# SoundIQ Tutorial

SoundIQ allows you to visually illustrate our projects on a map in the context of other important natural resource information. Embedded in the SoundIQ maps are links to the data and reports associated with the Northwest Straits Initiative projects. The following is a user friendly guide to utilizing the useful information that SoundIQ has to offer.

[Please click here to go to the SoundIQ site](#)

Welcome to SoundIQ! The Homepage

Take a few moments to read the Home panel "What can I do with SoundIQ?"
This panel provides a quick guide to some useful features of SoundIQ, such as, find published MRC reports for a shoreline area, search for a location, or identify additional information on a map feature etc.
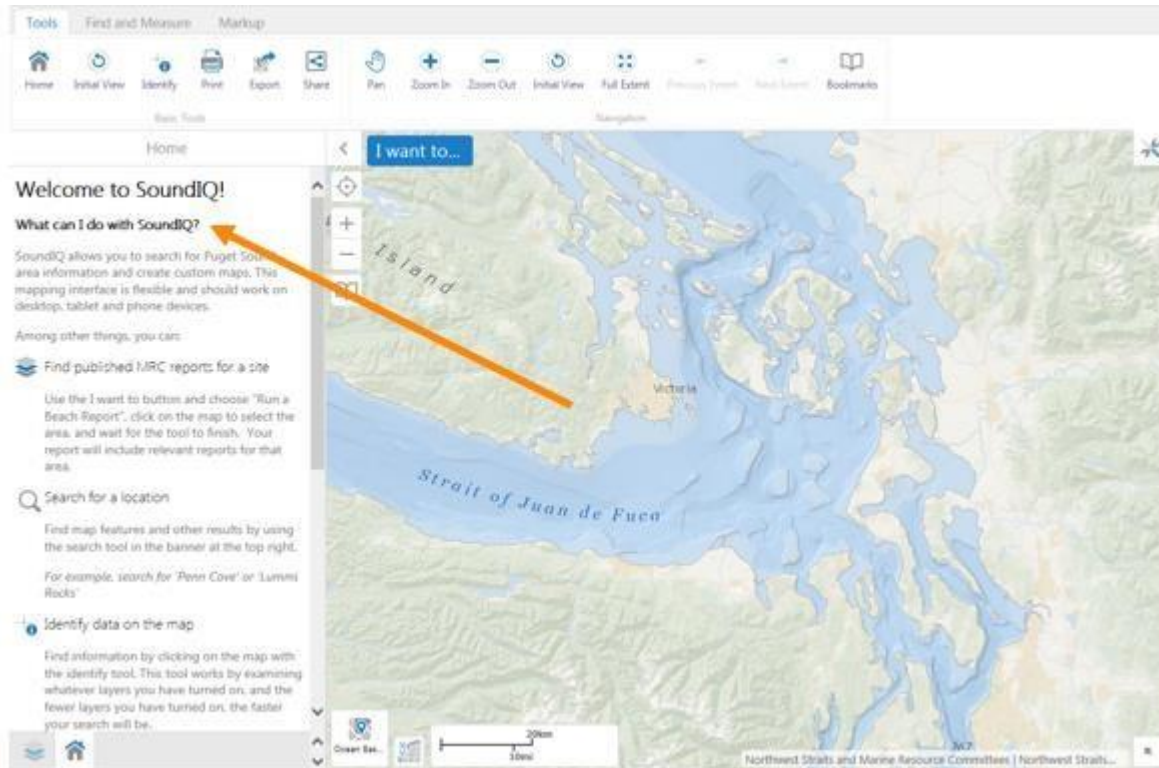
Click the "I want to…" menu (highlighted in blue) for quick access to commonly used tools which include: print a map, generate SoundIQ Data Report, and bookmark current map extent. See page 5 of this guide for more details on these functions.
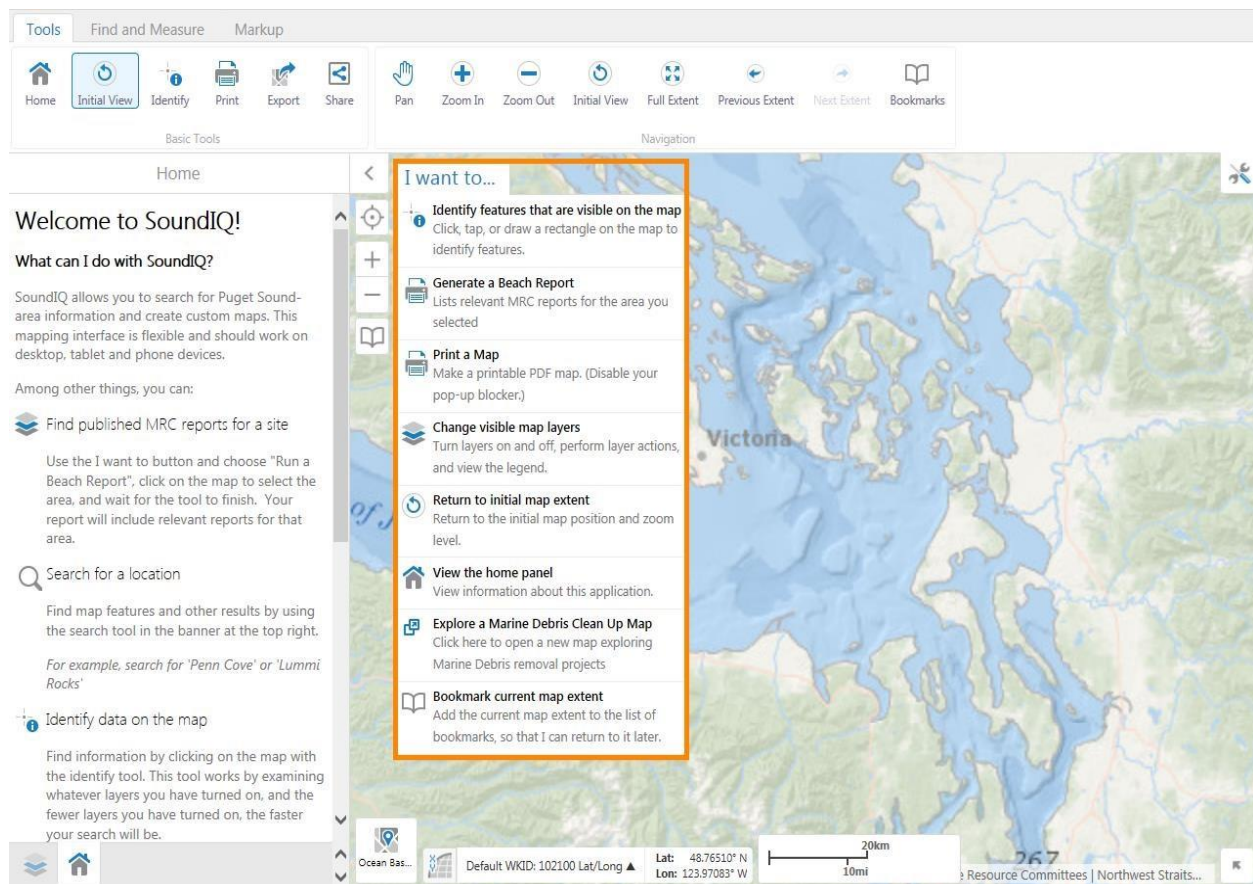
On the bottom left of the home page are two icons. The left icon is "Layers", which displays the map legend where map layers can be turned on/off (see more details on page 10).   The right icon is "Home" which will take you back to the Welcome to SoundIQ panel.
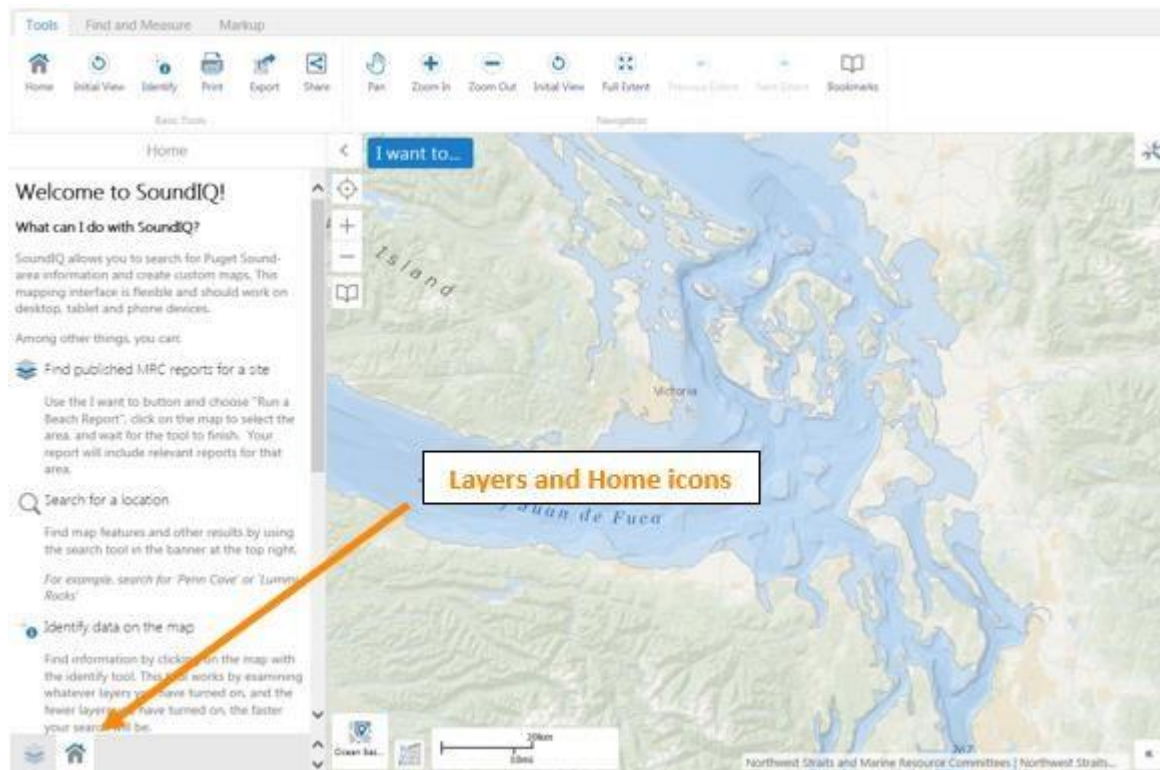
Map Display – Navigating the Map

The left panel can be expanded or collapsed by clicking the arrow to the left of the "I want to…" tab. Below that arrow are useful quick tools that include the Geolocation icon, which can be accessed via mobile app. to determine your current location (Find me), track an area (Track me), and follow you through on the map (Follow Me). Other quick tools allow you to zoom in and out and save the current location as a bookmark.
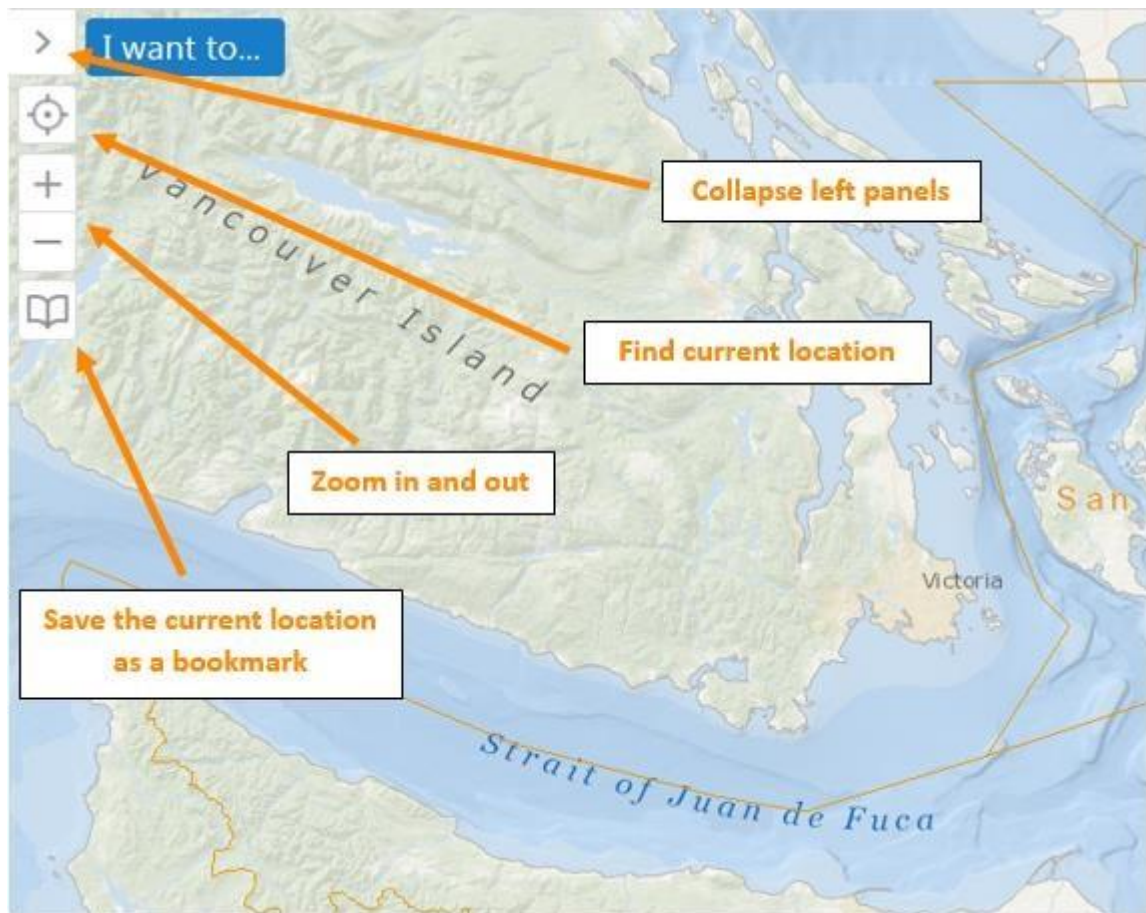
The "Basemap Picker" icon is located next to scale on the bottom left of the screen. This can be used to change the type of map being viewed. These include WADOT basemap, USA & World topographic, World light grey base, Ocean basemap, and aerial photography. The "Overview Map" allows the user to focus on a particular region of the map by clicking on the arrow on the bottom right, and moving the blue box to the desired area. Close this box by clicking on the arrow

The "tools" icon in the upper right corner, opens a toolbar across the top of the application providing a variety of tools described in detail on page 16 of this guide. Directly above the tools icon, is the "Search Bar", enter the name of a place and hit enter. The information on SoundIQ

associated with this place will be listed in a new panel on the left and corresponding markers will appear on the map.
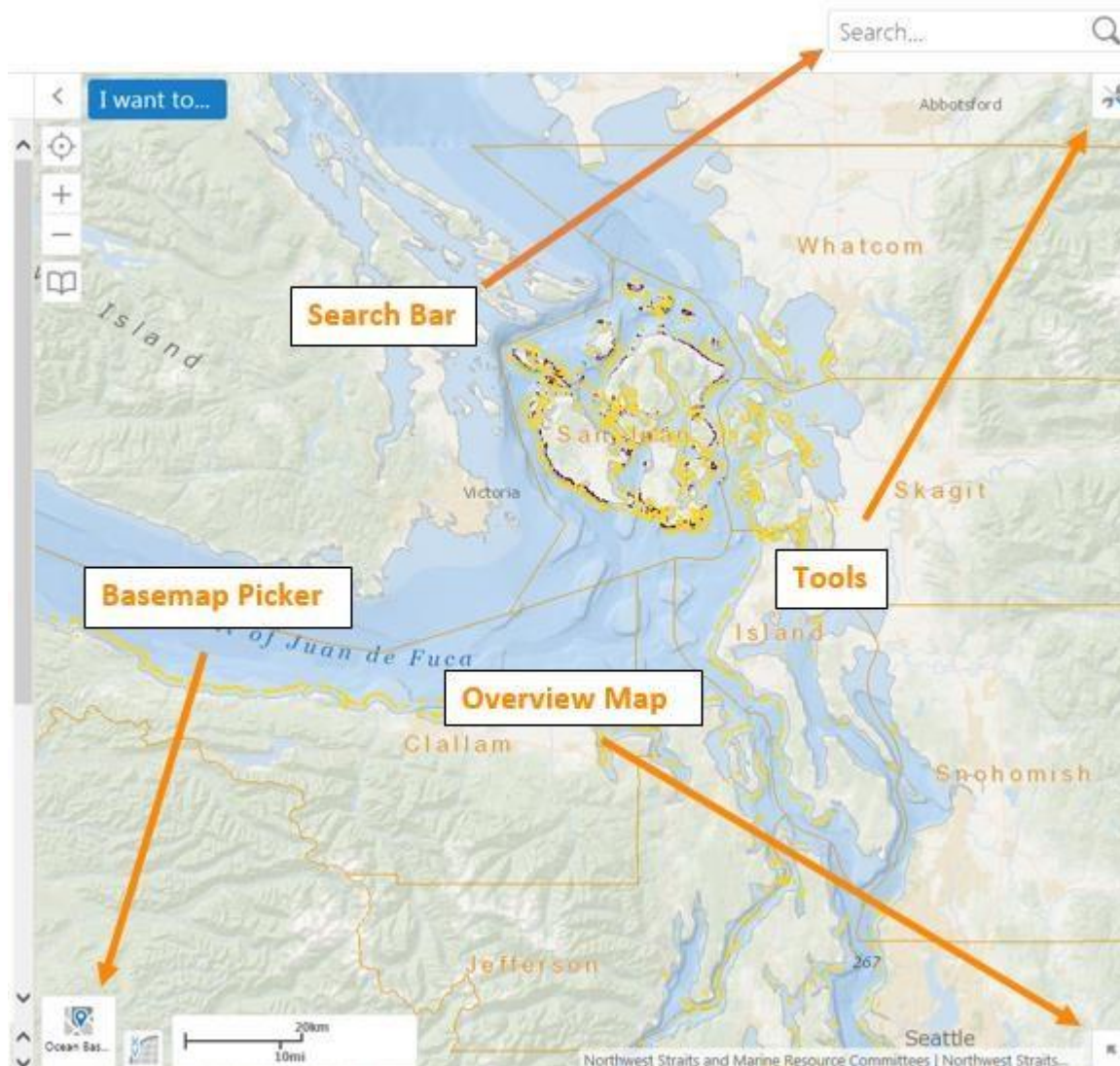
I Want to Menu – Detail

When clicked, the "I want to…" button drops a list of useful functions for SoundIQ. Some of these basic tools and what they do include: "Return to initial map extent", this will return the map to its initial position and zoom level. "View the home panel", takes you back to SoundIQ's home screen. "Bookmark current map extent" adds the current map extent map extent to the list of bookmarks, so that you can return to it later.
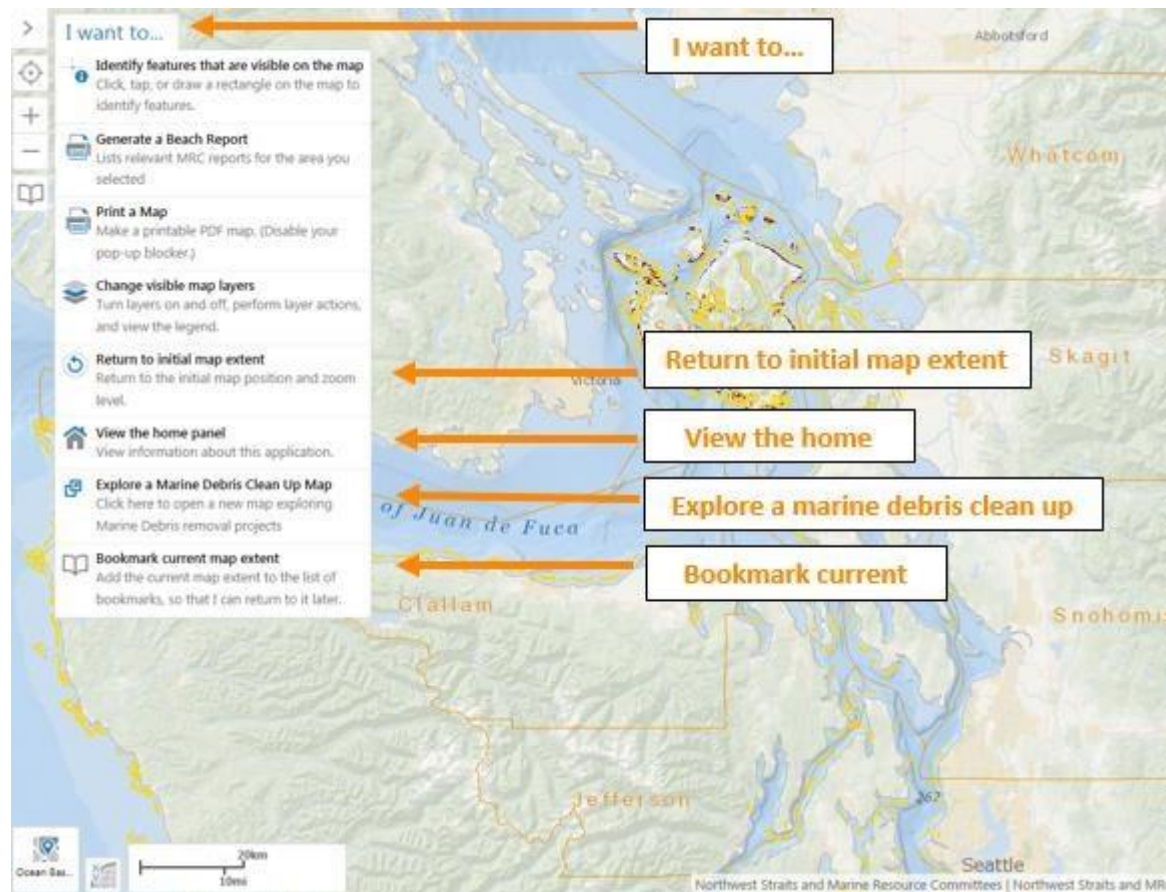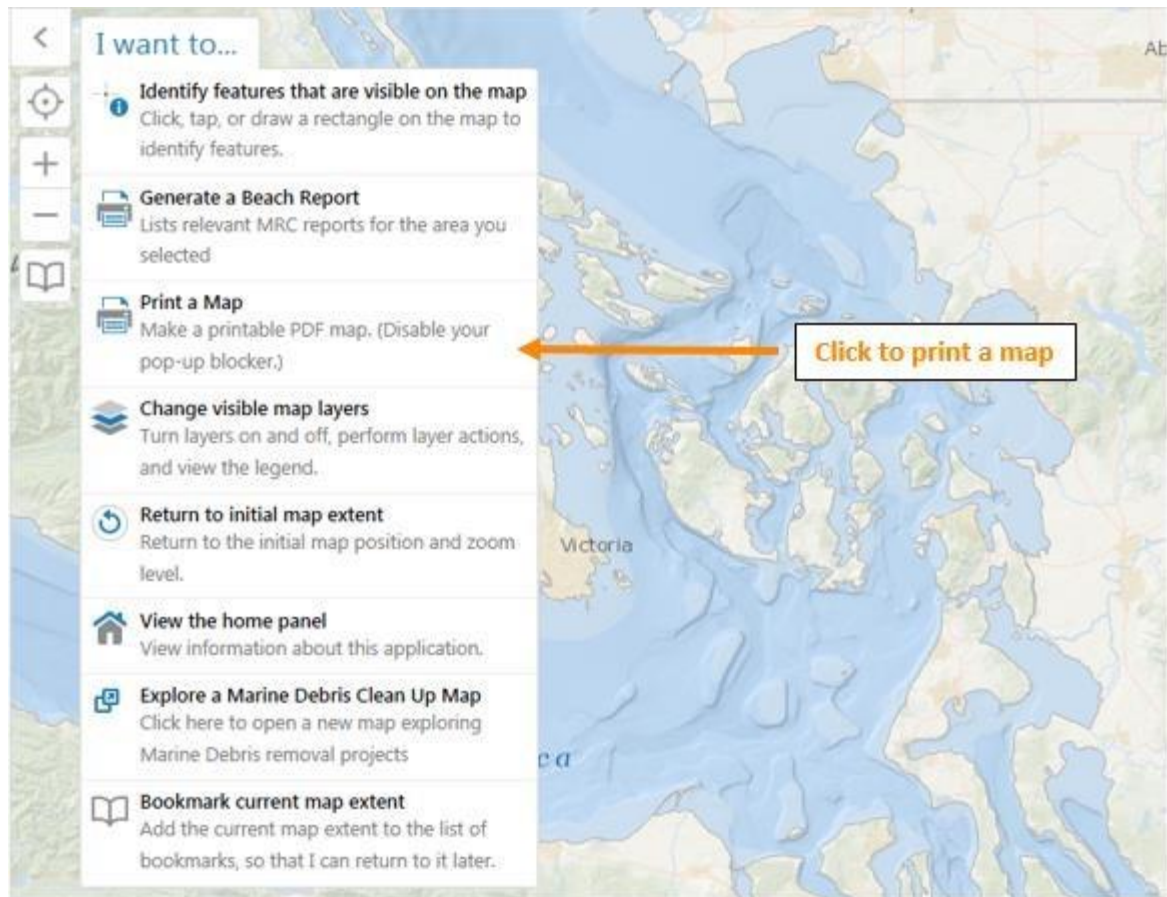
The "Explore a Marine Debris Clean up Map" tab opens up a separate link, taking you an interactive map that explores marine debris removal work from the Northwest Straits shoreline in 2014. You can scroll through the map to view each Northwest Straits County work with removing marine debris.
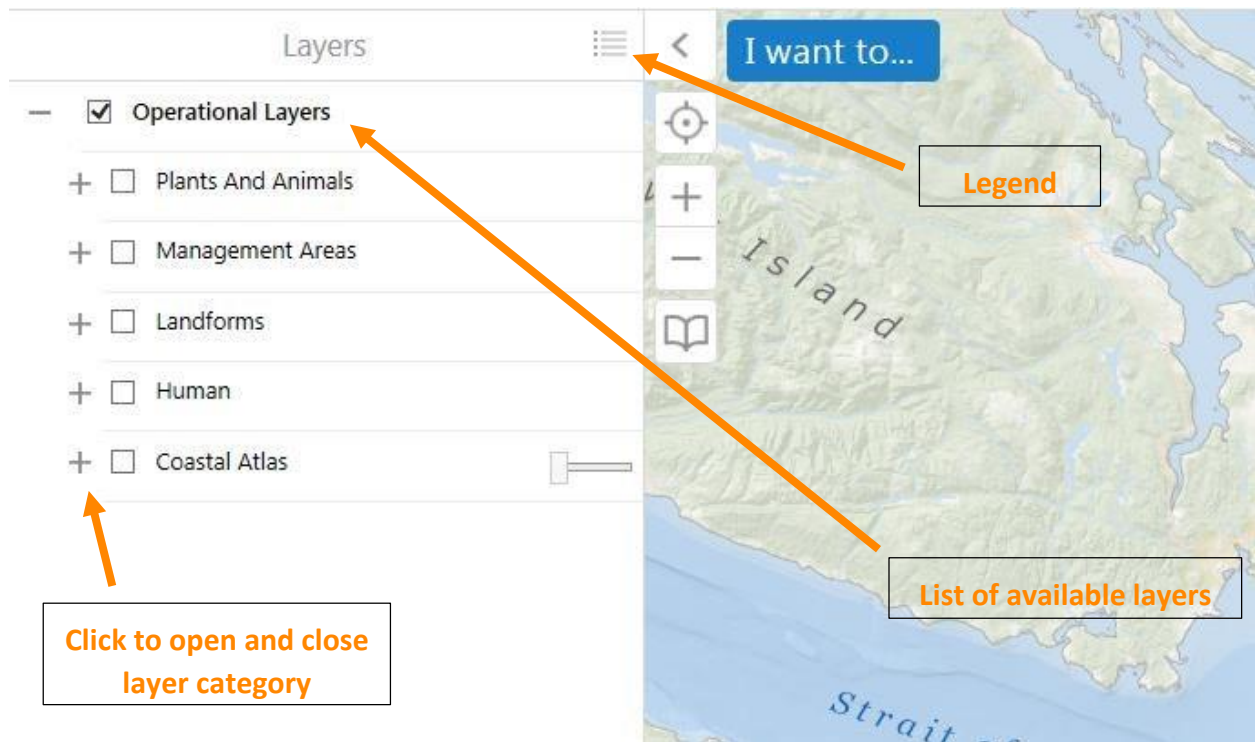
Use the arrow keys to scroll through the interactive map, clicking the home button to bring you back to the top.

If you would like to print a map of whatever you have navigated to and selected on SoundIQ, it is very simple. Simply click the "I want to…" for the drop down menu, then select "Print a Map". This will present you with several options for the format that you wish to print, such as the layout, format, and resolution.

Additionally, under the "I want to", are tools to really utilize the information available within SoundIQ. If you drop down the "I want to" tab, there are several other features available. Let's start with "Change visible map layers", clicking it will open up the table of contents of data layers on the left side of the screen.
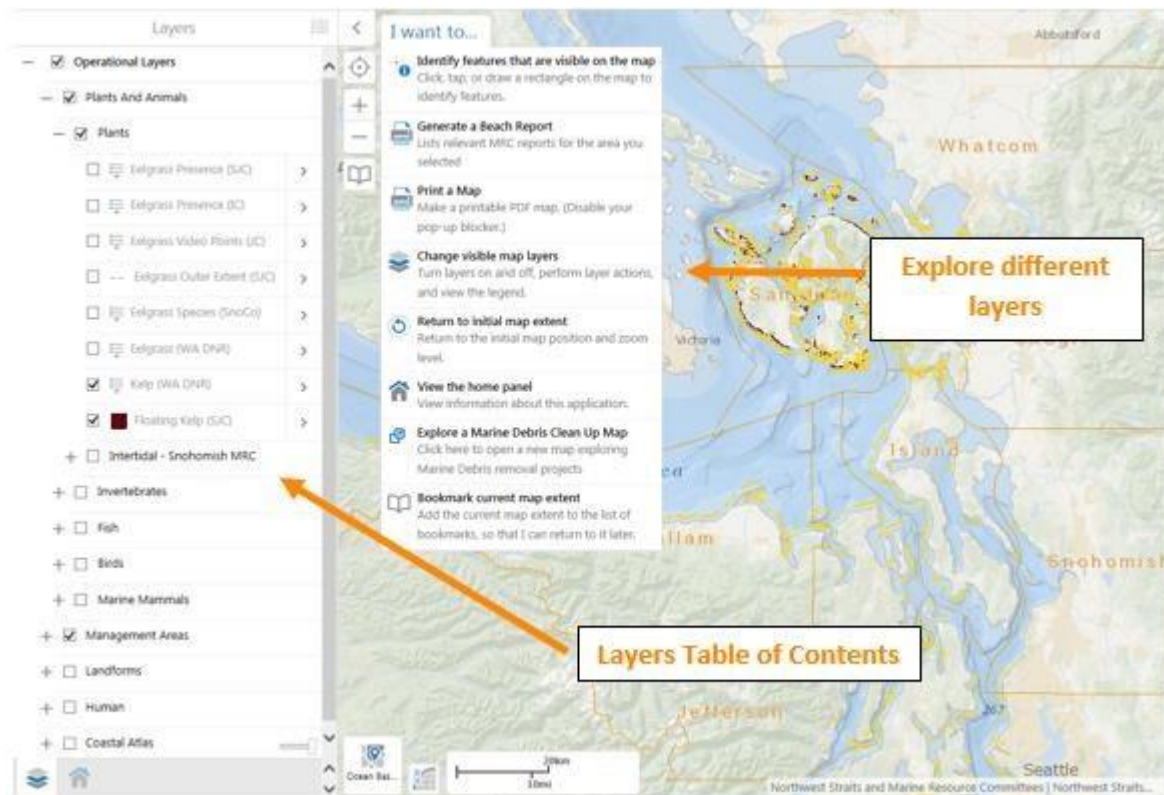
Using the Map Layers

There are 5 main layers that are displayed under "Operational Layers", each with a subset of different data available specific to it. How to access this data will be explained later in detail. They include "Plants and Animals", "Management Areas", "Landforms", "Human", and "Coastal Atlas". You can open and close the each sub section of the layers by clicking on the" +" or ""symbol.

In the upper right of the Layers panel is the "Legend" icon, which can display the legend for whichever layer is selected.

Layers

Operational Layers

+ ☐ Plants And Animals

+ ☐ Management Areas

+ ☐ Landforms

+ ☐ Human

+ ☐ Coastal Atlas

Legend

List of available layers

Click to open and close layer category

Now let's navigate through the map layers section with a specific objective in mind.

Say that I wanted to know about the fish spawning areas of Smelt and Pacific Herring, specifically to see if they overlap each other and where. Once you have clicked "Change visible

map layers" on the drop down "I want to…" tab, click in the box next to "Plants and Animals", then click the "+" to the left to drop down additional options.
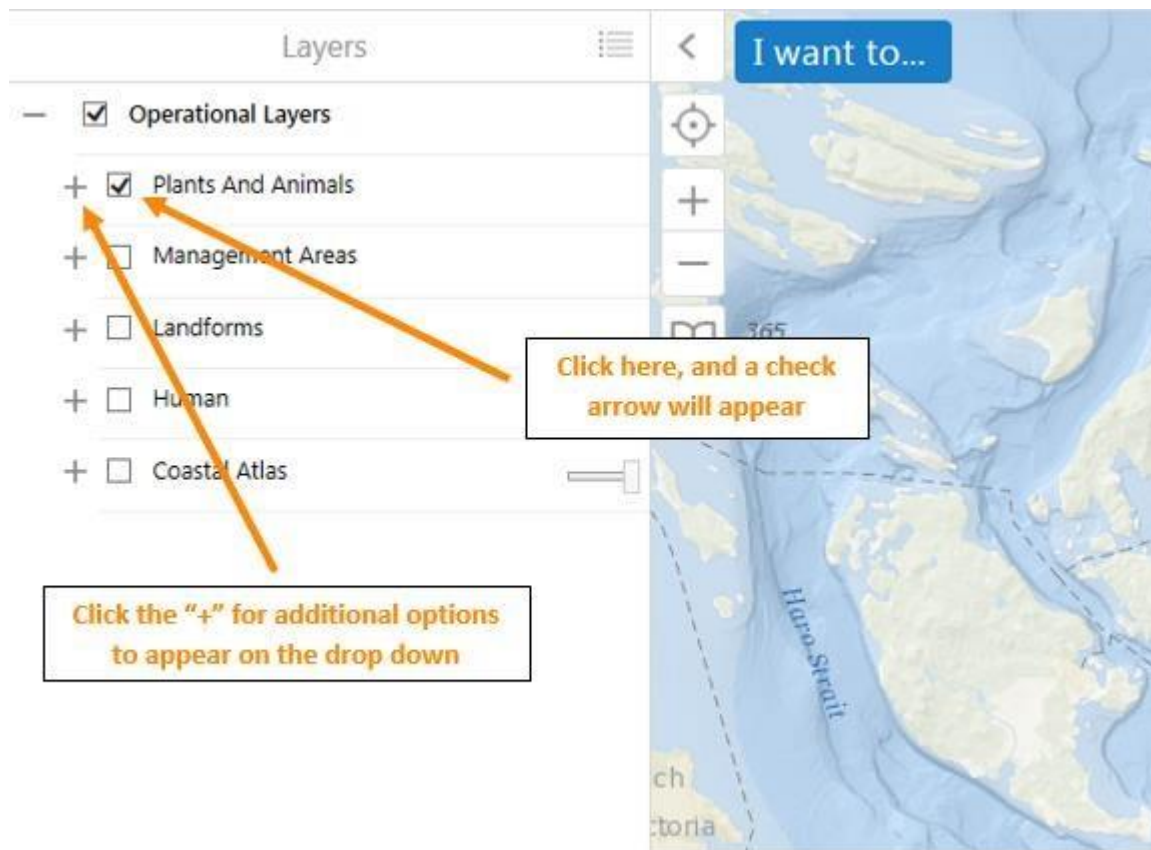
When you click the "+", more options will appear, select "Fish" since we are trying to view Smelt and Pacific Herring, then click the "+" next to "Fish" to drop down additional options just like in the previous step. In the next menu, look down the list until you see "Smelt (Spawning)" and "Pacific Herring (Spawning)", and select both boxes. The legend for each appears next to the name, and after selecting both, you can view their distributions on the map
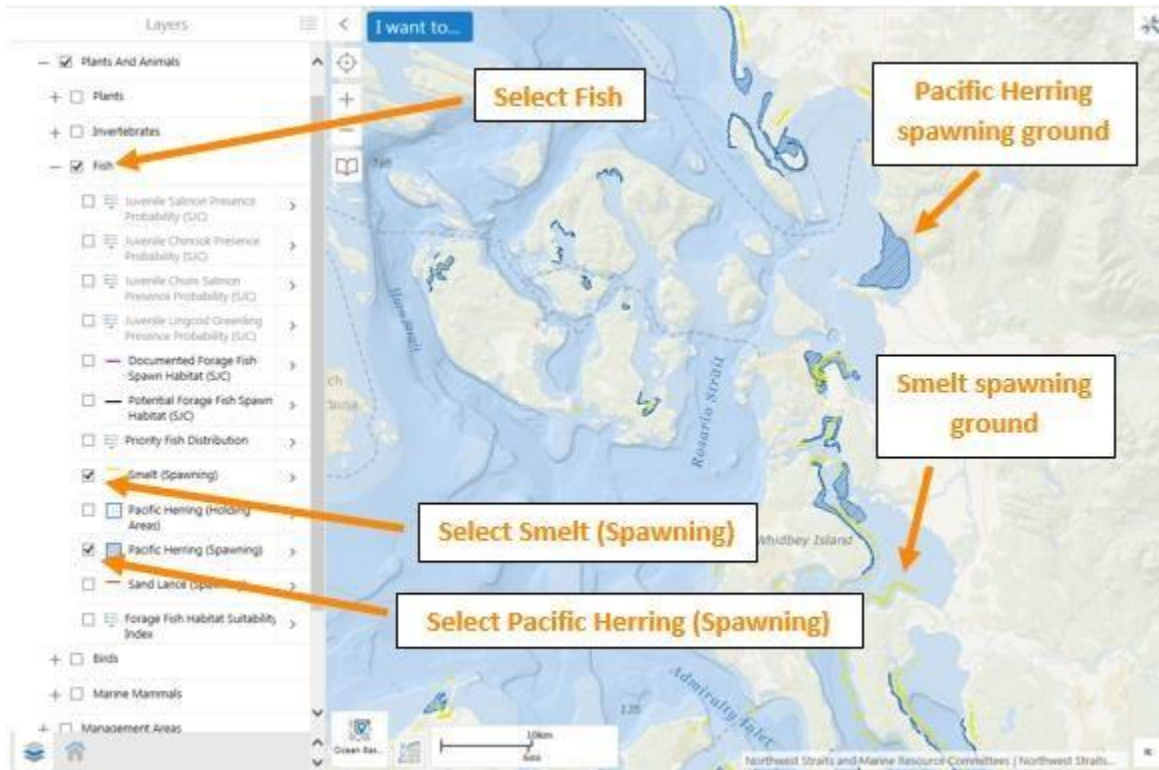
Finding Data on the Map – Identifying Features

Now that you are familiar with altering and using the map layers, you can find data on the map in a more specific area. By dropping down the "I want to…", and clicking "Identify features that are visible on the map". You can then either click on a certain area, or draw a rectangle over a larger area to view available data. To utilize this feature, it is important to keep in mind that any data that is to be viewed must be selected in the "Change visible map layers", which we just used. In this example provided, I will select the same data as above (Smelt Spawning and Pacific Herring Spawning).
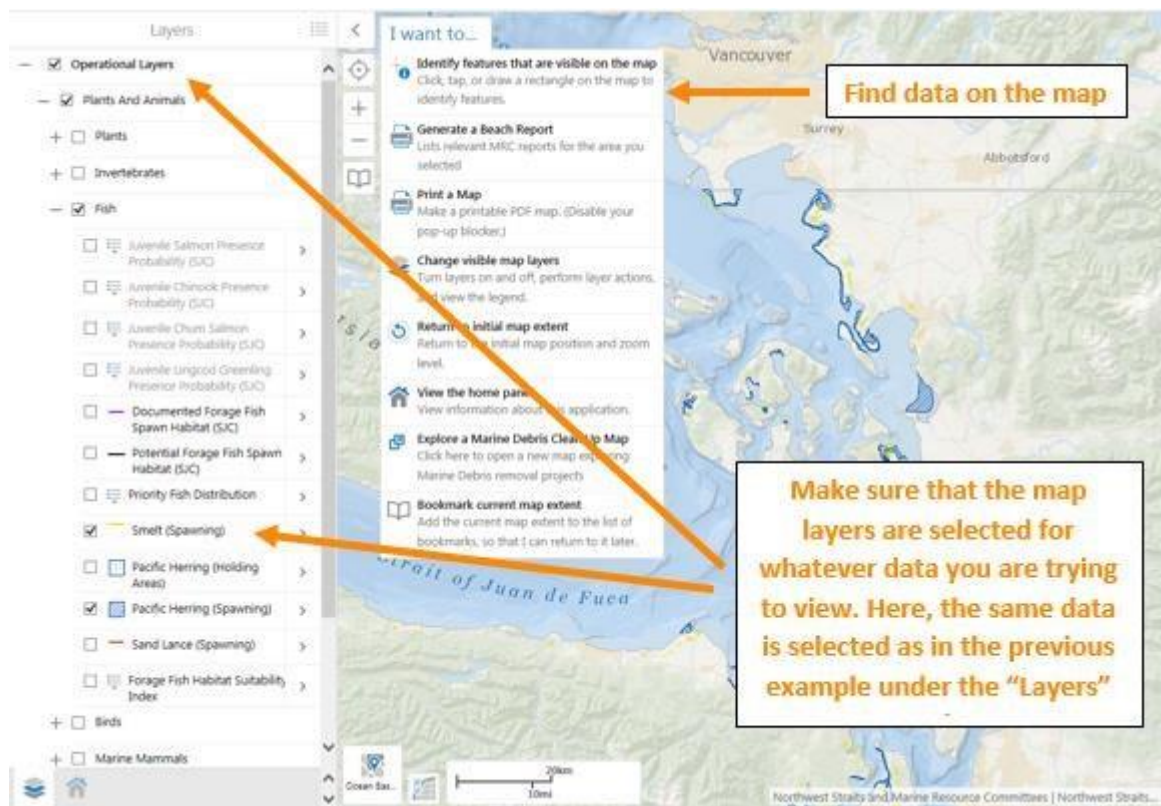
Now that the data I want to view has been selected under the "Layers" tab, let's identify features in the Samish Bay area of the Map by clicking "Identify features that are visible on the map", then drawing a rectangle over the desired region. First click the tools icon in the upper right corner, then "Identify" in the upper left. The data that is available for the selected area will then show up on the right side of the screen under "Identify Results". Now you can view each specific spawning site by clicking on one, which will then zoom in to the feature. Once this is done, the information for that site will appear, which in this example, includes survey date, station number and the data source. See next paragraph for method to export this data.
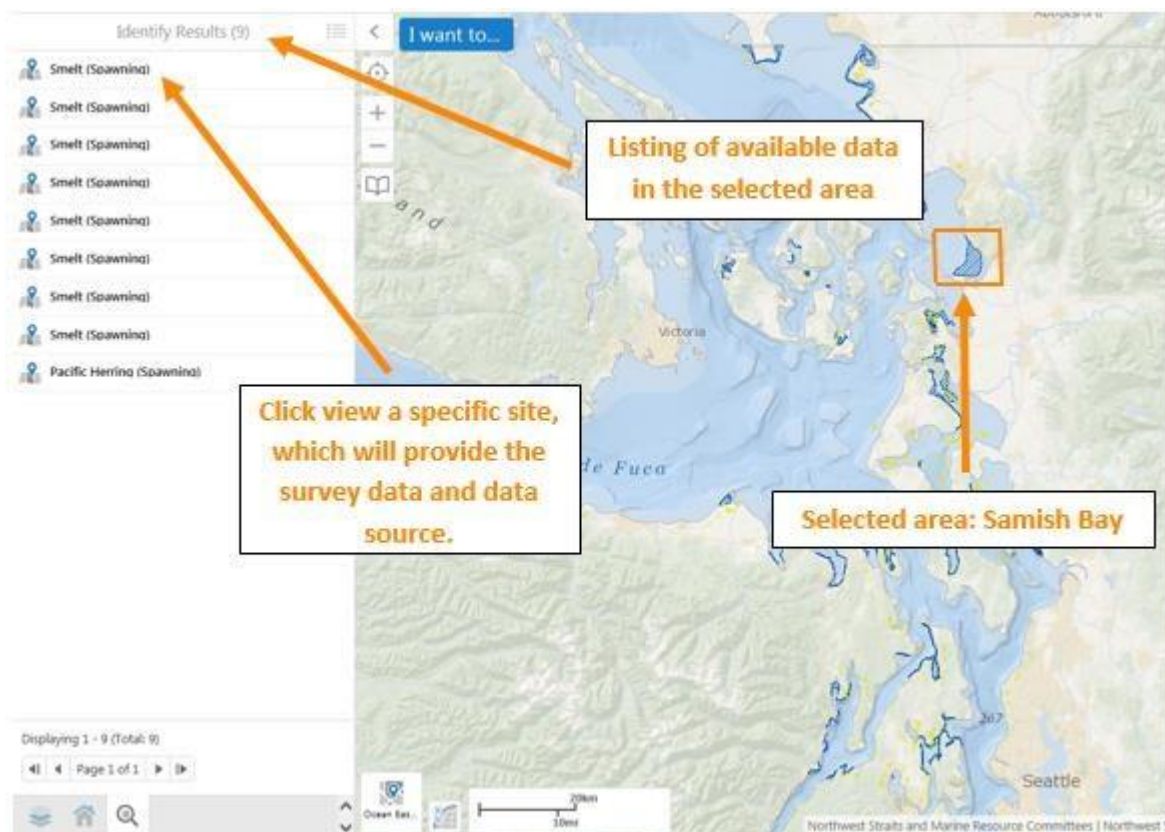
The selected data can also be viewed in a Table format, which provides the details for each specific site at once. You can view this table to clicking on the tab to the right of "Identify Results", where you then also have the option of exporting the data to CSV, XLSX, and Shapefile. We will go into detail later on how to access this data.

Let's click on the "Switch to Table" option and view the data in a more comprehensive manner. This will open up a table, with a separate tab at the top for each "Layer" that is being viewed. In this case, those are Smelt Spawning and Pacific Herring Spawning. You can now click any site and the map, viewing the exact location. To go back and view the information in the previous list form, on the right of the screen is the same display toggle used to view the table, click on it and hit "Switch to List". In the upper right of the map is an "Expanded tools" icon, clicking this will present an array of tools that can be used to examine and manipulate the selected data. We will go into detail with this feature in the next section.

Expanded Tools

Click on the expanded tools icon in the upper right corner (or double click blank space at top of the map) to display additional tools in three tabs that will appear on the upper left of the screen: "Tools", "Find and Measure", and "Markup". Each of these tabs provides many different options for examining and manipulating the map data.
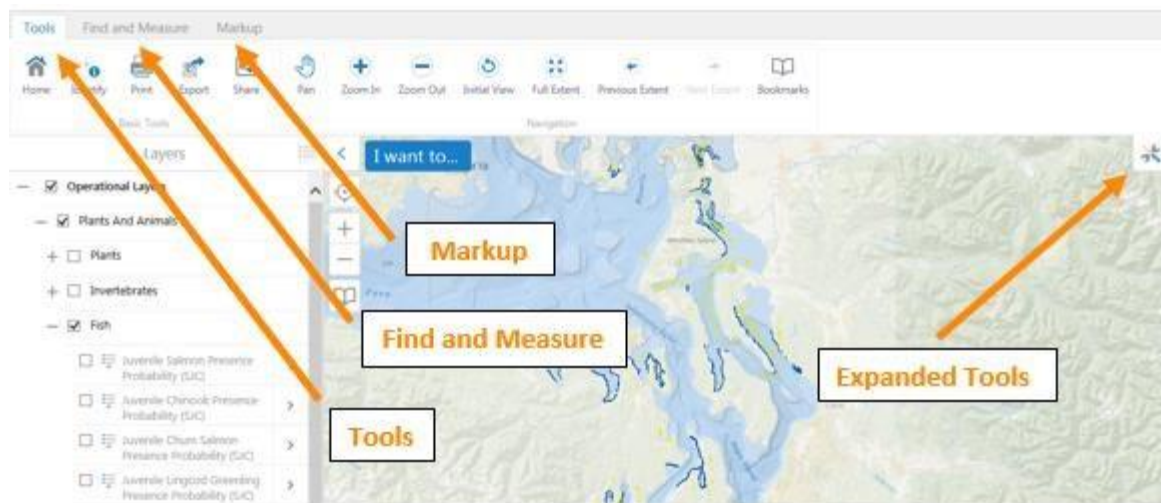

For the sake of explaining these expanded tools options, let's keep on the layers selected that have been used in the previous examples (Operational Layers>Plants and Animals>Fish>Smelt Spawning & Pacific Herring Spawning).
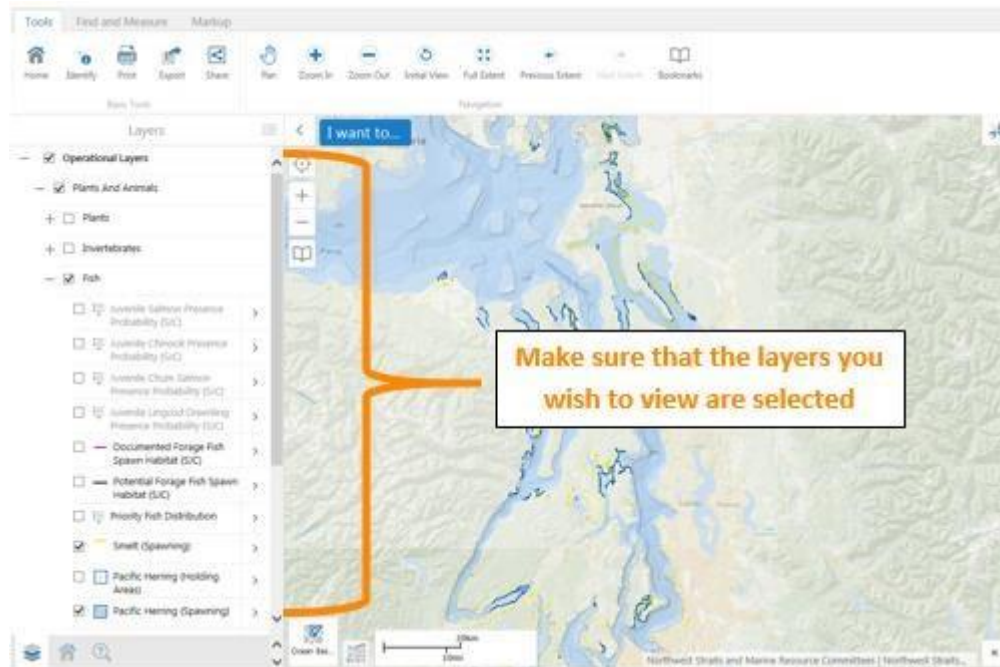
Tools

The first tab, "Tools", presents about a dozen different options for the user to manipulate their map. The "Basic Tools" include "Home" which will revert back to the home screen for SoundIQ, "Identify", which allows you click on any feature on the map to view attribute or spread sheet information stored in the data layer specific to that feature. There is a "Print" option, an "Export", and a "Share" option, which allows the user to share a link of their map, with whatever desired layers that they have selected. The link below was obtained through the "Share" option, which can be emailed, shared on social media, sent to a LinkedIn account, or shared on Google+.

Basic Tools options: Home, Identify, Print, Export, and Share
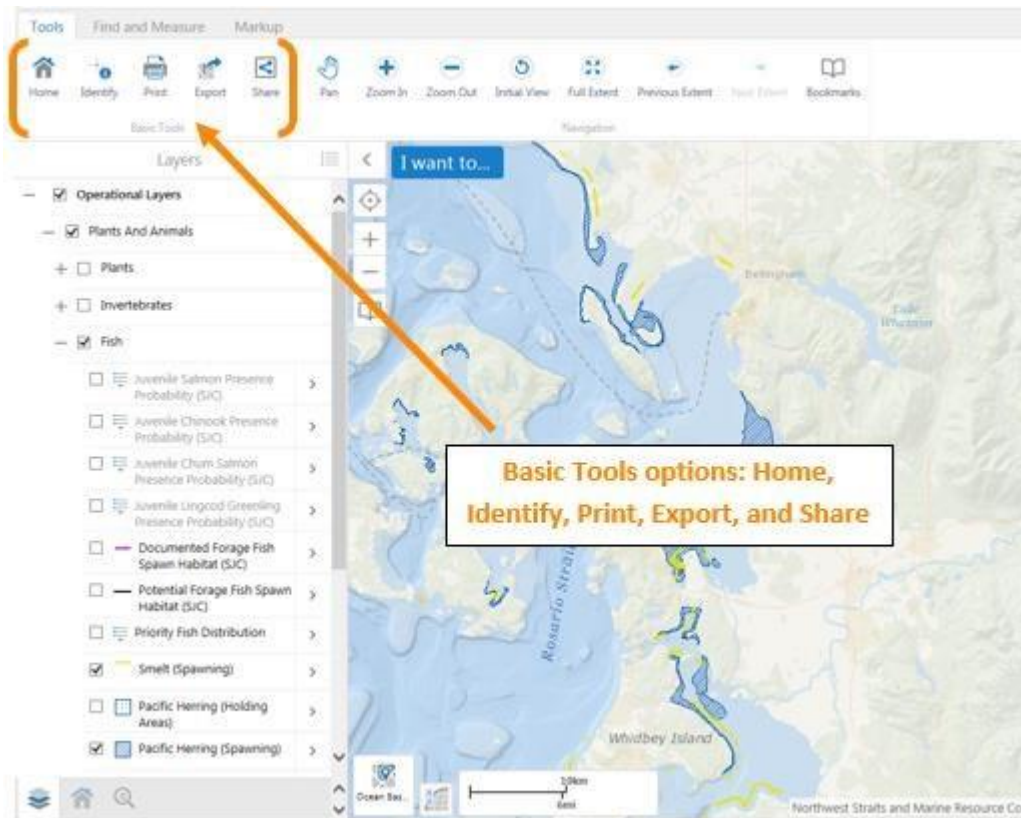
Also under the Tools tab is the "Navigation" section, which provides useful ways for maneuvering around the map. The "Pan" option allows you to navigate the map at the current scale by dragging, you can zoom in and out with the "Zoom" feature, "Initial View" will zoom the map back out to the original view, "Full Extent" will zoom all the way back out on the map. The "Previous & Next Extent", toggles you back and forth with zoom on the map.

**Navigation options: Pan, Zoom in, Zoom out, Initial View, Full Extent, Previous Extent, Next Extent, and Bookmarks**
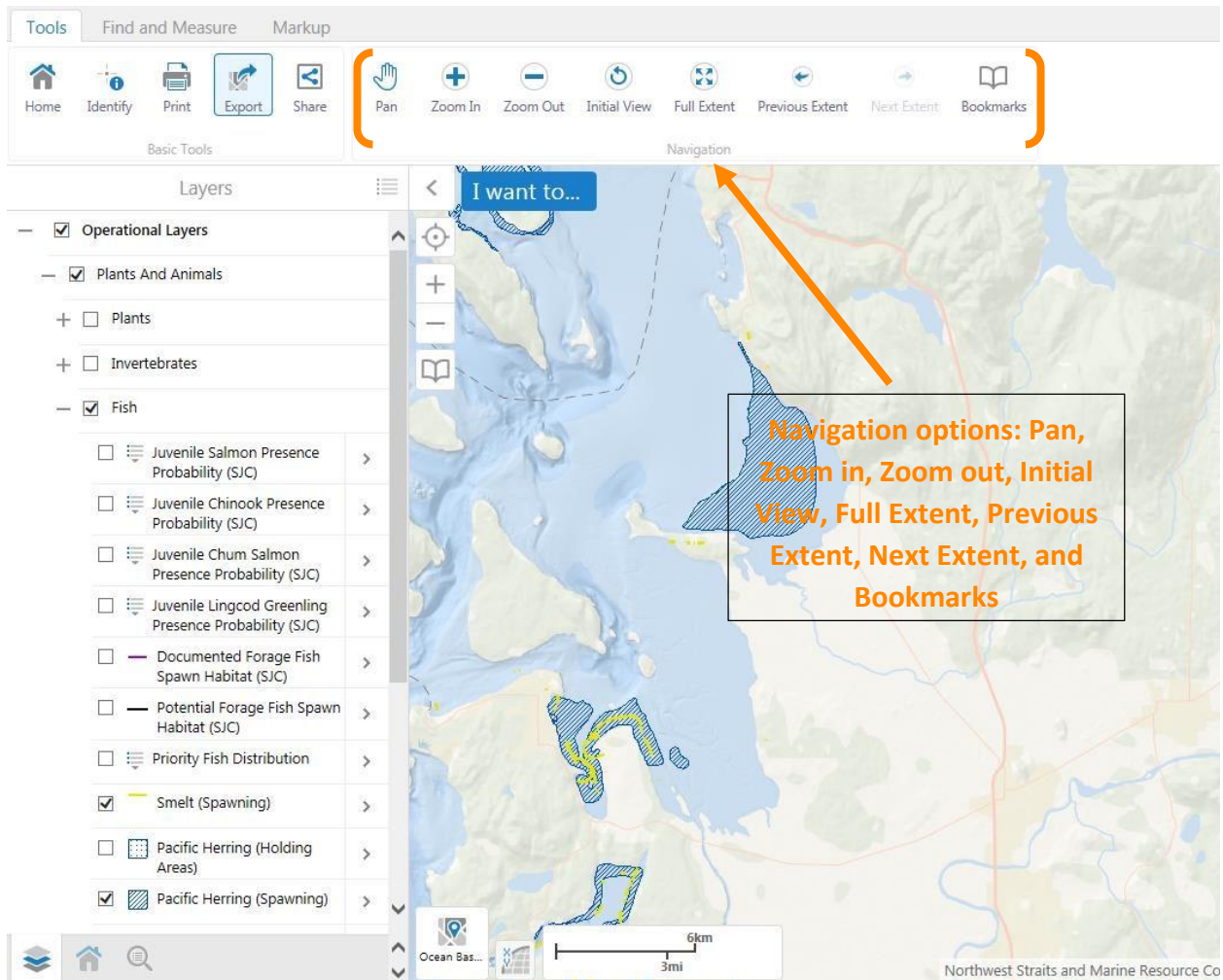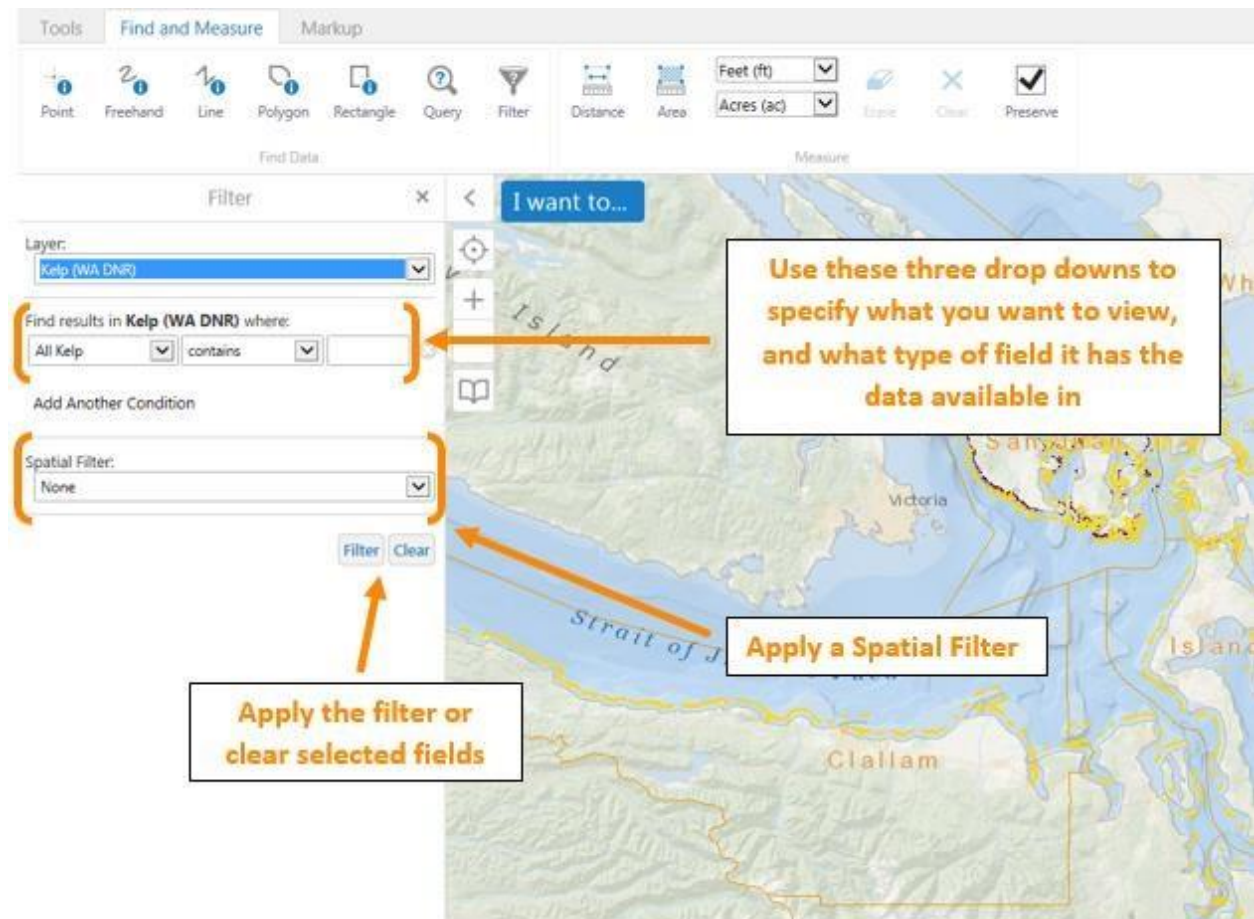
Find and Measure

The "

Find and Measure" tab presents different ways to find data on the map, as well as measure it for specific spatial awareness for the data. To "Find Data" you can use the "Point" feature to click anywhere on the map to learn what is there. The "Freehand" option allows you to encircle an area free hand on the map to view what information is there. The "Polygon" and "Rectangle" options allow you to draw a shape on the map, which will show any available data inside of it. "Query" returns a list of matches on the left hand pane – like a selection result and "Filter" removes all the data from the map display except what you have specified. Let's go through an example. First, select the Layer type you want to view, in this case "Kelp (WA DNR)".
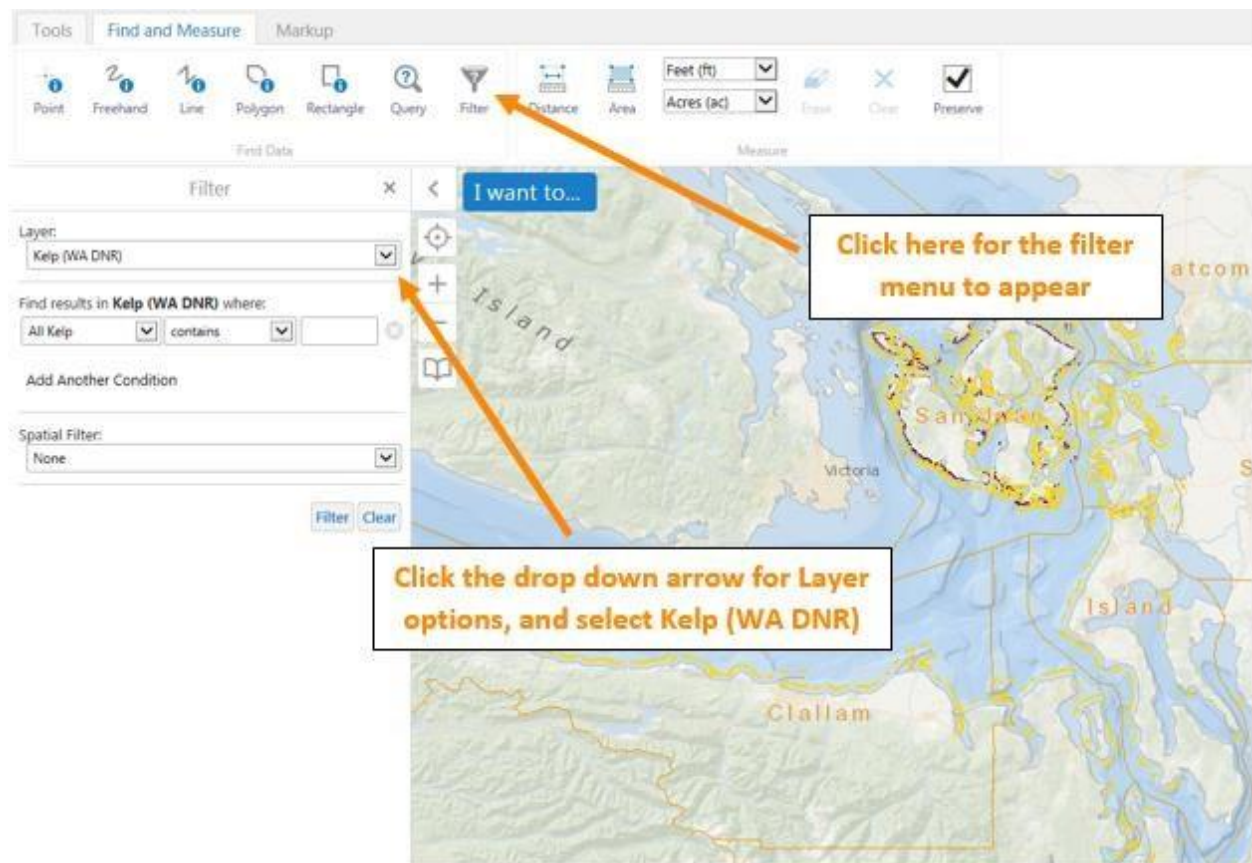
Next, you select a field in the data table, and is this select "All Kelp". The next drop down option allows you to select what specifically in that field you want to view. It includes, "contains, does

not contain, starts with, and ends with". The third drop down option allows you to view whatever that field has in it, in this case it is "Absent, Continuous, or Patchy". You can then apply a Spatial Filter to specify the data to be filtered: "Current Extent", which is the area you are zoomed into, or "Full Extent", which is the entire datset. Then click the "Filter" button to apply your search, and use "Clear" to clear your selected data.

"Measure" section provides different ways to measure the data on the map. The "Distance" tool lets you measure the distance between two points, or it can be continuously used to mark and measure as many connected distances as desired. "Area" allows you to draw a multi-sided shape and find the area within that space. The units for both of these tools can be changed, as
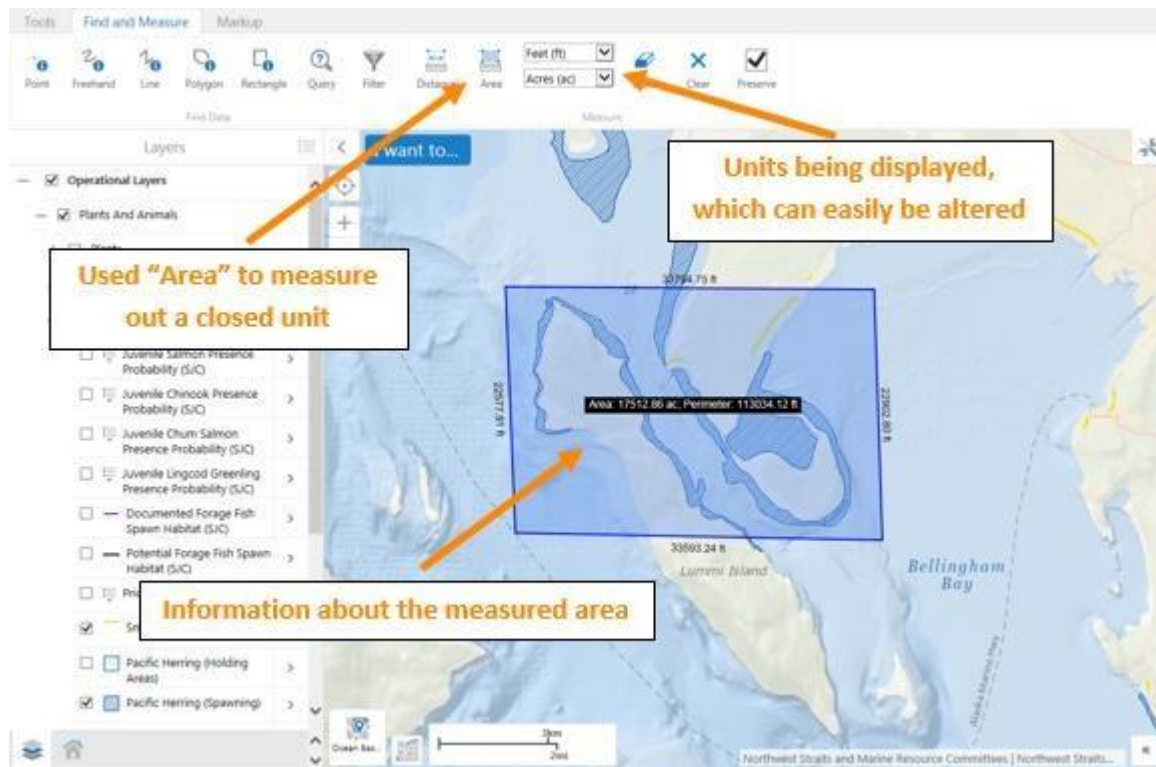
The "

"Distance" allows you to measure in feet, yards, meters, kilometers, miles, and nautical miles, and "Area" can be measured in feet^2, yard^2, kilometer^2, mile^2, nautical mile^2, acre^2, or hectares^2. The "Erase" option will delete any measured distance or area, simply by clicking on the measured line/area. The "Clear" option is an all-inclusive erase option, which will permanently erase all measured calculation currently on the map.
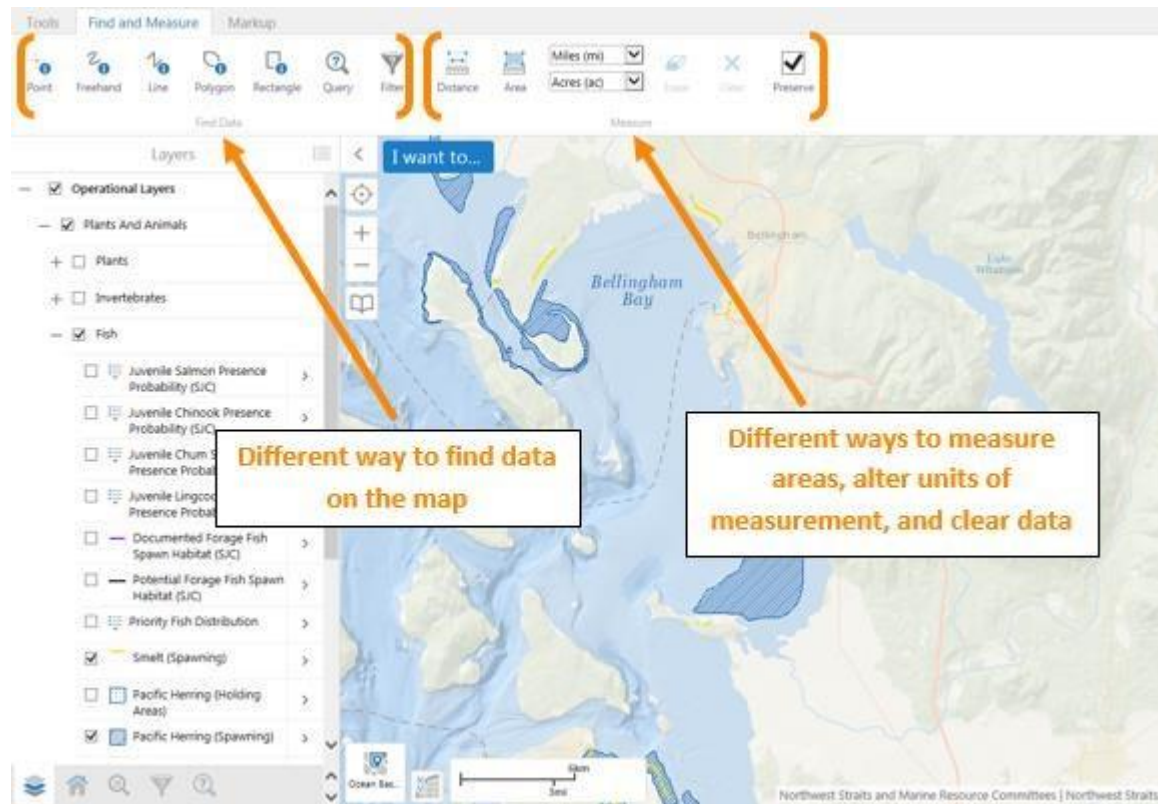

In an example, let's measure the area of the Smelt and Pacific Herring Spawning ground in the Bellingham Bay and Lummi Island Area. Click the "Area" option and draw four connecting lines around the area on the map, double clicking when you are done. The area will appear with each side labeled in the units that are being used, as well at the total area and perimeter being displayed inside the box. To clear this information, simply click the "Erase" option, and click on the outlined area. To close the Extended Tools section, simply click on the tools icon in the upper right of the map.

Used "Area" to measure out a closed unit

Units being displayed, which can easily be altered

Information about the measured area

Area: 17512.86 ac; Perimeter: 113034.12 ft

Markup" tab allows the user to customize the map by including text, shapes, specific points, or lines wherever they want. This is a good way to make the map your own, or for a situation where you want to present or share the information with others. The "Styles" option allows for even more customable options, as you can change the color or style of whatever features are included on the map.

The "
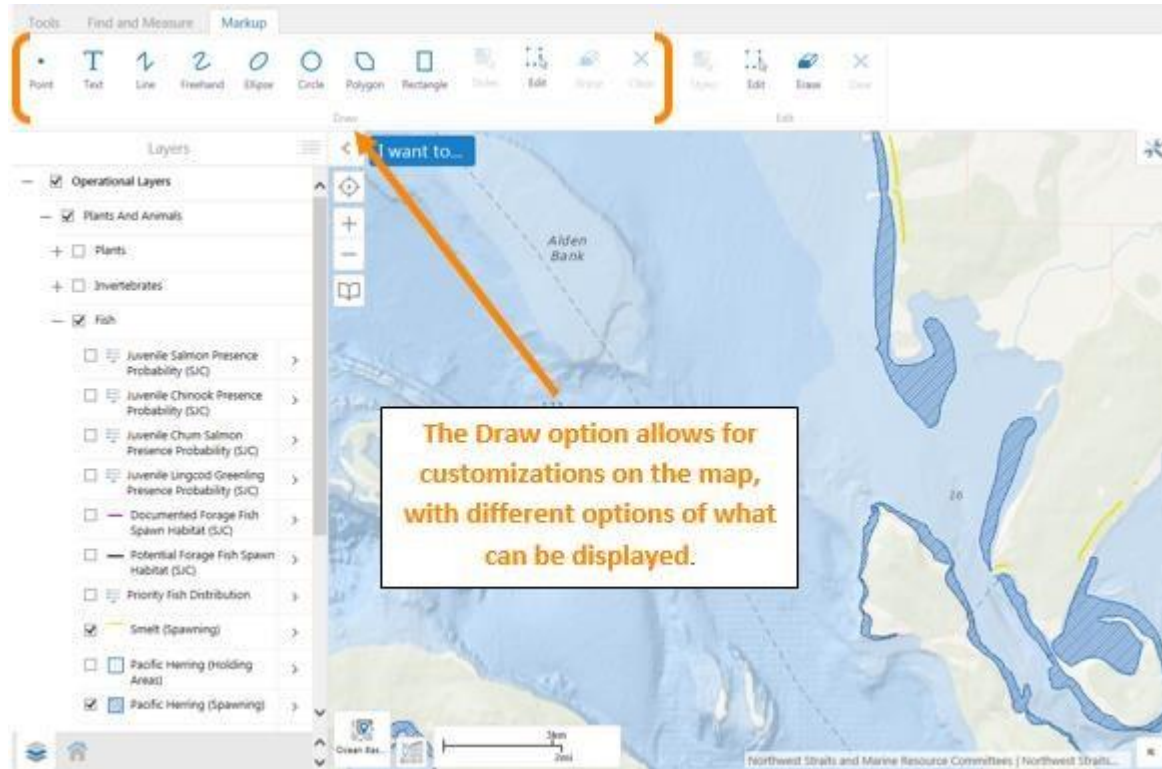
If you have feedback in regards to missing or bad data, or need help, send your comments to
shull@northweststraits.org