



Community-Based Research (CBR) Project Proposal Form

U-Links Administration Only

Project Number (automatically generated by CBR database): 6407

Recommended Courses and/or Disciplines (i.e. GEOG4030Y, FRSC4890Y, IDST3700Y/3710H/3720H, ERSC3160H, PSYCH or Alternatives):

Recommended Faculty Advisors:

PROJECT TITLE: Lake Capacity Study of Koshlong Lake

A – CONTACT INFORMATION

Date:

Contact person:

Phone:

Email:

B – COMMUNITY ORGANIZATION

- a) Organization's name and address:
 - b) Briefly state the organization's purpose and the products or services offered:
 - c) Has an immediate supervisor or board approved this application?
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C - PROJECT SCOPE

- a) Full year undergraduate CBR projects are allotted 220 hours total, per 1-2 students on a single project. The condensed hours are similar to six weeks of full-time work. Full term students would be working on this project from September to April as part of a course, while balancing work from other courses as well. Half term students will be working on this project from September - December or January to April. Does the scope of your project fit within this timeframe?

Yes • No • Comments:

- b) Select the theme(s) for your project:
 - Cultural
 - Economic
 - Environmental
 - Social
 - Other:
- c) Based on the timeframe and complexity of your project, please indicate the potential project scale:

- Single year project
- Multi-year project (requiring follow up or several parts)
- Ideal for undergraduate students
- Ideal for graduate students (requires specialized knowledge/in-depth consideration of theory)

d) Is your project appropriate for a single student or a group?

Either

e) Describe the purpose of the project:

This project will revisit the Koshlong Lake’s ‘at capacity’ designation, exploring how modern development patterns such as densification, short-term rentals, and increased year-round use impact lake capacity, water quality and local biodiversity. The study will identify measurable indicators of waterfront development to determine the impact on water quality. Indicators will include shoreline composition/naturalization, nutrient loading, recreational activity, etc. and will be used to provide actionable recommendations for maintaining sustainable development practices, contributing to the Koshlong Lake Association’s renewed lake plan.

The research will:

- Examine the rationale, assumptions and definitions underlying Koshlong Lakes ‘at capacity’ designation from the 1970s
- Investigate key stressors on the lake, such as increased number and size of buildings on properties, landscaping practices, year-round property use, changing patterns of boating, septic system impacts (including maintenance and upgrades), and biodiversity shifts.
- Analyze historical lake data and compare with current development trends via recent data (LPP, WVEW, etc.)
- Investigate key stressors on the lake, such as increased number and size of buildings on properties, increased use of properties beyond the summer season, changing patterns of boating, septic system maintenance and upgrades, and biodiversity shifts.
- Identify metrics to assess the impact on the lake, including water quality and development indicators
- Collaborate with other Highlands East lakes facing similar concerns to contextualize findings regionally*

*Depending on research team expertise and size, may need to be a follow up project.

f) How will the project benefit your organization and/or clients?

The project will provide KLA with data-driven insights to support sustainable development practices and educational materials to engage residents. Findings will inform a renewed lake plan, providing knowledge capital for KLA to advocate for responsible growth and to address unapproved developments properly.

g) How will the results of this project benefit Haliburton County?

This study will strengthen understanding of lake capacity designation and its role in , informing policies that protect the County’s lakes as environmental, recreational and economic resources.

h) How did you hear about U-Links Centre for Community Based Research?

Word of Mouth Social Media Newsletter News Article Other: _____

D – RESEARCH DESIGN

a) What are the proposed research questions to be answered?

How do modern development patterns on Koshlong Lake impact its ‘at capacity’ designation?

What measurable indicators (water quality, property density, motorized boat traffic, water and septic usage) best reflect development strain?

How can the findings support sustainable development policies for Koshlong Lake?

b) What are your ideas on how these questions might be answered (i.e. survey, literature review, field work etc.)?

-Literature review to (1) review historical capacity studies and the MECP Capacity Assessment Handbook and (2) examine recent studies or initiatives from other lake associations of similar environmental contexts (e.g. regional, glacial lakes, etc.)

-Data collection to (1) assess changes in land use, building density and property use patterns and (2) assess changes in water use, including drawing fresh water from the lake, and recreational use, (3) analyze water quality data from historical records including MECP Lake Trout Lake testing, MNRF Broad Scale Monitoring and Lake Partner Program.

-Stakeholder engagement to (1) collaborate with nearby lakes (e.g. Cedar, Glamor, Gooderham, Paudash, etc) to identify regional trends and (2) conduct informal interviews or surveys with residents to understand perceptions of development strain.

-Field work to: (1) collect recent water quality data for comparison with historical records to assess overall trends and changes and (2) survey cottage density and structures to identify broader patterns of development and areas that may benefit from further studies

c) Do you have knowledge of or expertise with these types of research methods?

Members of the board have familiarity and experience with social research methods, yes.

E - SCREENING AND/OR TRAINING

a) Do the students require any specific screening or training? (e.g. police checks, confidentiality agreements, CPR, WHMIS):

Yes No

Comments:

EXAMPLES: Projects involving vulnerable populations may require police checks. Some types of field work may involve WHMIS or other safety related training. Students and hosts working on boats need to understand and follow the U-Links Boat Safety Guidelines.

F – RESEARCH ETHICS

a) Does the research involve human subjects? (i.e. surveys, interviews)

Yes No

Maybe, depending on what methods are identified to gather information on land and water use

NOTE: If yes, the students may be required to submit an application for ethical review of the research. This process may take several weeks and will need to be taken into consideration when creating project timelines.

b) If your project involves collecting human subject data (i.e. interview transcripts), would you like access to that “raw” data at the end of the project, in addition to receiving the “summary” of data in the final report?

Yes No

c) Does the organization/employer have policies about research ethics approval?

Yes No

If yes, please explain:

G – PROJECT TASKS AND TIMELINE *(This section should be completed by the final draft)*

a) Please outline the major tasks and timelines involved in completing the project.

These tasks include important information to be gathered, key stakeholders who should be involved relevant dates for your organization, and critical meetings for the student to attend. Your Coordinator can help you complete this section.

Scenario 1: Fieldwork and Data Analysis Only		
<i>Task</i>	<i>Objective</i>	<i>Timeline</i>
<i>Orientation and Literature Review</i>	<i>Review historical lake data and relevant frameworks for lake capacity designation. Investigate regional trends in ecological stressors associated with development and transferable policies/recommendations from other lakes.</i>	<i>Weeks 1-3</i>
<i>Fieldwork Preparation</i>	<i>Develop protocols for field sampling and confirm sampling locations.</i>	<i>Week 4</i>
<i>Field observations/water quality sampling</i>	<i>Collect novel water quality data and note observations pertaining to shoreline development, water use (recreational and otherwise)</i>	<i>Weeks 5-7</i>
<i>Data Analysis (Primary+Secondary)</i>	<i>Compare collected data with historical records to identify trends and areas of concern/follow up.</i>	<i>Weeks 8-9</i>
<i>Draft Findings and Recommendations</i>	<i>Summarize data analysis results with initial recommendations for sustainable lake management</i>	<i>Weeks 10-11</i>
<i>Final Report and Presentation</i>	<i>Deliver comprehensive report and present findings to host</i>	<i>Week 12</i>

Scenario 2: Fieldwork, Data Analysis & Human Data Collection – Semester 1		
<i>Task</i>	<i>Objective</i>	<i>Timeline</i>
<i>Literature Review and Context Research</i>	<i>Review historical lake capacity studies and relevant frameworks. Investigate regional trends in ecological stressors associated with development and transferable policies/recommendations from other lakes.</i>	<i>Weeks 1-3</i>
<i>-(1) Research Ethics Board Application -(2) Fieldwork Preparation</i>	<i>(1) Draft and submit REB application, ensuring ethical protocols for surveying/interviewing. Develop survey questions/interview design. (2) Develop protocols for field sampling and to confirm sampling locations</i>	<i>Weeks 4-6</i>
<i>- (1) Stakeholder Mapping and Survey Design - (2) Field observations/water quality sampling</i>	<i>(1) Identify key stakeholders and develop survey/interview guides to collect data on property use, development trends, other perceptions. (2) Collect novel water quality data and note observations pertaining to shoreline development, water use (recreational and otherwise)</i>	<i>Weeks 7-9</i>
<i>- (1) Data Analysis (Primary+Secondary) - (2) Schedule Interviews</i>	<i>(1) Compare collected data with historical records to identify trends and areas of concern/follow up. (2) Schedule interviews with stakeholders in following term.</i>	<i>Weeks 10-12</i>
Scenario 2: Fieldwork, Data Analysis & Human Data Collection – Semester 2		
<i>Survey Distribution and Data Collection</i>	<i>Administer surveys and conduct interviews to gather data on property density, usage, development trends, etc.</i>	<i>Weeks 1-4</i>
<i>Survey Data Analysis</i>	<i>Analyze survey and interview data to identify patterns and their impact on lake capacity</i>	<i>Weeks 5-7</i>
<i>Integrated Data Analysis</i>	<i>Combine collected field data and human data to assess overall trends and highlight areas of potential concern.</i>	<i>Weeks 8-9</i>

<p>- (1) Recommendations and Educational Materials - (2) Draft final report</p>	<p>(1) Develop actionable recommendations for sustainable lake management and responsible development practices. (2) Prepare a final report and presentation for the Koshlong Lake Association to inform future decision-making/advocacy initiatives.</p>	<p>Week 10-11</p>
<p>Final Report and Presentation</p>	<p>Deliver final report to Koshlong Lake Association and final report</p>	<p>Week 12</p>

<p>Semester 1 (12 Weeks)</p>	<ul style="list-style-type: none"> ● Literature Review and Context Research <ul style="list-style-type: none"> ○ Review historical lake capacity studies, including Lakeshore Capacity Assessment Handbook (MECP) and data from Koshlong Lake’s 1970s designation ○ Investigate regional trends in development strain on lakes, focusing on indicators like property densification, short-term rentals, year-round usage ○ Examine policies and frameworks from other lake associations to identify transferable practices. ● Research Ethics Application <ul style="list-style-type: none"> ○ Develop and submit a REB application to ensure ethical data collection, including protocols for surveys and interviews with residents ● Stakeholder Mapping / Survey Design <ul style="list-style-type: none"> ○ Identify key stakeholders, including residents, lake association members, municipal bodies etc. ○ Design surveys and interview guides to gather input on property usage, development trends, and perceptions of lake strain ● Fieldwork <ul style="list-style-type: none"> ○ Conduct water quality sampling to assess key parameters such as Total Phosphorus, Dissolved Oxygen and temperature profiles ○ Collect data on land use patterns, property development, water use, and septic system impacts through surveys and stakeholder interviews.
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b) Indicate important start and end dates for the project, if applicable:

H – RESOURCES

NOTE: All known and needed resources should be listed in this section (e.g. for project coordination, data collection and analysis, software, hardware, photocopying, office supplies, workspace, travel expenses, food and refreshments, training, etc.). Students' travel expenses are reimbursed by U-Links at the end of the term.

a) **What resources are needed to support the research – financial or otherwise? Please indicate what, if any, resources your organization might be able to provide.**

Volunteers can assist with survey or interview design; the KLA can host virtual meetings, and possibly in person if small.

b) **Do you anticipate needing funding or other types of resources? If so, please explain (including any ideas on where resourcing may be obtained):**

I – KNOWLEDGE SHARING

NOTE: Please note the researcher(s) will own the copyright for all work completed as part of his/her involvement, but the lead organization/group/employer may use all project outputs in whole or in part, as it sees fit as long as the researcher(s) is duly credited as the author. If work is completed collaboratively, copyright will be decided by all project participants.

a) **How are the project results to be circulated and made useful to the broader community? Please indicate all that applies from the list below:**

- Academic article
- Conference/forum
- Manual
- Marketing, promotional, newsletter, outreach materials
- Policy brief
- Report
- Roundtable
- Video
- Workshop
- Presentation to the host organization
- Not sure of the above, let's talk some more

b) **If there are special circumstances where results might not be made public, please explain:**

J - ACKNOWLEDGEMENT

- a) **Are you able to credit U-Links when utilizing project results for the development of new programs, funding applications, policy, and other community endeavors?** *(Suggestions: cite U-Links and display our logo in your organization's printed matter and on your website, credit U-Links when speaking about your project in public and in the press, social media etc.)*

Yes No Possibly

- b) **Following successful completion of the research project, with results beneficial to the goals of your organization, would you consider a financial contribution to U-Links?**

Yes No Possibly

- c) **Can we highlight your project on our website and in social media?**

Yes No

K – PROJECT PROMOTION

Please “insert” an image below to help promote your project proposal.

