

## Overview

**Project Name**

Continuation of Water Sampling and Contamination Investigation at Isabella County Beaches

**Total Requested**

\$8,250.00

(amount based on the Itemized Budget total)

**Applicant Project Priority**

High

**Reoccurring Need?**

Not Reoccurring

## Applicant Information

**Applicant Name**

[shall@cmdhd.org](mailto:shall@cmdhd.org)

**Applicant Email**

Steve Hall

**Organization**

Central MI District Health Department

**Address**

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**Phone Number**

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## Organization Information

**Primary Organization**

Isabella County

**Authorizers**

[mmcavoy@isabellacounty.org](mailto:mmcavoy@isabellacounty.org) AndrewLaughlin [laughlin.drew@gmail.com](mailto:laughlin.drew@gmail.com)

**Status**

Review

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## Categories

- Environmental
- Safety/Security

## Project Description

Boating, fishing, and swimming are popular activities on the lakes and rivers in Isabella County. However, people enjoying these activities can be exposed to levels of bacteria in the water that are unacceptable for body contact. The only way to know if the water quality is acceptable is to routinely monitor the water by testing it for an indicator organism, such as E. coli. Since 2001, the Central

Michigan District Health Department (CMDHD) has received funding to monitor water at popular bathing beaches, post test results on a public web site, and inform the public when conditions were not acceptable for full body contact. This popular program continued for many years until funding was no longer available. Public and private entities were educated about the importance of monitoring beach water quality. While in agreement the program was important, municipal budgets are limited as well. In 2014, CMDHD received Tribal funding to monitor the water quality at popular and or vulnerable beaches within Isabella County. These beaches included Coldwater Lake Park, Herrick Lake, Halls Lake, Littlefield Lake, and Deerfield Park at the Chippewa River. CMDHD coordinated beach sampling efforts with the Tribal Water Quality Program to maximize the area covered without duplicating efforts. CMDHD would like to continue monitoring the water quality at Isabella County beaches and provide timely notification to the public when conditions are not acceptable for full body contact.

## Benefit Description

The primary goal of this program is to continue to ensure public health protection by notifying the public of any potential hazards posed by unsafe levels of E.coli bacteria in bathing beach waters, and if necessary, issuing advisories or warnings and posting beach closings as promptly as possible. A secondary goal is continued data gathering to contribute to the body of knowledge that can be used to identify potential sources that negatively impact water quality. Public reaction has been very favorable and the feedback received indicates an expectation by the public for CMDHD to provide this public service. Since CMDHD and the Saginaw Chippewa Indian Tribe share a common goal in making public health protection a priority, CMDHD would like the opportunity to continue this partnership in Isabella County to assure that citizens utilizing bathing beaches are not unduly exposed to potential microbial hazards. It is our intent to continue this working relationship and expand it by partnering with the Environmental Health (EH) Program students and faculty at Central Michigan University (CMU) to assist with these efforts.

Goals and objectives will be met by performing the following:

- Cooperate with the Tribe's activities for water quality sampling and to coordinate sampling efforts to better understand what may be impacting surface water quality in Isabella County.
- Partner with the CMU EH Program to provide student internship opportunities and prepare research and educational materials.
- Contact the local media sources regularly and continue an information sharing relationship with the University, the local media and the Tribe regarding bathing beach water quality data.
- Continue to provide education and outreach materials to the municipalities/entities responsible for maintaining bathing beaches as well as the local media to build public interest and acceptance for this program in the communities served by CMDHD.
- Continue to contact sewage treatment plants to ensure CMDHD receives immediate notification of possible or actual sewage overflow or release events.
- Perform sanitary surveys at each beach using the USGS and or EPA approved forms so that data can be entered on the MDEQ BeachGuard website and explore the feasibility of a predictive water quality model for beaches.
- Investigate and identify watershed activities that may affect E. coli levels such as, agricultural practices, animal feedlots, improperly functioning on-site sewage systems, etc.
- Continue to perform sampling in accordance with Act 451, subrule 62 (1) which states, "All waters of the State protected for total body contact recreation shall not contain more than 130 E. coli per 100 mls. As a 30 day geometric mean. Compliance shall be based on the geometric mean of all individual samples taken during five or more sampling events representatively spread over a 30 day period. Each sampling event shall consist of three or more samples taken at representative locations within a defined sampling area. At no time shall the waters of the State protected for total body contact recreation contain more than a maximum of 300 E. coli per 100 mls. Compliance shall be based on the geometric mean of three or more samples taken during the same sampling event at representative locations within a defined sampling area."
- Continue to utilize data to advise municipalities and the public of any potential public health hazards posed by full-body contact with bathing beaches.
- Samples will be collected routinely and analyzed during each sample event. Additional sampling may be done following wet weather/rain events that are expected to impact water quality by carrying high levels of bacteria in runoff.
- If sample results indicate elevated levels of indicator bacteria, additional sampling will be performed as necessary. At some targeted beaches, this may include more than one sample set per week.

## Funding Requirements

Water quality activities that will continue after the project has been completed will be to promote a bathing beach monitoring program, which will begin with voluntary cooperation and support from the County, townships, and municipalities responsible for these public beaches. These efforts have had some success with a few private groups doing their own limited testing, beach owners posting notices when advised to do so, and one municipality providing partial funding for beach sampling. CMDHD will continue to explore partnerships

and look for cost savings to make long term monitoring more accessible. Lines of communications opened between operators of municipal sewage facilities, the media, governmental and the Tribe will continue to be strengthened. CMDHD is committed to the importance of protecting the public who utilize our public beaches and will work toward sustaining this sampling program. In addition, new innovative technologies will be explored and used where possible to provide dependable, accurate and fast results to afford the maximum in public health protection. CMDHD is currently part of a research project to validate one of these technologies using qPCR DNA analysis. This will be year three of the multi-jurisdiction project, which is very close to producing a new sampling standard method.

## Project Timeline

### Task Name

Supplies purchase- April-May 2018  
 Hire summer staff- May 2018  
 Staff training- May 2018  
 Press release- May-June 2018  
 Sample collection- June-August 2018  
 Data entry (BeachGuard)- June-September 2018  
 Data analysis- June-September 2018  
 Reporting- September 2018

## Budget Items

Name	Cost	Quantity	Total	Category
Water Sample Analysis Costs	\$25.00	150	\$3,750.00	Environmental
Water Sample Analysis Cost	\$12.50	120	\$1,500.00	Environmental
Supplies	\$200.00	1	\$200.00	Environmental
Mileage	\$600.00	1	\$600.00	Environmental
Staff Time	\$2,200.00	1	\$2,200.00	Environmental
<b>AmountRequested</b>	<b>\$8,250.00</b>			

## Matching Funds

Name	Cost	Quantity	Total
No Matching Funds items have been added.			
<b>AmountMatched</b>	<b>\$0.00</b>		

## Budget Summary

Amount Requested  
 \$8,250.00

Amount Matched

\$0.00

Total Amount

\$8,250.00

Uploaded Files

Name
No files have been uploaded.

There are no comments to display.