

## Advanced Diploma in GIS Applications Practicum Opportunity Summary

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| Project                                      | Title:  | Ecological Accounting Process Partnership                     |        |                           |
|  | Organisation:   | Mount Arrowsmith Biosphere Region Research Institute (MABRRI) |        |                           |
|  | Location:   | Nanaimo, BC   |        |                           |
| Sponsor                                      | Name:   | Ariel Verhoeks  | Title: | GIS Specialist            |
|  | Email:  | Ariel.Verhoeks@viu.ca   | Phone: | (250) 753-3245 local 2802 |
| Project Overview                             | <p>The Ecological Accounting Process (EAP) Partnership project aims to initiate inter-governmental collaboration to operationalize EAP within local government processes. This project has followed a multi-year (2016-2022) program to test and refine the EAP methodology and metrics. Going forward, the EAP Partnership project is to begin mainstream integration, beginning with local government partners. As an overview, EAP provides metrics through a collaborative and applied research method approach that enable communities to appreciate the worth of natural assets. This process involves examining a stream or water system and its abutting and adjacent parcels and using these areas to calculate the dollar value of the land occupied by the natural commons. This value provides a basis for budgeting maintenance, management, and enhancement of riparian systems, and also assists with calculating riparian deficits. Alongside VIU, this project is in its second year and is being undertaken with the following partner organizations and local governments: The Partnership for Water Sustainability in BC, the City of Nanaimo, the Regional District of Nanaimo, and the Municipality of North Cowichan. For each local government partner a series of EAP analyses will be completed as part of a three-year project.</p>  |   |        |                           |
| Task Summary<br><br>(Types of work involved) | <p>A GIS intern is required to assist with the following components of Year 2 of the EAP project:</p> <p><b>Component 1: Parcel Analysis</b></p> <p>For each stream or wetland included in the study, a parcel analysis will need to be completed to determine the Natural Commons Asset (NCA) value. This portion of the analysis involves collecting parcel data (such as addresses, zoning, and land values) from the local governments. The purpose of this analysis is to calculate the NCA value for each parcel based on how much of the parcel falls within the riparian setback area.</p> <p><b>Component 2: Landscape Analysis</b></p> <p>Depending on the research questions and decisions of the local government partners there is the potential to complete additional landscape analyses for each study site. This component requires studying additional information about the parcels and surrounding areas, including the condition and extent of riparian areas, surrounding land uses, and drainage areas, determining the extent of impervious and pervious areas using remote sensing techniques, and conducting field work to ground truth based on the analyses being completed.</p> <p><b>Additional Components:</b></p> <p>Some additional tasks that will be completed include:</p> <ul style="list-style-type: none"> <li>• Creation of maps, data tables, and informational graphics and summaries for meetings and final reports;</li> <li>• Attending meetings with the project partners (in-person and online); and</li> <li>• Site visits to the study areas (transportation provided by MABRRI).</li> </ul> |   |        |                           |

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| Additional Information<br><br>(Appealing Aspects) | This is a great opportunity for the GIS intern to apply their skills and knowledge to a local and regional initiative assisting with calculating values to be used for the maintenance and management of natural assets and calculating riparian deficits. The intern will be able to improve their GIS expertise and learn valuable information suitable for the workforce, in addition to gaining experience working in a research-based office. The intern will also have the opportunity to work with various partner organizations and local governments during the duration of the project. |  |
| Funding   | <input type="checkbox"/> None <input type="checkbox"/> Minor (< \$3,000) <input checked="" type="checkbox"/> Major (>\$3,000)<br>One Time Payment of \$3,000 for practicum completion.  |  |
| Workplace   | <input type="checkbox"/> Off-site <input type="checkbox"/> Full-Time On-Site <input checked="" type="checkbox"/> Other/Mixture<br>Description (if Other): MABRRI's office is located in Building 305, Room 442 and will have desk space for the practicum student. There is potential for some work days to be completed remotely depending on in-person meeting and work session scheduling, but the majority of work will be completed on campus or in the field.   |  |
| Student Selection                                 | <input type="checkbox"/> Faculty Selection                      (Student with highest grades selected from among those interested)<br><input checked="" type="checkbox"/> Shared Selection                      (Faculty and Sponsor make selection based on discussion of interested students)<br><input type="checkbox"/> Sponsor Competition                      (Sponsor interviews, in-person or via telephone, and selects from interested students)   |  |

*For assistance or further information, please contact:*

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