

**MICHIGAN GREAT LAKES PROTECTION FUND**  
**REQUEST FOR PROPOSALS:**  
**ECONOMIC ANALYSIS OF LONG RUN RISK MANAGEMENT FOR**  
**GROUNDWATER RESOURCES**

**REVISED October 1, 2020**

**I. Overview**

This is a request for proposals for a research project to assess the long-term economic cost of using institutional controls and other restrictive management actions to manage risks associated with groundwater contamination compared with the cost of other potential management actions. EGLE will fund a project to use economic case studies to evaluate the Michigan Department of Environment, Great Lakes, and Energy's (EGLE) current process and criteria for determining when institutional controls are the appropriate response to a groundwater contamination event.

This research project will evaluate a set of case studies to determine the cost of past uses of institutional controls and restrictive covenants and develop a decision-making framework for future instances of groundwater contamination based on a holistic prediction of long-term risk and cost. The project will seek to incorporate the risk of additional unexpected costs into this framework as well as changes in risk associated with expected demographic change and the cumulative risk of using institutional controls at many sites within the same geographic area. The grantee will be expected to:

- a) Identify a set of case study sites where institutional controls have been used to manage risks associated with groundwater contamination. These cases should include sites where institutional controls have resulted in 1) low or no unexpected costs; 2) moderate unexpected costs; and 3) high unexpected costs.

Case study site selection will be led by the grantee and will occur in consultation with EGLE staff after the grant has been awarded. The applicant is not expected to identify case study sites in the proposal but should identify some criteria or a methodology for selecting sites.

- b) Evaluate the full economic cost of using institutional controls from the time of contamination to the present, including projections of future costs where feasible.
- c) Compare this cost to the cost that was estimated when institutional controls were selected as the management option and to the cost of other potential management actions; and
- d) Develop a decision-making framework to help EGLE determine when it is appropriate to use institutional controls and other restrictive management actions as opposed to more thorough removal of contamination from the environment, based on

the anticipated economic cost of each option. This calculation should incorporate the risk of additional unexpected costs, changes in risk associated with expected demographic change, and the cumulative risk of using institutional controls at many sites within the same geographic area.

Approximately \$350,000 from the Michigan Great Lakes Protection Fund (MGLPF) will be provided to one applicant. This grant program will be funded by the MGLPF and administered by EGLE. Eligible applicants include: educational institutions; federal, state, tribal, and local governments; and any other non-profit or for-profit entity with relevant experience.

**II. Background**

When groundwater becomes unusable due to contaminants exceeding applicable criteria, there are a number of adaptation and mitigation strategies available to manage the risk associated with the contamination. Section 324.20121 of Part 201 and Section 324.21310a of Part 213 of the Natural Resources and Environmental Protection Act (NREPA), Act 451 of 1994 authorizes the use of restrictive covenants and institutional controls to limit use of an aquifer to manage risk of exposure in lieu of actually removing contamination from the ground. In some cases, this may constitute a de facto permanent removal of that aquifer, or portions thereof, from use.

According to the Cleanup Criteria Requirements for Response Activity rules developed by the Remediation and Redevelopment Division, an

*Table 1*

Potential Economic Costs
<ul style="list-style-type: none"> <li>• Drinking water adaptation</li> <li>• Ongoing monitoring</li> <li>• Fish and wildlife contamination</li> <li>• Decreased property value</li> <li>• Health impacts</li> <li>• Contaminant migration</li> <li>• Vapor intrusion</li> <li>• Venting to surface water</li> <li>• Forgone recreational use</li> <li>• Risk of additional complications</li> </ul>

“institutional control” (R 299.1, Rule 1 (q)) is “a measure which is approved by the department, which takes a form other than restrictive covenant, and which limits or prohibits certain activities that may interfere with the integrity or effectiveness of a remedial action or result in exposure to hazardous substances at a facility, or which provides notice about the presence of a hazardous substance at a facility in concentrations that exceed only an aesthetic-based cleanup criterion.” In addition, Rule 299.2(a) defines land or resource use restrictions that may limit or restrict certain activities that may result in exposure to hazardous substances at a facility.

Institutional controls and other land or resource use restrictions have become a common mechanism for managing risk associated with groundwater contamination since the passage of NREPA and are

currently in use at over 2,000 sites across the state. The costs and risks at these sites have many dimensions that have significantly altered the benefit structure of using institutional

controls and restrictive covenants as a risk management option. In some of these cases, unexpected complications, like vapor intrusion, have occurred many years after the initial risk management decision was made and have significantly increased the cost of using institutional controls. In other cases, contaminants have migrated to affect additional populations, also significantly increasing the cost of using institutional controls. All of these dimensions should be considered when calculating the costs and risks of using institutional controls and restrictive covenants as part of this project. A longer (but not necessarily comprehensive) list of potential economic costs is available in Table 1.

Michigan's current environmental laws do not provide guidelines or limitations on the appropriate use of these mechanisms, nor do they account for the potential complications described above. As a result, the long-term implications, risks, and costs of using institutional controls and other restrictive management actions are not well understood. This research project is intended to augment decision-making by addressing this information gap.

### **III. Deliverables**

The deliverables of the project should be:

- An assessment of the cost of using institutional controls at each of the case study sites, compared to the cost that was expected at the time of implementation and the cost of other potential management actions, where information is available.
- An estimation of the total cumulative cost of using institutional controls in the 25 years since they became a common mechanism for managing groundwater contamination, extrapolated from the case study evaluations.
- A decision-making framework or set of criteria to help EGLE determine when it is appropriate to use institutional controls and other restrictive management actions as opposed to more thorough removal of contamination from the environment at a given site, based on the anticipated economic cost of each option.

EGLE and other State of Michigan project partners expect to work closely with the research team. The team may also be asked to periodically consult with an expert panel about the methods and conclusions of the project.

### **IV. Funding Availability**

#### **A. Eligible Applicants**

- Non-profit and for-profit entities with experience in socio-economic case study analysis
- Educational institutions
- Federal, state, tribal, and local units of government

**Note: Grants cannot be made out to individuals.**

#### **B. Ineligible Applicants**

An applicant for whom any of the following conditions existed in the 12 months prior to the application deadline for this RFP is not eligible for funding:

- EGLE grant contract terminated
- Unresolved EGLE enforcement actions
- History of inability to manage or meet EGLE contractual terms and conditions

C. Grant Amount

Approximately \$350,000 will be made available for one grant.

D. Match Requirement

Match is not required but will be considered. Match may be in the form of cash, in-kind services, or donations.

E. Project Award Period

Projects will be evaluated on project readiness and feasibility for completion within an 18-24-month time frame beginning in **February 2021** and ending no later than **January 2023**.

F. Ineligible Uses for Grant Funds

This grant cannot be used to fund professional development activities or large-scale purchasing of equipment. This grant is intended to fund research on existing uses of institutional controls; it cannot be used to fund planning or implementation of future remediation projects. This grant cannot be used to purchase equipment to be used for purposes other than the proposed project tasks. Travel expenses should be built into the proposal budget.

G. Application Deadline

Complete applications must be received no later than **5:00 p.m. on Monday, November 16, 2020**. Save the date for a webinar about the funding opportunity at **2:30 p.m. on Wednesday, September 16, 2020**.

H. Application Submittal

Applications should be submitted by e-mail. Attach the application package in Portable Document Format (PDF). The combined size of the files attached to the e-mail cannot exceed 10 megabytes.

Applications should be sent to:

Ms. Kimber Frantz  
frantzk@michigan.gov

**V. Information for Applicants**

Proposal information will not be kept confidential. Grant proposals are considered public information under the Michigan Freedom of Information Act, PA 442 of 1976, as amended.

Successful applicants will be required to enter into a grant agreement with EGLE with standard terms and conditions which are not subject to modifications. Failure of a successful applicant to accept these obligations will result in cancellation of the grant award.

Successful applicants will also be required to provide proof of a successful financial audit for a period ending within the 24 months immediately preceding the proposal due date.

## **VI. Application Package**

Applications can be no more than 10 single-sided pages in length with text no smaller than 10-point font size and standard 1-inch margins. Maps and illustrations may be included but will be subject to the overall application length limit. A cover letter signed by an authorized representative of the applicant on the applicant's letterhead must accompany the application but will not be included in the page limit. Applications should be addressed as described below.

### **A. Application Cover Letter**

The cover letter should be addressed to Ms. Emily Finnell, EGLE, Office of the Great Lakes Senior Advisor and Strategist, and should list the project title and information about the applicant. It must clearly state the grant amount requested, match amount provided, if relevant, and total project cost, if greater than the sum of the grant and match amounts. Information about the applicant must include:

- Applicant agency or organization name and mailing address
- Authorized representative's name, e-mail address, and telephone number
- Applicant Federal ID#
- Applicant DUNS #
- Name, title, and contact information of contact person, if different from that of applicant's authorized representative
- Congressional District, State Senate District, and State House District numbers of applicant's location

### **B. Proposed Project Summary**

Provide a brief summary (300 words or less) of the proposed project including the name of the applicant organization and partners, proposed methodology and justification for selection, and the focus and primary outcomes of the project.

### **C. Detailed Proposed Project Description**

The following information is required in the detailed proposed project description:

- Project scope, why the project is needed, and how it addresses the focus of the grant request
- A brief overview of the planned approach and methodology for carrying out the project
- List of deliverables
- Source of match, if applicable

### **D. Project Tasks and Schedule**

Display timelines for major tasks, target milestones for critical intermediate and final products, and key project outcomes/deliverables. The schedule must show that all tasks will

be completed within the project period. Progress will be reported semi-annually according to the table below.

Tasks	Feb 2021- July 2021	Aug -Sept 2021	Oct 2021- Mar 2022	Apr-Sept 2022	Oct 2022 – Jan 2023	Outcome/Deliverable
1.						
2.						
3.						
4.						
5.						

**E. Organizational Capability**

Describe the qualifications of the individual(s) anticipated to work on the project and the past experience of the applicant in managing grant projects. Provide a brief overview of individual(s)' publications on related topics.

**F. Budget Narrative**

Please provide a budget narrative that briefly describes the purpose of each line item in the budget form below.

**G. Detailed Project Budget**

Please download and use the following budget form:

[https://www.michigan.gov/documents/oql/oql-glpf-2020-budget-proposal-form-state\\_700410\\_7.xlsx](https://www.michigan.gov/documents/oql/oql-glpf-2020-budget-proposal-form-state_700410_7.xlsx). Reimbursement of indirect is optional and at the discretion of the grantee. Should the grantee choose to request reimbursement of indirect, rates will be calculated according EGLE policy 10-005, described below:

- The indirect rate established for the grantee organization, up to a maximum of 20 percent of the salary plus fringe costs. Please enter a rate between 0-20% in cell D96 of the form.
- EGLE maintains the right to ask for verification of how indirect rates are determined.

The completed budget spreadsheet file should be included in the e-mail with the application and will not count toward the 10-page application limit.

**H. Project Outcomes and Deliverables**

Provide a description of the expected results of the project and project deliverables.

**VII. Attachments**

- A. Cover Letter
- B. Project Budget Spreadsheet form specified in VI, Section G
- C. Proof of successful financial audit
- D. Proof that applicant is not on the federal/debarment list (sam.gov)

### **VIII. Evaluation Criteria**

EGLE strongly encourages interested applicants to contact program staff early in the proposal development process for assistance and guidance. Complete applications will be evaluated for funding based on the following considerations:

- Detailed description of proposed methodology for thoroughly evaluating the total economic cost of past uses of institutional controls, including some projected future costs
- Detailed description of a thoughtful, creative, and holistic approach for developing a decision-making framework to assess appropriate use of institutional controls at the onset of contamination in the future
- Interdisciplinary capacity of project team, including economic and hydrogeologic expertise
- Extent to which the project leverages other financial, information, and intellectual resources
- Feasibility for completion of project within the specified grant period
- Overall quality and clarity of the application
- Organizational capability of the applicant to complete the project as proposed
- Cost-effectiveness
- Measurability of project results

### **IX. Reporting Requirements and Funding Disbursement**

The grantee must complete and submit semi-annual financial and/or progress reports according to a form and format prescribed by the State and must include supporting documentation of eligible project expenses.

### **X. Program Contact**

If you have any questions or comments regarding the program or the application process, please contact:

Ms. Emily Finnell  
Office of the Great Lakes  
Department of Environment, Great Lakes, and Energy  
(c): 517-599-1330  
FinnellE@Michigan.gov

Ms. Christina Pastoria  
Office of the Great Lakes  
Department of Environment, Great Lakes, and Energy  
(c): 517-899-5174  
PastoriaC@Michigan.gov