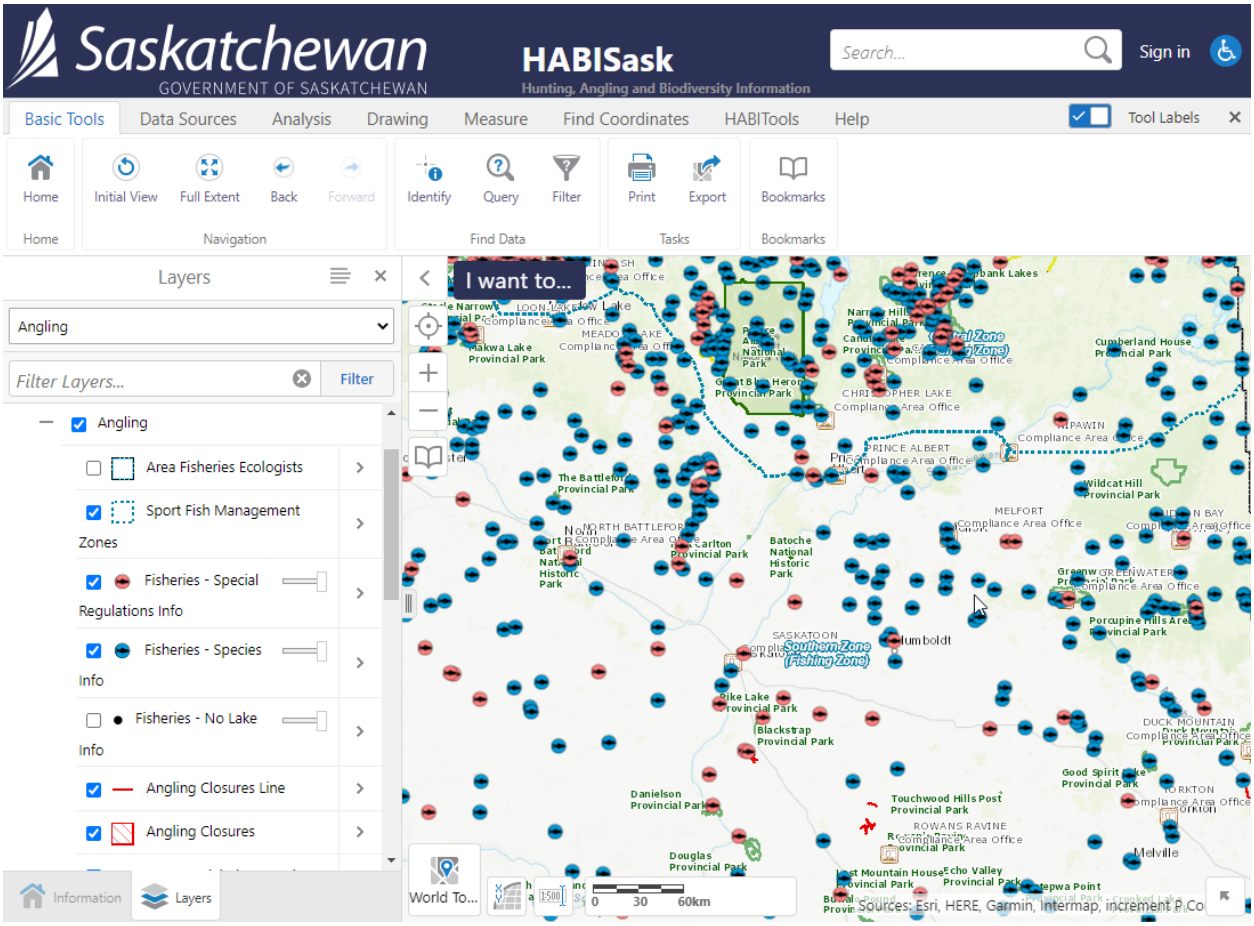
HABISask Users Guide

hunting | angling | biodiversity



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HABISask Users Guide
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DOCUMENT REVISION HISTORY

Version	Date	Editor	Comments
1.0	August 2016	Ed Beveridge	First available document.
1.1	November 2017	Andrea Benville	New Add Layers, Geolocation and Layer Action functions; consolidated assistance under 'Help Tab'; Analysis/Identify results now default to table view instead of list view
1.2	December 2017	Mark Duffy	Updated information on Angling theme
1.2	January 2018	Andrea Benville	Geocortex Essentials 4.6.1 and HTML5 Viewer 2.7 update
1.3	July 2018	Grayson Wihlidal	Task Tab Removal Updates
1.4	January 2020	Andrea Benville	Project Screening Report, Species List Report and Fish Finder Updates
1.5	March 2023	Andrea Benville	Project Screening Report, Metadata/Downloading, LLD Search, Fish by Watershed

Table of Contents

1.0 Introduction

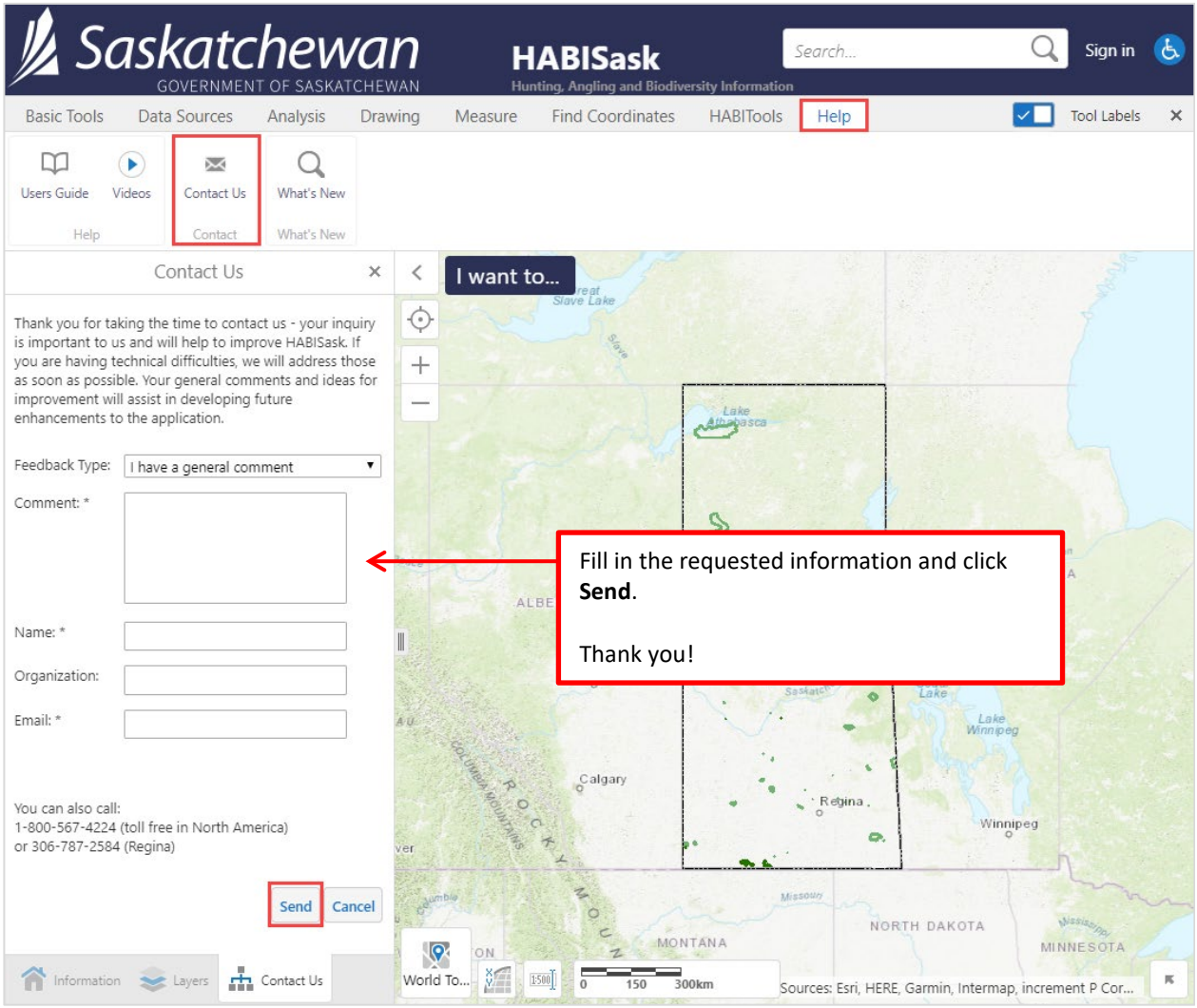
The purpose of this Users Guide is to provide instruction on the use of the **HABI**Sask (**H**unting, **A**ngling and **B**iodiversity **I**nformation of **Sask**atchewan) web mapping application (i.e., "app"). **HABI**Sask has been created to assist you, the user, in your day-to-day operations.

The focus of this Users Guide is on providing directions regarding the customized functions and available map layers found in this app regarding fish, wildlife and biodiversity information. You will find navigation around **HABI**Sask is quite easy once you familiarize yourself with the app layout and terms found in the sections that follow.

PLEASE NOTE: Downloading map layers**: Some data is available for download through the new Government of Saskatchewan GeoHub at geoHUB.saskatchewan.ca.** See section **5.2.4 Metadata & Downloading for details on how to see each map layers metadata with a link to the GeoHub if available. You may also connect directly to the map layers with the following service: https://gis.saskatchewan.ca/arcgis/rest/services. If using ArcGIS, see this Esri help document for adding connections to ArcGIS Server.** For acquisition of map layers not available through any of the above links, please use the Contact Us option under the Help tab to identify the data you wish to acquire.

1.1 “Contact Us” Button

Do you have questions regarding **HABI**Sask? Are you having some technical difficulties with the app? Or do you simply want to provide suggestions for improvement? Please use the **Contact Us** button under the **Help** tab and complete the information as requested. Thank you for your feedback!



1.2 Users Guide and Help Videos

To access the latest version of the Users Guide, click **Users Guide** from the **Help** tab.

Click the **Videos** button to access step-by-step YouTube **instructional videos** and recordings of past **webinars**.

1.3 What's New

Click the **What's New** button under the **Help** tab to keep up-to-date on recent changes to **HABI**Sask.

1.4 Subscribe to HABISask Updates

You may **subscribe** to the **HABI**Sask mail-out list to receive email notifications when updates are made to **HABI**Sask mapping tools and data layers. Visit the Government of Saskatchewan Wild Species Research and Project Updates page for details.

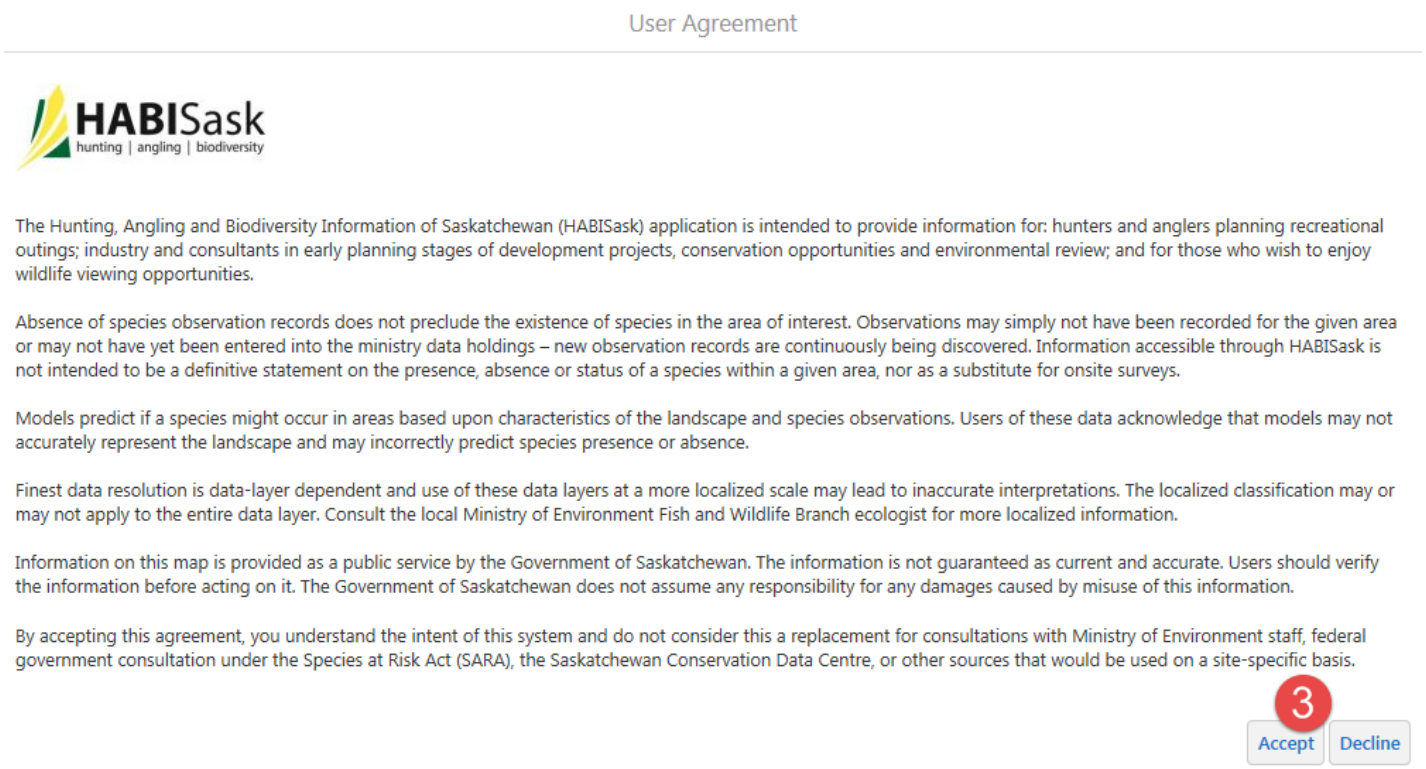
Need help using **HABI**Sask?

Email: centre.inquiry@gov.sk.ca

Call 1-800-567-4224 (North America)

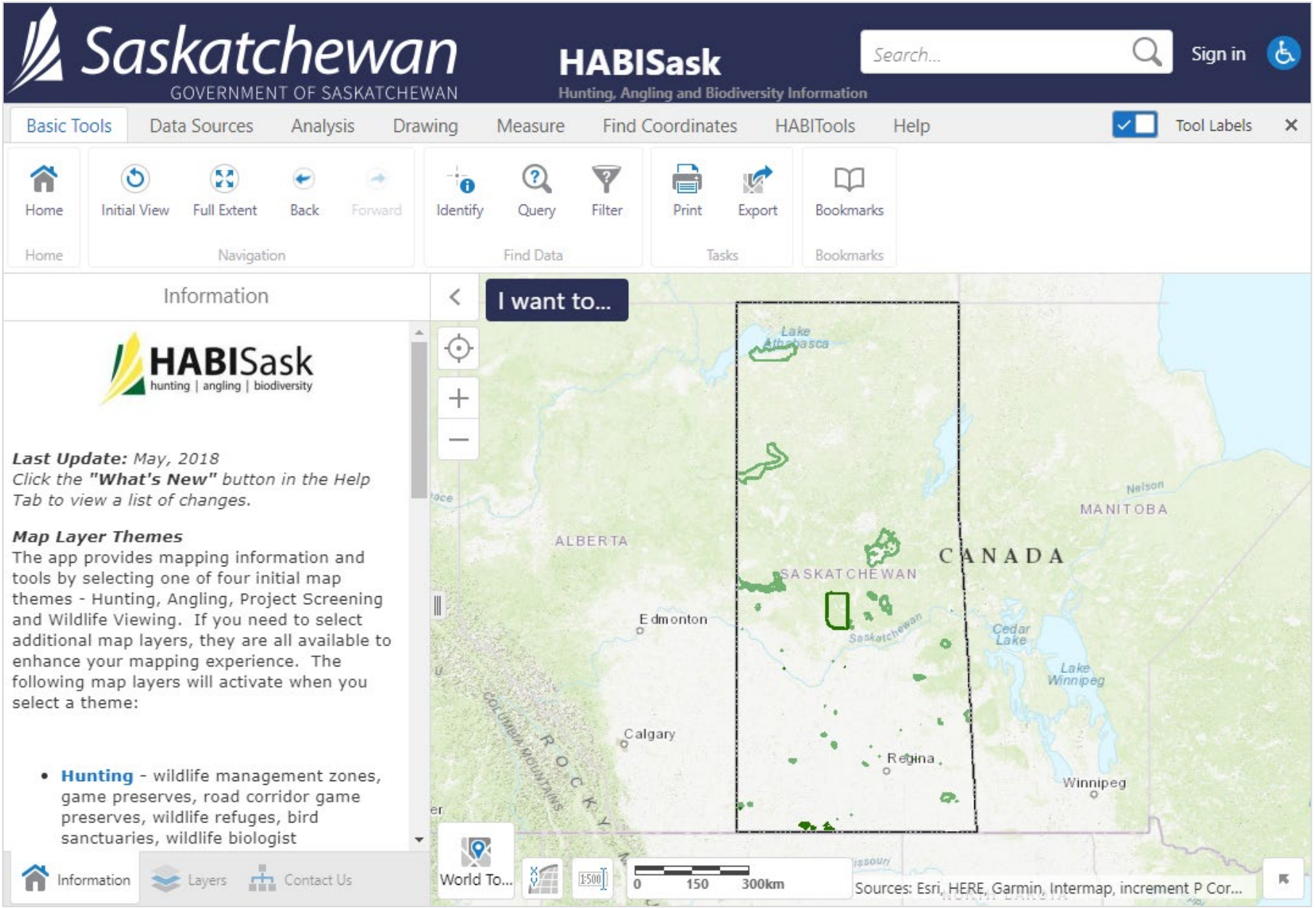
Call 306-787-2584 (Regina)

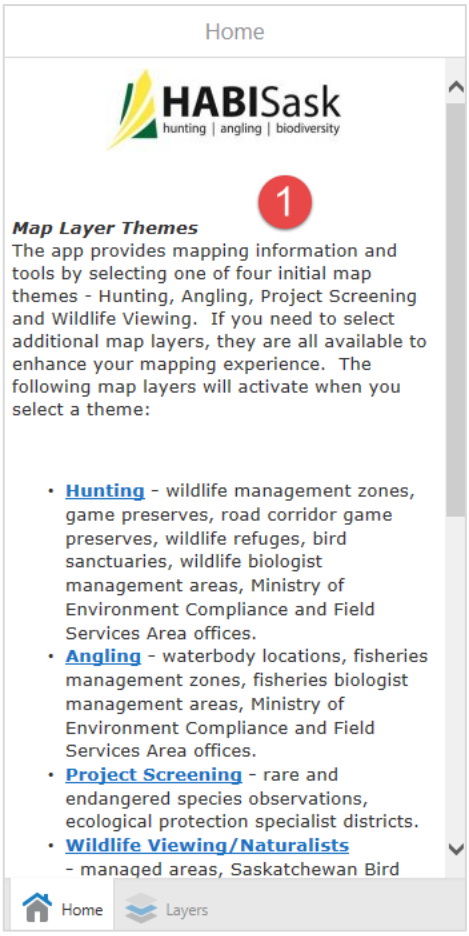
2.0 Accessing HABISask (User Agreement)

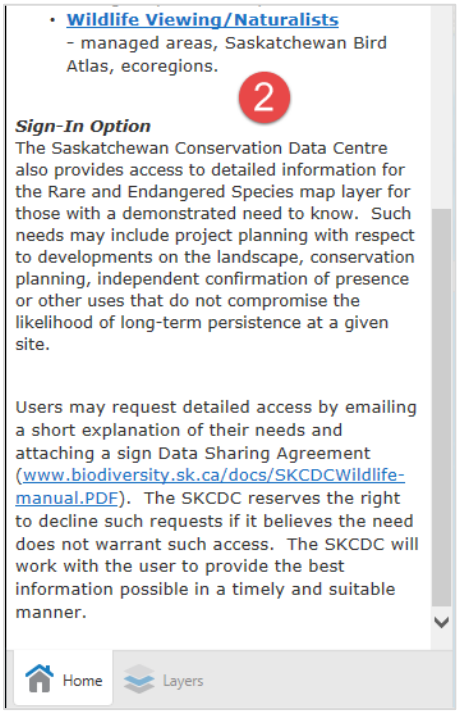


1. Open an internet web browser.
2. Enter the URL for **HABI**Sask.
3. Read the User Agreement and click Accept to continue to **HABI**Sask.

3.0 WELCOME TO HABISask!







3.1 HABISask Screen Overview

On the full **HABI**Sask application screen you will find an **Information Panel** to the left of the main map window. The Information Panel includes an **Information** tab and the **Map Layers** tab. Any results will also typically appear in the Information Panel once queries or analyses are completed. A map of Canada, which is centred on Saskatchewan, is shown in the map window.

The Welcome information covers the following topics:

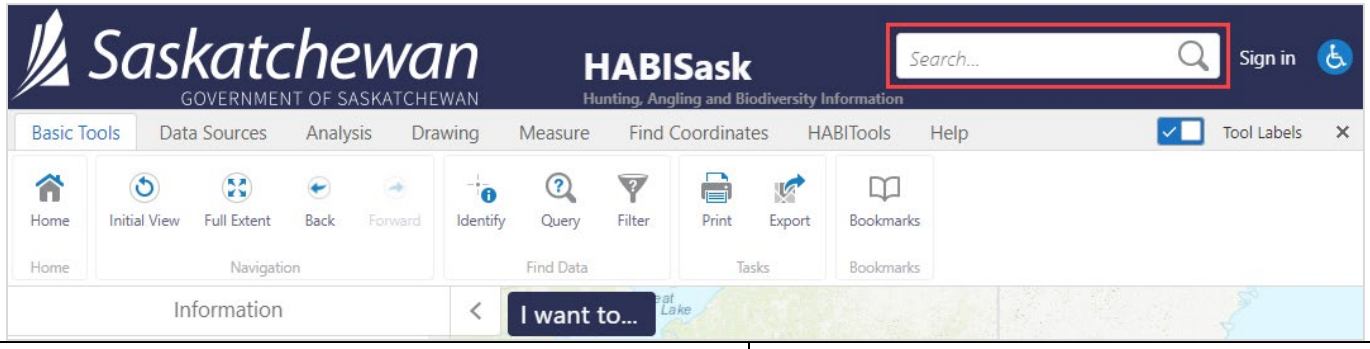
1. **Map Layer Themes**:
   - Hunting
   - Angling
   - Project Screening
   - Wildlife Viewing/Naturalists

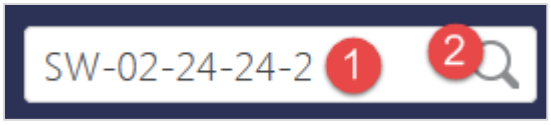
2. **Sign In Option**:
   - Rare and Endangered Species Detailed Map Layer: without signing in, limited information is provided in the Rare and Endangered Species General Map Layer. Details such as species and date are only available after signing in.
   - Requires Data Sharing Agreement with the Saskatchewan Conservation Data Centre (SKCDC)

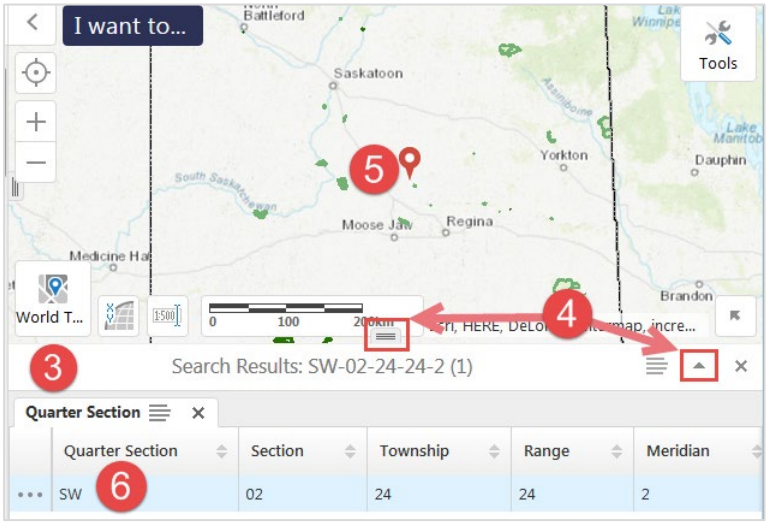
See section 6.1.1 I want to... Sign In for details.

4.0 Search Box

The **Search Box** is a useful tool for quickly finding what you need from the map or map layer data. The Search Box is located at the top right of the **HABI**Sask map screen beside Sign In. If you wish to find a location on the map quickly (e.g., using a legal land description) the easiest way to find that location is to use the **Search Box**:







1. Click anywhere in the blank space of the **Search Box** to select. Type in what you want to search (in this case we will search a legal land description SW-02-24-24-2).

2. Click the magnifying glass or press enter on your keyboard to search. Search time may vary depending on the dataset size, please be patient.

3. Results of the search will show in a table below the map display. If there are results from multiple map layers, they will be displayed in tabs – click on the tab name to switch between each table.

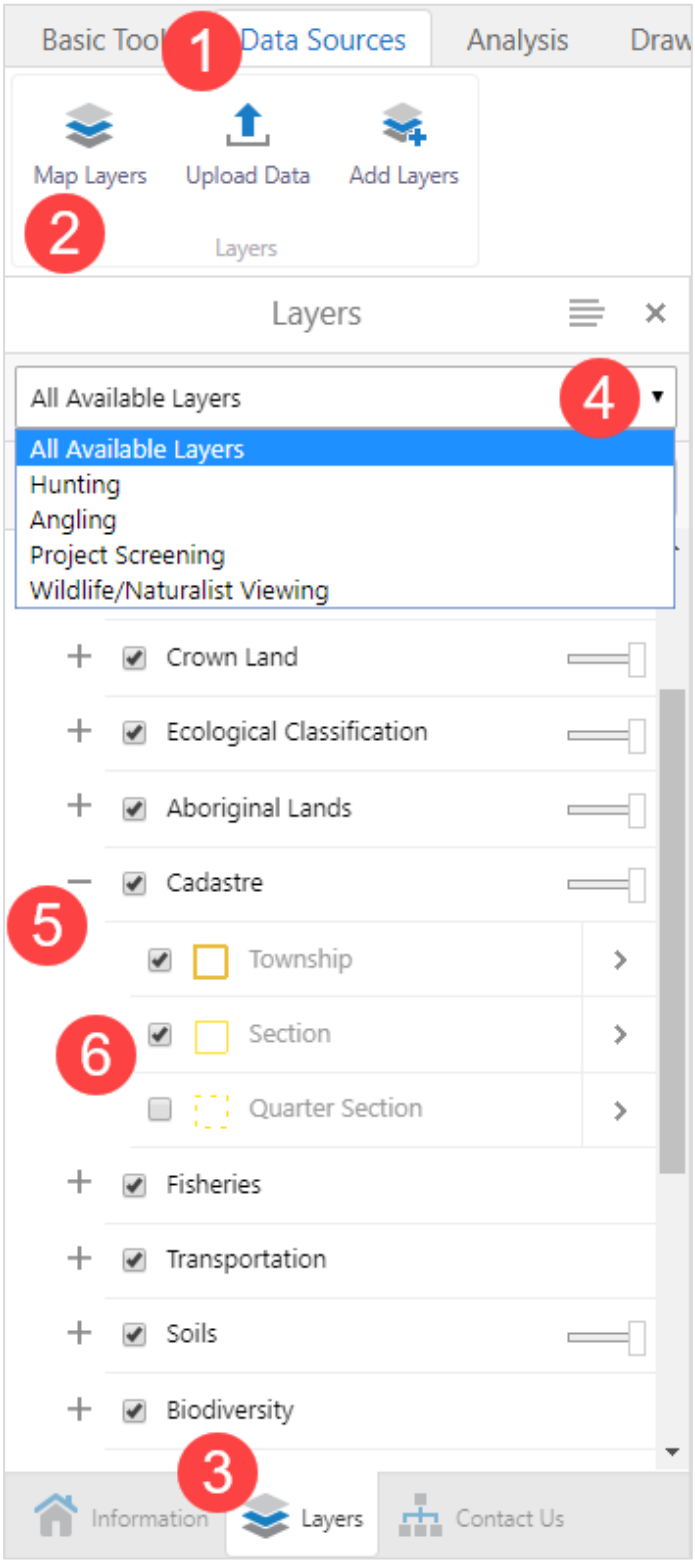
4. To adjust the table size, use the arrow to make it full size or click and drag the handles to resize it.

5. While you hover the mouse over a record in the table, the location will be marked on the map with a red pin.

6. Click on a row in the table or the pin on the map display (step 5) to zoom-in to the feature.

5.0 HABISask – Map Layers

Map Layers provide the core of species, habitat and administrative information found in **HABI**Sask. Map Layers are activated through a number of options identified in the following procedures.



5.1.1 Accessing and Selecting Map Layers

1. Click the **Data Sources** tab near the top of the page.

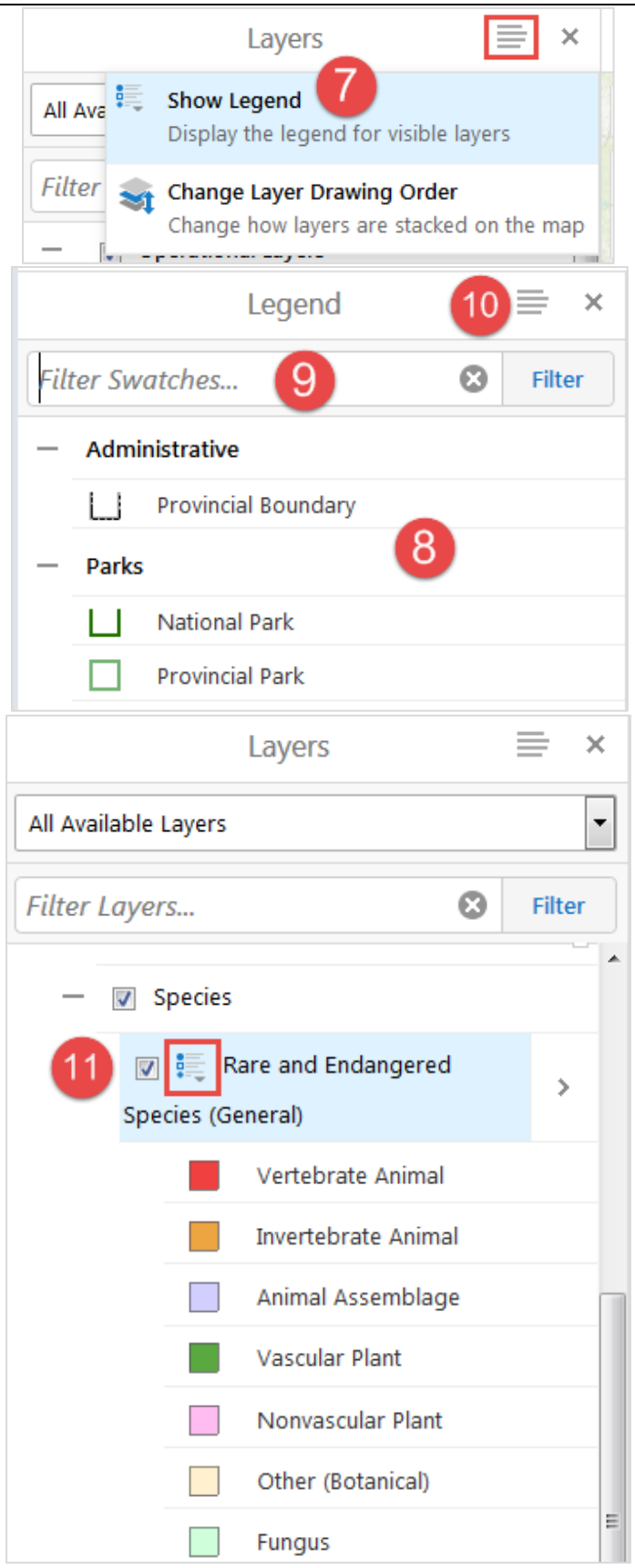
2. Click **Map Layers** from the ribbon.

3. Alternatively, click the **Layers** tab at the bottom of the Information Panel beside the **Information** tab. NOTE: All tabs that are opened will appear on the bottom tab list. **Information** and **Layers** appear by default and additional tabs are added when they are opened, such as Results, Queries, etc.

4. The app provides mapping information and tools through four themes – **Hunting, Angling, Project Screening and Wildlife Viewing/Naturalists** – based on your intended use. Select one of the Layer Themes from the drop-down list to pre-select respective map layers to help you quickly begin your planning efforts. Additional map layers can also be turned on manually after choosing the theme.

5. Each map layer is nested within a group. Click the **"+"** beside a group name to expand it and reveal the map layers within the group. Click the "-" to collapse the group.

6. To choose what map layers will appear on the map display, click the **checkbox** beside a map layer to either select or de-select it. For a map layer to turn on, both the group and individual layer must be checked. For example, to turn on the township layer, both "Cadastre" and "Township" must be checked. In the example to the left, unchecking Cadastre would turn off the township and section layer from displaying on the map even though they are checked.



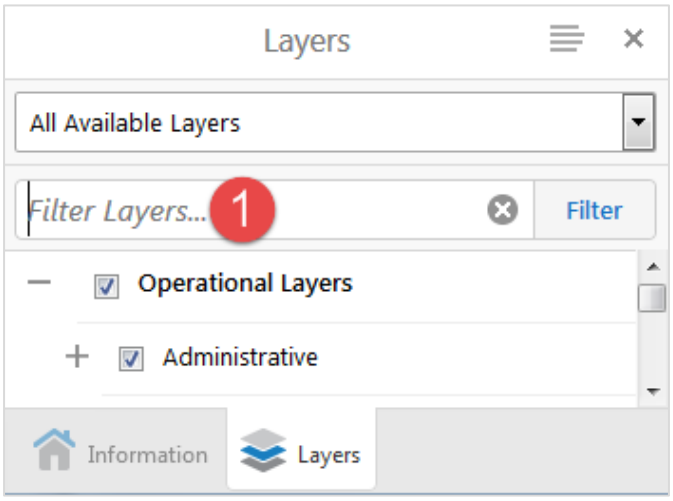
7. To view a legend of all active map layers, select **Show Legend** from the **panel actions menu**.

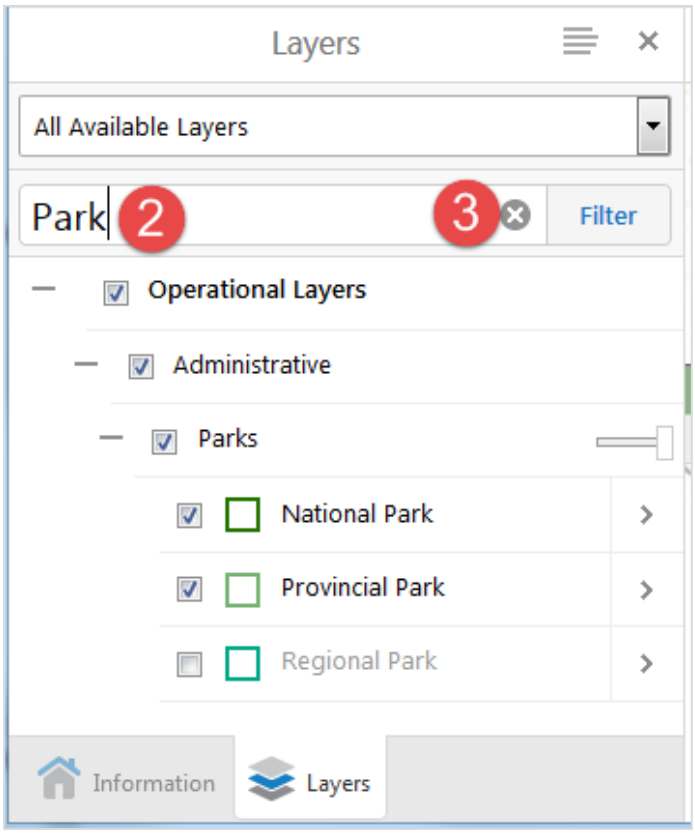
8. The legend will show all active map layers. Note that as you zoom in and out, the legend will automatically update to add/remove layers that show at the scale.

9. The **Filter Swatches** bar allows you to filter the legend. In the example to the left, typing in "Provincial" will filter the legend to show the provincial boundary and provincial park icons, excluded national parks. This does not affect how map layers display on the map, only the legend.

10. To close out of the legend, click the **X** at the top right corner.

11. To view the legend of an individual map layer, click on the **legend information icon** to the left of the map layer name in the layer list. Click on it again to close.



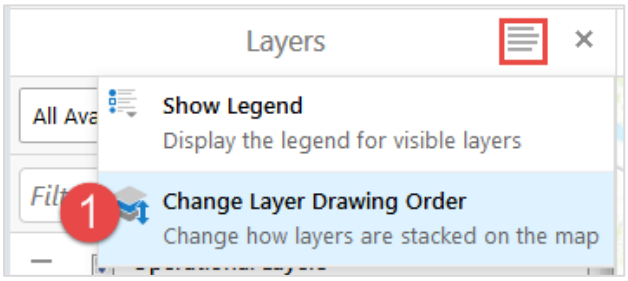


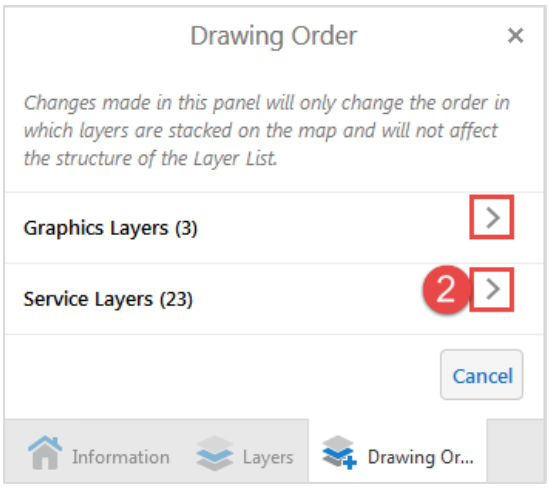
5.1.2 Filter Map Layers

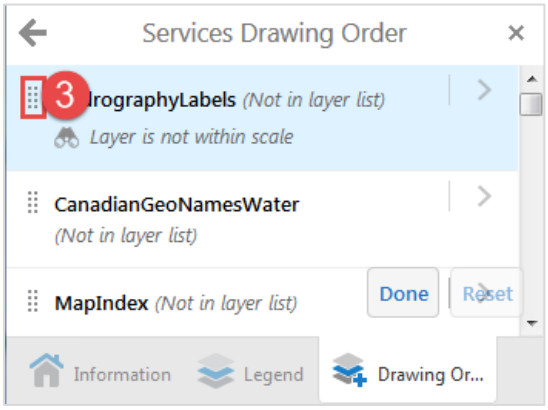
1. From the **Layers** panel, click in the ***Filter Layers…*** text box and type a word or part of a word that you which to search for. For example, type "Park". Select the blue **Filter** button or hit enter on the keyboard.

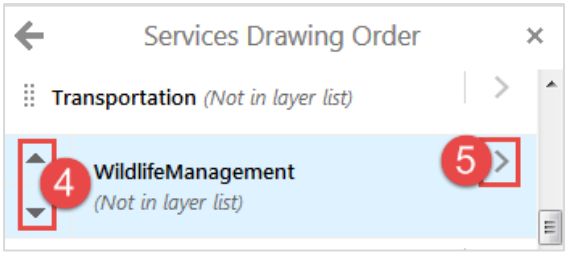
2. The map layers will be filtered for any layer that contains the text that you entered. For example, "Park" will return any layer with park in the map layer name. Note that this only searches the map layer names, and not the content.

3. Select the **X** in the filter layers box to remove the filter.









5.1.3 Change Drawing Order of Map Layers

Changing the drawing order affects the order in which map layers are displayed on the map. Map layers at the top of the drawing order will display on top of everything else. This does not affect how the layers are sorted in the Layers panel or legend.

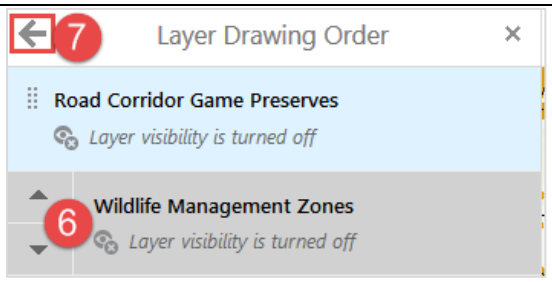
1. From the Layers panel, select the panel actions menu and choose **Change Layer Drawing Order**.

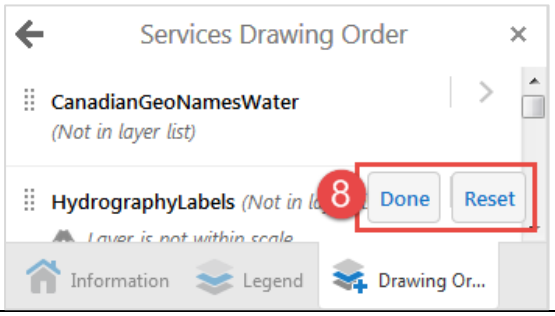
2. The **Drawing Order** panel will open. Layers are divided into graphics layers and service layers. Graphics layers include the fisheries layers and are considered as such because of the clustering settings. Select the arrow beside service layers.

3. All of the service layers will be listed. To reorder them, click the handle (dotted icon) beside the desired map layer name and drag it to the position in the list where you would like it.

4. Alternatively, click the layer in the list. An up and down arrow will appear. Click the respective arrow to move the layer up or down.

5. If the layer only contains one map layer, the arrow to the right of it will be a light grey. If it is a group of multiple layers, the arrow will be a darker grey. Click on a darker grey arrow.





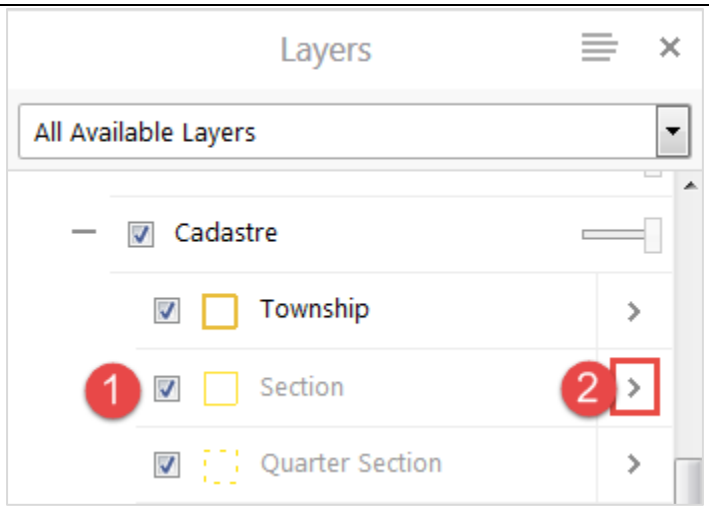
6. All of the layers within the group will be listed. You may reorder them via the methods in step 3 or 4. This reorders how they display within the group.

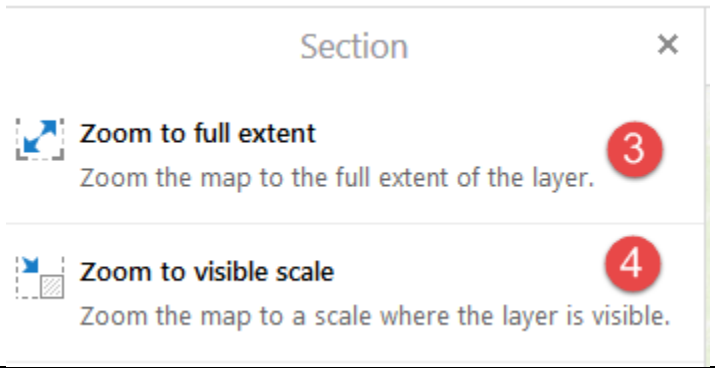
7. To return to the previous page, click the back arrow at the top left.

8. Click **Reset** if you wish to return the map layers to their original order, or click **Done** to close out of the drawing order panel. After selecting **Done**, the map layers will draw in the specified order on the map display.

5.2 Map Layer Actions

Available map layer actions may vary depending on the map layer. For example, the ability to change visualization (i.e., symbology) and labels is only available for certain layers. Options may vary depending on the nature of the layer (e.g. different options exist for points, lines or polygons). If there is a map layer for which you would like do any of the below actions and the action is not available, you may request the functionality be added using the Contact Us button in the **Help** tab and we will do our best to incorporate it in future releases.





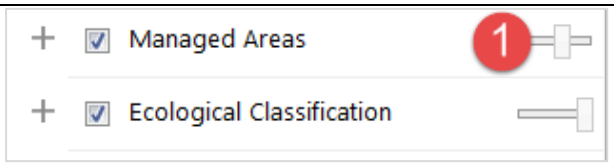
5.2.1 Zoom to Full Extent/Visible Scale

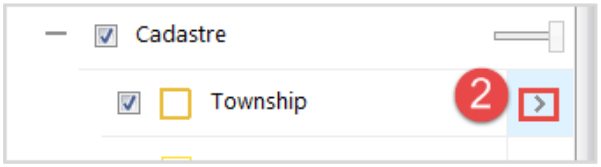
1. **Please Note**: If a map layer name appears **greyed-out**, it means the map is **not zoomed in to a scale at which the layer is set to be visible**. As you zoom in and out in the map display, layers will automatically grey out when the map is outside of their set range.

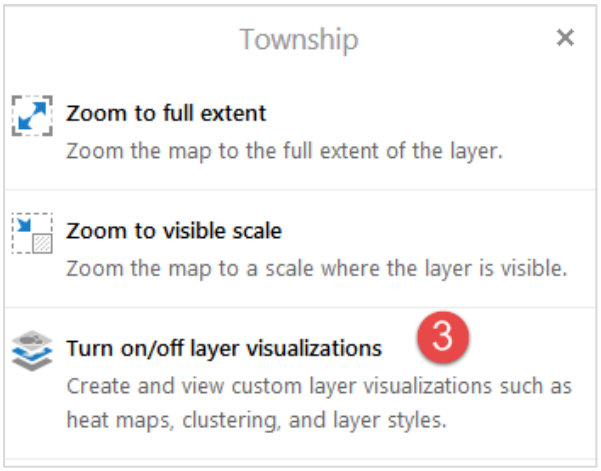
2. Click the arrow beside the map layer to view the available layer actions.

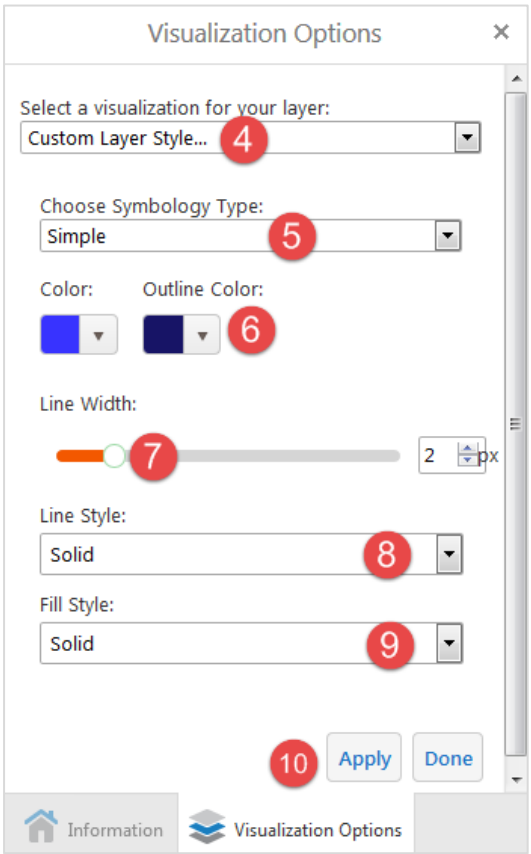
3. Click **Zoom to full extent** and the map will zoom and centre on the layer's outer boundary (e.g. the whole province if it is a province-wide layer).

4. Click **Zoom to Visible Scale** to zoom in. The layer will no longer appear greyed out in the Layers panel, and it will display on the map. You may need to pan across the map (click and drag) to the correct location to view the layer.









5.2.2 Transparency and Turn on/off Layer Visualizations

1. Some map layers have a transparency slider that can be adjusted by clicking and dragging the slider. To the left is 0% and to the right is 100%.

2. To see actions available for a layer, click on the arrow beside the map layer name.

3. Choose **Turn on/off layer visualizations** to customize the map layer. The **Visualizations Options** panel will open.

4. In the **Select a visualization for your layer** drop-down, choose **Custom Layer Style…**

5. Under **Choose Symbology Type**, select simple (all features symbolized the same way) or attribute (features symbolized based on an attribute). If attribute is chosen, choose the attribute to symbolize from the drop-down list. Note that there is a maximum of 12 unique attribute values that can be symbolized.

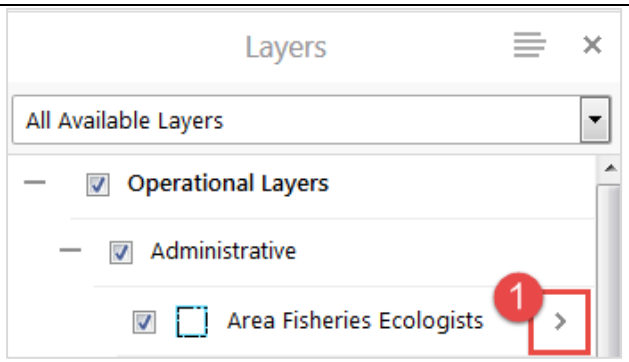
6. Choose a **color** and **outline color** for the map layer by clicking on the color symbol.

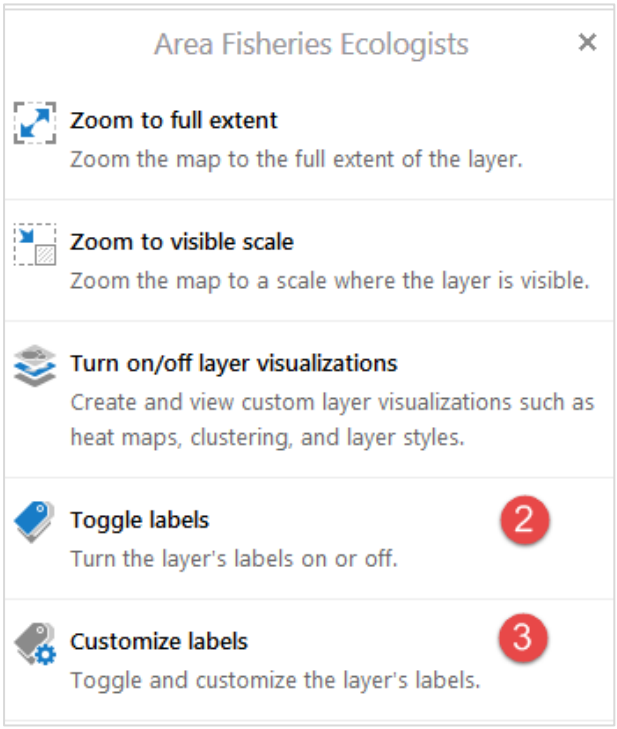
7. Adjust and **line width** (pixels) with the slider. If editing a point layer, **Marker Size** will also be available.

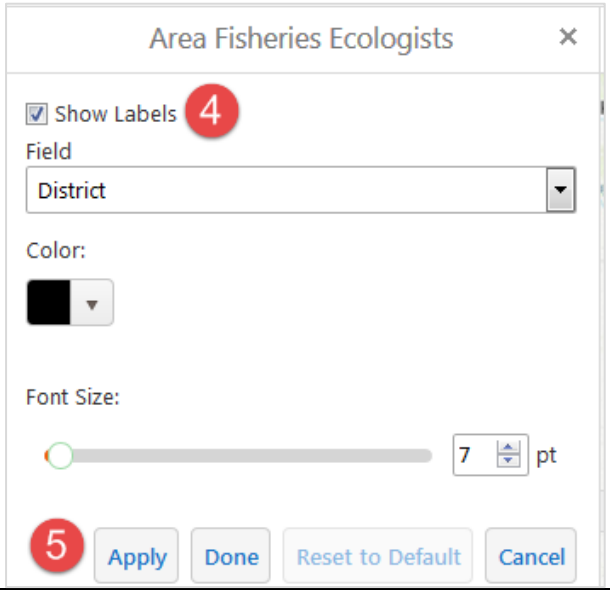
8. Choose a **Line Style.**

9. Choose a **Fill Style** for polygons or **Marker Style** for points.

10. Click **Apply** to view your changes on the map. Choose **Done** to close the **Visualization Options** panel. If you later wish to remove your custom visualizations, return to this menu and select **None** instead of **Custom Layer Style…** in the drop-down (step 4).







5.2.3 Toggle and Customize Labels

1. Click on the arrow beside the map layer name to view available layer actions.

2. If available, there will be a **Toggle labels** option. This will turn labels off of the map for the respective layer, or turn them back on.

3. Click **Customize labels.**

4. Options are given to change the field the labels are drawn from (only available for some layers) or to change the font size and color.

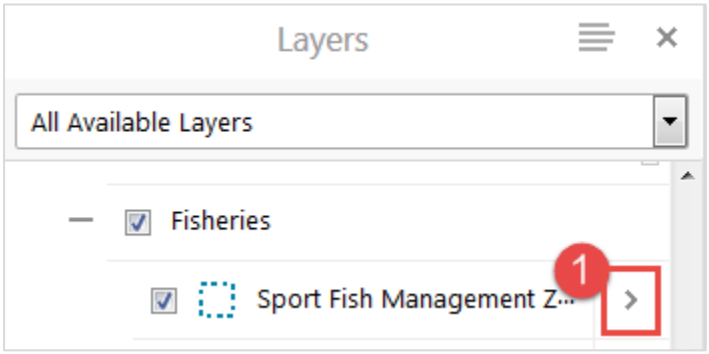
5. Choose **Apply** to view your changes on the map display or **Done** to make the changes and close the customize labels panel. **Reset to Default** will be greyed out unless changes have been made.

5.2.4 Metadata & Downloading

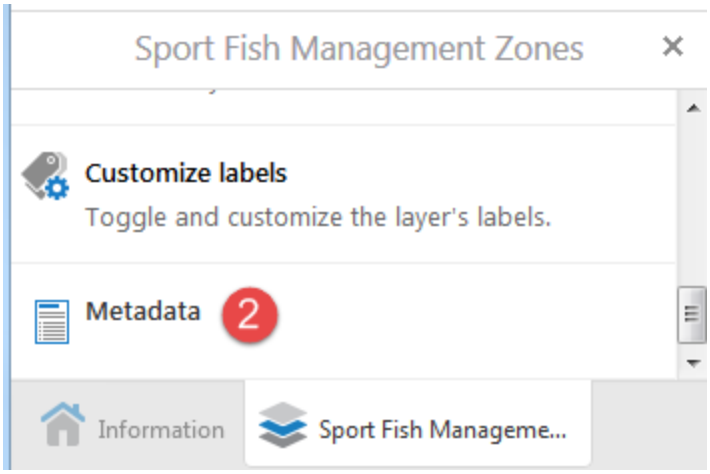
Map layers that are available for download can be found on the Government of Saskatchewan GeoHub site at geohub.saskatchewan.ca. Simply press the enter key in the search bar to view all layers available for the Government of Saskatchewan, or type in key words to search.

Within HABISask, if a GeoHub page exists for a map layer, the metadata button will appear as "Metadata/Download" in the menu and will take you to geohub.saskatchewan.ca. Follow the steps below for finding metadata in HABISask.

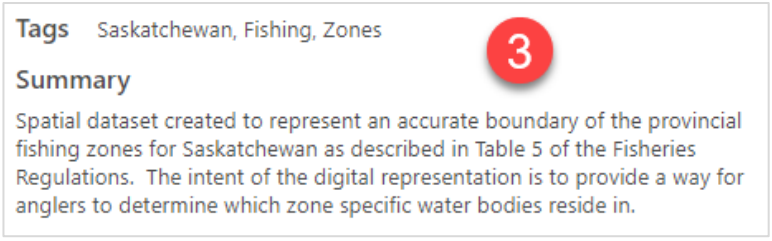
Advanced GIS users may also be interested in accessing the map layers through an ArcGIS Rest Service. All the layers in HABISask can be accessed through: https://gis.saskatchewan.ca/arcgis/rest/services. If using ArcGIS, see this Esri help document for adding connections to ArcGIS Server. For details on accessing the map layers behind the log in, visit the Saskatchewan Conservation Data Centre's HABISask page. For acquisition of map layers not available through any of the above links, please use the Contact Us option under the Help tab to identify the data you wish to acquire.



1. Click the arrow beside the map layer name to view available layer actions.



2. If available, a **Metadata** button will appear in the layer actions menu. Click it to view the metadata.

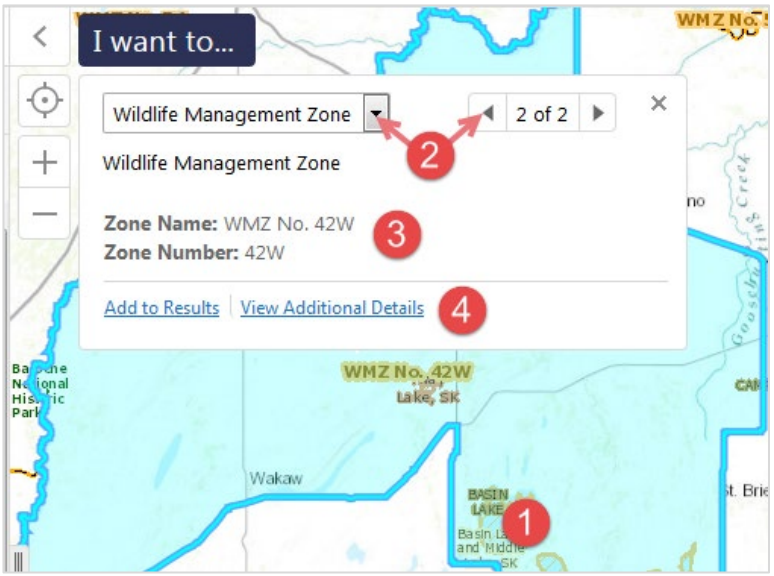


3. Another tab will open in your browser with the layer's metadata. Close when finished to return to the **HABI**Sask tab.

If you have further questions about the map layer or no metadata is available, use the Contact Us button in the Help tab to request more information.

5.3 Map Tip Window & View Additional Details

The map tip window is a pop-up with information that appears on the map after a map layer is clicked, and includes the option to view additional details.



1. Click on an area of interest on the map (e.g., in the hunting theme, click on a Wildlife Management Zone). The area that was clicked will highlight in light blue and the map tip window will appear.

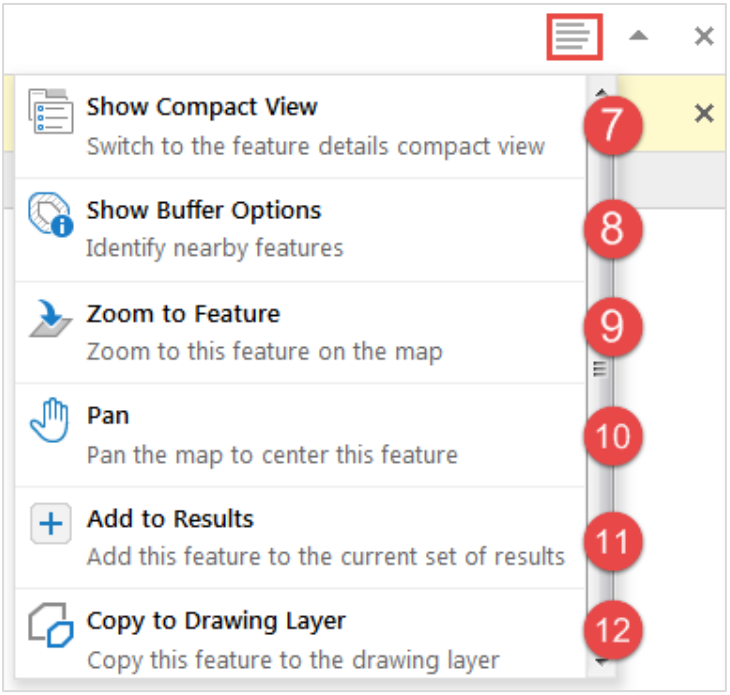
2. If more than one map layer is in the area that was clicked, you can scroll through the results by selecting the map layer name from the drop-down list or selecting the arrows in the top right corner. The selected feature will highlight on the map.

3. For each map layer selected, a few attributes will display in the map tip window (e.g., zone name).

4. To find out more, select **View Additional Details**.

5. The additional details will appear below the map. Some layers have related tables that display as tabs (e.g., hunting season draw, hunting season regular). Click on the tabs to view the information contained within them.

6. For additional actions, select the **Panels Actions Menu** (line icon at top right).



7. In the panel actions menu, select **Show Compact View** to display the additional details in the left panel instead of below the map. To return to the view below the map, select the panel actions again and select **Show Expanded View**.

8. Select **Show Buffer Options** to buffer the selected feature and generate a list of features within the buffer distance. See section 7.3.2 Identify: Enable Buffering for details on buffering.

9. Select **Zoom to Feature** and the map will zoom in on the selected feature (if not already zoomed in).

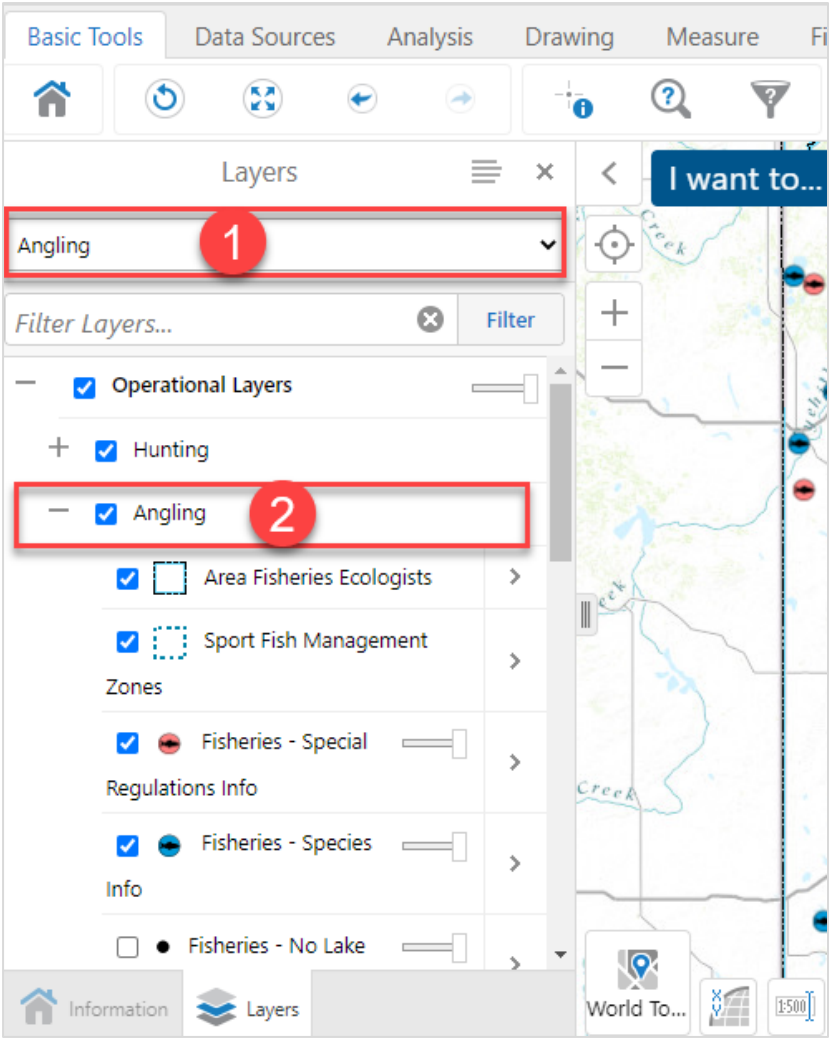
10. Select **Pan** and the map will pan and center on the selected feature without zooming in.

11. **Add to Results** will add the selected feature to an existing set of results, or create a new list if none has been created.

12. **Copy to Drawing Layer** will take the shape of the selected feature and copy it as a drawing on the map. Drawings can be edited and exported: see section 10.0 Drawing Tab to learn more, including instructions on clearing it from the map.

5.4 Angling Theme: Fisheries Map Layers

The Fisheries Map Layers contain additional sub-layers: Sport Fisheries Management Zones, Species Information (blue fish-circle icon), Special Regulations Information (red fish-circle icon), and No Lake Information (black circle icon). The following steps can be used to reveal all or any of these Fisheries map layers. See Section 13.3 Fish Finder for any easy way to filter the layers by fish species.

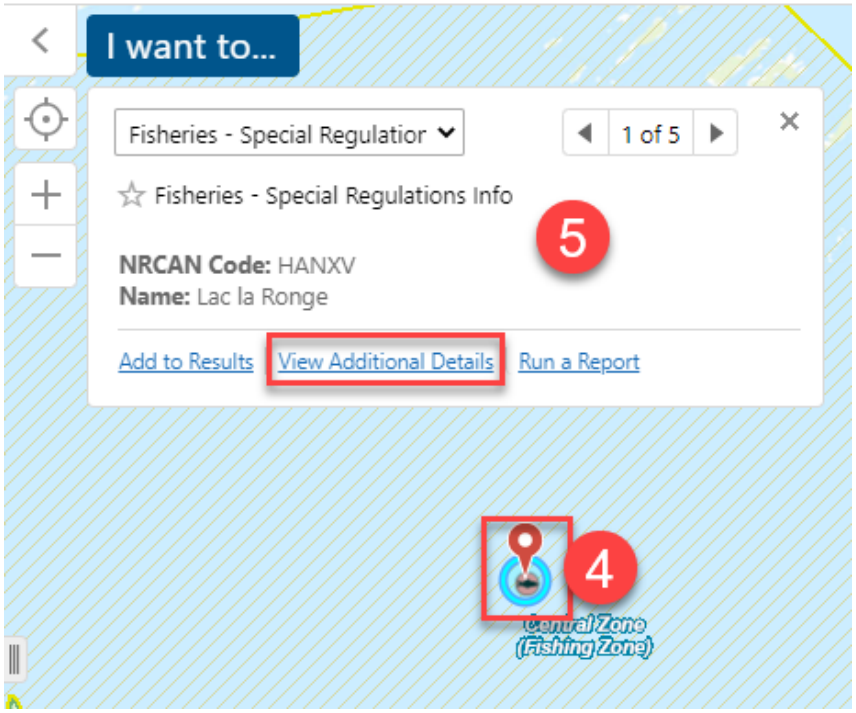


1. To reveal all the Fisheries map layers, select the **Angling** map layer theme. This will select all fisheries related map layers grouped under the Angling theme, except for the No Lake Information layer.

OR

2. From the **Layers** tab, within the **Operational Layers**, expand **Angling** by clicking the "+" button. Select **Fisheries - Species Info** by clicking the box beside it. Once selected there will be a checkmark.

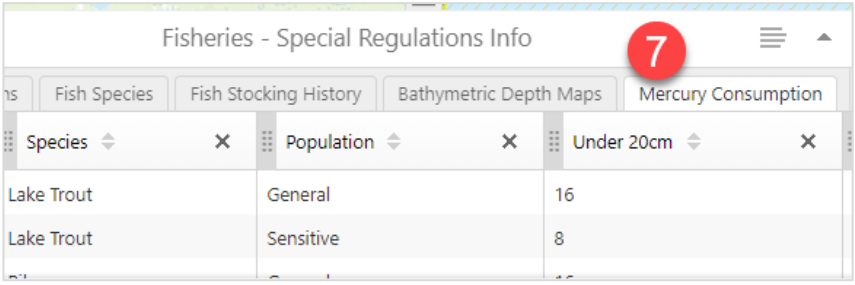
3. As you view the map, fisheries locations are shown as circles with a fish in the middle. Each red icon represents a location with fisheries information and special regulations pertaining to that location. Each blue icon represents a location with fisheries information only.



4. To view additional details for a selected **Fisheries – Species Info or Fisheries – Special Regulations Info** location, click on the desired fish icon.

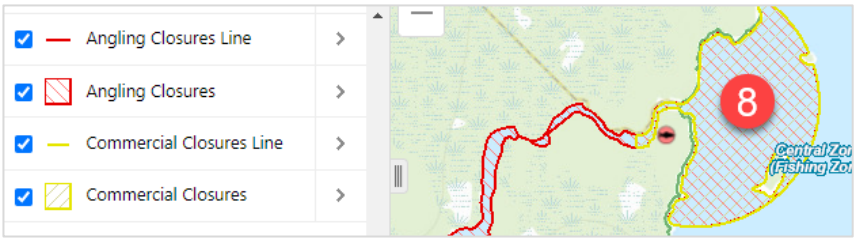
5. A map-tip window will open that contains the name of the Fisheries. To view further details of the Fisheries location, click **View Additional Details**.

6. A results window will open that contains the name of the waterbody, as well as fish species found there, any special regulations in effect, fish stocking history, links to bathymetric maps, and recommended consumption guidelines for mercury, if available.

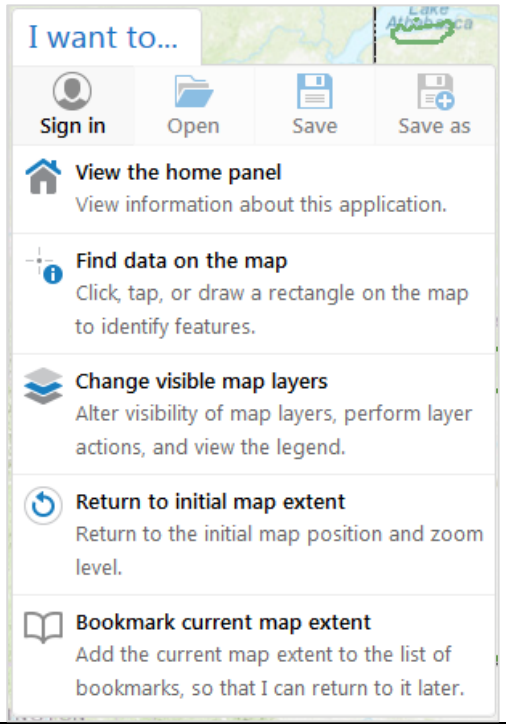


7. **Mercury consumption guidelines** are listed as the recommended number of meals per month based on size and species of fish. The "sensitive" population refers to women who are or may become pregnant, or are breastfeeding, and children under 12 years of age. A meal is defined as 8 ounces, or 220 grams of uncooked fish.

   For more information on mercury in fish, please refer to the Mercury in Fish document found on the Government of Saskatchewan Publications Centre.

	8. **Seasonal or permanent closures** to commercial and recreational fisheries are an important part of management of fish stocks. These closures are shown in Yellow for commercial closures and Red for recreational fishing closures.

6.0 Map Window Tools



6.1 "I want to…" menu

On the map, in the top left corner, there is an "**I want to…**" menu that is blue when not selected. To expand, click on the menu and a list of quick options will be shown.

This menu tries to anticipate what you will want to do most often. The menu also contains the tools for signing in, saving and opening projects (will be greyed out unless signed in).

This section covers instructions for signing in and saving projects. The other "quick options" are covered in the following sections:

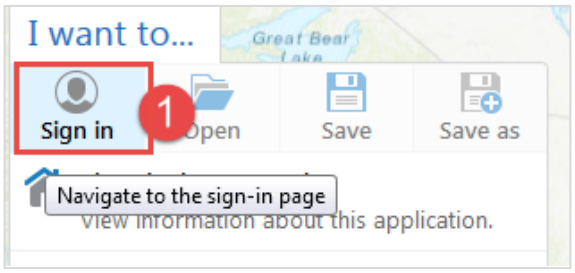
7.1 View the home panel
7.3 Find data on the map
5.1 Change visible map layers
7.2 Return to initial map extent
7.8 Bookmark current map extent

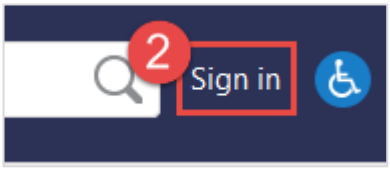
6.1.1 I want to…Sign In

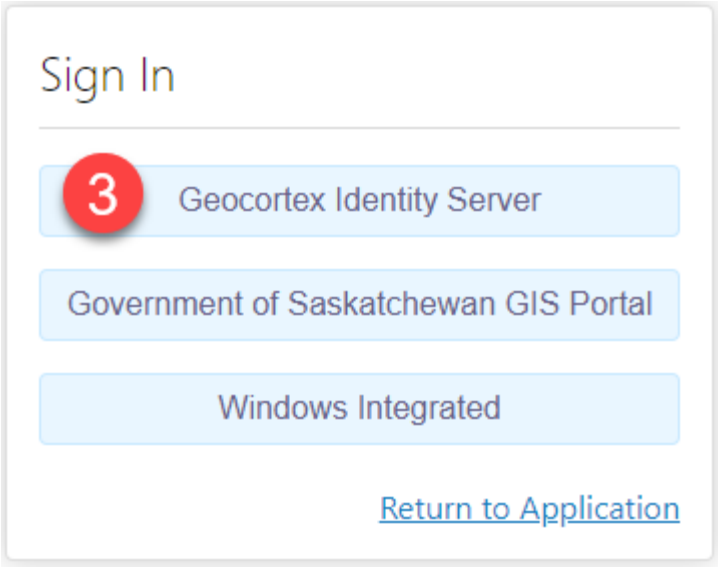
The Saskatchewan Conservation Data Centre (SKCDC) provides access to detailed information on rare and endangered species for those with a demonstrated need to know. Such needs may include project planning with respect to developments on the landscape, conservation planning, independent confirmation of presence or other uses that do not compromise the likelihood of long-term species or habitat persistence at a given site. The rare and endangered species map layer is available in **HABI**Sask to general users without logging in, but attributes are limited to species group (i.e. animal, vascular plant), and detailed information such as species and observation details are not provided. **Signing in will also give access to map layers such as Federal Critical Habitat, Federal Emergency Protection Order, Species Predictive Models, Important Natural Areas and more.**

General users, without a login, are unable to access the **Project Screening Report tool** (section 13.4), which enables the creation of a pdf report of biodiversity information within an area**.**

HABISask users may request detailed access by emailing a short explanation of their needs and attaching a signed **Data Sharing Agreemen**t, downloaded from http://biodiversity.sk.ca/HABISask.htm. The SKCDC reserves the right to decline such requests if the need does not warrant such access.







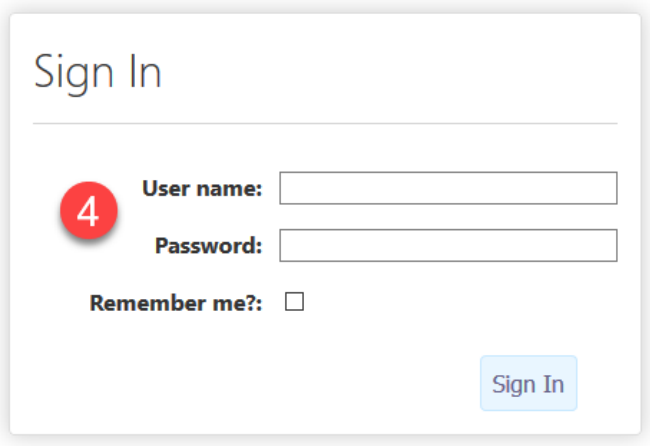
If you or your organization have signed a data sharing agreement with the SKCDC and you have a user name and password, you may sign in using the following steps:

1. Select **Sign In** from the top left-hand corner of the **I want to…** menu.

OR

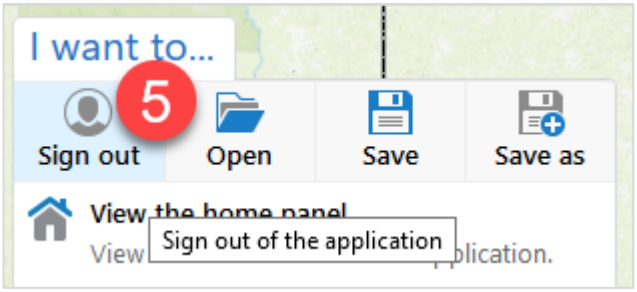
2. Use the **Sign In** option in the upper, right-hand corner of the app.

3. If you are a user external to the Government of Saskatchewan, select **Geocortex Identity Server**. Government of Saskatchewan users may sign in with the **Government of Saskatchewan GIS Portal** option.



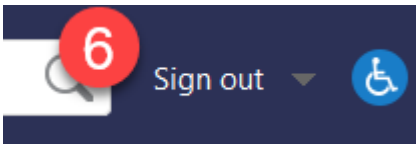
4. Enter your user name and password and select **Sign In**. The page will re-load and you will now be signed in. The **Users Agreement** will pop-up and contains additional information pertaining to the data available after signing in.

Note: If you receive an Access Denied page, you may have entered incorrect credentials or selected the wrong sign in option (Geocortex for external users and Government of Saskatchewan GIS Portal for Government users). You will need to clear your browser's cookies and return to HABISask to get a new sign in page. If you continue to have sign in trouble, use the Contact Us button in HABISask to ask for assistance.



5. To sign out, either click the **I want to…** drop down list and select **Sign Out**;

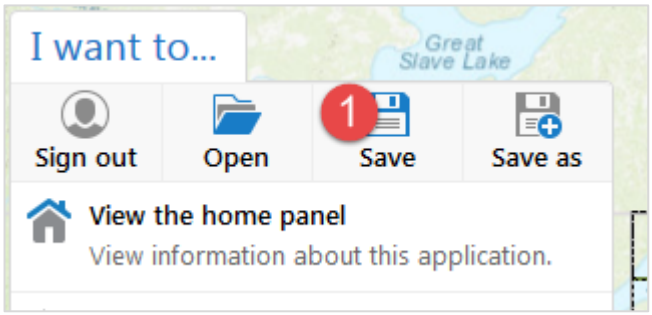
OR



6. Click **Sign Out** in the upper right-hand corner of the app.

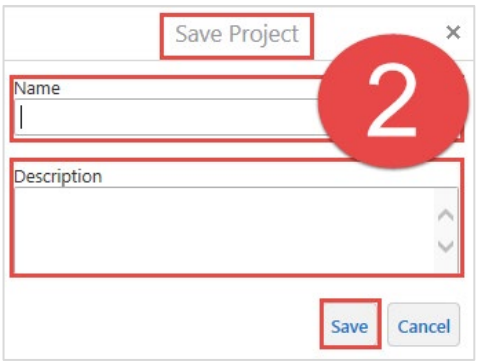
7. You will be shown a new page confirming you are signed out before it redirects back to **HABI**Sask.

NOTE: HABISask will only allow you to save a project if you are signed in through a data sharing agreement with the SKCDC.

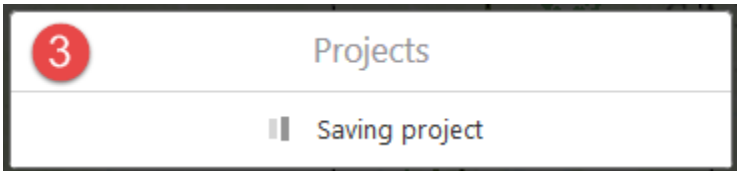


6.1.2 I want to…Save (a project)

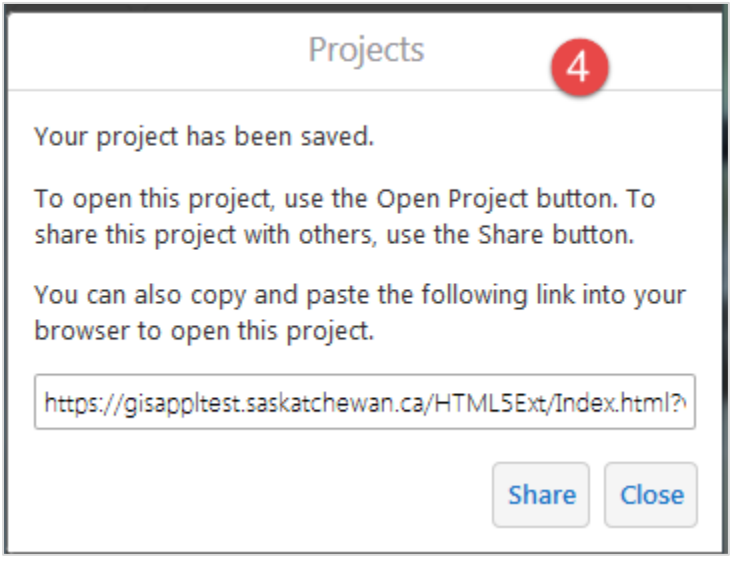
1. Click on the **save** icon. You must be **signed in** or this will be greyed out.



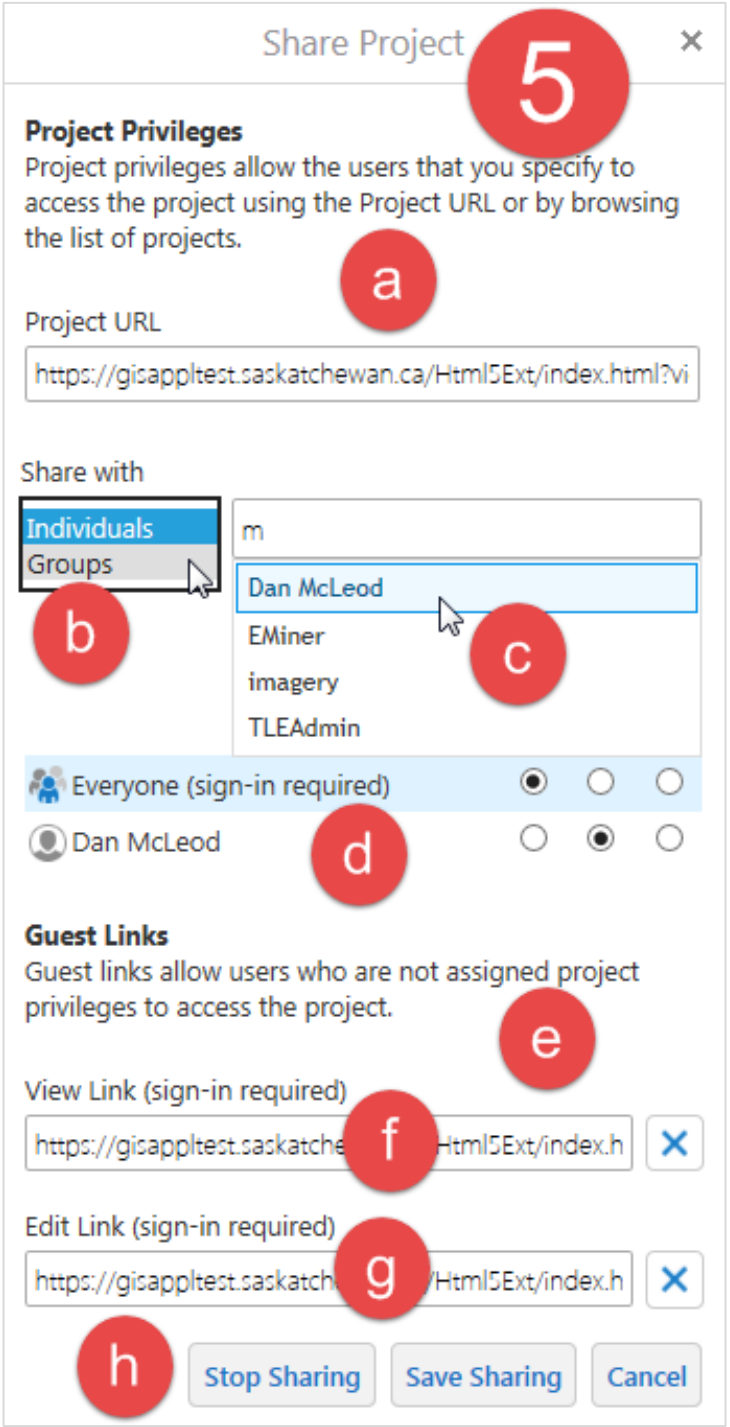
2. If you have not saved this project before, the **Save Project** panel will open. Enter the name of your project and brief description (if desired) and click on **Save**. If you were working out of an already saved project, this step will be skipped and the project will be saved to the open project.



3. A dialogue window will open with a process bar demonstrating the project is being saved.



4. A second dialogue window will open which tells you **your project has been saved**. There are options provided as to how you can **Open** the project or **Share** it with others (to share, the other user must also have an account to sign in). Click **Share.**



5. Your project can be shared with Users you specify:
   a. The **Project URL** is where the project has been saved.

   b. You can specify whether you want to share the project with **individuals** or a **group**.

   c. Enter user name of individual or group and a drop-down list of existing individuals or groups will appear. Click **Add** to add the User you wish to have access the project.

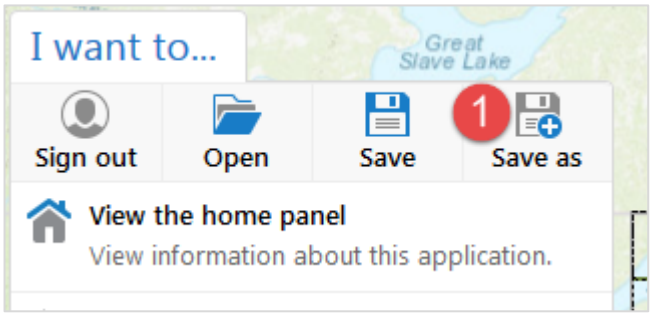
   d. The individual or group will be added to Users. You can then set whether they have no privileges (**None**), can **View** the project or can **Edit** the project.

   e. **Guest Links** allows Users without assigned project privileges to access the project. This option still requires the other user to sign in using their account.

   f. You can grant **View**-only privileges OR

   g. **Edit** privileges.

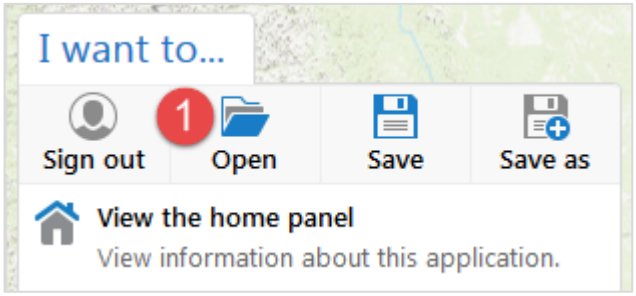
   h. Click **Stop Sharing** to disconnect the links to others; **Save Sharing** to save the settings for the project with the Share Project privileges. Click **Cancel** to cancel the sharing of the project.



6.1.3 I want to…Save as

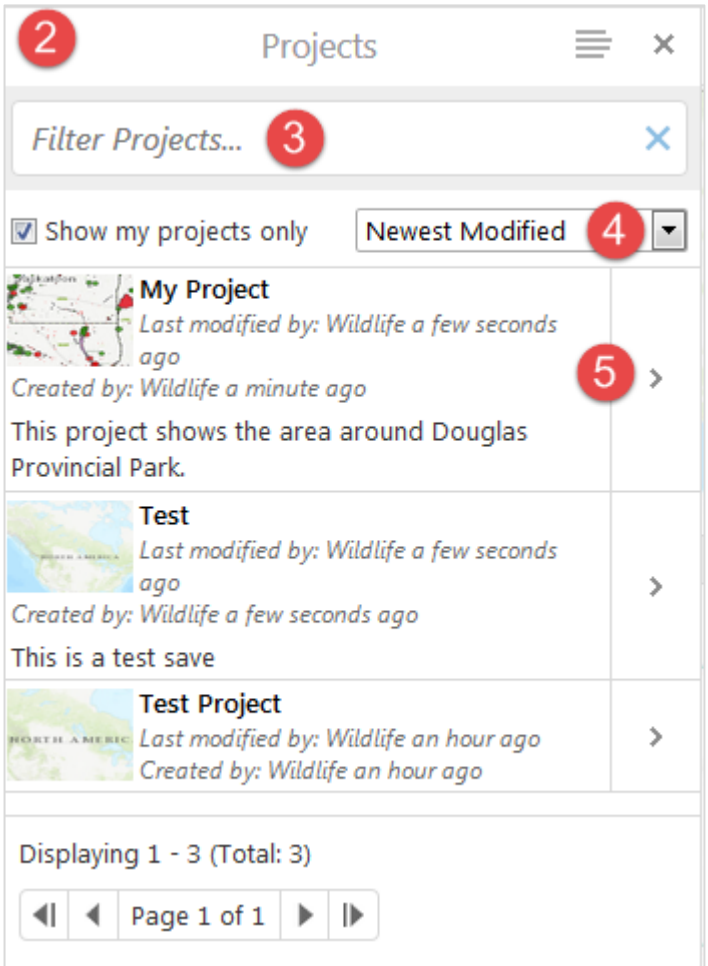
1. Click on **Save as** to save your project under another name.

2. See section 6.1.2 I want to… Save (a project) for details on saving and sharing a project.



6.1.4 I want to…Open (a project)

1. Click **Open** to open an existing project.

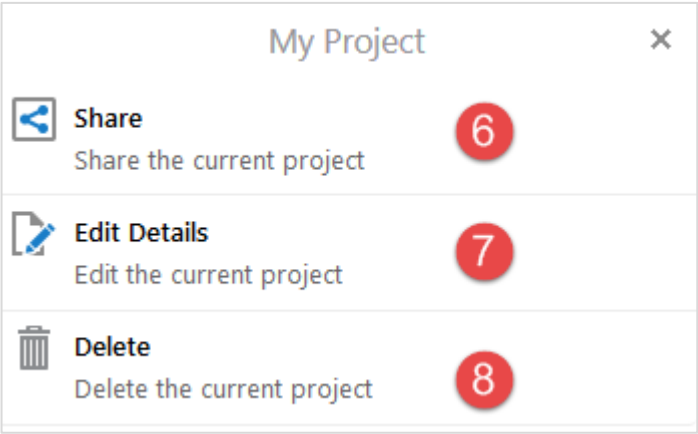


2. The **Projects** panel will open, displaying all of the saved projects under your account. If you have a shared account within your office, there may be projects saved by other members of your team – talk to them before editing their projects!

3. Type in your project name or a part of your project name in the ***Filter Projects*** text box to filter the list.

4. Click the drop-down list to sort by project name, newest created, newest modified, modified by or created by.

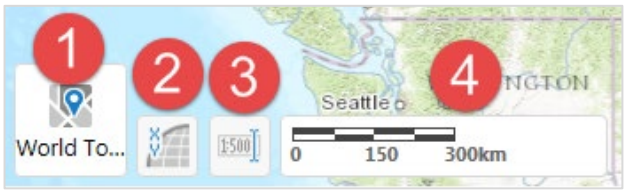
5. Click the **arrow** beside your project name to see the available **project actions**.



6. Click **Share** to share your project with other individuals (see section 6.1.2. I want to… Save, step 5).

7. Click **Edit Details** to edit the project name, description or to access the project URL.

8. **Click Delete** to delete the project. This cannot be undone.



6.2 Map Window Tools: Cartographic Tools

There are four map window tools in the lower left-hand corner of the map:

1. Basemap Menu
2. Coordinates Widget
3. Scale Input Box
4. Scale Bar

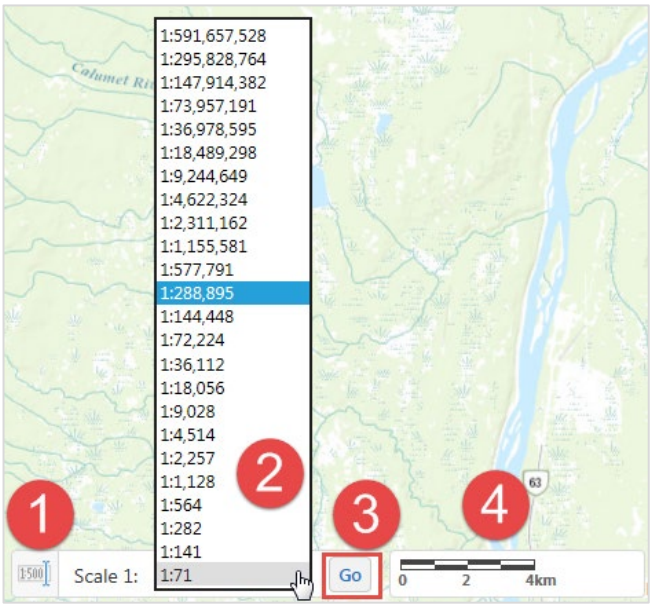
6.2.1 Basemap Menu

1. On the lower left of the map, the name of the basemap will be displayed (e.g., World Topographic Map – ESRI) - click to expand the options.

2. From here, a new basemap can be selected.

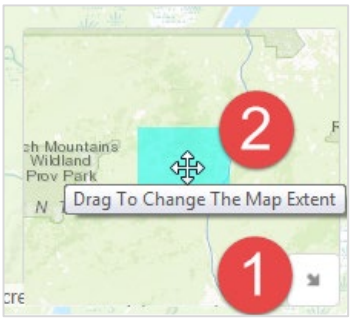
6.2.2 Coordinates Widget

After clicking the **Coordinates Widget** icon, coordinate system information will be displayed; the system in the left-hand box (1) and the coordinates in the right-hand box (2). The coordinate system can be changed using the drop-down menu arrow (3) and selecting one of the coordinate system options listed (4).



6.2.3 Scale Input Box

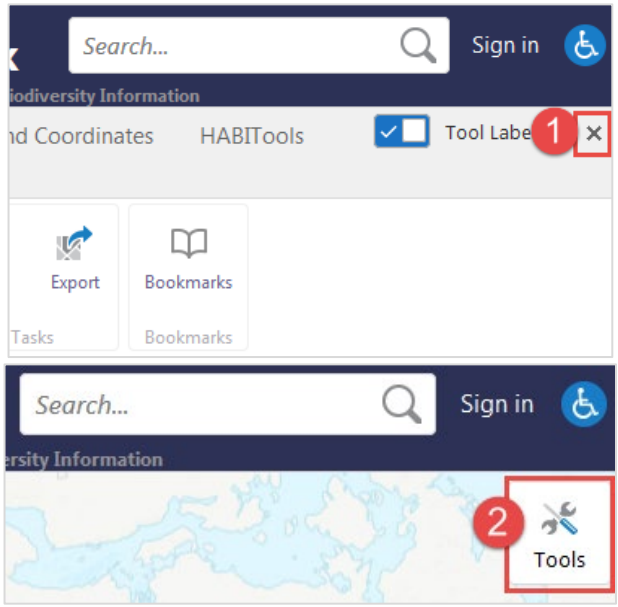
1. Click on the **Scale Input Box** to open or close it.
2. The scale is shown in the **Scale input Box** and can be set using the available values in the drop down list or can be manually typed into the **Scale Input Box**.
3. Click **Go** once a scale value has been selected or manually entered.
4. The **Scale Bar** will reconfigure to show the proper scale dimensions for the map.



6.2.4 Overview Map

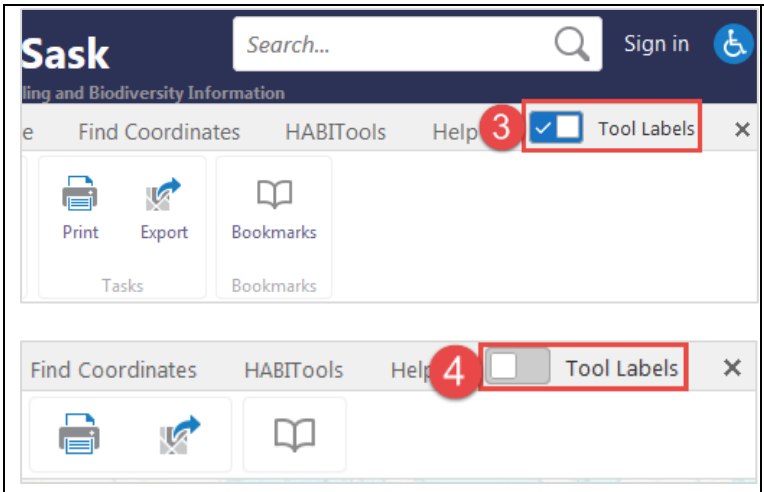
The **Overview Map** provides an image of the current map view and insets it within a view of the larger map extent.

1. Click the **Overview Map** icon (arrow symbol in the bottom right corner of the map display) to open or close the **Overview Map**.
2. Click and drag the cursor on the light blue box within the Overview Map or pan/zoom within the main map display to move the extent of the **Overview Map**.



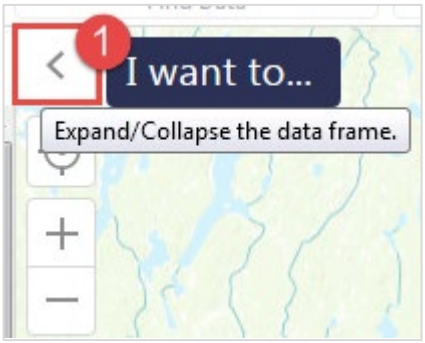
6.2.5 Open/Close Toolbar and Change Tool Labels

1. To close the toolbar and have a bigger map display, select the **X** at the top right-hand corner of the toolbar.
2. Click the **Tools** icon in the upper right-hand corner of the screen to open it again.



3. In the toolbar, select the check mark beside **Tool Labels** to convert tool labels to smaller icons.

4. Select the check mark back on to change them to larger, labeled icons.



6.2.6 Overview Map

1. Click the **Expand/Collapse** icon to open or close the side information panel.

6.2.7 Zoom In/Out

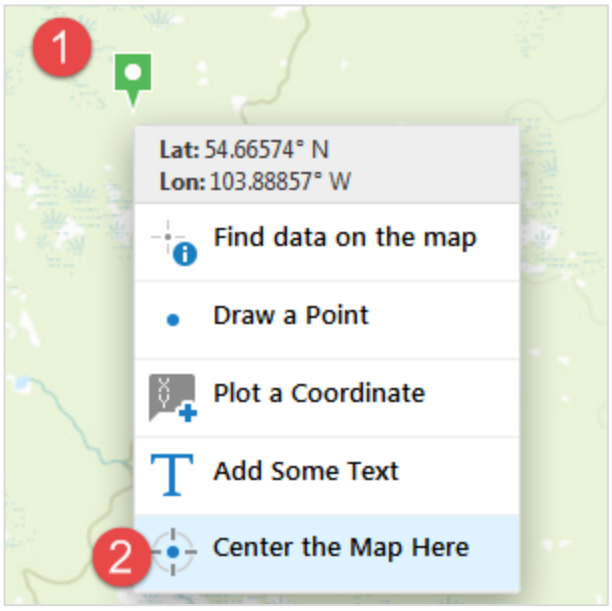
1. At the top left of the map display, click the plus or minus icon to **Zoom in** or **Zoom out** on the map.

   OR

   Click on the map display and use the **scroll wheel** on your mouse.

   OR

   While holding the **shift** key on your keyboard, **click and drag** the mouse over an area to **zoom in** and centre on the selected location.

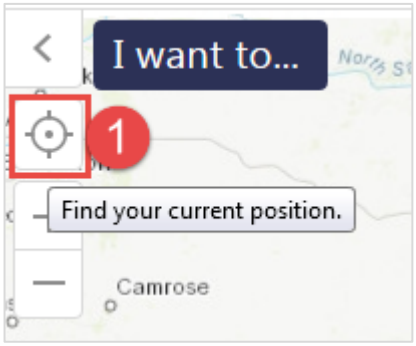


6.2.8 Pan and Centre the Map Here

1. To **pan** across the map to a different location, click and hold a position on the map and drag the map in the direction you would like to move it (e.g., to pan to the east, click and drag the mouse to the left). While panning, the cursor will appear as a four-way arrow. When you let go of the mouse, the map will reload in the new location.

OR

2. Right click the map in the desired location and select **Centre the Map Here** from the menu. The map will centre on the location that was right clicked.



6.2.9 Find Your Current Position

1. Click the geolocation (target) icon in the top left corner of the map display.

2. A **Geolocation** dialogue will display.

3. Click **Find Me** and the map will zoom and centre on your current location. You may get a pop-up window asking for access to your location – you must allow location access for this tool to function.

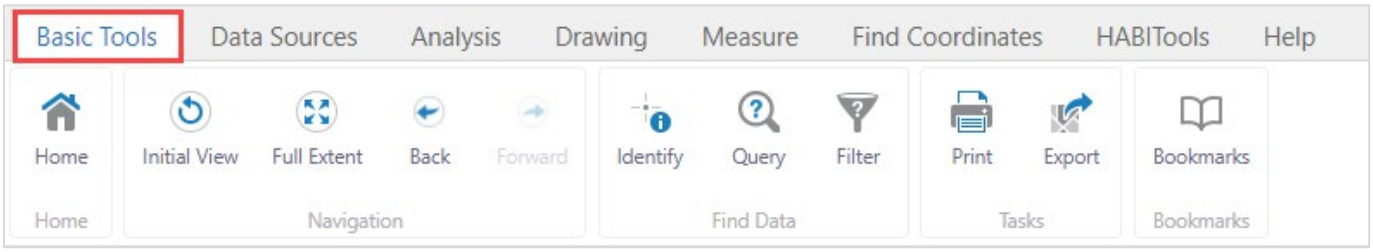
4. Click **Track Me** and **HABI**Sask will follow your location as you move and track it on the map. A window with a message that it is "tracking via geolocation" along with your current coordinates will appear at the bottom of the map.

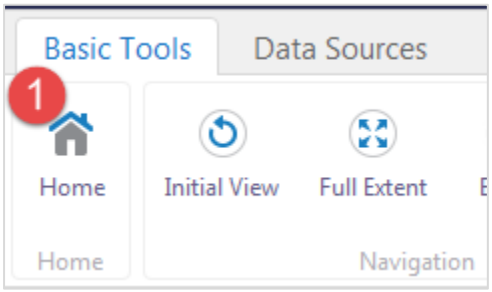
5. Click **Follow Me** and the map will continue to centre on your location as you move. A window with a message that it is "following via geolocation" along with your current coordinates will appear at the bottom of the map.

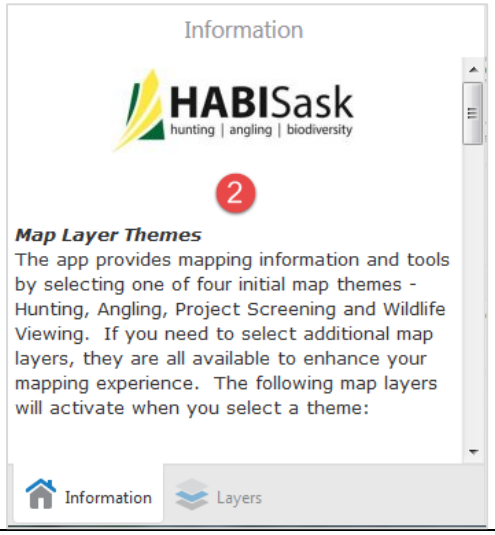
6. While geolocation is active (tracking or following), a blue arrow will appear on the geolocation icon at the top left of the map. Click this icon to turn geolocation back off.

7.0 Basic Tools Tab

The **Basic Tools** tab contains many of the basic search and query tools for the app.



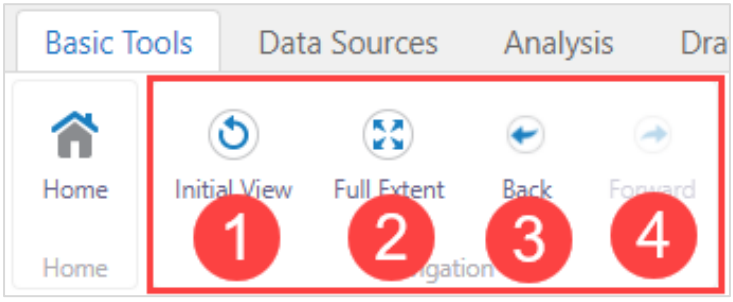




7.1 Home

1. Click **Home** and it will return to the introductory page.

2. The **Information** panel will open to provide information about the **HABI**Sask application, including details about the map layer themes and how to get a sign-in account to view the detailed rare and endangered species layer.

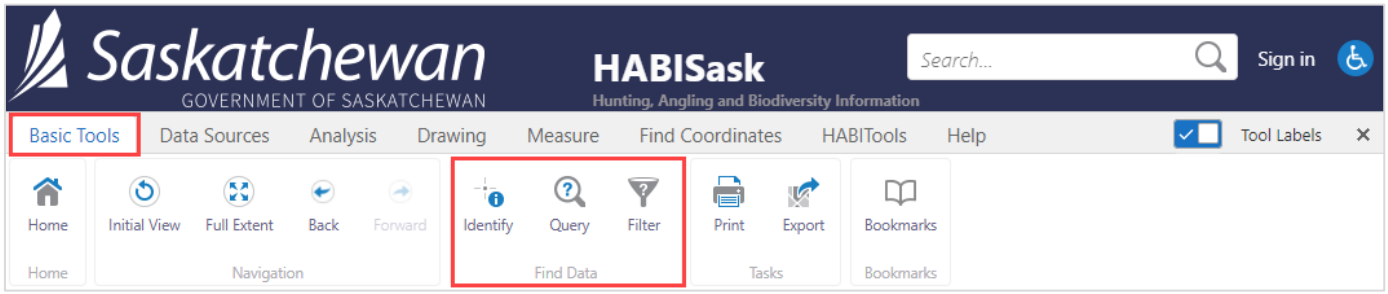


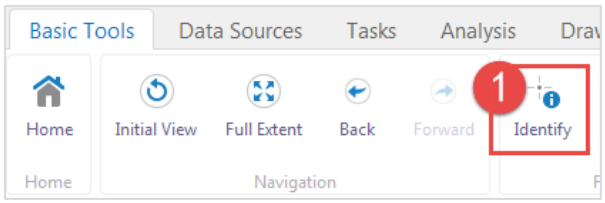
7.2 Navigation

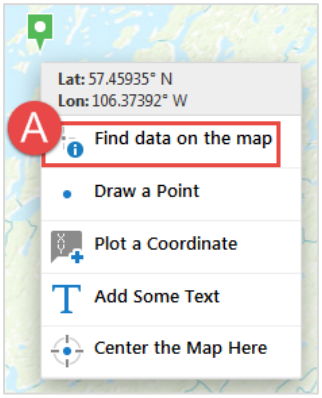
1. **Initial View** returns you to the initial position of the map.
2. **Full Extent** zooms out to the full extent of the map.
3. **Back** zooms you to the previous extent of the map.
4. **Forward** zooms you to the next extent (only available after back has been selected).

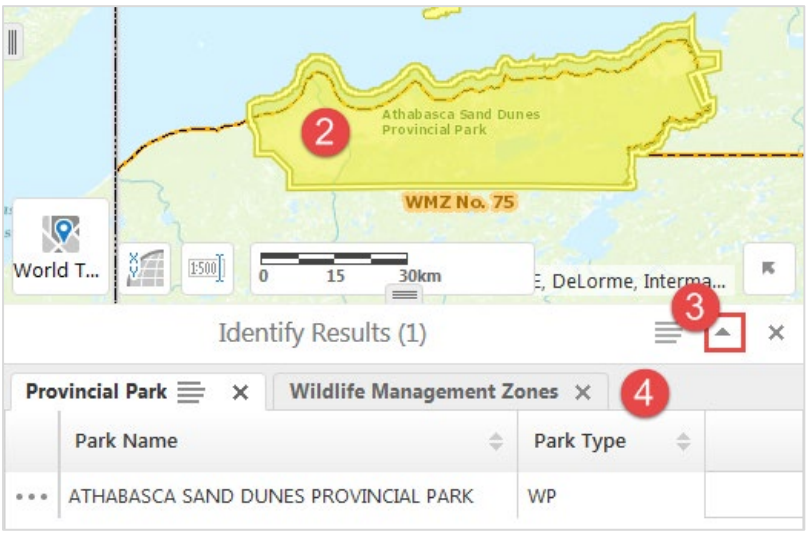
7.3 Find Data

Identify will show results for an area selected related to the layer being viewed. **Note that the identify tool will only show results for layers displaying on the map display. For scale-dependent layers, you must be zoomed in above the visible scale in order to identify them.** See section 5.1 for details on visible scales.









7.3.1 Identify

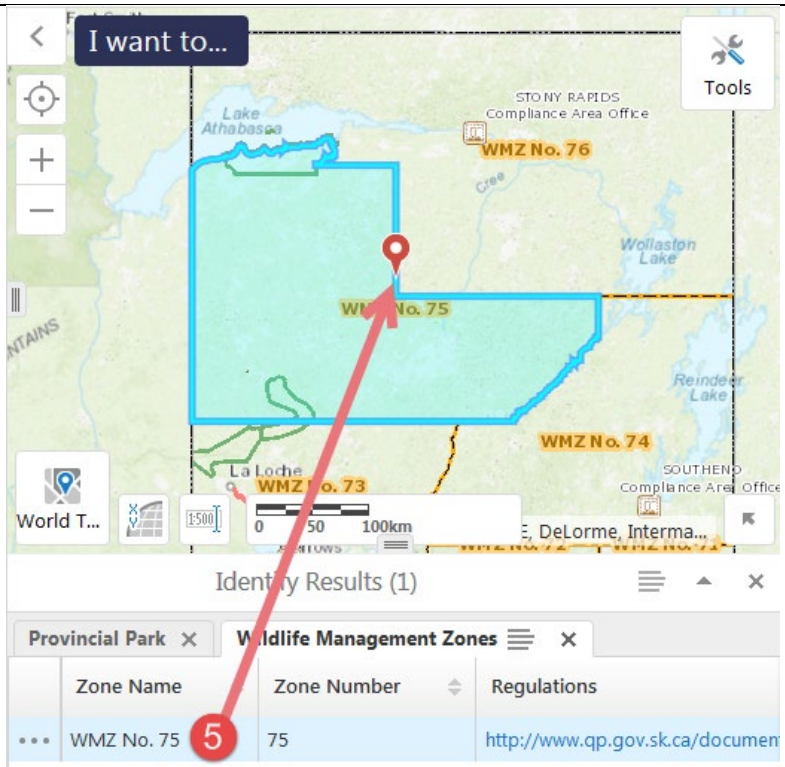
1. Click **Identify** from the **Basic Tools** tab. The icon will turn blue to signal that the tool is active. If you need to turn it off (for example, to pan across the map), select the **Identify** button again, so that it is no longer blue. Once you've panned to your location, turn the tool back on by selecting it again.

   OR: A. Right-click the map in the desired location to access a menu and click **Find data on the map** to quickly run the identify tool, and skip steps 1 and 2.

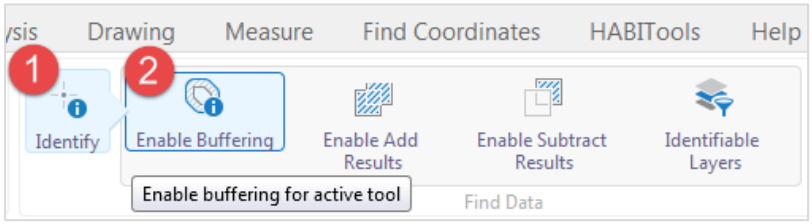
2. Select an area on the map to search. You may select a point, or click and drag the mouse to select an area. **Note: if you wish to use different drawing tools to select an area (e.g., lines, freehand or polygon), see section 9.0 analysis tab**.

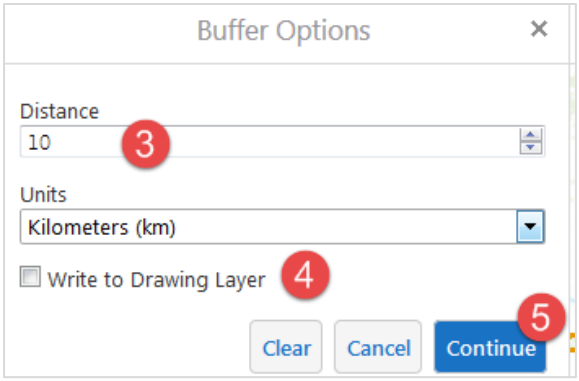
3. Results will show in a table below the map display, and selected features will be highlighted in yellow on the map. To make the table full size, use the arrow icon at the right corner of the table.

4. Within the **Identify Results** table, there will be a tab for each layer (in this example, there is a provincial park and wildlife management zone). Click on the tab to view more information.



5. When you hover over a record in the table, the feature will highlight in blue on the map display. If you click on the record in the table, the map will also zoom and center on it.

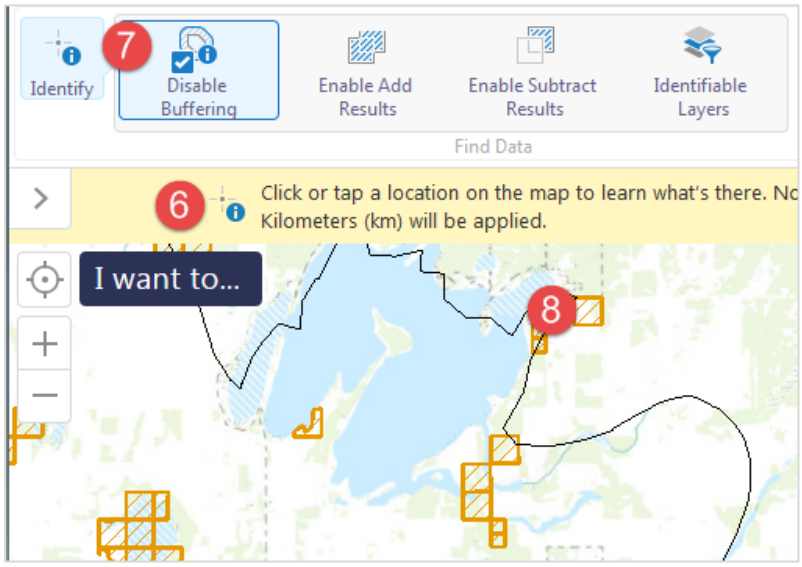


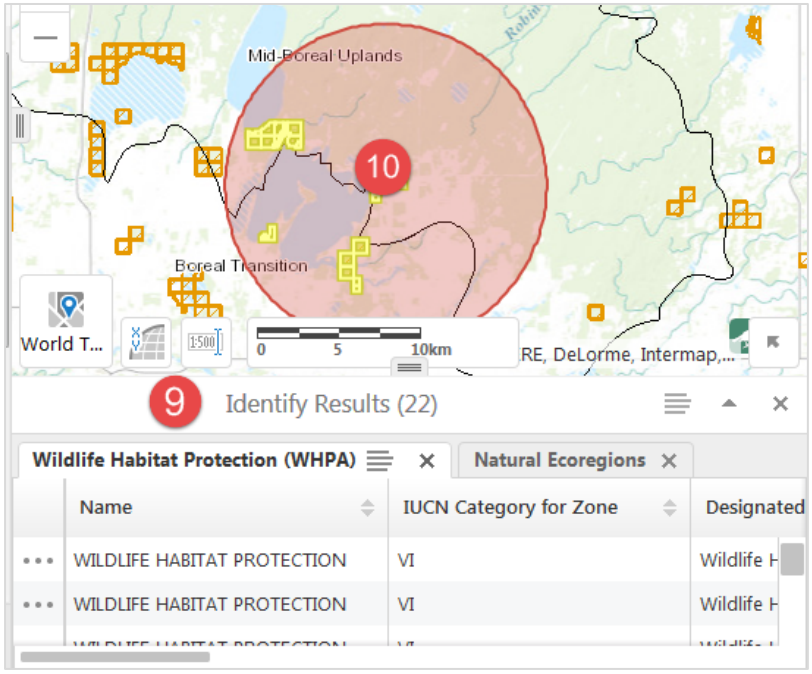


7.3.2 Identify: Enable Buffering

Applying a buffer to the identify tool will expand the search area to be within the buffer distance.

1. Click **Identify** and two more buttons will appear: Enable buffering and Identifiable Layers
2. Click **Enable Buffering** to buffer the selected area by a distance you manually enter.
3. Enter the **Distance** and **Units** (select from drop-down list) that you would like the selection buffered by.
4. Check the box beside **Write to Drawing Layer** if you'd like the buffer to be saved as a shape on the map after the tool has run.
5. Click Clear to reset and enter new values or **Continue** to create the buffer and the Buffer Options panel will close.





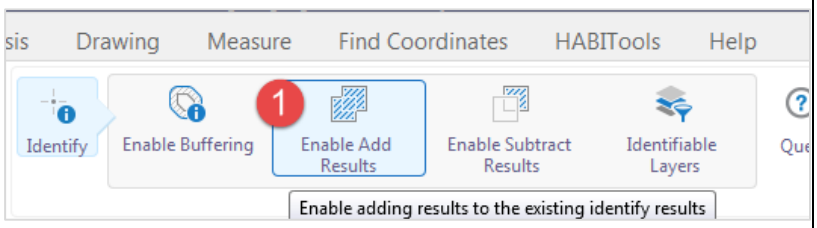
6. A note that buffering is active will appear at the top of the map display.

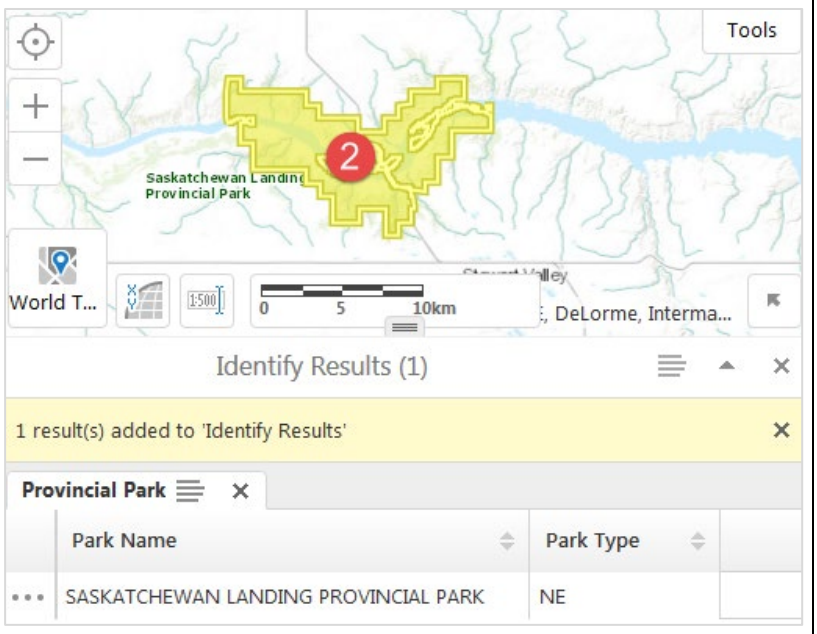
7. If you change your mind and don't want to use the buffer, select the **Disable buffering** tool in the **Basic Tools** tab.

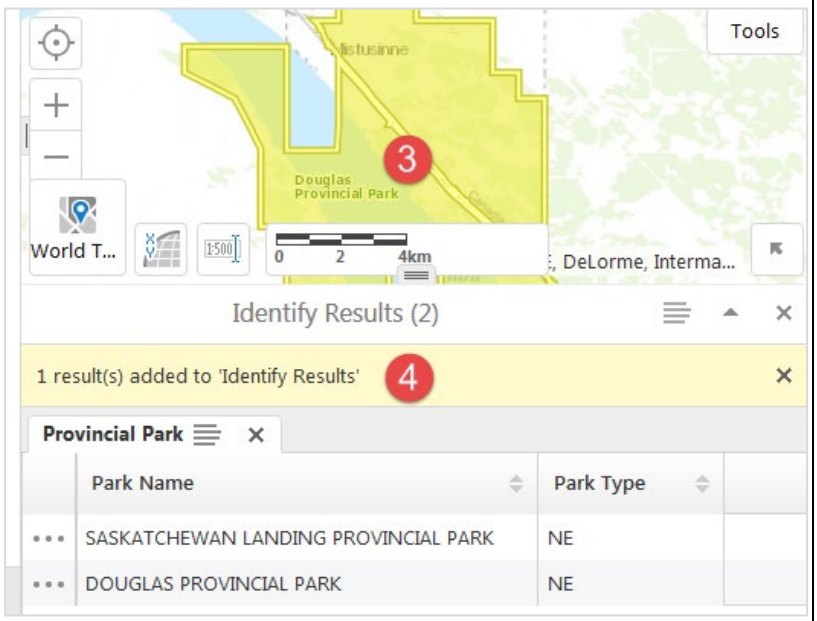
8. Click a location on the map or click and drag to select an area (the rectangle's perimeter will be buffered).

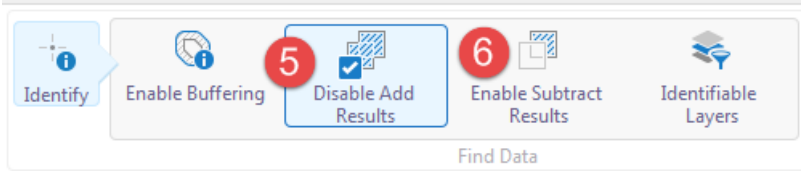
9. **HABI**Sask will search for all active layers within the buffered location. The results appear in a table below the map display.

10. If you checked **Write to Drawing Layer** in step 4, the buffer will appear as a blue shape on the map after you close the identify results. See section 10.1 Draw Tools for guidance on using the tools found in the Drawing tab for editing, exporting or erasing shapes from the map.









7.3.3 Identify: Enable Add/Subtract Results
If using the identify tool more than once, this feature allows you to continue to add/subtract from your identify results.

1. After selecting the **Identify** tool, select **Enable Add Results**.

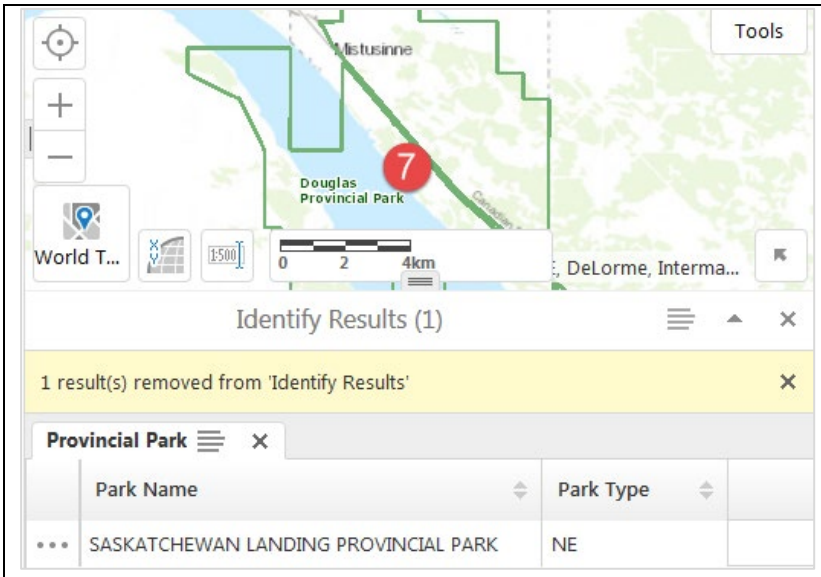
2. Click on the map over a feature you wish to identify (e.g., a provincial park). The identified feature(s) will display in the **Identify Results** table below the map display.

3. Click the identify tool again to activate it, and click on another feature (e.g., another provincial park).

4. The identified features from both clicks will now be combined in the **Identify Results** table, and a message will appear with how many results were added.

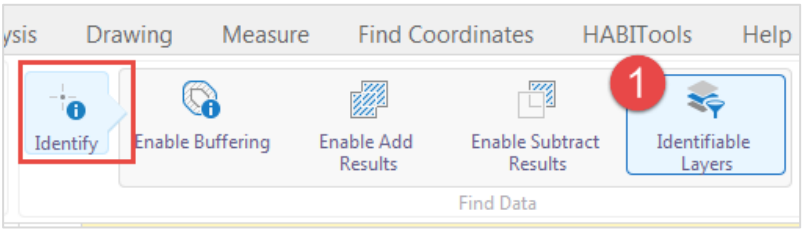
5. To turn off this feature, select the **Disable Add Results** tool.

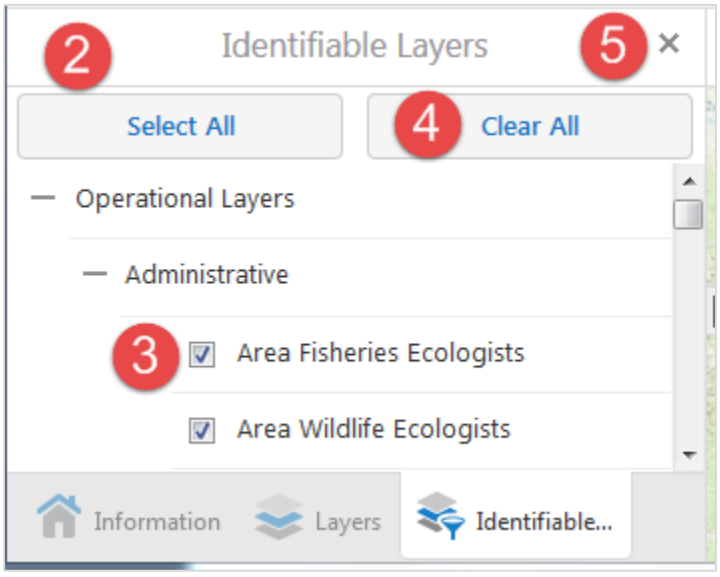
6. If you wish to subtract from your results, select **Enable Subtract Results**.



7. Click on the map over the feature you wish to remove. It will no longer appear in the **Identify Results** table.

See Section 7.3.5 Identify: Results Panel Actions to see further actions that can be performed on the identify results, such as saving, buffering and exporting.





7.3.4 Identify: Identifiable Layers

The identifiable layers tool should be used if you wish to exclude a specific map layer from appearing in future identify results but would still like it to display on the map. Otherwise, turning the map layer off in the Layers panel so that it does not display will also exclude it from being in **Identify Results**.

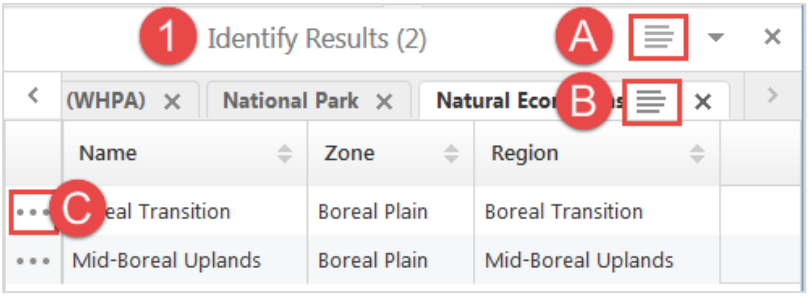
1. Click **Identify – Identifiable Layers** to provide a list of all map layers.

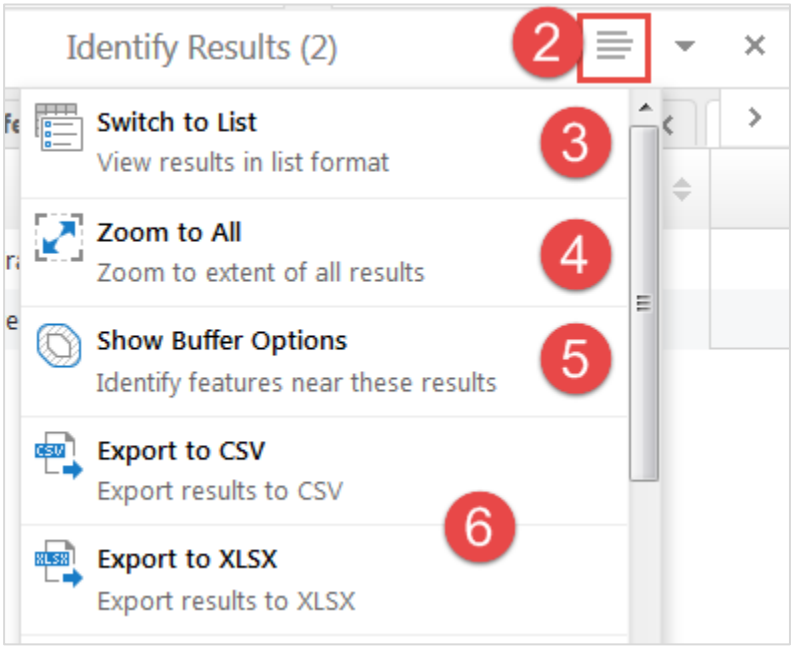
2. The **Identifiable Layers** list is found in the panel on the left-hand side of the app. Click the "**+**" to view the list of map layers under each group.

3. De-select a layer by clicking the check mark beside the layer name or select it by selecting the empty box. If a layer has a check mark, it will only display in the results if it is also turned on in the Layers panel and displaying on the map.

4. If you wish to only have one or a few layers identifiable, select **Clear All** and then turn the desired layers on.

5. Click "**x**" to close the **Identifiable Layers** panel.





7.3.5 Identify: Results Panel Actions

1. After identifying a point/area on the map, an **Identify Results** panel will open as a list to the left of the map or as a table below. Further actions can be found in both by selecting the **Panel Actions Menu**. This is available at three levels:
   A. For all identified results, in the right corner of the table. These actions will be performed on all results.
   B. For each map layer that was identified, at the right corner of the selected tab in the identify results table. These actions will only be applied to the corresponding map layer.
   C. For an individual feature in the map layer, the dotted icon at the left of each row in the table. This will perform an action on the single, selected feature.

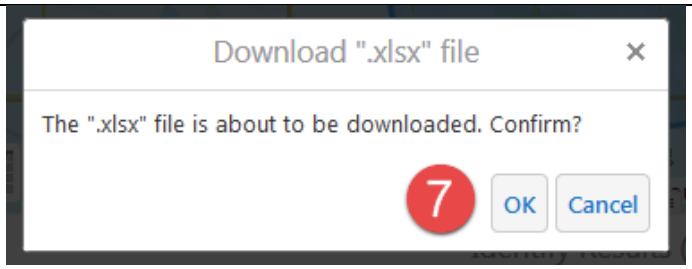
2. Select the Panel Actions Menu from the Identify Results table (1A) to view available actions.

3. **Switch to List** – results are provided in a list view found in the panel on the left-hand side of the map. To revert back to the table view for the results, select the **Panel Actions Menu** from the left panel and select **Switch to Table**.

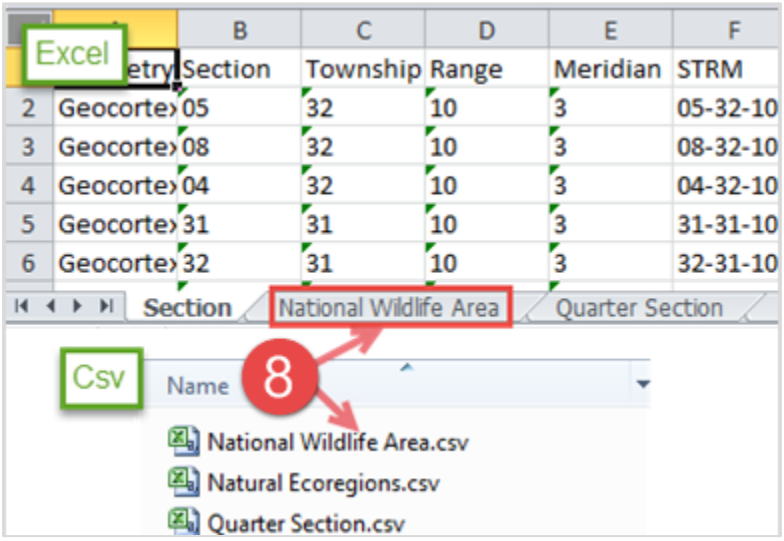
4. **Zoom to All** will zoom and center the map on all of the identify results. All identified features are highlighted in yellow.

5. **Show Buffer Options** allows you to set the distance and units for buffering and identifying around each of the result items (see Section 7.3.2 Identify: Enable Buffering). **Only map layers that are turned on and visible are searched by this tool.** Remember from step 1 that if you have selected **Show Buffer Options** from the identify results table (1A), it will buffer all results; if you select it from the map layer tab (1B), it will buffer all results within that map layer; and if you select it from the individual feature (1C), it will only buffer that feature.

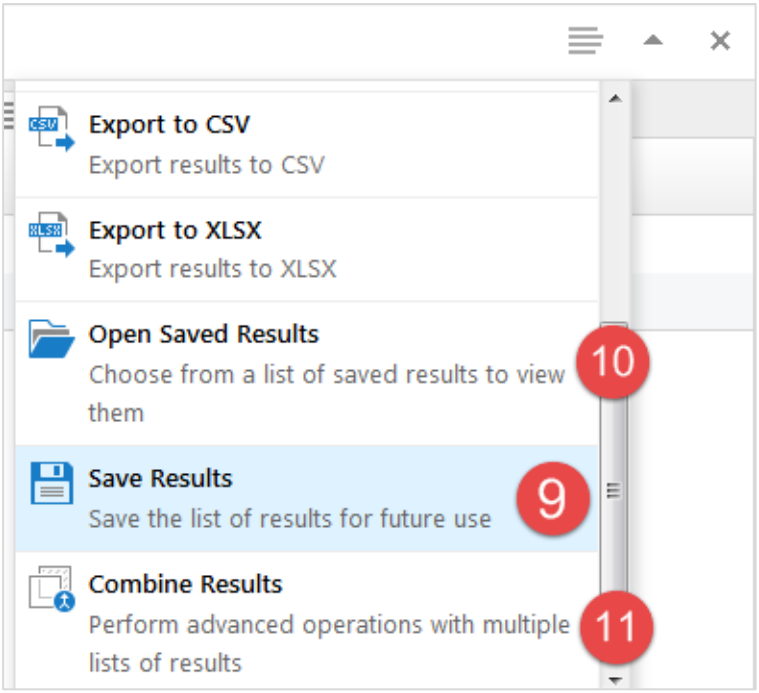
6. To export the results in table format, select **Export to CSV** (Comma Separated Values) or **Export to XLSX** (Microsoft Excel) to export the results to the respective file type on your computer.



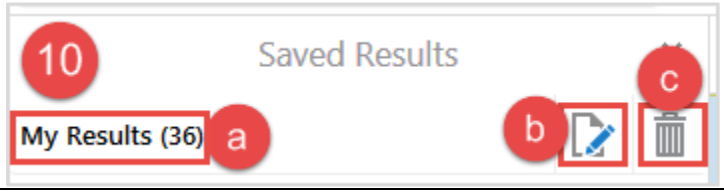
7. A **Download** window will open to confirm download. This may be followed by a dialogue window asking if you would like to "Open", "Save" or "Save As" the file.



8. If you have chosen to download an **xlsx** file, results of each map layer (if multiple) will appear on separate tabs within the xlsx. If you have downloaded a **csv** and there are multiple layers in the results, a zip file with each layer will be downloaded. You will need to unzip the file before using.



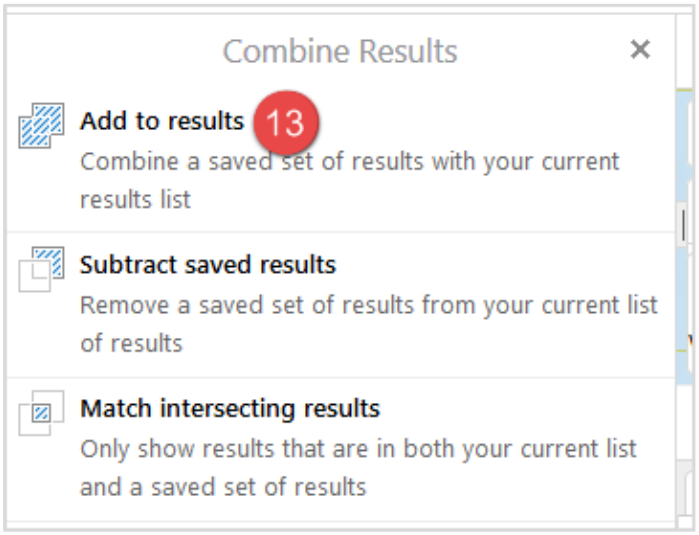
9. If you'd like to save your results in **HABI**Sask so that you can access them later or add more results to the list, from the **Panel Actions Menu**, click **Save Results** to save the results of your Identify efforts. A Save Results panel will open allowing you to enter a name for you results and to click **Save.** Once you save your results, this option will not be available (greyed out).
NOTE: Saved results are only available during your current session, unless you are signed in and save the map as a project after creating the lists (see section 6.1.2 I want to… Save). **Otherwise, they will be deleted after leaving HABISask, refreshing the page, or signing in/out.** Use the export to CSV/XLSX tools (step 8) if you would like to save a tabular record of your results.



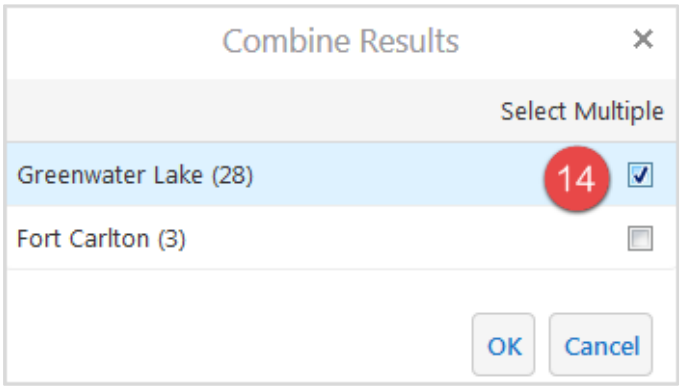
10. **Open Saved Results** will provide a list of all previously saved lists, and provides three options:
    a. Opening the results file;
    b. Renaming the saved results file;
    c. Deleting the save results file.

11. From the **Panel Actions Menu**, **Combine Results** will add, subtract or intersect multiple lists. This tool creates a new list with these functions – it does not take or add from the already saved lists.

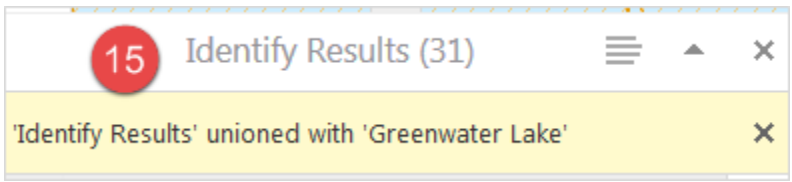
12. To **Combine Results**, a set of results needs to be saved in order to add/subtract from them. To create a set of results, for this example, the Analysis function was used with a rectangular buffer of 2 km. The results can be seen on both the map and the table in the image. Save the results as per previous steps (i.e., steps 8-10). Then, open a different list or do another analysis to open a new set of results. Click the **Panel Actions Menu** (outlined) to open the menu and select **Combine Results**.



13. From the **Combine Results** sub-menu, select **Add to results**.



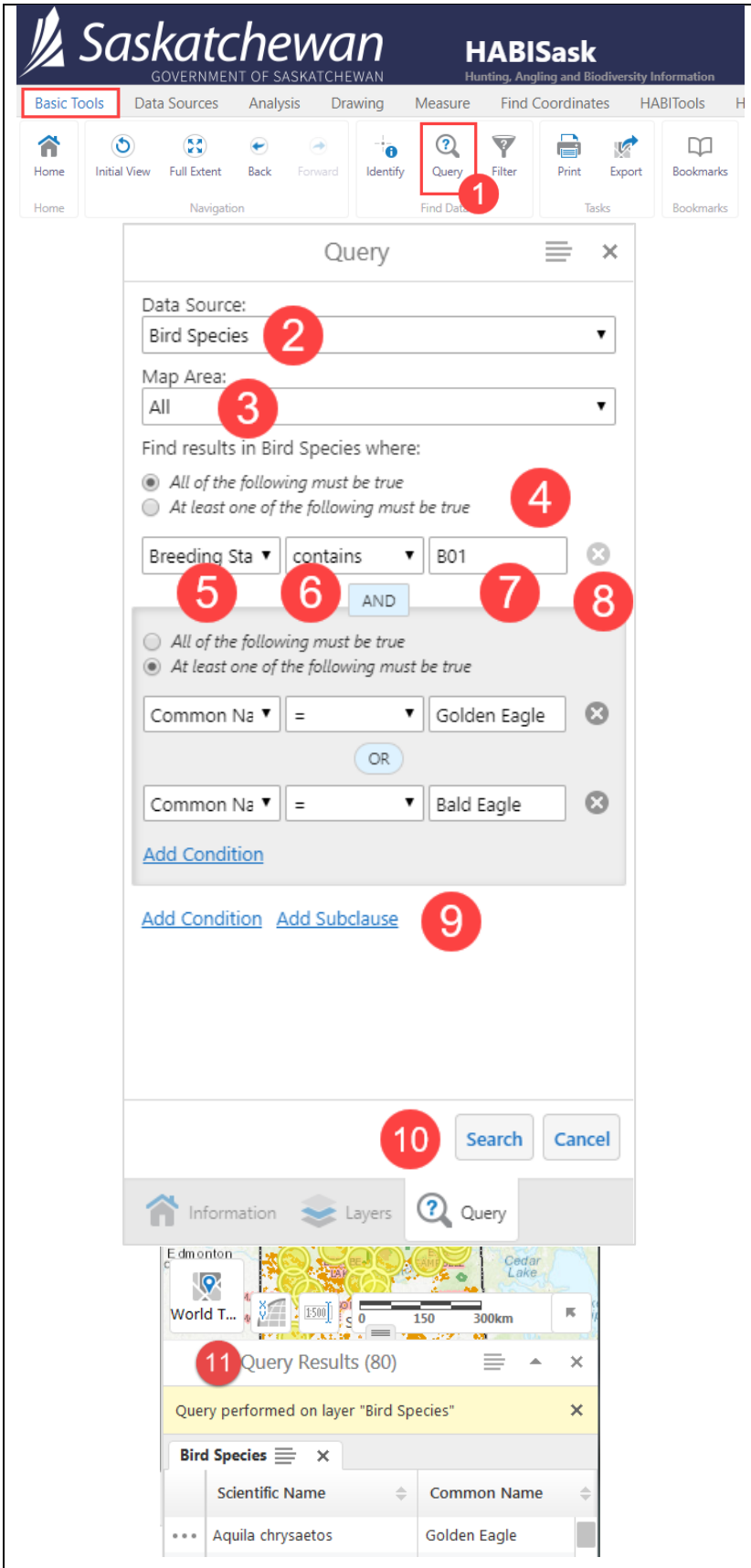
14. Check the previous results (may choose multiple lists) you wish to add your recent Identify results to and click **OK**.



15. The current results are combined (i.e., added) with a previous set of results. In this example, where some results exist in both sets, the two data sets were unioned i.e., results are not duplicated where the selection areas overlap. **You must save the results as a new list (step 11) to save the combined list; it has not altered the originally saved lists.**

16. **Subtract saved results** is similar in steps to **Add to results** except a saved set of results is removed from your current set of results.

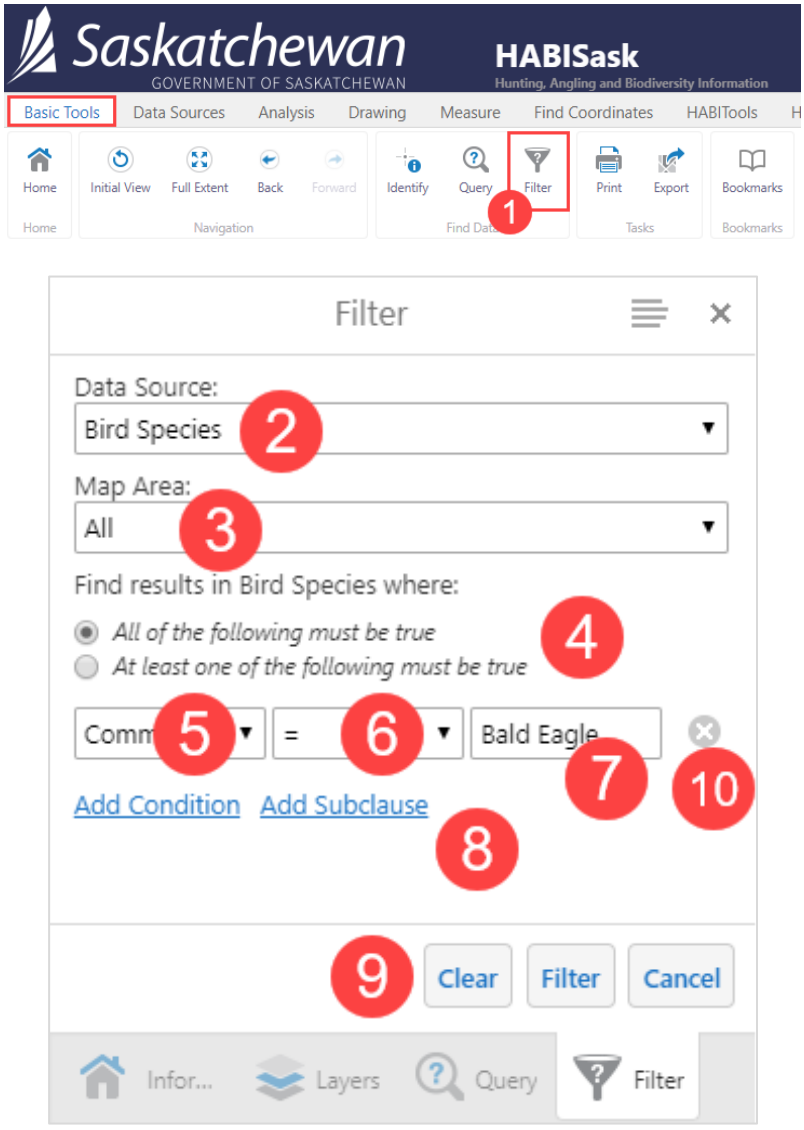
17. **Match intersecting results** uses same steps as adding and subtracting results, but the results are those only in common between the saved and current data sets.



7.4 Query

The Query tool allows you to create a list of features within a map layer that meet certain criteria.

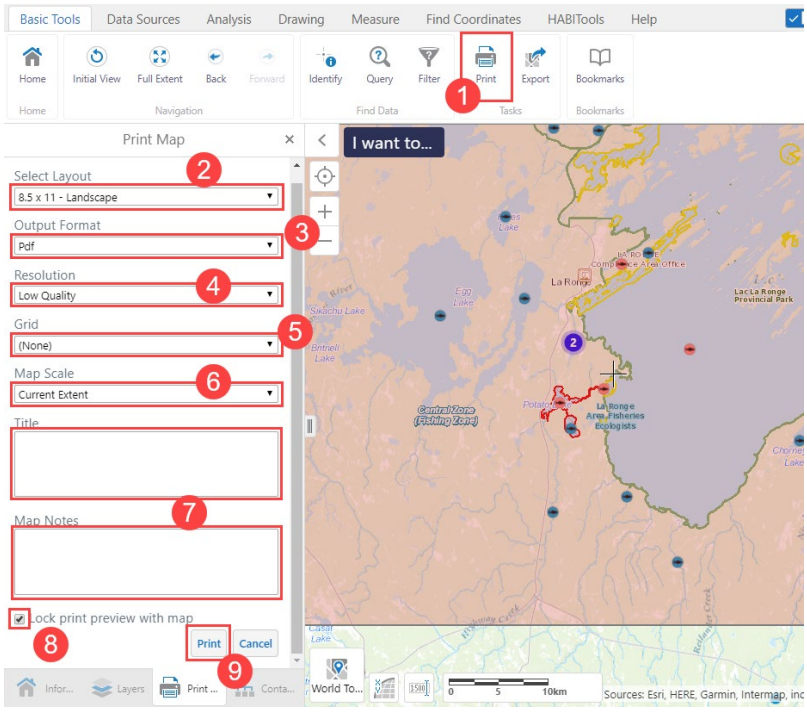
1. Click **Query** from the **Basic Tools** tab.
2. Select a **Data Source** from the dropdown list.
3. Under **Map Area**, leave the selection as all to filter the entire area or select **Current Extent** to only filter features within the current map view.
4. If you intend to use multiple search conditions, choose **All of the following must be true** (equivalent to AND in a query) or **At least one of the following must be true** (equivalent to OR in a query).
5. Select the field to query.
6. Select the desired operator from the drop-down list. "!=" means does not equal.
7. Type in the text to search for. A drop-down list with available values will appear as you type.
8. To delete the search condition, click the "X" beside the condition (must have multiple conditions to delete one).
9. To add another condition to the query click **Add Condition** or **Add Subclause.** In the example, Add Subclause was chosen, and is similar to adding brackets to a formula. In the example, the query reads as "Select all bird species records where the breeding status contains B01, and the common name is either Golden Eagle or Bald Eagle".
10. Click **Search** when you have finished making the query.
11. The query results will display in a table below the map and results will be highlighted in yellow on the map display. Click on each individual result to centre on them. See Section 7.3.5 Identify: Results Panel Actions for more direction on using the panel actions menu to save or export your results.

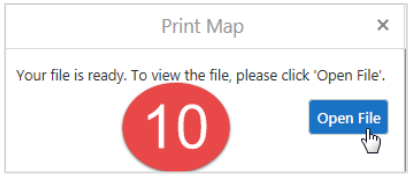


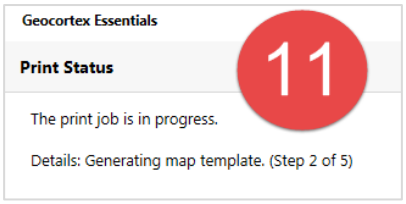
7.5 Filter

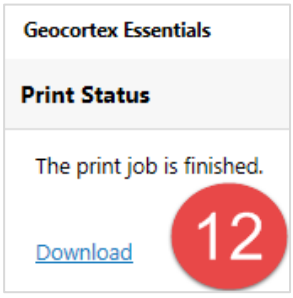
The filter tool allows you to filter a map layer by a certain condition, so only those features that meet the criteria will be displayed on the map. The filter will also be applied on any queries or analyses that are run after the filter has been set.

1. Click **Filter** from the **Basic Tools** Tab.
2. Choose the layer to filter from the **Data Source** drop-down list.
3. Under **Map Area**, leave the selection as all to filter the entire area or select **Current Extent** to only filter features within the current map view.
4. If using multiple filter conditions, select the radio button for **All of the following must be true** or **At least one of the following must be true** depending on whether you wish all or one of the conditions to be met.
5. Choose the field to filter on by selecting it from the drop-down list.
6. Select the desired operator from the drop-down list. “!=” means does not equal.
7. When you click in the text box, the possible options will appear, or you can type your own if one of the “contains” or “starts/ends with” operators was chosen.
8. Select **Add Condition** or **Add Subclause** to add more conditions.
9. Click **Filter** to filter the results on the map. Note that the map layer must be turned on and you must be zoomed to a visible scale to view it on the map display. The **Clear** button will reset the results and the **Filter** button will filter them again after clearing.
10. To delete a filter condition, click the **X** icon beside the condition. This will be greyed out unless there is more than one condition set.



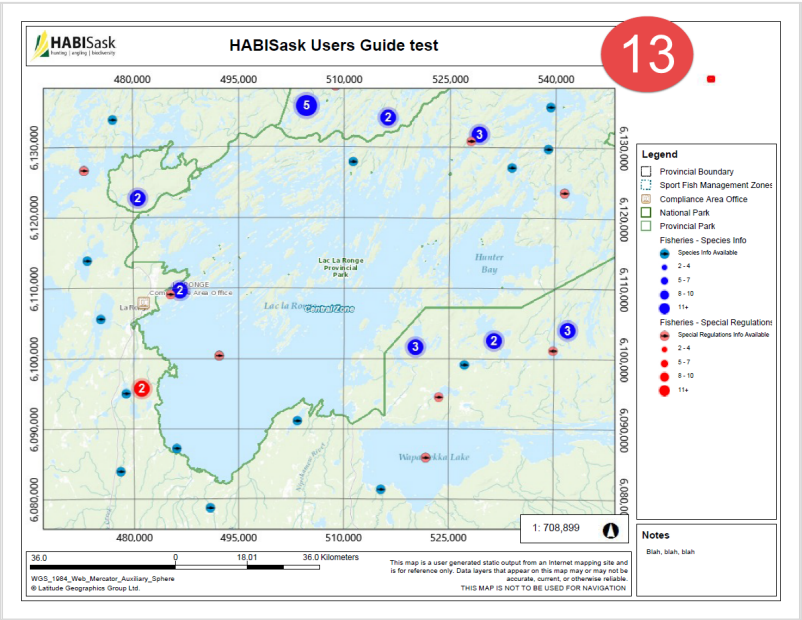




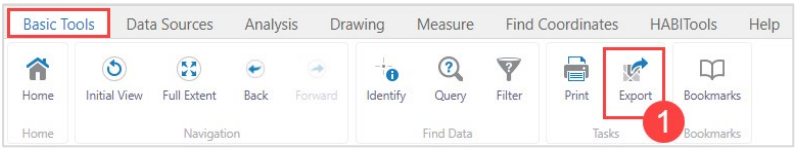


7.6 Print Map

1. Select the **Print** button under the Basic Tools tab.
2. **Select Layout** – portrait or landscape.
3. Select the **Output Format** – only PDF at this time.
4. Select the **Resolution** desired (low, medium or high quality).
5. Select the **Grid** type – Latitude/longitude or UTM.
6. Select the **Map Scale**.
7. **Title** the map and add any **Map Notes**.
8. Click "**Lock print preview with map**" to lock the preview (pink box) on the current extent and allow panning around the map without changing the print extent. The Map Scale must be set to "Current Scale" for this function to work.
9. Print the map by selecting "**Print**".
10. The app will prepare the map for printing then open the **Print Map** window. Click **Open File**.
11. The **Print Status** window will open providing a progress status on the printing of the map.
12. Once the map is generated, click **Download** to view the printable PDF map.



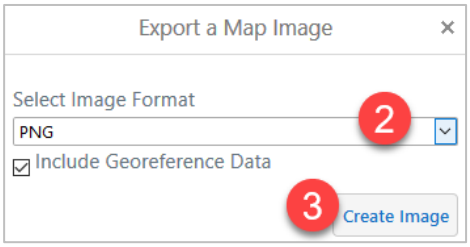
13. The printable PDF map is displayed and can then be saved as a PDF or printed to paper.



7.7 Export Map

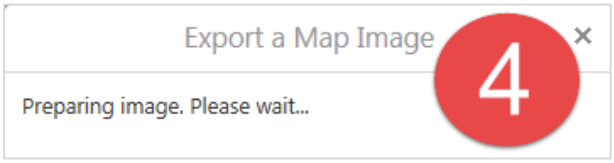
Exporting will allow you to export the map in BMP, JPEG, PNG, TIFF, GeoTIFF or PDF file format.

1. Click **Export** from the **Tasks** section of the **Basic Tools** tab.

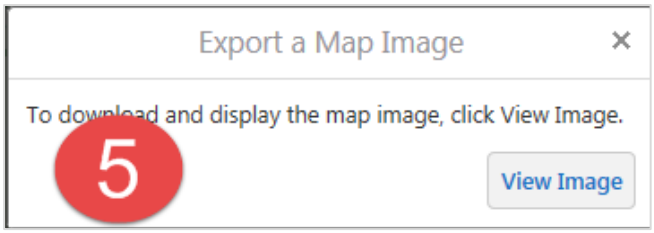


2. **Select Image Format** from the dropdown list (see inset). Also click the checkbox if wanting to **Include Georeference Data**. Georeferencing is only available for certain image formats and will not be selectable if unavailable.

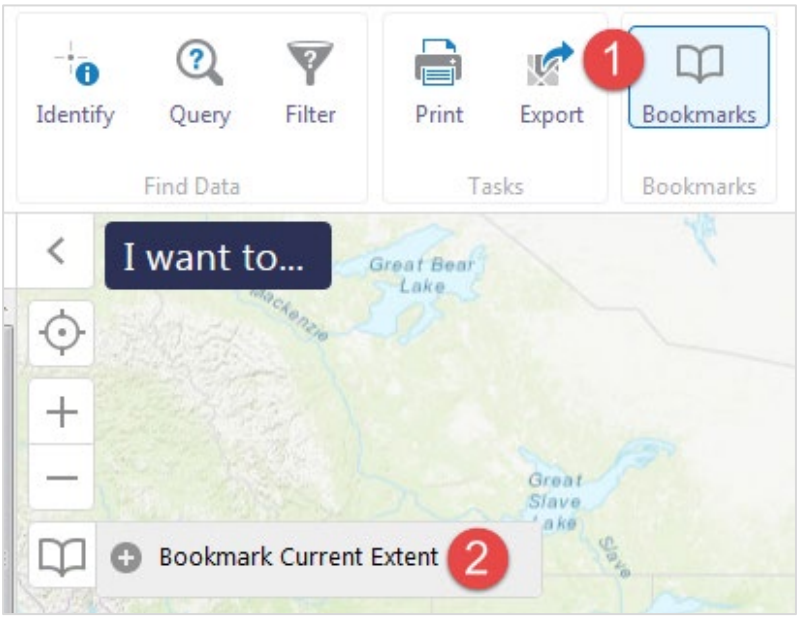
3. Click Create Image.

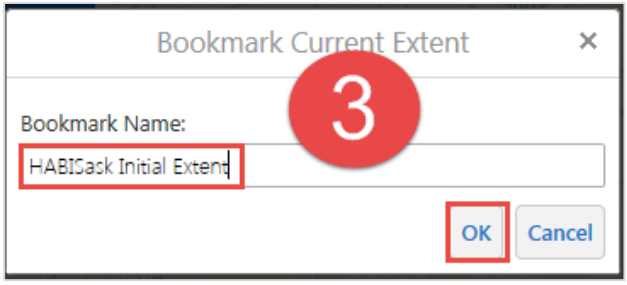


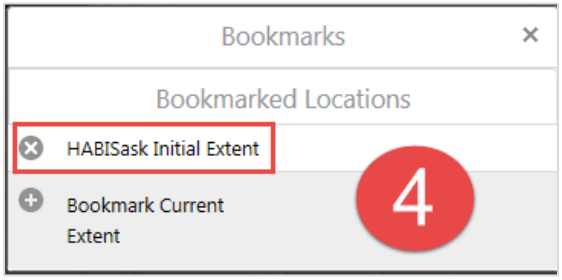
4. The **Export a Map Image** window will open while the map image is prepared.



5. Click **View Image**. The image will open in another browser tab, or a pop-up will appear asking if you want to open or save the file. If it opens in a browser tab right click the image in the browser and select save image/picture from the menu if you wish to save it (options vary depending on browser type).







7.8 Bookmarks

Bookmarks allow you to save map views so that you can easily return to your favourite locations on the map.

1. Click **Bookmarks** from the **Basic Tools** tab to open the bookmarks view.

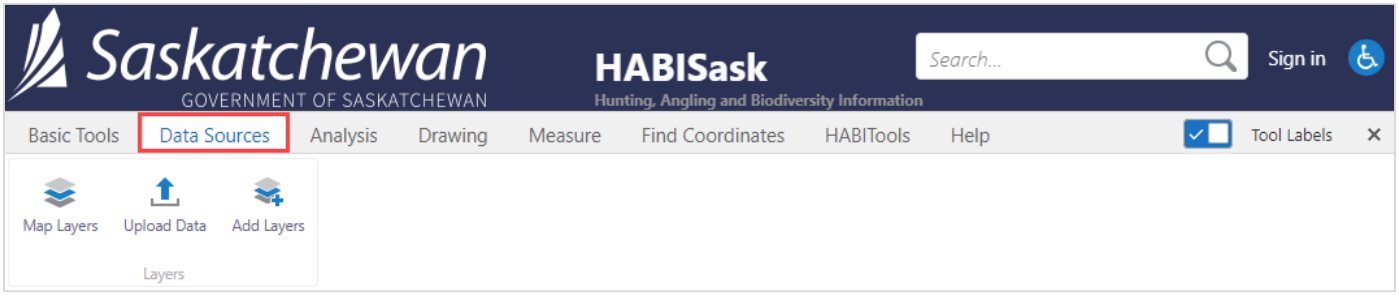
2. The bookmark icon will appear in the top left corner of the map display, below the zoom tools. From here, click **Bookmark Current Extent**. A **Bookmark Current Extent** dialogue window will open.

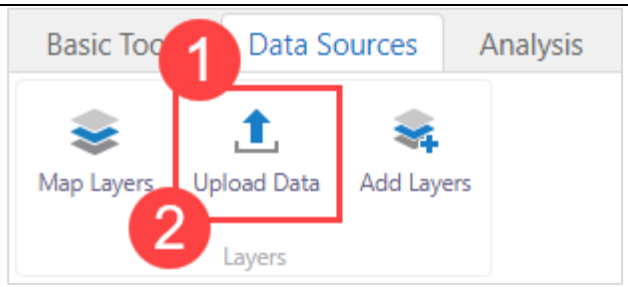
3. Enter the **Bookmark Name** you want for the current extent. Click **OK**.

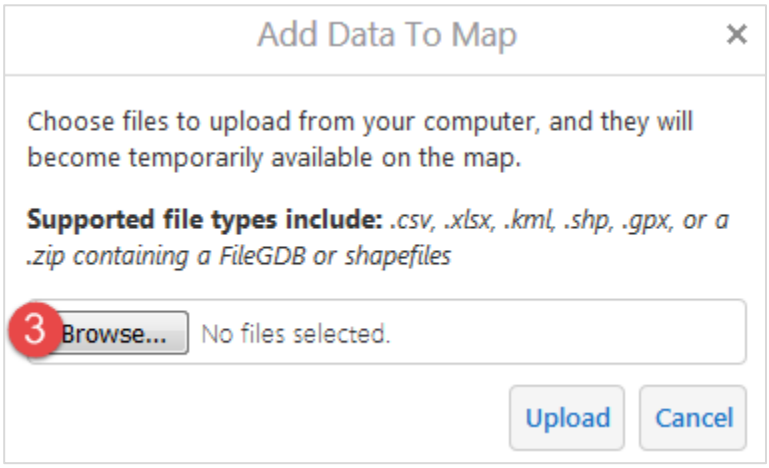
4. The newly entered bookmark name will appear in the **Bookmarks** tool window. You can delete the bookmark by clicking on the "**x**" icon to the left of the bookmark name. When you select a bookmark, it will return the map view to the extent of the selected bookmark.

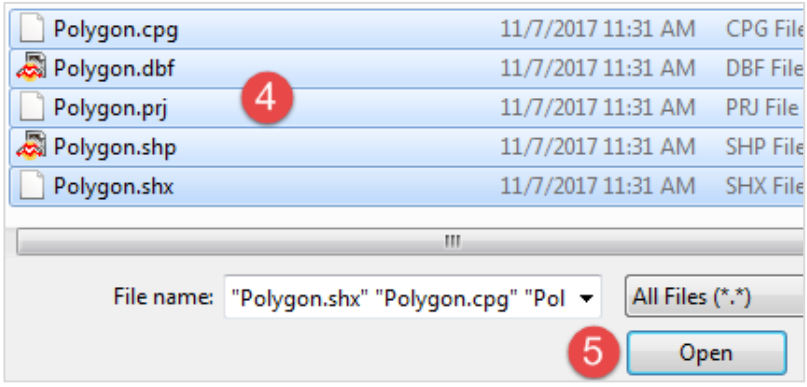
8.0 Data Sources Tab

This section covers uploading data and adding layers. See Section 5.1 Map Layers for details on working with map layers.





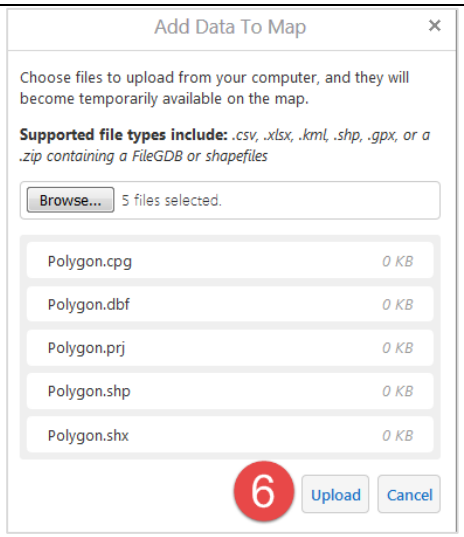




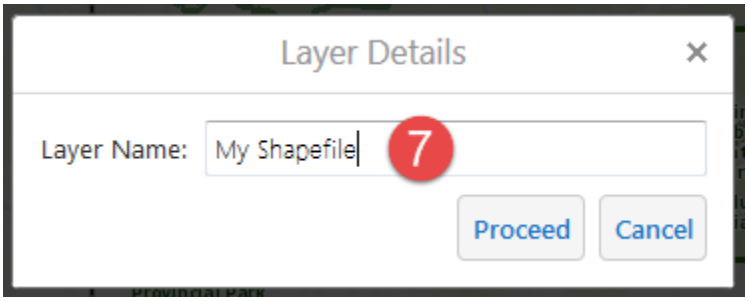
8.1 Upload Data

This tool allows you to upload data from your computer to display on **HABI**Sask. Uploaded data is only viewable to you, the person who uploaded it, and cannot be seen by others. Files are limited to 10 mb in size.

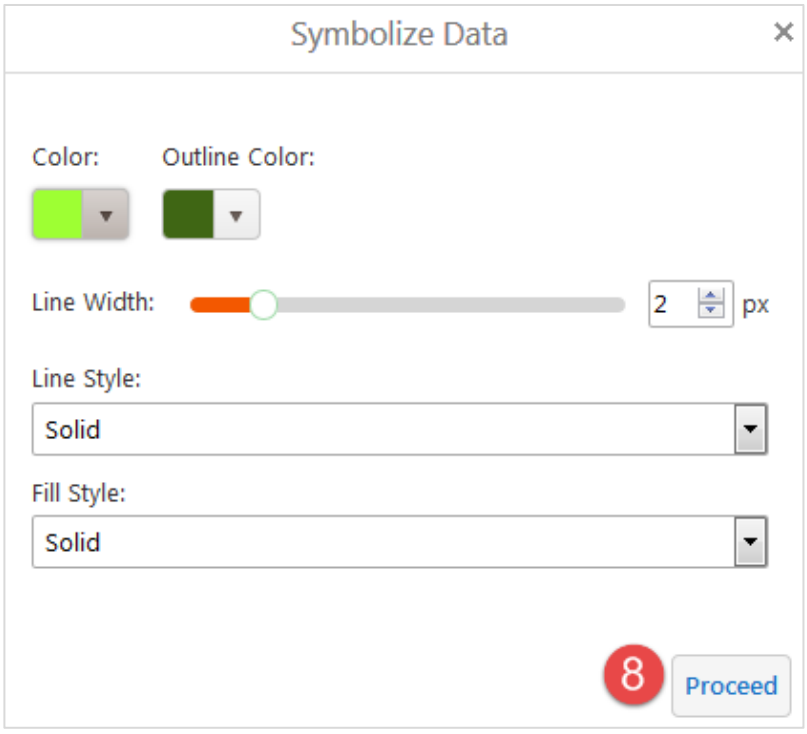
1. Click **Data Sources** from the toolbar.
2. Click **Upload Data**.
3. An **Add Data To Map** window will open. Choose one of the listed file types to add to your map screen. FileGDB is a file geodatabase in a zipped (i.e., .zip) format. Click Browse to search your file directories for the data you wish to upload.
4. Find and select the folder or files to add**. If adding a Shapefile, Press CTRL or SHIFT key to select all of the files associated with the shapefile – not just the .shp but all of them!** If you do not select the .prj file in addition to the .shp, the map will not know how to project it and the shape will appear in the wrong place on the map (e.g., Europe). If you do not include the .dbf file, you will not be able to access the attribute table.
5. Click Open.



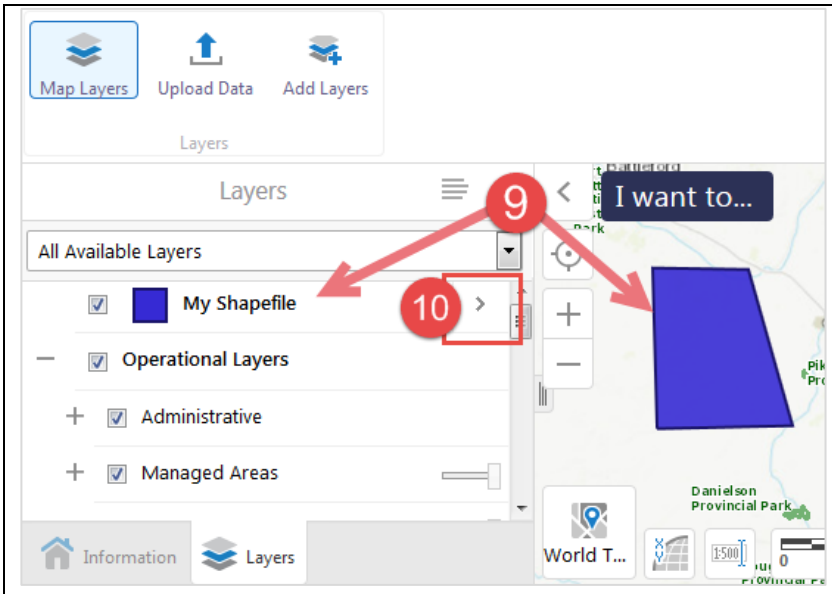
6. The **Add Data To Map** window will reappear with the file directory string in the browse window and the selected files listed (e.g., .dbf, .prj, .shp). Click **Upload** to load the data from your file directory into the map in **HABI**Sask.



7. A **Layer Details** window will open to provide you with an opportunity to add/edit the name of the map layer you will be adding. Once you have entered the **Layer Name**, click **Proceed**.

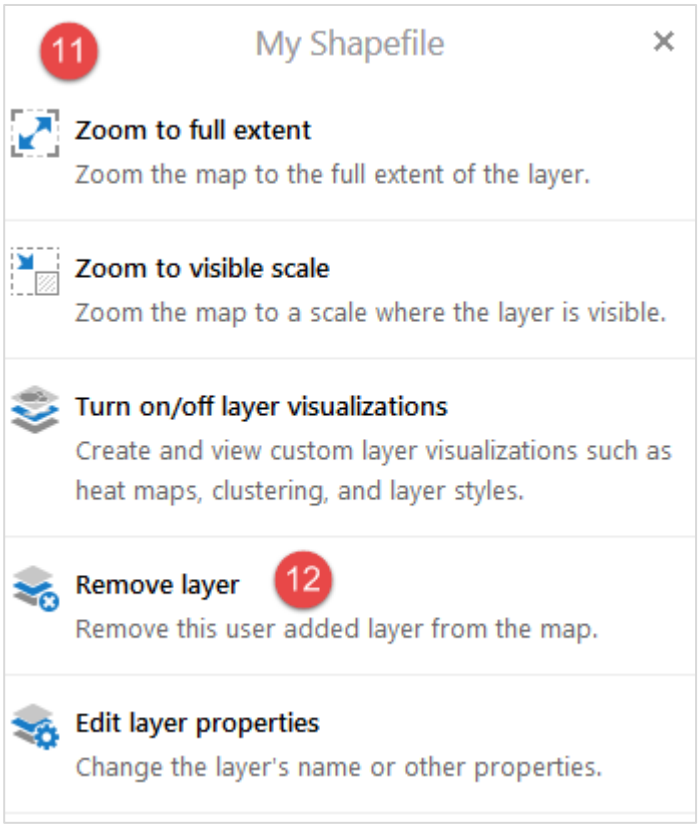


8. A **Symbolize Data** window will open providing you with the opportunity to edit the symbolization of the data you are adding. Edit the settings as you would like and click Proceed. Different options will be provided depending on whether the data is points, lines or polygons.



9. Your data will be added both to the map and to the **Layers** panel.

10. To see actions available for the layer you just added, click the **layer actions** button (arrow icon to the right of the map layer name).



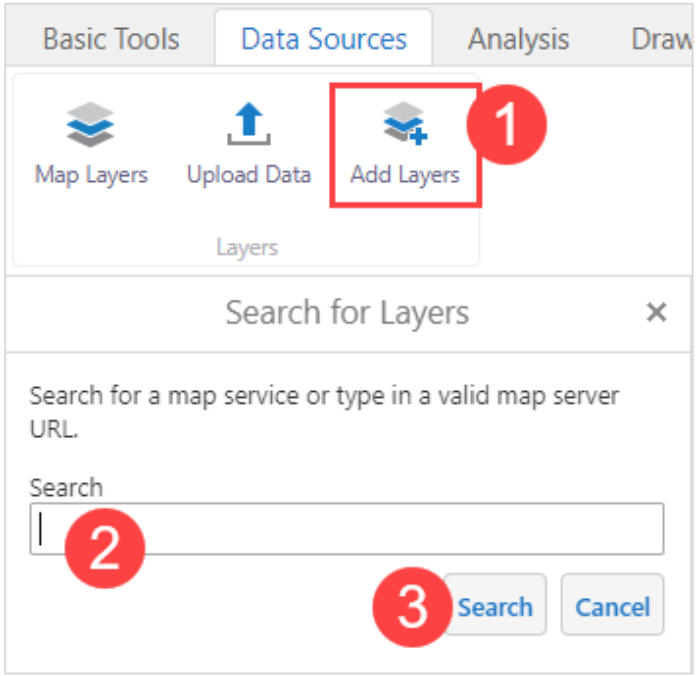
11. A dialogue window opens and provides a list of the layer actions you can select to enhance your view of the data in the map. This includes the ability to zoom to the full extent of the layer, changing the visualizations, and editing the layer properties.

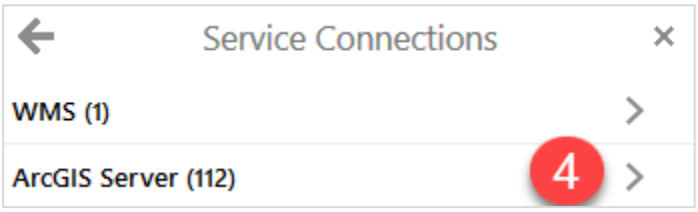
12. The option to **Remove Layer** from the map is available in the layer actions. When you click **Remove Layer**, the uploaded data source is removed - there is no option to cancel removal.

8.2 Add Layers

The **Add Layers** button allows you to add map layers from available Government of Saskatchewan ArcGIS REST Services. ArcGIS REST Services are map layers that have been published to the web and can be accessed with a URL.

For a list of available Government of Saskatchewan map layers, visit the ArcGIS REST Services Directory at: https://gis.saskatchewan.ca/arcgis/rest/services
Each of the map layers are nested within services as sub-layers. For example, click on the AboriginalLands service in the link above to see the sub-layers contained within it: Indian Reserve (NRCan), Indian Reserve (ISC), and First Nation Treaty Boundaries.



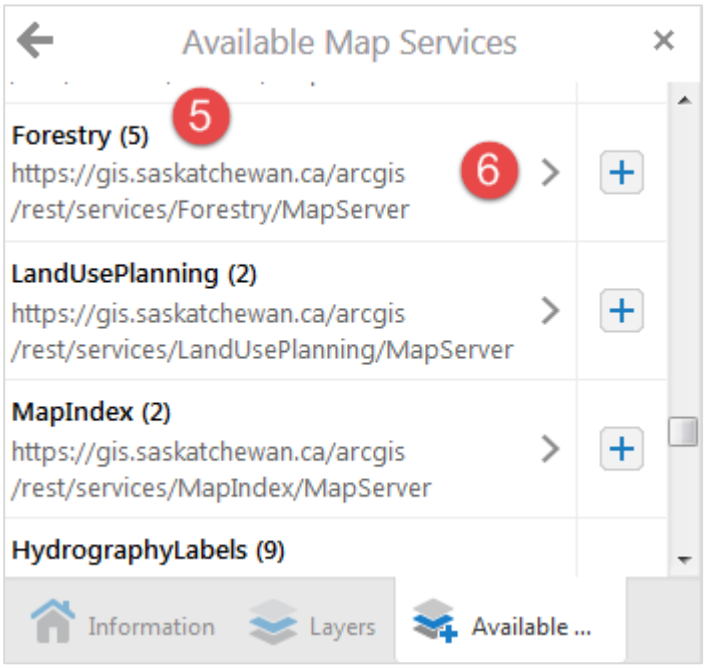


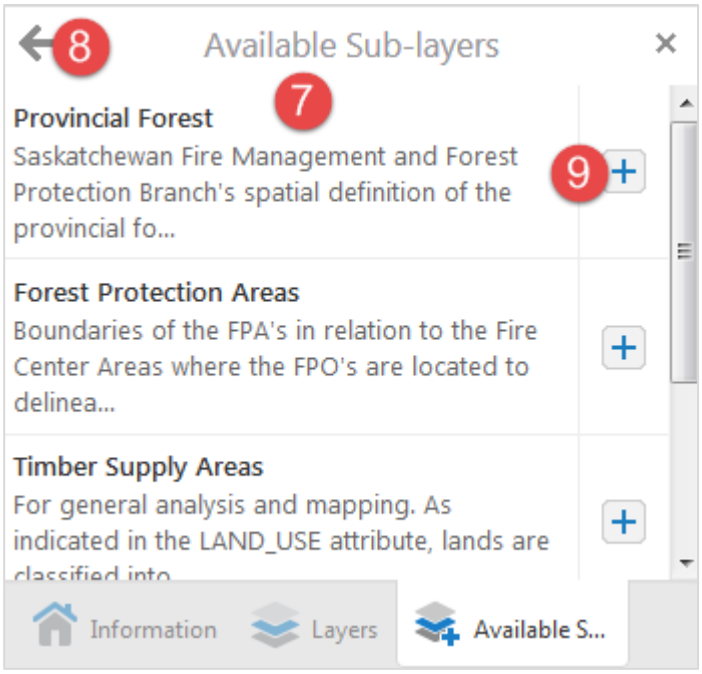
1. Click the **Add Layers** button from the **Data Sources** tab to open the **Search for Layers** dialog.

2. Type the **URL** of a Government of Saskatchewan map service in the **search** box (e.g., for the Forestry service, type: https://gis.saskatchewan.ca/arcgis/rest/services/Forestry/MapServer), or type the name of it (e.g., Forestry) and the URL will appear in a list below the search box for you to select. **You must enter a valid Government of Saskatchewan service URL in this box.**

3. **Don't know what to search for?** Leave the text box **empty**, click **Search** and all results from the Government of Saskatchewan REST Services Directory will be displayed in the next window. For this example, we will do this.

4. After selecting **Search**, the **Service Connections** panel shows how many available layers there are. Click on the arrow beside ArcGIS Server.





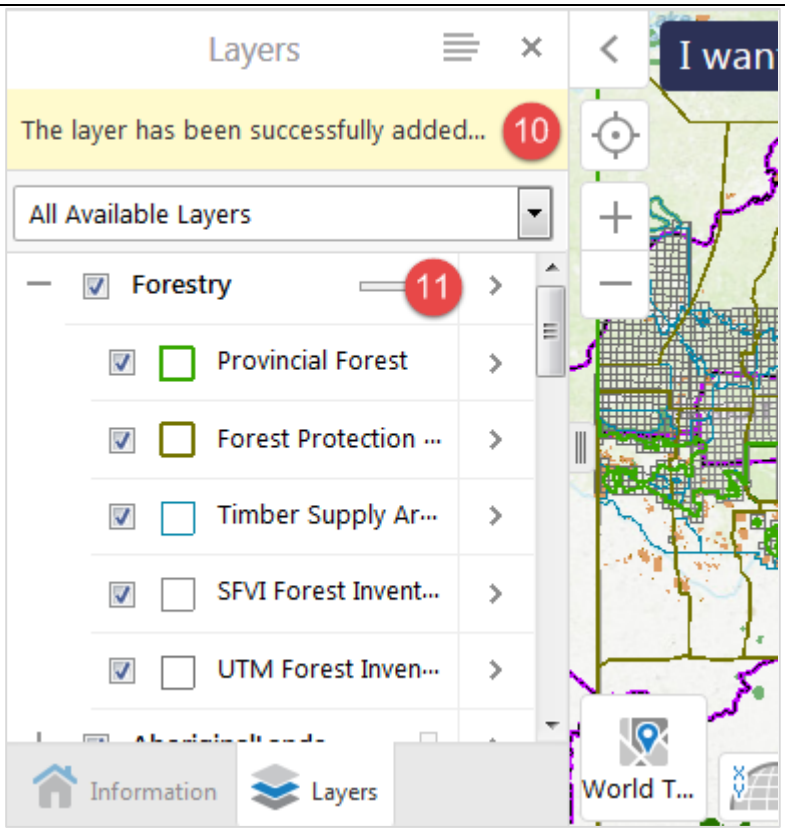
5. All **available map services** are listed. The number in brackets indicates the number of sub-layers within the service. Scroll through the list to find the service you are looking for.

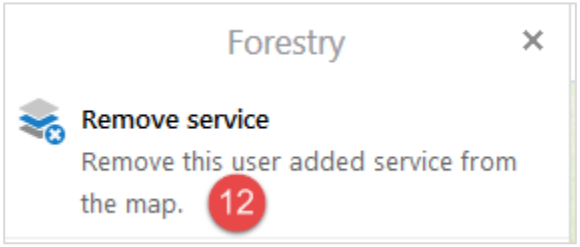
6. Click on the **arrow** beside the map service name to view sub-layers within it.

7. After clicking the arrow, the **available sub-layers** are displayed (in this example, Forestry sub-layers are shown).

8. To return to the previous page, click the **arrow** to the left of the Available Sub-layers heading.

9. Click the "**+**" icon beside a layer to add it to the map. You may either add a single sub-layer (shown in step 7) or the entire group (shown in step 5).





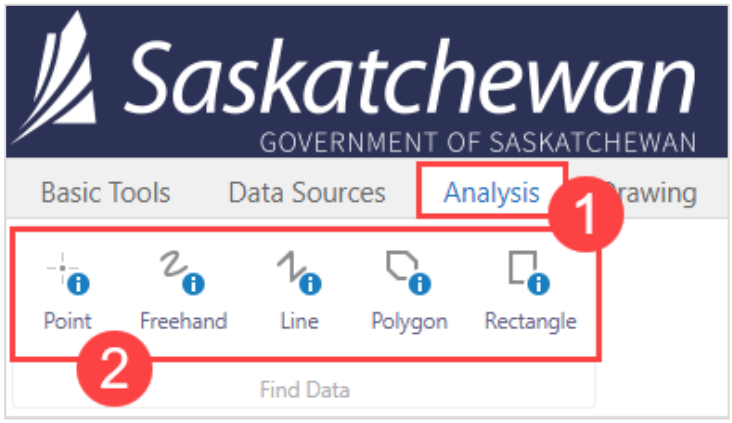
10. After clicking the "**+**" icon the layer will be added to the map and a message that the layer has been successfully added will appear.

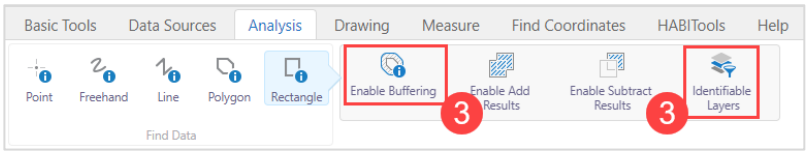
11. To **remove** the service from the map layers, click on the **arrow** beside the service name to open the **layer actions**.

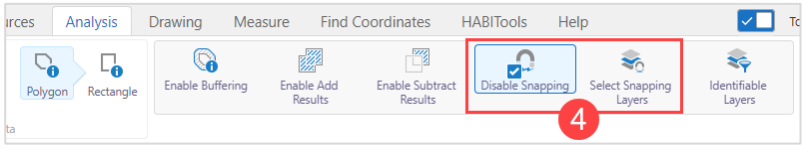
12. Choose **Remove service** and the layer will be removed from the map.

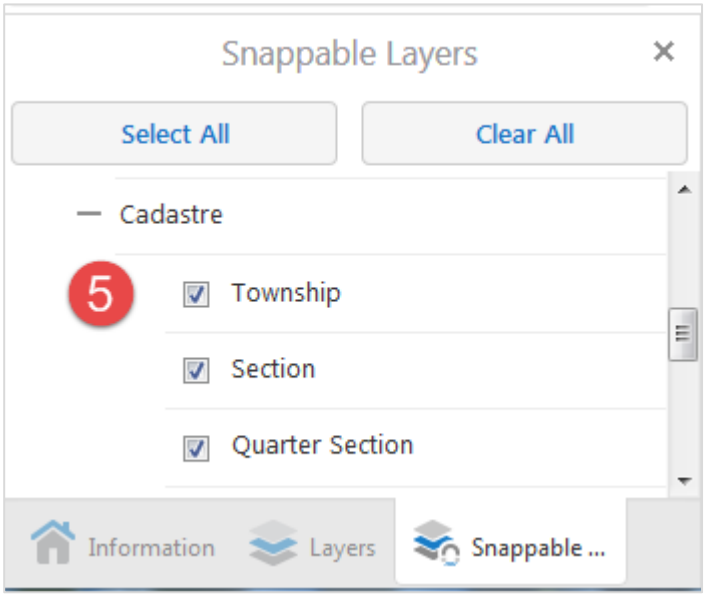
9.0 Analysis Tab

The analysis tab contains identify tools that can be used to identify which map layers intersect your project area. The identify tools only return results for layers that are turned on and visible.









1. Click the **Analysis** tab.

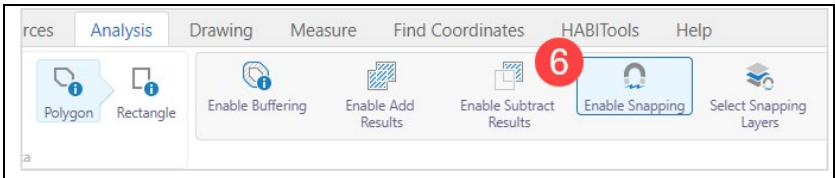
2. There are five drawing tools available (choose one by clicking it):

    a. Point
    b. Freehand
    c. Line
    d. Polygon
    e. Rectangle

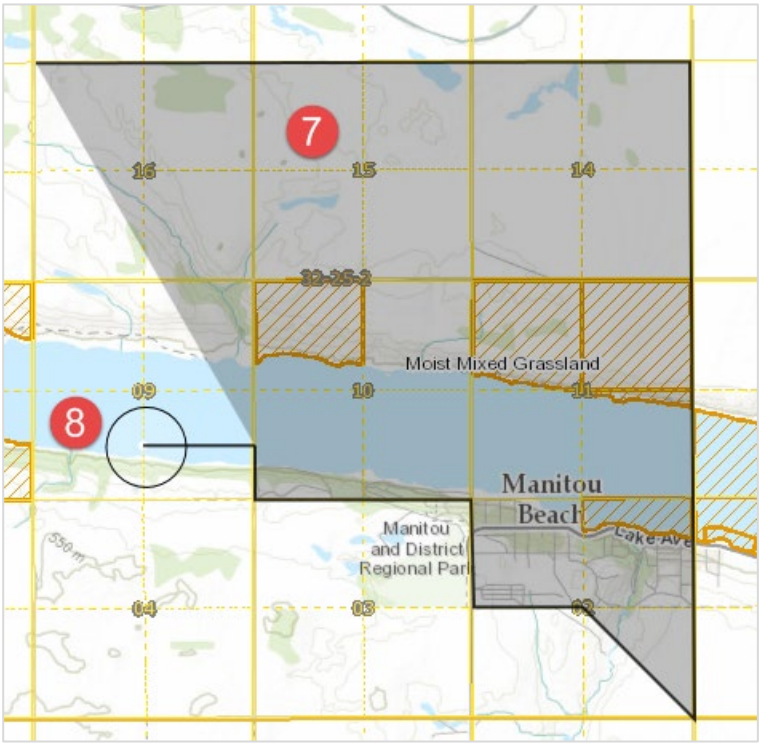
3. Instructions for **enabling buffering** and selecting **identifiable layers** are covered in Sections 7.3.2 Identify: Enable Buffering and 7.3.3 Identify: Identifiable Layers. If you selected Enable Buffering, the map will search the area that is included in the buffer.

4. For the line and polygon tools, snapping is available. This allows you to snap to an existing shape as you draw. Click **Polygon** and then click **Select Snapping Layers**.

5. In the **Snappable Layers** panel, check the box beside the name of the layer you wish to be able to snap to, or click **Select All**.

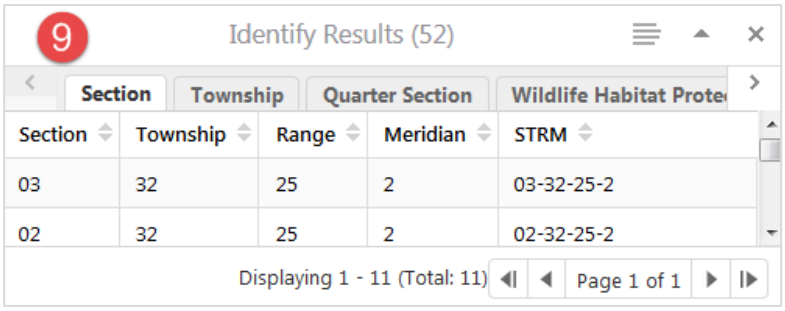


6. Select **Enable Snapping**. It will highlight in blue to let you know that the tool is active, and say **Disable Snapping** – if you wish to turn snapping off later, click this.



7. Draw the polygon that covers the area you would like to do your analysis on. If you need to pan to the area, turn the analysis tool off by selecting **Polygon** in the **Analysis** tab so that it is no longer blue, and then turn it back on after panning by selecting it again. Your snapping settings will be saved.

8. To draw a shape, click on the map to make each corner of the shape and then double click to finish. With snapping enabled, the cursor will appear as a black circle. When you click, the line will snap to the edge of the nearest layer that it can snap to within the circle, allowing you to easily trace along areas such as quarter sections.

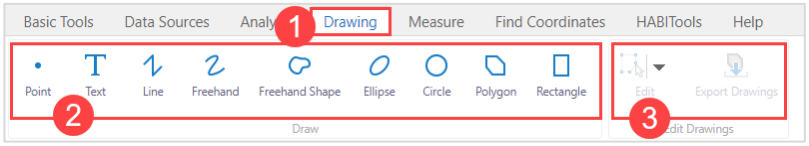


9. After completing your shape, the results will show in the table below the map. Tabs in the table will appear for each different map layer that was identified.

See section 7.3.5 Identify: Results Panel Actions for details on actions you can perform with the results of your analysis, such as saving and exporting.

10.0 Drawing Tab

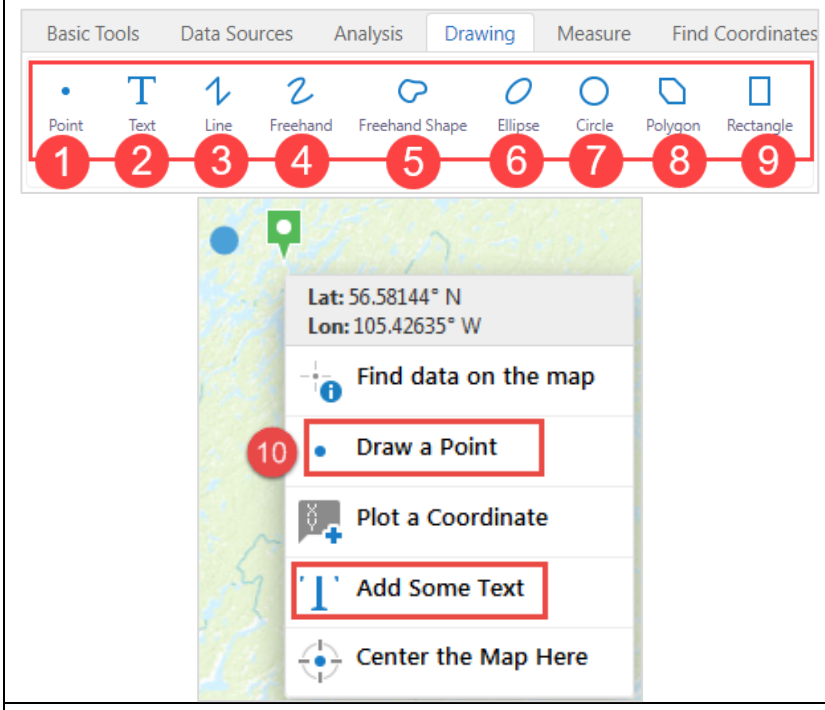
The tools on the drawing tab allow you to draw shapes and text on the map. These shapes can be used in conjunction with the Print or Export tool to save a picture of your map, or they can be exported as an Esri Shapefile (.shp). If signed in, shapes can be saved with a project (section 6.1.2).



1. Click the **Drawing** tab.

2. Select one of the drawing tools from the toolbar ribbon. Note that additional drawing functions become available once the drawing tool is selected.

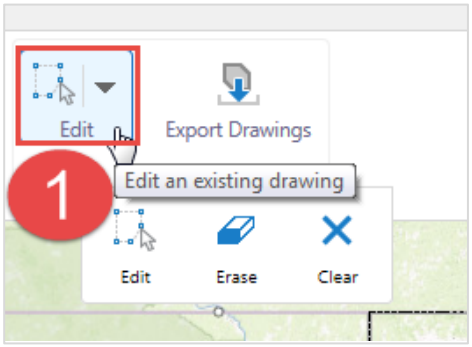
3. The **Edit** and **Export Drawings** functions are not available until a drawing has been created.



10.1 Draw Tools

1. Point (Snapping)
2. Text (Snapping)
3. Line (Snapping)
4. Freehand (No Snapping)
5. Freehand Shape (No Snapping)
6. Ellipse (No Snapping)
7. Circle (Oval) (No Snapping)
8. Polygon (Snapping)
9. Rectangle (No Snapping)

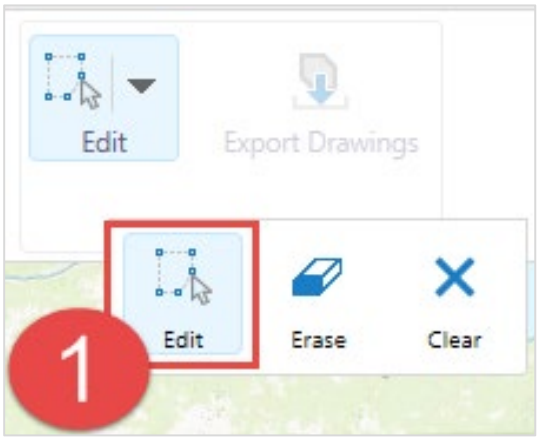
10. Tip: **Right click the map** to access a menu to quickly **Draw a Point** or **Add Some Text** where you clicked.

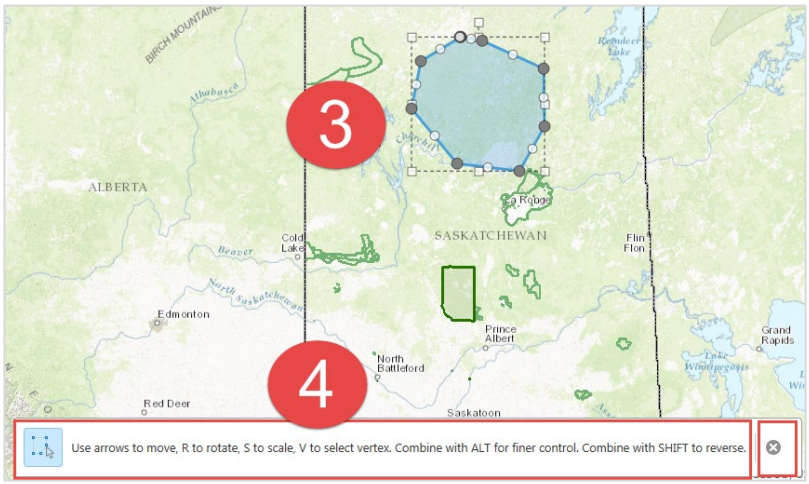


10.2 Edit Drawings Multi-Tool

The **Edit Drawings Multi-Tools** are available for all draw tools once a drawing has been added to the map.

1. Click the **down-arrow** beside **Edit** to open the various edit tools.



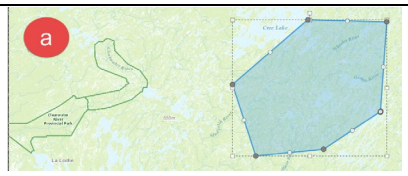


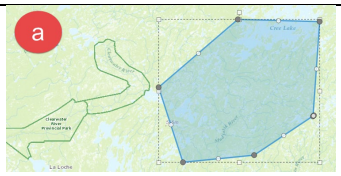
10.2.1 Edit Tool

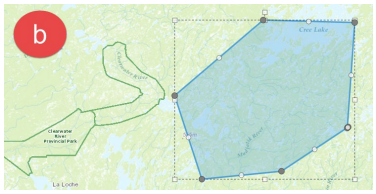
1. Click the **Edit** tool to make changes to your drawing.

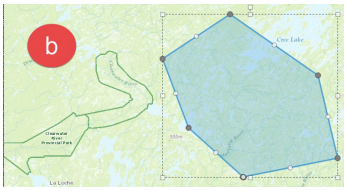
2. Click or tap on the existing drawing to begin editing it.

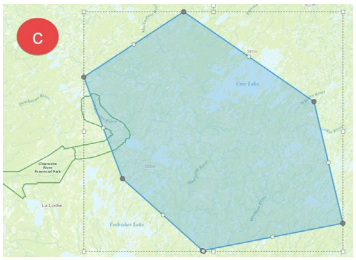
3. The drawing will change and an instructional panel will open in the map to explain how to complete edits using the Edit Tool. Close the instructional panel by clicking the “x” icon.

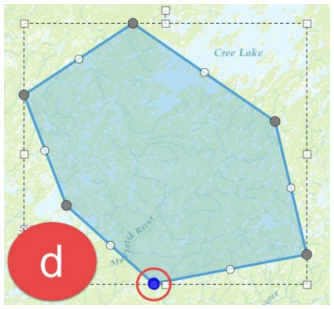


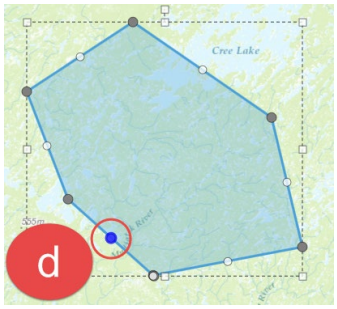






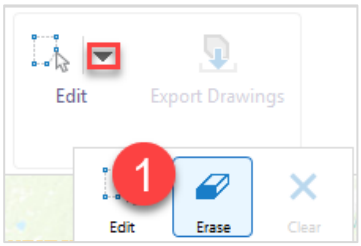


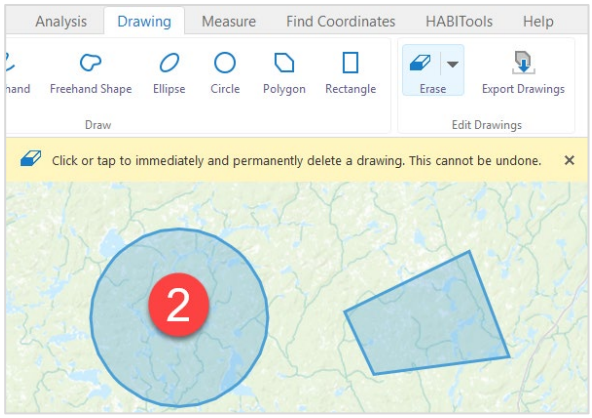


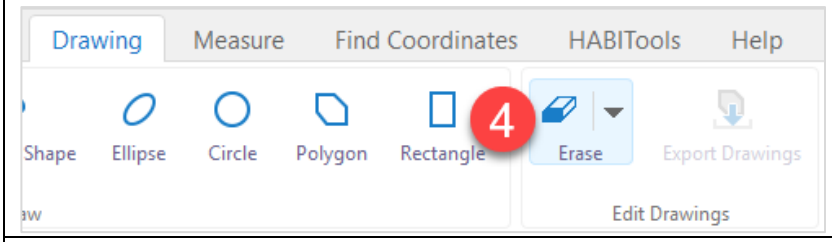


4. Use:
    a. Keyboard arrows to move the drawing;
    b. R key to rotate the drawing;
    c. S key to scale the drawing, and;
    d. V key to select a vertex (moves from vertex to vertex).

Combine the letter keys with the **ALT** key for finer control. Combine letter keys with the **SHIFT** key to reverse edits.







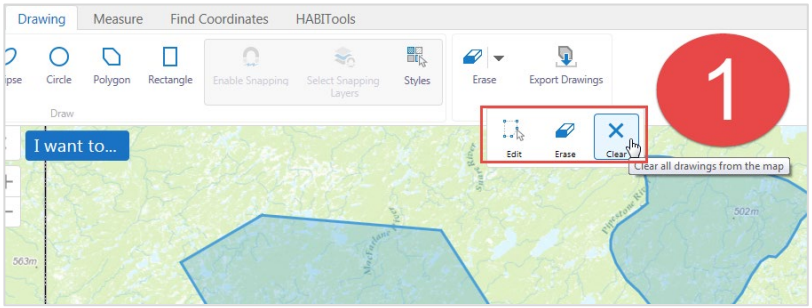
10.2.2 Erase Tool

1. From the **Edit** menu, click **Erase** to remove one or more drawings from the map. NOTE: Once a drawing is selected for erasing, this action cannot be undone.

2. Click the shape on the map to delete it.

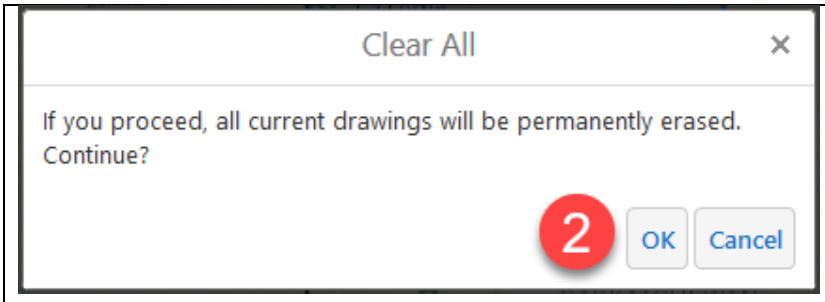
3. The drawing is erased.

4. To deactivate the tool, select **Erase** from the **Drawing** toolbar. The icon will no longer be highlighted in blue once turned off.

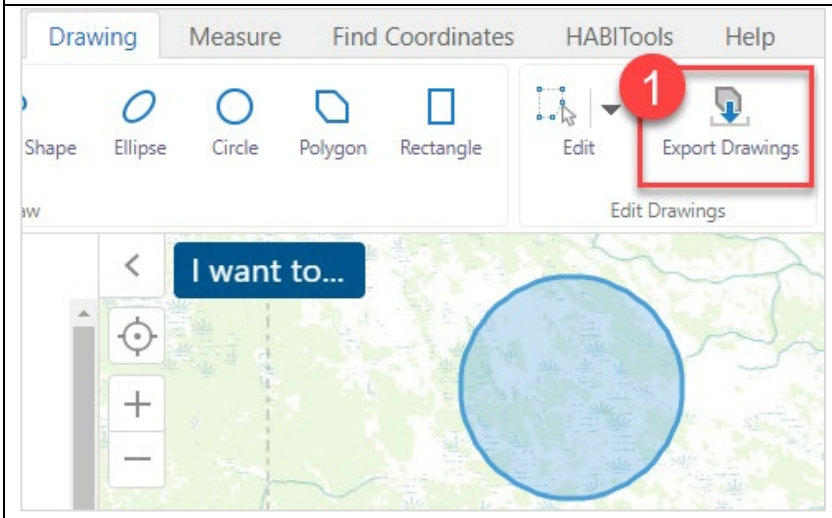


10.2.3 Clear Tool

1. Click **Clear** to remove all drawings from the map view. If there are now drawings, the Clear tool will be greyed out.

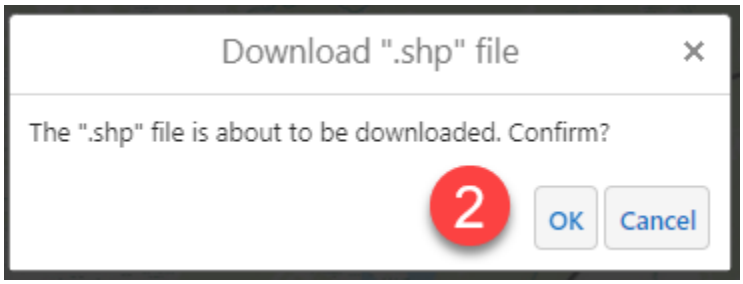


2. A **Clear All** warning window will appear asking you to confirm you want all drawings cleared from the map. Click **OK** to continue or **Cancel**. **NOTE: Once you clear all drawings, this action cannot be undone.**

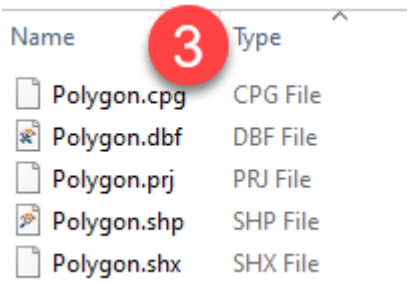


10.3 Export Drawings

1. Click **Export Drawings** to export your drawing as a shapefile. Shapefiles are a file format for saving map layers and can be opened in **HABI**Sask, ArcGIS and other programs that support it. If there are no drawings on the map, this tool will be greyed out.

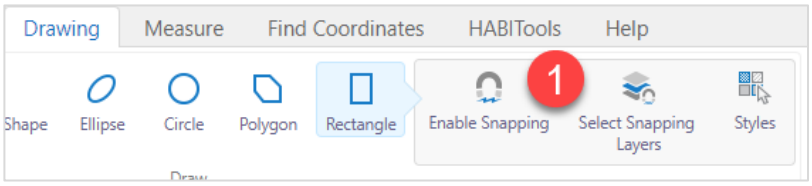


2. A **Download ".shp" file** dialogue window will open and ask you to confirm the download. After selecting OK, the file will be downloaded to your computer.



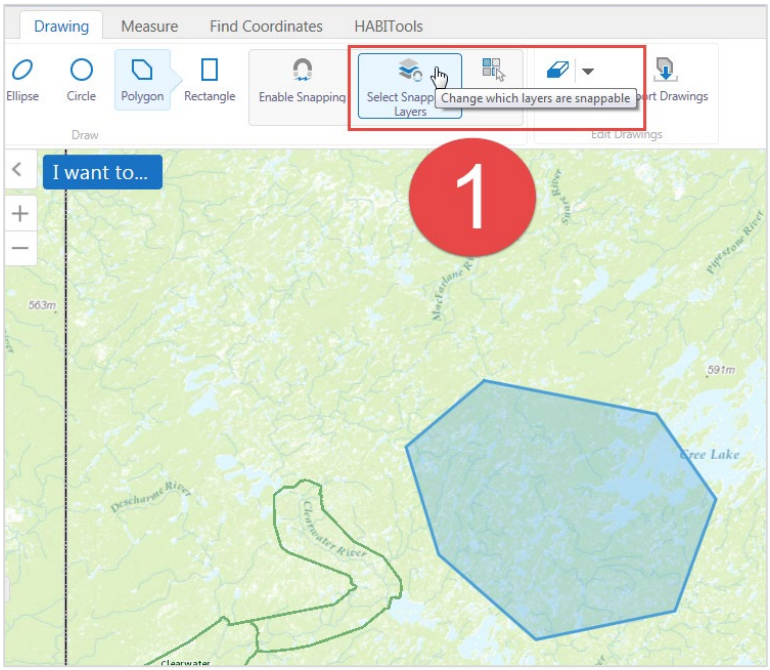
3. Navigate to the folder where you saved the shapefile (likely your downloads folder) to view it. The shapefile will be in a zipped folder called Export.zip by default. To use the shapefile, you will need to unzip the folder first. There will be five file types associated with your shapefile (named Polygon by default): .cpg, .dbf, prj, .shp and .shx. All of these are required for your shapefile to function correctly, and must be kept together. If you rename one of the files, rename all of them with the same name.

See Section 8.1 Data Sources Tab - Upload Data if you would like instructions for how to add your shapefile back to the map.



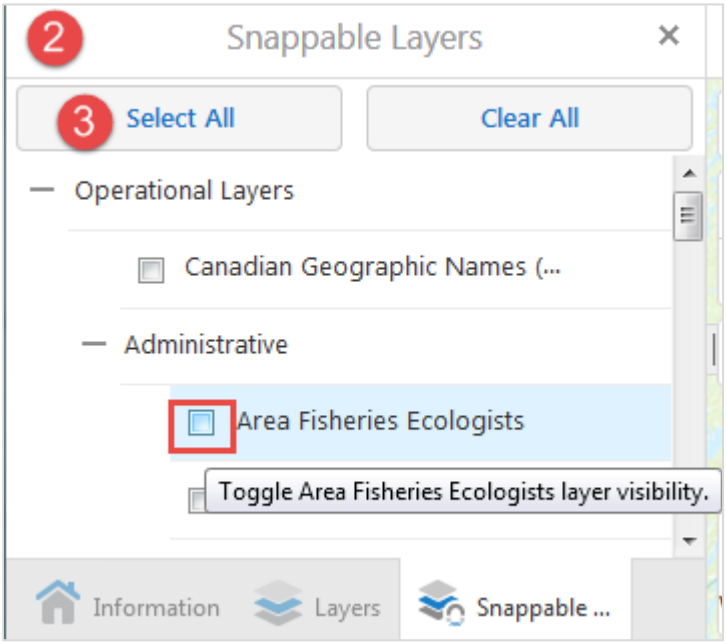
10.4 Snapping Tools

1. For some draw tools, there are additional tools. These include **Enable Snapping, Select Snapping Layers** and **Styles**.



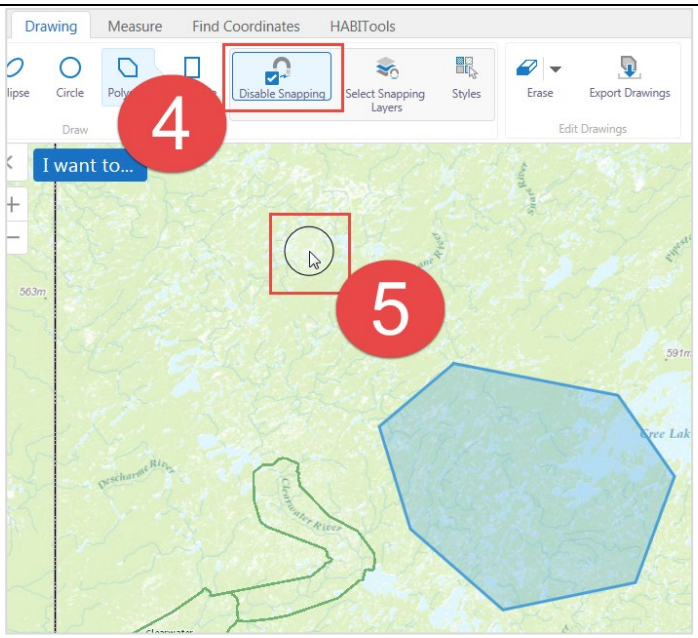
10.4.1 Select Snapping Layers

1. Prior to enabling snapping, you must select the layers that you wish to enable snapping with. Click **Select Snapping Layers** to identify the layers you wish to be able to snap to.



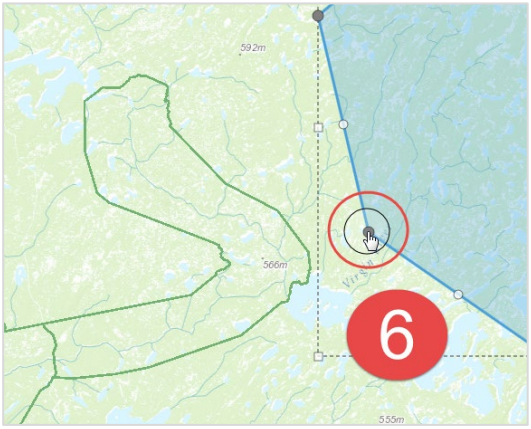
2. A **Snappable Layers** panel will open with all map layers listed.

3. You can **Select All** map layers or **Clear All** selected map layers, otherwise check the boxes beside the individual layers. Selection of a map layer is confirmed with a checkmark placed in the selection box.

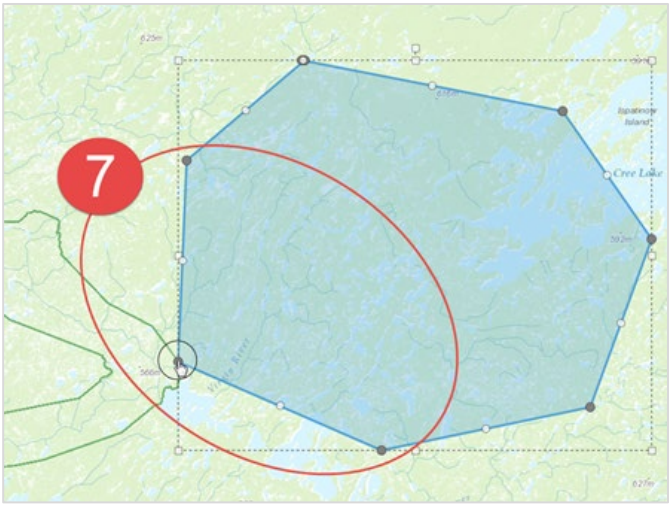


4. Once layers have been selected, click **Enable Snapping**. The **Enable Snapping** will switch to **Disable Snapping** to turn snapping off.

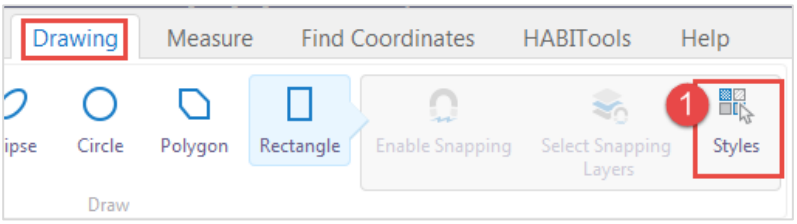
5. The cursor will now have a circle associated with it to enable the snapping of vertices between map layers.

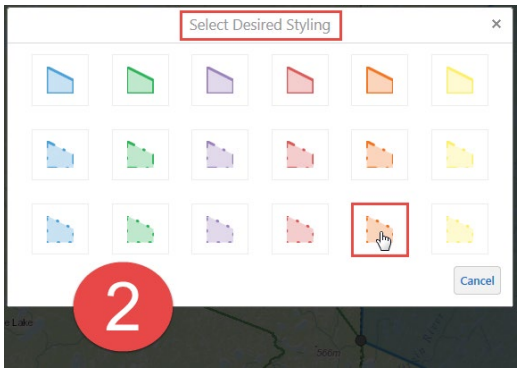


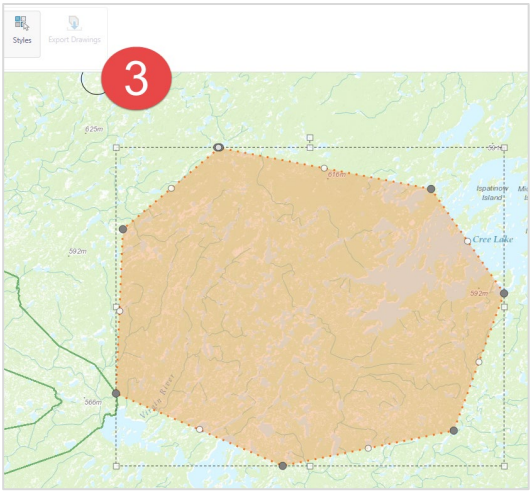
6. Click **Edit** to view the vertices associated with the drawing you've made. Select the vertex you wish to snap and drag it to the map layer you wish to snap to (e.g., Clearwater River Provincial Park).



7. The selected vertex from your drawing is then snapped to an aligning vertex in the selected map layer (e.g., Clearwater River Provincial Park).







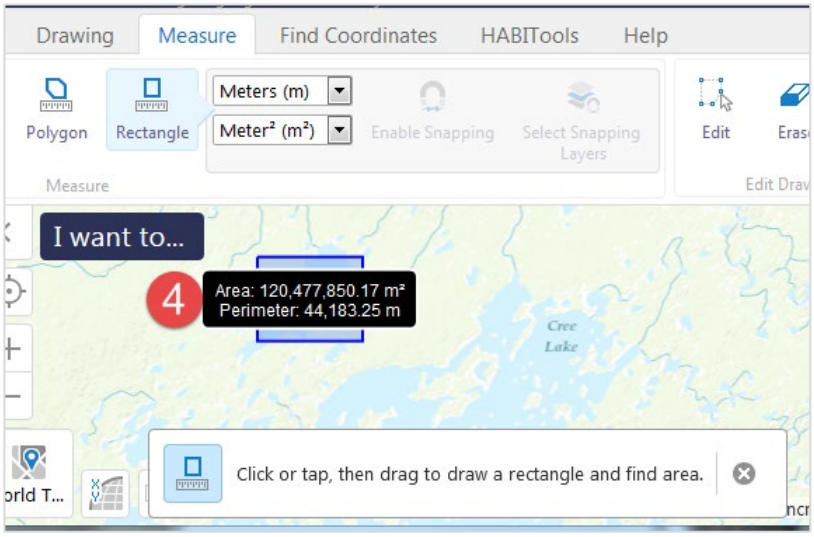
10.4.2 Styles

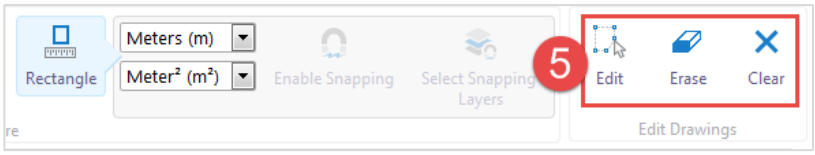
1. After selecting a drawing tool from the Drawing tab (e.g., Rectangle), click **Styles** to select a different style for the currently selected drawing tool.

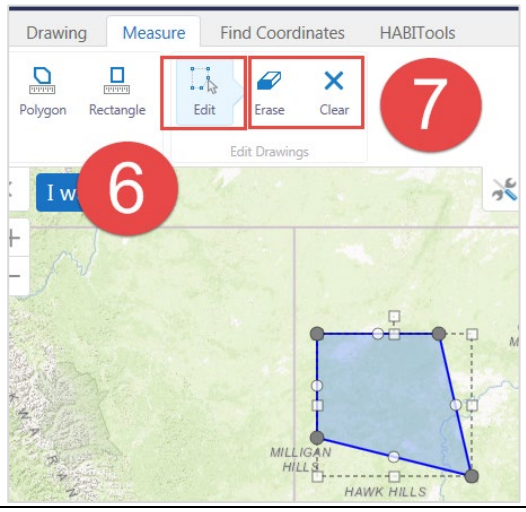
2. A **Select Desired Styling** palette will open, and you can then select one of the styles offered. This will appear different depending on the drawing tool selected (e.g., if text is selected this tool will allow you to change the text size; if line is selected you will be able to change the line style and colour).

3. Draw a new shape using the selected drawing tool and it will show the style you selected. If you wish to edit an existing shape/text's style, use the edit tool (Section 10.2.1) to select the shape first and then use the style tool.

11.0 Measure Tab







1. Click the **Measure** tab.

2. Select one of the measuring tools: Line (**Line**, **Freehand Line**) or polygon (**Freehand Shape**, **Ellipse**, **Circle**, **Polygon**, **Rectangle**). Similar to the **Drawing** tab, options to **Enable Snapping** or **Select Snapping Layers** will be made available with some **Measure** tools once the measurement is made.

3. Adjust the **measurement units** (e.g., metres, feet, etc.) by clicking the respective dropdown list. Different units are controlled for length/perimeter (upper drop-down list) and area (lower drop-down list).

4. Measure the linear feature or area on the map using the appropriate tool (e.g., rectangle). Instructions on how to use the measurement tool will appear in a window at the bottom of the map. Click the selected measurement tool in the Measure tab to turn it off. The measured drawing will remain on the map with the measurement parameters provided (e.g., side lengths and area) as you zoom in.

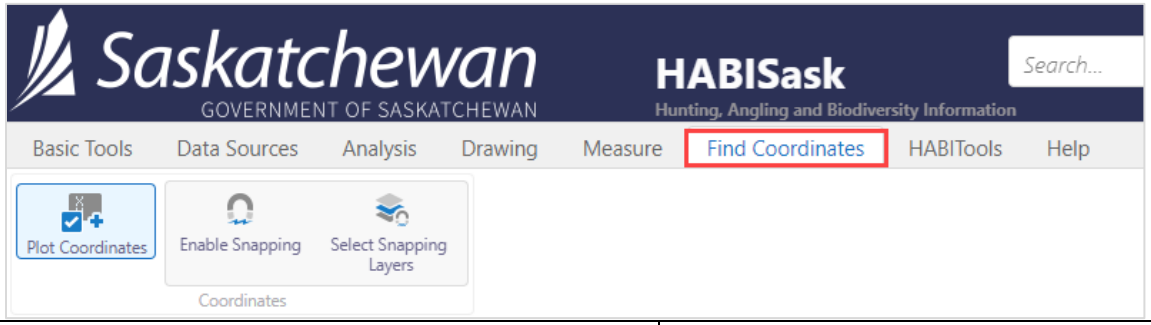
5. Select one of the **Edit Drawings** tools to edit or remove one or more of the measurement drawings.

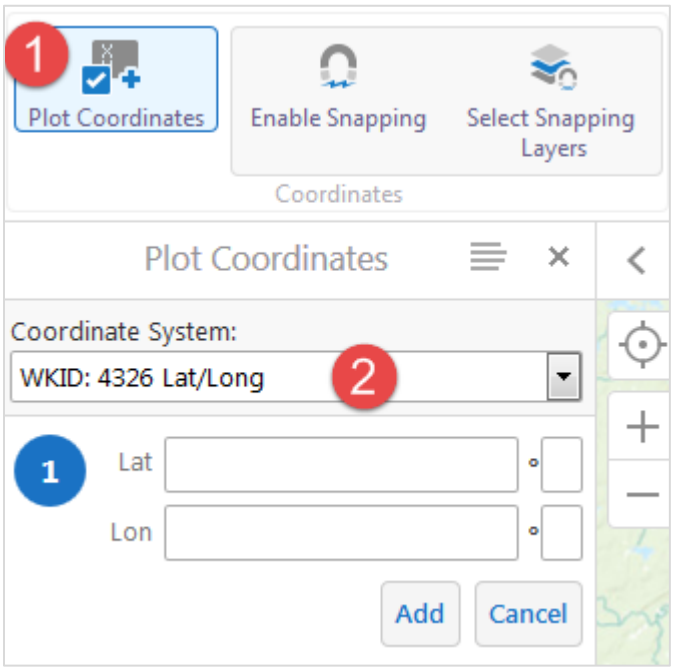
6. When the **Edit** tool is selected, click on the drawing to expose the vertices of the area or line to be measured. Make your desired edits then click outside of the drawing on the map to complete editing. Click on **Edit** to turn editing off.

7. To remove measure drawings, use **Erase** (click one drawing at a time) or **Clear** (all drawings at the same time). This cannot be undone.

12.0 Find Coordinates Tab

This tool allows you to plot and zoom to coordinates on the map. If you wish to save these, you must first be signed in and then save the map as a project.





1. From the **Find Coordinates** tab, click **Plot Coordinates** to manually enter coordinates that will be plotted on the map. Note that you may also enable snapping, to snap the coordinates to the nearest layer (set by selecting snapping layers).

2. Click **Coordinate System** to select from the dropdown box. If you are entering coordinates manually, this must be the coordinate system of the coordinates you are entering. You can also use this drop-down after entering coordinates to change how they are displayed on the map. See below for a description of the coordinate system options.

The coordinate system options are (with examples below each):

WKID: 4326 Lat/Long

- Units: Decimal Degrees; datum: WGS84; Example: Lat: 56.13688° N, Lon: 103.73355° W

WKID: 4326 DDM

- Units: Degrees Decimal Minutes; datum: WGS84; Example: Lat: 56°8.21289’ N, Lon: 103°44.01286’ W

WKID: 4326 DMS

- Units: Degrees Minutes Seconds; datum: WGS84; Example: Lat: 56°8’12.77319” N, Lon: 103°44’0.77145” W

Default WKID: 102100 X/Y

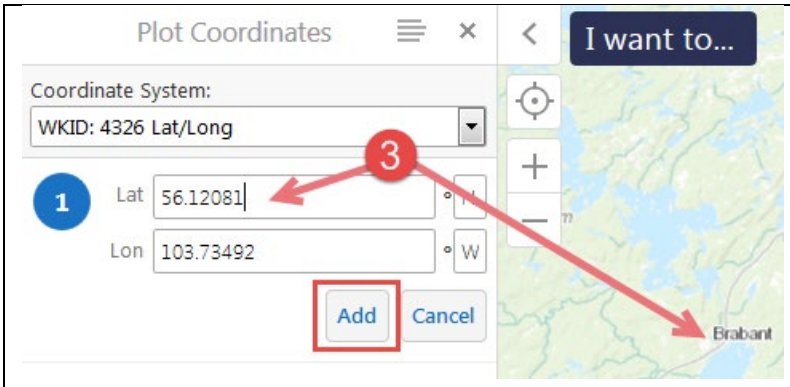
- Units: Metres; projection: WGS84 Web Mercator; Example: X: -11547565.69984, Y: 7585713.27642

NAD83(CSRS) / UTM Zone 13N

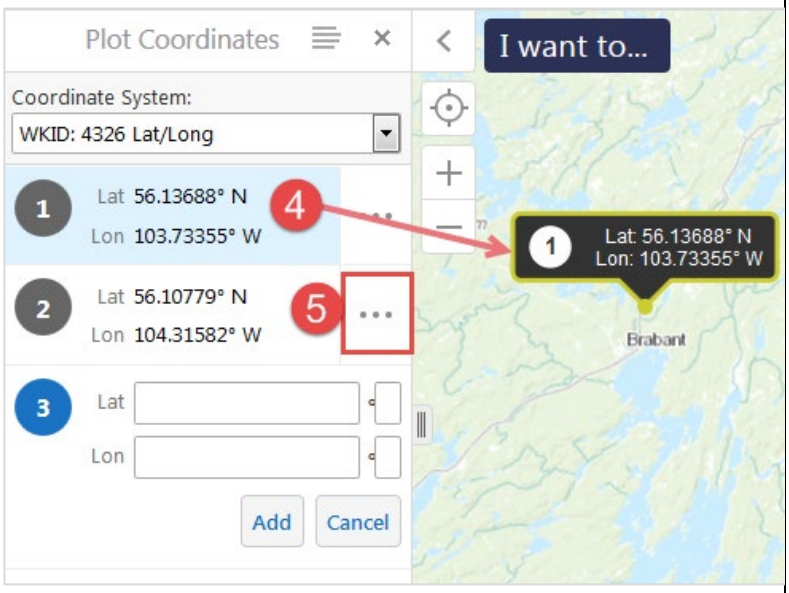
- Units: Metres; Example: X (easting): 578704.87727, Y (northing): 6222035.70747

NAD83 / UTM Zone 12N, 13N or 14N

- Units: Metres; Example: X (easting): 578704.88608, Y (northing): 6222035.71388

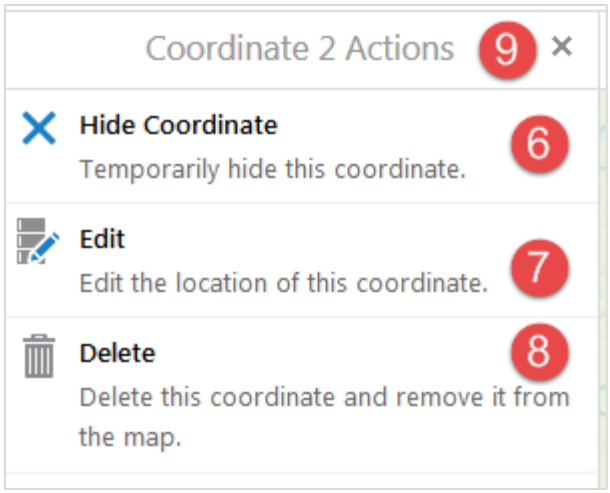


3. After selecting a coordinate system, enter your coordinates manually in the Lat/Lon or X/Y boxes and click **Add**; or select a point on the map display.



4. The coordinate will be marked on the map with a black bubble and a number denoting which one it is in the list. Click on the coordinate listed in the **Plot Coordinates** panel to centre the map on it.

5. Click on the "**…**" icon beside your coordinates in the **Plot Coordinates** panel to view available actions

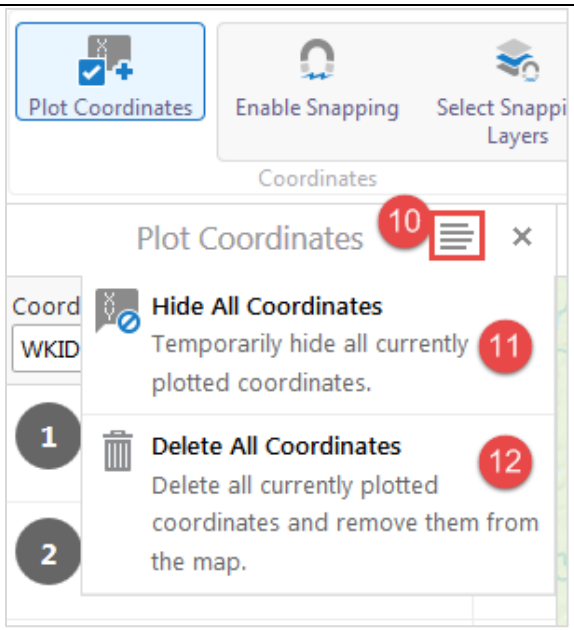


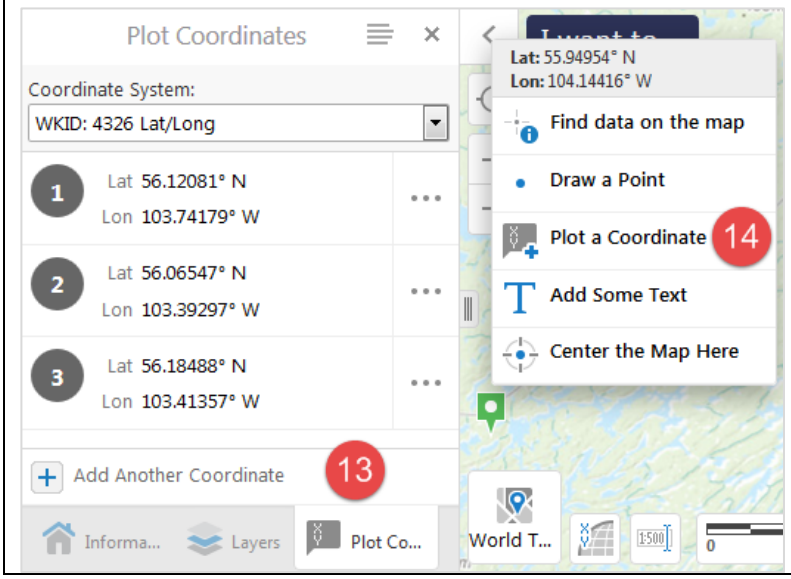
6. **Hide Coordinate** will hide the coordinate form displaying on the map. The coordinates will appear greyed out in the **Plot Coordinates** panel. To unhide them, return to this menu and select **Unhide Coordinate**.

7. **Edit** will open the **Plot Coordinates** panel and allow you to change the coordinates. Select **Update** when done or **Cancel** to go back.

8. **Delete** will remove the coordinate from the map. This cannot be undone.

9. Click the **X** in the right corner to close the **Coordinate Actions** panel and return to the **Plot Coordinates** panel.





10. View actions for all coordinates with the **Panel Actions Menu** at the top right.

11. **Hide All Coordinates** will hide all your coordinates from displaying on the map, and they will be greyed out in the **Plot Coordinates** panel. To unhide them, return to this menu and choose **Show All Coordinates**.

12. **Delete All Coordinates** will delete them from the map. This cannot be undone.

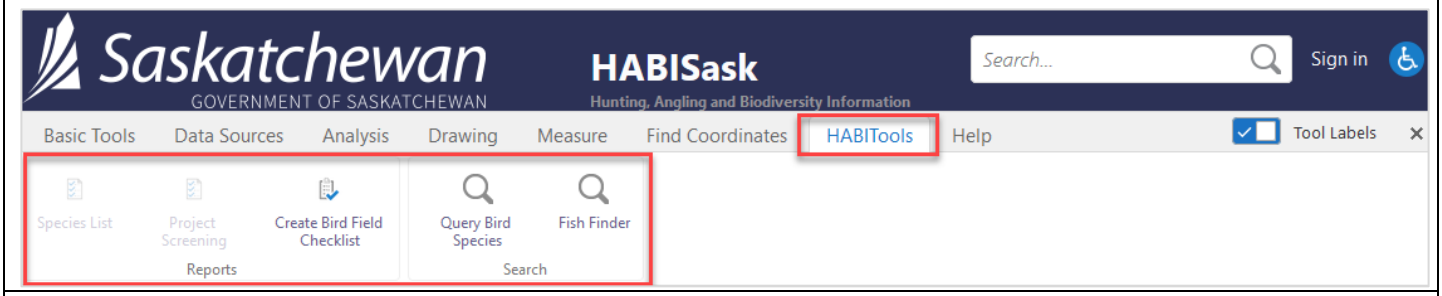
13. You may plot more coordinates at any time by returning to the **Plot Coordinates** tool and selecting **Add Another Coordinate** at the bottom of the panel,

    OR,

14. **Right-click** the map in the location where you would like to plot a coordinate. From the menu that pops-up, select **Plot a Coordinate** and it will automatically be added to the map.

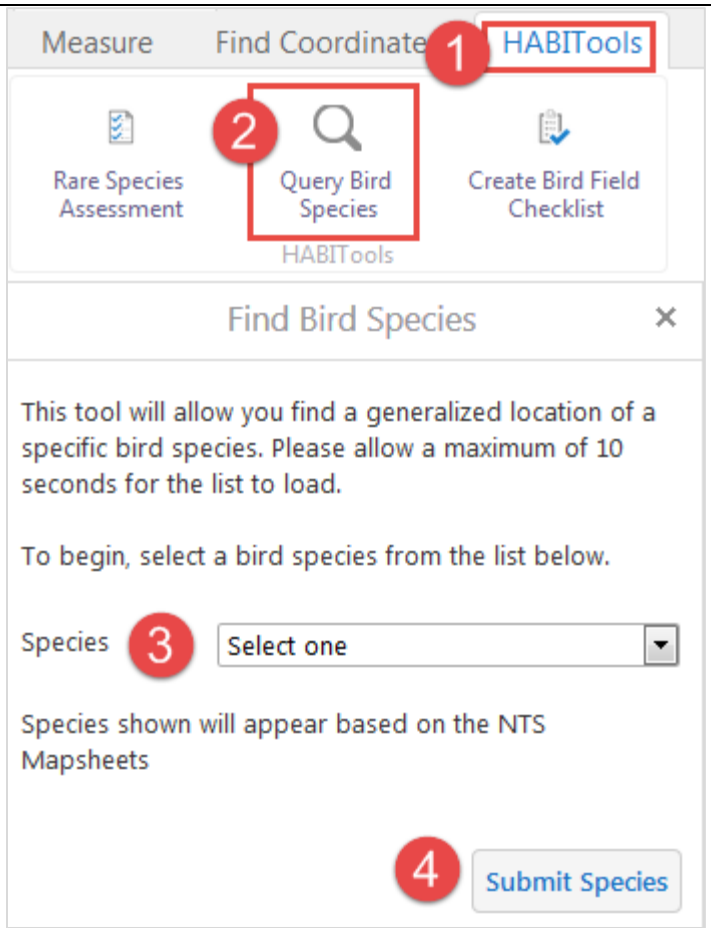
13.0 HABITools Tab

HABITools are a customized suite of report and search tools that use data from pre-selected map layers. If the tool is greyed out, it requires signing in to **HABI**Sask for it to work.

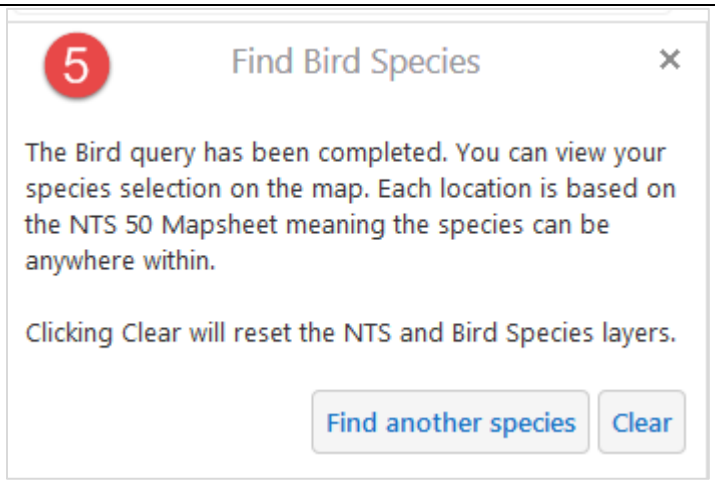


13.1 Query Bird Species

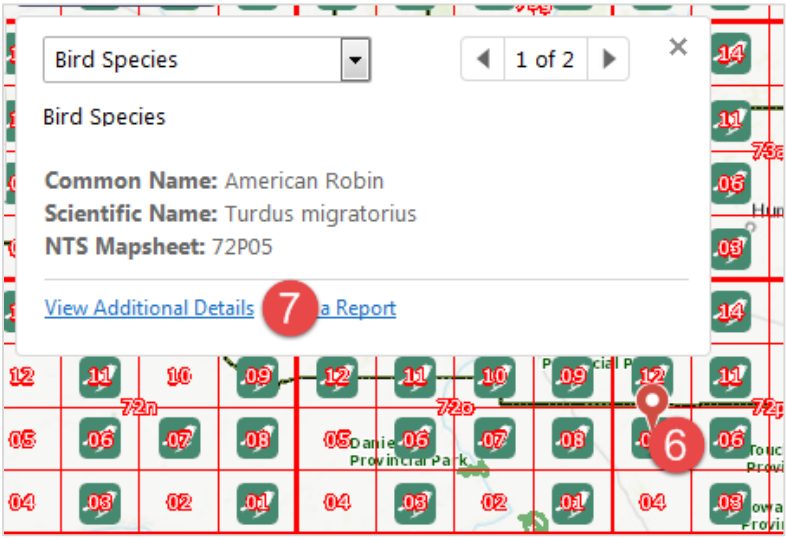
Use this tool to find locations where a bird species is expected to be found. The points comprising this dataset are centroids of the 1:50,000 National Topographic System (NTS). Bird location and breeding data originates from the 1996 Atlas of Saskatchewan Birds by Al Smith. Additional sources include Breeding Bird Survey data from the United States Fish and Wildlife Service (1960-1996), bird banding data from the Canadian Wildlife Service (1960-1996), nest records from the Prairie Nest Records Scheme (selected from 1960-1996), regional annotated species lists (1960-1994), articles in the Blue Jay published by Nature Saskatchewan (1960- 1994), publications containing historical information, articles in American Birds and other journals (to 1994). Also included are specimen records from the Royal Saskatchewan Museum, Saskatoon Bird Review and Saskatoon Field Notes, Grey Literature and personal observations taken specifically for the Atlas by a wide range of contributors. Plans are underway to update this information with data from more recent sources.



1. Click the **HABITools** tab.
2. Click **Query Bird Species** from the toolbar ribbon.
3. Select a **Species** from the dropdown list. You will have to wait a few seconds (~10) for the app to load the species list. Once the drop-down Species button says “Select one”, the list should be loaded.
4. Click **Submit Species**.

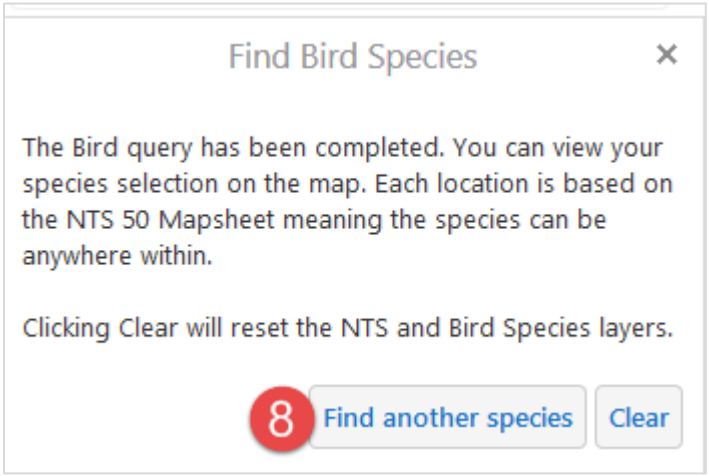


5. A **Find Bird Species** results panel will open to inform you of the search completion.

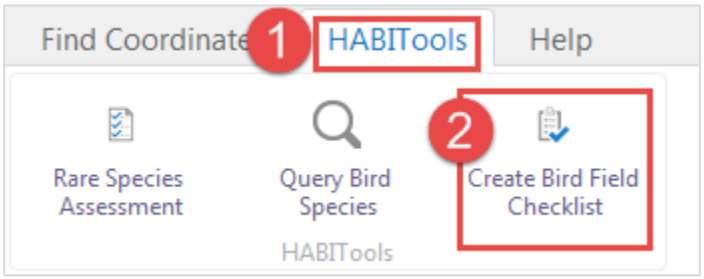


6. On the map display, the Birds layer (green icons) will be filtered to show only those NTS50 map sheets for which there is a location for the selected species. Click a bird icon to see information on the bird species.

7. Click **View Additional Details** to see more information on the bird species.

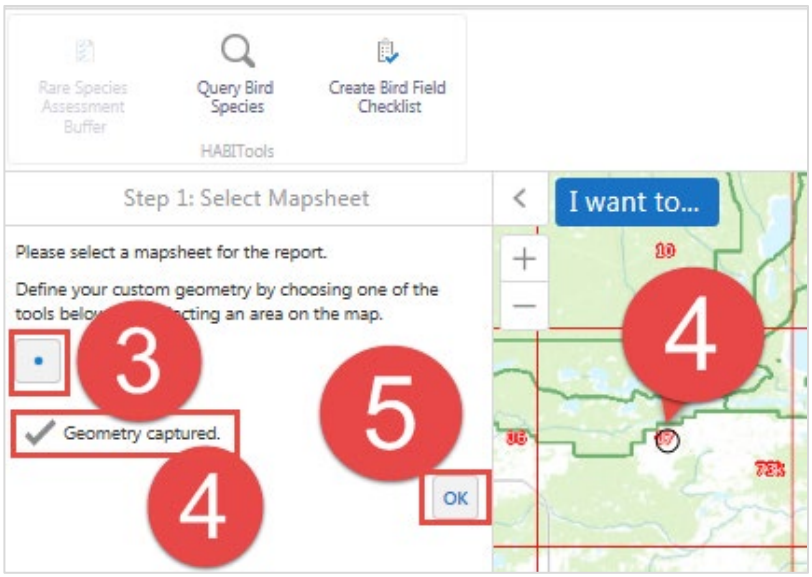


8. Click **Clear** to clear the results and exit the tool or choose **Find another species** to continue searching.

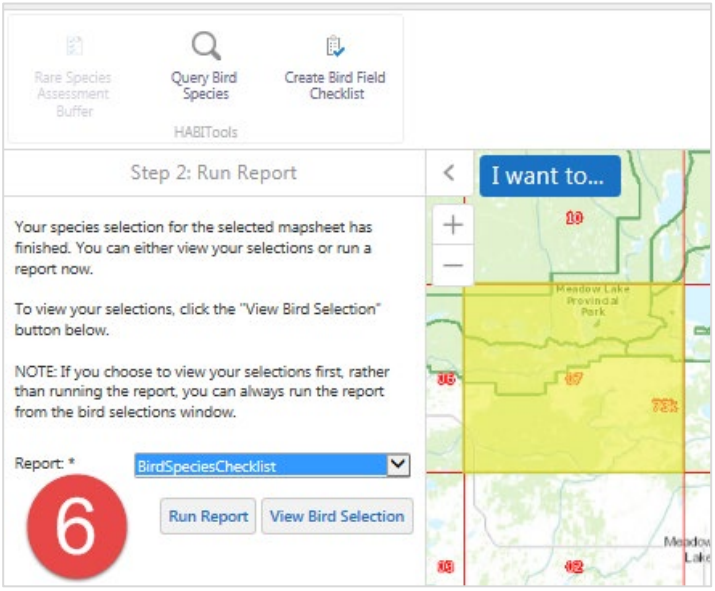


13.2 Create Bird Species Field Checklist

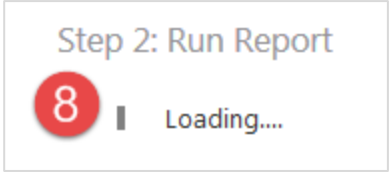
1. Click the **HABITools** tab.
2. Click **Create Bird Species Field Checklist**.



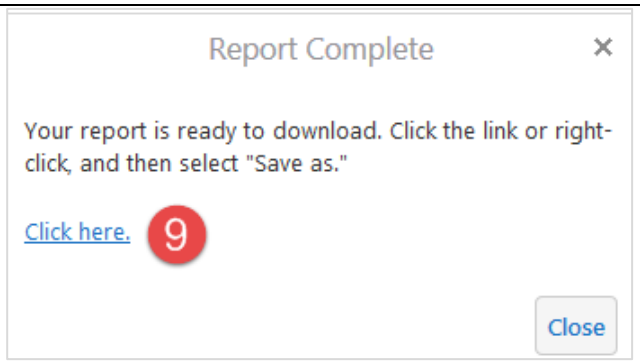
3. Select a point on the map in the desired NTS50 map sheet area. If you need to zoom or pan around the map display, the drawing tool may be deselected, and reselected when you are ready to click the desired location on the map display.
4. A confirmation will show on the left-hand information panel that geometry was captured (circle).
5. Click **OK**.



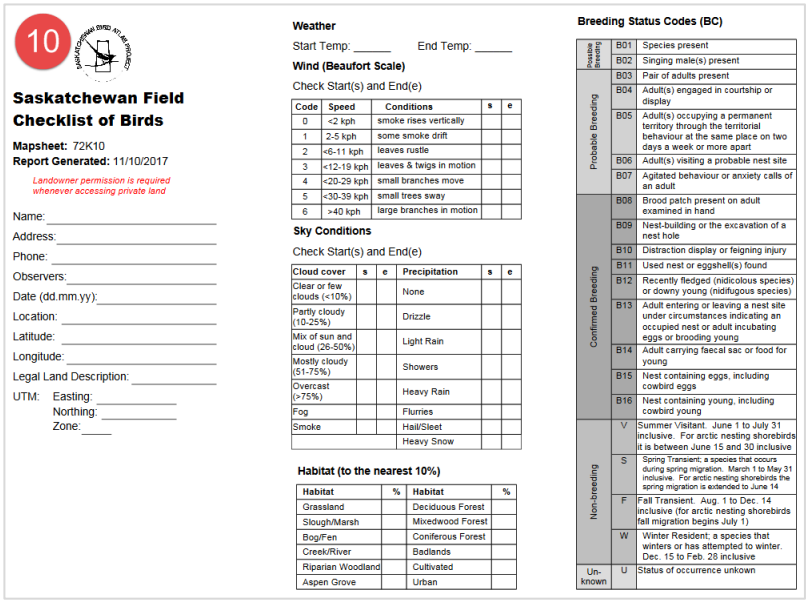
6. A **Step 2: Run Report** information panel for the selected NTS50 map sheet will appear along with the selected map sheet being highlighted.
7. Select **Run Report**.



8. After clicking Run Report, the app will load the data and prepare the results and a report.

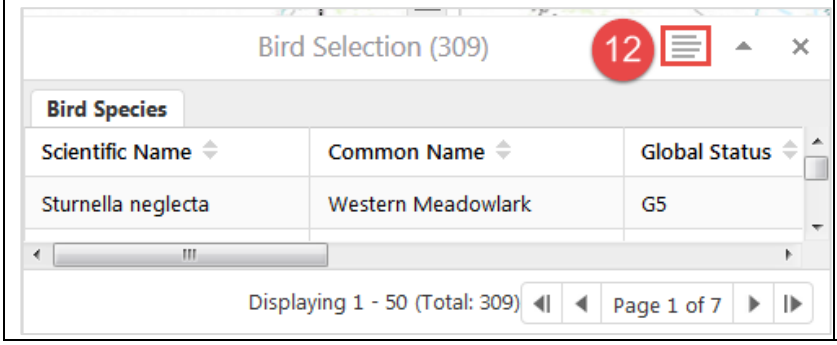


9. A **Report Complete** panel will open. Choose **Click here** to open the report.



10. The report will open in another window within the browser and provides columns to collect the observer information, environmental condition coding and breeding codes.

11. The second page of the report provides a columned data sheet to record species and numbers of birds observed. You can then print the page or save the checklist. Return to the **HABI**Sask browser tab when finished.

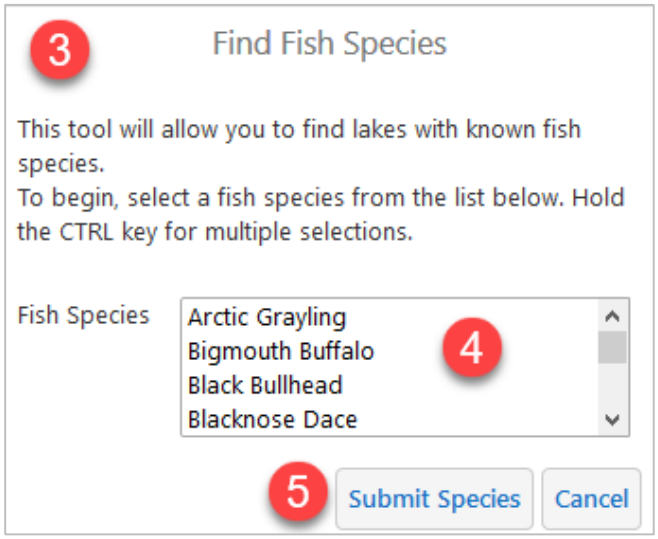


12. The list of birds within the selected mapsheet will also appear in a table below the map. Click **Panel Actions Menu** to open up options for switching the results view (table/list), exporting the results (csv or xlsx) and more (see Section 7.3.5 Identify: Results Panel Actions for more details). You can also create a report from the Bird Selection results panel by selecting the **Run a Report** option on the Actions Panel Menu.

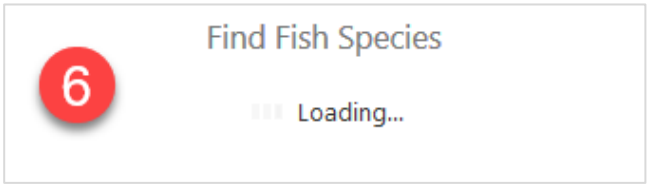
13.3 Fish Finder

The **Fish Finder** tool is a quick way to filter the fish species layers on the map to view one species at a time. It uses the **Fisheries – Special Regulations Info** and **Fisheries – Species Info** map layers that are included with the **Angling** map theme.

1. Select the **HABITools** tab from the ribbon.
2. Select **Fish Finder.**



3. The **Find Fish Species** panel will open on the left.
4. In the **Fish Species** menu, click the name of the fish species you wish to find. To search for lakes with more than one species together, hold the CTRL key while selecting the fish species.
5. Click **Submit Species** to run the search or click **Cancel** to exit the tool.

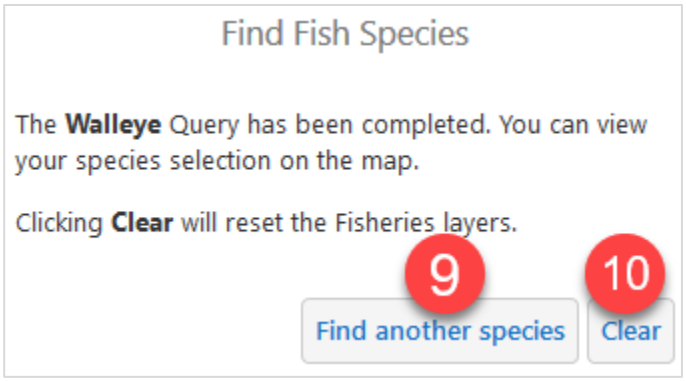


6. A **Loading…** icon will appear while the search runs.

7. A message will appear that the **query has been completed**. If you are searching for more than one species together, and no lakes are known with this combination of species you will receive a pop-up message that says, “There are no lakes that contain these species together”.

8. The selected fish species will now be the only fish that displays on the map. Scroll/pan across the map to view the results. The watershed map layer (red lines) will also filter to show watersheds that contain the selected species.

   (TIP: to centre the map on the entire province, from the **Basic Tools** tab select **Initial View**).



9. Select **Find another species** from the **Find Fish Species** panel to run another search.

10. Select **Clear** to clear the results on the map display and exit the tool.

13.4 Project Screening Report

The following function requires that you are signed in to HABISask, which requires a data sharing agreement with the Saskatchewan Conservation Data Centre (SKCDC). See Section 6.1.1 for details on signing in.

The **Project Screening Report** will provide a list of known and expected species as well as certain features such as managed areas, Federal Critical Habitat, Federal Emergency Protection Order, Woodland Caribou Habitat Management Areas and more. The report exports into a PDF format that can be saved.

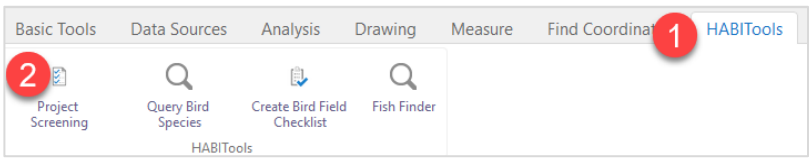
A note on Rare and Endangered Species Occurrences: The Project Screening HABITool allows you to create a report that includes rare and endangered species occurrences within your project area. Species occurrence data is drawn from the Saskatchewan Conservation Data Centre's (SKCDC) provincial database. **If you notice any errors, omissions, or have questions about the data, please use the Contact Us button. See the SKCDC Training Manual and Data Sharing Agreement for details on interpreting conservation ranks, how occurrences are mapped, and data sensitivity issues.**

The absence of information provided by the SKCDC within the area searched does not categorically mean the absence of sensitive species or features. The quantity and quality for data collected by the SKCDC are dependent on the research and observations of many individuals and organizations.

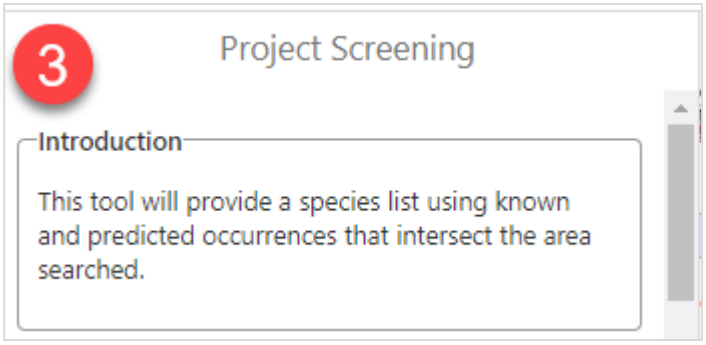
"Expected" species are based on a modelled prediction if a species might occur in areas based upon developed statistical relationships between local and landscape characteristics and species presence. Models utilized by this report have only been created in the prairie ecozone for a selection of species. The boreal plain, boreal shield and taiga shield will not return expected species results.

Woodland caribou and Barren-ground Caribou are both wide-ranging species and therefore range polygons have been provided, as opposed to individual sightings. You will see these sections in the report, including Woodland Caribou Habitat Management Areas, when searching areas that overlap with their ranges.

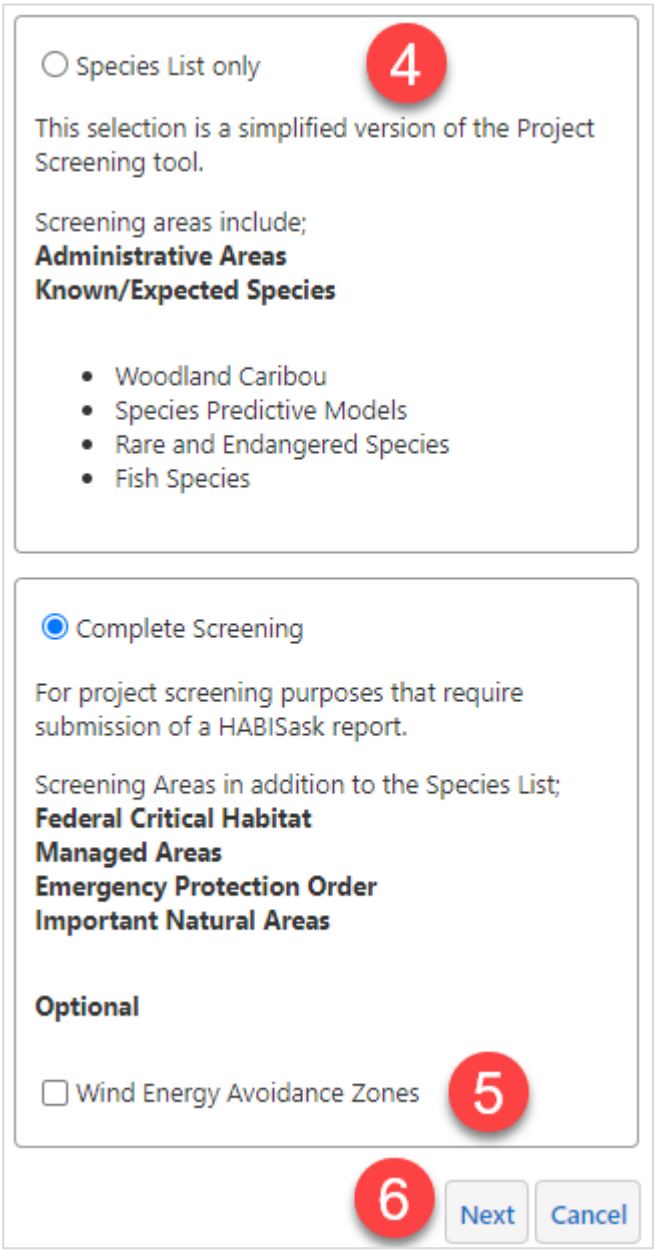
HABISask Project Screening reports summarize the existing natural heritage information, known to the SKCDC, at the time of the request. Data should never be regarded as final statements on the species or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. The user therefore acknowledges that the absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.



1. After signing in, click the **HABITools** tab.
2. Click **Project Screening**.



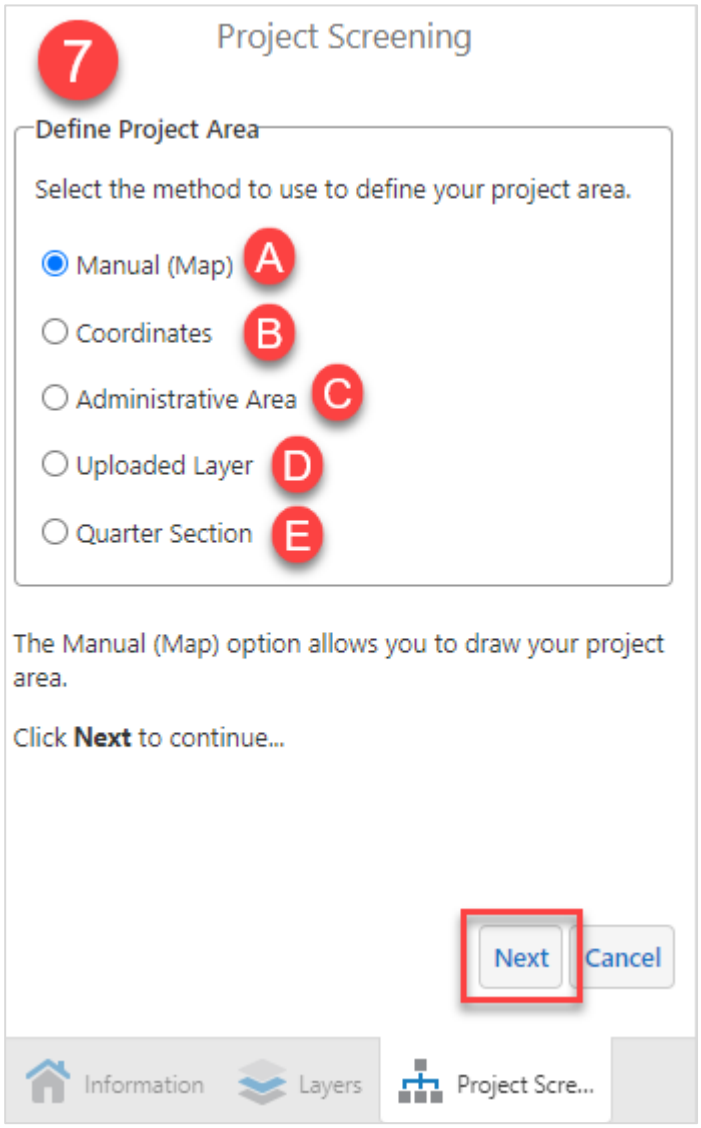
3. A **Project Screening** panel will open on the left with an **introduction** to the tool.

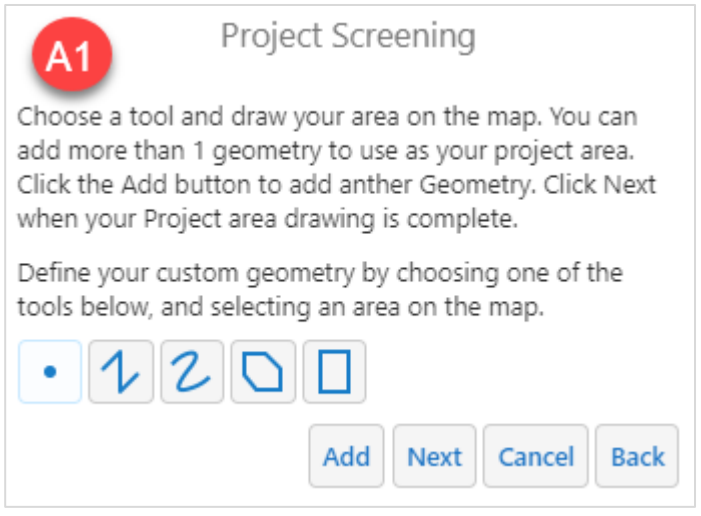


4. Below the introduction, you will have an option to choose **Species List only** or **Complete Screening**. Complete Screening is checked by default and will create the Project Screening report that is required for environmental review processes. This option is recommended. The Species List only option will produce a simpler report with a species list.

5. For the **Complete Screening, Wind Energy Avoidance Zones** are optional. This will be unchecked by default. If your project is related to wind energy, check this box.

6. Select **Next** to continue to the next step.



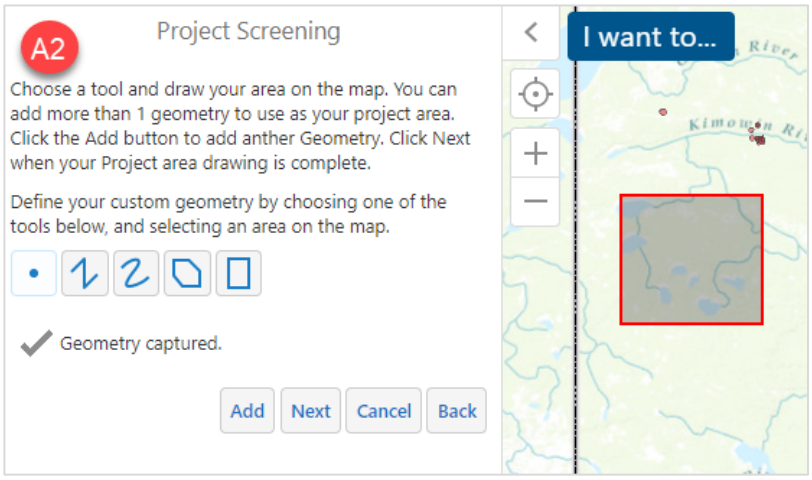


7. **Project Screening – Define Project Area** will open. Here you can choose how you want to define your project area. The options are:

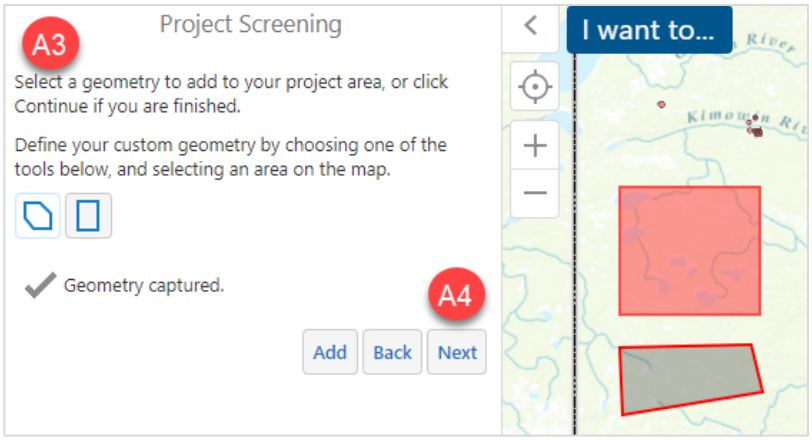
A. **Manual (Map)**: will allow you to select your location by clicking a spot on the map or drawing around your location. If you would like to use this option, select it and then click **Next**.

   The following steps (**A1-A2**) will demonstrate using the manual (map) option – if you would like to use a different option, skip to the corresponding step (**B-E**).

A1. Use the draw tool to mark a location (i.e., geometry) on the map. Choose which draw tool to use by selecting one of the draw options. Hover over each draw tool with the mouse for a description: the options are point, line, freehand line, polygon or rectangle. Once the draw tool is selected, it will be highlighted in light blue. Instructions for how to use the tool will appear at the top of the map in a yellow bar.

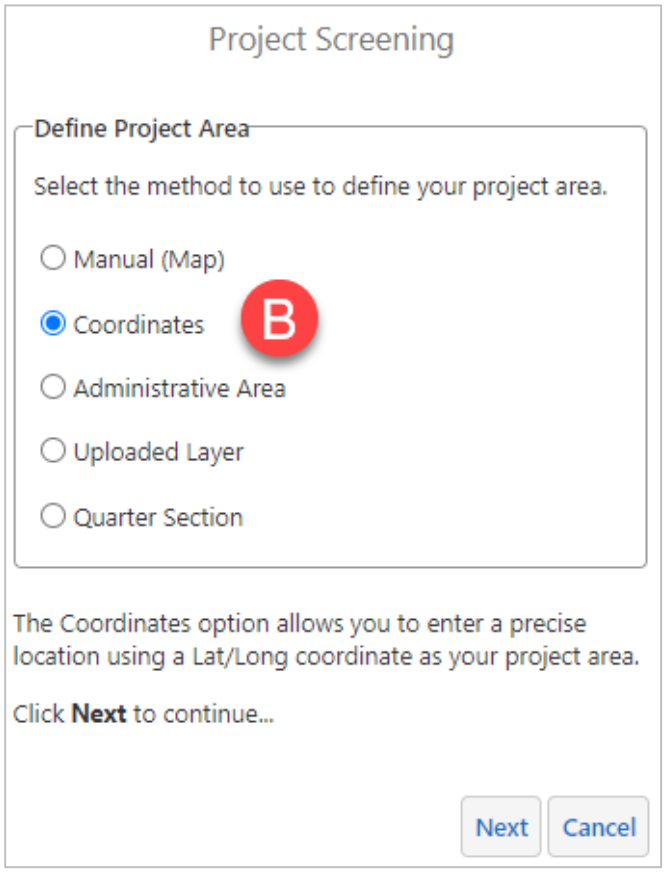


A2. After drawing on the map, there will be a confirmation that the geometry was captured. If you wish to add another geometry (so that both areas are searched), select **Add**.

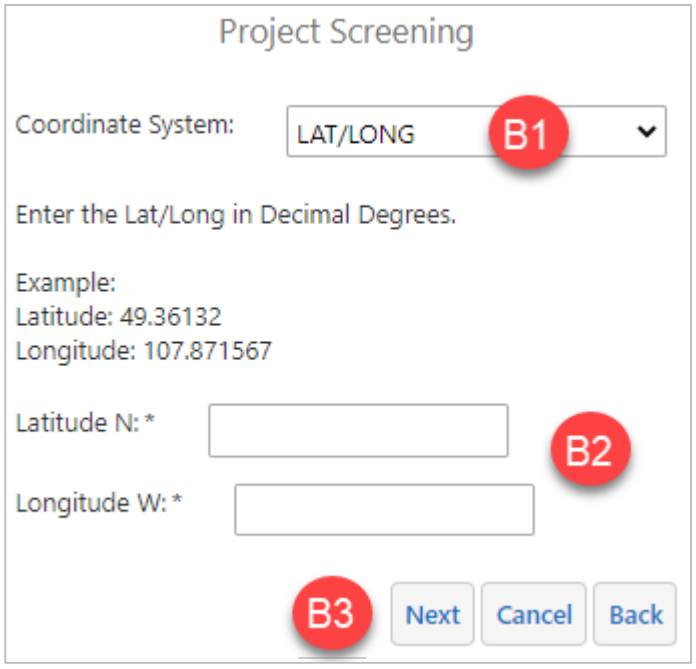


A3. If you've chosen to add another geometry, the draw options will appear for your second drawing. If the first geometry drawn was a polygon/rectangle, subsequent drawings are restricted to polygons/rectangles. If the first drawing was a line/freehand, these will be the options for subsequent drawings and if the first drawing was a point, this will be the option.

A4. Select **Next** when all drawings are complete and proceed to step 8 in this document.



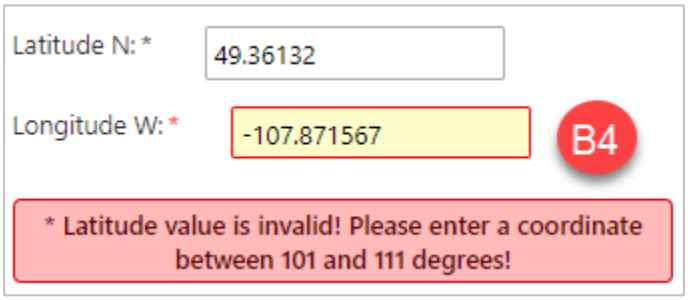
B. **Coordinates:** selecting this option will enable you to enter coordinates. After selecting it, the form will appear below the selection.



B1. In this version, the only option for coordinate system is **LAT/LONG** in Decimal Degrees.

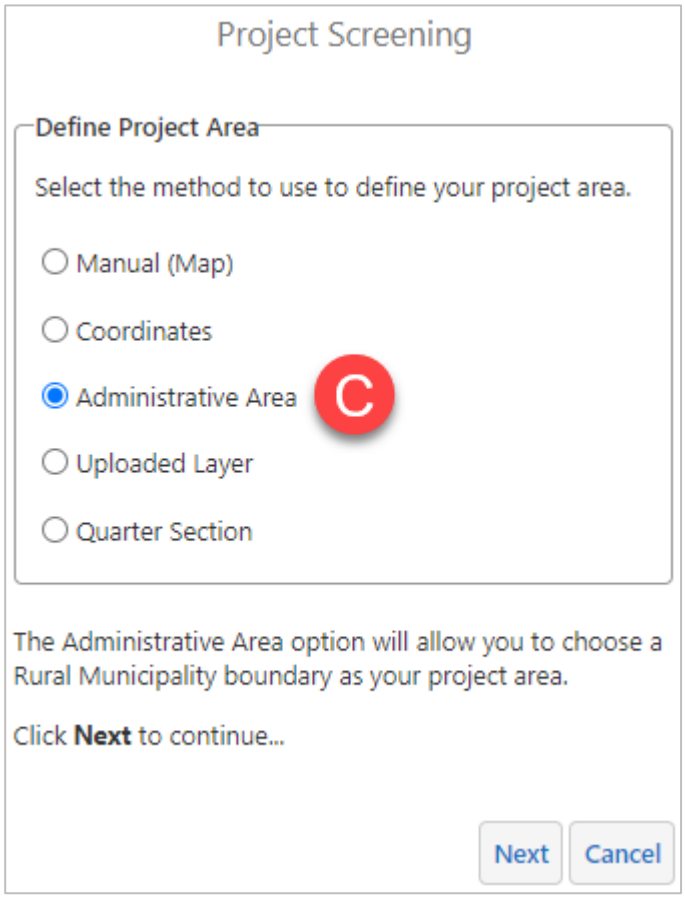
B2. Enter the **latitude** (2 digits + decimals) and **longitude** (3 digits + decimals, no negative symbol) in the appropriate fields. Do not include degree symbols (°).

B3. Select **Next** when ready.

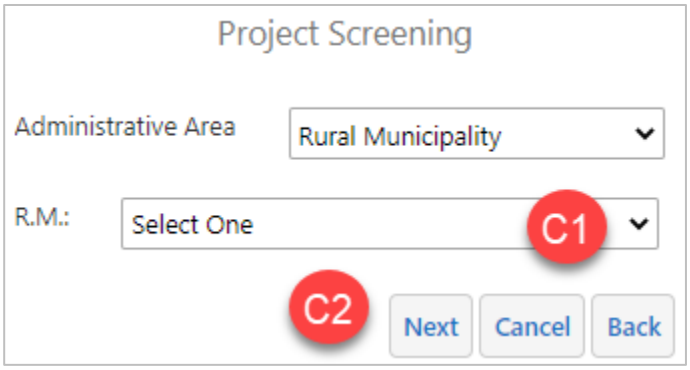


B4. If a coordinate was entered that is not within Saskatchewan, an error message will appear. Latitude coordinates must fall between 49 and 60, and longitude coordinates must fall between 100 and 110 (decimal degrees). Correct your coordinates and select **Next** when complete.

B5. The map will zoom to your coordinate. Proceed to step 8 in this document.

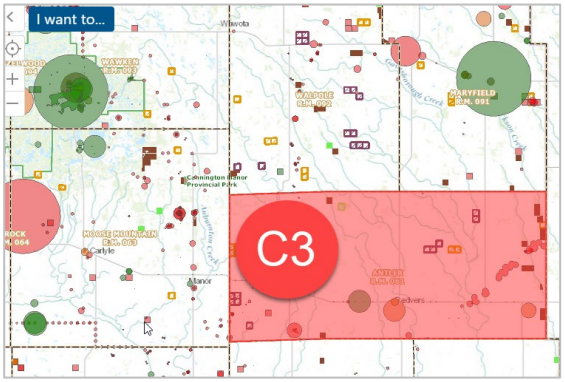


C. **Administrative Area:** choose this option to search by an administrative area, such as Rural Municipality. After selecting it, the form will appear below the selection.

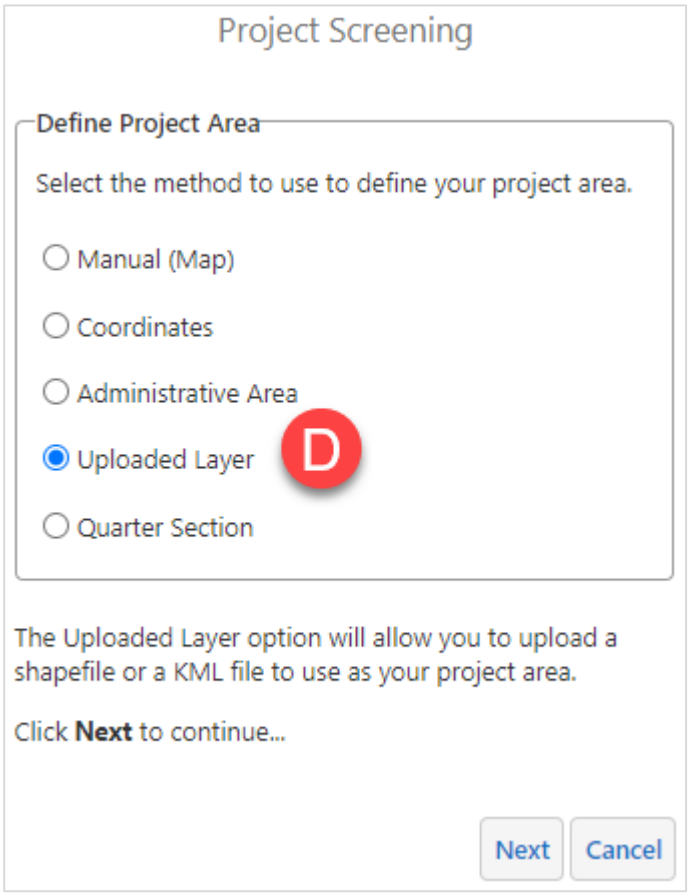


C1. In this version, the only administrative area available is Rural Municipality (R.M.). Select the Rural Municipality you would like to search from the R.M. drop-down menu.

C2. After completing your selection, choose **Next**.

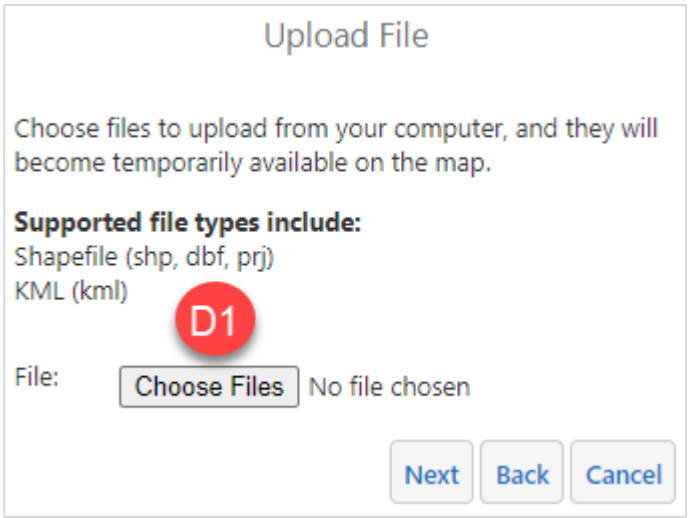


C3. The map will zoom to the chosen R.M., and it will be highlighted in red. **Proceed to step 8 in this document**.

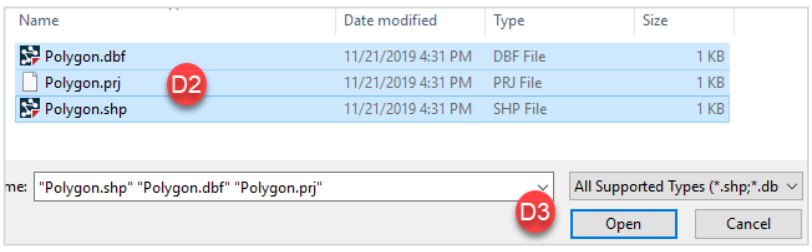


D. **Uploaded Layer**: this option will allow you to upload your own shapefile (e.g., created in Esri ArcGIS or exported from HABISask) or KML file (e.g., created in Google Earth) to use as the project boundary.

If you would like to create a shapefile in **HABI**Sask and save it to use here, refer to Section 10.0 for instructions on how to create and export drawings prior to running this tool. Note that you will need to unzip the folder after downloading it before you can use it.

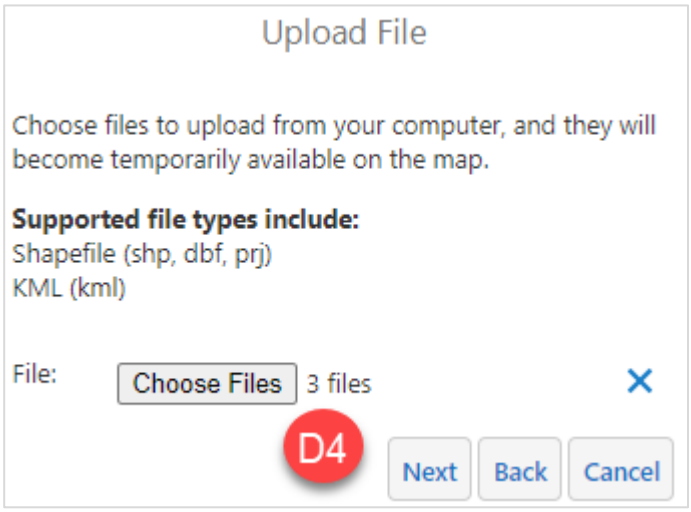


D1. Select **Choose Files…** to search for the file on your computer.

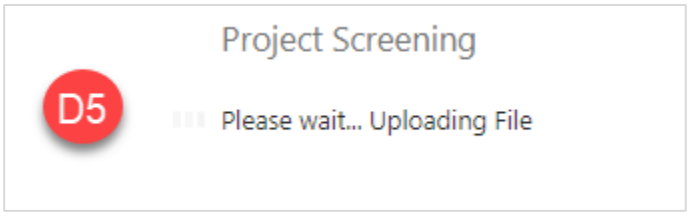


D2. A file upload window will open. Search for the location of your file. If it is a shapefile, hold the **Shift** key on your keyboard to select **all three** of the necessary files: there must be a **.dbf** file (attribute information), a **.prj** file (projection information), and a **.shp** file (shape information).

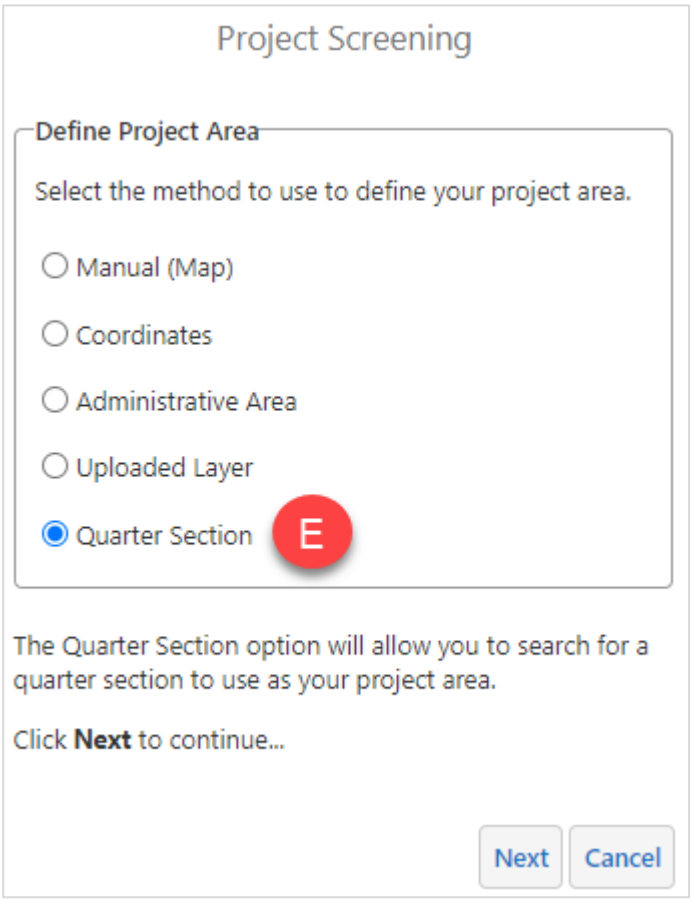
D3. **With the kml or three files from the shapefile selected**, click **Open** (may look different depending on which browser/operating system you are using).



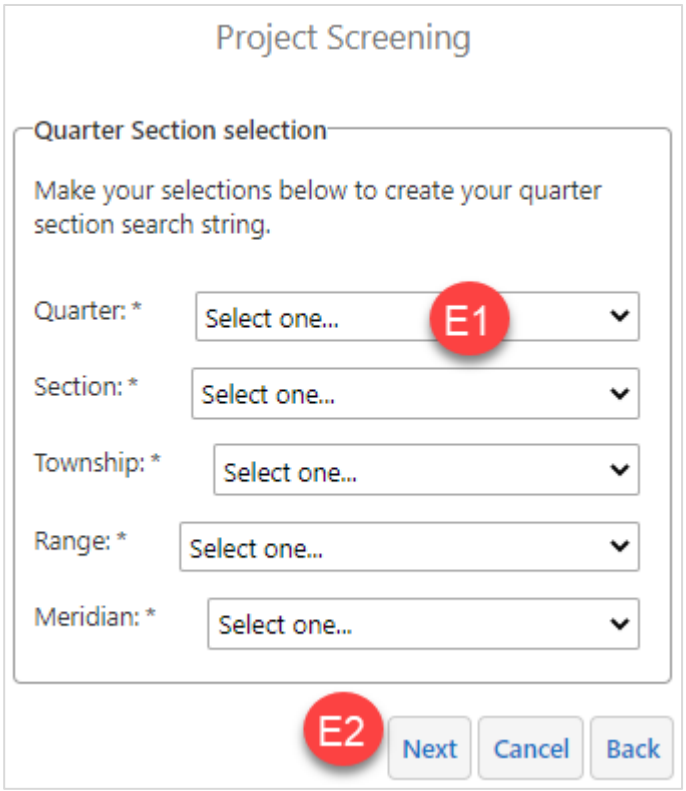
D4. The upload window will close, and the Project Screening panel will say how many files have been selected. Click **Next.**



D5. While the file uploads, **Please wait… Uploading File** will appear in the next window. When the file has loaded, the map will zoom to its location and the uploaded layer will appear on the map in red. **You are now ready to proceed to step 8 in this document.**

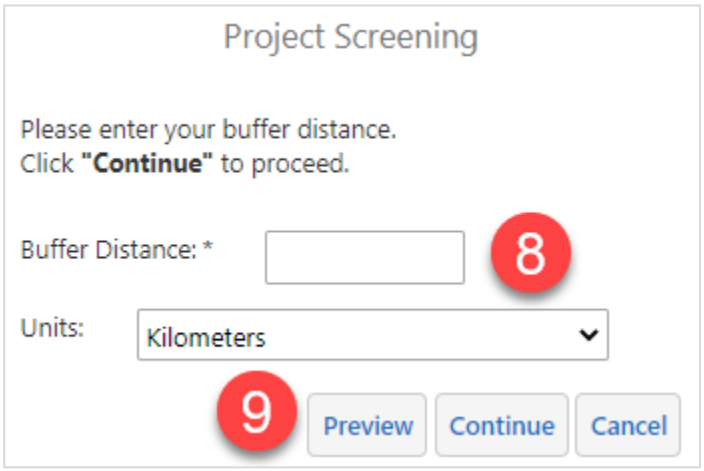


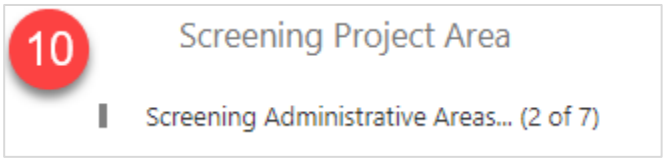
E. **Quarter Section** – this option will use a quarter section as the project area to screen. With **Quarter Section** selected, click **Next**.

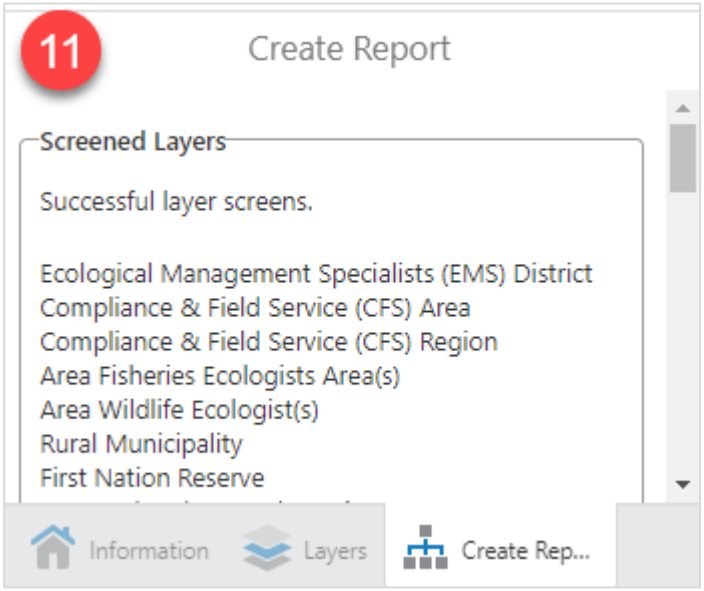


E1. To start, select the quarter from the drop-down menu. Once a quarter has been selected, the section drop-down menu will populate with sections that are available for the chosen quarter. It may take a moment for the drop-down to populate. The form must be filled out top to bottom. Continue until all the values for **Quarter**, **Section**, **Township**, **Range** and **Meridian** have been selected.

E2. When the desired quarter section has been filled out in the form, select **Next**. The map will zoom to the quarter section, and it will appear red. **Continue to step 8 in this document.**





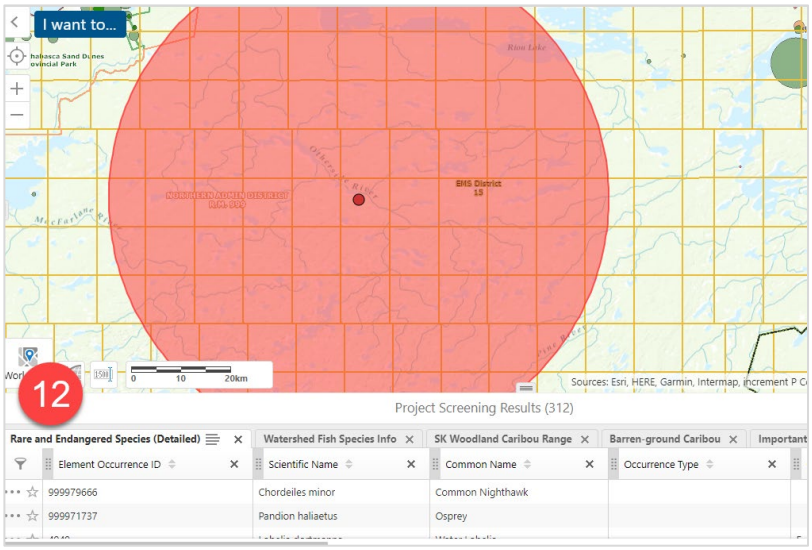


8. In the **Project Screening** panel, enter a **Buffer Distance** in the text box and select the **Units** from the drop-down menu. The buffer distance must be greater than one.

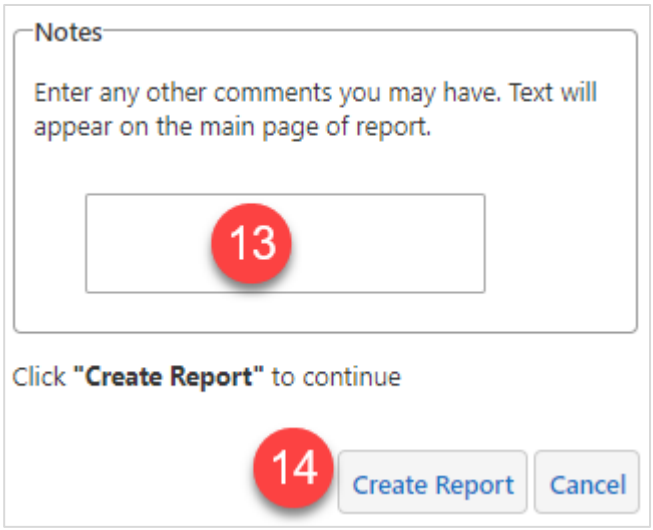
9. Click **Preview** to see the buffered point on the map. Click **Continue** to view results.

10. While the application searches for features within the buffered area, a loading icon will appear for each layer. Depending on the size of your area and how much data is within it, this may take some time.

11. Once the search is complete the **Create Report** panel will open, with a list of all the map layers that were queried within your area.

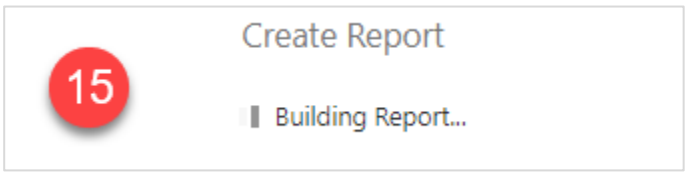


12. The map will display your buffered area. Any map layers that were selected will appear in tables at the bottom of the map.

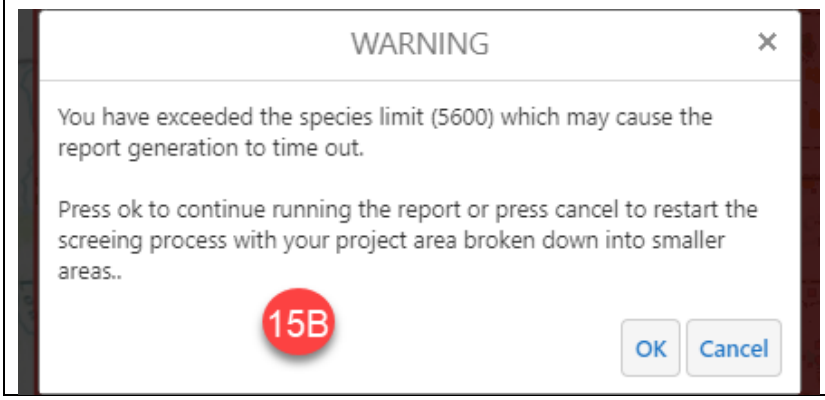


13. Back on the **Create Report** panel, scroll to the bottom. There is a text box called **Notes** where you can enter in comments that will appear at the top of the report (e.g., project name and location).

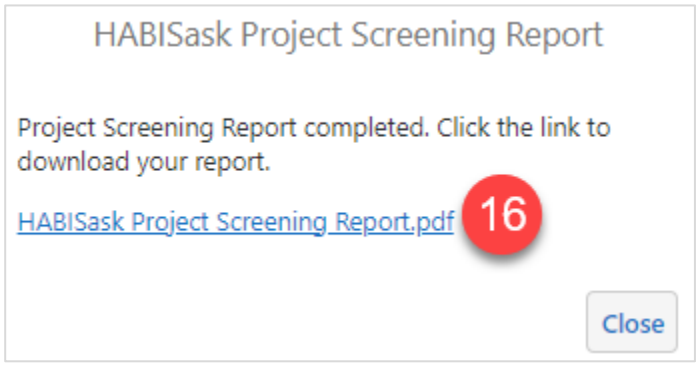
14. Select **Create Report**.



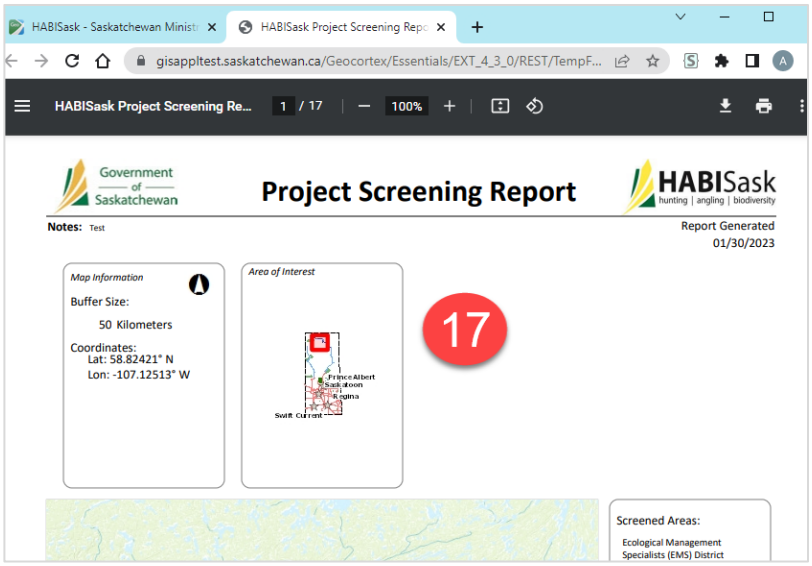
15. While the report is being prepared, a loading icon will appear.



15B. Limit: The Rare and Endangered Species map layer has a search limit of 5600 records. If the search area is large and this limit is reached, a message will pop-up letting you know. If you select OK and continue with the search, you may get a time-out error. It is recommended to click **Cancel** and break your project area into smaller areas.



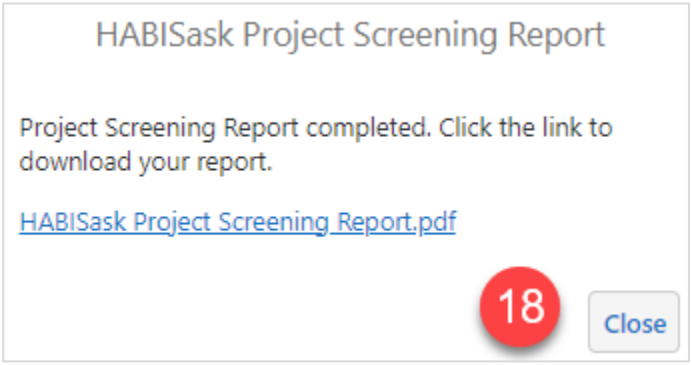
16. When the report is ready, select **HABISask Project Screening Report.pdf**. *Note: if you chose "Species List Only" in the beginning, the pdf will be named **HABISask Species List Report.pdf.***



17. A **new tab** will open in your browser with the PDF report. You can print or save the report to your computer.

The last page of the report contains further information on Wild Species Research Permitting, Species Detection Survey Protocols and Activity Restriction Guidelines.

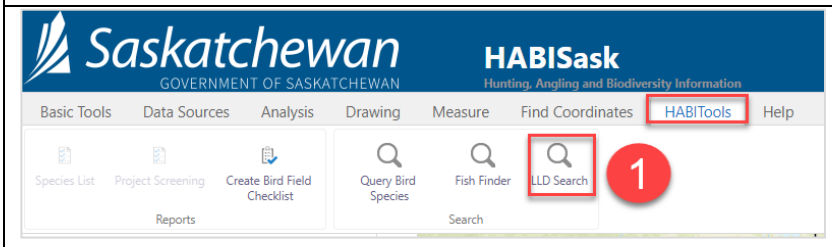
Return to **HABI**Sask in your browser when finished.



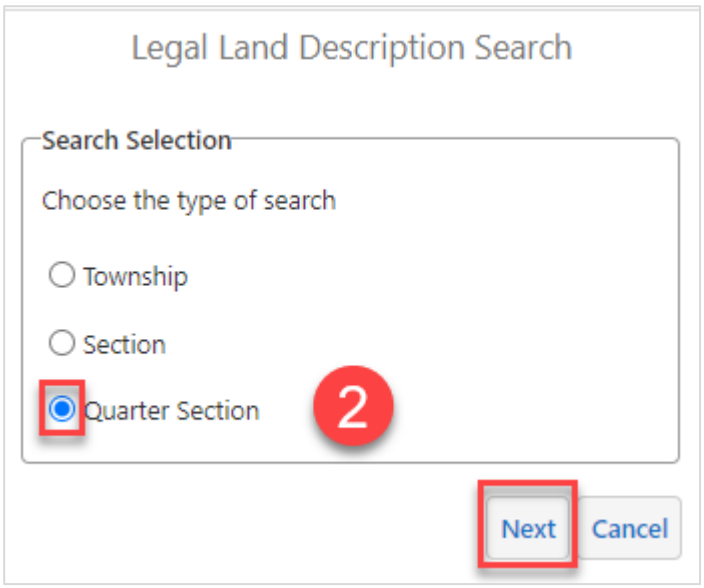
18. To close the Project Screening results in **HABI**Sask and reset the map display, select **Close** from the **HABISask Project Screening Report** panel.

13.5 Legal Land Description (LLD) Search

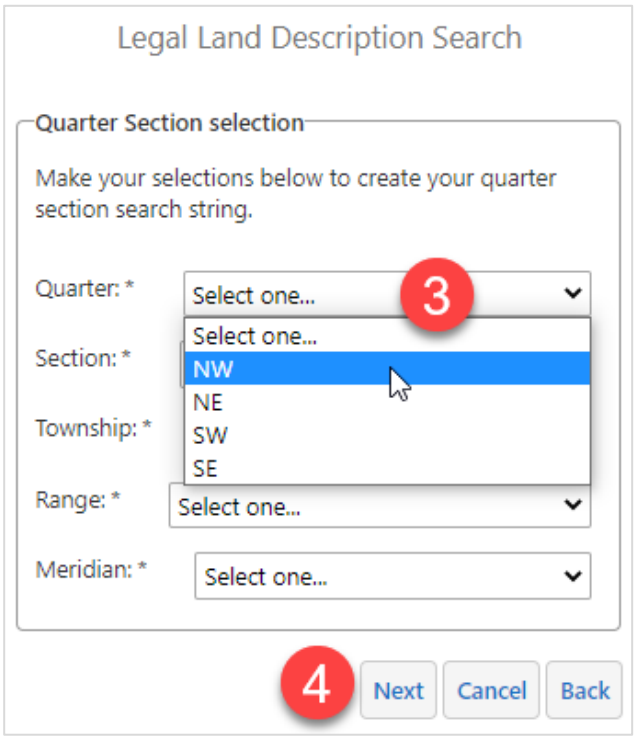
Using the LLD Search, you can zoom into the specified township, section or quarter section. These map layers can also be viewed in the "Cadastre" group of the Base Layers on the Layers panel.



1. From the **HABITools** tab, select **LLD Search**.

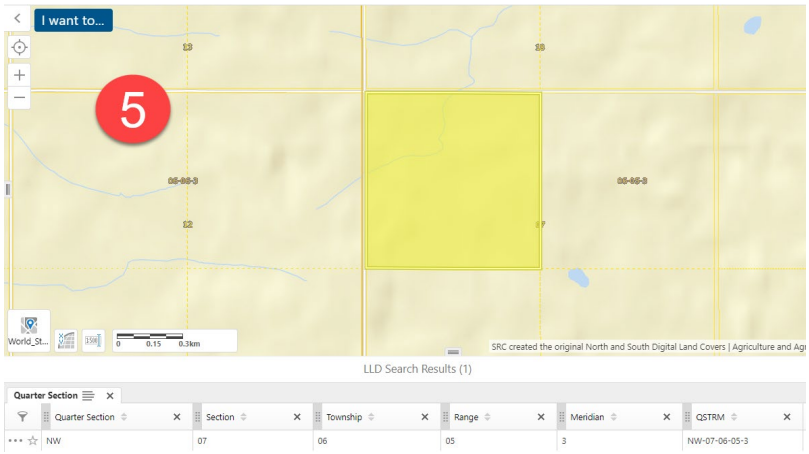


2. The tool will open in the **Legal Land Description Search** panel to the left of the map. Choose whether you want to search by **township**, **section** or **quarter section** by selecting the radio button and select **Next**.



3. Search for your location by choosing the appropriate values from the drop-down menus. The form must be filled out top to bottom, as the drop-down lists will filter to locations that are available based on your previous choices. It may take a moment for each drop-down to populate. Continue until all values have been selected.

4. When the form is complete, select **Next.**



5. The LLD search panel will close while the map zooms to the location you entered. The Cadastre map layers from the Layers panel will turn on. The township, section, or quarter section that you searched will appear in a table below the map.