

STATE OF MICHIGAN DEPARTMENT OF NATURAL RESOURCES

SR37 Appendix

February 2006

Thunder Bay River Assessment Appendix

Tim A. Cwalinski, Neal A. Godby, Jr., and Andrew J. Nuhfer

MICHIGAN DEPARTMENT OF NATURAL RESOURCES FISHERIES DIVISION

Special Report 37 appendix February 2006

Thunder Bay River Assessment Appendix

Tim A. Cwalinski, Neal A. Godby, Jr., and Andrew J. Nuhfer



MICHIGAN DEPARTMENT OF NATURAL RESOURCES (DNR) MISSION STATEMENT

"The Michigan Department of Natural Resources is committed to the conservation, protection, management, use and enjoyment of the State's natural resources for current and future generations."

NATURAL RESOURCES COMMISSION (NRC) STATEMENT

The Natural Resources Commission, as the governing body for the Michigan Department of Natural Resources, provides a strategic framework for the DNR to effectively manage your resources. The NRC holds monthly, public meetings throughout Michigan, working closely with its constituencies in establishing and improving natural resources management policy.

MICHIGAN DEPARTMENT OF NATURAL RESOURCES NON DISCRIMINATION STATEMENT

The Michigan Department of Natural Resources (MDNR) provides equal opportunities for employment and access to Michigan's natural resources. Both State and Federal laws prohibit discrimination on the basis of race, color, national origin, religion, disability, age, sex, height, weight or marital status under the Civil Rights Acts of 1964 as amended (MI PA 453 and MI PA 220, Title V of the Rehabilitation Act of 1973 as amended, and the Americans with Disabilities Act). If you believe that you have been discriminated against in any program, activity, or facility, or if you desire additional information, please write:

HUMAN RESOURCES
MICHIGAN DEPARTMENT OF NATURAL RESOURCES
PO BOX 30028
LANSING MI 48909-7528

Or MICHIGAN DEPARTMENT OF CIVIL RIGHTS CADILLAC PLACE 3054 W. GRAND BLVD., SUITE 3-600 DETROIT MI 48/002

Or OFFICE FOR DIVERSITY AND CIVIL RIGHTS
US FISH AND WILDLIFE SERVICE
4040 NORTH FAIRFAX DRIVE
ARI INGTON VA 22203

For information or assistance on this publication, contact the MICHIGAN DEPARTMENT OF NATURAL RESOURCES, Fisheries Division, PO BOX 30446, LANSING, MI 48909, or call 517-373-1280.

TTY/TDD: 711 (Michigan Relay Center)

This information is available in alternative formats.

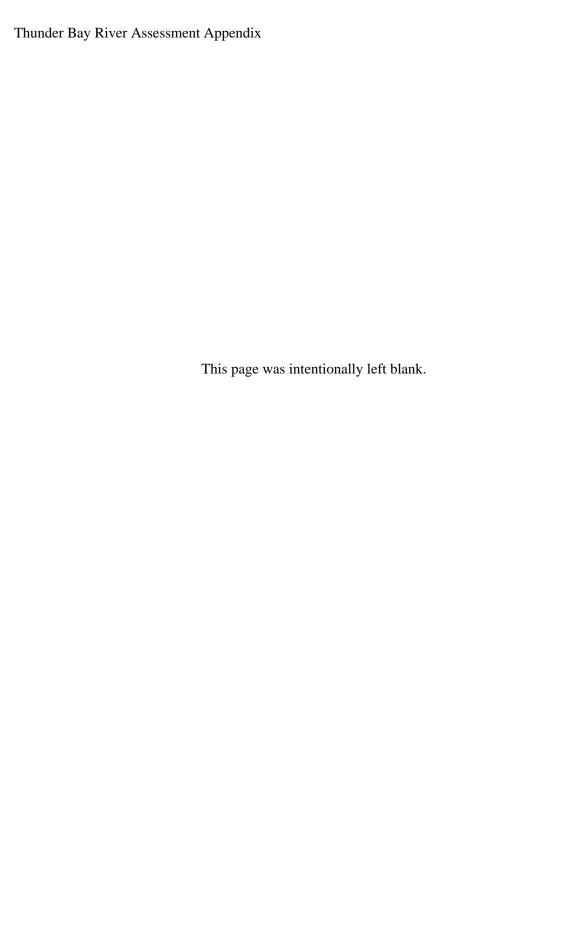






TABLE OF CONTENTS

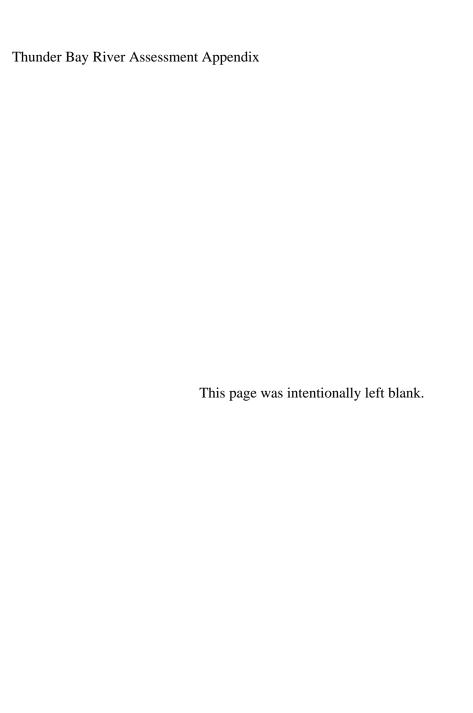
opendix 1.
Federal Energy Regulatory Commission settlement agreement between Thunder
Bay Power Company, Michigan Department of Natural Resources, United States
Department of Interior Fish and Wildlife Service, the Michigan Department of
Environmental Quality, the Michigan Hydro Relicensing Coalition, and the
Hubbard Lake Sportsmen and Improvement Association and Hubbard Lake
Information Center.
opendix 2.
Known past and present fish distributions in the Thunder Bay River system47
opendix 3.
Direct contact angler creel data for various streams and lakes in the Thunder Bay
River watershed



Thunder Bay River Assessment Appendix

Appendix 1

Federal Energy Regulatory Commission settlement agreement between Thunder Bay Power Company, Michigan Department of Natural Resources, United States Department of Interior Fish and Wildlife Service, the Michigan Department of Environmental Quality, the Michigan Hydro Relicensing Coalition, and the Hubbard Lake Sportsmen and Improvement Association and Hubbard Lake Information Center.



THUNDER BAY POWER COMPANY

Administrative Offices: 13561 West Bay Shore, Suite 3000 Traverse City, MI 49684-5472 (616) 941-1140 Fax (616) 941-0338 OFFICE OF THE SECRETARY

98 JUL 17 PM 4: 29

REGULATORY COMMISSION

July 15, 1998

Ms. Lois Cashell, Secretary
Federal Energy Regulatory Commission
United States Department of Energy
888 First Street, N.E.
Washington, D. C. 20426

Re: Offer of Settlement

FERC Project Nos. 2404 and 2419

Dear Ms. Cashell:

I have enclosed for filing an Offer of Settlement in FERC Projects Nos. 2404 and 2419 which has been fully executed by the applicant and all intervenors.

Concurrent with this filing, all participants in FERC Projects Nos. 2404 and 2419 have been mailed a copy of the Offer of Settlement filed with you. The participants have also been notified of the date on which comments on the settlement are due in accordance with 18 CFR 385.602(f)(2).

Sincerely yours,

Gregory W. Blanche

Counsel

GWB/lgs Enclosure

Copy: All Participants

FERC - DOCKETED

JUL 17 1998

A

9807210401.3

Thunder Bay River Assessment Appendix

THUNDER BAY POWER COMPANY

Administrative Offices: 13561 West Bay Shore, Suite 3000 Traverse City, MI 49684-5472 (616) 941-1140 Fax (616) 941-0338 OFFICE OF THE SECRETARY

98 JUL 17 PM 4: 29

REGULATORY COMMISSION

July 15, 1998

Ms. Jan Fenske
Fisheries Division
Department of Natural Resources
P. O. Box 30446
Lansing, MI 48909

Mr. Burr Fisher U. S. Fish & Wildlife Service 2651 Coolidge Road East Lansing, MI 48823

Mr. James Delahanty for Hubbard Lake Sportsmen & Improvement Association 2986 Melanie Lane West Branch, MI 49661

John E. Bowen Alpena Power Company P. O. Box 188 Alpena, MI 49707

Mr. David Borgeson Department of Natural Resources Fisheries Division 1732 W. M 32 Gaylord, MI 49735

Mr. Kyle Kruger P. O. Box 939 Mio, Ml 48647

Mr. Andy Blystra P. O. Box 1078 Holland, MI 49422-1078 Mr. John Suppnick Michigan Department of Environmental Quality P. O. Box 30473 Lansing, MI 48909-7973

James D. Schramm, Esq. Michigan Hydro Relicensing Coalition 4780 Longbridge Road Pentwater, MI 49449

Richard E. Sayers, Jr., Ph.D. U. S. Fish & Wildlife Service Bishop Henry Whipple Federal Bldg. One Federal Drive Fort Snelling, MN 55111

Stephen H. Fletcher Alpena Power Company P.O. Box 188 Alpena, MI 49707

Kirk Howard Betts
Dickinson, Wright, Moon, Van Dusen, and
Freeman
1901 L St., N.W., Suite 800
Washington, D. C. 20036

Mr. Thomas Baird
Michigan Hydropower Relicensing
Coalition
2300 Jolly Oak
Okemos, MI 48864

Thunder Bay River Assessment Appendix

Participants in FERC Projects Nos. 2404 and 2419 July 15, 1998 Page 2

John C. Scherbarth, Esq. Office of the Attorney General 300 S. Washington, Suite 530 Lansing, MI 48913

Mr. Michael Felosak
Hubbard Lake Sportsmen &
Improvement Association
P. O. Box 111
Hubbard Lake, MI 49747

Mr. Paul G. Liddicoat 1866 Hahn Trail Hillman, MI 49746

Mr. Dick Trychol Fletcher Floodwaters Assoc. Rt. #1, Box 152 Hillman, MI 49746 Mr. Dennis McCauley 739 Hastings Traverse City, MI 49686

Mr. Mark Grenzicki Hubbard Lake Info Center 6881 Bear Springs Rd. Hubbard Lake, MI 49747

Jean Sutton, Esq.
U. S. Department of the Interior
Bishop Henry Whipple Federal Bldg.
One Federal Drive, Room 686
Ft. Snelling, MN 55111

Manager of Hillman Hillman, Michigan 49746

Dear Participant:

The following is the explanatory statement required to be submitted to you by Rule 18 CFR 385.602(c)(ii) in connection with the filing of the enclosed Offer of Settlement. The Offer of Settlement represents a negotiated resolution of issues in FERC Project Nos. 2404 and 2419. The Offer of Settlement was negotiated between the intervenors in FERC Project Nos. 2404 and 2419 (United States Department of Interior Fish and Wildlife Service, Michigan Department of Natural Resources, Michigan Department of Environmental Quality, The Michigan Hydro Relicensing Coalition and Hubbard Lake Sportsmen and Improvement Assoc. & Hubbard Lake Information Center) and the applicant in those Projects, Thunder Bay Power Company. The Offer of Settlement addresses implementation of 401 Water Quality Certificate requirements and certain other Project issues.

The Settlement requires Thunder Bay Power Company to make a one time One Million Dollar (\$1,000,000.00) deposit into an escrow account. These deposited funds along with accrued interest will provide funding during the term of the license for the following: (a) upstream fish passage; (b) downstream fish protection and passage; (c) fish entrainment; (d) recreation except maintenance of recreation sites owned by Thunder Bay Power Company; (e) land management; (f) wildlife management; (g) bald eagle protection and management; (h) nuisance plant control; (i) aquatic habitat improvement except passing large woody debris and remediation of stream bank

Participants in FERC Projects Nos. 2404 and 2419 July 15, 1998 Page 3

erosion; and (j) Project retirement. The deposit also relieves Thunder Bay Power Company of any further responsibility for funding these activities during the term of the license. The costs associated with compliance monitoring, remediation of stream bank erosion and maintenance of recreation sites owned by Thunder Bay Power Company are also funded from the escrow account; however, if the escrow account is exhausted prior to the end of the license term, Thunder Bay Power Company will remain responsible for funding these activities during the term of the license.

The following activities are not funded by the escrow account: (a) operation of the Projects as run-of-river; (b) maintenance of the impoundment water levels provided in the Offer of Settlement; (c) maintenance of storage reservoir discharge and minimum flow criteria provided in the Offer of Settlement; (d) passing large woody debris collected on the trash racks and log booms; (e) remediation of any pollution generated by the Projects; (f) operation of the facilities to meet numerical water quality standards; and (g) any additional FERC license requirements. Thunder Bay Power Company must provide funding during the term of the license for these activities.

The Offer of Settlement provides that the United States Department of Interior Fish and Wildlife Service, the Michigan Department of Natural Resources and Thunder Bay Power Company are the members of the Coordination Team responsible for determining the schedule of activities that will be funded by the escrow account. The Surface Water Quality Division of the Michigan Department of Environmental Quality, Michigan Hydro Relicensing Coalition and the Hubbard Lake Sportsmen and Improvement Assoc. & Hubbard Lake Information Center are ex officio members of the Coordination Team which entitles them to notices of the Team meetings, to have a representative present at Team meetings and to participate in discussions at Team meetings but does not entitle them to a vote on Team decisions.

Comments on the Offer of Settlement must be filed with the Secretary, Federal Energy Regulatory Commission, United States Department of Energy not later than August 4, 1998.

Sincerely yours,

Stigory W. Blanche

Counsel

GWB/lgs Enclosure

cc: Lois Cashell, Secretary

FERC

Thunder Bay River Assessment Appendix

THUNDER BAY POWER COMPANY

Administrative Offices: 13561 West Bay Shore, Suite 3000 Traverse City, MI 49684-5472 (616) 941-1140 Fax (616) 941-0338 OFFICE OF THE SECRETARY

98 JUL 17 PM 4: 29

REGULATORY COMMISSION

July 15, 1998

Ms. Lois Cashell, Secretary Federal Energy Regulatory Commission United States Department of Energy 888 First Street, N.E. Washington, D. C. 20426

Dear Ms. Cashell:

The following is the explanatory statement required to be submitted to you by Rule 18 CFR 385.602(c)(ii) in connection with the filing of the enclosed Offer of Settlement. The Offer of Settlement represents a negotiated resolution of issues in FERC Project Nos. 2404 and 2419. The Offer of Settlement was negotiated between the intervenors in FERC Project Nos. 2404 and 2419 (United States Department of Interior Fish and Wildlife Service, Michigan Department of Natural Resources, Michigan Department of Environmental Quality, The Michigan Hydro Relicensing Coalition and Hubbard Lake Sportsmen and Improvement Assoc. & Hubbard Lake Information Center) and the applicant in those Projects, Thunder Bay Power Company. The Offer of Settlement addresses implementation of 401 Water Quality Certificate requirements and certain other Project issues.

The Settlement requires Thunder Bay Power Company to make a one time One Million Dollar (\$1,000,000.00) deposit into an escrow account. These deposited funds along with accrued interest will provide funding during the term of the license for the following: (a) upstream fish passage; (b) downstream fish protection and passage; (c) fish entrainment; (d) recreation except maintenance of recreation sites owned by Thunder Bay Power Company; (e) land management; (f) wildlife management; (g) bald eagle protection and management; (h) nuisance plant control; (i) aquatic habitat improvement except passing large woody debris and remediation of stream bank erosion; and (j) Project retirement. The deposit also relieves Thunder Bay Power Company of any further responsibility for funding these activities during the term of the license. The costs associated with compliance monitoring, remediation of stream bank erosion and maintenance of recreation sites owned by Thunder Bay Power Company are also funded from the escrow account; however, if the escrow account is exhausted prior to the end of the license term, Thunder Bay Power Company will remain responsible for funding these activities during the term of the license.

Thunder Bay River Assessment Appendix

Ms. Lois Cashell, Secretary July 15, 1998 Page 2

The following activities are not funded by the escrow account: (a) operation of the Projects as run-of-river; (b) maintenance of the impoundment water levels provided in the Offer of Settlement; (c) maintenance of storage reservoir discharge and minimum flow criteria provided in the Offer of Settlement; (d) passing large woody debris collected on the trash racks and log booms; (e) remediation of any pollution generated by the Projects; (f) operation of the facilities to meet numerical water quality standards; and (g) any additional FERC license requirements. Thunder Bay Power Company must provide funding during the term of the license for these activities.

The Offer of Settlement provides that the United States Department of Interior Fish and Wildlife Service, the Michigan Department of Natural Resources and Thunder Bay Power Company are the members of the Coordination Team responsible for determining the schedule of activities that will be funded by the escrow account. The Surface Water Quality Division of the Michigan Department of Environmental Quality, Michigan Hydro Relicensing Coalition and the Hubbard Lake Sportsmen and Improvement Assoc. & Hubbard Lake Information Center are ex officio members of the Coordination Team which entitles them to notices of the Team meetings, to have a representative present at Team meetings and to participate in discussions at Team meetings but does not entitle them to a vote on Team decisions.

Sincerely yours.

Gregory W. Blanche

Couňsel

GWB/lgs Enclosure

Copy: All Participants

OFFICE OF THE SECRETARY

98 JUL 17 PM 4: 29

OFFER OF SETTLEMENT

REGULATORY COMMISSION

1.0 Jurisdiction

This OFFER OF SETTLEMENT ("SETTLEMENT") is entered into voluntarily by 1.1 and between the "parties," Thunder Bay Power Company ("TBPC"), the licensee applying for new licenses for two (2) FERC-licensed hydroelectric projects and the United States Department of Interior Fish and Wildlife Service ("USF&WS"), the Michigan Department of Environmental Quality ("MDEQ"), the Michigan Department of Natural Resources ("MDNR"), the Michigan Hydro Relicensing Coalition (an organization representing the Anglers of the Au Sable, the Michigan United Conservation Clubs, the Michigan Council of Trout Unlimited and the Great Lakes Council of the Federation of Fly Fishers -- "MHRC") and the Hubbard Lake Sportsmen and Improvement Assoc. & Hubbard Lake Information Center ("HLSA") pursuant to Federal Energy Regulatory Commission ("FERC") rule, 18 CFR Section 385.602. The "Fish and Wildlife Agencies" are defined as USF&WS and MDNR. This settlement offer concerns the resolution of and implementation of FERC license requirements for powerhouse operation, impoundment water levels, compliance monitoring, fish passage, fish protection, recreation, land management, wildlife management, bald eagle protection and management, nuisance plant control, aquatic habitat improvement, project retirement and other matters.

2.0 Effect of Offer of Settlement

- 2.1 This SETTLEMENT is made upon the express understanding that it constitutes a negotiated settlement of issues in FERC Project Nos. 2404 and 2419 ("PROJECTS"), and no party to the SETTLEMENT shall be deemed to have approved, admitted, accepted, agreed to or otherwise consented to any operation, management, valuation or other principle underlying any of the matters herein, except as expressly provided in this SETTLEMENT. The Parties further agree that this SETTLEMENT shall not be used as a precedent or as an admission with regard to any issue dealt with in the SETTLEMENT.
- 2.2 For those issues addressed in this SETTLEMENT, the parties agree not to propose, mandate, support or otherwise communicate to FERC any license condition requirements other than those provided for in this SETTLEMENT, or oppose FERC license articles which incorporate the provisions described in this SETTLEMENT, except as provided for in Section 11.
- 2.3 This SETTLEMENT shall become effective upon issuance by FERC of "final" orders accepting this SETTLEMENT without modification or condition and issuing licenses in accordance with the SETTLEMENT for the two (2) hydroelectric PROJECTS covered by this SETTLEMENT. If FERC issues orders accepting the SETTLEMENT with modifications or conditions, this

SETTLEMENT shall be considered modified to conform to the terms of those orders unless within thirty (30) days after such orders are issued at least one party notifies the other parties in writing of its objection to the modification, change or conditions. The parties shall then commence negotiations for a period of up to ninety (90) days to resolve the issue(s) and modify the SETTLEMENT as needed. If agreement cannot be reached at the end of the ninety (90) day period, the objecting party may withdraw from the SETTLEMENT by notifying the parties in writing within ten (10) days. If TBPC or any one of the Fish and Wildlife Agencies withdraws, this SETTLEMENT shall cease to have any force or effect except for Paragraph 2.1. If this SETTLEMENT is modified to conform to the terms of FERC orders, as discussed above, it shall become effective once those orders become final as of the date rehearing is denied, or if rehearing is not applied for, the date on which the right to seek rehearing expires. The above shall not preclude a party from seeking rehearing on modifications or conditions pursuant to 18 CFR 385.713 within the prescribed time limits. The request for rehearing shall be withdrawn if the party subsequently reaches agreement on modifying the SETTLEMENT. The terms of this SETTLEMENT shall continue in effect, subject to FERC's reserved authority under the licenses to require modifications, until the earlier of the expiration of a new license (plus the term of any annual license) issued by FERC or the effective date of any FERC order approving surrender of a PROJECT under Section 6 of the Federal Power Act.

- 2.4 In the event that FERC issues final license orders that do not include all of the conditions of this SETTLEMENT because FERC has determined it lacks jurisdiction over those issues, the parties agree that they will be bound by the conditions of the entire SETTLEMENT. With respect to those conditions over which FERC does not have jurisdiction, the parties agree that the SETTLEMENT shall be enforceable in a court of appropriate jurisdiction.
- 2.5 The withdrawal of a party other than TBPC and the Fish and Wildlife Agencies does not terminate the effect of this SETTLEMENT on the other parties.
- 2.6 It is a fundamental assumption of TBPC that the amounts to be placed in Escrow and otherwise expended, as a result of this SETTLEMENT, balance economics and environmental stewardship at these projects. All parties concur that the SETTLEMENT fairly and appropriately addresses the environmental and natural resource issues covered by this SETTLEMENT and associated with the relicensing of TBPC's two (2) hydroelectric PROJECTS by FERC. The Fish and Wildlife Agencies will, if requested, support this SETTLEMENT before FERC as fairly and appropriately addressing environmental and natural resource issues.
- 2.7 TBPC, in consultation with the Fish and Wildlife Agencies and MDEQ, shall prepare a draft schedule for implementing the plans and actions called for in this SETTLEMENT. The schedule shall specify dates for initiation, progress reporting and completion for each plan or action and shall include milestones for major activities. A draft schedule shall be submitted to the Fish and

Wildlife Agencies and MDEQ for review in accordance with Section 19 not later than 120 days after execution of this SETTLEMENT by the parties. Upon completion of the review, the schedule shall be submitted to FERC for approval.

3.0 Parties Bound

3.1 This SETTLEMENT shall apply to, and be binding on, the parties and their successors and assigns. However, no party shall be bound by any part of this SETTLEMENT except with regard to FERC licensing proceedings and then only if the SETTLEMENT is approved and made effective as provided for in Paragraph 2.3. No change in corporate status of TBPC shall in any way alter TBPC's responsibilities under this SETTLEMENT. Each signatory to this SETTLEMENT certifies that he or she is authorized to execute this SETTLEMENT and legally bind the party he or she represents.

4.0 Implementation Funding

- 4.1 TBPC shall establish an Escrow, the terms and conditions of which are set forth in a Escrow Agreement incorporated herein (Exhibit A) and shall make a one-time deposit of One Million Dollars (\$1,000,000.00) into the Escrow which amount, together with accrued earnings and interest, shall be referred to as the "Escrow Amount". These deposited funds shall relieve TBPC from any further responsibility for funding and liability during the term of this license and any extension of this license to fund PROJECT costs and expenses ("Project Activity Costs") either in the form of a monetary payment or in the form of providing labor, materials or equipment related to the study, planning, implementation, installation, maintenance, inspection or operation of PROJECT activities conducted in connection with the following: (a) upstream fish passage; (b) downstream fish protection and passage; (c) fish entrainment; (d) recreation except maintenance of recreation sites owned by TBPC; (e) land management; (f) wildlife management; (g) bald eagle protection and management; (h) nuisance plant control; (i) aquatic habitat improvement except passing large woody debris and remediation of stream bank erosion; and (j) PROJECT retirement.
- 4.2 The following activities shall be funded from the Escrow Amount until the Escrow Amount is exhausted and upon exhaustion of the Escrow Amount, TBPC shall fund these activities: (a) compliance monitoring including but not limited to discharge and flow monitoring and water quality monitoring; (b) remediation of stream bank erosion; and (c) maintenance of recreation sites owned by TBPC.
- 4.3 TBPC shall be responsible for any cost and expenses relating to the following: (a) operating the hydroelectric PROJECTS as run-of-river operations; (b) operating the PROJECTS to maintain the impoundment water levels in this SETTLEMENT; (c) operating the PROJECTS to maintain the storage reservoir discharge and minimum flow criteria in this SETTLEMENT; (d)

passing large woody debris collected on the trash racks and log booms; (e) remediation of any pollution generated by the PROJECTS; (f) operating the facilities to meet numerical water quality standards; and (g) any additional FERC license requirements. The Escrow shall not be charged for the above costs and expenses, and in addition, the Escrow Amount shall not be charged for equipment acquired by TBPC before the date of this SETTLEMENT or equipment acquired by TBPC after the date of this SETTLEMENT to meet run-of-river operational requirements.

- 4.4 If any structure, passage device, or protection device not currently existing and which is mandated by the Fish and Wildlife Agencies or FERC after the date of this SETTLEMENT has the effect of diverting or limiting flows through the turbines in excess of fifteen percent (15%) and thereby decreasing generating capability for more than three (3) months during a calendar year, the parties agree that reasonable conditions exist for TBPC to request a modification or replacement of such structure or device to reduce the cumulative effect of any such diversion or limitation of flows at a generating facility below fifteen percent (15%) of total daily flow at that generating facility to ensure that generating capability is not reduced for more than three (3) months during a calendar year. Such request shall not be unreasonably denied. The cost of replacement or modification shall not be the sole basis for denial of TBPC's request.
- 4.5 In the event the Escrow Amount is fully depleted, TBPC shall have no further responsibility or obligation to conduct the activities listed in Section 4.1 above unless and until the Fish and Wildlife Agencies or the State of Michigan provide an alternate source of funds.

5.0 <u>Creation of Escrow</u>

- 5.1 An Escrow with the State of Michigan as beneficiary shall be established according to the terms and conditions of the Escrow Agreement (Exhibit A).
- 5.2 The Escrow Agent shall make disbursements from the Escrow for payment of PROJECT related expenses at the direction of the TBC Team established in Paragraph 18.3. Team expenses related to preparing for, traveling to, and attending TBC Team meetings shall be payable from the Escrow Amount in accordance with Section 4 of the Escrow Agreement.
- 5.3 It is the intent of the parties that the Escrow established under this SETTLEMENT shall be the sole source of funds from TBPC for the following: (a) upstream fish passage; (b) downstream fish protection and passage; (c) fish entrainment; (d) recreation except for maintenance of recreation sites owned by TBPC; (e) land management; (f) wildlife management; (g) nuisance plant control; (h) aquatic habitat improvement except for passing large woody debris and stream bank erosion remediation; and (i) PROJECT retirement either mandated by the Fish and Wildlife Agencies or which the Fish and Wildlife Agencies request FERC to mandate.

5.4 Upon the end of this license period, any unexpended funds remaining in the Escrow shall be dedicated to the PROJECT activities including dam retirement. The actual activities will be determined two (2) years prior to the end of the license period by the TBC team. Any remainder of the Escrow Amount shall not be used to pay any costs related to relicensing or any FERC Project activities required under a new license.

6.0 Powerhouse Operation

6.1 Upon issuance of the FERC license, TBPC shall operate the PROJECTS on a run-of-river basis. Run-of-river (ROR) means the Thunder Bay River flow through a PROJECT measured downstream of the tailrace shall approximately equal inflow to the reservoir, as monitored by "constant" pond level elevation and flow stability. Constant pond level elevation shall mean minimizing impoundment level fluctuation to \pm 0.25 feet for at least fifty percent (50%) of the time on an annual basis. No fluctuation shall exceed \pm 0.50 feet if the existing conditions are within the operational constraints of the PROJECTS and the conditions causing the fluctuation are within TBPC's control. If, in TBPC's opinion, existing conditions require fluctuations that exceed \pm 0.50 feet, TBPC shall notify and consult with the MDNR. There shall be a three year test period to determine if TBPC can maintain ROR operations with existing equipment. If it is determined that TBPC is unable to meet ROR operating standards established in this section at the end of the test period, TBPC shall consult with the Fish and Wildlife Agencies to determine what measures shall be undertaken to achieve the ROR operation criteria.

7.0 Impoundment Water Levels

- 7.1 TBPC shall maintain impoundment water levels as required by the MDNR Certification under Section 401 of the Federal Clean Water Act (401 Certification) for the PROJECTS.
- 7.2 TBPC shall develop a plan for the continuous monitoring of impoundment levels and tailwater elevations. The impoundment level gauge shall be equipped with telemetry equipment or a method of daily data transfer to a TBPC world wide web page or otherwise transferred to the Fish and Wildlife Agencies in a manner acceptable to the Fish and Wildlife Agencies. The data shall be summarized and reported to the MDNR with copies of the data files on computer disk upon written request. Data for less than five (5) days shall be provided within two (2) working days of the receipt of the request. Data for more than five (5) days shall be provided within fourteen (14) working days of the receipt of the request.
- 7.3 TBPC shall install a calibrated staff gauge at a location clearly visible to the public at all impoundments that are not presently equipped with a staff gauge.

7.4 TBPC shall develop a plan to calibrate and monitor the gauges acceptable to the Fish and Wildlife Agencies. TBPC shall develop a quality control plan using United States Geological Survey protocols as a basis.

8.0 Storage Reservoir Discharge and Minimum Flow

8.1 Fletcher's Floodwaters.

- (A) TBPC shall operate Fletcher's Floodwaters Dam in a ROR mode from April 1 through October 15 and December 15 to the last day of February.
- (B) During drawdown and refill periods (October 16 to December 14 and March 1 to March 31), a minimum flow of 40 cfs shall be maintained when water elevations are equal to or greater than 0.12 feet of minimum pool levels and may be decreased to 15 cfs when water elevations are less than 0.12 feet of minimum pool levels in consultation with the TBC Team as defined in Article 18.3. The maximum discharge shall not exceed 300 cfs unless a greater discharge rate is required to maintain the water elevations provided in the Fletcher Pond lake level agreement and the increase is done in consultation with the TBC Team. The change in daily flow shall be no more than twenty percent (20%) of the previous days flow unless one of the trigger lake levels is achieved requiring a greater change to comply with the lake level agreement.

8.2 Hubbard Lake.

- (A) TBPC shall operate Hubbard Lake Dam in a ROR mode from May 1 through October 31 and February 1 to March 31.
- (B) During drawdown and refill periods (November 1 to November 30 and March 1 to March 31), a minimum flow of 40 cfs shall be maintained when water elevations are equal to or greater than 0.12 feet of minimum pool levels and may be decreased to 15 cfs when water elevations are less than 0.12 feet of minimum pool levels in consultation with the TBC Team. The maximum discharge shall not exceed 300 cfs unless a greater discharge rate is required to maintain the water elevations provided in the Hubbard Lake lake level agreement. The change in daily flow shall be no more than twenty percent (20%) of the previous days flow unless one of the trigger lake levels is achieved requiring a greater change to comply with the lake level agreement.

9.0 Water Ouality

- 9.1 TBPC shall maintain Dissolved Oxygen (DO) concentrations in the PROJECT tailwaters not less than 5 mg/L at any time.
- 9.2 TBPC shall not warm the Thunder Bay River downstream of the PROJECTS, by operation of the dams, to temperatures in degrees Fahrenheit higher than the following monthly average temperatures: JAN 38; FEB 38; MAR 41; APR 56; MAY 70; JUN 80; JUL 83; AUG 81; SEP 74; OCT 64; NOV 49; DEC 39.
- 9.3 The PROJECTS shall not warm the Thunder Bay River below each of the PROJECT's dams greater that 5 degrees Fahrenheit above the temperature as measured upstream of the impoundment.
- 9.4 TBPC shall develop and implement a water quality monitoring program consistent with the 401 Certifications issued for the Thunder Bay and Hillman Projects, issued March 16, 1995, that includes:
 - (A) Grab samples shall be taken once in the morning (between 4:00 a.m. and 8:00 a.m.) and once in the afternoon (between 2:00 p.m. and 6:00 p.m.) five days during the week for DO monitoring from May 15 to October 15 and temperature monitoring year-round at Four Mile, Ninth Street, Norway Point and Hillman Dams. Temperature monitoring shall be conducted at eleven (11) locations which shall be established in consultation with the MDEQ. DO monitoring shall be conducted at six (6) locations which shall be established in consultation with the MDEQ.
 - (B) Temperature and DO profiles in the deepest part of the impoundments every two weeks from June 1 to August 31 and once mid-month for the months of January, February, and March.
 - (C) A plan to sample water quality contaminants including testing of sediments and fish prior to significant drawdowns in excess of three (3) feet when the drawdown is expected to mobilize sediments.

10.0 Fish Protection

- 10.1 TBPC shall develop a downstream fish passage and protection plan which evaluates all reasonable fish protection alternatives including an analysis of an air bubbler system. This plan shall be approved by the TBC Team.
- 10.2 The plan shall include an evaluation of the effectiveness of any device installed at any of the dams no later than three (3) years after installation.
- 10.3 The plan shall provide for an evaluation of all reasonable downstream fish passage alternatives including computer hydraulic modeling, if deemed necessary by the TBC Team. The timing of the evaluation shall be established in consultation with the MDNR.
- 10.4 The plan shall provide a description of the proposed downstream fish passage alternatives, including engineering and biological design specifications and operation and maintenance procedures.
- 10.5 The downstream fish passage device(s) shall be selected and installed in consultation with the TBC Team.

11.0 Upstream Fish Passage

- 11.1 Upon written request of the Fish and Wildlife Agencies, TBPC shall prepare a plan for the design, construction, operation and maintenance of upstream fish passage structures at the PROJECTS subject to the following:
 - (A) For the PROJECTS, an aquatic management plan which demonstrates the appropriateness of fish passage has been developed by the MDNR with the USF&WS and public input, and approved by the Michigan Natural Resources Commission. The plan shall address all concerns that are raised regarding the potential impact of upstream fish passage.
 - (B) The USF&WS, after consultation under the Section 7 authority of the Endangered Species Act of 1973, as amended, does not object to fish passage.
 - (C) The FERC approves such structures.

- 11.2 Once the criteria in Paragraphs 11.1 (A) and (B) have been satisfied, the MDNR will provide to TBPC a list of fish species to be passed and all necessary biological design parameters for the fish passage facilities to be constructed at that dam. TBPC shall, within twelve (12) months, submit a design plan for MDNR review prior to submittal to FERC.
- 11.3 The USF&WS reserves the Secretary of Interior's authority under Section 18 of the Federal Power Act, 16 USC Section 811, to prescribe fishways after the issuance of new licenses, and will not invoke this authority, or make recommendations pursuant to the Fish and Wildlife Coordination Act for implementing fish passage, until the conditions of Paragraphs 11.1 (A) and (B) and 11.2 are satisfied.
- 11.4 TBPC shall complete installation of the fish passage structures in compliance with a schedule to be developed in consultation with the Escrow Agencies. Prior to completing construction of a structure, TBPC shall submit an operation and maintenance plan and a performance evaluation plan (OMPEP) for Fish and Wildlife Agencies review prior to submittal for approval by FERC. TBPC shall implement the OMPEP upon FERC approval and completion of fish passage construction.
- 11.5 If more than one dam meets the above conditions at the same time and within twelve (12) months of FERC approval of the fish passage design plan for the first dam, TBPC shall prepare and submit for the Fish and Wildlife Agencies review and FERC approval, an implementation schedule for the next dam to be modified for fish passage. This process would be repeated until all dams meeting the above requirements are modified.

12.0 Recreation

TBPC shall develop and implement a recreation plan for the PROJECTS that will include but not be limited to the following:

12.1 Hillman Dam and Impoundment:

- (A) Improvements to the tailwater area, including a marked chipped path and wooden ramp to the existing covered pier.
- (B) Provide funding to the village of Hillman to complete improvements to Hillman Pond boat ramp.
- (C) Maintain the existing canoe portage facilities.

(D) Construction, maintenance, and operation of a no-fee barrier free fishing and viewing pier.

12.2 Fletcher Pond:

- (A) Maintain the existing canoe portage facilities.
- (B) Construction, maintenance, and operation of a no-fee handicap accessible tailwater access.

12.3 Hubbard Lake:

- (A) Provide handicap accessible toilets, a fishing area or pier, a path, and organized parking at the tailwater.
- (B) Maintain the existing facilities at North Hubbard Lake Park.
- (C) Construction, maintenance, and operation of a no-fee handicap accessible shoreline pier.

12.4 Norway Point Impoundment and Dam:

- (A) Maintain existing tailwater facilities, including organized parking, toilets, and an improved cartop boat launch at the tailwater.
- (B) Maintain existing no-fee boat ramp by the dam, toilets, and picnic tables accessible to persons with disabilities.
- (C) Maintain existing canoe portage.
- (D) Construction, maintenance, and operation of a no-fee handicap accessible shoreline fishing and viewing pier.

12.5 Four Mile Impoundment and Dam:

- (A) Provide enhancements to tailwater parking area, bumpers, and the path to the existing tailwater platform.
- (B) Maintain the existing no-fee boat ramp on Four Mile Impoundment.

- (C) Maintain existing canoe portage.
- (D) Construction, maintenance, and operation of a no-fee handicap accessible shoreline fishing and viewing pier.
- 12.6 Ninth Street Impoundment and Dam:
 - (A) Provide toilets and make the area accessible to disabled persons.
 - (B) Maintain existing canoe portage.
- 12.7 Signs:

Provide directional signs to all recreational facilities from major highways.

13.0 PROJECT Lands and Land Management

13.1 TBPC shall develop a Comprehensive Management Plan providing flexible buffer zones on TBPC lands and including provisions for working with riparian landowners on the PROJECTS to adopt TBPC's management plan.

14.0 Wildlife Management

- 14.1 TBPC shall develop and implement a wildlife management plan in consultation with the TBC Team including the following enhancements:
 - (A) Protection to environmentally sensitive areas on PROJECT lands.
 - (B) Protection to wildlife habitat on PROJECT lands.
 - (C) Osprey nesting platforms.
 - (D) One purple martin nesting colony at each dam.
 - (E) Two bat houses at each dam.
 - (F) Eastern bluebird nesting locations.
 - (G) Kestrel and owl nesting locations.

- (H) Protection of any federal or state listed threatened, endangered or sensitive species on PROJECT lands.
- (I) Provide for maintenance on all structures.

15.0 Bald Eagle Protection and Management

- 15.1 TBPC shall develop a bald eagle management plan in consultation with the Fish and Wildlife Agencies which shall include but not be limited to the following:
 - (A) Road closures or restriction of road access within bald eagle management areas.
 - (B) Limiting camping in primitive areas with potential bald eagle habitat.
 - (C) Establishing protection zones around bald eagle nesting areas to restrict activities on PROJECT lands during nesting seasons or critical periods.
 - (D) Preserving larger stands of trees near nesting areas.

16.0 Aquatic Habitat Improvement

- 16.1 TBPC shall develop an erosion remediation plan for PROJECT related streambank erosion sites on the river system within one year of license issuance in consultation with the MDEQ. The plan shall provide for the continued monitoring by TBPC of the natural healing of the erosion sites. TBPC shall report the results of natural healing at the end of the first year to MDEQ and the TBC Team. If the MDEQ determines that natural healing is sufficiently effective, TBPC shall continue to monitor the natural healing process and report the results to MDEQ and the TBC team annually until the erosion sites are remediated.
- 16.2 Within one (1) year of license issuance and in consultation with the TBC Team and MDEQ, TBPC shall develop a program to improve fish habitat by increasing the amount of large woody debris in the impoundments and river system including:
 - (A) Developing a procedure for passing large woody debris collected on the trash racks and log booms.
 - (B) Protection of currently existing instream and reservoir large woody debris.

(C) Place in the river, when possible and feasible, any other woody debris from TBPC cutting or clearing activities in the basin.

17.0 Nuisance Plant Control

17.1 Develop and implement a plan to monitor, control and eliminate purple loose strife and European water milfoil in PROJECT waters.

18.0 PROJECT Coordination

- 18.1 The coordination and implementation of actions related to the activities listed in Sections 4.1 and 4.2, except stream bank erosion and water quality monitoring, of this SETTLEMENT will be overseen by a two-level coordination structure. These shall be known as the TBPC-Fish and Wildlife Agencies Steering Committee and the Thunder Bay Coordination Team.
- TBPC and the Fish and Wildlife Agencies shall each designate a Project Leader (a 18.2 total of three (3)) who will have overall responsibility for the coordination and implementation of the actions required by this SETTLEMENT related to Sections 4.1 and 4.2 activities, except stream bank erosion and water quality monitoring, and shall be collectively known as the TBPC - Fish and Wildlife Agencies Steering Committee ("Steering Committee"). TBPC in consultation with the Fish and Wildlife Agencies shall prepare a proposed implementation schedule for Sections 4.1 and 4.2 activities, except stream bank erosion and water quality monitoring, to be funded from the Escrow during the expected forty (40) year term of the PROJECTS license and present it to the Steering Committee within ninety (90) days of the last parties' execution of this SETTLEMENT. The Steering Committee shall be responsible for approving TBPC's annual work plans and budgets for Section 4.1 and 4.2 PROJECT activities, except stream bank erosion and water quality monitoring, to be funded from the Escrow. The Steering Committee shall act by unanimous consent of the quorum. The Steering Committee shall be responsible for the resolution of any disputes related to Sections 4.1 and 4.2 activities, except stream bank erosion and water quality monitoring, in accordance with the procedures outlined in Section 20 of this SETTLEMENT, and shall also meet at least once annually to review the progress of overall implementation of this SETTLEMENT. The Chair of the Steering Committee shall be the TBPC Project Leader. The Chair shall be responsible for setting the date, time and place of the annual meeting and such other meetings of the Steering Committee, as may be required, and shall notice the other Project Leaders at least fourteen (14) days in advance; provided however, that the Chair shall set a meeting of the Steering Committee if requested in writing by any two (2) of the Steering Committee members. The Chair shall also be responsible for all meeting arrangements, including the recording and dissemination of notes. Quorum of the Steering Committee to conduct business shall be defined as any two (2) of the three (3) Project Leaders at a properly noticed meeting. If any party decides to change its designated Project Leader, the name, address, and telephone number of the successor shall be provided, in

writing, to the other parties and FERC seven (7) days prior to the date the change becomes effective or as soon after as practical. The date, time, and location of the annual meeting of the Steering Committee to review the overall implementation of the SETTLEMENT shall also be noticed to the following individuals at least fourteen (14) days in advance: Director, FERC Division of Compliance and Administration (DCPA); Chief, Surface Water Quality Division ("SWQ"), MDEQ; Chairman, MHRC; and Chairman, HLSA. The individuals, or their designee, may attend the annual meeting and participate in an ex-officio advisory capacity. These individuals shall each receive a copy of the notes from the annual meeting, regardless of whether they or their designee attended. Provision of notice and notes to the Chairman MHRC and to the Chairman HLSA is dependent on the MHRC and the HLSA providing the Steering Committee with its Chairman's name and address in writing. The Steering Committee may, at its option, invite any individual or organizational representative to any of its meetings to serve in a similar advisory capacity.

A Thunder Bay Coordination team ("TBC Team") shall be established to provide for the ongoing coordination and implementation of the actions required by this SETTLEMENT. The TBC Team shall consist of one representative each from TBPC and the two Fish and Wildlife Agencies, who shall be appointed by the respective Project Leaders. The TBC Team shall act by unanimous consent of the quorum present. If any party decides to change its TBC Team member, the name, address and telephone number of the successor shall be provided, in writing, to the other parties, the FERC Director, DCPA and the Chief SWQ, MDEQ, seven (7) days prior to the date the change becomes effective or as soon after as practical. Communications between the parties and all documents, reports, submissions and correspondence concerning activities performed pursuant to the terms and conditions of this SETTLEMENT shall be directed through the TBC Team members. The TBC Team will meet as often as is necessary to provide for the swift and orderly implementation of the terms and conditions of this SETTLEMENT. The TBC Team Chair shall set a meeting within fourteen (14) days of a request, in writing, by any two of the TBC Team members. The Chair of the TBC Team shall be the designated representative of TBPC. The Chair shall be responsible for setting the date, time and place for TBC Team meetings and for providing other appropriate meeting arrangements. A quorum of the TBC Team necessary to conduct business shall be any two of the three members at a properly noticed meeting. The date, time and location of the TBC Team meeting shall also be noticed to the following individuals at least fourteen (14) days in advance: Chief SWQ, MDEQ, Chairman, MHRC and Chairman, HLSA. The individuals, or their designee, may attend the meeting and participate in an ex-officio advisory capacity. The TBC Team may, at its option, invite any individual or organizational representative to any of its meetings for advice and participation in an ex-officio advisory capacity. The TBC Team may also form ad-hoc teams that include other employees, interested parties, contractors or consultants to pursue and/or monitor any actions required by or resulting from this SETTLEMENT. The TBC Team shall also inform, on a periodic basis, all interested parties, including those defined in Paragraph 18.2 and such others as may be identified, regarding their progress and actions taken to implement this SETTLEMENT. This information may be provided in a written or meeting format. The frequency

of these periodic reports will be determined at the annual Steering Committee meeting described in Paragraph 18.2 by the Project Leaders. Any disputes arising from the conduct of the TBC Team mission shall be referred to the Project Leaders for resolution in accordance with the provisions of Section 20 of this SETTLEMENT.

19.0 Fish and Wildlife Agencies and MDEO Review, Consultation and Concurrence

- 19.1 Fish and Wildlife Agencies and MDEQ reviews referred to in this section pertain to activities among the parties and would be, in many cases, preparatory to seeking FERC approvals. In all situations described herein, where the license requires FERC approval, TBPC shall use its best efforts to promptly seek and obtain authorizations from FERC before any changes to operations, facilities, PROJECT boundaries, or procedures are implemented.
- 19.2 All plans, studies, reports and submissions ("Submissions") shall be delivered to the Fish and Wildlife Agencies, MDEQ and ex-officio advisory members for review in accordance with the schedules in this SETTLEMENT.
- 19.3 Upon receipt of any Submission or other item relating to the work that is required to be submitted for review pursuant to this SETTLEMENT, the Fish and Wildlife Agencies TBC Team members except for water quality monitoring and stream bank erosion and the MDEQ for water quality monitoring and stream bank erosion will, in writing within forty-five (45) days, signify:
 - (A) Concurrence with the Submission, or;
 - (B) Objection to the Submission, notifying TBPC of the nature of their objection.
- 19.4 Upon receipt of a notice of concurrence and following FERC approval as necessary, TBPC shall proceed to take any action required by the Submission or other item as concurred with or as modified. Approved Submissions shall become enforceable under the terms of this SETTLEMENT and any new licenses issued, provided that with respect to Section 4.1 activities funded by the Escrow, there are sufficient funds in the Escrow to fund those activities. All comments from the MDEQ or TBC Team members including ex-officio members shall be addressed in the final Submission to FERC. MDEQ will consider comments from any interested party regarding stream bank erosion or water quality issues before making a final recommendation.
- 19.5 Notice of objection arising from Paragraph 19.3 will specify the reason(s) for the objection. Unless a notice of objection specifies a longer time period, and upon receipt of a notice of objection from the Fish and Wildlife Agencies except for water quality monitoring and stream bank erosion, TBPC shall within sixty (60) days thereafter: (a) address the comments and submit the modified plan, report, or other item to the appropriate agencies or to FERC for approval, if

necessary, or (b) refer matters to dispute resolution according to Section 20. Upon receipt of a notice of objection from MDEQ regarding water quality or soil erosion pursuant to Section 19.3 (B) of this SETTLEMENT, TBPC will either (I) address the comments and submit the modified plan, report, or other item to the appropriate agencies or to FERC for approval, or (ii) attach MDEQ'S objection to their final submittal to FERC. TBPC shall proceed to take any action directly related to the portion of the Submission for which there is no objection to the extent that any required FERC approval has been received.

19.6 Fish and Wildlife Agencies concurrence means the Submission is acceptable to meet the intent of the SETTLEMENT and does not mean that the Fish and Wildlife Agencies concur with all conclusions, methods, or statements in the Submission.

20.0 <u>Dispute Resolution</u>

- Any dispute that arises with respect to activities listed in all sections of this SETTLEMENT except water quality monitoring and stream bank erosion shall, in the first instance, be the subject of informal negotiations between TBPC and the Fish and Wildlife Agencies. The informal negotiations shall not exceed seven (7) working days from the date of written notice by any team member that a dispute has arisen unless extended by agreement. If the TBC Team is unable to resolve the dispute, except those concerning water quality and stream bank erosion, TBPC shall, at the end of the period of negotiations, refer the matter to the Steering Committee for a period of negotiations not to exceed seven (7) working days from the date of the referral, unless extended by agreement. The Steering Committee shall commence to negotiate the dispute. At the end of this negotiation period, the Fish and Wildlife Agencies shall provide to TBPC a written statement setting forth their proposed resolution of the dispute. Within seven (7) working days of receiving the Fish and Wildlife Agencies proposed resolution, TBPC shall indicate to the Fish and Wildlife Agencies in writing whether or not it accepts the proposed resolution. During this informal dispute resolution period, any Steering Committee member may request the FERC Director of the Office of Hydropower Licensing (OHL), or the Director's designee, to participate in the negotiations to assist in resolving the dispute.
- 20.2 If TBPC rejects the Fish and Wildlife Agencies proposed resolution for any dispute except those concerning water quality monitoring and stream bank erosion, any Steering Committee member may refer the dispute to FERC for expedited dispute resolution. All disputes taken to FERC under this section shall be governed by FERC's Rules of Practice and Procedures, 18 CFR 385.
- 20.3 Nothing within this section shall act to limit the parties' FERC rehearing opportunities under 18 CFR 385.713.

21.0 PROJECT Retirement

- 21.1 It is the intent of the parties that the Escrow established under this SETTLEMENT shall be the sole source of funds from TBPC for studies related to non-power PROJECT operation or studies related to PROJECT removal, and PROJECT removal if removal is required by the Fish and Wildlife Agencies. If PROJECT removal is initiated solely at the discretion of TBPC and not at the direction of the Fish and Wildlife Agencies or by FERC order but not at the request of the Fish and Wildlife Agencies, TBPC shall fund the removal of the PROJECT(s) and such shall not be charged against the Escrow.
- 21.2 Twenty (20) years after the license for the PROJECTS is issued and upon written request from the Fish and Wildlife Agencies, TBPC shall begin consulting with the Fish and Wildlife Agencies on a plan for studying the costs of: (a) permanent non-power operation, (b) partial PROJECT removal, or (c) complete PROJECT removal. Within six (6) months of the Fish and Wildlife Agencies request, TBPC shall submit the study plans to FERC for approval. Within twenty-four (24) months after approval of the plans by FERC, TBPC shall complete the study unless FERC shall establish a different period for study completion. On completion of the studies, TBPC shall submit study reports to FERC, the Fish and Wildlife Agencies and the TBC Team for review.
- 21.3 Nothing contained in this SETTLEMENT shall create or be construed to create any obligation on the part of TBPC to retire any PROJECT or refrain from seeking additional relicenses for any PROJECT. Nothing contained in this SETTLEMENT shall create or be construed to create any obligation on the part of the Fish and Wildlife Agencies, the State of Michigan or the United States to indemnify TBPC or any other person for any claims for damages or reimbursement of any kind including, but not limited to, any claims relating to the selection and implementation of Project Activities set forth in Sections 4.1 and 4.2 in the event the Escrow Amount is exhausted.

22.0 Entire Agreement

22.1 This SETTLEMENT, including any attached exhibit constitute the entire agreement between the parties with respect to the FERC relicensing of the Thunder Bay and Hillman hydroelectric PROJECTS and supersede all prior agreements, understandings, negotiations and discussions, whether oral or written, of the parties except that the Section 401 Water Quality Certification of the Projects shall remain in full force and effect; provided however, this SETTLEMENT shall control any inconsistencies between this SETTLEMENT and the Section 401 Water Quality Certificate for the Projects. No supplement, amendment, alteration, modification, waiver or termination of this SETTLEMENT, shall be binding unless executed in writing by the parties.

23.0 Governing Law

23.1 This SETTLEMENT shall be governed by and interpreted in accordance with the laws of the State of Michigan.

24.0 Waiver

24.1 No waiver of any of the provisions of this SETTLEMENT shall be deemed or shall constitute a waiver of any other provisions of this SETTLEMENT, nor shall such waiver constitute a continuing waiver unless otherwise expressly provided.

25.0 Severability

25.1 If any term or other provision of this SETTLEMENT is invalid, illegal or incapable of being enforced under any rule of law, all other conditions and provisions of this SETTLEMENT shall nevertheless remain in full force and effect so long as the economic substance of the SETTLEMENT is not affected in a materially adverse manner with respect to any of the parties.

26.0 Counterparts: Exhibits

26.1 This SETTLEMENT may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. All Exhibits attached to this SETTLEMENT are made a part of this SETTLEMENT and are incorporated in the SETTLEMENT by this reference.

This SETTLEMENT shall become binding on the parties after a duly authorized representative of each party with the power to bind that party executes this SETTLEMENT.

IN WITNESS WHEREOF, each of the parties has caused this SETTLEMENT to be executed on its behalf by its officers thereunto duly authorized effective as of March 25, 1998.

THUNDER BAY POWER COMPANY	MICHIGAN DEPARTMENT OF NATURAL RESOURCES
By Wand To Howard	Ву
David B. Howard	
Its: President	Its: Director
Date March 25, 1998	Date 5-5-98

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	U.S. DEPARTMENT OF INTERIOR- FISH AND WILDLIFE SERVICE
By Director Date 6/5/98	By Its: Date
HUBBARD LAKE SPORTSMEN & IMPROVEMENT ASSOCIATION	MICHIGAN HYDRO RELICENSING COALITION
Ву	By
Its: Date	Its:Date

Thunder Bay River Assessment Appendix

Thunder Bay River Settlement Offer March 25, 1998 Page 19

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	U.S. DEPARTMENT OF INTERIOR- FISH AND WILDLIFE SERVICE
By	Bell Hartifa
Its:	Its: Regional mector
Date	Date
HUBBARD LAKE SPORTSMEN & IMPROVEMENT ASSOCIATION	MICHIGAN HYDRO RELICENSING COALITION
By	By
Its:	Its:
Date	Date

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	U.S. DEPARTMENT OF INTERIOR- FISH AND WILDLIFE SERVICE
By	By
Its:	Its:
Date	Date
HUBBARD LAKE SPORTSMEN & IMPROVEMENT ASSOCIATION	MICHIGAN HYDRO RELICENSING COALITION
By James L Delahanty	Ву
Ital Ferc Representative	Its:
Date April 6, 1998	Date

Thunder Bay River Settlement Offer March 25, 1998 Page 19

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY	U.S. DEPARTMENT OF INTERIOR- FISH AND WILDLIFE SERVICE
By	Ву
Its:	Its:
Date	Date
HUBBARD LAKE SPORTSMEN & IMPROVEMENT ASSOCIATION	MICHIGAN HYDRO RELICENSING COALITION
By	By James D. Dehram
Its:	Its: Lezal Council
Date	Date4/6/98

EXHIBIT A

Attached to and Made a Part of that Offer of Settlement Dated March 25, 1998, Between Thunder Bay Power Company, the Michigan Department of Natural Resources, et al

Escrow Agreement

This Escrow Agreement is entered into and effective this day of	
1998, by and among	, Thunder Bay Power
Company (TBPC), United States Department of Interior Fish and	Wildlife Services (USFWS) and
the Michigan Department of Natural Resources (MDNR).	

RECITALS

- A. On February 17, 1998, TBPC, USFWS, MDNR, the Michigan Department of Environmental Quality (MDEQ), the Hubbard Lake Sportsmen & Improvement Association (HLS&IA), and the Michigan Hydro Relicensing Coalition (MHRC), entered into an Offer of Settlement (hereinafter "Settlement") which was approved by the Federal Energy Regulatory Commission in an Order dated _________. Pursuant to the terms of the Settlement, TBPC shall deposit cash in the amount of One Million Dollars (\$1,000,000.00) into an Escrow Account established by the parties herein. This deposit into the Escrow Account and any interest and earnings generated by the investment of this amount is hereinafter referred to as the "Escrow Amount".
- B. TBPC or persons authorized by TBPC (Authorized Person) shall direct the use of the Escrow Amount for the purpose of implementing PROJECT activities described in Sections 4.1 and 4.2 of the Settlement. The expenditures for PROJECT activities that may be authorized for payment

Thunder Bay River Assessment Appendix

Exhibit A
Escrow Agreement
Page 2

from the Escrow Amount shall be referred to as "Project Activity Costs" which are specifically set forth in the Settlement and include:

- i. Compliance monitoring, including but not limited to, discharge and flow monitoring and water quality control monitoring;
- ii. Upstream fish passage;
- iii. Downstream fish protection and passage;
- iv. Fish entrainment;
- v. Land management;
- vi. Recreation;
- vii. Soil erosion;
- viii. Wildlife management;
- ix. Bald Eagle protection and management:
- x. Nuisance plant control;
- xi. Fisheries habitat improvement;
- xii. Project retirement; and
- xiii. Reasonable expenses of the Thunder Bay Coordination Team (TBC Team) related to preparing for, traveling to, and attending TBC Team meetings.
- C. The Escrow Amount may be used only to pay Project Activity Costs for PROJECT activities that have been selected and approved in accordance with the procedures set forth in Sections 18 and 19 of the Settlement.

Thunder Bay River Assessment Appendix

Exhibit A

Escrow Agreement

Page 3

D. Pending use of the Escrow Amount in accordance with the terms of this Escrow

Agreement, the parties agree to the investment of the Escrow Amount as set forth in paragraph 3.2

of this Escrow Agreement.

E. The Escrow Agent shall invest and disburse the Escrow Amount on the terms and

conditions provided below.

NOW, THEREFORE, in consideration of the premises herein, the parties hereto agree as

follows:

I. DEPOSITS INTO ESCROW

1.1 Deposit.

TBPC shall deposit cash in the amount of \$1,000,000.00 in the Escrow Account within thirty

(30) days of the issuance of an order by the Federal Energy Regulatory Commission ("FERC")

approving the Settlement by transferring such amount to the Escrow Agent as follow:

Escrow Agent:

Address:

Telephone No.:

Fax No.:

Account No.:

Attention:

ABA No.:

35

1.2 Earnings on Deposit.

Interest and earnings from the deposit shall be invested as part of the principal. The Escrow Agent shall be authorized to pay any taxes associated with the interest and earnings on deposit from the Escrow Amount.

II. Disbursement of Escrow Amount

2.1 Use of Escrow Amount to Pay Approved Project Activity Costs.

At the written direction of the Authorized Person, delivered from time to time, and certifying that such direction is made for the purpose of paying Project Activity Costs (as defined in Section 4.1 and 4.2 of the Settlement) selected and approved by the Fish and Wildlife Steering Committee, the Escrow Agent shall disburse funds held in the Escrow in accordance with the procedures set forth in this section. Such disbursements shall be made at the written direction of the Authorized Person, which shall include the following certification:

Thunder Bay Power Company certifies that the invoices attached hereto are true and correct copies of invoices prepared or received by me in connection with the implementation of Project Activity Costs selected and approved by the Fish and Wildlife Steering Committee and the TBC Team.

2.2 Disbursement Procedure for Escrow Amount.

The parties hereto acknowledge and agree that the Escrow Amount shall be held and disbursed pursuant to the forms, at times and otherwise in the manner reasonably prescribed by the Escrow Agent, which shall at all times be consistent with the terms of this Escrow Agreement. All requests for disbursements, including expenses of the TBC Team (and excepting the Escrow Agent's

Fee due the Escrow Agent pursuant to Subsection 4.12 of this agreement) shall be presented in writing to the Escrow Agent.

- (a) Prior to the disbursement of any portion of the Escrow Amount, the Escrow Agent shall promptly send a notice of the request for disbursement, together with copies of the certification required by Subsection 2.1, invoices and any other supporting documentation to the TBC Team members identified in Section VI. Each TBC Team member shall have the right to object to the disbursement of the Escrow Amount by sending a written notice of objection to the Escrow Agent (with copies to the other TBC Team members) within seven (7) days after the date that the Escrow Agent sends such notice, invoices and supporting documentation (as delivery is defined in SectionVI) to the TBC Team. Notification by FAX to the Escrow Agent constitutes objection in writing. If no objection is made within ten (10) days of receipt of the notice of request for disbursement, the Escrow Agent shall, within seven (7) days thereafter, remit payment to TBPC.
- (b) If the Escrow Agent receives a timely objection to a request for disbursement, the Escrow Agent shall refuse to pay the request for disbursement and shall continue to hold the Escrow Amount until the Escrow Agent has received (i) a written notice by the objecting TBC Team member withdrawing its objection, (ii) a written agreement executed by each of the parties to the Settlement directing the disbursement of the Escrow Amount, or (iii) a final non-appealable order issued by FERC directing the payment of the disputed Project Activity Costs. The FERC order referred to in (iii) above shall be accompanied by a legal opinion by

Exhibit A

Escrow Agreement

Page 6

counsel for the presenting party satisfactory to the Escrow Agent to the effect that said FERC

order is final and non-appealable. The Escrow Agent shall act on such FERC order and legal

opinions without further question.

2.3 Termination of Escrow

This Escrow Agreement shall terminate only upon the disbursement of the entire Escrow

Amount.

III. MANAGEMENT AND INVESTMENT OF ESCROW DEPOSIT

3.1 Preservation of Income and Principal.

Subject to Subsections 3.2 and 4.5, the Escrow Agent shall at all times hold, manage and

invest the assets of the Escrow Amount in a manner designed to maximize and preserve the earnings

and principal of the Escrow Amount for the purpose of this Escrow.

3.2 Investment of Escrow Funds.

The Escrow Agent shall invest and reinvest all or any part of the Escrow Amount, including

any earnings therefrom, exclusively in the investments hereinafter listed: in United States direct

obligations, obligations guaranteed by the United States or agencies of the United States, common

trust funds or mutual funds which invest solely in United States direct or guaranteed obligations,

bank certificates of deposit to the extent they are insured by the Federal Government, and common

trust funds or money market funds investing in short term insured or at least "A" rated municipal

bonds. In all cases, however, the total investments must be sufficiently liquid to enable the Escrow

38

Agent to fulfill the purpose of the Escrow and to satisfy obligations when submitted by an Authorized Person.

IV. POWERS, DUTIES AND OBLIGATIONS OF THE ESCROW AGENT

4.1 <u>Duties of Escrow Agent</u>.

This Escrow Agreement expressly sets forth all the duties of the Escrow Agent with respect to any and all matters pertinent hereto. No implied duties or obligations shall be read into this Escrow Agreement against the Escrow Agent. The Escrow Agent shall not be bound by the provisions of any agreement among the other parties hereto except this Escrow Agreement.

4.2 Authority of Escrow Agent.

The Escrow Agent shall have the authority to make, execute, acknowledge and deliver any and all documents of transfer and conveyance and any and all instruments that may be necessary or appropriate to carry out the powers herein described.

4.3 <u>Designation of Investments</u>.

The Escrow Agent may register or hold any security in bearer form or in book entry, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and record of the Escrow Agent will at all times show that all such securities are part of this Escrow.

Exhibit A

Escrow Agreement

Page 8

4.4 Accounting for the Escrow.

The Escrow Agent shall keep all records of this Escrow on a calendar-year basis. The

Escrow Agent shall make a quarterly accounting to the TBC Team members designated in Section

VI within thirty (30) days following the close of the period designated or portion thereof during

which this Escrow Agreement is operative.

The accounting shall show in reasonable detail the following:

1. the total funds deposited into the Escrow;

2. accrued earnings on the funds deposited into the Escrow;

3. the amount of the Project Activity Costs that have been paid out of the Escrow;

4. the remaining balance of the Escrow.

4.5 Standard of Care.

In investing, reinvesting, exchanging, selling, and managing the Escrow, the Escrow Agent

will discharge its duties with respect to the Escrow solely in the interest of the parties hereto, and

with the care, skill, prudence, and diligence under the circumstances then prevailing which persons

of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an

enterprise of a like character and with like aims.

4.6 Liability.

The Escrow Agent shall not be liable for any acts, omissions or defaults of any agent or

depository appointed or selected with reasonable care. The Escrow Agent shall be liable only for

its own acts or omissions occasioned by its willful misconduct, bad faith or negligence.

40

4.7 Discretion in Exercise of Powers.

The Escrow Agent shall be entitled to rely upon any order, judgment, certification, demand, notice instrument or other writing delivered to it hereunder without being required to determine the authenticity or the correctness of any fact stated therein or the propriety or validity of the service thereof. The Escrow Agent may act in reliance upon any instrument or signature reasonably believed by it to be genuine.

4.8 Advice of Counsel.

The Escrow Agent may from time to time consult with respect to any question arising as to the construction of this Escrow Agreement or any action to be taken hereunder. The Escrow Agent shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

The expense related to the advice of counsel shall be covered as part of the services rendered for the monthly fee paid to the Escrow Agent.

4.9 <u>Independent Escrow</u>.

The Escrow Agent does not have any interest in the Escrow but is serving as escrow holder only and having only possession thereof. This subsection and subsection 4.6 of this Section 4 shall survive notwithstanding termination of this agreement or the resignation of the Escrow Agent.

4.10 Resignation or Removal of Escrow Agent.

The Escrow Agent may be removed by a joint written notice of removal signed by the TBPC, MDNR, and USFWS and delivered to the Escrow Agent. The Escrow Agent may resign by giving thirty (30) days' prior written notice to each of the parties hereto. Such removal or resignation shall

take effect at the end of thirty (30) days following delivery of the notice of removal or resignation as the case may be or when a successor escrow agent has been agreed upon by the parties and has assumed the responsibilities of the Escrow Agent hereunder, whichever is earlier.

4.11 Disputes Regarding Action of Escrow Agent.

In the event that the Escrow Agent in good faith is in doubt as to what action it should take hereunder, the Escrow Agent shall be entitled to retain the Escrow Amount until the Escrow Agent shall have received (a) a final non-appealable order of a court of competent jurisdiction directing the delivery of the Escrow Amount; or (b) a written agreement executed by each of the parties hereto directing delivery of the Escrow Amount. Any court order referred to in (a) above shall be accompanied by a legal opinion by counsel for the presenting party satisfactory to the Escrow Agent to the effect that said court order is final and non-appealable. The Escrow Agent shall act on such court order and legal opinions without further question.

4.12 Payment of Escrow Agent.

Fees for the services to be rendered by the Escrow Agent hereunder shall be paid to the Escrow Agent from the Escrow Amount in accordance with the fee schedule attached hereto as Exhibit "I". The Escrow Agent shall be reimbursed from the Escrow Amount for all reasonable expenses and disbursements incurred or made by the Escrow Agent in performance of its duties hereunder (excluding attorney's fee). It is understood that the Escrow Agent's fees may be adjusted from time to time upon ninety (90) days' prior written notice to all the parties hereto.

V. SUCCESSORS/GOVERNING JURISDICTION/MODIFICATION

5.1 Successors and Assigns.

This Escrow Agreement shall be binding upon and inure solely to the benefit of the parties hereto and their respective successors and assigns, and representatives and shall not be enforceable by or inure to the benefit of any third party. No party may assign any of its rights or obligations under this Escrow Agreement without the written consent of the other parties.

5.2 Governing Jurisdiction.

This Escrow Agreement shall be construed in accordance with and governed by the internal laws of the State of Michigan.

5.3 Modification.

This Escrow Agreement may only be modified by written agreement signed by all of the parties hereto, and no waiver hereunder shall be effective unless in writing and signed by the affected parties.

VI. NOTICES

All notices, deliveries or other communications required or permitted hereunder shall be in writing and shall be deemed given when sent by facsimile transmission and confirmed by certified or registered mail (unless otherwise specified) addressed as follows:

(a) Escrow Agent:

Thunder Bay River Assessment Appendix

Exhibit A
Escrow Agreement
Page 12

(b) Thunder Bay Power Company 13561 W. Bay Shore, Suite 3000 Traverse City, MI 49684 Attention: Gregory W. Blanche Telephone: (616) 941-1140

Fax No.: (616) 941-0338

(c) U. S. Fish & Wildlife Service 2651 Coolidge Road East Lansing, MI 48823 Attention: Burr Fisher

Telephone: (517) 351-8273 Fax No.: (517) 351-1443

(d) Michigan Department of Natural Resources
Fisheries Division
530 W. Allegan
Lansing, MI 48933
Attention: Janice Fenske

Telephone: (517) 373-1280 Fax No.: (517) 373-0381

or to such other address as the person to whom notice is given may have previously furnished to the others in writing in the manner set forth above. Such communications shall be deemed to have been delivered on the day of delivery if delivered personally, two (2) days after mailing if sent by mail, and one (1) business day after delivery to an overnight courier, if sent by overnight courier; provided that notice of any change of address shall be effective only upon receipt thereof.

VII. EXECUTION

Execution of this agreement by the Escrow Agent will constitute its acceptance of the terms hereof.

VIII. COUNTERPARTS

This Escrow Agreement may be executed in two or more counterparts, each of which shall be deemed an original, and all of which, when taken together, shall constitute one and the same instrument.

IX. DISSOLUTION

In the event TBPC dissolves or otherwise ceases to conduct business, all of its rights in the Escrow shall vest in the TBC Team and any unexpended portion of the Escrow Amount shall be disbursed in accordance with the direction of the Fish and Wildlife Agencies or at the direction of FERC.

IN WITNESS WHEREOF, each of the parties has caused this Escrow Agreement to be executed on its behalf by its officers thereunto duly authorized, all as of the day and year first above written.

ESCROW AGENT:	THUNDER BAY POWER COMPANY
Ву	By
Its:	Its:
US DEPARTMENT OF INTERIOR FISH AND WILDLIFE SERVICE	MICHIGAN DEPARTMENT OF NATURAL RESOURCES
Ву	Ву
Its:	Its:
Date	Date

Exhibit "I"

[To be supplied when Escrow Agent has been selected.]