

Teck Serv Applied Research Internship – 2017

Background:

2017's Teck Serv internship allowed Alexandre Landry, a student of the geographic information systems bachelor degree program to work with the [Columbia Basin Rural Development Institute](#) to support the Economic Development Commission of the East Shore of Kootenay Lake (EDC) during an initial stage of their [Asset Based Community Development Project](#). Alexandre designed data models and a data collection framework which lead to the launching of an asset inventory project focusing on organizations and businesses on the East shore of Kootenay Lake. The information collected from this asset inventory will be used by the EDC for strategic planning during the next stages of their longer term [Asset Based Community Development Project](#).

Overview of Internship Components:

More precisely, Alexandre's involvement with the EDC began in May of 2017 with an initial phase of project planning and development, attending a number of meetings with core members of the EDC in order to assist in defining the scope of the short-term goals and objectives for the Asset Based Rural Development Project. These meetings and discussions identified the group's need to acquire up-to-date information about the area and the population being researched, leading to the development of the aforementioned asset inventory project, composed of two parts or "Tiers". Additionally, discussions and meetings with the urban planner and leading GIS technician at the RDCK helped inform the design and scope of the inventory data collection spreadsheets which became fundamental pillars of the inventory project.

The objective for the "Tier 1" inventory was to gather a basic level of information (an asset description and contact information) from as many business owners, directors and members of clubs and associations of all types to serve as an updated local directory, a dataset for general analysis and web mapping content.

As for the "Tier 2" inventory, the objective was to gather detailed level information about a select number of assets that hold a particular level of significance to the East Shore of Kootenay Lake. Such assets include community halls and centres, boat launches and marinas, campgrounds, parks and similar amenities that provide widely used and appreciated services to the community. With the information gathered from this inventory, concise reports ([see example](#)) have been, and will continue to be produced for the priority assets inventoried.

The main motivation behind conducting the Tier 2 inventory was that by gathering information using a standardized approach, similar assets can be compared and analyzed in greater depth to support decision making and project planning processes. Additionally, asset owners, managers and members of associations will be able to use the reports to provide supporting documentation to accompany applications for funding and/or to help in their own project planning initiatives. To view the Tier 2 dataset, and for more information about the type of information collected we invite you to contact the EDC Planning Team at assetsandaction@gmail.com.

The long-term goal in relation to both the Tier 1 and Tier 2 inventory datasets is that they will be in constant flux, being updated and edited as businesses, groups and services and amenities change, come and go over time. However, in the short term the intension is to generate inventories to a highest level of

completeness possible in order to work with information that represents the study area most comprehensively. The following sections provide a summary of the tools and methods that have been developed to accomplish these objectives.

Tier 1 – Summary of Methods and Outcomes

A simple data structure was developed for collecting Tier 1 inventory data which conforms generally to spatial data format requirements in order to facilitate the use of this dataset for possible future mapping applications.

In order to collect updated contact information, descriptions of assets from the perspective of those who own or manage them, and to record whether the EDC has the consent to use any information shared on a future web map, data collection was designed to occur via responses to an online form sent through email mailing lists. Using Google Forms, a questionnaire was created and linked to an automatically personalized introductory email to have respondents submit the requested information. Using built-in Google Forms functionality, options were enabled so that submissions from respondents were linked directly to a sheet within the main Tier 1 data collection spreadsheet document.

Next, to begin reaching out to the target population, a multitude of lists of local businesses, associations and services of all types were assembled from a variety of sources, aggregated, sorted and formatted to fit the dataset structure. Importantly, the dataset structure was developed to permit the status of responses to be monitored, and to track who was contacted, and at which time.

From here, a series of iterative data managements tasks are required to continually reach out to groups and individuals via mailing lists when new email addresses are found and to update response status as form submissions come in. This stage of the Tier 1 inventory requires significant effort to gather updated email addresses, mostly by phoning individuals directly.

At the time of this report, August 23, 2017, just over 100 responses had been submitted and over 400 groups and/or individuals had been contacted in regard to an asset they are affiliated with on the East Shore. This means that we have gathered current information for approximately a quarter of the potential assets identified thus far.

Tier 2 – Summary of Methods and Outcomes

The Tier 2 Inventory involved the development of a much more elaborate data structure to capture the level of detail that was desired. Two similar datasets were created to capture Tier 2 data: datasets “A” and “B”. Dataset “A” was tailored to capture information regarding an asset that was comprised mainly of a central physical structure such as a community hall, Library or other facility. For example, this includes details pertaining to ownership and location, but also in regard to the type and condition of the structure and its components such as the roof, foundation, windows, floors, doors, etc. Dataset “B”, however, was slightly modified to capture information about an asset that is mainly centred around a space or a property such as a park, boat launch or campground. For example, sections about a central structure’s components were replaced with space to record information about vegetation and ground cover as well as a list of amenities and infrastructure found on the site. (Please contact the EDC Planning Team to view the Tier 2 datasets.)

Interviews, conducted in person and by phone were the main method used to collect Tier 2 data. Depending on the level of organization and knowledge of the interviewee, the duration of one interview ranges between one and two hours in addition to some time needed post-interview for cleaning and completing data entries.

Aside from reaching out to schedule and conduct interviews with individuals associated to what core EDC members identified as a “Priority Asset”, the Tier 2 inventory involved carrying on a varying degree of follow-ups with interviewees to gather pieces of information that were unavailable during the initial interview and updating entries as these pieces came in. Based on what core EDC members view as a “Priority Asset” for the East Shore, the focus of the Tier 2 Inventory was placed on community halls/centres, boat launches, parks, and campgrounds.

The final aspect relating to the Tier 2 Inventory were the aforementioned report documents created for each asset inventoried. A report document template has been developed for data models “A” and “B” to reflect the differences in the type of data collected and has been used to complete a for most community halls.

At the time of this report, interviews had been conducted in relation to 21 “Priority Assets”.

Summary of products and deliverables

The following lists all deliverables generated from this internship:

Tier 1:

- Data collection spreadsheet, containing the data collected thus far.
 - Format: Google Sheets.
- Online form and accompanying email configured to generate personalized greeting linked to mailing lists.
 - Format: Google Forms Application / Gmail.
- Associated data management methodology to be shared in training sessions with successive data custodian to be named by the members of the EDC.
 - Format: Training sessions/workshops in person and/or by phone.

Tier 2:

- Data collection spreadsheet, containing the data collected thus far. Blank template also included.
 - Format: Google Sheets
- Supporting documents collected as part of the Tier 2 Inventory Interviews (site plans, maps, pictures, etc.)
- All Tier 2 reports completed to date with accompanying templates.
 - Format: PDF
- Associated data management and interview methodology to be shared in training sessions with successive data custodian to be named by the members of the EDC.

Other:

- Email address (assetsandaction@gmail.com) associated to the inventory project, holding ownership of Google Drive source directory containing all documents relevant to the asset inventory project and Asset Based Rural Development Project to date.
 - Format: Gmail account, Google Drive directory and all associated files.
- Spreadsheet containing population census data for the East shore by Dissemination Area from 1996 to 2016, developed by request of core EDC members during earlier scoping phase.
 - Format: Excel document
- Maps created displaying watersheds and census data by request of core EDC members during earlier scoping phase.
 - Format: PDF

Next Steps:

As it was alluded to in the introduction of this report, the goal for what has been developed over the last few months is to maintain both the Tier 1 and Tier 2 inventories for the benefit of economic and community development projects and initiatives on the East Shore in addition to providing direct and shorter-term strategic planning support for the EDC's current Asset Based Rural Development Project.

That said, the next step for the EDC is to undergo a transition away from the support offered by Alexandre Landry in designating another individual (or small group) to be responsible for pursuing the tasks generally outlined above to continue collecting Tier 1 and 2 data, bringing the datasets to their first version of “maturity” or “completeness”. Primarily, this transition will involve some training sessions and workshops lead by Alexandre in order to help orient the new data custodian(s).

Once consensus has been made amongst members of the EDC that the datasets have reached a desirable level of completion, analysis of the data collected will be the next task. This is where the EDC will manage to develop questions and attempt to extract trends from the data hopefully utilizing the potential of GIS analytics to create visualizations and to compute with the spatial dimension in mind.

From here, community outreach activities and/or public meetings could be planned and implemented to gather input from local residents by stimulating discussion centred on the findings pulled from the data collected through the inventories.

Then, in addition to pursuing project plans and objectives which would arise from strategic planning processes, largely informed by the results of data analysis and public outreach activities, exploring avenues for web mapping applications could be considered with the support of local GIS expertise as a method to create an accessible and attractive resource for locals and visitors to use to learn and stay current about what the East Shore of Kootenay Lake has to offer.

Additionally, in parallel to the East shore's asset based development initiative, it is worth noting that the tools and methodologies developed here could be used as the framework to replicate this project (or one similar) in other rural communities in the Columbia basin or abroad!

What I've Learned:

I feel it is important for me to express that I have learned much more than I thought I would have as I received the great opportunity to participate in this year's *Teck Serv* Applied Research Internship. This internship gave me a valuable opportunity to gain experience working with multiple groups from volunteers to research institute staff and members of local government. I was presented with many engaging challenges to help develop parts of a project that I believe will have important contributions to future efforts on the East Shore, including the creation of several tools and methodologies that will set the project to continue on a very positive trajectory.

Through is internship, I feel I was able to have my first significant chance of implementing the theory and practical concepts of project management that I learned during one of the courses I took during the final year of my bachelor degree at Selkirk College and I'm pleased to say that I feel quite happy with the role I played in this stage of the project.

Finally, this opportunity permitted me to develop a better sense of the complexity involved in working for, and developing a project focused on the interests of a community. I have definitely developed a much deeper appreciation for the hard work done by members of organizations like the EDC and look forward to seeing the fruits that their initiatives will soon bear!