

Job Posting: 15509 - Position: Research Assistant

Application Deadline	Aug 28, 2013 11:59PM
Application Method:	
Posting Goes Live:	Jul 30, 2013 11:59PM
Job Posting Status:	Approved

Company Info

Organization	Brock University
Province / State	Ontario
Country	Canada

Job Posting Information

Position Type	Part Time Contract
Graduating Year Posting	No
Number of Positions	1
Position Location Type	On Campus
Employment Category	Research
Job Title	Research Assistant
Job Location	Brock University
Job Description	

The project for which I wish to hire a research assistant is one part of a large project that I am pursuing with a transdisciplinary group of researchers. The overall issue is one that has recently been recognized but has potentially important public policy implications. Namely, this is the negative impact of upstream wildfires on downstream municipal water supplies. Recent work by members of the group (Emelko et al 2010) identifies the types of water quality contamination that may occur in the source waters used by downstream drinking water treatment plants that supply water to residential households. For example, in Alberta, some 88 % of the population depends upon surface water that originates in heavily forested areas that are potentially susceptible to wildfire risks that have been increasing in frequency and severity over the last decade and are predicted to increase with climate change. The presence of these contaminants will require adjustments in water utility operations, leading to higher costs that will be passed on to consumers in the form of higher prices and/or defensive expenditures (e.g., purchases of bottled water or spending on home filtration systems intended to provide protection). Depending upon the size of the community and/or the water utility system, some communities may be better or less well equipped to deal with such costs.

I am in the process of gathering data from a number of different sources to shed light on different water utility systems (about 200) in the province of Alberta in terms of the size and socio-demographic characteristics of the community served, as well the costs of their current operating systems. I wish to hire a research student over the upcoming year to assist me in first collating these data and second, in using them to categorize the systems according to a two-way matrix: ability of the water supply system to

adjust to wildfire threats (low-cost of adjustment versus high-cost of adjustment) and relative vulnerability of community population to such threats (low versus high). The result will be a first evaluation of critical drinking water treatment system vulnerabilities to wildfire threats that can help in public policy discussions about the benefits/costs of alternative wildfire mitigation strategies. The student will work closely with me but will have the opportunity to liaise with government officials, as well as students working with other team members.

The specific duties include:

1. Contact government officials (including employees of Statistics Canada and Alberta Health System) for updated information on the Census data and boil water advisories, as well as Brock's research and map Librarians to assist with locating each community/water utility geographically with respect to proximity to forested areas
2. Organize and input into Excel (for transfer to SPSS) socio-economic information from Canada's Census (2001, 2006, 2011) on the communities served by the water utility systems
3. Collect information on boil water advisories (from Alberta Health Services website) and combine with information on communities and input into Excel
4. Organize and input into Excel information on baseline water treatment costs and wildfire threat treatment costs by community
5. Undertake web based literature surveys and data searches, including the use of RACER and databases on the Brock library website. The focus will be on the full cost accounting of water supplies, taking into account differences in water quality and differently sized water utilities.
6. Assist me in putting each community into one of the four cells of the matrix described above using the two criteria of: ability of water utility to adjust to wildfire threats and vulnerability of community population to threats.
7. Network with students and HQP of other team members.
8. Write progress reports on the literature, methodologies, and results, as well as a final report describing the outcomes of the project. Present results to other team members.

Job Qualifications

Students should have completed the second year of an Economics, Environment or Geography program.

Good communications skills and experience with SPSS and Excel, as well as Word required

Salary	\$13.52
Start Date	09/09/2013
End Date	04/11/2014
Minimum Education Completed	3rd year complete
Open to All Degrees and Disciplines	No
Targeted Degrees and Disciplines	Faculty of Social Sciences Business Economics Economics Geography Tourism and Environment
Experience Works Position	Yes

Application Information

By Email to	diane.dupont@brocku.ca
Application Material Required	Cover Letter Resumé Academic Transcript Experience Works Approval (http://bit.ly/nnU9zd)