

**TRENT SCHOOL OF THE ENVIRONMENT POTENTIAL COMMUNITY-BASED RESEARCH
(CBR) PROJECTS LISTING AUGUST 2019**

The latest project listings may be found on the TCRC and U-Links websites.

Student Applications are available at trentu.ca/tcrc

AVAILABLE 2019-2020 Undergraduate CBR Projects with Trent Community Research Centre:

#4693 Cooperative Cafe Membership Outreach Survey

The purpose of this project is to survey members and patrons of the Season Spoon Cafe to seek their feedback about the cafe. As the Spoon matures it has gone from an organization that is 100% volunteer/member-driven to one that is primarily run by paid staff. While we feel that this is a good development, we want to ensure that, as a cooperative, we are in touch with our membership base. In addition to a survey, this project will undertake research into the history and viability of cooperative organizations.

Research Theme(s): Cultural; Social

#4857 User Profiles and Data for Skiers Utilizing Kawartha Nordic

The Kawartha Nordic Ski Club, located 40 minutes north of Peterborough is home to 46km of classic cross country skiing. The organization is currently involved in a 5 year strategic plan and is looking to hear from users of the Ski Club. Students will design and administer a user survey and produce a final report that identifies key trends and demographics. Ideally, the research would commence in January, with a final report due by the end of April 2019.

Research Theme(s): Economic

#4870 50% LocalFood 2030 Economic Impact & Jobs Report

Intended as the Goal setting Report for raising awareness, support and funding for the community to come together to build the economic and physical infrastructure to support a dynamic local Food Supply Chain to the level of 50% of food purchased at consumer prices for home consumption by 2030. This is all in line with the SPP aspiration goal of feeding ourselves in the city and County of Peterborough by 2036.

Research Theme(s): Cultural, Environment; Social; Economic

#4874 Public Operating Trusts as Non-Political Economic Infrastructure for the Equitable Distribution of Non-Capital Public Funds

Transition Town Peterborough is a not for profit social enterprise focused on building both personal and community resilience through economic localization of life essentials including food, water, energy, wellness and culture; squarely facing together, at the same time, the compounding Environmental, Energy, Economic and Equality crises that are upon us. The purpose of this research project is to lever local community financing to serve citizens of Peterborough City and County, locally -owned businesses, local charities and not-for-profit organizations in responding to the interconnected Energy, Economic, Environmental and Equity impacts of the Climate/Energy Crisis. The City and County of Peterborough have not yet faced the enormous costs of adapting to the worst effects of the Climate Crisis, nor do they have the non-political infrastructure to equitably distribute funds to build the local economy.

Research Theme(s): Cultural, Environment; Social; Economic

#4875 The Ganaraska River as a source of motive and electric power, past, present, and future.

This TCRC project will provide a context for, and explore the possibility of, development of the Ganaraska River as an environmentally responsible source of hydroelectric and motive power using innovative small-scale technologies. The mandate of the Town of Port Hope Centre of Excellence (CoE) is to engage in research and education; reduce the environmental footprint; reduce waste to the landfill; eliminate incineration and burning; engage all levels of government in the dialogue; and engage local recycling businesses and develop new ones.

Research Theme(s): Environment; Social; Economic

#4882 ASHMuskoka

‘ASHMuskoka’ is an initiative of FOTMW, a not-for-profit corporation whose vision is to foster the understanding, choices, actions, and wise management necessary to ensure the protection of our freshwater resources forever. The ‘ASHMuskoka’ project seeks to address the environmental issue of diminishing concentrations of calcium, an essential mineral to plants and animals, in Muskoka forests, and indirectly, lakes by supplementing forest soils with residential wood ash – a natural calcium rich by-product of wood burning in fireplaces. By applying residential wood ash to forest soils, residents of Muskoka can convert a readily available waste product that is often landfilled, into a useful forest soil additive. The project has three goals: 1) to improve public engagement in environmental restoration and protection; 2) to launch a major wood ash recycling programme to help Muskoka’s forests and lakes; and 3) to test the efficacy and ecological sustainability of residential wood ash application to solve ecological osteoporosis in Muskoka’s forests and lakes.

Research Theme(s): Environment

#4883 Strengthening Opportunities with Havelock Farmer & Artisan Market Attendees

The Havelock Farmer & Artisan Market is comprised of a group of active community members who came together in 2018 to start a farmer's market in Havelock, Ontario. The first year of the market was a great success and the organizers are looking to identify enhancements for coming years.

The organizing committee seeks to gain a better understanding of market attendees. Understanding the interests, numbers and where attendees are from will help them tailor the market to meet the needs of the customers. As a researcher, you will assist with the identification of best practices, and most appropriate means for data collection. This project will involve a literature review, creation of survey/interview tools and the writing of an ethics proposal.

Research Theme(s): Environment; Social; Economic

#4886 State of the Kawartha Lakes Symposium 2020: organizing a science-based forum to share local expertise and other relevant information with respect to the health of waterbodies in the Kawartha Lakes.

The purpose of the project is to bring together all stakeholders who are actively studying or managing the water resources of the Kawartha Lakes to share each other's activities and results. There are numerous individuals and organizations that are active on the lakes, including but not limited to academic institutions, governments, First Nations communities, lake associations, conservation authorities, stewardship organizations, and citizen scientists. Sharing of information and communicating what each stakeholder is doing, in terms of scientific-related study and other activities to improve the health of the lakes, is paramount towards effective management of the Kawartha Lakes. Sharing of information will help to build new and strengthen existing partnerships, create efficiencies and reduce duplication of efforts, and lead to an increase in the collective understanding of lake-based issues and opportunities to ensure ongoing and future efforts are focused and relevant. A project of this scope has not been undertaken for over 10 years.

Research Theme(s): Environment; Social

#4888 Viable Alternatives to Spraying Roundup along Guider Rails and in Forest Trails in Northumberland County

Northumberland County Council recently agreed to cease spraying guide rails and forest trails in Northumberland County and return to the practice of mowing as was done prior to 2017 with the provision that this practice be evaluated this fall. Blue Dot Northumberland requested this change to comply with the healthy environment resolution council had passed. Please see the links provided in the email for the supporting material regarding the Special Meeting of the Northumberland County Council on June 7. The purpose of this project is to provide Northumberland County Council and staff with viable alternatives to vegetation control without using Roundup. Such alternatives will allow the County to comply with their vegetation control obligations under provincial regulations without the harmful effects of Roundup on the

environment.

Research Theme(s): Environment;

#4889 Durham Region Food Security Strategy; An Addendum to The Regional Municipality of Durham Climate Change Resilience Strategy

The purpose of the project is two-fold; first package information from the Trent High Level study and the Food Security task force into a document suitable for public consultation dissemination and; the second stage of the project is aggregating qualitative data received from the public consultation (received via email). The final document will help to inform the Regional Municipality of Durham, city and regional counselors, mayors, civil society organizations, NGO's and the broader community of projects/programs to develop/ work towards to mitigating increased food insecurity in Durham Region during weather related emergencies and during recovery; improved resilience to food insecurity occurrences during and after a climate change emergency and; to improve community and household food security as the climate continues to change.

Research Theme(s): Environment; Social

#4890 The 3 R's in Educating for Waste/A Report Card

The purpose of the project, in light of the epidemic crisis in plastic pollution and the ever increasing dilemma of dealing with waste, either shipping it to other jurisdictions and countries or creating more and more contentious landfills, and considering the federal and provincial and municipal levels of government banning single use plastic bottles and straws, and understanding the direct relationship of waste and the production of Co2 and Methane Gases which are Greenhouse Gases that have changed our climate and will continue to do so, and working to achieve the United Nations Sustainability Goals which the Canadian Government has committed to, this project will demonstrate the absolute necessity for educational institutions to become part of the solution. Implementing changes to the processes in waste management at the school level will instill a culture of environmental stewardship in the students, create a social commitment to sustainable practices such as recycling, reducing, reusing, and composting and help to foster a culture of sustainability.

Research Theme(s): Environment; Social

#4898 Port Hope Fountain Restoration: Preserving Our Past for Future Generations

An old historic fountain lays neglected in the center of Port Hope. There has been a tremendous amount of interest to restore the fountain but there was not enough meaningful action in the community to proceed with restoration. This project is an attempt to generate public interest for a viable restoration project through the lens of environmental sustainability. Once restored, the intent would be for the fountain to serve as a symbolic, aesthetic functional and demonstrated alternative/sustainable technology. In effect, we will take the historic artifact (fountain) and retrofit it with advanced sustainable design technologies. We hope to be able to draw on creative minds with access to knowledge of the innovative technology in energy supply and water purification.

Research Theme(s): Environment; Social; Economic, Cultural

#4902 Examining the Effect of the Student Choice Initiative on Trent University Levy Groups

Many groups at Trent are funded through levies, and these groups have been targeted by the Student Choice Initiative legislation proposed by the provincial government. This legislation will make many of their fees categorized as non-essential, meaning that students will be given the opportunity to opt-out of paying them. This will be a time of significant change for many groups and will greatly increase the precarity of groups deemed non-essential. Levy groups are diverse and their mandates cover a wide range of issues that are social, political, environmental and cultural, working both on campus and within the broader Peterborough community.

Our goal with this project is to track the work currently being done on campus by levy groups, to determine how levy groups are preparing for a new fiscal reality of the Student Choice Initiative, to examine the ways that levy groups are both vulnerable and resilient, and to assess what may be lost by making their work more precarious. This group of research projects will have case studies of other levy groups (currently: Centre for Women and Trans People, Community Race Relations Committee, Kawartha World Issues Centre, Theatre

Trent, Sadleir House, Active Minds, and the Arthur Newspaper), and potentially more.

Research Theme(s): Environment; Social; Economic, Cultural

#4907 Arthur Newspaper's coverage of Ontario provincial politics from 1990 to 1999

Established in 1966, Arthur Newspaper is the Trent University and Peterborough-Nogojiwanong Independent Press that aims to produce a bi-weekly newspaper during the academic year. Our goal as a print publication is to be valuable, constructive, informative and critical of developments in the Peterborough and Trent community. Arthur acknowledges its privileged position in being free from commercial and administrative controls. We strive to protect that position by defending our editorial autonomy, and inviting unique avenues of conversation on educational, social, economic, environmental and political issues.

The project will map the coverage of major news events involving the Ontario provincial government during the 1990's through Arthur Newspaper. It will benefit the Arthur readership by contextualizing the publication historically and culturally with its relationship to the Trent University Peterborough-Nogojiwanong student public.

Research Theme(s): Environment; Social; Economic, Cultural

#4908 Arthur Newspaper's coverage of Ontario federal politics from 1990 to 1999

The project will map the coverage of major news events involving the Ontario federal government during the 1990's through Arthur Newspaper. It will benefit the Arthur readership by contextualizing the publication historically and culturally with its relationship to the Trent University Peterborough-Nogojwanong student public.

Established in 1966, Arthur Newspaper is the Trent University and Peterborough-Nogojwanong Independent Press that aims to produce a bi-weekly newspaper during the academic year. Our goal as a print publication is to be valuable, constructive, informative and critical of developments in the Peterborough and Trent community. Arthur acknowledges its privileged position in being free from commercial and administrative controls. We strive to protect that position by defending our editorial autonomy, and inviting unique avenues of conversation on educational, social, economic, environmental and political issues.

Research Theme(s): Environment; Social; Economic, Cultural

#4912 Regional analysis and documenting of local Cottagers Associations water resource management priorities and their intersection with waterpower production

OWA actively engages and educates the public on waterpower through a number of education initiatives on behalf of its membership. The report would aid OWA in understanding particular regional areas of focus to engage WPO. The data can be used to identify particular interests and priorities from WPOs and their Associations through an analysis of their respective publications (e.g. meeting minutes, bylaws) and/or media (e.g. websites, social media). FOCA has expressed that some of their association members have concerns with water management within their area, which in some cases incorporate the operation of waterpower facilities. This analysis would aid FOCA in identifying regional locations in proximity to waterpower facilities which may become a focus for outreach and engagement efforts. ***Student with a GIS background is preferred.**

Research Theme(s): Environment; Social; Economic

Undergraduate CBR Projects with U-Links (Haliburton County):

#4899 QEII Cultural Summary – Park Fire History

Ontario Parks' mandate is to protect significant natural and cultural resources in a system of parks and protected areas that are sustainable and provide opportunities for inspiration/ enjoyment and education now and for future generations. The objective of this project is to develop a deep understanding of Queen Elizabeth II Wildlands Park's forest fire history from the late 1800s onwards and their mitigation efforts. By investigating this history via literature reviews and interviewing historians, the student's comprehensive summary will provide key information for the park users and stakeholders, giving them a better understanding of the park's fire ecology. This project may open the door for future research and help aid in the protection of this area natural environment.

#4900 QEII Species Summary – Eastern Moose

Ontario Parks' mandate is to protect significant natural and cultural resources in a system of parks and protected areas that are sustainable and provide opportunities for inspiration/ enjoyment and education now and for future generations. The objective of this project is to gain a better understanding of Queens Elizabeth II Wildlands Eastern Moose (*Alces alces americana*) populations. By researching and organizing a summary of local Moose biology, ecology, population status, cultural signification and management strategies, the student will educate park staff on the species status. This project will work to create a proposal for improving future park management practices as well as fill gaps in the local cultural knowledge of the species. An increased understanding and management of the Moose populations will directly influence the viability of the species across Haliburton County.

#4901 Restoration Plan for QEII – Recommendation to naturalize decommissioned ATV trails

Queen Elizabeth II Wildlands Provincial Park is the largest protected roadless wilderness in Haliburton County. The Park serves as a biological engine that supports the flora and fauna of the County. Many kilometers of unauthorized ATV trail within QEII are being closed as recreational ATV riding is prohibited in all Provincial Parks. To minimize the negative impact these trails have had on the park's ecological integrity and prevent further unauthorized use, trail sections may require different forms of accelerated (human-assisted) naturalization. A shelf ready restoration plan would assist Ontario Park staff in reducing the negative impact of these trails on the park's ecological integrity and restore the park's unique semi-wilderness environment.

The purpose of this project is to determine the extent of unauthorized ATV trails being closed and the approximate severity of ATV caused damage amongst them; the tested methods (used in other protected areas) for ensuring trails stay closed and re-naturalize swiftly; and recommendations to prioritize and naturalize QEII's unauthorized ATV trails.

#4836 Assessing water quality and riparian health at Halls Lake Causeway

The Halls and Hawk Lakes Property Owners Association (HHLPOA) in Haliburton County has a strong focus on environmental issues, with an aim of maintaining or improving the natural environment and the overall quality of life on Halls Lake, Hawk Lake and Little Hawk Lake. HHLPOA is looking to participate in a research project on the effects of the Halls Lake causeway from Old Mill Road onto the lake's only island. Residents on the north east shore of Halls Lake believe their water quality has deteriorated since the causeway was built, perhaps due to the disconnection of water flow. This project involves a measurement and analysis of water quality and benthic/riparian health on both sides of the causeway as a basis for comparison and potential remedial action. Students will use a combination of fieldwork and a literature review to provide a descriptive report which includes recommendations for action.

#4838 Gull Lake Benthic Zone Assessment

This project involves undertaking Benthic Sampling at various spots on Gull Lake in Haliburton County to determine an understanding of the status of lake health, species diversity and an important baseline for future comparisons.

Sampling 5-6 locations, student(s) will evaluate current fall draw-down conditions of Gull Lake and establishing an ongoing benthic sampling and documentation protocol for continued evaluation of lake health and its ability to sustain higher level species.

NOTE: Please contact U-Links for additional benthic biomonitoring research opportunities.

#4855 Kawagama Lake Calcium Decline Mitigation Cost Benefit Analysis

Calcium has been declining in Kawagama Lake due to historic and ongoing acid deposition. These declining calcium levels have a negative impact on the food-chain and can thus affect the growth of various sport fish. This project will involve researching the calcium decline mitigation costs and benefits that were already identified in an earlier (2019) research project. A summary booklet for educational purposes should be included as part of the project deliverables. The project will help raise community awareness around the issue of calcium decline in our freshwater lakes, as well as assist the Kawagama Lake Cottagers' Association to start implementing broader mitigation strategies to address the issue of calcium decline in Kawagama Lake.

#4809 Establishment of Permanent Sample Plots in the Dahl Forest

Habitat loss and degradation are the greatest threats to biodiversity in Canada today. To mitigate this process in the Haliburton Highlands the Haliburton Highlands Land Trust (HHLT) is acquiring lands of ecological and cultural significance for conservation purposes. It works to select only those properties, which clearly have long-term benefit to the public and can be maintained by the land trust in perpetuity. The establishment of Permanent Sample Plots (PSPs) will provide the HHLT with the ability to monitor changes in vegetation biodiversity and land use on its various properties on a long term basis. At the Dahl Forest PSPs were established in two different Ecosites – three in the Sugar Maple Ecosite and one in the Mature Red Pine Ecosite. Both Ecosites were located on the west side of the Burnt River which bisects the property. For the 2018 – 2019 Academic year the HHLT would like to continue the work of establishing additional plots in different Ecosites on the Dahl Forest including plots on the east side of the Burnt River. Based on the experience in 2017 two students are able to complete surveys on four PSPs.

#4810 Establishment of Permanent Sample Plots in the Barnum Creek Nature Reserve

Habitat loss and degradation are the greatest threats to biodiversity in Canada today. To mitigate this process in the Haliburton Highlands the Haliburton Highlands Land Trust (HHLT) is acquiring lands of ecological and cultural significance for conservation purposes. It works to select only those properties which clearly have long-term benefit to the public and can be maintained by the land trust in perpetuity. The establishment of Permanent Sample Plots (PSPs) will provide the HHLT with the ability to monitor changes in vegetation biodiversity and land use on its various properties on a long term basis. For the 2018 – 2019 academic year the HHLT would like to continue the work of establishing PSP plots in different Ecosites on the Barnum Creek Nature Reserve. Based on experience in 2017 on the Dahl Forest two students are able to complete surveys on four PSPs. The intent is to be able to begin and complete the field program by the end of October before winter arrives.

#4811 Establishment of Permanent Sample Plots in the Fred and Pearl Barry Wetland Reserve

Habitat loss and degradation are the greatest threats to biodiversity in Canada today. To mitigate this process in the Haliburton Highlands the Haliburton Highlands Land Trust (HHLT) is acquiring lands of ecological and cultural significance for conservation purposes. It works to select only those properties which clearly have long-term benefit to the public and can be maintained by the land trust in perpetuity. The establishment of Permanent Sample Plots (PSPs) will provide the HHLT with the ability to monitor changes in vegetation biodiversity and land use on its various properties on a long term basis. For the 2018 – 2019 academic year the HHLT would like to continue the work of establishing PSP plots in different Ecosites on the Fred and Pearl Barry Wetland Reserve. Based on experience in 2017 on the Dahl Forest two students are able to complete

surveys on four PSPs. The intent is to be able to begin and complete the field program by the end of October before winter arrives.

#4812 Establishment of Permanent Sample Plots on Norah's Island, Kennisis Lake

Habitat loss and degradation are the greatest threats to biodiversity in Canada today. To mitigate this process in the Haliburton Highlands the Haliburton Highlands Land Trust (HHLT) is acquiring lands of ecological and cultural significance for conservation purposes. It works to select only those properties which clearly have long-term benefit to the public and can be maintained by the land trust in perpetuity. The establishment of Permanent Sample Plots (PSPs) will provide the HHLT with the ability to monitor changes in vegetation biodiversity and land use on its various properties on a long term basis. For the 2018 – 2019 academic year the HHLT would like to continue the work of establishing PSP plots in different Ecosites on Norah's Island (Kennisis Lake). Based on experience in 2017 on the Dahl Forest two students are able to complete surveys on four PSPs. The intent is to be able to begin and complete the field program by the end of October before winter arrives.

#4808 Haliburton County Grocery Stores and Food Pricing

There is a perception that grocery prices are higher in Haliburton County than neighbouring towns. Is there evidence to support this or is it just a myth? Haliburton County FoodNet is a network of food programs in our county. FoodNet members believe that all residents of Haliburton County should be able to access food in a way that upholds basic human dignity and that the food is safe and nutritionally adequate as well as personally acceptable and culturally appropriate. For years some residents of Haliburton County have been complaining that the cost of groceries is higher here than elsewhere. Others say they choose to shop in neighbouring towns such as Bracebridge and Lindsay since they believe prices there are lower. We are interested in finding out whether this is an accurate assessment or simply a misperception. To answer this question we require research to find out how prices are set by local grocery stores. We believe comparing the costs of a set list of grocery items to other towns would be valuable. At the end of the day we hope to either prove or disprove the above perception. This project is appropriate for independent students or a group of students.

#4897 An Investigation into Plastic Consumption and Alternatives for the Haliburton County Farmers Markets

The Haliburton County Farmers Market Association (HCFMA) hosts 3 community farmers markets locations and have over 25 vendors involved from the months of May to October. With increasing awareness of the problems associated with the single use plastic and the recent federal government proposal to ban single use plastics by 2021 the HCFMA wishes to look for ways to minimize the plastic usage practices of vendors and customers. This project will provide an overview of the main sources of plastic usage in farmers markets

locally and in Ontario and understand how to best utilize incentives for behavioral change re: plastic use, and identify challenges and limitations to plastic reduction initiatives. Students will work closely with community members, vendors and the HCFMA to find useful answers to the outstanding questions involving plastic consumption and alternatives.

#4877 Haliburton Forest Revitalization Project: Integrative Report

Haliburton Forest and Wildlife Reserve is an integrated and diversified company with a tourist and recreation division and forest products division. The tourist and recreation division offers multiple activities such as wilderness adventures (including the world's longest canopy boardwalk trail) - forest and wildlife education and wilderness retreats. The company has always maintained a strong focus on environmental sustainability. The purpose of this project is to assess the current state of the Haliburton Forest entrance parking lot area (including, but not limited to, general aesthetics, signage, native plants, soil erosion and compaction, and stormwater management), conduct complementary research and analysis that builds on the initial findings from the previous research project (Project #4866), and produce an integrative report with clear and well-reasoned recommendations for action.

Note: This is the project #2 of two interrelated projects; the first project involved conducting focused research on 'greening' parking lots and surrounding spaces in rural areas (refer to Project # - 4866). This project is ideal for a group of senior undergraduate students.

#4903 Evaluation of Repair Cafes in Haliburton County

SIRCH Community Services in Haliburton County identifies community needs and responds with innovative services, programs and partnerships that support individuals, families and communities. Repair Cafes are a relatively recent concept that was first introduced in 2009 in Europe, but have since gained popularity and are proliferating around the world. Repair cafes are fixed meeting places where tools are available for community volunteers to repair various items (electronic, mechanical, clothing, etc). The objectives of the Cafes are to reduce waste, strengthen social cohesion, and develop and maintain repair skills.

The purpose of this project is to conduct a process evaluation to estimate the effectiveness (including social cohesion and environmental stewardship) and efficiency of five local Repair Cafes, which SIRCH will be funded through a Ontario Trillium Foundation SEED grant.

#4910 Public Attitudes Towards Climate Change in Haliburton County

Established in 2003, Environment Haliburton (EH!) takes a comprehensive view of environmental issues in Haliburton County and provides a strong voice to encourage positive initiatives and oppose those that could have an adverse impact on the environment.

This project will involve creating, distributing, and analyzing results of a climate change opinion survey aimed at community organizations and the public. Interviews with community organizations and/or municipal government representatives may also be included.

This project will assist EH! and Planet Haliburton with understanding current public and community attitudes towards climate change and the health-climate change relationship. Results will also assist EH! and Planet Haliburton to frame their climate change programming, as well as assisting environmentally-mandated organizations in focusing their resources on activities most likely to help generate action across the community. It will help EH! and Planet Haliburton in making recommendations to local municipalities and stakeholders. This project will also build on past work that EH! has done to increase public awareness of climate change and its impacts.