**Introduction**

Hectares BC is a pilot project to test the concept of a new tool for geospatial data analysis in the natural resource sector. The provincial government has a wealth of geospatial data but limited staff and tools for its analysis. Hectares BC allows researchers, scientists, government staff, and others to access and work with geographic information without the need for GIS skills to carry out planning, assessment, reporting, and decision making functions.

To log in to Hectares BC, select the blue Login link located in the upper right portion of the screen of any of the tabs. You will be prompted for your login credentials. You must be logged in to access any of the functionalities of Hectares BC.

**Hectares BC Overview**

Welcome: Shows the project collaborators (with links to the collaborators website) as well as a description of what users need to agree to prior to using the application.

Show Me Where: Will allow you to construct formulas to ask spatial questions. The results from these queries are summarized on a map of the province for every hectare of land in BC.

How Much: Will allow you to construct formulas for generating summaries where the results are displayed in tabular format. This information can be exported so you can use it in other applications.

**Layers List**

Contains a hierarchical listing of all data layers available in Hectares BC system. The items in this list can be dragged and dropped in to the Definition Window in order to build queries.

**Map Window Tools**

- **Pan Buttons**: Pan around the map without zooming in or out.
- **Zoom In / Out Buttons**: Zoom in or out of the map.
- **Zoom to BC**: Zooms to the full extent of the map, which is the province of BC.
- **Pan Tool**: Pan around the map without zooming in or out.
- **Zoom Tool**: Zooms in on the map.

**Data Drill Tool**: Displays all the information about a given hectare.

**Zoom To Location Tool**: Zooms to a particular map sheet, lat/long coordinate or BC Albers coordinate.

**Add WMS Layer**: Add an overlay WMS layers by selecting the service from the list to generate a list of layers.

**Hide Layer List / Layer Switcher**: Change the background map image or any added WMS layers.

**Save Query**: Saves your query. You must be logged in to save a query.

**Export Image**: Exports the map window as an image. Set your Format, Size, and Recipients. The processing time will be calculated.

**Clear Query**: Removes all layers from the Query Definition window.

**Load Query**: Click the My Saved Show Me Where Queries dropdown menu and select the query you wish to load.

**Themes Tab**

This tab is similar to the Show Me Where... tab, however it allows you to specify multiple queries and view the results in different colours in the map window.

To create a themes query, you can use the same method as the Show Me Where... tab (shown above). The tab list at the top of definition box allows you to add / modify / delete multiple themes.

You can add a theme by clicking on the at the far right of the theme tab bar or you can delete a theme by clicking on the red X in the upper left corner of the Themes tab. If you only have one single tab you will not see an as you cannot have zero themes.

If you define more themes than space allows, the themes will automatically scroll and you can use the scroll buttons on the far right of the tab bar to scroll through the query tabs.

You can modify the name of a theme by double-clicking on the existing theme name to make the name editable. Once you are finished editing the name either press ‘Enter’ or click elsewhere on the screen to keep your edits.

You can modify the colour of a theme by clicking on the colour chip next to the theme name and picking a colour.

**Creating a Query**

To build a definition query, drag layers from the layer list into the definition window. These layers will be used to show your results.

1. Click and drag the appropriate layers into the definition window.

2. Optionally, select Not to exclude the layer from the query.

3. If you have multiple layers, select the or And option in the first layer.

4. Get any operators and values for any value based layers.

5. Click the Run Query button to display your query in the map window.

6. Give the Query a name in the title box.

**About the Application**

- **Contact Us Tab**: Contains links to report Bugs, Enhancements, Data Issues, and Project Information.
- **Login**: Will give you access to your previously saved queries, view any equations you have previously saved, and are able to manage your queries in the MyHaBC tab.
- **Hints and Recent Updates**: Lists hints and any recent updates to the application and application data.

**FAQ**

- **How Much**
  - Will allow you to construct formulas for generating summaries where the results are displayed in tabular format.
  - This information can be exported so you can use it in other applications.

- **My HaBC**
  - Will allow you to view and manage your HaBC profile including your contact information, saved queries (both Show Me Where and How Much queries), and view your batch queue list.

- **If the user is not logged into the system and selects this tab, they will be prompted for their login first.**

- **Help**
  - Will give you access to the help system for HaBC. This contains help topics grouped by tabs for each of the tools and functions in HaBC and has four tutorials to help you use HaBC. You can also click the icon in the top right of each window to open the help application.

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- **Pan Buttons**: Pan around the map without zooming in or out.
- **Clear Query**: Removes all layers from the Query Definition window.
- **Load Query**: Click the My Saved Show Me Where Queries dropdown menu and select the query you wish to load.

- **Layer Switcher**: Allows you to specify multiple queries and view the results in different colours in the map window.

- **Save Query**: Saves your query. You must be logged in to save a query.

- **Export Image**: Exports the map window as an image. Set your Format, Size, and Recipients. The processing time will be calculated.

- **Share Query (as link)**: Will open a link that can be copied and shared so other users can view your query.

- **Compute Overlapping Areas**: Calculates the area for each of the selected themes (which can be either individually, and where the query areas overlap).
How Much Tab

The How Much tab allows users to construct formulas for generating summaries in tabular format. Click and drag layers from the layer list to the top or the side of the How Much window where it states Drop Categories Here or Drop Values Here. Once you have more than two layers, click the Execute tool to run the How Much query.

How Much Tools

- Data Drill Tool: Change the background layer. The map image or any added WMS layers.
- Information Window: Provides information about the map window.
- Metadata / Legend Window: Displays the legend for the layer displayed in the map window.
- How Much Tools: Allow you to share, export, save, clear, and execute queries.
- Batch Queue: Manages Saved Queries, where the user can view and manage their HaBC profile, including their saved queries and batch processing list. An overview of the types of functionality includes layers whose attributes can be summarized and placed. This type of data includes layers whose attributes are classified into groups. Examples include Ecological Drainage Units, Grasslands, or Baseline Thematic Mapping.
- How Much Query Window: Displays the query results for your How Much query.
- Managing Saved Queries: Allows you to view and manage the items you have submitted to the batch queue.

How Much Layout

Select Existing How Much Queries: If the user is logged in this drop down list contains previous How Much queries the user has saved.

Title: Allows users to specify a title for their query so that they may save the query and view it at a later date.

Drop Values Here: The area of the grid whose layers whose attributes can be summarized can be placed. Examples include Total Area, Road Length, or Average Elevation.

Drop Categories Here: The area of the grid whose categorical data layers are placed. This type of data includes layers whose attributes are classified into groups. Examples include Ecological Drainage Units, Grasslands, or Baseline Thematic Mapping.

How Much Query Window: Displays the query results for your How Much query.

FAQ’s

- Q: Why are there blank values in the How Much grid when I run a query?
  A: Blank values in the results indicate that there are no values present (missing) for that particular combination of attributes.
- Q: Why are the How Much results "approximate"?
  A: Computing full resolutions results of your How Much query can take up to two hours or more. Computing full resolutions results of your How Much query can take up to two hours or more.
- Q: Why is information for a cell not visible when I am at a small scale (zoomed out) but as I zoom in, data appears in that area?
  A: HaBC uses sampling at the smaller scales to provide rapid representations.

Exporting Raster Data

1. Click and drag the appropriate layer into the Definition Window. Draggable layers are shown in black and non-draggable layers are shown in gray.

2. A layer can also be added to the Definition Window by double-clicking the layer in the layer list.

3. Click the Export Raster Data tool. You must be logged in to do this.

4. In the Raster Data window, select the Format and Recipients and click Export.

How Much Tools: Allow you to share, export, save, clear, and execute queries.