



Request for Qualifications Engineering and Feasibility Study

**Boardman River Dams Committee
ATTN: Project Facilitator
c/o NMC University Center, Great Lakes Water Studies Institute
1701 East Front Street
Traverse City, Michigan**

February 2, 2006

Responses Due: MARCH 15, 2006

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Other relevant information:

Other information is available at the City of Traverse City website (<http://www.ci.traverse-city.mi.us/>), Grand Traverse County website (www.grandtraverse.org), Traverse City Light and Power website (www.tclp.org), and the Boardman River Dams Committee website (theboardman.org) That information includes plans, inspection reports, communications from regulatory agencies, reports about the river system, available aerial photography and mapping information and other information.

PLEASE NOTE! An information meeting concerning this Request for Qualifications (RFQ) will be held on February 14, 2006 from 6:00 p.m. to 8:00 p.m. in room C, Hagerty Center, Great Lakes Campus, Northwestern Michigan College to provide an overview of this RFQ and to answer questions from organizations considering responding to this RFQ.

I. Summary

The purpose of the Boardman River Dams Committee (BRDC) is *“to engage all interests in assessing and recommending the fate of the Boardman River Dams on the main stem of the Boardman River based upon a thorough analysis of options, including long and short-term economic, societal, environmental, aesthetic, transportation and ecological impacts on the community, individuals and riparian owners.”*

Accordingly, the Boardman River Dams Committee is issuing this Request for Qualifications (RFQ) to determine the interest, experience and capacities of organizations to complete an engineering and feasibility study concerning the fate of four dams on the Boardman River near Traverse City, and within Grand Traverse County, Michigan. The City of Traverse City (City) and Grand Traverse County (County), as owners of the Dams, and the Implementation Team established by the Boardman River Dams Settlement Agreement, have no predisposition or bias about the future of the dams. As a result, all reasonable, feasible options for the future of the dams, including dam retention and dam removal, will be fully assessed based upon the concerns and issues identified by the Boardman River Dams Committee. Based upon this comprehensive assessment, the Boardman River Dams Committee will make its recommendations about the future of the dams to the Implementation Team, City and County.

Based on a review of responses to this request, the candidate or candidates selected will be asked to submit detailed bids for the engineering and feasibility study.

Eligible organizations include any private or nonprofit organization, corporation or other legal entity or a combination of such organizations, including academic institutions.

The BRDC will require information and analyses in the engineering and feasibility study regarding issues and concerns involving options for the future of these dams. Many issues and concerns have been identified by the BRDC and they are grouped into four categories in this Request for Qualifications.

These issues and concerns have been identified by the BRDC through a series of meetings and small group facilitations which have been widely advertised to involve all interests in the process, including riparian and other property owners, governments and government officials, nonprofit organizations, businesses and others. The four categories are:

- Societal
- Economic
- Environmental
- Engineering

Organization interested in being considered for the Engineering and Feasibility Study will be evaluated based on criteria applied consistently to all respondents, such as:

- Multi-disciplinary or have the capabilities through a team of organizations to define and assess the societal, economic, environmental and engineering implications of options for the future of the dams.
- Responsive to the needs, questions, concerns and time requirements of the Boardman River Dams Committee and the Implementation Team created under the Boardman River Settlement Agreement as well as all other interests involved with or relevant to the project.
- Have substantial prior experience in similar initiatives involving dams and/or natural resource-related matters or projects which are complex, large in scope, affect a large variety and large number of stakeholders and have societal, economic, environmental and engineering implications.
- Capable of integrating local organizations and resources into the engineering and feasibility study to the maximum extent possible, provided that the goals and objectives of the engineering and feasibility study are met in full. This includes contracting for services with local organizations where appropriate to the maximum extent possible.
- Capable of working collaboratively with the US Army Corps of Engineers through the Section 506 process (Water Resource Development Act of 2000).
- Capable of complying with a variety of funding source (federal, state, private, etc.) requirements.
- Ability to complete the project in an efficient and timely manner.

The organization or team of organizations selected to complete the engineering and feasibility analysis will be responsible for developing information and analyses and performing tasks outlined in this RFQ and will report their findings to the Boardman River Dams Committee and the Implementation Team.

II. Project Background

The Boardman River and its 287 square mile watershed contribute one-third of the water volume of Grand Traverse Bay. More than 88 of its 179 river miles are designated as blue ribbon trout fishery. The Boardman River is also a State designated natural river. A copy of the Boardman River Natural River Plan may be obtained at (www.michigan.gov/documents/Boardman_River_Plan_23122_7.pdf).

Four dams currently impound water on the main stem of the Boardman River. They are, from upstream to downstream, Brown Bridge Dam, Boardman Dam, Sabin Dam, and Union Street Dam. Currently, all dams with the exception of Union Street generate hydropower. Since the Union Street Dam is located within the general project area and is of similar age and structure as the other dams, it has also been incorporated into this project.

The hydro dams are operated by Traverse City Light and Power (TCLP) and licensed by the Federal Energy Regulatory Commission (FERC). Requirements by FERC to install

emergency spillways at Brown Bridge Dam are among the factors that caused TCLP to seek de-licensing and decommissioning of the dams because the operations were deemed by TCLP to no longer be economically viable.

TCLP leased the dams for hydropower operations from the City of Traverse City and Grand Traverse County. Brown Bridge and Union Street dams are owned by the City of Traverse City. Boardman and Sabin dams are owned by Grand Traverse County.

Under the lease agreement the dams and any associated maintenance will become the responsibility of the owners once TCLP decommissions the dams. TCLP has formally notified FERC of their intent to surrender their license to operate at the dam sites. Regulation of the dams would revert to the Michigan Department of Environmental Quality (DEQ) dam safety program in the absence of FERC licensing. Questions regarding maintenance and other costs once the dams are under DEQ jurisdiction also need to be addressed.

The de-licensing and decommissioning process began with preparation of a Settlement Agreement (attached) and subsequent Preliminary Restoration Plan (PRP) required by the US Army Corps of Engineers (USACE) for the project to be eligible for USACE funding. The PRP (attached) outlines issues involving the dams and recommends a course of action. It does not, however, fully address the societal, economic, environmental or engineering questions and concerns of the Boardman River Dams Committee.

The settlement agreement for the Boardman River Dams established an Implementation Team to determine the disposition of the dams covered by the Settlement Agreement. The Settlement Agreement enabled the Implementation Team to establish advisory groups. Accordingly, the Implementation Team established the Boardman River Dams Committee (BRDC) to engage all interests in determining the future of the dams so that the Implementation Team's recommendation is based upon an exhaustive assessment of public concerns, issues and questions.

III. Project Objectives

The objective of this RFQ is to obtain information about the interest, experience and capabilities of organizations that are interested in completing the engineering and feasibility study of the future of the Boardman Dams. That study must encompass all of the issues and concerns identified in this document as well as other issues and concerns that may arise.

The responses to this RFQ will be used to identify one or more organizations that will be requested to submit a detailed proposal(s) to complete the engineering and feasibility study. A task group of the Boardman River Dams Committee, supported by technical experts disinterested in competing for the engineering and feasibility study, will be established to review submissions and identify organizations that are deemed to be most qualified to perform the engineering and feasibility study. The RFQ task group will recommend to the Implementation Team one or more RFQ respondents that exhibit a capability to meet or exceed all elements of the study as presented in the RFQ. A detailed scope of work will be developed upon selection of the top ranked firm or firms. A similar process, involving an RFP task group drawn from the BRDC membership, will be used to select the preferred contractor.

The primary objective of the engineering and feasibility study will be to define and analyze the societal, economic, environmental and engineering implications involving a variety of options for the future of the Boardman River dams.

The engineering and feasibility study is intended to enable the Boardman River Dams Committee and Implementation Team to develop recommendations to the City of Traverse City and Grand Traverse County about the future of the dams.

IV. Boardman River Dams Committee – Concerns, Issues, Questions

The concerns, issues and questions identified to date by the Boardman River Dams Committee include but are not limited to the following. This effort to assess the future of dams will differ substantially from other studies that have been done in the nation in that it must include a thorough analysis of societal and economic implications in addition to engineering and environmental implications. The issues and concerns itemized in this document were identified by members of the Boardman River Dams Committee. It is important to note that duplication of issues across categories is intentional, reflecting the interrelated nature of issues and concerns. Further, we expect that additional issues and concerns may be identified while the engineering and feasibility study is being completed. It will be essential that candidates have the capability to be flexible and accommodate these needs and other adjustments in the conduct of their work.

Candidates who will be requested to submit proposals for completing the engineering and feasibility study must demonstrate their capability to respond to all of the following as well as other concerns and issues that may be identified. Respondents to this RFQ are encouraged to demonstrate their capabilities by describing their management approach and how they would address the concerns, issues and questions in all four categories. Respondents are also encouraged to identify other concerns, issues or questions that should be considered by the Boardman River Dams Committee.

IV. (A) Environmental

1. Determine the loss or gain of endangered species if dams are removed versus retained.
2. Determine impacts of various dams options on all fish and wildlife, including but not limited to eagles, swans, nesting ducks, shorebirds, insects, ruffed grouse, hex hatches, cold and warm water fish, fur bearers, deer, etc.
3. Define vegetative changes and the timing of expected vegetative changes if dams are modified or removed.
4. Determine if contaminated sediments and groundwater exist in the impoundments, if they will be mobilized if the dams are removed and the management options if this should occur. Define the contaminated sediment exposure if the Union Street dam is removed.
5. Determine the impact of all sediments, including sediment transport.
6. Define options for stream channel alterations/improvements for fish, recreation, property owners and others.
7. Assess the cost implications of channel restoration vs. no channel restoration.
8. Describe what will happen to the river during any dam removal. Where will it flow? Define the short-term implications.
9. What are the water quality impacts on the river and bay if dams are removed?
10. Identify what will be done to prevent sea lamprey from entering the river if dams are removed. Define the potential for other invasive species migration based on the various options for the dams and the management options and costs in the event of potential migration.
11. Define how nesting loons will be impacted if the impoundments are removed, including nest relocation options.

12. Identify the organization(s) that will prepare necessary Environmental Impact Statements (EIS) and National Environmental Policy Act (NEPA) documents. If there are options, assess the pros and cons.
13. Define the options for migratory fish passage. Determine potential fishery management options if some or all of the dams are removed by working collaboratively with the DNR and the Grand Traverse Band of Ottawa and Chippewa Indians (GTB).
14. Define the impacts to tributaries, including wetlands loss or gain.
15. Define impacts upon groundwater, including assessment of implications involving septic systems, holding tanks, water supply systems, etc.
16. Define the full impacts upon fish populations, both migratory and non-migratory. Analyze the management options and impacts involving Pacific Salmon species.
17. Depending upon the options, define the environmental issues involving transportation and other infrastructure.
18. Determine the environmental value of added cold-water fisheries.
19. Define the environmental impacts of expanded recreational uses in the event of dam removal. Determine the implications for access control and dispersion of users.
20. Define what may be required with regard to quality fishing regulations as well as any migratory fish species barriers if any dams are removed by working collaboratively with the DNR, US Fish and Wildlife Service and GTB.
21. Determine the gains and losses for all options and approaches for mitigating losses.
22. Determine the chemical and biological changes, which will occur while and after the river seeks equilibrium.
23. Determine at each of the dams the amount of water, which enters each reservoir so that the flow of water without dams can be understood.
24. How would the flow or depth of water upstream of the Brown Bridge Dam be impacted? If it is impacted how would it affect fish habitat and change the current use of the river?

IV. (B) Engineering

1. Determine how the flood plain will be altered in the absence of the dams.
2. Define the impact of the dams on flood control.
3. Assess if a bottom draw system is feasible to release cold water to improve trout habitat.
4. Determine the feasibility and costs of moving the stream channel in Boardman Pond to potentially provide river frontage to impoundment landowners.
5. Provide a complete assessment concerning removal or retention of the Union Street dam.
6. Define how new channel erosion will be addressed if dams are removed.
7. Determine the sediment content and methods for management in the event of a dam draw-down.
8. Address the feasibility of restoring the river channel to its original location.
9. Define the time implications involving dams removal and impoundments drawn down. Determine if the dams would be drawn down simultaneously.
10. Define impacts on water supplies, ground water and septic systems of properties impacted, including surface water discharge of the regional wastewater treatment plant.
11. Determine the hydraulic impacts on structure crossings within and downstream of the project area to the termination in Grand Traverse Bay.
12. Do flood analyses under various options.
13. Describe what the engineering costs would be if another entity operated the dams.

14. Assess the potential and implications of a “Whitewater Park” feasible in areas of high gradient.
15. Define how a variety of views could be established for the channel and ponds.
16. Define if the ponds could be maintained with a by-pass of the river.
17. Determine the implications of replacing the dams with waterfalls, thereby maintaining the impoundments.
18. Define options for the road crossing at Boardman Dam if the dam is removed.
Assess implications to traffic flow.
19. Determine the hydrologic and hydraulic characteristics of the watershed of low water and peak flows and the effects of seasonal variation if the dams are removed.
20. Determine the effects of sediment transport to the Boardman River, entry into Boardman Lake, Union Street Dam and the river entry into Grand Traverse Bay.
Discuss sediment aggradation in flood plains, alluvial fans and deltas.

IV. (C) Economic

1. Define the impact on property values of impoundment owners on Boardman and Sabin Ponds if the dams are removed.
2. Assess the value of recreational user hours of the impoundment versus the river.
3. Determine the current boundaries of impoundment landowners and how/if the boundary changes under various options and the economic impact upon landowners.
4. Define the cost to the public if bottomlands are given to landowners.
5. Determine the costs of dam repair and continued maintenance versus removal.
6. Determine all potential funding sources for all options.
7. Under the various funding options, define who applies for the funding, and how dollars would flow.
8. Determine the costs of moving the channel in Boardman Pond from its historic location to provide frontage to impoundment owners.
9. Explicitly define the legal position of all political jurisdictions regarding bottomland ownership.
10. Compare costs for all dam options.
11. Define the tax implications for frontage owners under various options.
12. Determine the economic gains for restoring high quality trout water.
13. Ascertain the economic impacts to rate payers of TCLP.
14. Determine what grants are available for maintenance versus removal of the dams.
15. Define the timeline for maintenance costs, the cost amounts and potential sources of funding.
16. Define what the costs are to all interests in the City and County if the dams are removed or maintained.
17. If the flood plain changes as a result of dam removal, define the cost implications if structures need to be moved and how such a move would be financed.
18. Define the economic impact upon different economic sectors, such as service industry, hospitality, manufacturing and others.
19. Define how a Trout Unlimited “Home Rivers” designation would impact the economic value of the area and/or the ability to secure funds for various dam options.
20. Determine what the economic impact will be on the community from an improved cold water fishery in the event the dams are removed.
21. Determine potential negative or positive economic impacts of any of the dam options on riparian owners, including ownership of impoundment bottomland, and how they will be addressed.
22. Determine if there will be short and long term gain in jobs based on options for the dams, including jobs for Grand Traverse County constituents at prevailing wages.

23. How do the cost implications change when the dams are shifted to DEQ control?
How could those costs be covered so that the dams can be retained?
24. Define the costs associated with a range of options, including drawing down the dams to various levels that might impact safety and maintenance costs.
25. Determine the costs associated with any effect on tax revenues and the cost of infrastructure that may be required based on various dam options.
26. Determine “who will or may pay” local costs under all options for the future of the dams.
27. Determine if there are entities other than TCLP that could or would operate the dams.
28. Determine if there is value in maintaining the powerhouses.

IV. (D) Societal

1. Determine the property rights of the frontage owners on Boardman and Sabin Ponds if the dams are removed.
2. Define potential risks to property owners if dams are removed. Examples include storm events and flooding. Explain the impact of the dams on flood control.
3. Define the relationship between the flood plain the existing homes and properties.
4. Define if new technologies or other options exist for using the dams as an energy source. Determine if view of expected growth in the region and the impact of growth upon energy demand.
5. Define how property owners and properties will or may be impacted if the dams are removed from changes in recreational uses. Define what property owners can anticipate. Define how impacts can be mitigated.
6. Define the economic or other values associated with a shift in recreation if the dams are removed.
7. If the dams are removed, determine the impacts and costs for increased, different or improved access and increased user numbers.
8. Define the impact upon the culture of the community if the dams are removed.
9. Define the cost advantages of removing the dams but keeping the ponds.
10. Ascertain the historic values of the dams or powerhouses that need to be considered. Also determine the historic and cultural implications in, around and under the impoundments.
11. Define the impact upon current users of the impoundments if the dams are removed.
12. Determine how dam removal would impact Cass Road and transportation flow and costs in general.
13. Define the safety concerns associated with increased recreational activity, including increased use of the river, roads, etc.
14. In the event that Boardman Lake is lowered, define the impacts upon the community in general, including impacts involving recreation (sailing club, etc.) and wastewater treatment, including impacts during storm events resulting in sewage overflows.
15. Define the impacts associated with a change in the type and nature of the fishery if the dams were removed.
16. Determine if all interests are being represented in this process.
17. Determine the impact on the County’s Natural Education Reserve.
18. Determine if the public participation process is adequate. Describe best practices to keep the public updated and involved throughout the process.
19. Describe the recreational uses that will be gained and/or lost under the various options.
20. Determine the risks/liabilities of failure if the dams are left in place.
21. Develop and conduct an empirical assessment of the societal aspects of dam removal/retention.

V. Technical Capabilities

Respondents must demonstrate technical capabilities and experience sufficient to address all four areas of the study. Examples include the disciplines of:

- Fisheries
- Wildlife biology
- Ornithology
- Botany
- Archeology
- Fluvial geomorphology
- Structural, environmental, chemical and civil engineering
- Socio-economic analysis
- Land valuation and property tax assessment
- NEPA analysis
- Tax and water law

As noted elsewhere, organizations are encouraged to partner with other organizations to demonstrate capability to respond to all of the issues and concerns that must be addressed by the engineering and feasibility study. Partners may include public or private educational institutions, community colleges, organizations and agencies with skills and experience in the greater grand traverse region and other forms of organizations. However, one primary organization and contact must be identified in responses to this RFQ.

Interested firms must also demonstrate success on similar projects and be experienced in:

- Managing projects that achieve deadlines and budgets.
- Developing design layouts that optimize efficiency and effectiveness.
- Developing accurate budget estimates.
- Developing, managing, coordinating and maintaining accountability for project plans and specifications and timelines.
- Communicating with all primary stakeholders.
- Collaborating with all primary stakeholders, including subcontractors and the USACE.

VI. Environmental and Engineering Capabilities

Sediment cores have been obtained from all impoundments and are being analyzed. Sediment transport and removal modeling will be partly determined in the engineering and feasibility study by the contractor based on the outcome of those analyses.

In general, tasks associated with the engineering and feasibility study will likely fall into two categories: feasibility/analysis and restoration design. Under the feasibility/analysis portion, the anticipated tasks include:

- Structural and geo-technical engineering
- Surveying
- Hydraulic Engineering
- Hydrologic Engineering
- Wildlife Biology
- Vehicular traffic Impact Assessment
- Geomorphic Assessment

- Socio-economic analysis (costs of removal versus retention, recreational use, property values, etc)
- Environmental Analysis
- Sediment Modeling
- Cost Estimates
- Meetings
- Process documentation

The restoration design tasks will include:

- Stream channel restoration
- Soil erosion and sedimentation control
- Sediment management
- Detailed plans and specifications
- Construction oversight
- Re-vegetation plan

VII. Societal and Economic Capabilities

The engineering and feasibility study will differ substantially from other dam studies in that full consideration will be given to the societal and economic implications of options for the future of the dams.

This comprehensive assessment, involving all interests and embracing public participation, is essential to enable the City and County to arrive at sound decisions about the fate of the dams. It may also represent a model for other communities in Michigan and elsewhere that are confronted with questions about the future of large dams.

In issuing this Request for Qualifications, we realize that organizations that have competencies to assess environmental and engineering implications involving dams may not possess the capacities to provide the information and analyses needed to assess the societal and economic implications. It is, however, the responsibility of the “lead organization” to possess, source or establish those capabilities and demonstrate such in their response to this RFQ.

VIII. Management Capabilities

Respondents must demonstrate:

- Sufficient expertise, experience and infrastructure to successfully manage a project of this nature.
- Capability to manage a project, which has the scope, magnitude, duration and complexity of the project defined herein.
- Capability to accurately estimate time and cost and meet time and cost objectives.
- An ability to properly qualify, source and supervise subcontractors, including local subcontractors and be responsive to public requests for data, reports, analyses, updates and findings.
- Ability to document process and product details for publication.
- Ability to interface with ongoing projects and master planning efforts of affected governmental units.

IX. Minimal Submittal Requirements

Respondents must provide the following information in the following format:

Executive summary of no more than six pages which contains information about the lead organization, project team, project experience, project capabilities and approach to working with the Boardman River Dams Committee in managing the engineering and feasibility study for this project

A REVIEW OF QUALIFICATIONS MUST INCLUDE:

1.0 Introduction To Lead Organization

1.1 Basic information (name, primary contact, address, phone and fax number, email address, web page address). Provide a summary of the organization's vision, mission, goals, and objectives.

1.2 History of lead organization

2.0 Project Team

2.1 Partnering organizations. A review of all organizations, groups or institutions to be involved in the project, including complete contact information for each (see basic information above) and a summary of how the capabilities of the lead and partnering organizations will respond to the goals, objectives and issues and concerns to be address by the engineering and feasibility study.

2.2 Organizational accountability. The name and qualifications of the designated project manager and key personnel. Attached complete resumes for key personnel, including years of experience, professional licenses and a description of how the experience of personnel relates to this project.

3.0 Project Experience

3.1 Project references. Provide detailed information about prior projects or work that best reflect the capabilities of the lead organization and project team. The information should enable the BRDC to assess the technical and management capabilities of the applicant to address the issues and concerns covering (1) environmental, (2) engineering, (3) economic, and (4) societal factors.

4.0 Project Understanding

4.1 Narrative which summarizes:

(A) The capabilities of the participating organization in relation to the requirements of the project.

(B) How the organization will collaborate with the BRDC and keep the general community informed of progress, plans, preliminary and final results or findings and other milestones.

(C) The organization's comprehension of the scope, conduct and management philosophy of the project.

5.0 Project Management

5.1 Narrative which summarizes:

(A) The management approach

(B) Management and accountability with and among team members

(C) Communications with the BRDC, community and any other interested party

(D) Cost management and control processes

(E) Schedule management

(F) Suggested evaluation process of the organization and partners by the BRDC.

(G) Quality control in all elements of the project.

(H) Coordination with affected local units of government, including permitting, planning and other functions.

6.0 References.

Provide the name and contact information for at least six client references which are relevant to the scope and magnitude of this project.

X. Estimated Schedule to Complete RFQ Process

The Boardman River Dams Committee has a preliminary project schedule. It is subject to change based upon factors such as availability of funding, permit requirements, unforeseen site conditions, and others. The preliminary schedule is as follows:

RFQ responses due	March 15 2006
RFQ responses reviewed	April 15 2006
Qualified firms determined	April 30 2006

XI. Submission Details

Please limit responses to 50 numbered pages, (font size no less than 11 point, with one-inch margins at top, bottom and sides) including cover letter, excluding resumes and project descriptions. Ten copies of the response must be submitted by March 15, 2006 at the mailing address given below. In addition, all respondents must also submit an electronic version (cd or other common media) of their qualifications.

Please send submittals to:
Boardman River Dams Committee
Request for Qualifications
ATTN: Project Facilitator
1701 E. Front Street
Traverse City, MI 49686

Submissions must be received by March 15, 2006.

Questions? Questions should be directed to the Project Facilitator at:

knopp@chartermi.net

231-947-9477

or

Boardman Dams Project Facilitator
c/o Water Studies Institute, Northwestern Michigan College
1701 E. Front St.
Traverse City, MI 49686
PH: 231-995-1787; Fax: 231-995-1794

Attachments

- Boardman River Preliminary Restoration Plan
- Work Plan Summary
- Boardman River Dams Settlement Agreement