assessment of adverse effects", and the fulfillment of FERC's responsibility to notify the SHPO, as a consulting party in the Section 106 process, under 36 CFR § 800.5(c) "Consulting party review".

The State Historic Preservation Office is not the office of record for this undertaking. You are therefore asked to maintain a copy of this letter with your environmental review record for this undertaking. If the scope of work changes in any way, or if artifacts or bones are discovered, please notify this office immediately.

If you have any questions, please contact Brian Grennell, Cultural Resource Management Specialist, at (517) 335-2721 or by email at grennellb@michigan.gov. Please reference our project number in all communication with this office regarding this undertaking. Thank you for this opportunity to review and comment, and for your cooperation.

Sincerely,


Martha MacFarlane Faes
Deputy State Historic Preservation Officer

MMF:SAT:ROC:bgg

copy: Gary Rast, Renewable World Energies, LLC





Renewable World Energies, LLC
100 State Street, P.O. Box 264, Neshkoro, WI 54960 USA
Tel (855) 994-9376 Fax (920) 293-4100
Web www.renewableworldenergies.com

May 17, 2012

State Historic Preservation Office
Environmental Review Office
Michigan Historical Center
702 W. Kalamazoo Street
PO Box 30740
Lansing, MI 48909-8240
Attn: Mr. Brian Grennell

**Re: Cataract Hydroelectric Project FERC # 10854
Upper Peninsula Hydro, LLC
Application for Section 106 Review**

Dear Mr. Grennell,

On behalf of Upper Peninsula Hydro, LLC (Licensee) Renewable World Energies, LLC (RWE) is submitting an Application for section 106 Review for the Cataract Hydroelectric Project located in Marquette County, MI. We are requesting your review and comment on the drawdown of the impoundment at the Cataract Hydro Project. The objective is to inspect the concrete structures of the dam for any possible defects. Once the drawdown and inspection is complete, it is the owner's intent, if defects are found, to make routine repairs to the concrete structures of the dam within the time allowed. No plans or drawings have been developed at this time. That will be determined from the inspection of the dam following the drawdown. The inspection and possible repairs are to be done at the same time as the repairs to the penstock and surge tank which was previously addressed in another 106 review and approved by your agency. There will be no ground disturbing activities in or around the impoundment. However, should repairs be required on the dam structures there may be ground disturbance only at or very near the dam so as to complete the repairs.

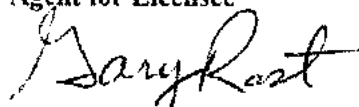
RWE understands that no archaeological sites have been located in the area. This finding is based upon research of company archives by RWE personnel and thru a short phone consultation with MI SHPO. The Section 106 Application is enclosed as well as Appendix A which includes Maps and Photos of the project and area. The section 301 Joint Permit Application was sent to the Michigan DNR by letter dated May 4, 2012. We are awaiting approval and permit from MDNR. When the Licensee receives the Michigan DNR Joint Permit and the approval of the enclosed section 106 application, we will file the documentation with the Federal Energy Regulatory Commission asking for approval. The Licensee hopes



to receive all approvals as quickly as possible so we may complete the drawdown, inspection, and possible repairs within the timeframe requested.

If you have any questions concerning this submittal please contact Mr. Gary Rast at 855-994-9376 x 105 or by e-mail at grast@rwehydro.com.

Sincerely,
Renewable World Energies, LLC
Agent for Licensee

WR

Mr. Jason Kreuscher
Vice President, Operations

Enclosures: State Historic Preservation Office Application for Section 106 Review
1. Appendix A Maps & Photos

Cc: Corporate, RWE

**STATE HISTORIC PRESERVATION OFFICE
Application for Section 106 Review**

SHPO Use Only					
<input type="checkbox"/> IN	Received Date	___ / ___ / ___	Log In Date	___ / ___ / ___	
<input type="checkbox"/> OUT	Response Date	___ / ___ / ___	Log Out Date	___ / ___ / ___	
	Sent Date	___ / ___ / ___			

Submit one copy for each project for which review is requested. This application is required. Please type. Applications must be complete for review to begin. Incomplete applications will be sent back to the applicant without comment. Send only the information and attachments requested on this application. Materials submitted for review cannot be returned. Due to limited resources we are unable to accept this application electronically.

I. GENERAL INFORMATION

THIS IS A NEW SUBMITTAL THIS IS MORE INFORMATION RELATING TO ER#

- Project Name: UP Hydro LLC - Cataract Hydroelectric Project FERC #10854
- Project Address (if available): 1200 North Cataract Rd. Gwinn, MI 49841
- Municipal Unit: Forsyth County: Marquette
- Federal Agency, Contact Name and Mailing Address (If you do not know the federal agency involved in your project please contact the party requiring you to apply for Section 106 review, not the SHPO, for this information.): Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426 .
Phone: 202-502-8400
- State Agency (if applicable), Contact Name and Mailing Address: N/A
- Consultant or Applicant Contact Information (if applicable) including mailing address: Renewable World Energies, LLC 100 State Street PO Box 264 Neshkoro, WI 54960 Contact Mr. Gary Rast at 855-994-9376 ext. 105 or grast@wehydro.com

II. GROUND DISTURBING ACTIVITY (INCLUDING EXCAVATION, GRADING, TREE REMOVALS, UTILITY INSTALLATION, ETC.)

DOES THIS PROJECT INVOLVE GROUND-DISTURBING ACTIVITY? YES NO (If no, proceed to section III.)

Exact project location must be submitted on a USGS Quad map (portions, photocopies of portions, and electronic USGS maps are acceptable as long as the location is clearly marked).

- USGS Quad Map Name: Universal Transverse Mercator (UTM) Projection Zone 16 (scale 1:24,000)
- Township: 45N Range: 26W Section: 11
- Description of width, length and depth of proposed ground disturbing activity: Draw down of impoundment to inspect and make routine concrete repairs to the dam. Drawdown of the impoundment (180 acres, 12' max depth) will be 7.4 feet and will expose areas upstream which are currently inundated by the dam. This is the area of concern and the reason for this application. No ground disturbance of the impoundment is anticipated.
- Previous land use and disturbances: Undeveloped until 1928 when construction began on the hydroelectric project. No major changes to the project since construction. Operation on hold and power generation stopped due to deterioration concerns with the upper penstock section in 2008. Repairs are schd. to be made in 2012.
- Current land use and conditions: The historical and maintenance records for the Cataract Hydroelectric Project indicate that little has changed at the project since construction in 1928-1929. New growth trees and underbrush have taken over the construction area of dam/penstock and the impoundment has filled with water.
- Does the landowner know of any archaeological resources found on the property? YES NO

Please describe: The Licensee research indicates the following: (1) The Final Environmental Assessment For Hydro Power issued by FERC dated February 7, 1997 and as part of the licensed issued on that date said UPPCo performed a literature and field examination that identified no significant cultural materials. The survey concluded the potential for significant historic or prehistoric archaeological sites to exist within the immediate project area was low to medium. It further stated the inundated sites, if present, would not be affected by the project. (2) The Cataract Hydro Project has been the subject of two archaeological surveys and overview in the last twenty (20) years. In November 1991 an Historical and Archaeological Overview was conducted by

Patrik E Martin Archaeological Consulting of Houghton, MI, and focused on the immediate vicinity of the hydroelectric facility (dam, penstock, and powerhouse), access roads, and the public access area on the Escanaba River. The field work phase of the study produced no archaeological remains, but makes note that the hydro facility may be eligible for listing on the National Register. (3) A letter to the Upper Peninsula Power Co. (the previous Licensee) dated 3/25/92 from the Historic Preservation Office for the State of Michigan identified the diversion dam, tunnel, penstock, surge tank, substation and powerhouse as the structural components that contribute to the complex's eligibility for inclusion in the National Register of Historic Places. (4) Sometime in April 2002, Wisconsin Public Service Corp. (Licensee at the time) filed NPS form 10-900 with the Michigan Dept. of History, Archaeological & Libraries for the Cataract Hydroelectric Project. (5) A phase I archaeological survey was also conducted in 2005 by AVD Archaeological Services of Union Grove, WI (Report of Investigations No. 106347). The survey and archive research showed no archaeological sites reported at the project or within one mile of the project boundaries. The report makes no mention of the hydroelectric facility or it's eligibility.

III. PROJECT WORK DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)

Note: Every project has an APE.

- a. Provide a detailed written description of the project (plans, specifications, Environmental Impact Statements (EIS), Environmental Assessments (EA), etc. **cannot** be substituted for the written description): The penstock/surge tank section 106 application for review was sent to the State Historic Preservation Officer on July 31, 2011. The SHPO issued a favorable determination on August 31, 2011. North American Hydro Holdings (the former Licensee) submitted the documentation of the Replacement of Steel Penstock and Return to Service along with supporting consultation correspondence to the FERC for approval on March 22, 2012. Since that time Renewable World Energies, LLC has taken ownership of the Cataract Hydroelectric Project. The new owner wishes to perform a drawdown of the impoundment. The purpose is to inspect the dam and it's concrete structures for any possible defects. Once the drawdown and inspection is complete, it is the owners intent, if defects are found, to make routine repairs to the concrete structures of the dam within the time allowed. No plan or drawings have been developed for the repairs because it will be the results of the inspection after the drawdown which will determine what is to be done. The inspection and repairs to the dam are to be done at the same time the repairs to the penstock and surge tank are being performed so as to maximize the time allowed for repairs.
- b. Provide a localized map indicating the location of the project; road names must be included and legible.
- c. On the above-mentioned map, identify the APE.
- d. Provide a written description of the APE (physical, visual, auditory, and sociocultural), the steps taken to identify the APE, and the justification for the boundaries chosen. The Area of Potential Effect will be the area from the dam upstream to the Hydroelectric Projects Federally stipulated boundaries and from the shoreline inward. As the water is drawn down the inundated areas will be exposed. The area is shown on the attached 1:24000 scale topo map and is roughly outlined in red. However the APE will only be from the shoreline inward as the water is drawn down and will not have any adverse effects. The dam itself will also be affected by the receding water and will expose the foundation and structures but will not adversely effect the structure.

IV. IDENTIFICATION OF HISTORIC PROPERTIES

- a. List and date all properties 50 years of age or older located in the APE. If the property is located within a National Register eligible, listed or local district it is only necessary to identify the district: Cataract Hydroelectric Dam FERC #10854
- b. Describe the steps taken to identify whether or not any historic properties exist in the APE and include the level of effort made to carry out such steps: The Licensee researched its archives forIn consultation with the Michigan SHPO it was determined that the dam itself is located in a National Register eligible area.
- c. Based on the information contained in "b", please choose one:
 - Historic Properties Present in the APE
 - No Historic Properties Present in the APE
- d. Describe the condition, previous disturbance to, and history of any historic properties located in the APE: The hydro project was constructed in 1928-1929. No major changes have occurred since construction. Property is maintained and in satisfactory condition. The Licensee believes there may have been a drawdown sometime in history but has no record to prove when it was done.

V. PHOTOGRAPHS

Note: All photographs must be keyed to a localized map.

- a. Provide photographs of the site itself.
- b. Provide photographs of all properties 50 years of age or older located in the APE (faxed or photocopied photographs are not acceptable).

VI. DETERMINATION OF EFFECT

- No historic properties affected based on [36 CFR § 800.4(d)(1)], please provide the basis for this determination.
- No Adverse Effect [36 CFR § 800.5(b)] on historic properties, explain why the criteria of adverse effect, 36 CFR Part 800.5(a)(1), were found not applicable.
- Adverse Effect [36 CFR § 800.5(d)(2)] on historic properties, explain why the criteria of adverse effect, [36 CFR Part 800.5(a)(1)], were found applicable.

Please print and mail completed form and required information to:
 State Historic Preservation Office, Environmental Review Office, Michigan Historical Center, 702
 W. Kalamazoo Street, P.O. Box 30740, Lansing, MI 48909-8240

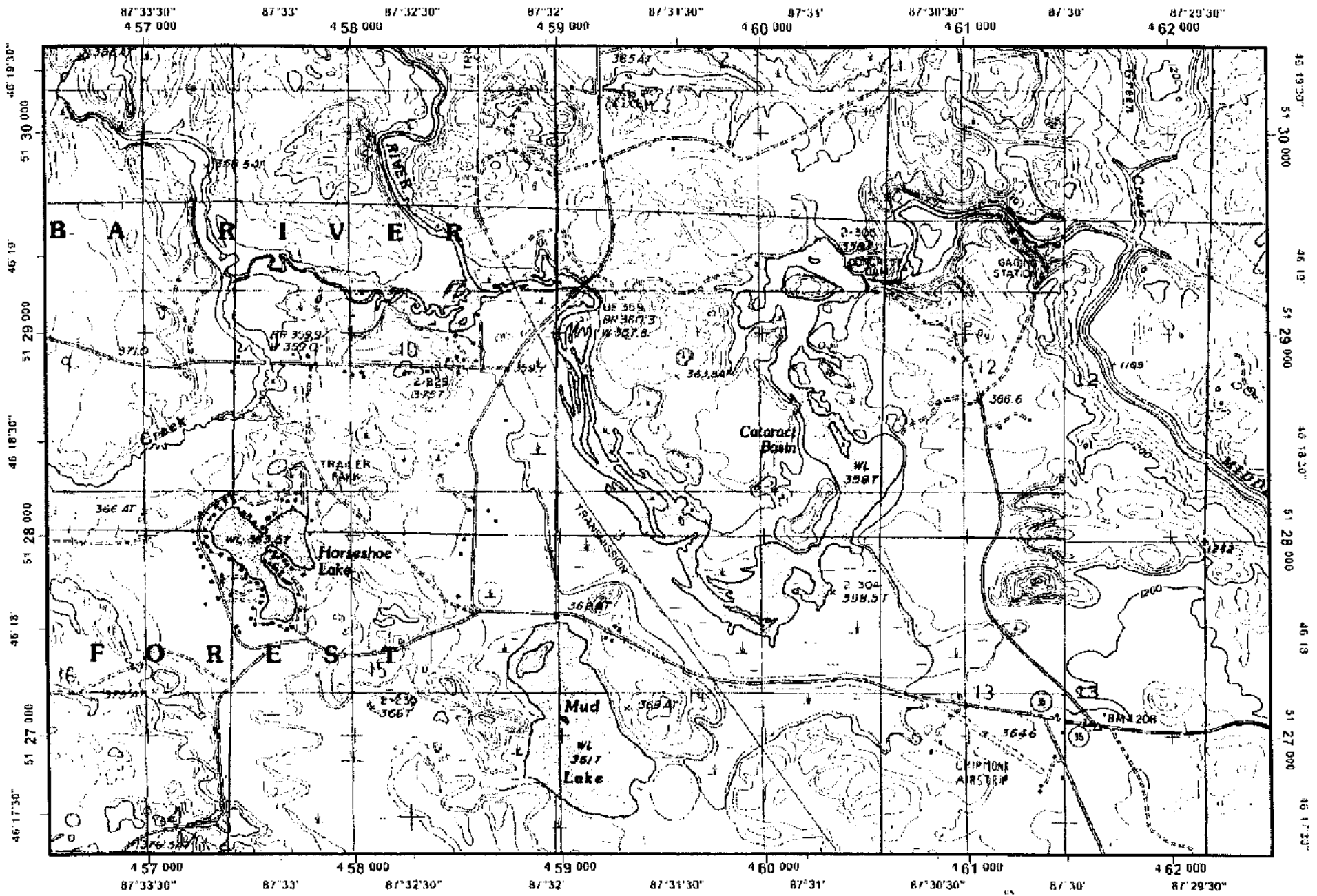
VI: Determination Of Effect

Based upon the criteria (36 CFR 800.5) no adverse effect is expected from the drawdown of the impoundment. No ground disturbing activities are planned in or around the impoundment. The only way the area will be affected will be by the receding water and exposure of inundated areas which should cause No Adverse Effect. The Dam will not be adversely effected by the drawdown as the drawdown will only expose the structures currently under water causing No Adverse Effect.

Appendix A

Maps & Photos

1. 1:24000 Cataract Basin Topographic Map
2. Cataract Hydroelectric Project Location
3. Project Location Map/Marquette County
4. Area of Potential Effect (Approximate)
5. Ariel Photo – Cataract Basin & Dam Location
6. Photo 1 – Cataract Dam – Tailrace – Down Stream Side
7. Photo 2 – Cataract Dam & Intake – Up Stream Side



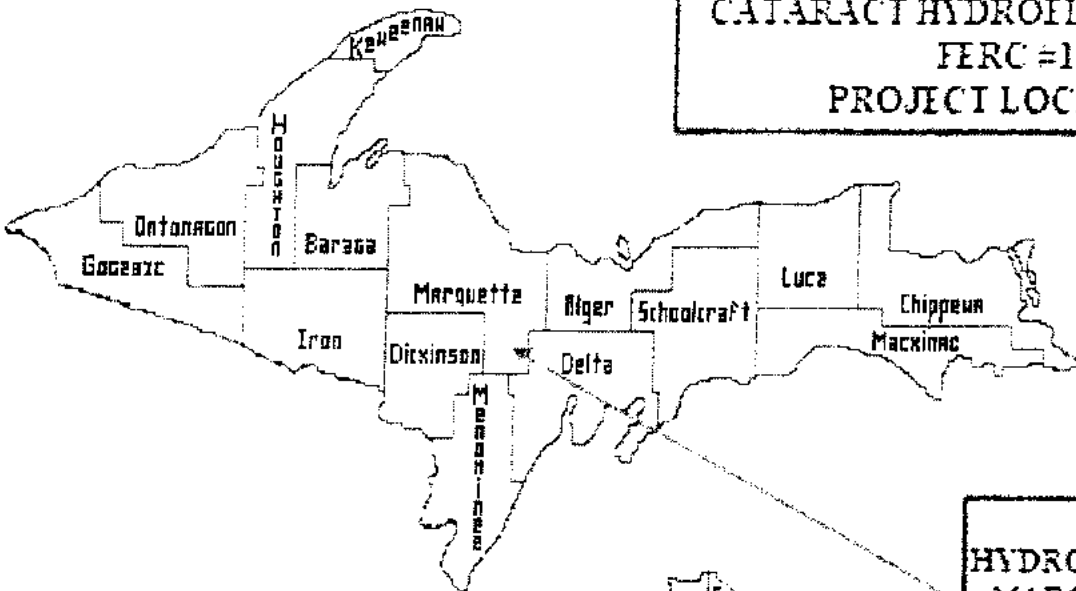
Division of Hydrographic Measurements, U.S. Navy, Project 1000, 1960
 North American Datum of 1983
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1:24,000 Scale

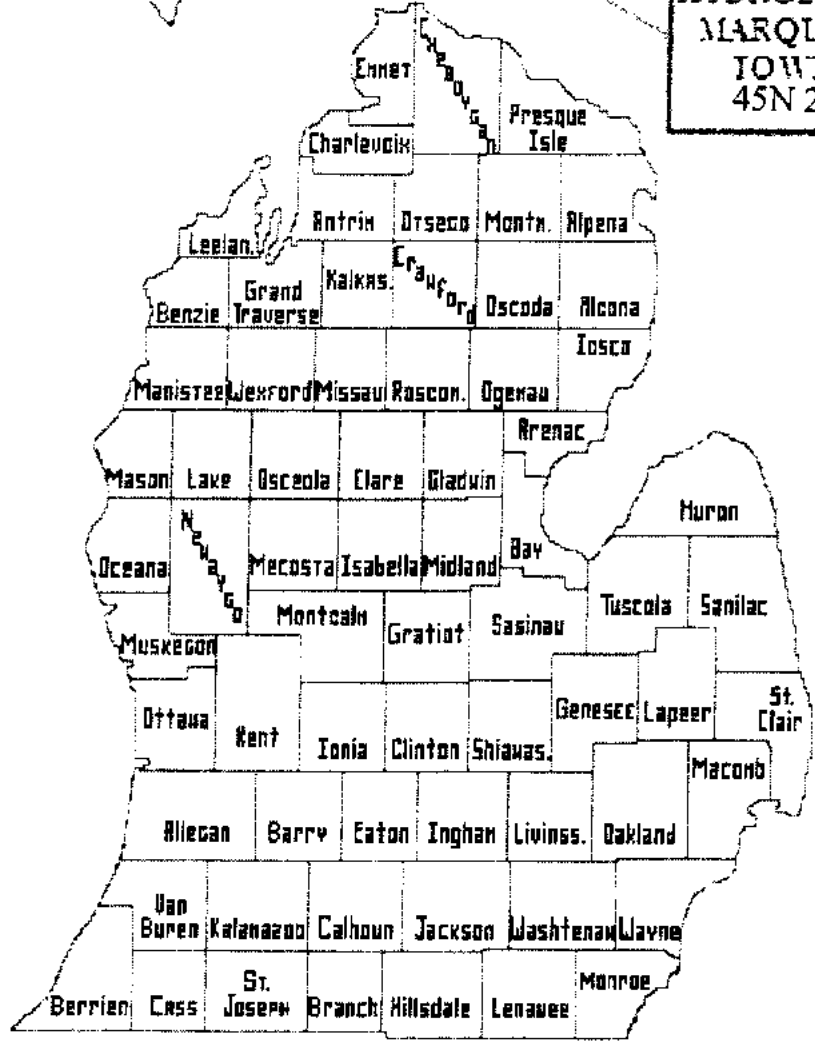


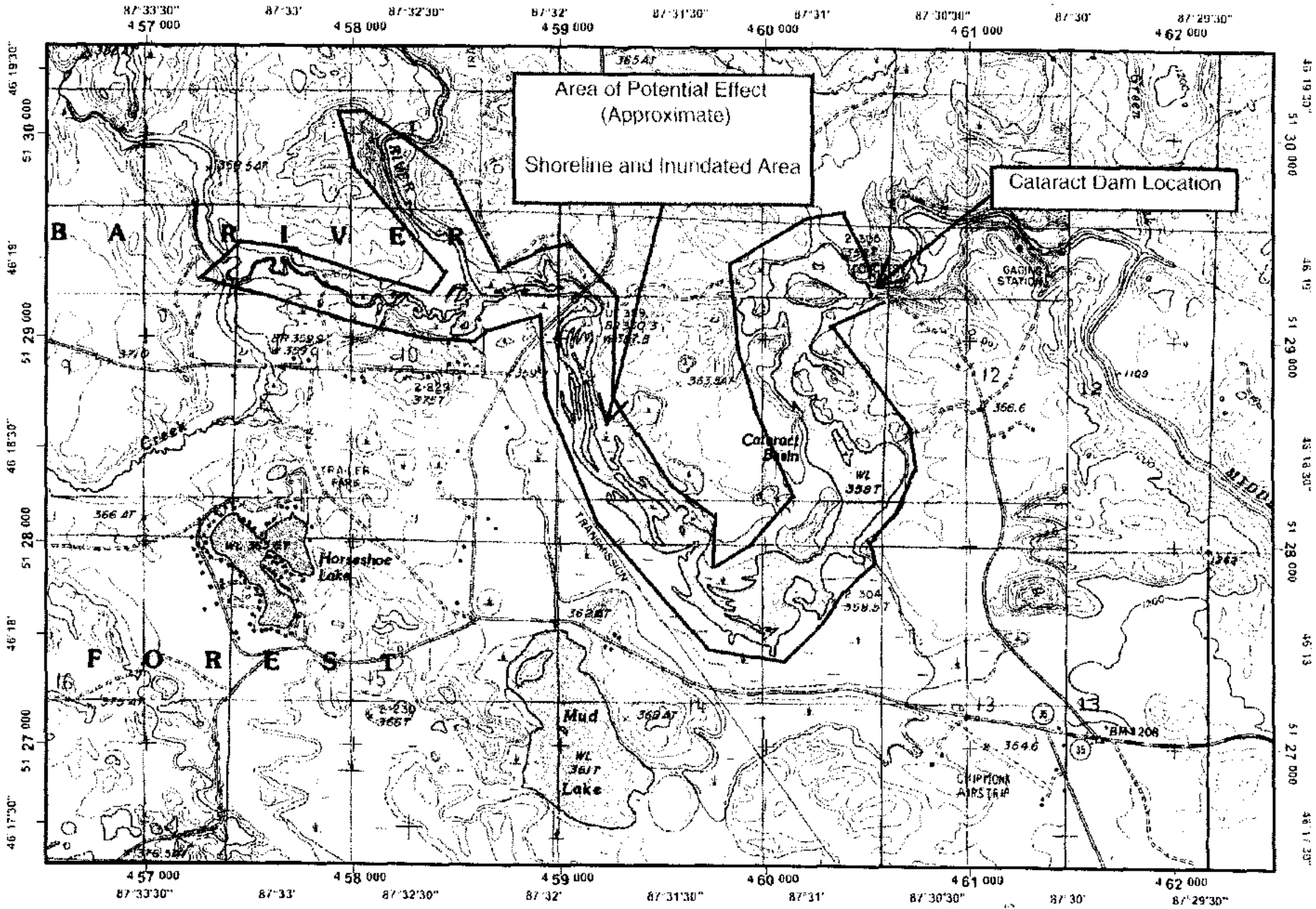
1:24000 Cataract Basin
 Topographic Map

UP HYDRO LLC
CATARACT HYDROELECTRIC PROJECT
FERC #10854
PROJECT LOCATION MAP



CATARACT
HYDROELECTRIC PROJECT
MARQUETTE COUNTY MI
TOWN OF FORSYTH
45N 26W Section 11





1. Contour Interval: 5 Feet
 2. Spot Elevation: 5 Feet
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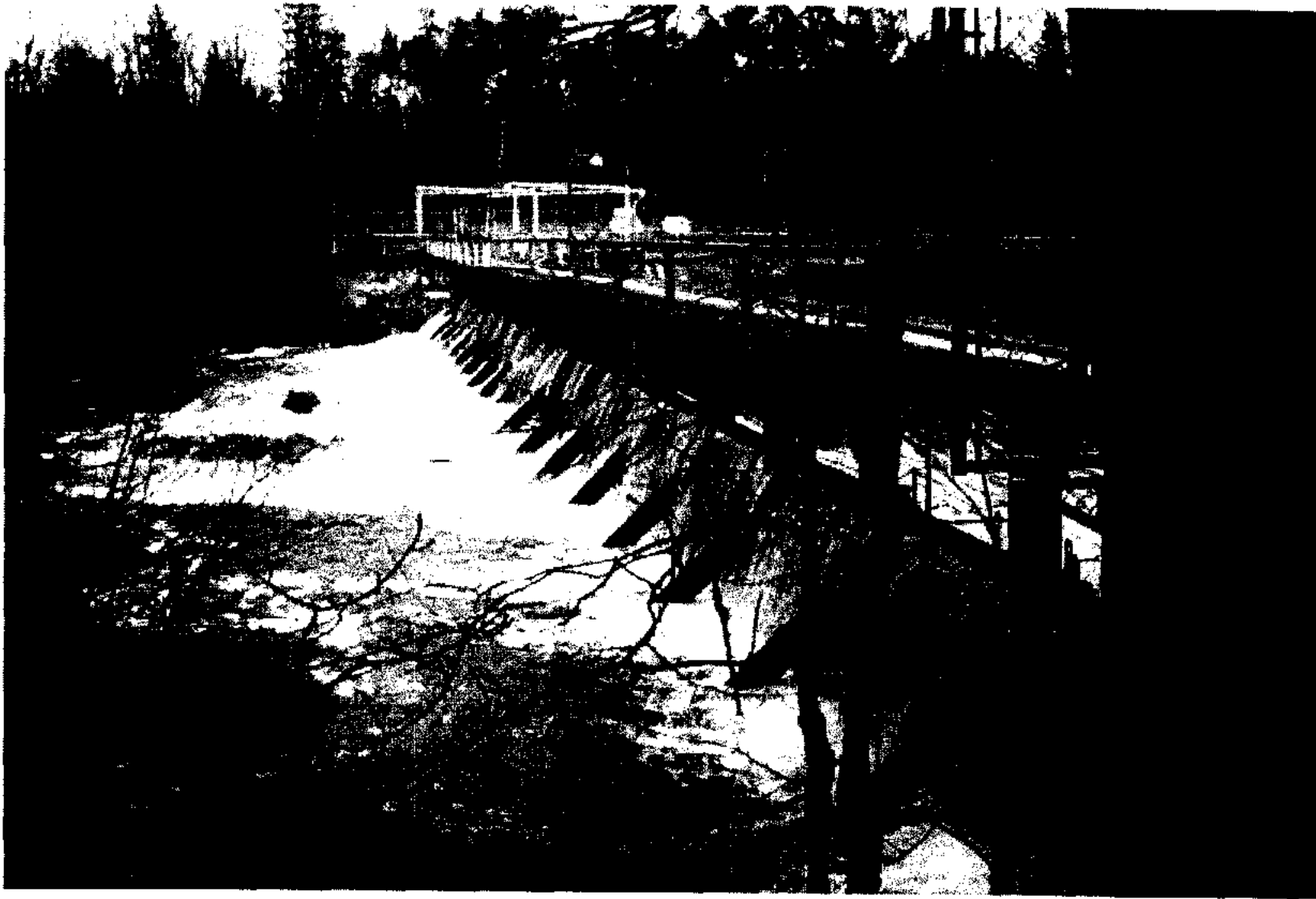


Photo 1 - Cataract Dam -- Tailrace -- Down Stream Side

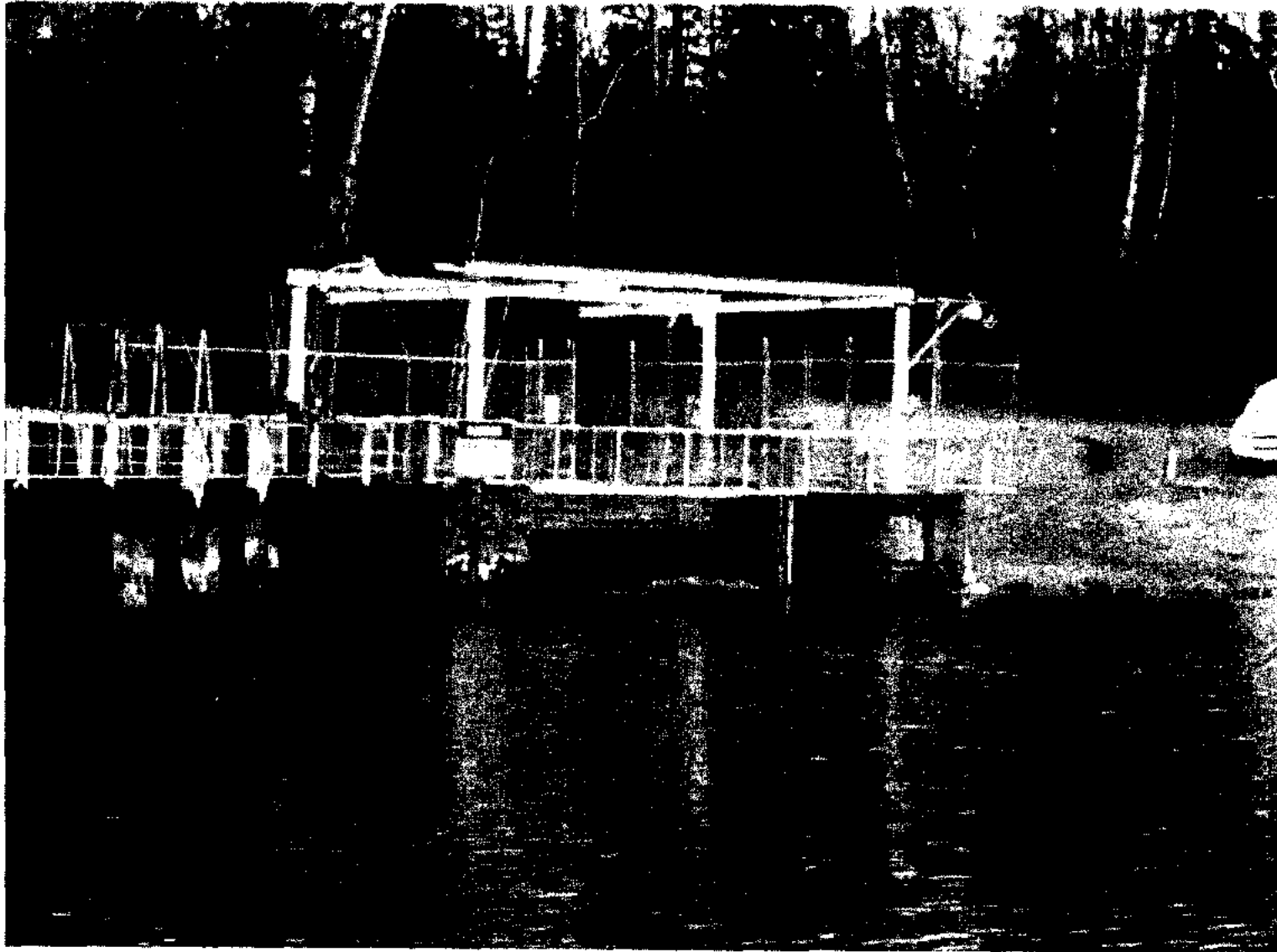


Photo 2 – Cataract Dam & Intake – Up Stream Side



Renewable World Energies, LLC
100 State Street, P.O. Box 264, Neshkoro, WI 54960 USA
Tel (855) 994-9376 Fax (920) 293-4100
Web www.renewableworldenergies.com

May 7, 2012

DEQ, WRD, PCU
P.O. Box 30458
Lansing, MI 48909-7958

Re: Cataract Hydroelectric Project FERC # 10854
UP Hydro, LLC
Joint Permit Application Part 301 – Cataract Hydroelectric Project Drawdown

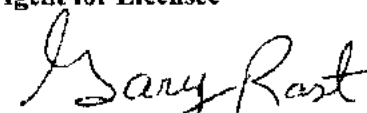
Dear Sir or Madam,

Please find enclosed a completed Joint Permit Application for the Licensee's proposed drawdown of the impoundment at the Cataract Hydro Project along with the \$500 application fee. The dam itself is located at 1200 North Cataract Road, Marquette County, MI in Forsyth Township with the impoundment located up-stream of the dam. The drawdown of the impoundment is requested so the owner may inspect and make routine repairs to the concrete structures of the dam if needed based upon the inspection. Please note that item 3 pre-application file number is N/A and date project staked/flagged is N/A both found on page 1. This was not done as it was deemed not necessary in consultation with Mr. Jay Parent of Michigan DEQ. Also Mr. Parent did not believe it was necessary to file out item 12 found on page 7. The application includes Appendix A – Adjacent Property Owners and Appendix B – Maps and Plans. Also note that the Drawdown Plan was written with consultation and approval from Mr. Kyle Kruger and Mr. Paul Piszeek of MDNR. The Application for Section 106 Review will be filed shortly with the Michigan State Historical Preservation Office in reference to the drawdown.

If you have any questions concerning this submittal please contact Mr. Gary Rast at 855-994-9376 x 105 or by e-mail at grast@rwehydro.com.



Sincerely,
Renewable World Energies, LLC
Agent for Licensee

JVK

Mr. Jason Kreuzscher
Vice President, Operations

Enclosures: Joint Permit Application Inc. Appendix's A and B
Application Fee - Check in the amount of \$500.00

Cc: Corporate, RWE



U.S. Army Corps of Engineers
 Detroit District Office
 Phone: 313-226-2218, Fax: 313-226-6763
 Website: www.lre.usace.army.mil

Michigan Department of Environmental Quality
 Water Resources Division
 Phone: 517-373-9244, Fax: 517-241-9003
 Website: www.mi.gov/jointpermit



Joint Permit Application

For Work in Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams,
 High Risk Erosion Areas and Critical Dune Areas

www.mi.gov/jointpermit

<p>What is the purpose of the Joint Permit Application?</p>	<p>This Joint Permit Application was developed to facilitate the state and federal permit application process administered by the Michigan Department of Environmental Quality (DEQ) and the U.S. Army Corps of Engineers (USACE).</p> <p>The Joint Permit Application is a multi-purpose application used to describe and quantify proposed activities regulated by the DEQ and/or the USACE. This application is for those activities regulated by the following Parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended by the State of Michigan.</p> <ul style="list-style-type: none"> • Part 301, Inland Lakes and Streams • Part 325, Great Lakes Submerged Lands • Part 303, Wetlands Protection • Floodplain Regulatory Authority found in Part 31, Water Resources Protection • Part 315, Dam Safety • Part 323, Shorelands Protection and Management (High Risk Erosion Areas) • Part 353, Sand Dunes Protection and Management (Critical Dune Areas) <p>The regulated activities are summarized in Appendix D. The statutes and rules are available at www.mi.gov/jointpermit.</p> <p>This application is also for those activities regulated by the USACE within the waters of the United States under Section 10, Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404, Clean Water Act of 1977 (33 U.S.C. 1344).</p> <p>Preapplication Meeting: This is an optional service available for activities proposed in Inland lakes and streams (Part 301), wetlands (Part 303), and critical dune areas (Part 353). A preapplication meeting can answer many questions regarding whether or not a permit is required and the review process. The application form and fee schedule are available at www.mi.gov/jointpermit.</p>
<p>How do I complete the Joint Permit Application?</p> <p><i>An accurate and complete application package is required for processing; inaccurate or missing information will delay processing.</i></p>	<p>There are three parts to a complete Joint Permit Application package:</p> <ol style="list-style-type: none"> 1. Application Form 2. Maps and Drawings 3. Fee <p>Follow the checklists on the following page for each part of the application package.</p> <p>When you have questions or need assistance in completing the application package refer to the following information on our website www.mi.gov/jointpermit or you may contact the appropriate district office, page iii, or through the website link "Who to Contact."</p> <ul style="list-style-type: none"> • Joint Permit Application Training Manual • EZ Guides for small projects • Acronyms in Appendix A • Sample drawings in Appendix B • Minor Project and General Permit Categories in Appendix C • Fee schedule in Appendix C • State and Federal Authority and Penalties in Appendix D • Glossary in Appendix E

**Application Checklist**

The following website will provide township, range, section, latitude and longitude information:

www.mcgi.state.mi.us/wetlands/

www.geocoder.us

In each section check all boxes that apply to your project.

Show and label property lines on the site plan.

Label existing and proposed contours, dimensions, excavation and/or fill on the site plans and cross sections.

Provide tables for multiple impact areas.

1. Application Form

- Complete Sections 1 through 9 of the application form.
- An authorization letter from the property owner if someone other than the property owner is signing the application.
- Complete those Sections 10 through 20 that apply to your project. Follow the instructions at the beginning of each section. For additional information, the instructions for each sample drawing in Appendix B indicate the application sections you will most likely need to complete. Complete the application form as much as possible before adding attachments. Label each attachment with the applicant's name.
- Stake or flag the area for site inspection including the property corners, proposed road or driveway centerlines, and areas of proposed impacts. The site must be flagged when the application is submitted. *SEE APPLICATION LETTER*

2. Maps and Drawings

- All maps and drawings must be black and white, legible, reproducible, and sized to 8.5" x 11". Aerial photographs do not substitute for site plans. If larger drawings or blueprints are required to show adequate detail for review, you may also submit one full size copy.
- Vicinity Map: A map to the proposed project location that includes ALL streets, roads, intersections, highways, or cross-roads to the project. Do not assume review staff knows your project location.
- Project Site Plan: Overhead drawings to scale or with dimensions, length and width, of the proposed project are required. Show and label property lines on the site plan.
- N/A* Cross-section drawings are required. Provide the cross-sections and profile views to scale or with dimensions, length, width, and height.
- Elevation data must include a description of the reference point or benchmark used and its corresponding elevation. For projects on the Great Lakes or Section 10 Waters, elevations must be provided in IGLD 85. For observed Great Lake water elevations in IGLD, visit the USACE website under "water levels". If elevations are from still water, provide the observation date and water elevation. On inland sites, elevations can use NGVD 29, NAVD 88, a local datum or an assumed bench mark. *No BM*
- N/A* Provide descriptive photographs of the proposed work site showing vegetation if wetlands are involved or the shoreline for shore protection projects. All photographs must be labeled with your name and the date of the photograph, indicate what they show, and be referenced to the site plan. Proposed activities or structure(s) may be indicated directly on the photographs using indelible markers or ink pens. Provide aerial photographs 1:400 or larger for major projects.

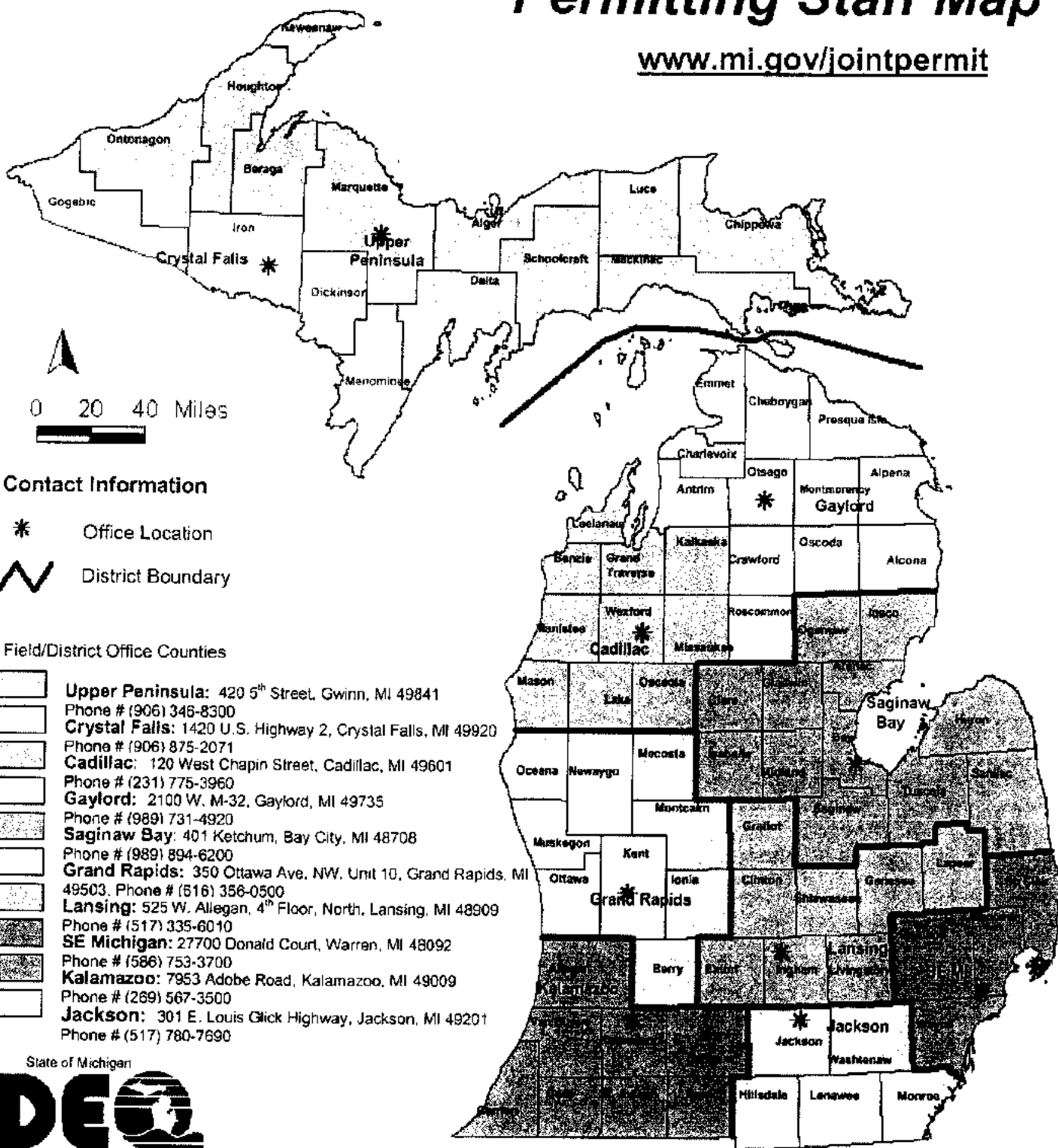
3. Fee

- Payment to the **State of Michigan**. Fees typically range from \$50.00 to \$4,000.00 depending on the type of project. Refer to Appendix C of the application and/or visit www.mi.gov/jointpermit to determine the appropriate fee for your project and to download a form for credit card or electronic fund transfer payment. **Checks can only be submitted to our central Lansing office.**
- To send applications directly to the field offices, refer to page iii, or refer to www.mi.gov/jointpermit "who to contact" for address and/or phone number.
- Applications with check payments, that cross county boundaries, or from public agencies eligible to receive federal and/or state transportation funding for a project involving public roadways, non-motorized paths, airports, or related facilities should be mailed to: DEQ, WRD, P.O. BOX 30458, LANSING, MI 48909-7958



Land/Water Interface Permitting Staff Map

www.mi.gov/jointpermit



Contact Information

* Office Location

~ District Boundary

Field/District Office Counties

- Upper Peninsula:** 420 5th Street, Gwinn, MI 49841
Phone # (906) 346-8300
- Crystal Falls:** 1420 U.S. Highway 2, Crystal Falls, MI 49920
Phone # (906) 875-2071
- Cadillac:** 120 West Chapin Street, Cadillac, MI 49601
Phone # (231) 775-3960
- Gaylord:** 2100 W. M-32, Gaylord, MI 49735
Phone # (989) 731-4920
- Saginaw Bay:** 401 Ketchum, Bay City, MI 48708
Phone # (989) 894-6200
- Grand Rapids:** 350 Ottawa Ave. NW, Unit 10, Grand Rapids, MI 49503. Phone # (616) 356-0500
- Lansing:** 525 W. Allegan, 4th Floor, North, Lansing, MI 48909
Phone # (517) 335-6010
- SE Michigan:** 27700 Donald Court, Warren, MI 48092
Phone # (586) 753-3700
- Kalamazoo:** 7953 Adobe Road, Kalamazoo, MI 49009
Phone # (269) 567-3500
- Jackson:** 301 E. Louis Glick Highway, Jackson, MI 49201
Phone # (517) 780-7690

Slate of Michigan



Department of Environmental Quality

Water Resources Division

517-373-1170



APPENDICES

Appendix A:	Acronyms and Abbreviations	A-1
Appendix B:	Sample Drawings	
	1. General Instructions for all Drawings and Sample Site Location Maps.....	B-1
	2. Inland Lake Shore Protection.....	B-2
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	4. Pond Construction.....	B-3
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	12. Pipe/Utility Crossings in a Trench	B-7
	13. Pipe/Utility Crossings using Directional Bore	B-7
	14. Bridge or Culvert (4 drawings).....	B-8
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	19. Proposed Residence in a High Risk Erosion Area	B-14
	20. Proposed Residence in a Critical Dune Area.....	B-14
	21. Marina Site Plan.....	B-15
	22. Outlet Pipe.....	B-16
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Appendix C:	Fees and Categories for Minor Project and General Permit for Minor Activities.....	C-1
Appendix D:	State Authority, Federal Authority, Privacy Act Statement, and State and Federal Penalties	D-1
Appendix E:	Glossary (listed words are italicized in the application package).....	E-1

Application status can be viewed on the Water Resources Division (WRD) website at www.deq.state.mi.us/CIWPIS. During the application period, if any information is missing from the application or if any clarification is needed regarding materials provided, the application is incomplete and staff will request the information from the applicant/agent by letter, email, fax or phone call. If a complete response is not provided within 30 days, the application will be closed. Some regulatory parts allow extensions if requested within the 30 day time frame. Once the WRD has received the information necessary for review of the project, including a thoroughly completed application, consistent drawings that have adequate detail for review and the full application fee, the file will be reviewed for final processing. A mailed postcard or a public notice will provide the file number and the telephone number of the office where the application is being processed. The review time to determine if an application is complete for processing ranges from 15 to 30 days. Technical processing times, after the application is administratively complete, may range from 60 to 90 days. Processing times will be longer if a public hearing is held. Staff from your local District/Field Office may visit the project site and may request additional information prior to a decision on the application. Application fees are not refundable or transferable.

If a federal permit will also be required, a copy of the permit application will be sent to the Detroit District Office, USACE, for processing at the federal level. Additional copies of this application form can be downloaded from the WRD website at www.mi.gov/jointpermit or can be photocopied from the original. If you have any questions about the permitting process or if you need to modify your application, you can contact the WRD by phone or fax at the addresses on the previous page, or email at DEQ-WRD-jointpermit@michigan.gov.

U.S. Army Corps of Engineers www.lra.usace.army.milMichigan Department of Environmental Quality www.mi.gov/jointpermit

AGENCY USE	Previous USACE File Number	Date Received	DEQ File Number
	USACE File Number		Fee received \$
Validate that all parts of this checklist are submitted with the application package. Fill out application and additional pages as needed. <input checked="" type="checkbox"/> All items in Sections 1 through 9 are completed. <input checked="" type="checkbox"/> Project-specific Sections 10 through 20 are completed. <input checked="" type="checkbox"/> Dimensions, volumes, and calculations are provided for all impact areas. <input checked="" type="checkbox"/> All information contained in the headings for the appropriate Sections (1-20) are addressed, and identified attachments (☛) are included. <input checked="" type="checkbox"/> Map, site plan(s), cross sections; one set must be black and white on 8 1/2 by 11 inch paper; photographs. <input checked="" type="checkbox"/> Application fee is attached.			
1 Project Location Information For Latitude, Longitude, and TRS info anywhere in Michigan see www.mcqi.state.mi.us/wetlands/			
Project Address (road, if no street address) <i>1200 North Cataract Road</i>		Zip Code <i>49841</i>	Municipality (Township/Village/City) <i>Forsyth Township</i>
Property Tax Identification Number(s) <i>N/A</i>		Latitude <i>45.3167 N</i>	County <i>Marquette</i>
Subdivision/Plat and Lot Number <i>N/A</i>		Longitude <i>- 87.5000 W</i>	Township/Range/Section (TRS) <i>T 45 N or S, R 26 E or W, Sec 11</i> OR Private Claim # _____
2 Applicant and Agent Information			
Owner/Applicant (individual or corporate name) <i>UP Hydro, LLC</i>		Agent/Contractor (firm name and contact person)	
Mailing Address <i>100 State Street PO Box 264</i>		Mailing Address	
City <i>Neshkoro</i>	State <i>WI</i>	Zip Code <i>54960</i>	City State Zip Code
Contact Phone Number <i>855-994-9376 x 105</i>	Fax <i>920-293-4900</i>	Contact Phone Number	Fax
Email		E-mail	
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? • If no, attach letter(s) of authorization from all property owners including the owner of the disposal site.			
Property Owner's Name (if different from applicant) <i>N/A</i>		Mailing Address	
Contact Phone Number	City	State	Zip Code
3 Project Description			
Project Name <i>Cataract Hydro Project</i>		Preapplication File Number <i>- N/A - -P</i>	
Name of Water body <i>Middle Branch Escanaba River</i>		Date project staked/flagged <i>N/A</i>	
The proposed project is on, within, or involves (check all that apply)		Project Use	
<input checked="" type="checkbox"/> an inland lake (5 acres or more) <input type="checkbox"/> a pond (less than 5 acres) <input checked="" type="checkbox"/> a stream, river, ditch or drain <input type="checkbox"/> a legally established County Drain Date Drain was established _____ <input type="checkbox"/> a channel/canal <input checked="" type="checkbox"/> 500 feet of an existing water body		<input type="checkbox"/> private <input type="checkbox"/> commercial <input type="checkbox"/> public/government <input type="checkbox"/> project is receiving federal/state transportation funds <input type="checkbox"/> Wetland Restoration <input checked="" type="checkbox"/> other <i>Hydroelectric Generation</i>	
<input type="checkbox"/> a Great Lake or Section 10 Waters <input checked="" type="checkbox"/> a wetland <input checked="" type="checkbox"/> a 100-year floodplain <input checked="" type="checkbox"/> a dam <input type="checkbox"/> a designated high risk erosion area <input type="checkbox"/> a designated critical dune area <input type="checkbox"/> a designated environmental area			
Indicate the type of permit being applied for: <input type="checkbox"/> General Permit <input type="checkbox"/> Minor Project <input checked="" type="checkbox"/> Individual (All other projects.) • See Appendix C.			
Written Summary of All Proposed Activities <i>The reason for the drawdown is for the inspection of the dam & routine repairs to the concrete structures if needed based upon the inspection.</i>			
Construction Sequence and Methods <i>Drawdown is schd. to start June 15, 2012 or upon approval if later than June 15th. Drawdown will be no more than 6" per day & should take 15 days. Inspect dam - Make repairs as needed & time allows - Refill start is October 16th and ends October 31st. However, the refill will not exceed the inflow.</i>			

**4 Project Purpose, Use and Alternatives** *Attach additional sheets as necessary.*

Describe the purpose of the project and its intended use; include any new development or expansion of an existing land use.
Drawdown the impoundment to inspect the dam & make routine concrete repairs if needed based upon the inspection.

Describe the alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative locations, project layout and design, and construction technologies. For utility crossings include alternative routes and construction methods.
Divers are the alternative for inspection only. For repairs a sheet pile coffer dam would be needed. This would not be feasible based upon environmental concerns, safety considerations, and cost.

5 Locating Your Project Site *Attach a legible black and white map with a North arrow.*

Names of roads of closest intersection *CR-577 and M-35*

Directions from main intersection to the project site, with distances from the best and nearest visible landmark and water body *East on M-35 0.2 miles. Left (North) on Cataract Rd. 1.4 miles. Road name changes CR-Eef 0.3 miles.*

Description of buildings on the site (color; 1 or 2 story, other)

No buildings - Concrete Gravity Dam

Description of adjacent landmarks or buildings (address; color; etc)

None visible from site.

How can your site be identified if there is no visible address? *Project Identification Sign & GPS Coordinates*

6 Easements and Other Permits

No Yes Is there a conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property?
 * If yes, attach a copy. Provide copies of court orders and legal lake levels if applicable.

List all other federal, interstate, state, or local agency authorizations including required assurances for Critical Dune Area projects.

Agency	Type of Approval	Number	Date Applied	Date approved /denied	Reason for denial
FERC	Written Order		To be done after Drawdown Plan & Permit Approval		

7 Compliance

If a permit is issued, when will the activity begin? (M/D/Y) *6/15/12* Proposed completion date (M/D/Y) *10/30-31/12*

No Yes Has any construction activity commenced or been completed in a regulated area?

* If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s).

No Yes Were the regulated activities conducted under a DEQ and/or USACE permit?

* If Yes, list the permit numbers

No Yes Are you aware of any unresolved violations of environmental law or litigation involving the property?

* If Yes, attach explanation.

8 Adjacent Property Owners *Provide current mailing addresses. Attach additional sheets/labels for long lists.*

<input type="checkbox"/> Established Lake Board	Contact Person	Mailing Address	City	State and Zip Code
<input type="checkbox"/> Lake Association				

List all adjacents. If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.

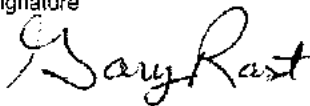
Property Owner's Name	Mailing Address	City	State and Zip Code
<i>See attached list-Appendix A</i>	<i>See attached list-Appendix A</i>	<i>See attached list-Appendix A</i>	<i>See attached list-Appendix A</i>

9 Applicant's Certification

Read carefully before signing.

U.S. Army Corps of Engineers www.lre.usace.army.milMichigan Department of Environmental Quality www.mi.gov/jointpermit

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the DEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site before and during construction and after the completion of the project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

<input type="checkbox"/> Property Owner <input type="checkbox"/> Agent/Contractor <input checked="" type="checkbox"/> Corp. or Public Agency / Title	Printed Name Gary Rast <i>Regulatory/Compliance Manager</i>	Signature 	Date <i>5/4/12</i>
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10 Projects Impacting Inland Lakes, Streams, Great Lakes, Wetlands or Floodplains

- Complete only those sections A through M applicable to your project.
- If your project impacts wetlands also complete Section 12. If your project impacts regulated floodplains also complete Section 13.
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27. Example: (25 ft long x 10 ft wide x 2 feet deep) / 27 = 18.5 cubic yards
- Some projects on the Great Lakes require an application for conveyance prior to Joint Permit Application completeness.
 - ◆ Provide a black and white overall site plan, with cross-section and profile drawings. Show existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures, land change activities and soil erosion and sedimentation control measures. Review Appendix B and EZ Guides for aid in providing complete site-specific drawings.
 - ◆ Provide tables for multiple impact areas or multiple activities such as multiple fill areas or multiple culverts. Include your calculations.

Water Level Elevation

On inland waters NGVD 29 NAVD 88 other Observed water elevation (ft) date of observation (M/D/Y)
 On a Great Lake IGLD 85 surveyed converted from observed still water elevation.

A. PROJECTS REQUIRING FILL (See All Sample Drawings)

- ◆ Attach a site plan and cross-section views to scale showing maximum and average fill dimensions with calculations.
- ◆ For multiple impact areas on a site provide a table with location, dimensions and volumes for each fill area.

Purpose bioengineered shore protection boat ramp boat well bridge or culvert crib dock
 riprap seawall swim area other

Dimensions of fill (ft)			Total volume (cubic yards)	Volume below OHWM (cubic yards)
Length	Width	Maximum Depth		
Maximum water depth in fill area (ft)			Area filled (sq ft)	Will filter fabric be used under proposed fill? <input type="checkbox"/> No <input type="checkbox"/> Yes (If Yes, type)

Fill will extend _____ feet into the water from the shoreline and upland _____ feet out of the water.

Type of clean fill peastone % sand % gravel % other

Source of clean fill commercial on-site other
 ◆ If on-site, show location on site plan.
 ◆ If other, attach description of location.

B. PROJECTS REQUIRING DREDGING OR EXCAVATION (See Sample Drawings)

- Refer to www.mi.gov/jointpermit for spoils disposal and authorization requirements.
- ◆ Attach a site plan and cross-section views to scale showing maximum and average dredge or excavation dimensions with calculations.
- ◆ For multiple impact areas on a site provide a table with location, dimensions and volumes for each dredge/excavation area.

Purpose boat ramp boat well bridge or culvert maintenance dredge
 navigation pond/basin other

Dimensions (ft)			Total volume (cu yds)	Volume below OHWM (cu yds)
Length	Width	Maximum Depth		

Has this same area been previously dredged? No Yes If Yes, provide date and permit number:

Will the previously dredged area be enlarged? No Yes If Yes, when and how much?

Is long-term maintenance dredging planned? No Yes If Yes, how often?

Dredge or Excavation Method Hydraulic Mechanical other

Spoils Disposal
 Dredged or excavated spoils will be placed on-site landfill USACE confined disposal facility other upland off-site
 For disposal, provide a ◆ Detailed spoils disposal area location map and site plan with property lines.
 ◆ Letter of authorization from property owner of spoils disposal site, if disposed off-site.

For volumes less than 5,000 cu yards, has proposed dredge material been tested for contaminants within the past 10 years?
 No Yes ◆ If Yes, provide test results with a map of sampling locations.

C. PROJECTS REQUIRING RIPRAP (See Sample Drawings 2, 3, 8, 12, 14, 22, and 23)

Riprap water ward of the ordinary high water mark: dimensions (ft)	length	width	depth	Volume(cu yd)
Riprap landward of the ordinary high water mark: dimensions (ft)	length	width	depth	Volume(cu yd)
Type and size of riprap (inches)	Will filter fabric or pea stone be used under proposed riprap?			
<input type="checkbox"/> field stone <input type="checkbox"/> angular rock <input type="checkbox"/> other	<input type="checkbox"/> No <input type="checkbox"/> Yes, Type			



<input type="checkbox"/> D. SHORE PROTECTION PROJECTS (See EZ Guides and Sample Drawings 2, 3, and 17. Complete Sections 10A, B, and/or C.)			
◆ For bioengineering projects include the list of native plants/seeds, if available.			
Type and length (ft)	<input type="checkbox"/> bioengineering (ft)	<input type="checkbox"/> revetment (ft)	<input type="checkbox"/> riprap (ft) <input type="checkbox"/> seawall/bulkhead (ft)
Structure is	<input type="checkbox"/> new <input type="checkbox"/> repair <input type="checkbox"/> replacement of an existing structure	Will the existing structure be removed? <input type="checkbox"/> No <input type="checkbox"/> Yes	
Proposed Toe Stone (linear feet)	Distance of project from adjacent property lines (ft)		
Distance of project from an obvious fixed structure (example - 50 ft from SW corner of house)			
For bioengineering projects indicate the structure type <input type="checkbox"/> brush bundles <input type="checkbox"/> coir log <input type="checkbox"/> live stakes <input type="checkbox"/> tree revetment <input type="checkbox"/> other			
<input type="checkbox"/> E. DOCK - PIER - MOORING PILINGs (See Sample Drawing 10)			
◆ Attach a copy of the property legal description, mortgage survey, or a property boundary survey report.			
Dock Type	<input type="checkbox"/> open pile <input type="checkbox"/> filled <input type="checkbox"/> crib <input type="checkbox"/> floating <input type="checkbox"/> cantilevered <input type="checkbox"/> spring piles <input type="checkbox"/> piling clusters <input type="checkbox"/> other		
Is the structure within the applicant's riparian area interest area? <input type="checkbox"/> No <input type="checkbox"/> Yes ◆ Show parcel property lines on the site plan.			
Proposed structure dimensions (ft)	length width	Use <input type="checkbox"/> private <input type="checkbox"/> public <input type="checkbox"/> commercial	
Dimensions of nearest adjacent structures (ft)	length width	Distance of dock from adjacent property lines (ft)	
<input type="checkbox"/> F. BOAT WELL (See EZ Guide. Complete Sections 10A and 10B)			
Dimensions (ft)	length width depth	Number of boats	
Type of sidewall stabilization	<input type="checkbox"/> concrete <input type="checkbox"/> riprap <input type="checkbox"/> steel <input type="checkbox"/> vinyl <input type="checkbox"/> wood <input type="checkbox"/> other		
Volume of backfill behind sidewall stabilization (cu yd)	Distance of boat well from adjacent property lines (ft)		
<input type="checkbox"/> G. BOAT RAMP (See EZ Guide. Complete sections 10A, 10B, and 10C for mattress and pavement fill, dredge, and riprap)			
Type	<input type="checkbox"/> new <input type="checkbox"/> existing <input type="checkbox"/> maintenance/improvement	Use <input type="checkbox"/> private <input type="checkbox"/> public <input type="checkbox"/> commercial	
Existing overall boat ramp dimensions (ft)	length width depth	Type of construction material <input type="checkbox"/> concrete <input type="checkbox"/> wood <input type="checkbox"/> stone <input type="checkbox"/> other	
Proposed overall ramp dimensions (ft)	length width depth	Proposed ramp dimensions (ft) below ordinary high water mark length width depth	
Number of proposed skid piers	Proposed skid pier dimensions (ft) length width	Distance of ramp from adjacent property lines (ft)	
<input type="checkbox"/> H. BOAT HOIST - ROOFS (See EZ Guide)			
Type	<input type="checkbox"/> cradle <input type="checkbox"/> side lifter <input type="checkbox"/> other	Located on <input type="checkbox"/> seawall <input type="checkbox"/> dock <input type="checkbox"/> bottomlands	
Hoist dimensions, including catwalks (ft) length width			
Area occupied, including catwalks (sq ft)		Distance of hoist from adjacent property lines (ft)	
Permanent Roof <input type="checkbox"/> No <input type="checkbox"/> Yes ◆ If Yes, how is the roof supported?		Maximum Roof Dimensions (ft): length width height	
<input type="checkbox"/> I. BOARDWALKS and DECKs in WETLANDS or FLOODPLAINS (See Sample Drawings 5 and 6. Complete Sections 12 and/or 13)			
◆ Provide a table for multiple boardwalks and decks proposed in one project; include locations and dimensions.			
Wetlands		Floodplains	
Boardwalk <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Deck <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Boardwalk <input type="checkbox"/> on pilings <input type="checkbox"/> on fill	Deck <input type="checkbox"/> on pilings <input type="checkbox"/> on fill
Dimensions (ft) length width	Dimensions (ft) length width	Dimensions (ft) length width	Dimensions (ft) length width
<input type="checkbox"/> J. INTAKE PIPES (See Sample Drawing 16) or OUTLET PIPES (See Sample Drawing 22)			
If outlet pipe, discharge is to <input type="checkbox"/> inland lake <input type="checkbox"/> stream, drain or river <input type="checkbox"/> overland flow <input type="checkbox"/> Great Lake <input type="checkbox"/> wetland <input type="checkbox"/> other			
Number of pipes	Pipe diameters and invert elevations	Does pipe discharge below the OHWM?	<input type="checkbox"/> No <input type="checkbox"/> Yes
		Is the water treated before discharge?	<input type="checkbox"/> No <input type="checkbox"/> Yes
Type <input type="checkbox"/> headwall <input type="checkbox"/> end section <input type="checkbox"/> other	Dimensions of headwall OR end section (ft) length width height		



<input type="checkbox"/> K. MOORING and NAVIGATION BUOYS (See EZ Guide for Sample Drawing)			
➤ Provide a site plan showing the distances between each buoy and from the shore to each buoy, and depth (ft) of water at each location. ➤ Provide cross-section drawing(s) showing anchoring system(s) and dimensions.			
Purpose of buoy <input type="checkbox"/> mooring <input type="checkbox"/> navigation <input type="checkbox"/> scientific structures <input type="checkbox"/> swimming <input type="checkbox"/> other			
Number of buoys	Dimensions of buoys (ft)		Boat Lengths
	width	height	swing radius
			chain length
Buoy Location: Latitude N Longitude -- W. ➤ Provide a table for multiple buoys.			
Do you own the property along the shoreline?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If No, attach an authorization letter from the property owner(s).
Do you own the bottomlands?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If No, attach an authorization letter from the property owner(s).
<input type="checkbox"/> L. FENCES			
➤ Provide an overall site plan showing the proposed fencing through streams, wetlands or floodplains. ➤ Provide a drawing of fence profile showing the design, dimension, post spacing, mesh, and distance from ground to bottom of fence.			
Purpose of fence <input type="checkbox"/> Airport <input type="checkbox"/> Cervidae <input type="checkbox"/> Livestock <input type="checkbox"/> Residential <input type="checkbox"/> Security <input type="checkbox"/> Other			
Total length (ft) of fence through		Fence height (ft)	Fence type and material
streams wetlands floodplains			
<input type="checkbox"/> M. OTHER - e.g., structure removal, maintenance or repair, aerator, dry fire hydrant, gold prospecting, habitat structures, scientific measuring devices, soil borings, or survey activities.			
Structure description, dimensions and volumes. Complete Sections 10A-C as applicable.			
<input checked="" type="checkbox"/> Expansion of an Existing or Construction of a New Lake or Pond (See Sample Drawings 4 and 15)			
➤ Complete Section 10J for outlets and Section 17 for water control structures. ➤ Provide elevations, cross-sections and profiles of outlets, dams, dikes, water control structures and emergency spillways to nearest water bodies.			
Which best describes your proposed water body use (check all that apply)			
<input type="checkbox"/> mining <input type="checkbox"/> recreation <input type="checkbox"/> storm water retention basin <input type="checkbox"/> wastewater basin <input type="checkbox"/> wildlife <input type="checkbox"/> other			
Water source for lake/pond			
<input type="checkbox"/> groundwater <input type="checkbox"/> natural springs <input type="checkbox"/> Inland Lake or Stream <input type="checkbox"/> storm water runoff <input type="checkbox"/> pump <input type="checkbox"/> sewage <input type="checkbox"/> other			
Location of the lake/basin/pond <input type="checkbox"/> floodplain <input type="checkbox"/> wetland <input type="checkbox"/> stream (inline) <input type="checkbox"/> upland			
Maximum dimensions (ft)		Maximum Area: <input type="checkbox"/> acres <input type="checkbox"/> sq ft	
length	width	depth	
Has the there been a hydrologic study performed on the site?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If Yes, provide a copy.
Has the DEQ conducted a wetland assessment for this parcel?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If Yes, provide a copy or WIP number.
Has a professional wetland delineation been conducted for this parcel?		<input type="checkbox"/> No <input type="checkbox"/> Yes	➤ If Yes, provide a copy with data sheets.
Spoils Disposal	Dredged or excavated spoils will be placed <input type="checkbox"/> on-site <input type="checkbox"/> landfill <input type="checkbox"/> USACE confined disposal facility <input type="checkbox"/> other upland off-site For disposal, provide a ➤ Detailed spoils disposal area location map and site plan with property lines. ➤ Letter of authorization from property owner of spoils disposal site, if disposed off-site.		



12 Activities That May Impact Wetlands (See Sample Drawings 8 & 9). Complete other Sections as applicable.

- Locate your site and wetland information with the DEQ Wetlands Map Viewer at www.mcqi.state.mi.us/wetlands/
- For information on the DEQ's Wetland Identification Program (WIP) visit www.mi.gov/wetlands.
 - ◆ Provide a detailed site plan with labeled property lines, upland and wetland areas, and dimensions and volumes of wetland impacts.
 - ◆ Complete the wetland dredge and wetland fill dimension information below for each impacted wetland area.
 - ◆ Attach tables for multiple impact areas or activities.
 - ◆ Attach at least one cross-section for each wetland dredge and/or fill area; show wetland and upland boundaries on the cross-section.

Has the DEQ conducted a wetland assessment for this parcel?	<input type="checkbox"/> No <input type="checkbox"/> Yes	◆ If Yes, provide a copy or WIP number:
Has a professional wetland delineation been conducted for this parcel?	<input type="checkbox"/> No <input type="checkbox"/> Yes	◆ If Yes, provide a copy with data sheets
Is there a recorded DEQ easement on the property?	<input type="checkbox"/> No <input type="checkbox"/> Yes	◆ If Yes, provide the easement number
Did the applicant purchase the property before October 1, 1980?	<input type="checkbox"/> No <input type="checkbox"/> Yes	◆ If Yes, provide documentation.
Is any grading or mechanized land clearing proposed?	<input type="checkbox"/> No <input type="checkbox"/> Yes	◆ If Yes, label the locations on the site plan.
Has any of the proposed grading or mechanized land clearing been completed?	<input type="checkbox"/> No <input type="checkbox"/> Yes	◆ If Yes, label the locations on the site plan

Proposed Activity	<input type="checkbox"/> boardwalk or deck (Section 10I)	<input type="checkbox"/> bridges and culverts (Section 14)	<input type="checkbox"/> designated environmental area
	<input type="checkbox"/> dewatering	<input type="checkbox"/> draining surface water	<input type="checkbox"/> driveway / road
	<input type="checkbox"/> fences (Section 10L)	<input type="checkbox"/> fill or dredge	<input type="checkbox"/> restoration
	<input type="checkbox"/> septic system	<input type="checkbox"/> stormwater discharge (Section 10J)	<input type="checkbox"/> other

FILL	Dimensions maximum length (ft) maximum width (ft)	Area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	Average depth (ft)	Volume (cu yd)
DREDGE	Dimensions maximum length (ft) maximum width (ft)	Area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	Average depth (ft)	Volume (cu yd)

Spoils Disposal
 Dredged or excavated spoils will be placed on-site landfill USACE confined disposal facility other upland off-site
 For disposal, provide a ◆ Detailed spoils disposal area location map and site plan with property lines.
 ◆ Letter of authorization from property owner of spoils disposal site, if disposed off-site.

Septic System
 The proposed project will be serviced by:
 public sewer private septic system
 ◆ Show system on plans.
 If a private septic system is proposed, has an application for a permit been made to the County Health Department? No Yes
 If Yes, has a permit been issued? No Yes ◆ Provide a copy of the permit.

Describe the wetland impacts, the proposed use or development, and the alternatives considered:

Does the project impact more than 1/3 acre of wetland? No Yes
 ◆ If Yes, submit a Mitigation Plan with the type and amount of mitigation proposed. For more information go to www.mi.gov/wetlands

Describe how impacts to waters of the United States will be avoided and minimized:

Describe how the impact to waters of the United States will be compensated. OR Explain why compensatory mitigation should not be required for the proposed impacts.



13 Floodplain Activities (See Sample Drawing 5 and others. Complete other applicable sections.)

- For more information go to www.mi.gov/floodplainmanagement. This site also lists the projects and requirements for an expedited floodplain review under "Expedited Review Information for Minor Floodplain Projects."
- Examples of projects proposed within the non-floodway portions of the 100-year-floodplain which may qualify for an expedited review: Open pile decks and boardwalks; residences, commercial/industrial facilities, garages and accessory structures; parking lots; pavilions, gazebos, large community playground structures; residential swimming pools
- Examples of projects proposed within the floodway portions of the floodplain which may qualify for an expedited review: Open pile decks and boardwalks, (non-enclosed) that are anchored to prevent floatation and that do not extend over the bed and bank of a watercourse; parking lots constructed at grade or resurfacing that is no more than 4 inches above the existing grade; dry hydrants that do not require fill placement; scientific structure such as staff gauges, water monitoring devices, water quality testing devices, and core sampling devices which meet specific design criteria and fish structures that meet specific design criteria.
- For expedited review include:
 - ◆ Photographs of the work site labeled to identify what is being shown and with the direction of the photo clearly indicated. Include photographs of any river or stream adjacent to the project.
 - ◆ A letter or statement from the local unit of government acknowledging your proposed application. See the website for sample wording.
- A hydraulic analysis or hydrologic analysis may be required to fully assess floodplain impacts.
- The state building code requires an Elevation Certificate for any building construction or addition in a floodplain. A sample form can be found at www.fema.gov/nfip/elvinst.shtm.
 - ◆ Attach additional sheets or tables for multiple proposed floodplain activities and provide hydraulic calculations.
 - ◆ Show reference datum used on plans.

Proposed Activity	<input type="checkbox"/> fill <input type="checkbox"/> excavation or cut <input type="checkbox"/> other	100-year floodplain elevation (ft) (if known) Datum <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> other
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Site is _____ feet above ordinary high water mark (OHWM) OR observed water level. Date of observation (M/D/Y)

Fill volume below the 100-year floodplain elevation (cu yds)	Compensating cut volume below the 100-year floodplain elevation (cu yds)
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Buildings and/or Additions	Type of construction is <input type="checkbox"/> residential <input type="checkbox"/> garage/pole barn <input type="checkbox"/> non residential <input type="checkbox"/> other	
	Construction is <input type="checkbox"/> new <input type="checkbox"/> addition AND Serviced by <input type="checkbox"/> public sewer <input type="checkbox"/> private septic <input type="checkbox"/> other	
	Lowest adjacent grade (ft): existing proposed datum <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> other	
	Existing Structure Information	Proposed Structure Information
	Foundation type <input type="checkbox"/> basement <input type="checkbox"/> concrete slab on grade <input type="checkbox"/> pilings <input type="checkbox"/> crawl space <input type="checkbox"/> other	Foundation type <input type="checkbox"/> basement <input type="checkbox"/> concrete slab on grade <input type="checkbox"/> pilings <input type="checkbox"/> crawl space <input type="checkbox"/> other
	Foundation floor elevation (ft)	Foundation floor elevation (ft)
	Height of crawl space/basement from finished foundation floor to bottom of floor joists (ft)	Height of crawl space/basement from finished foundation floor to bottom of floor joists (ft)
	Elevation of 1st floor above basement floor/crawl space (ft)	Elevation of 1st floor above basement floor/crawl space (ft)
	For enclosed areas below the flood elevation, such as a crawl space, garages and accessory structures: Area of proposed foundation (sq ft) Elevation of proposed enclosed area (ft) datum <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> other	
	Number of flood vents	net opening of each vent (sq inches)



14 Bridges and Culverts Including Foot and Cart Bridges. (See EZ Guides and Sample Drawings 5, 14A, 14B, 14C, 14D.)

- Complete other applicable Sections, including 10A-C.
- A hydraulic analysis or hydrologic analysis may be required to fully assess impacts. ♦ Attach hydraulic calculations.
- High Water Elevation - describe reference point and highest known water level above or below reference point and date of observation.
 - ♦ Attach additional sheets for multiple bridges and/or culverts.
 - ♦ Provide detailed site-specific drawings of existing and proposed Plan and Elevation View at a scale adequate for detailed review.
 - ♦ Provide all information in the boxes below; do not write in a reference to plan sheets. Show reference datum used on plans.

Stream Information	The site has a high water elevation (ft) <input type="checkbox"/> above or <input type="checkbox"/> below the Reference Point of _____ Date observed _____				
	Reference datum used <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> IGLD 85 (Great Lakes coastal areas) <input type="checkbox"/> other _____				
	Average stream width (ft) at the ordinary high water mark (OHWM) outside the influence of any ponding or scour holes around the structure	Upstream			
		Downstream			
	Cross-sectional area of primary channel (sq ft) _____ (See Sample Drawing 14C for more information)				
	The width of the stream where the water begins to overflow its banks. Bankfull width (ft) _____				
	The invert of the stream 100-feet from structure (ft)	Upstream			
	Downstream				
Is the existing culvert perched? <input type="checkbox"/> No <input type="checkbox"/> Yes If Yes, provide a profile of the channel bottom at the high and low points for a distance of 200 feet upstream and downstream of the culvert.					
Complete this form for each bridge / culvert location.			Existing	Proposed	
Bridge	Number of bridge spans				
	Bridge type (concrete box beam, concrete I-beam, timber, etc.)				
	Bridge span (length perpendicular to stream) (ft)				
	Bridge width (parallel to stream) (ft)				
	Bottom of bridge beam (ft)	Upstream			
		Downstream			
	Stream invert elevation at bridge (ft)	Upstream			
	Downstream				
Bridge rise from bottom of beam to streambed (ft)					
Culvert	Number of culverts				
	Culvert type (arch, bottomless, box, circular, elliptical, etc.)				
	Culvert material (concrete, corrugated metal, plastic, etc.)				
	Culvert length (ft)				
	Culvert <input type="checkbox"/> width <input type="checkbox"/> diameter (ft)				
	Culvert height prior to any burying (ft)				
	Depth culvert will be buried (ft)				
	Elevation of culvert crown (ft)	Upstream			
		Downstream			
Higher elevation of <input type="checkbox"/> culvert invert OR <input type="checkbox"/> streambed within culvert (ft)	Upstream				
	Downstream				
Complete for both Bridges and Culverts	Entrance design (mitered, projecting, wingwalls, etc.)				
	Total structure waterway opening above streambed (sq ft)				
	Total structure waterway area below the 100-year elevation (sq ft) (if known)				
	Elevation of road grade at structure (ft)				
	Elevation of low point in road (ft)				
	Distance from low point of road to mid-point of bridge crossing (ft)				
	Length of approach fill from edge of bridge/culvert to existing grade (ft)				
A Licensed Professional Engineer may certify that your project will not cause a harmful interference for a range of flood discharges up to and including the 100-year flood discharge. The "Required Certification Language" is found under "forms" on the "maps, forms and documents" link from the www.mi.gov/jointpermit page or a copy may be requested by phone, email, or mail. A hydraulic report supporting this certification may also be required.					
Is Certification Language attached? <input type="checkbox"/> No <input type="checkbox"/> Yes					

**15 Stream, River, or Drain Construction, Relocation and Enclosure Activities**

- Complete Section 10C for riprap activities.
- If side casting or other proposed activities will impact wetlands or floodplains, complete Sections 12 and 13, respectively.
 - Provide a scaled overall site plan showing existing lakes, streams, wetlands, and other water features; existing structures; and the location of all proposed structures and land change activities.
 - Provide scaled cross-section (elevation) drawings necessary to clearly show existing and proposed conditions.
 - For activities on legally established county drains, provide original design and proposed dimensions and elevations.

Stream Information	Water elevation (ft) datum <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> IGLD 85 (Great Lakes coastal areas) <input type="checkbox"/> other ➔ Show elevation on plans with description.		
	Dimensions (ft) of existing stream/drain channel (ft) length width depth		
	Existing channel average water depth in a normal year (ft)		
Proposed Activity <input type="checkbox"/> enclosure <input type="checkbox"/> improvement <input type="checkbox"/> maintenance <input type="checkbox"/> new drain <input type="checkbox"/> relocation <input type="checkbox"/> wetlands <input type="checkbox"/> other			
If an enclosed structure is proposed, check material type <input type="checkbox"/> concrete <input type="checkbox"/> corrugated metal <input type="checkbox"/> plastic <input type="checkbox"/> other			
Dimensions (ft) of the structure: diameter length		Volume of fill (cu yds)	
Will old/enclosed stream channel be backfilled to top of bank grade? <input type="checkbox"/> No <input type="checkbox"/> Yes			
Length of channel to be abandoned (ft)		Volume of fill (cu yds)	
Dimensions (ft) of improved, maintained, new, relocated or wetland stream/drain channel. length width depth		Volume of dredge/excavation (cu yds)	
How will slopes and bottom be stabilized?		Proposed side slopes (vertical / horizontal)	
Spoils Disposal	Dredged or excavated spoils will be placed <input type="checkbox"/> on-site <input type="checkbox"/> landfill <input type="checkbox"/> USACE confined disposal facility <input type="checkbox"/> other upland off-site For disposal, provide a ➔ Detailed spoils disposal area location map and site plan with property lines. ➔ Letter of authorization from property owner of spoils disposal site, if disposed off-site.		
16 Drawdown of an Impoundment			
• If wetlands will be impacted, complete Section 12.			
Type of drawdown <input type="checkbox"/> over winter <input checked="" type="checkbox"/> temporary <input type="checkbox"/> one-time event <input type="checkbox"/> annual event <input type="checkbox"/> permanent (dam removal) <input type="checkbox"/> other			
Reason for drawdown <i>inspection & routine repairs to concrete structures of the dam.</i>			
Has there been a previous drawdown? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes If Yes, provide date (M/D/Y) <i>The Licensee believes there may have been one done in the past give the age of the dam. However, the date is not known.</i>		Previous DEQ permit number, if known <i>Unknown</i>	
Does waterbody have established legal lake level? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not Sure		Dam ID Number, if known <i>FERC #10854</i>	
Extent of vertical drawdown (ft) <i>7.4 Ft.</i>	Impoundment design head (ft) <i>30</i>	Number of adjacent or impacted property owners <i>45</i>	
Date drawdown would start (M/D/Y) <i>6/15/12</i>	Date drawdown would stop (M/D/Y) <i>6/30/12</i>	Rate of drawdown (ft/day) <i>.5 Ft./Day</i>	
Date refilling would start (M/D/Y) <i>10/16/12</i>	Date refill would end (M/D/Y) <i>10/31/12</i>	Rate of refill (ft/day) <i>.5 Ft./Day - Not to exceed inflow.</i>	
Type of outlet discharge structure to be used <input type="checkbox"/> surface <input type="checkbox"/> bottom <input checked="" type="checkbox"/> mid-depth	Impoundment area at normal water level (acres) <i>180</i>	Sediment depth behind impoundment discharge structure (ft) <i>Unknown</i>	



17 Dam, Embankment, Dike, Spillway, or Control Structure Activities (See Sample Drawing 15)					
<ul style="list-style-type: none"> For more information go to www.mi.gov/damsafety. If wetlands will be impacted, complete Section 12. Information on removing a dam is available at www.mi.gov/damsafety and following the Related Link – DEQ Dam Removal web site. <ul style="list-style-type: none"> Attach site-specific conceptual plans for construction of a new dam, reconstruction of a failed dam, or enlargement of an existing dam for resource impact review. Detailed engineering plans are required once the activity has been determined to be permissible. Attach detailed signed and sealed engineering plans for a Part 315 dam repair, dam alteration, dam abandonment, or dam removal. Part 315 Dam Safety application fees are added to all other application fees. 					
Proposed Activity		<input type="checkbox"/> abandonment	<input type="checkbox"/> alteration	<input type="checkbox"/> enlargement of an existing dam	
		<input type="checkbox"/> removal	<input checked="" type="checkbox"/> repair	<input type="checkbox"/> reconstruction of a failed dam	
		<input type="checkbox"/> new dam construction	<input checked="" type="checkbox"/> other <i>Drawdown for inspection and concrete maint.</i>		
Dam ID Number, if known <i>FERC #10854</i>		Type of outlet discharge structure <input type="checkbox"/> surface <input type="checkbox"/> bottom <input checked="" type="checkbox"/> mid-depth			
Will proposed activities require a drawdown of the waterbody to complete the work? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes • If Yes, complete Section 16.					
Does the structure allow complete drainage of the waterbody? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes			Impoundment size (acres) <i>180</i>		
Benchmark elevation (ft) <i>Unknown</i> Describe the benchmark and show on the plans <i>N/A</i>			Datum <input type="checkbox"/> NGVD 29 <input type="checkbox"/> NAVD 88 <input type="checkbox"/> Local <input checked="" type="checkbox"/> other <i>MSL</i>		
Dredging/excavation volume (cu yd) <i>N/A</i>		Fill volume (cu yd) <i>N/A</i>		Riprap volume (cu yd) <i>N/A</i>	
Have you engaged the services of a Licensed Professional Engineer? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes					
Engineer's Name <i>Thomas N. Gordon</i> <i>1001 Stephenson Street</i> <i>Norway, MI 49870</i>		Registration Number <i>6201029321</i>		Mailing Address <i>RWE Operations</i>	
Will a water diversion during construction be required? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes					
If Yes, describe how the stream flow will be controlled through the dam construction area during the proposed project activities:					
Complete the following for a new dam, reconstruction of a failed dam or enlargement of an existing dam					
Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam.					
Embankment top elevation (ft)			Streambed elevation at downstream embankment toe (ft)		
Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)					
Embankment dimensions	length (ft)	top width (ft)	bottom width (ft)	slopes (vertical / horizontal)	Upstream Downstream
Proposed normal pool elevation (ft)			Impoundment flood elevation (ft)		
Maximum vertical drawdown capability (ft)			Attach operational procedure of the proposed structure, if available.		
Have soil borings been taken at dam location?			<input type="checkbox"/> No <input type="checkbox"/> Yes	• If Yes, attach results.	
Will a cold water underspill be provided?			<input type="checkbox"/> No <input type="checkbox"/> Yes	• If Yes, provide the invert elevation (ft)	
Do you have flowage rights to all proposed flooded property at the design flood elevation?			<input type="checkbox"/> No <input type="checkbox"/> Yes	• If No, provide a letter of authorization from the property owner.	



18 Utility Crossings (See Sample Drawings 12 and 13, and EZ Guide)

- If side casting is proposed, complete Sections 10A and 10B. If spoils will be placed in or impact wetlands, complete Section 12.
 - ◆ Attach additional sheets or tables with the requested information as needed for multiple crossings.
 - ◆ For wetland crossings using the open trench method show clay plugs at the wetland/upland boundaries on the plans.

Crossing of Inland Lake or Stream floodplain Great Lake wetlands (also complete Section 12)

What method will be used to construct the crossings? directional boring jack and bore open trench plow / knife flume

Utility Type	Number of lake or stream crossings	Number of wetland crossings	Pipe diameter with casing (in)	Pipe length per crossing (ft)	Distance below streambed or wetland (in)	Trench width (ft)
<input type="checkbox"/> sanitary sewer						
<input type="checkbox"/> storm sewer						
<input type="checkbox"/> watermain						
<input type="checkbox"/> cable						
<input type="checkbox"/> electric						
<input type="checkbox"/> fiber optic cable						
<input type="checkbox"/> oil/gas pipeline						

19 Marina Construction, Expansion and Reconfiguration (See Sample Drawing 21)

- For more information go to www.mi.gov/marinas
- Marinas located on the Great Lakes, including Lake St. Clair, may be required to secure leases or conveyances from the state of Michigan to place structures on the bottomlands. If a conveyance is necessary, an application must be submitted before the Joint Permit Application can be determined complete.
 - ◆ Fully complete Section 10 E. For multiple structures provide a table with the requested information.
 - ◆ Enclose a copy of any current pump-out agreement with another marina facility, if on-site sanitary pump out facilities are not available.
 - ◆ Attach a copy of the property legal description, mortgage survey, or a property boundary survey to your application.
 - ◆ The WRD may require a riparian interest area (RIA) estimate survey, sealed by a licensed surveyor, in order to determine whether the proposed project will adversely impact riparian rights. Include any available sealed RIA estimate survey and/or written authorizations from affected adjacent riparian owners with your application.

Proposed Marina Activity New construction Expansion Reconfiguration

Do you have an existing Great Lake Conveyance? No Yes For more information visit www.mi.gov/deqgreatlakes.

Are sanitary pump-out facilities available? No Yes Is there a pump out agreement? No Yes If Yes, provide a copy.

Marina Description	Current Count	Final Count
Number of boat slips/wells (do not include broadside dockage or mooring buoys)		
Lineal feet of broadside dockage		
Maximum number of boats at broadside dockage		
Number of mooring buoys		
Number of launch ramps/lanes		



20 Critical Dune Areas and High Risk Erosion Areas (See Sample Drawings 19 and 20, also Sample Drawing 9 for wetlands)

Critical Dune Areas (See Sample Drawing 20)

- For more information go to www.mi.gov/deqsanddunes/
- All property boundaries, proposed structure corners including decks, septic system, water well, driveway, grading, and terrain alteration locations must be staked before the WRD site inspection.
- Scaled overhead and cross-section plans that include all property boundaries, location and dimensions of all structures and terrain alterations, and construction access must be included. Cross-sections must show existing and proposed grades including foundations.
- Additional information may be required to complete the application review.
 - ◆ Construction in critical dune areas requires the following written assurances submitted with the application:
 - 1) permit or letter from County Enforcing Agent stating project complies with Part 91 (Soil Erosion and Sedimentation Control),
 - 2) permit or letter from County Health Department for work on a septic system, and
 - 3) a copy of the assurance letter received from the local Conservation District indicating your project has been reviewed and the prepared instructions or plans for vegetation removal will be followed during and after the construction process.
- Construction in critical dune areas on slopes greater than 33 percent (1 vertical: 3 horizontal) is prohibited without a special exception.
- Construction in critical dune areas on slopes that measure from 25 percent (1 vertical: 4 horizontal) to less than 33 percent requires plans prepared by a registered architect or licensed professional engineer.

High Risk Erosion Areas (See Sample Drawing 19)

- For more information go to www.mi.gov/jointpermit, select HREA under "related links"
- All property boundaries and proposed structure corners and septic system locations must be staked before the WRD site inspection.
- Scaled overhead plans that include all property boundaries, and the location and dimensions of all structures and septic systems must be included.
- Additional information, including the building construction plans, may be required to complete the application review.

Complete for all Critical Dune Areas and/or High Risk Erosion Areas

Parcel dimensions (ft) width	depth	Date project staked (M/D/Y)
Property is a <input type="checkbox"/> platted lot <input type="checkbox"/> unplatted parcel		Year current property boundaries created
Type of construction activities <input type="checkbox"/> addition <input type="checkbox"/> driveway <input type="checkbox"/> garage <input type="checkbox"/> home <input type="checkbox"/> renovation <input type="checkbox"/> septic <input type="checkbox"/> other		
The proposed project will be serviced by <input type="checkbox"/> public sewer <input type="checkbox"/> private septic system.		
◆ On the plans show the location and dimensions of the private septic system.		
If a private septic system is proposed has application been made to the County Health Department for a permit? <input type="checkbox"/> No <input type="checkbox"/> Yes		
If Yes, has a permit been issued? <input type="checkbox"/> No <input type="checkbox"/> Yes		
◆ If Yes, provide a copy of the permit for all Critical Dune Area projects.		
If in a High Risk Erosion Area provide the number of individual living-units in the proposed building		

Critical Dune Areas

Utility Installation	Proposed New Construction
Installation Method	Foundation type <input type="checkbox"/> basement
<input type="checkbox"/> directional bore <input type="checkbox"/> plowing in	<input type="checkbox"/> concrete slab <input type="checkbox"/> pilings
<input type="checkbox"/> open trench <input type="checkbox"/> other	<input type="checkbox"/> crawl space <input type="checkbox"/> other
◆ Show utility locations and dimensions on the site plan.	Area of existing structure (sq ft)
◆ Show construction access route on the site plan.	Area of proposed structure (sq ft)
◆ Show existing and proposed grades on the cross-section.	Area of existing deck (sq ft)
◆ Show locations of vegetation to be removed on the site plan.	Area of proposed deck (sq ft)

High Risk Erosion Areas

Existing Structure Information	Proposed New Construction
Foundation type <input type="checkbox"/> basement	Foundation type <input type="checkbox"/> basement
<input type="checkbox"/> concrete slab <input type="checkbox"/> pilings	<input type="checkbox"/> concrete slab <input type="checkbox"/> pilings
<input type="checkbox"/> crawl space <input type="checkbox"/> other	<input type="checkbox"/> crawl space <input type="checkbox"/> other
Material above foundation wall	Material above foundation wall
<input type="checkbox"/> block <input type="checkbox"/> log <input type="checkbox"/> stud frame <input type="checkbox"/> other	<input type="checkbox"/> block <input type="checkbox"/> log <input type="checkbox"/> stud frame <input type="checkbox"/> other
Siding material	Siding material
<input type="checkbox"/> block <input type="checkbox"/> vinyl <input type="checkbox"/> wood <input type="checkbox"/> other	<input type="checkbox"/> block <input type="checkbox"/> vinyl <input type="checkbox"/> wood <input type="checkbox"/> other
Area of the foundation, excluding attached garage (sq ft)	Area of the foundation, excluding attached garage (sq ft)
Area of the garage foundation (sq ft)	Area of garage foundation (sq ft)
If renovating or restoring an existing structure, indicate the renovation or restoration cost \$	
Current structure replacement value \$	
Tax assessed value of existing structure excluding land value \$	Assessment Year

Appendix A
Adjacent Property Owners

	A	B	C	D	E	F	G
1	OWNER1	OWNER2	OWNER3	MAILING_AD	MAILING_CI	MAILING_ST	MAILING_ZI
2	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
3	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
4	PARIS, MARK & WENDY			50 GREEN MEADOW CIR	SHEPHERDSTOWN	WV	25443
5	STEEN, ERROL & CAROL			1051 N RIVER DR	GWINN	MI	49841
6	PARIS, BRUCE & JILL			180 N PINE ST	GWINN	MI	49841
7	PARIS, BRUCE & JILL			180 N PINE ST	GWINN	MI	49841
8	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
9	STATE OF MICHIGAN				LANSING	MI	48909
10	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
11	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
12	SCHILS, BRIAN & SHEILA			N8139 - 900TH ST	RIVER FALLS	WI	54022
13	UREN, PAULINE & TODD &	LISA & KIMBERLY UREN		BOX 4E 140 MIDWAY DR	NEGAUNEE	MI	49866
14	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
15	KETOLA, PAUL & KAREN			342 N PRINCETON DR	GWINN	MI	49841
16	UPPER PENINSULA POWER COMPANY			PO BOX 19001	GREEN BAY	WI	54307
17	DRURY, HUGH			130 W NORRIE ST	IRONWOOD	MI	49938
18	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
19	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
20	PARIS, MARK & SCOTT &	BRUCE & DAVID PARIS		204 CARBON ST	GWINN	MI	49841
21	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
22	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
23	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
24	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
25	KETOLA, GERALD M JR			BOX 211	GWINN	MI	49841
26	KETOLA, PAUL & KAREN			342 N PRINCETON DR	GWINN	MI	49841
27	PARIS, BRUCE & JILL			180 N PINE ST	GWINN	MI	49841
28	UREN, PAULINE & TODD &	LISA & KIMBERLY UREN		777 PIONEER PARK, LOT 183	MARQUETTE	MI	49855
29	BARRETT, JOSEPH			P O BOX 860	GWINN	MI	49841
30	PETERSON, ROXANN			PO BOX 238	LITTLE LAKE	MI	49833
31	LAITURI, GARY & JUDY			4470 219TH LANE NW	ANOKA	MN	55303
32	THURSTON, JACK			2136 CO RD 565	NEGAUNEE	MI	49866
33	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
34	SAYRE, KRIS & LEAH			899 N CATARACT DR	GWINN	MI	49841
35	COONEN, JAY			810 N CATARACT RD	GWINN	MI	49841
36	COONEN, JAY			810 N CATARACT RD	GWINN	MI	49841
37	WILLIG, JOHN			708 N MAPLE HILLS DR	GWINN	MI	49841
38	PETERSON, DUANE &	ESTHER GUSTAFSON		PO BOX 103	LITTLE LAKE	MI	49833
39	WILLIG, DAVID WILLIAM & KAREN	LIFE EST WILLIG JUDITH		104 E JOHNSON LAKE DR	GWINN	MI	49841
40	ASPLUND, JOHN & JANET			2136 CO RD 565	NEGAUNEE	MI	49866
41	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
42	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
43	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
44	EBNER, RONALD & ANNETTE &	JOHN SNELL		302 GREENWOOD ST	ISHPEMING	MI	49849

	A	B	C	D	E	F	G
1	OWNER1	OWNER2	OWNER3	MAILING_AD	MAILING_CI	MAILING_ST	MAILING_ZI
45	BARRETT, JOSEPH			P O BOX 860	GWINN	MI	49841
46	LAITURI, REVA			375 SENEY RD	NEGAUNEE	MI	49866
47	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
48	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
49	ASPLUND, JOHN & JANET	LIFE EST J & J THURSTON		2136 W CO RD 565	NEGAUNEE	MI	49866
50	ASPLUND, JOHN & JANET	LIFE ESTATE JACK THURSTON		2136 CO RD 565	NEGAUNEE	MI	49866
51	ZEITS, JOHN			2102 W CO RD 565	NEGAUNEE	MI	49866
52	MENI, STANLEY			320 FORTRESS	GWINN	MI	49841
53	STELLARD, GERALD & ANNABELLE			PO BOX 1024	GWINN	MI	49841
54	GUSTAFSON, HELEN & REUBIN &	LUKE GUSTAFSON		RT 1 BOX 431	NEGAUNEE	MI	49866
55	GRAGE, LUCAS			PO BOX 824	GWINN	MI	49841
56	BEAUPRE, DENNIS & LISA			2002 W HEADING AV	PEORIA	IL	61604
57	DRURY, HUGH			130 W NORRIE ST	IRONWOOD	MI	49938
58	STEEN, ERROL & CAROL			1051 N RIVER RD	GWINN	MI	49841
59	BANKS, WILLIAM			460 S BIG CREEK RD	MARQUETTE	MI	49855
60	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
61	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
62	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
63	BANKS, WILLIAM			2108 PRESQUE ISLE	MARQUETTE	MI	49855
64	LADWIG, JEFFREY & BILLIE			2250 W CO RD 565	NEGAUNEE	MI	49866
65	BARRETT, BRUCE			PO BOX 672	GWINN	MI	49841
66	PETERSON, LIZABETH			PO BOX 238	LITTLE LAKE	MI	49833
67	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
68	UP HYDRO, LLC			116 STATE ST	NESHKORO	WI	54960
69	RECTOR, JAMES ET AL			705 HENNEPIN RD	MARQUETTE	MI	49855
70	BARRY, RICHARD & NATHAN CARD			1940 W M-35	GWINN	MI	49841
71	STATE OF MICHIGAN				LANSING	MI	48909
72	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
73	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
74	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
75	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
76	STEEN, ERROL & CAROL			1051 N RIVER DR	GWINN	MI	49841
77	BUCK, STEPHEN & KARI			3150 N LINCOLN LAKE RD	COAL CITY	IL	60416
78	BUCK, MICHAEL			2874 2369TH RD	MARSEILLES	IL	61341
79	KEEBAUGH, JAMES & GALE DAVID			104 PROVIDER	GWINN	MI	49841
80	UPPER PENINSULA POWER COMPANY		TAX DEPT	PO BOX 19001	GREEN BAY	WI	54307
81	SIMISON, GARY & LAURA			49 ROYAL OAK DR	GLADSTONE	MI	49837
82	UP HYDRO LLC			116 STATE ST	NESHKORO	WI	54960
83	VANDERWALL, TIMOTHY & BARBARA			310 E SEMINOLE	DWIGHT	IL	60420
84	ARCHIBALD, ROBERT & DONNA			4700 PRATHER AV	SAINT LOUIS	MO	63109
85	BARRETT, JOSEPH			P O BOX 860	GWINN	MI	49841
86	UP HYDRO LLC			116 STATE STREET	NESHKORO	WI	54960

Appendix B

Maps & Plans

1. Figure 1 Escanaba River Project - Project Map
 2. Cataract Drainage Basin Area
 3. Project Location Map/Marquette County
 4. Cataract Basin/Dam Map
5. Ariel Photo - Cataract Basin & Dam Location
6. 1:24000 Cataract Basin Topographic Map
 7. Intake Dam Plan, Elevation & Sections
8. Reservoir Draw Down Plan – March 22, 2012

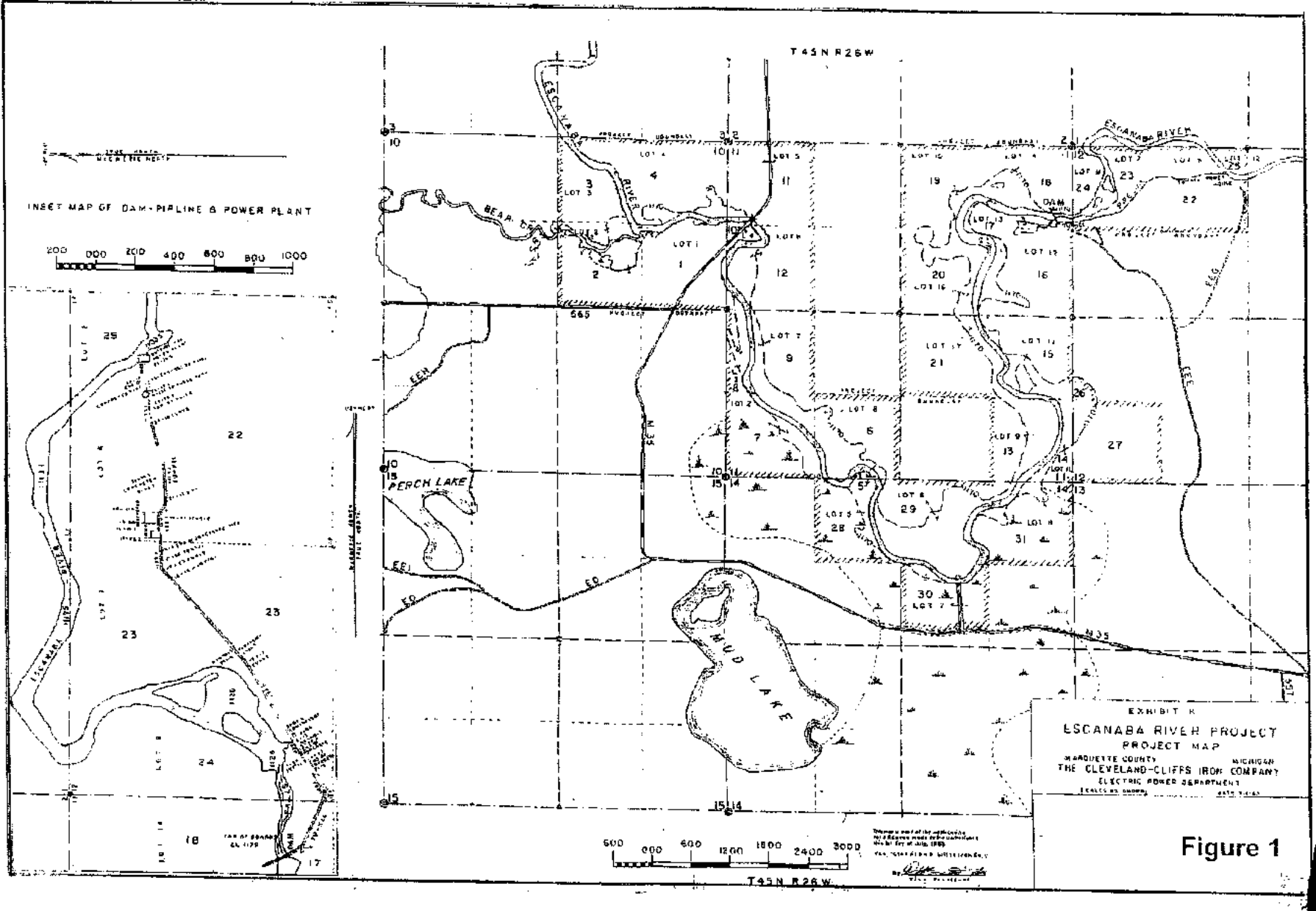
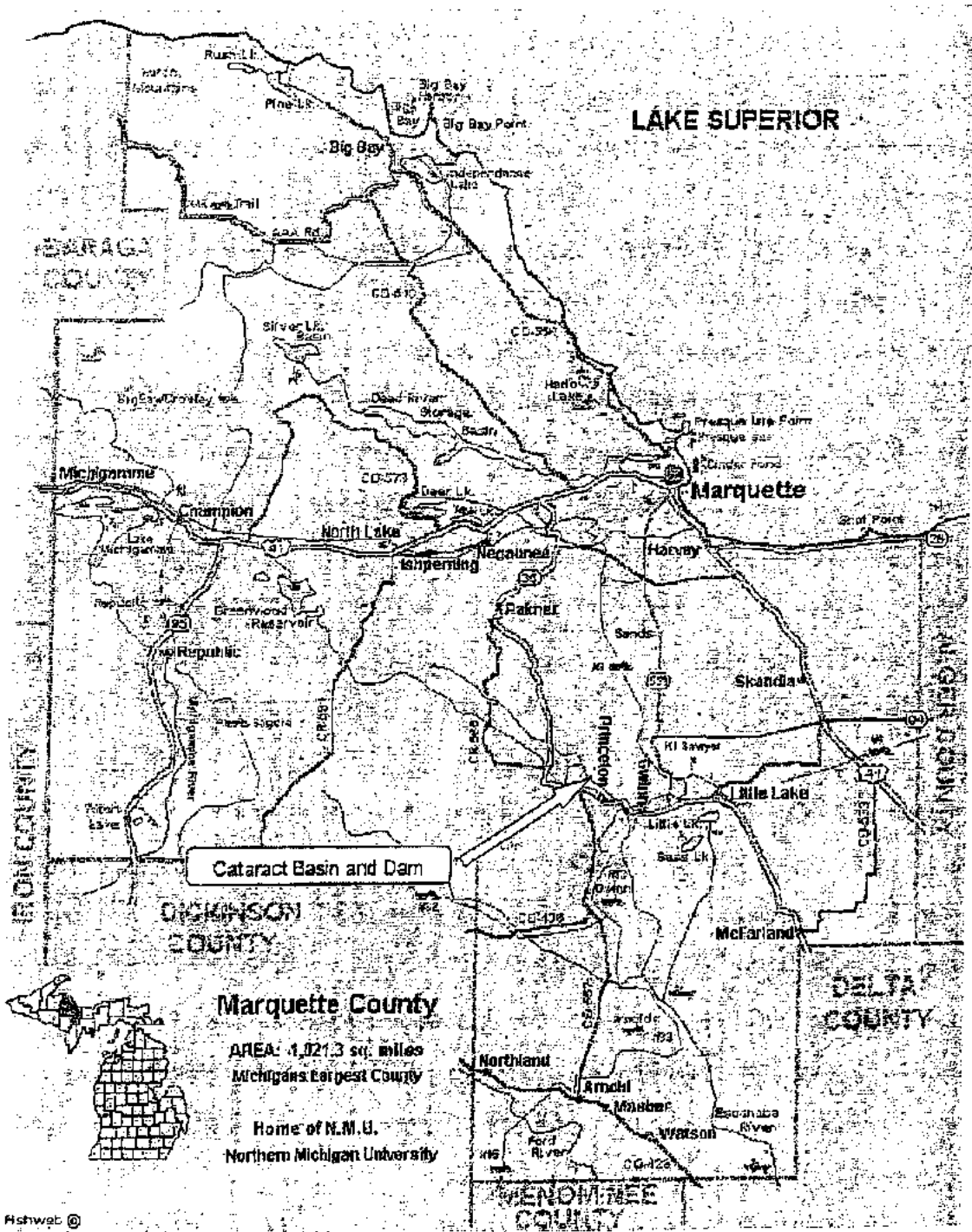
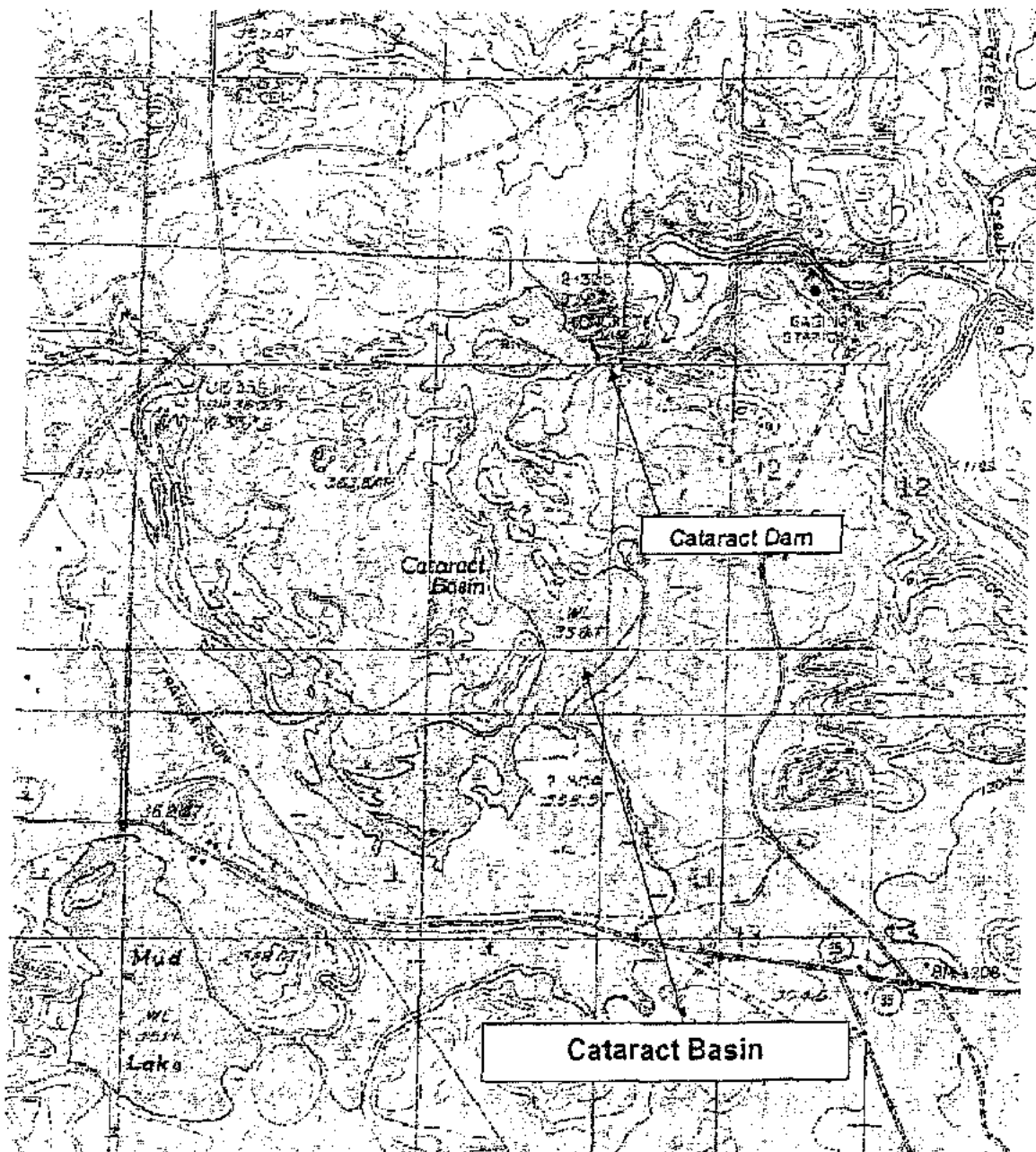


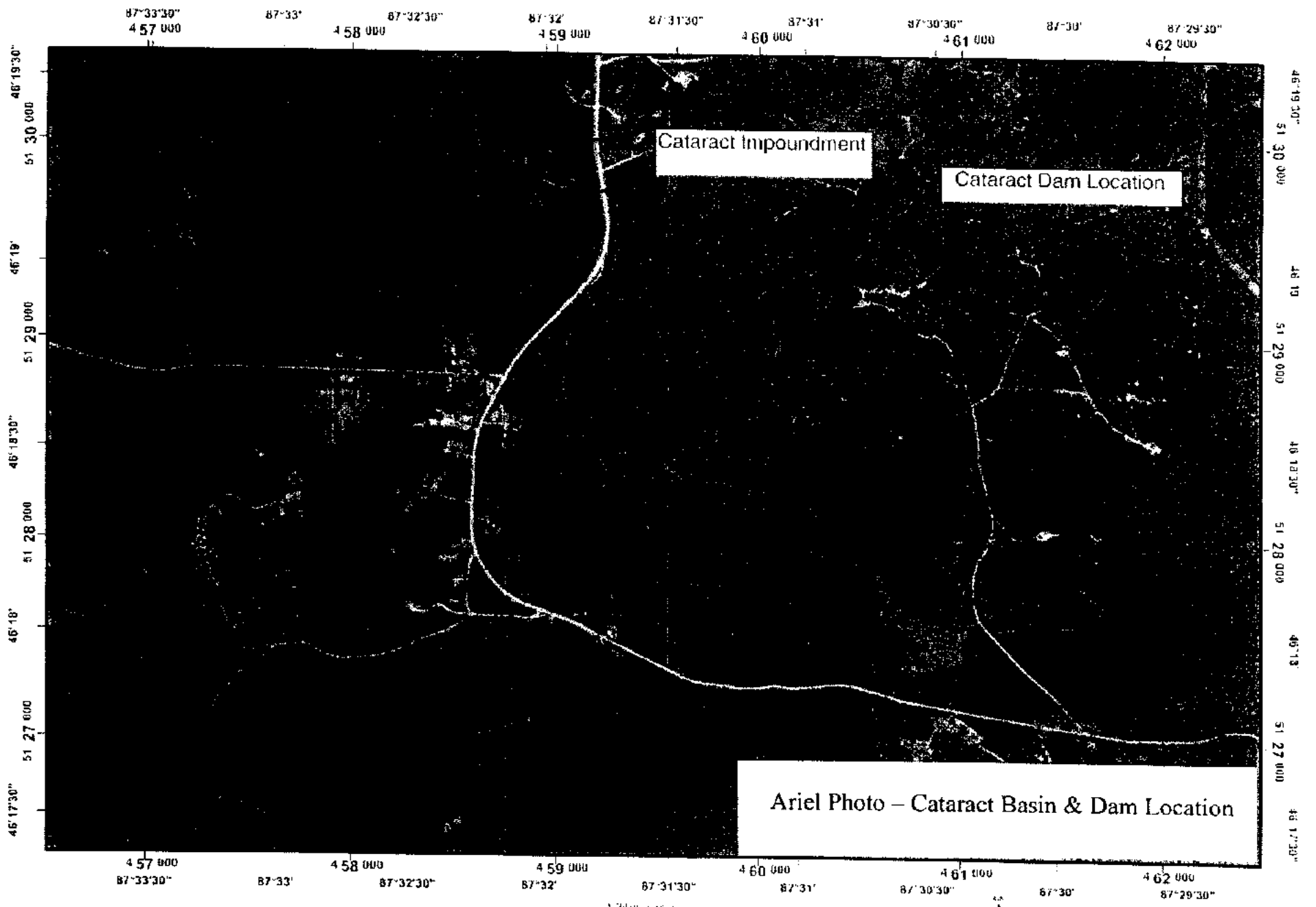
Figure 1



Project Location Map/Marquette County



Cataract Basin/Dam Map



Cataract Impoundment

Cataract Dam Location

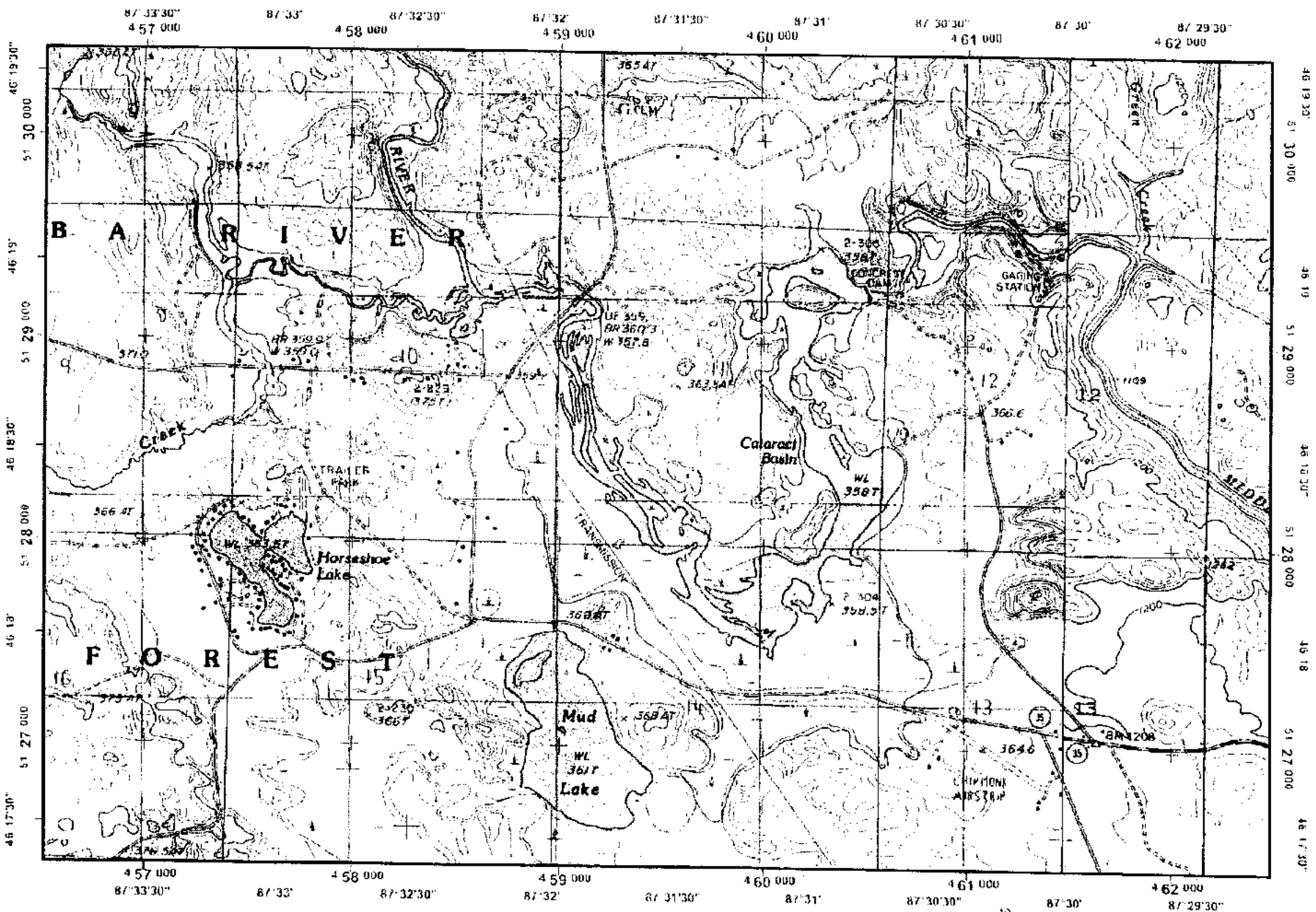
Ariel Photo - Cataract Basin & Dam Location

457 000 87°33'30" 458 000 87°33' 87°32'30" 459 000 87°32' 87°31'30" 460 000 87°31' 87°30'30" 461 000 87°30' 462 000 87°29'30"

Universal Transverse Mercator (UTM) Projection Zone 18
 North American Datum of 1983
 Horizontal Units: Meters
 Vertical Units: Meters
 Datum: North American Datum of 1983
 Zone: 18N

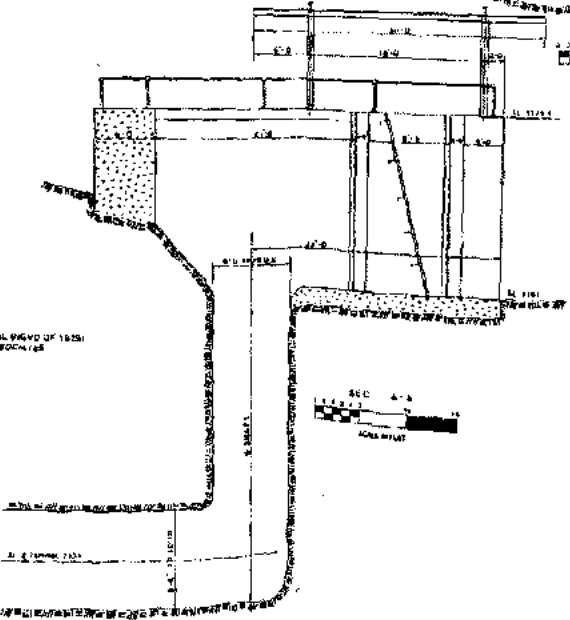
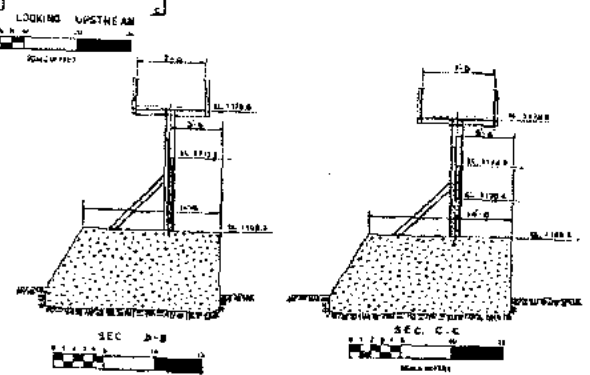
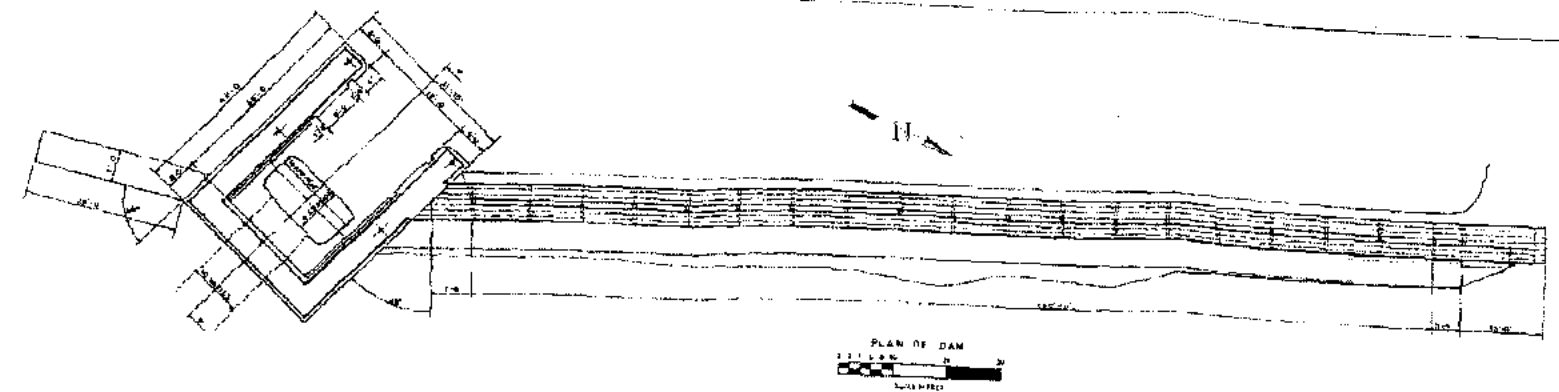
1:24,000 Scale

North Arrow
 UTM Zone 18N
 Datum: North American Datum of 1983



U.S. GEOLOGICAL SURVEY
 WATER RESOURCES DIVISION
 BRIDGE DIVISION
 BRIDGE ENGINEERING CENTER
 1415 RICHMOND AVENUE
 PITTSBURGH, PENNSYLVANIA 15222-3326
 (724) 385-3300
 WWW.WATER.USGS.GOV

1:24000 Cataract Basin
 Topographic Map



NOTE:
ALL ELEVATIONS ARE GIVEN IN FEET AND MEAN SEA LEVEL (MSL) OF 1929
BASED ON 1927 SURVEY BY SANDRICK CARLSON, AND ASSOCIATES

THIS DRAWING IS A PART OF THE APPLICATION
FOR LICENSE MADE BY THE UNDERSIGNED
THIS DATE OF _____ 1928
UPPER PENNSYLVANIA POWER COMPANY
BY *Charles P. [Signature]*

CATARACT HYDROELECTRIC PROJECT FERC PROJECT NO. 1084 UPPER PENNSYLVANIA POWER COMPANY		
INTAKE DAM PLAN, ELEVATION & SECTIONS		
	Sheet 1	Sheet 2

Reservoir Drawdown Plan

(Per FERC License Article 403)

Cataract Hydroelectric Project

FERC No. 10854

Located On Middle Branch Escanaba River
Marquette County, Michigan

LICENSEE - UP HYDRO, LLC

March 22, 2012

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Federal License Requirements

License article 403 requires the licensee to, within one year of license issuance, file with the Commission, for approval, an operation and compliance plan including draw-down management procedures, emergency operating procedures, and measures to document compliance with run-of-river operation (Article 401) and minimum flow requirements (Article 402).

Article 403 requires that the plan include, at minimum: 1) provisions for releasing flow to the bypassed reach by removing stoplogs when reservoir elevation drops to 1 foot below normal pool elevation; 2) procedures for re-establishing flow following power outages and other emergencies; 3) a draw-down plan that outlines notification procedures; 4) provisions for submission of annual reports containing summaries of hourly operating and streamflow gaging data for the preceding year; 5) provisions for clearly marking the existing reservoir staff gage with elevations pertinent to compliance with the run-of-river requirements of article 401; 6) provisions for maintenance of the remotely-monitored continuous recording level sensors in the project reservoir and bypassed channel; 7) provisions for operation and maintenance of the existing U.S. Geological Survey (USGS) streamflow gage at Princeton and equipping the gage with sufficient telemetry equipment; 8) development of procedures for agency notification when necessary; and 9) development of a minimum flow plan that addresses compliance demonstration methods. The article requires the licensee to prepare the plan after consultation with Michigan Department of Natural Resources (MDNR) and U.S. Fish and Wildlife Service (FWS). The licensee must include with the plan documentation of consultation, and copies of comments on the completed plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt an agency's recommendation, the filing shall include the licensee's reasons, based on project-specific information. Additionally, the article requires the licensee to update the plan once every 5 years after approval of the original plan, in consultation with MDNR and FWS, and to file the updated plan with the Commission for approval.

Plan Update

The plan was last updated and filed with FERC on October 28, 2009. The FERC issued an order approving the updated Operation and Compliance Plan pursuant to Article 403 of the Order Issuing Original License for the Cataract Hydroelectric Project.

Drawdown Reason

The reason for the drawdown is for inspection of the dam and routine repairs to the concrete structures if needed based upon the inspection.

Duration of Drawdown

The drawdown is expected to last approximately 122 days or as long as the agencies will allow.

Drawdown Start Date

The expected starting date of the drawdown will be June 15, 2012, pending FERC approval.

Rate of Drawdown

The drawdown of the reservoir will be 6 inches (.5 ft.) per day. The drawdown will be 7.4 ft. which will take approximately 15 days. The starting drawdown elevation will be between 1173.25 msl and 1173.75 msl which is the operational range of the project. The top elevation of the penstock/intake is 1161.0 msl (NGVD 1929).

Lowest Reservoir Elevation

The lowest elevation reached during the drawdown will be the height of the sill or 1166.5 msl.

Stranded Fish/Mussel Survey

Stranded fish/mussel surveys will be performed at the beginning of and during the drawdown. The goal is to manually relocate fish and mussels from dewatered areas back to the main water area (in this case, the receding water of the impoundment). See the attachment for guidance on the mussel survey.

Stranded fish and mussel surveys will be conducted daily to inspect the shallow water margins and backwaters of the reservoir as well as the dewatered zone around the impoundment, as stranded organisms will likely be found in the dewatered zone as the water levels recede during drawdown. The surveys will be conducted by boat whenever possible and by foot if needed. Buckets of water and a cooler will be used to pick up fish and mussels that are left behind. To minimize stress and mortality to fish and mussels, the survey will be conducted during early morning hours when air temperatures are coolest. Every effort will be made to return stranded fish and mussels to the permanently inundated portion of the river channel. These inspections will continue until such time that no stranded organisms are found for three consecutive days after drawdown is complete or upon agreement with MDNR. Records of daily inspections will include numbers and species stranded the condition of the organisms, and whether the organisms

were able to be rescued. The records will be provided to MDNR after the maximum drawdown depth is reached. MDNR will be notified in advance of the proposed date and time of the stranded fish surveys. The Escanaba River Association (ERA) is interested in stocking trout in the Middle Branch during fall 2012. The proposed drawdown may have some water temperature implications relative to stocking success. The company will contact and work with the ERA to install water temperature data loggers upstream and downstream from Cataract Basin prior to the drawdown, and allow those loggers to record data until the refill is complete.

Refill Start Date & Rate of Refill

The refill of the reservoir will begin on October 16, 2012 at a rate not to exceed of 6 inches (.5 ft.) per day, unless otherwise agreed to by NAH and MDNR. The rate of refill will not exceed the actual water available for inflow and maintenance of the minimum flow requirement of 8 CFS.

Date Reservoir Complete

The refill is anticipated to be complete on the 30th or 31st of October 2012.

MDNR Fisheries Division Draft Mussel Relocation Guidance
September 2011

Mussel Relocation Survey

Mussel relocation surveys shall be conducted prior to any construction activities or impoundment reservoir drawdown whenever there is potential for mussels to be stranded or otherwise negatively affected. If a reservoir drawdown may result in the release of sediment downstream of the dam, mussels both in the reservoir and downstream of the dam should be relocated. Any stranded mussels should be handled and relocated per the guidelines below.

Surveys should focus on habitats with known high mussel densities or rare species. If information on mussels is not available for the water body of interest, surveys should be conducted for either the entire reservoir shoreline to the depth of the thermocline or the entire affected stretch of river. During construction or drawdown activities, surveys to evaluate and relocate stranded mussels should be conducted on a daily basis unless historical information allows for less frequent surveys (e.g., if historical data shows that mussels are found only at certain reservoir depths, then survey efforts should focus on those depths). Survey dates should be coordinated with Fisheries Division staff in advance to allow for feedback and possible participation. Additionally, a MDNR Cultural or Scientific Collector's Permit must be requested at least 30 days in advance of the drawdown for collection of voucher specimens (shells) of each mussel species, with more time allowed if federal or state listed species may be found in the affected area.

A report of mussel relocation efforts shall be provided to MDNR Fisheries within 30 days after the event and include the following:

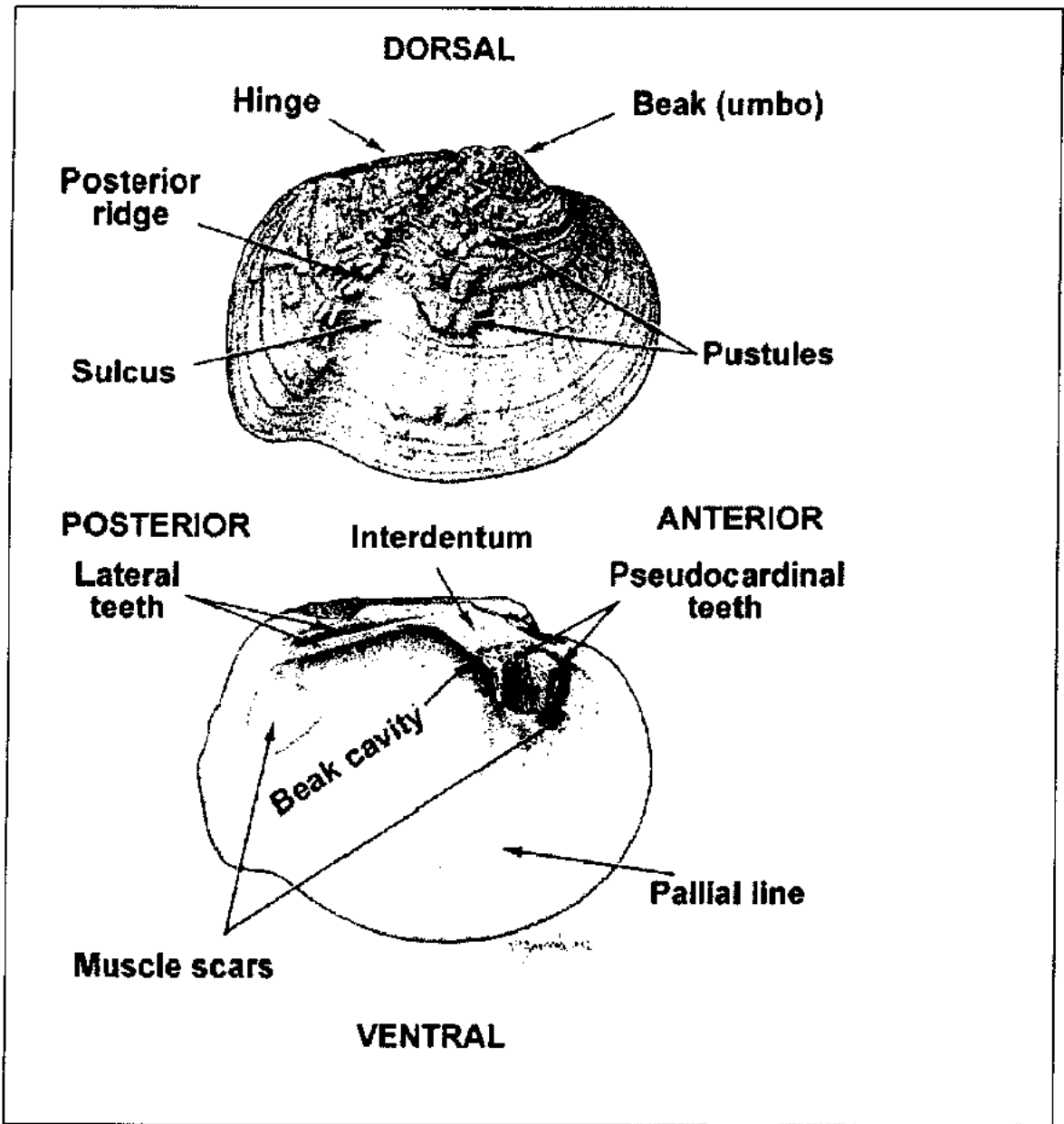
- Survey date and time
- Weather conditions
- Water elevation
- Mussel condition (live or dead), species, number, and location/GPS coordinates
- Photographs of each mussel species

Mussel Handling and Relocation

To minimize stress and mortality, mussels must be handled using the following relocation guidelines which shall be included in any MDNR Cultural or Scientific Collector's Permit issued for the work:

- Reproduction and viability of mussel populations depends on the presence of appropriate fish host species. Potential sites for mussel relocation should be evaluated (with fish survey data, etc.) for the presence of fish hosts.
- Relocations should be within the same river reach either upstream or downstream of the zone of disturbance. The presence of a mussel community comprised of all or most of the species to be moved is the best indicator that the relocation site is suitable.
- Perform the relocation when air temperatures are cool (e.g., 50-75 °F, or in spring or autumn).
- Mussels should remain in the water inside a mesh collecting bag or kept moist in a cooler covered with wet towels or burlap until ready for relocation. Do not expose the mussels to air any longer than necessary, preferably less than 1 hour and no more than 4 hours.
- Place the mussels in the same type of habitat as they were found in terms of sediment composition and stability, water quality, water depth, and current velocity. Make certain that the mussels will be placed in an area that is either permanently inundated or will not be affected by the reservoir drawdown.
- Place mussels carefully by hand into the sediment in the correct position (posterior up position-see following diagram). If uncertain of the correct position, the mussel should be placed on the substrate surface and left to appropriately burrow to the correct direction, position, and depth.
- Mussels may be moved back to the project site after it has stabilized. This decision should be weighed against the stress of repeated handling and the likelihood that the mussels will naturally recolonize the project site.

MDNR Fisheries Division Draft Mussel Relocation Guidance
September 2011



Source: Cummings, K.S. and C.A. Mayer. 1992. *Field Guide to Freshwater Mussels of the Midwest*. Manual 5. Illinois Natural History Survey, Champaign, IL. 194pp.

Reservoir Drawdown PLAN

(Per FERC License Article 403)

Cataract Hydroelectric Project FERC No. 10854

Located On Middle Branch Escanaba River
Marquette County, Michigan

LICENSEE - UP HYDRO, LLC

March 22, 2012

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Article 403 requires that the plan include, at minimum: 1) provisions for releasing flow to the bypassed reach by removing stoplogs when reservoir elevation drops to 1 foot below normal pool elevation; 2) procedures for re-establishing flow following power outages and other emergencies; 3) a draw-down plan that outlines notification procedures; 4) provisions for submission of annual reports containing summaries of hourly operating and streamflow gaging data for the preceding year; 5) provisions for clearly marking the existing reservoir staff gage with elevations pertinent to compliance with the run-of-river requirements of article 401; 6) provisions for maintenance of the remotely-monitored continuous recording level sensors in the project reservoir and bypassed channel; 7) provisions for operation and maintenance of the existing U.S. Geological Survey (USGS) streamflow gage at Princeton and equipping the gage with sufficient telemetry equipment; 8) development of procedures for agency notification when necessary; and 9) development of a minimum flow plan that addresses compliance demonstration methods. The article requires the licensee to prepare the plan after consultation with Michigan Department of Natural Resources (MDNR) and U.S. Fish and Wildlife Service (FWS). The licensee must include with the plan documentation of consultation, and copies of comments on the completed plan. The licensee must allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt an agency's recommendation, the filing shall include the licensee's reasons, based on project-specific information. Additionally, the article requires the licensee to update the plan once every 5 years after approval of the original plan, in consultation with MDNR and FWS, and to file the updated plan with the Commission for approval.

Plan Update

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were able to be rescued. The records will be provided to MDNR after the maximum drawdown depth is reached. MDNR will be notified in advance of the proposed date and time of the stranded fish surveys. The Escanaba River Association (ERA) is interested in stocking trout in the Middle Branch during fall 2012. The proposed drawdown may have some water temperature implications relative to stocking success. The company will contact and work with the ERA to install water temperature data loggers upstream and downstream from Cataract Basin prior to the drawdown, and allow those loggers' to record data until the refill is complete.

Refill Start Date & Rate of Refill

The refill of the reservoir will begin on October 16, 2012 at a rate not to exceed of 6 inches (.5 ft.) per day, unless otherwise agreed to by NAH and MDNR. The rate of refill will not exceed the actual water available for inflow and maintenance of the minimum flow requirement of 8 CFS.

Date Reservoir Complete

The refill is anticipated to be complete on the 30th or 31st of October 2012.

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