User's Guide

Wild Steelhead Conservation Atlas

Steelhead Fishing Trip Planner

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About

The purpose of this user guide is to help you get oriented in our ArcGIS Online applications. We include three scenarios of use to further expound how these apps can be used.

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Notes on Use

A. Different layers are hosted by different organizations and government agencies. As a result their layers can sometimes be slow to load, or not work.

For instance the USFS Stream Temperature data can be slow to load.

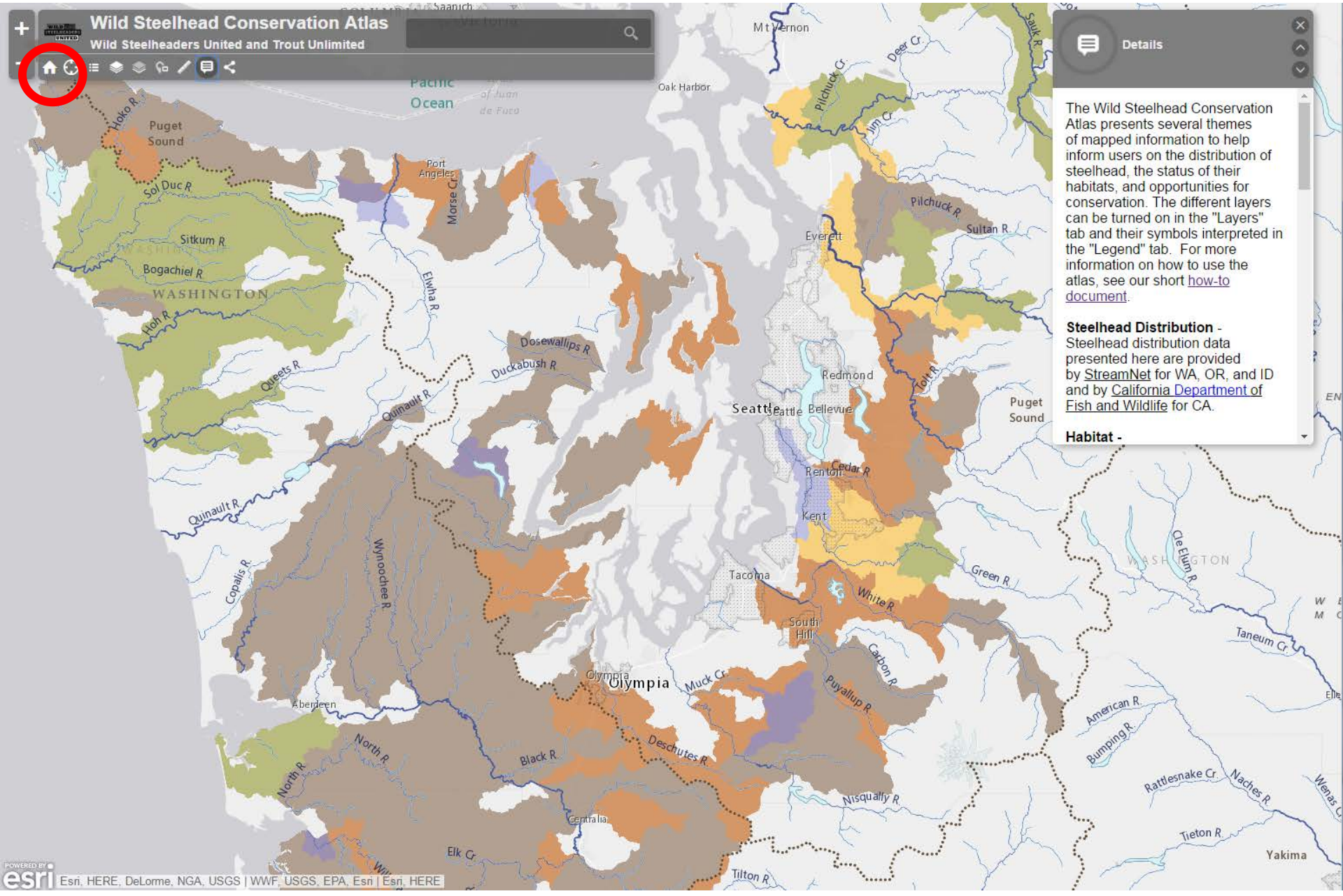
B. Some layers require you zoom into a pretty tight window before they load.

The USFS Stream Temperature data is subject to this kind of interaction.

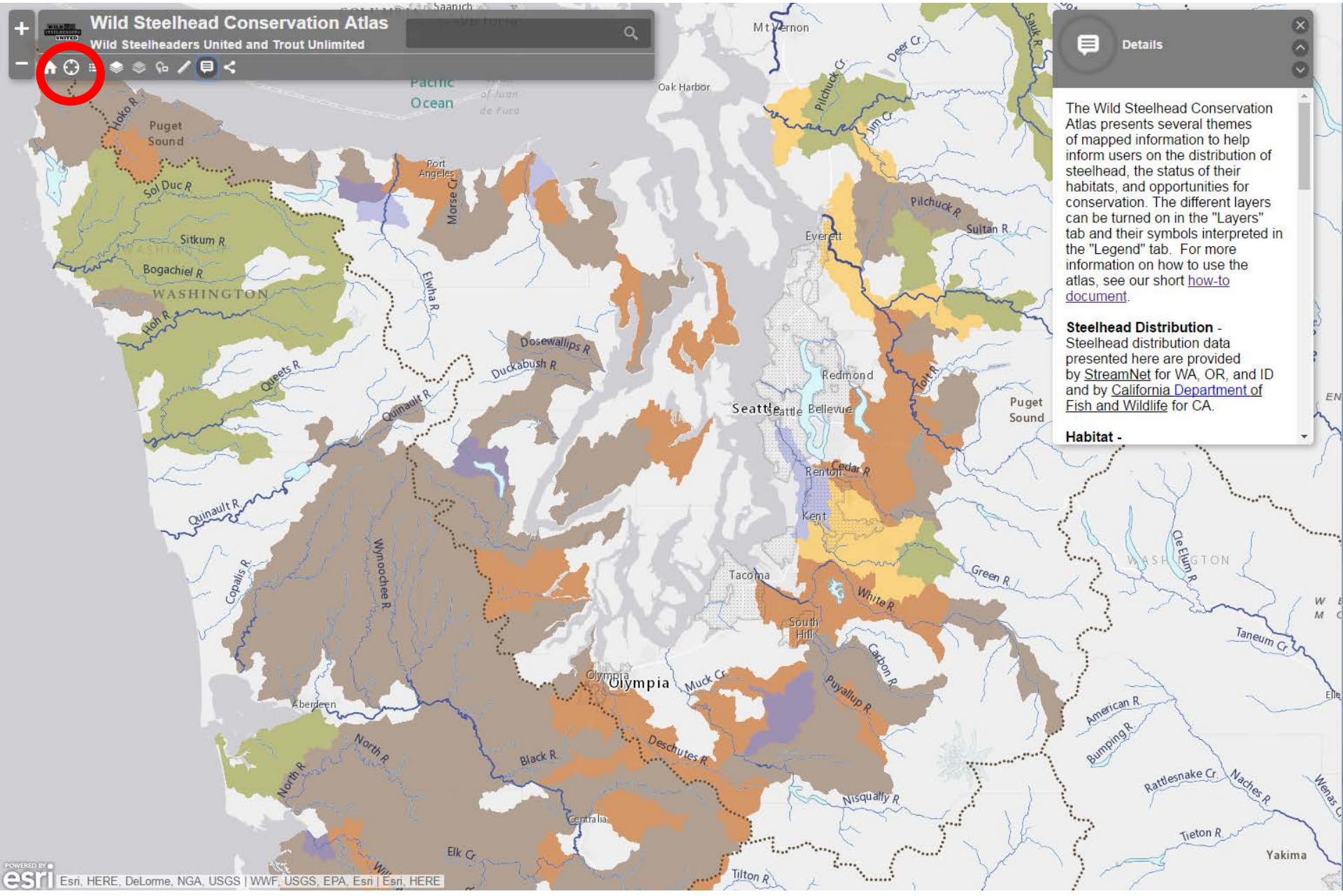
Part 1: Getting Oriented

This section applies to both the Conservation Atlas and Fishing Trip Planner

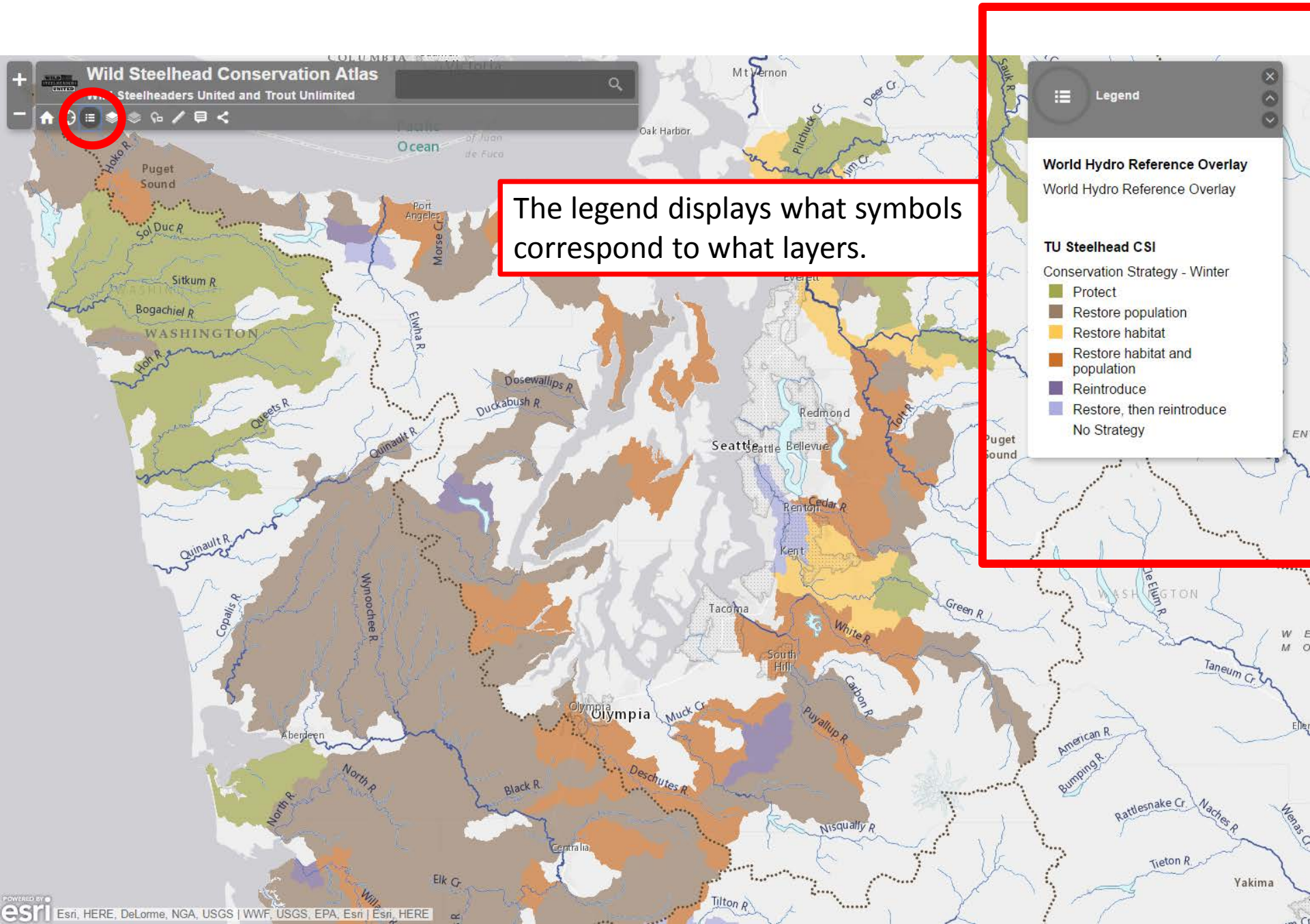
TOOL | *Default Extent* |Sets your map to its original view



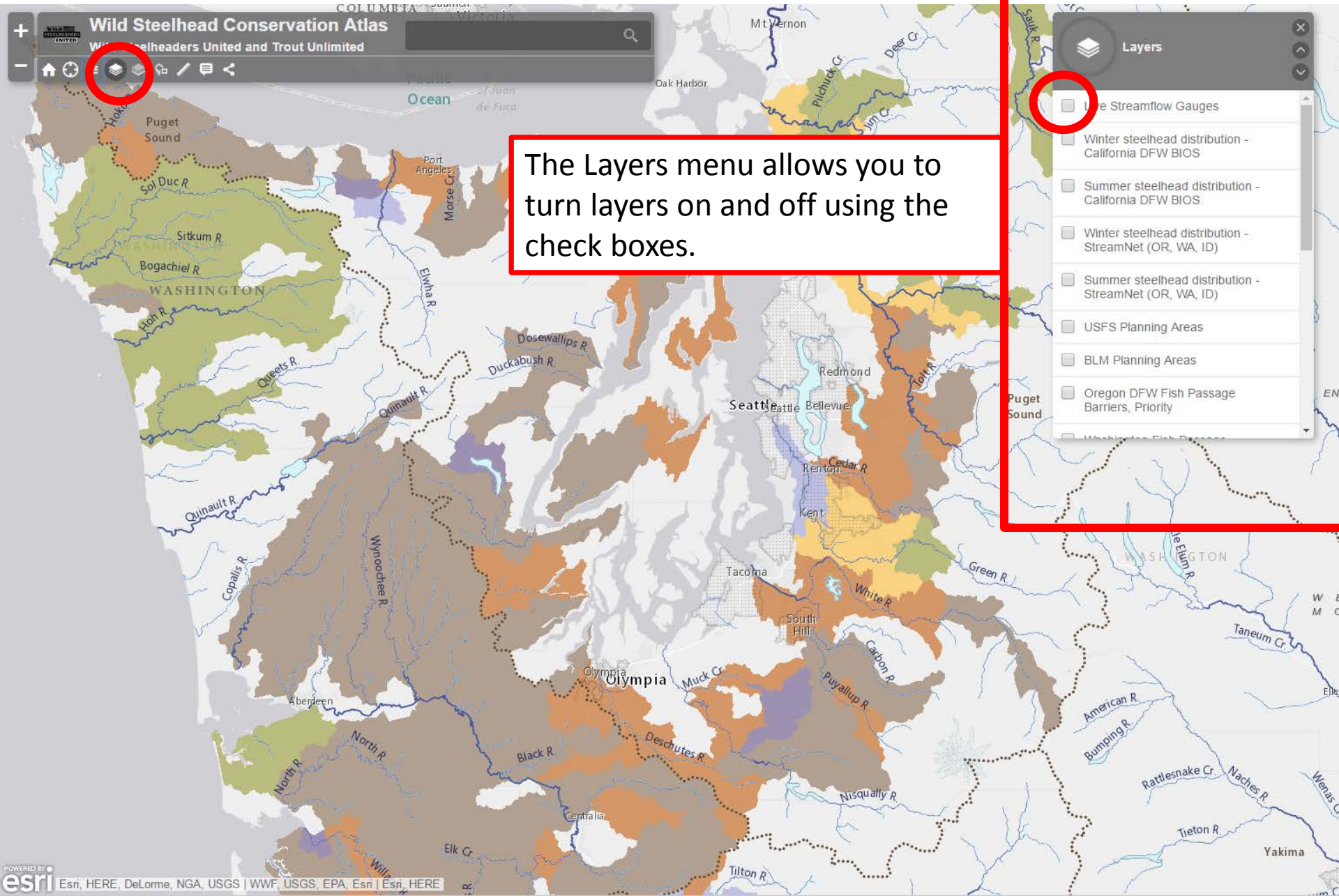
TOOL | *Find My Location*| Centers the map on your current location



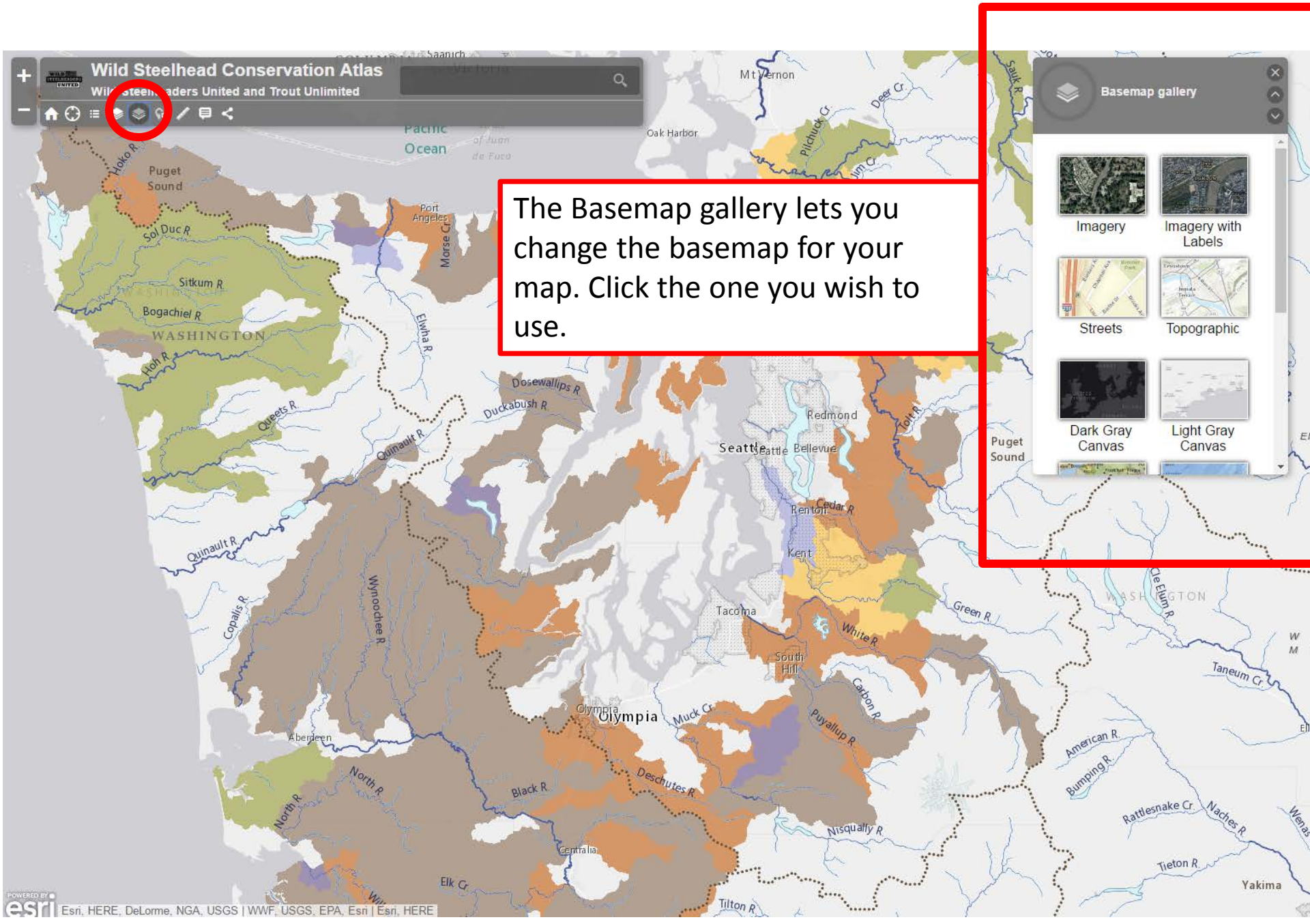
TOOL | *Toggle Legend* | Brings up the Legend menu on the right



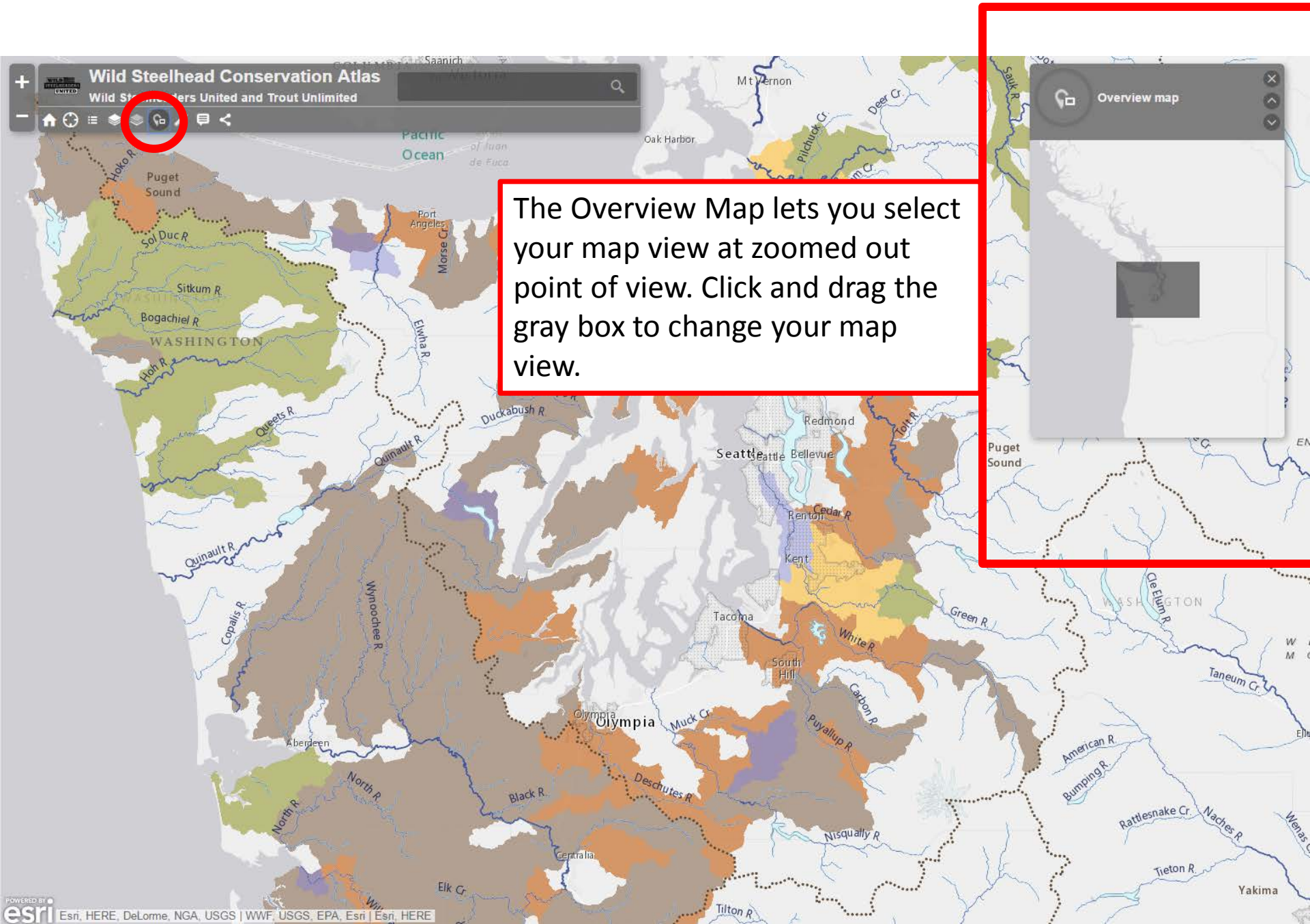
TOOL | *Toggle Layers* | Brings up the Layers menu on the right



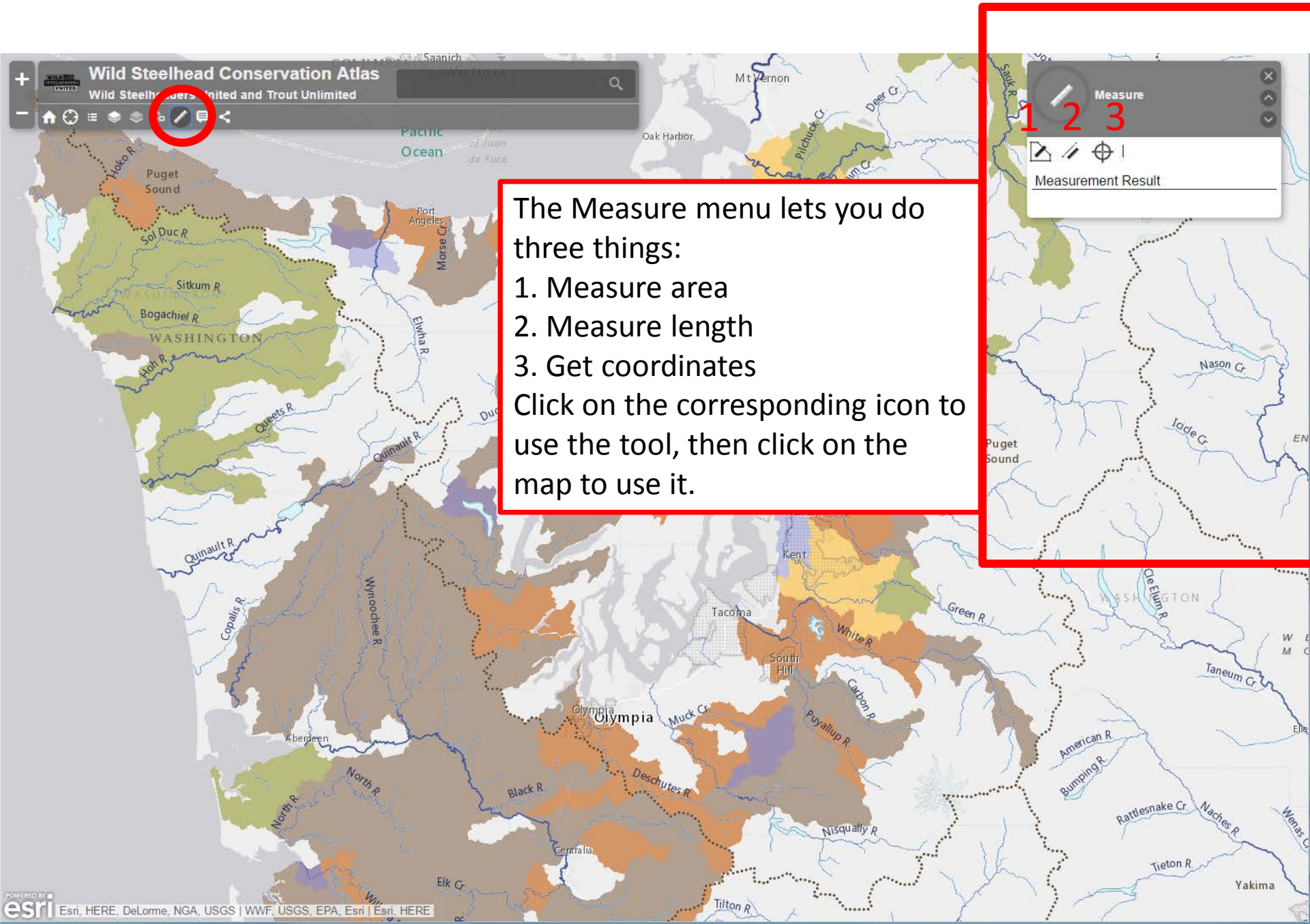
TOOL | *Toggle Basemap*| Brings up the Basemap menu on the right



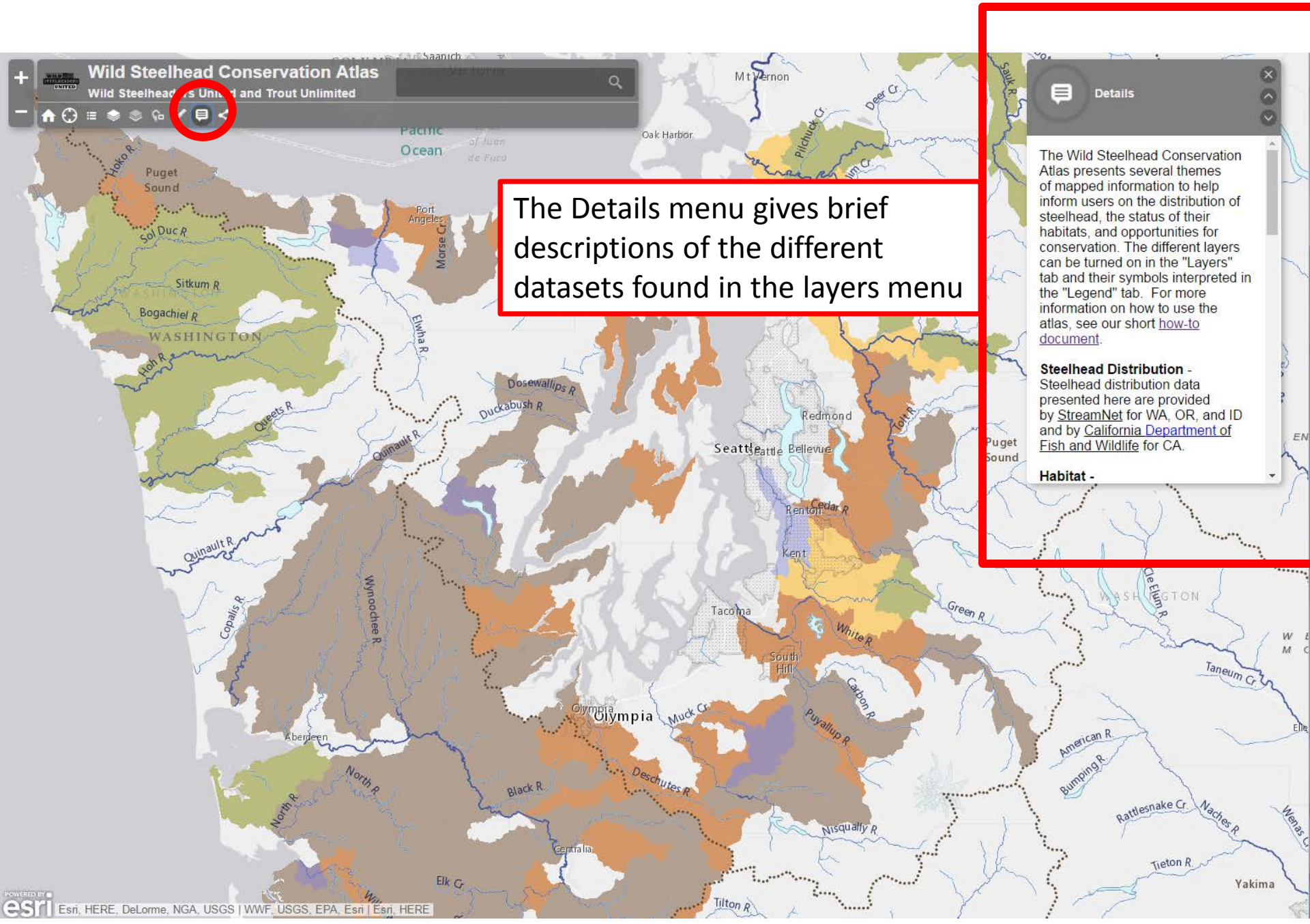
TOOL | *Toggle Overview* | Brings up the Overview menu on the right



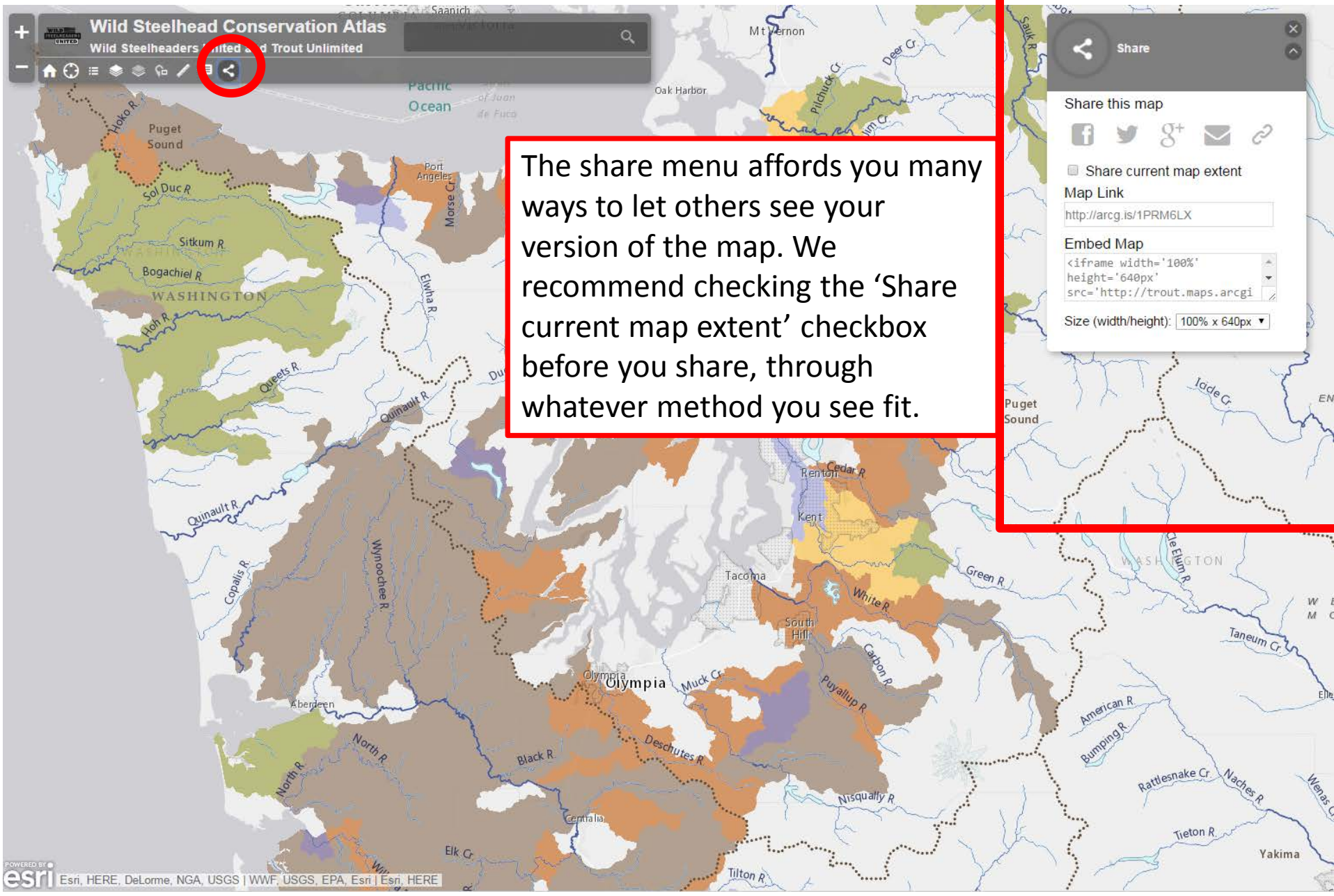
TOOL | *Toggle Measure* | Brings up the Measure menu on the right



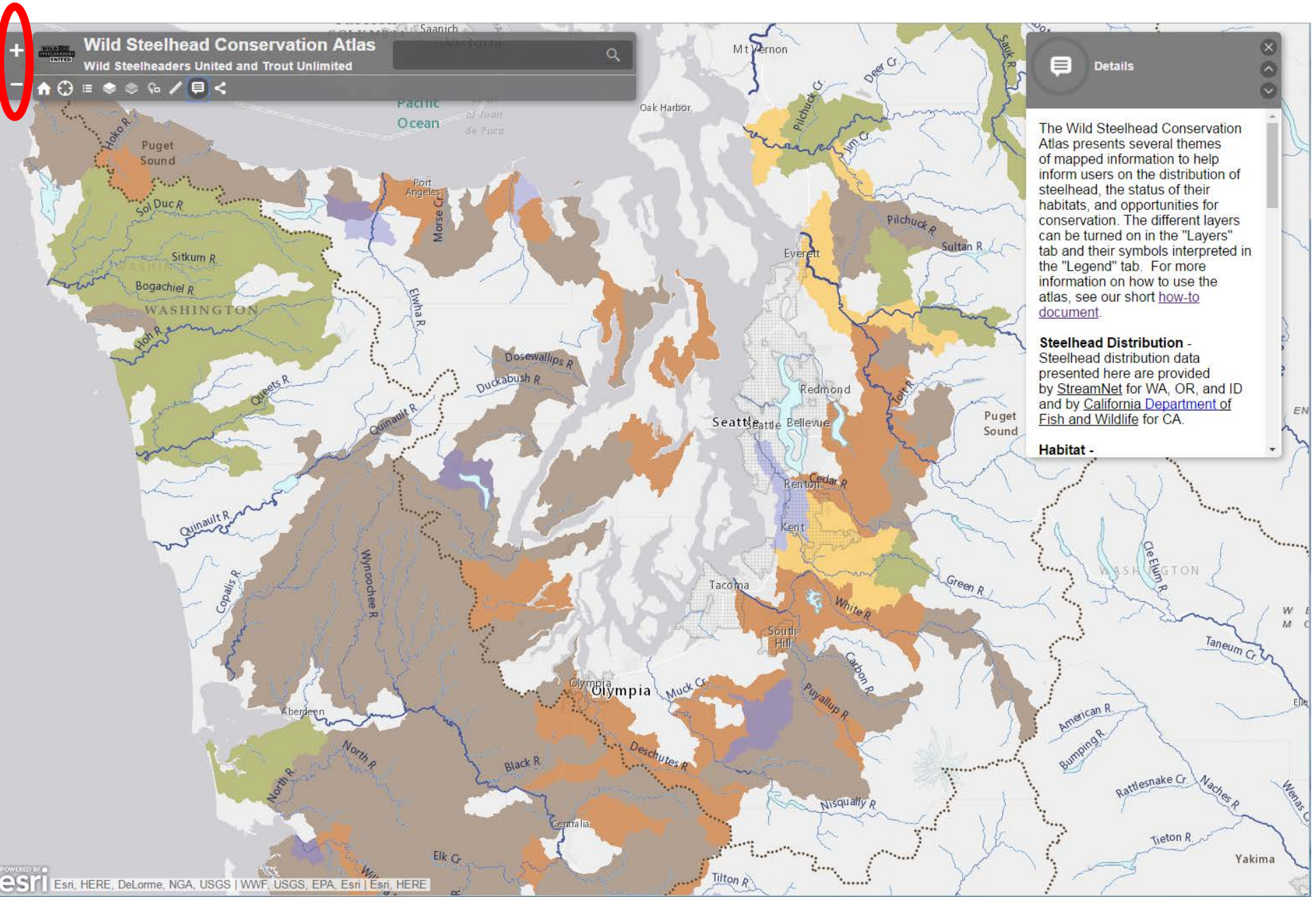
TOOL | *Toggle Details* | Brings up the Details menu on the right



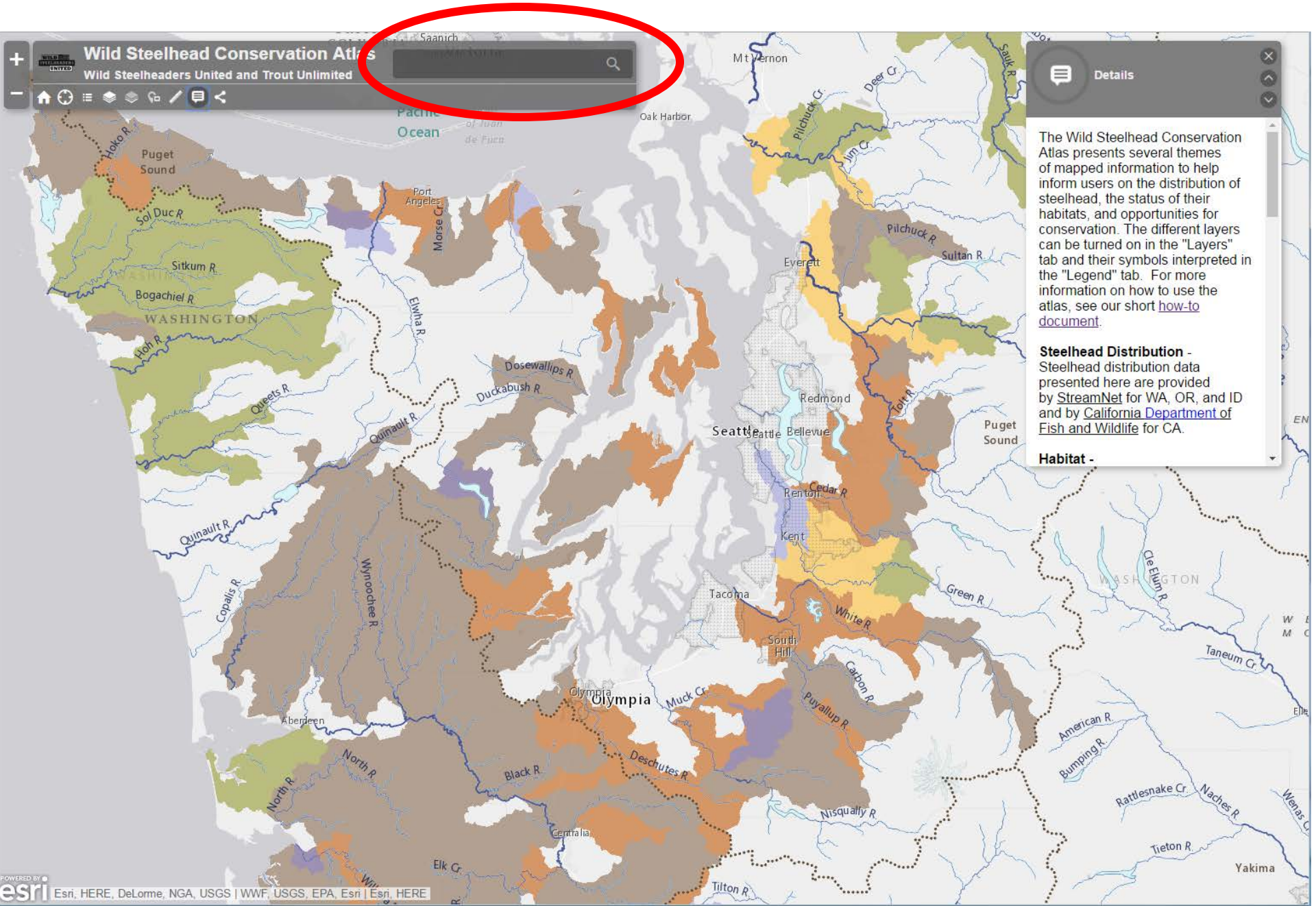
TOOL | *Toggle Share* | Brings up the Share menu on the right



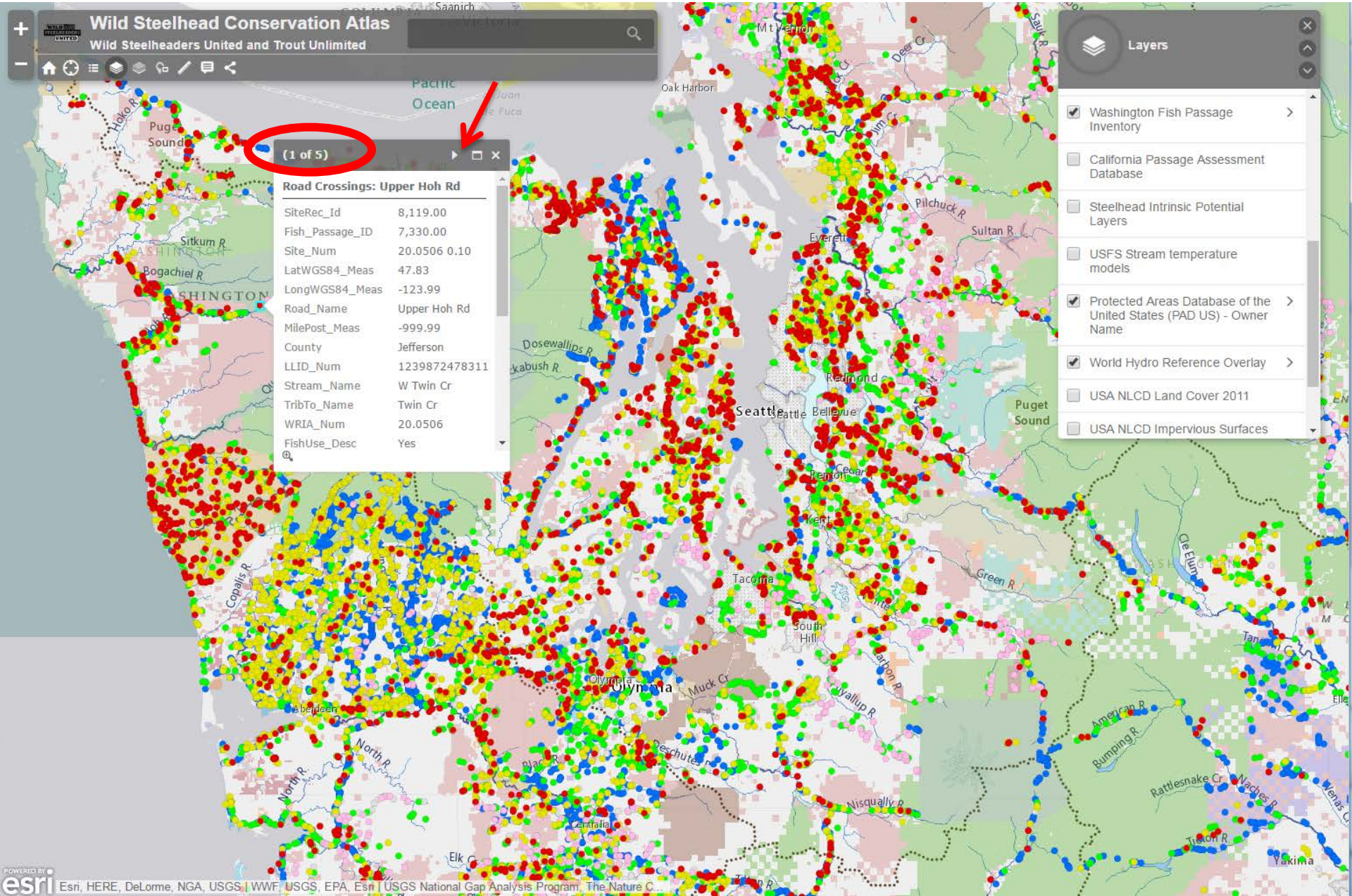
TOOL | *Zoom In/Out*| Click the '+' sign to zoom in, the '-' sign to zoom out. You can also Double Click on the map or use your mouse's scroll wheel to do the same.



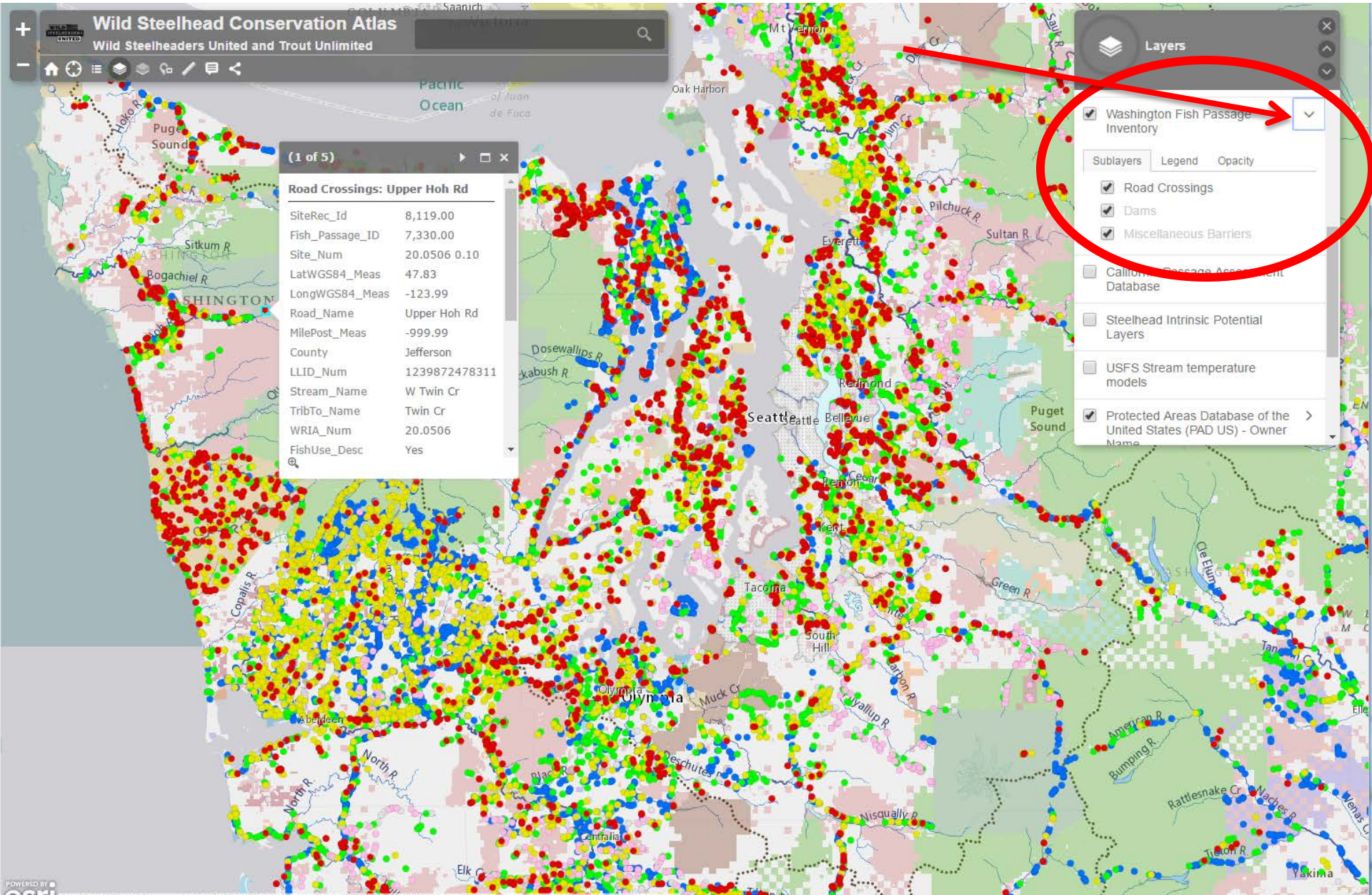
TOOL | *Location Search*| Enter a location of interest, the map will center on that location



To explore the layers you have turned on, click on the map and a dialogue box should appear. When multiple layers are turned on, they will often overlap. If you are interested in looking at the data for each of them (outside of the legend), you should click on the layer you are interested in. You may have to click through a few different layers.



Some content includes sub-layers which can be accessed from the “>” symbol next to the layer name. In this example, the Washington Fish Passage Inventory includes 3 sub-layers: Road Crossings, Dams, and Miscellaneous Barriers. If a layer is “greyed-out” – as Dams and Miscellaneous Barriers are in this example – zoom in closer on the map and the layers will become visible.



Part 2: Scenarios

Scenario A applies to the Fish Trip Planner

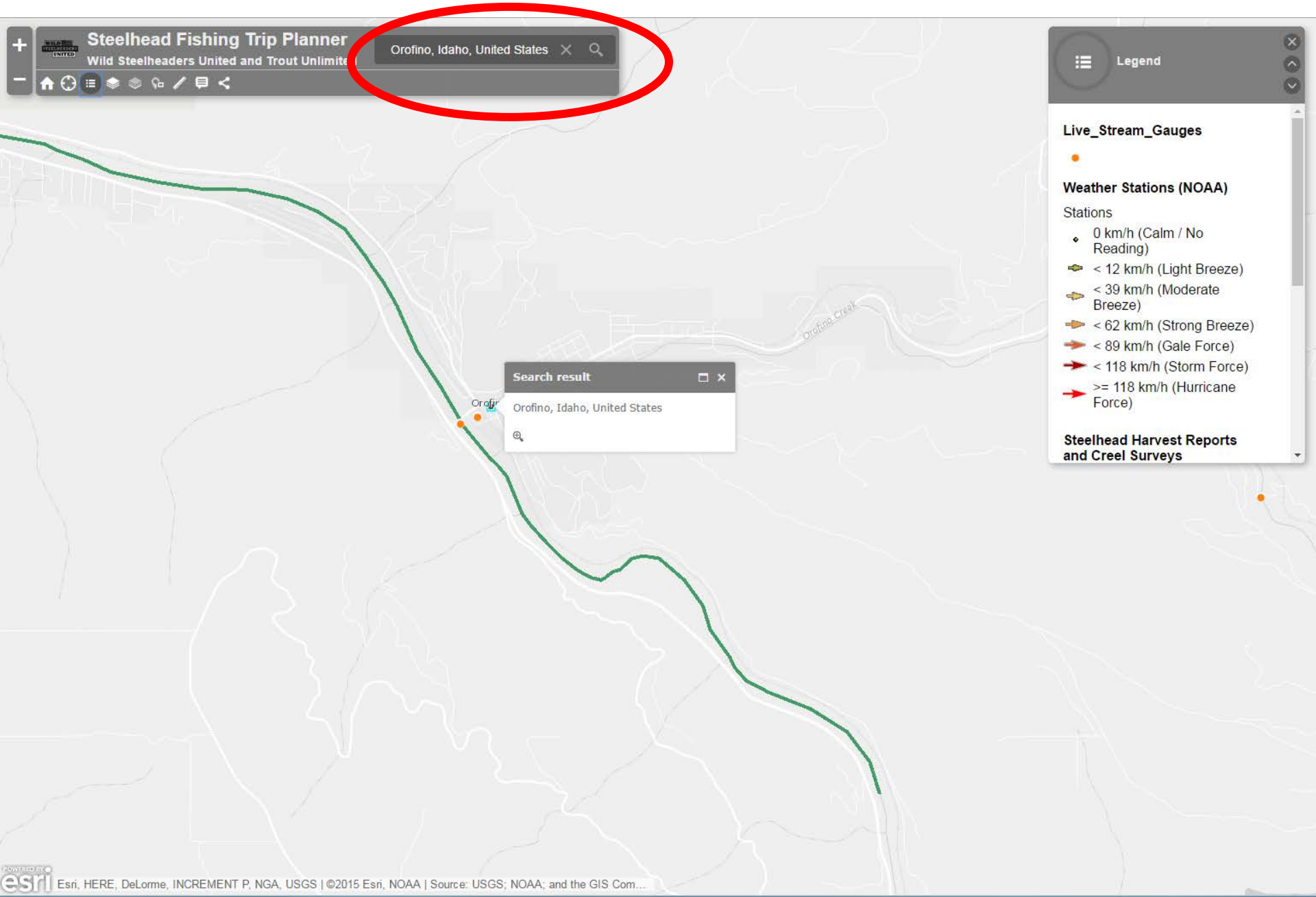
Scenarios B and Capply to the Conservation Atlas

Scenario A: Fishing Trip

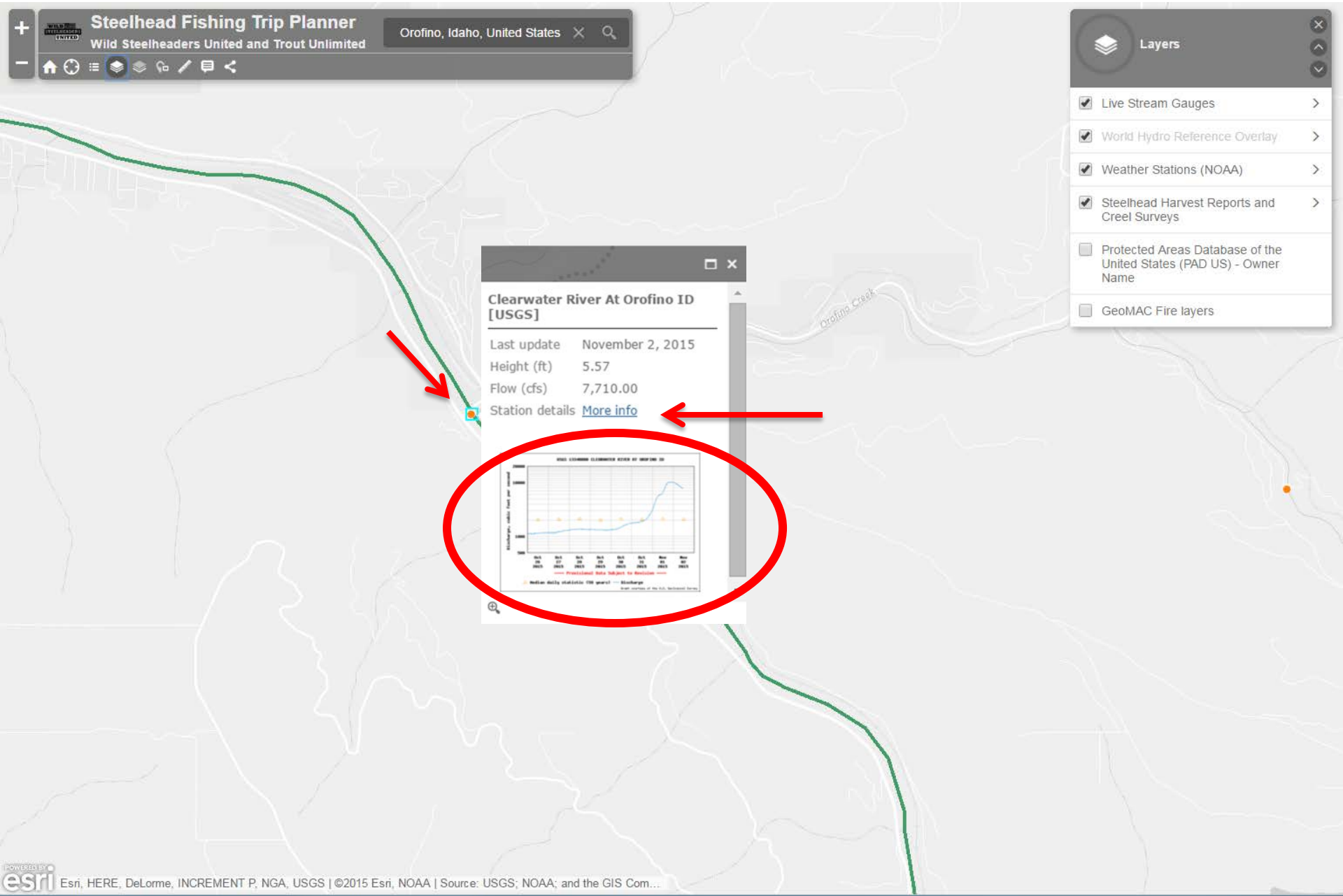
Collect information about a pre-selected fishing area like:

a. Live stream flow data
b. Creel and dam counts of adult steelhead returns

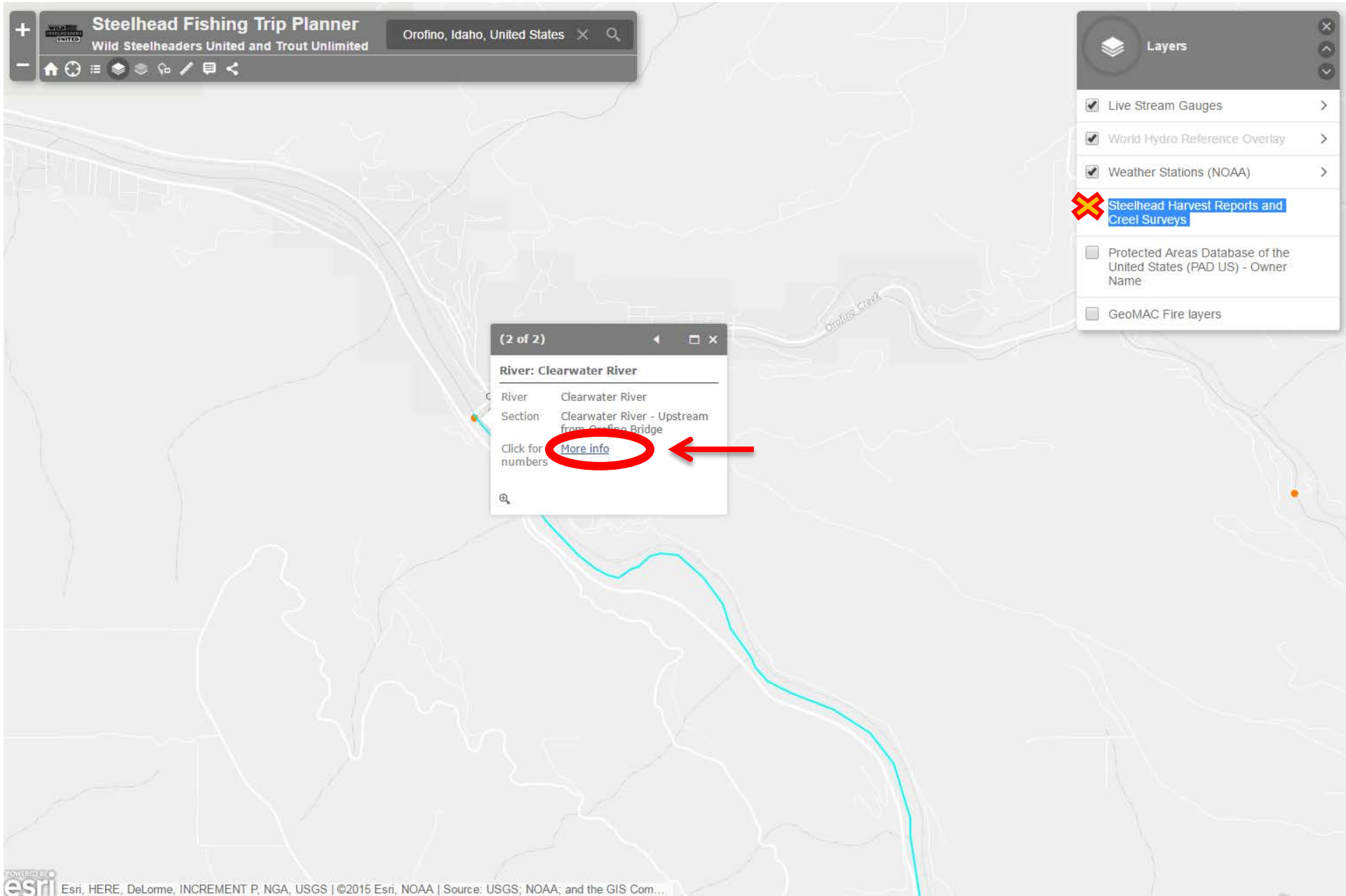
Use the Steelhead Fishing Trip Planner to make an informed decision on where to go fishing in northern Idaho. First search for a town near the Clearwater that you're familiar with, in this case Orofino, ID.



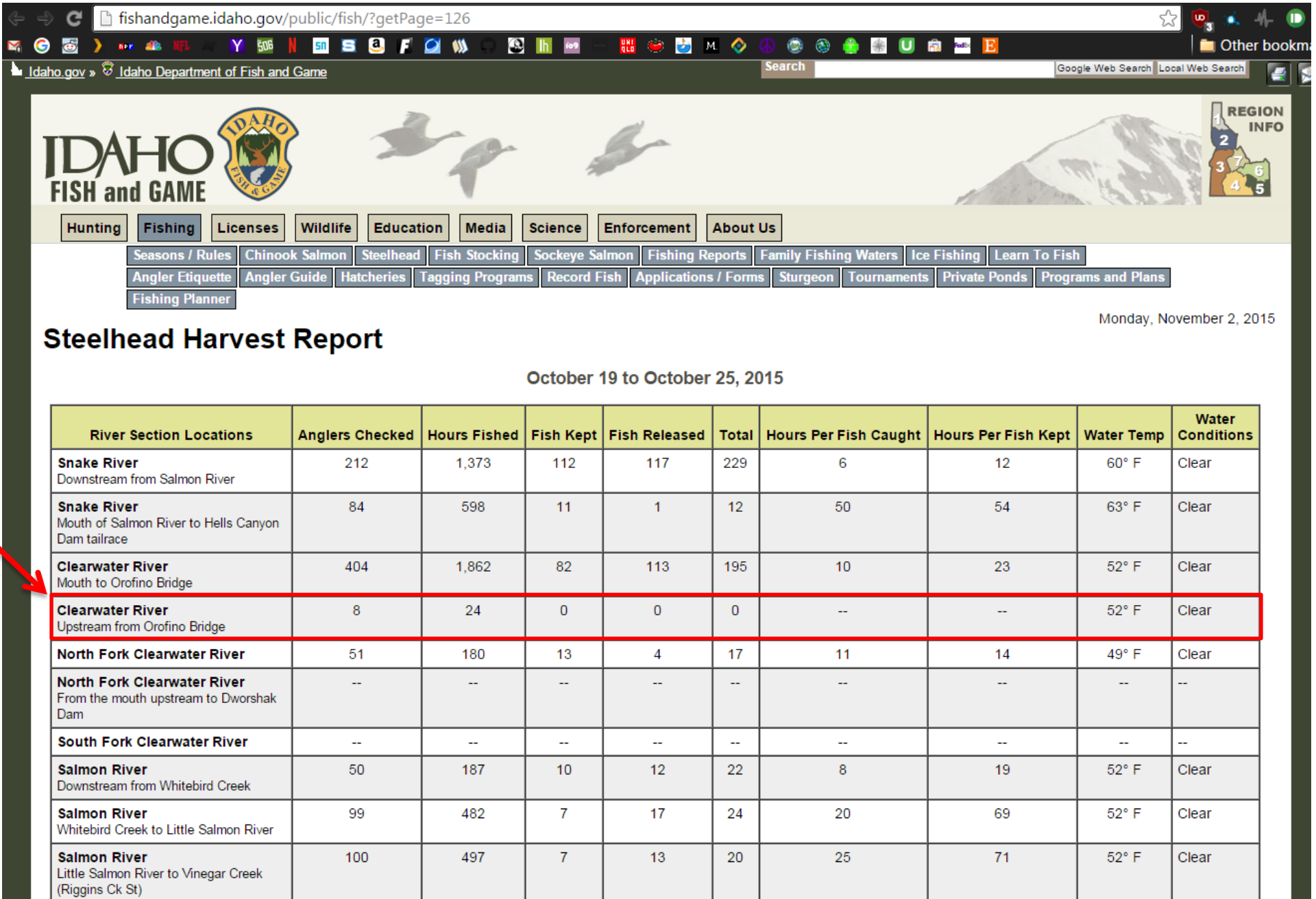
Next, check nearby stream gauges by clicking on one of the orange circles. According to this live stream gauge, the Clearwater is experiencing decreasing flows after a spike in flows – often a great time for steelhead fishing.



Now determine what the most recent steelhead returns are. First make sure the ‘Steelhead Harvest Reports and Creel Surveys’ layer is on. Second, click on the river section you are interested in. Finally click the ‘More Info’ link…
(Note the River Section name for the next step!)



…to open Idaho Fish and Game's steelhead harvest report for the river section. 'Clearwater River - Upstream from Orofino Bridge' is the section (as labeled on the map) of interest.



fishandgame.idaho.gov/public/fish/?getPage=126

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Monday, November 2, 2015

Steelhead Harvest Report

October 19 to October 25, 2015

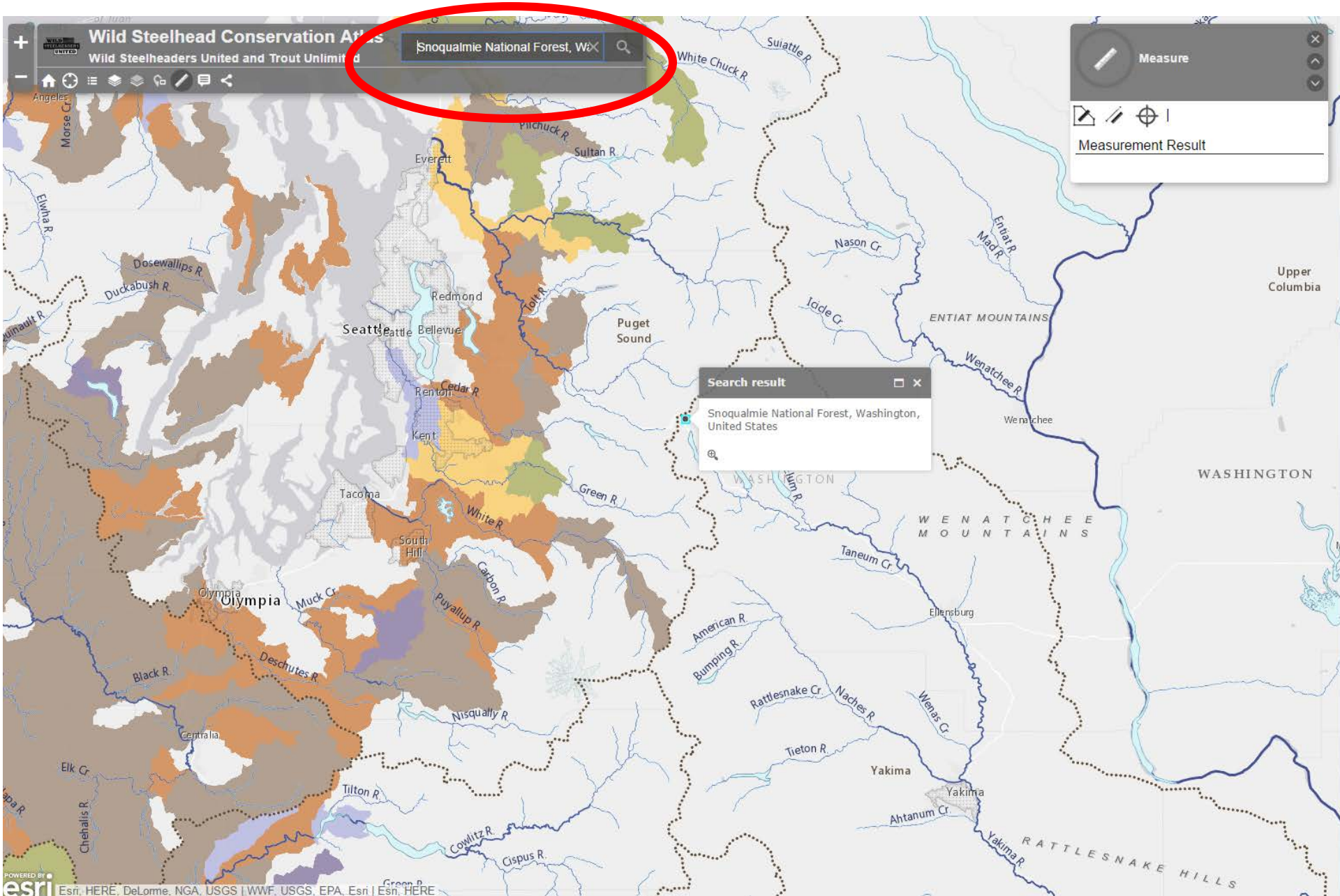
River Section Locations	Anglers Checked	Hours Fished	Fish Kept	Fish Released	Total	Hours Per Fish Caught	Hours Per Fish Kept	Water Temp	Water Conditions
Snake River Downstream from Salmon River	212	1,373	112	117	229	6	12	60° F	Clear
Snake River Mouth of Salmon River to Hells Canyon Dam tailrace	84	598	11	1	12	50	54	63° F	Clear
Clearwater River Mouth to Orofino Bridge	404	1,862	82	113	195	10	23	52° F	Clear
Clearwater River Upstream from Orofino Bridge	8	24	0	0	0	--	--	52° F	Clear
North Fork Clearwater River	51	180	13	4	17	11	14	49° F	Clear
North Fork Clearwater River From the mouth upstream to Dworshak Dam	--	--	--	--	--	--	--	--	--
South Fork Clearwater River	--	--	--	--	--	--	--	--	--
Salmon River Downstream from Whitebird Creek	50	187	10	12	22	8	19	52° F	Clear
Salmon River Whitebird Creek to Little Salmon River	99	482	7	17	24	20	69	52° F	Clear
Salmon River Little Salmon River to Vinegar Creek (Riggins Ck St)	100	497	7	13	20	25	71	52° F	Clear

Scenario B: Restoration

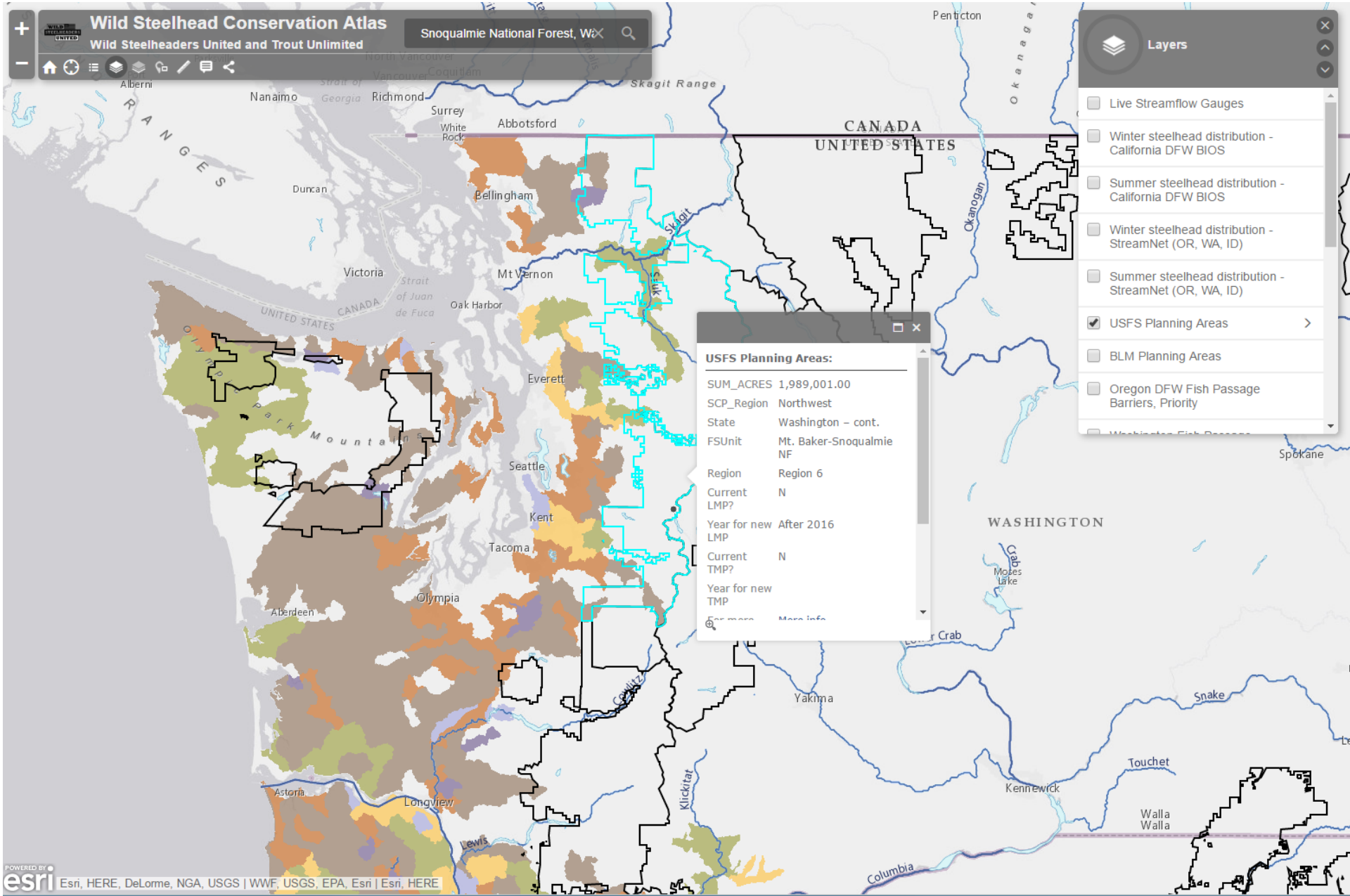
Identify areas within Baker-Snoqualmie National Forest where:

a. No acute habitat stressors exist within the Forest
b. Stream temperatures may be limiting for summer steelhead in the future
c. Restoration may help mitigate those temperatures.
d. Stream temperature monitoring may be appropriate

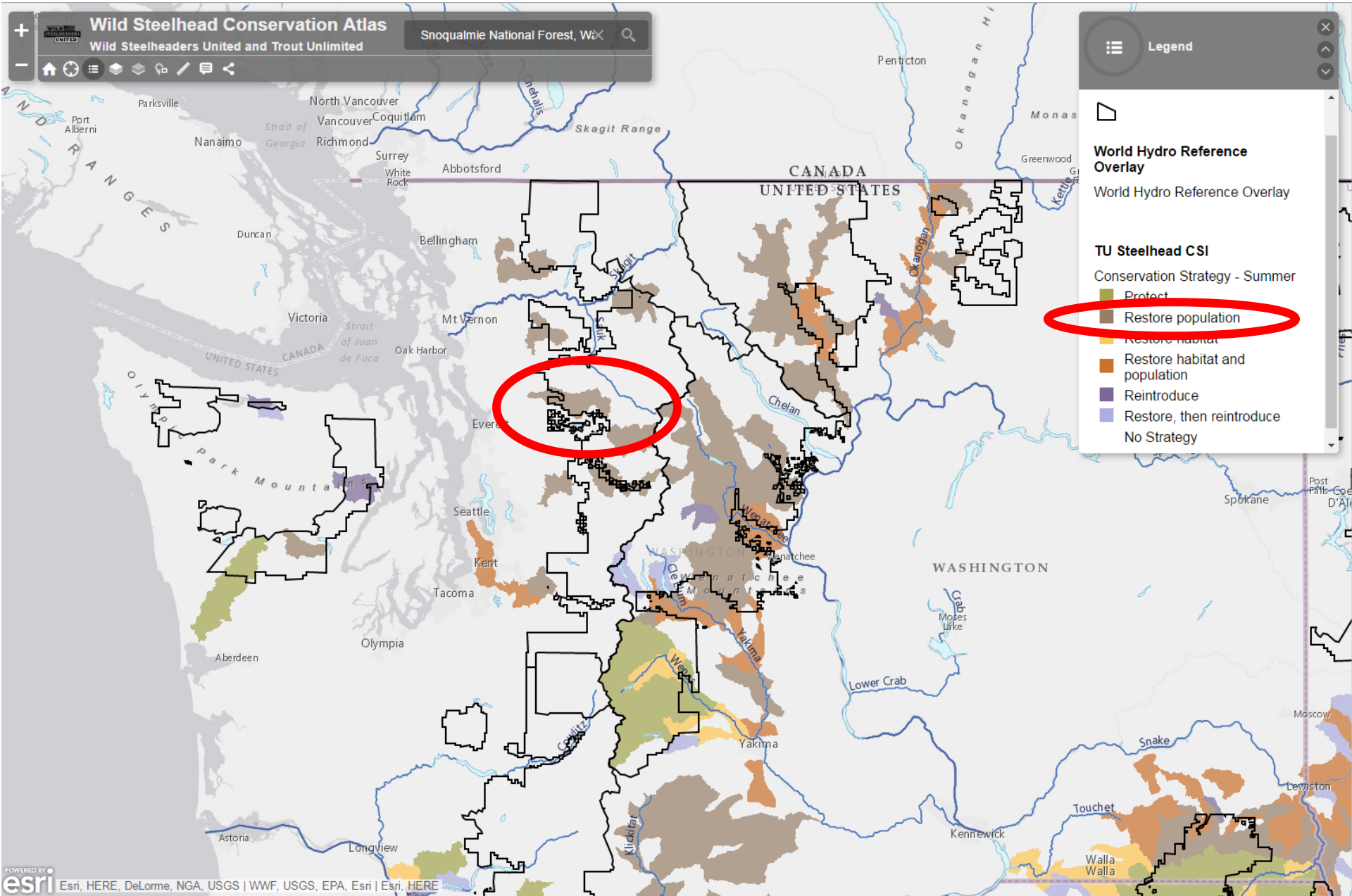
First search for our area of interest.



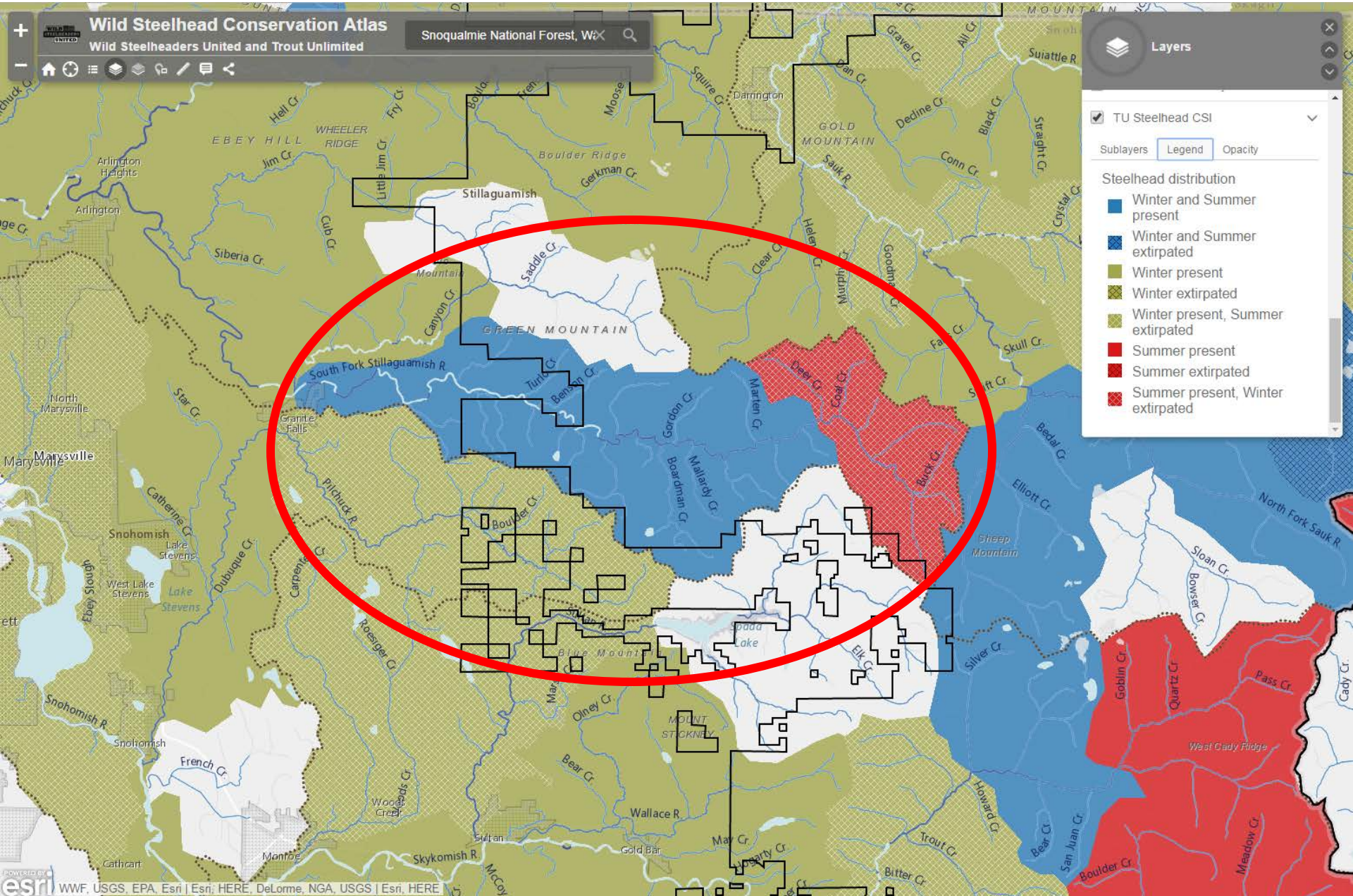
Turn on the ‘USFS Planning Areas’ to make sure you are within the boundary of the National Forest, then click on the area to verify the name and other possibly relevant information.



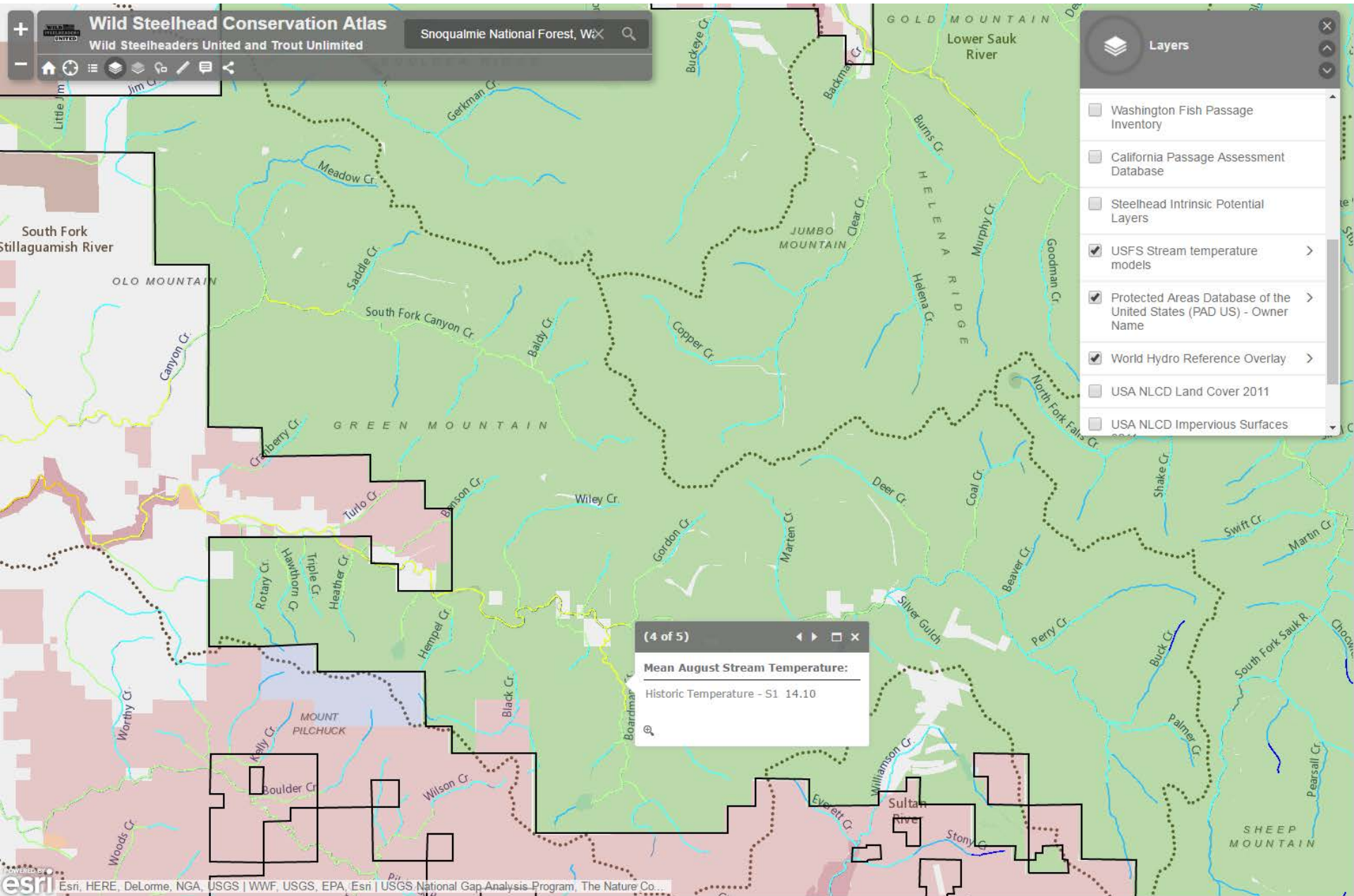
To make sure there are no acute habitat stressors present, we'll determine the most common conservation strategy in the Forest, using the TU CSI layers (specifically the 'Conservation Strategy – Summer' layer). Areas that are brown only require population restoration, indicating few acute habitat stressors.



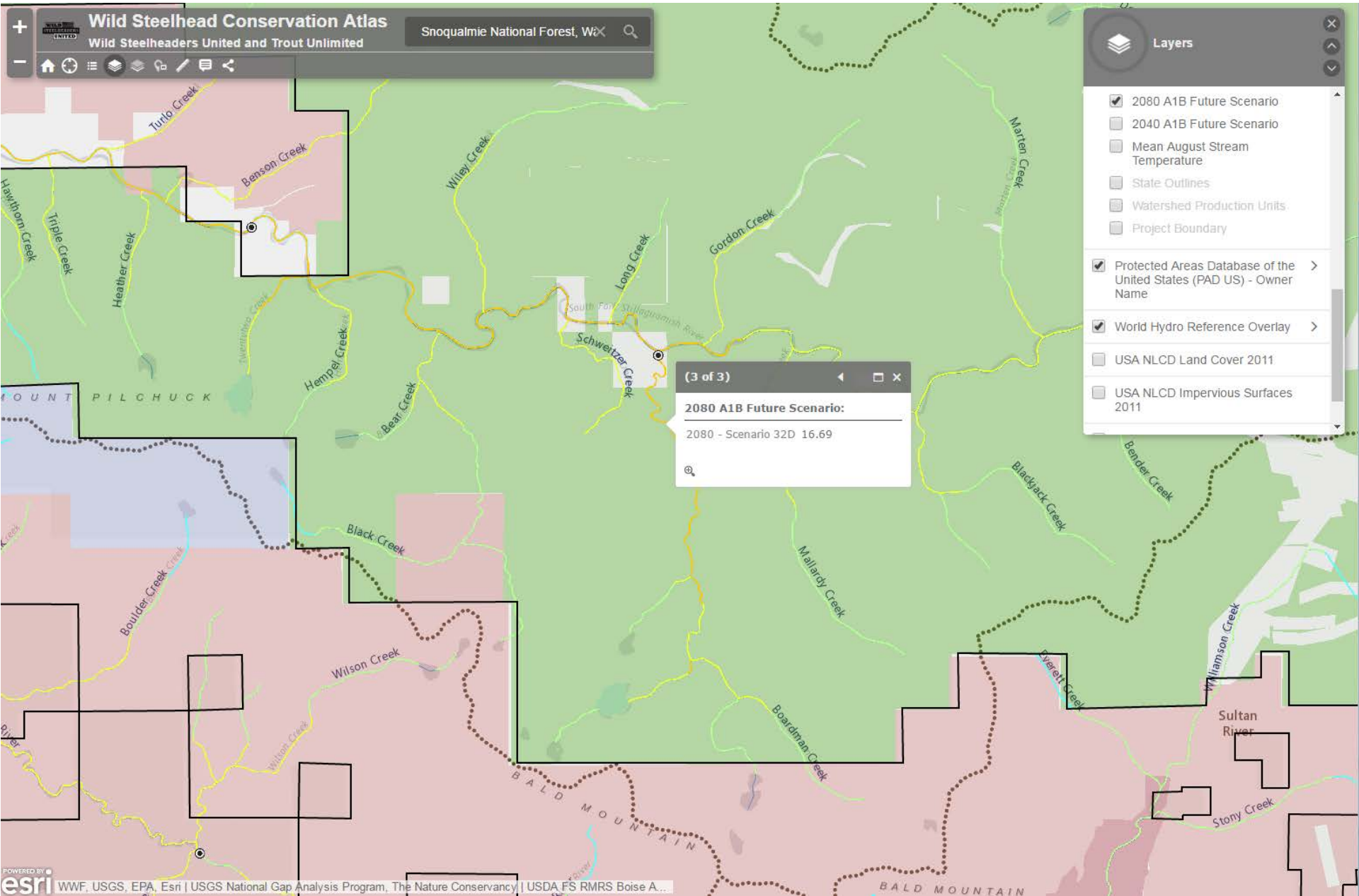
Turn on the TU Steelhead CSI ‘Steelhead Distribution’ layer to zoom and identify areas where Summer Steelhead are currently present. South Fork Stillaguamish River appears to support such a population.



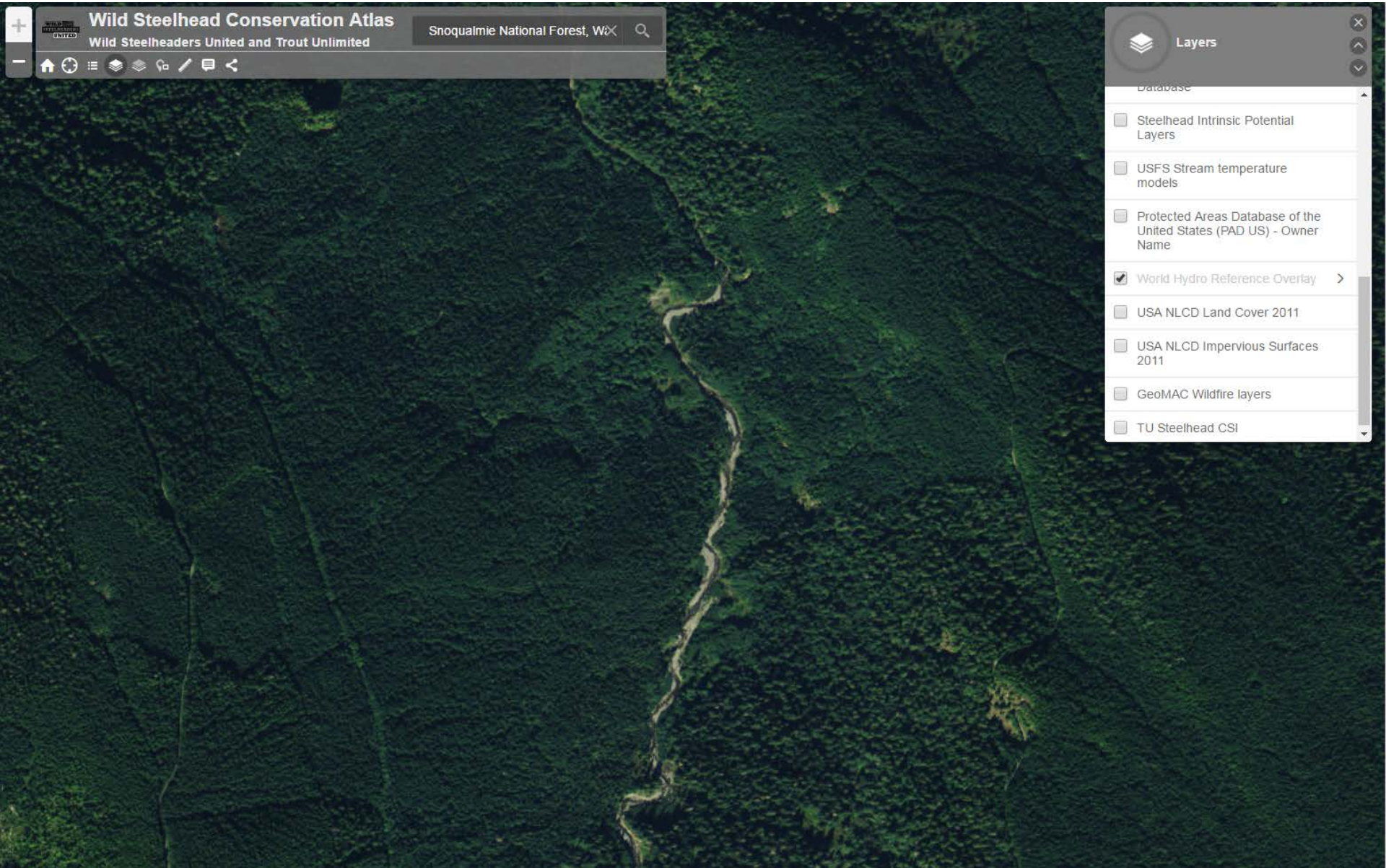
Now examine current and future temperature and land ownership. The ‘Mean August Stream Temperature’ layer lets us know the current, general temperature. The ‘Protected Areas Database…’ shows land ownership. Boardman Creek appears to be the warmest tributary on USFS lands at 14°C (57°F).



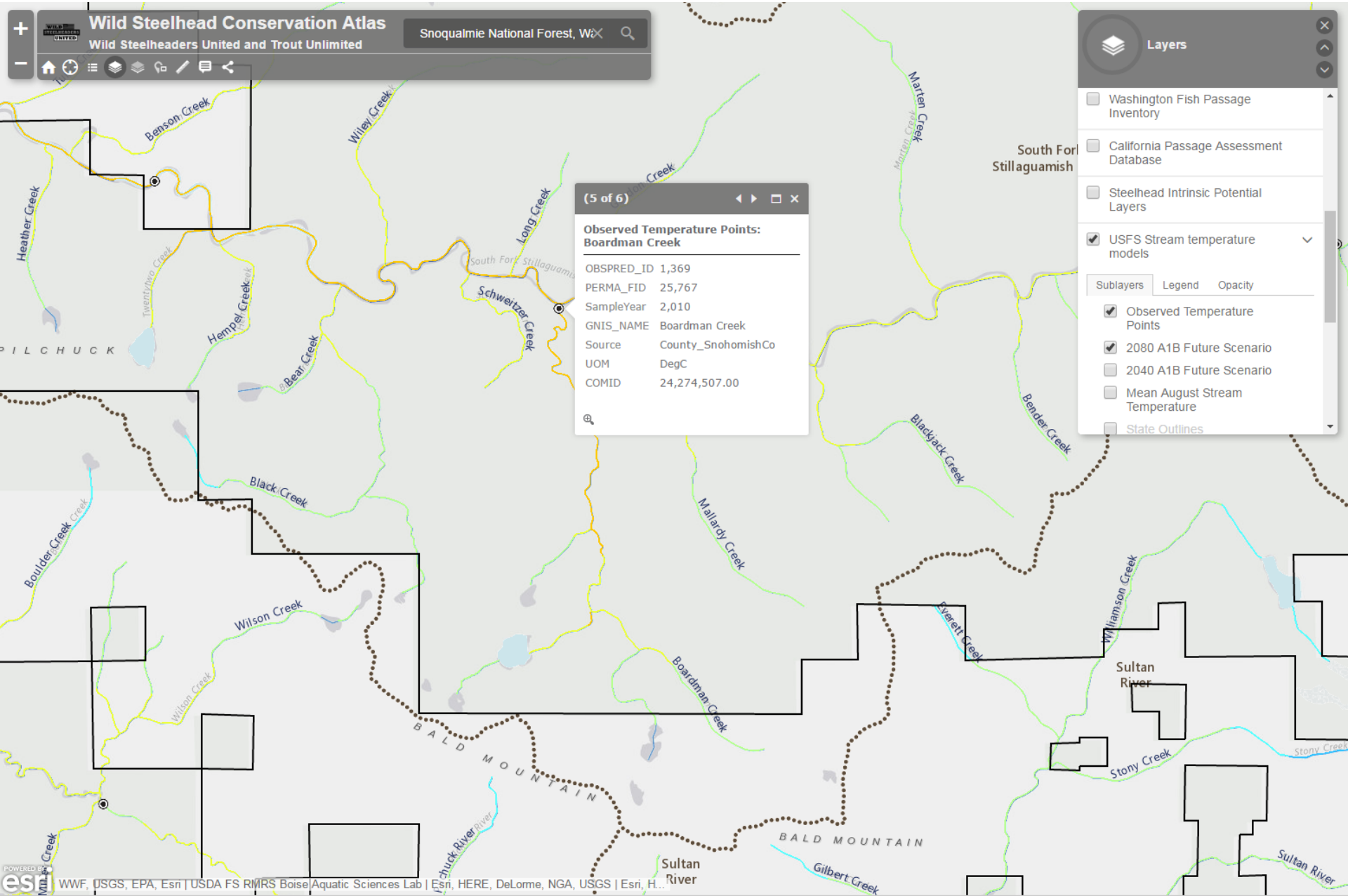
The 2080 forecast stream temperature indicates temps may increase by nearly 3° C (5° F) to 62° F.



Change the basemap to aerial imagery and determine where additional streamside vegetation could potentially mitigate future stream temperature increases. This riparian zone looks well-forested, but with a visible logging history – forest management may provide opportunity to place large wood in stream, increasing channel complexity and creating pool habitat.



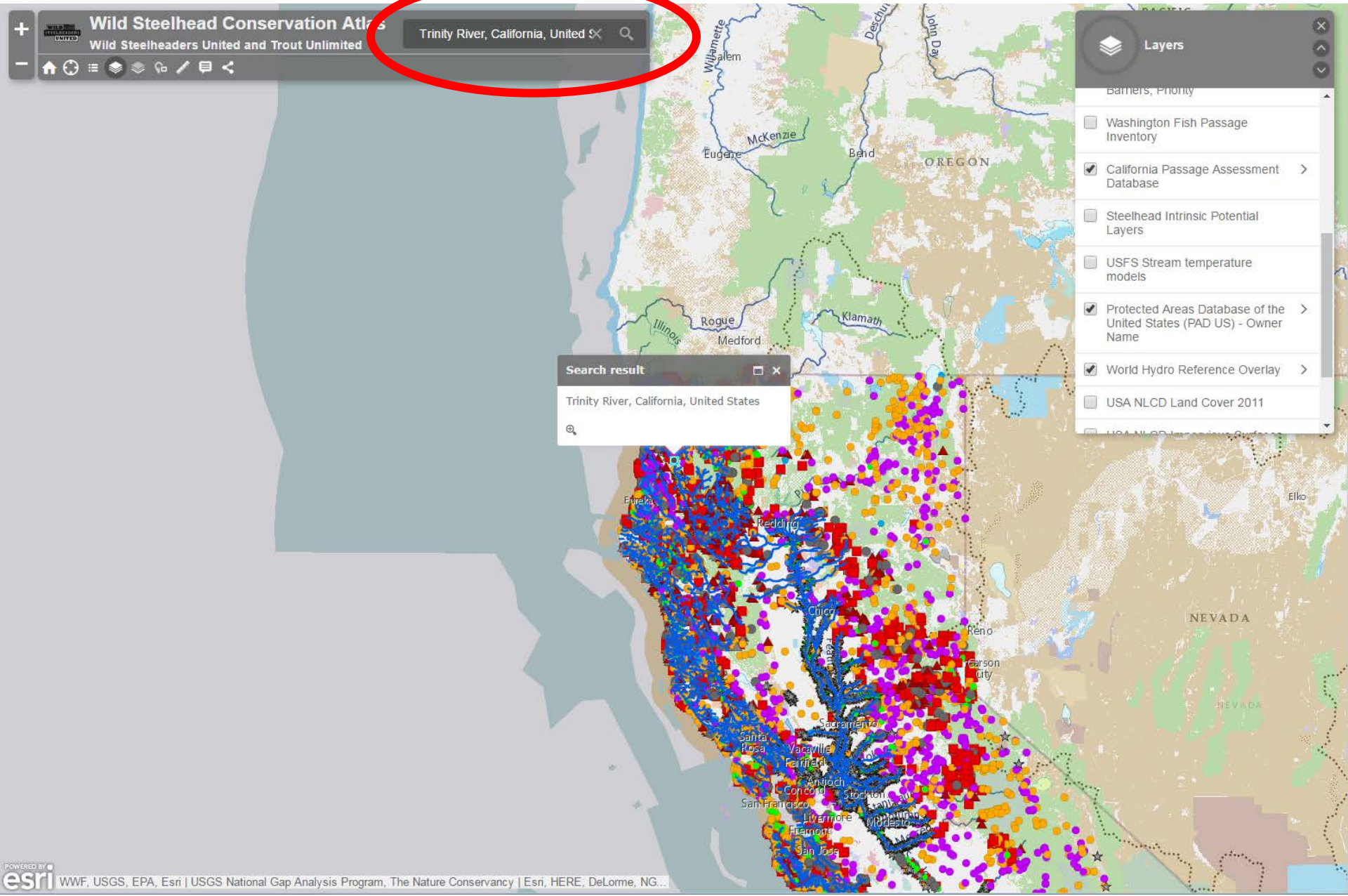
Within the USFS stream temperature models layer, the locations of existing or historical monitoring are provided – these may help identify gaps in existing temperature models. TU has created another web-map to further identify existing monitoring and monitoring opportunities (http://arcg.is/1TE0Aj8)



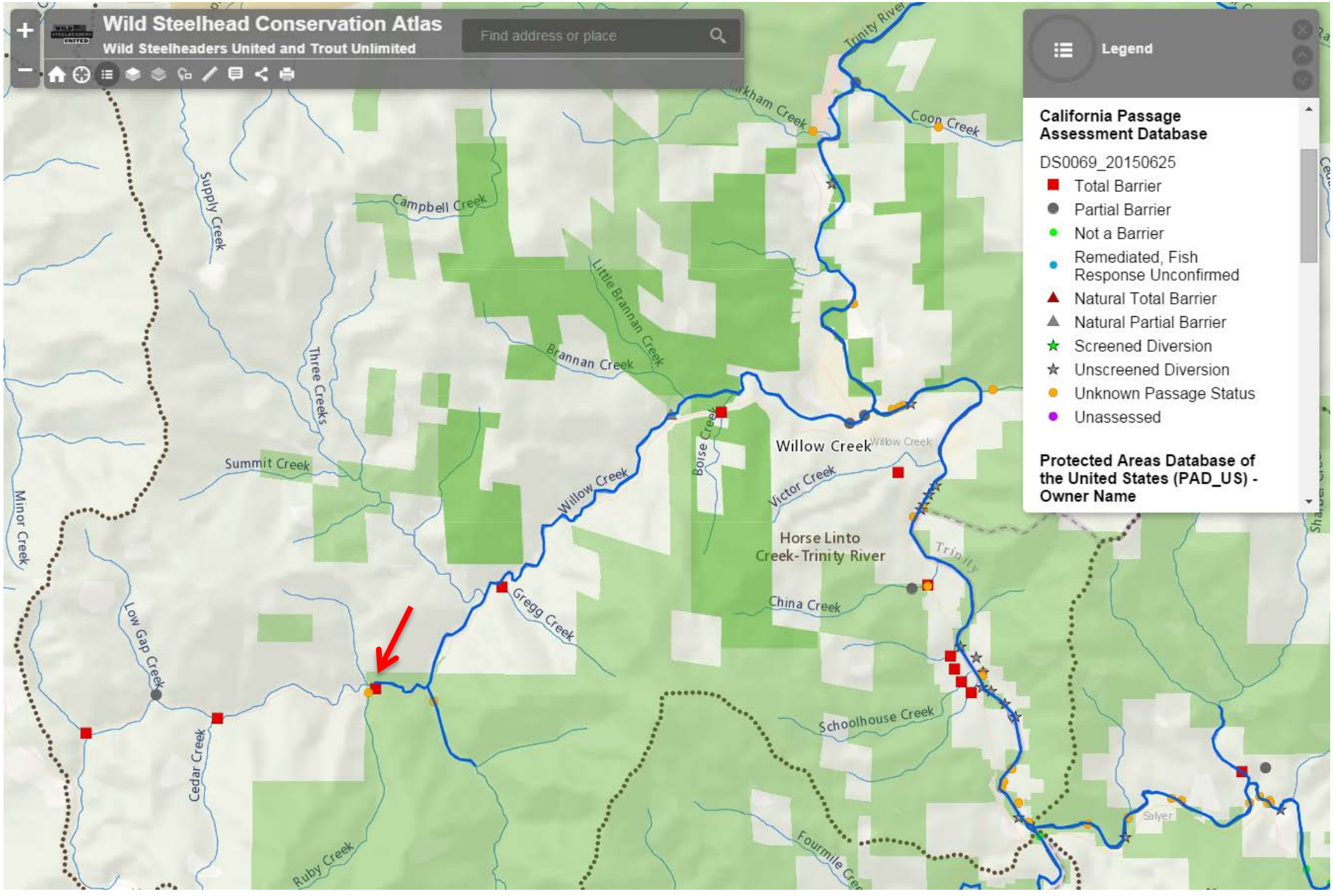
Scenario C: Habitat Evaluation

Identify tributaries to the Trinity River in California that winter run steelhead could potentially inhabit, but are unable to due to artificial barriers.

First, navigate to your basin of interest and turn on the relevant steelhead distribution and fish passage barrier dataset and land ownership layer



Explore your basin of interest looking for areas where steelhead distribution stops at a barrier. Here is an example area in the Willow Creek drainage where winter-run steelhead distribution ends at a Total Barrier.



With the intrinsic potential layer, we can determine if the blocked-off area contains high-quality steelhead rearing habitat. A majority of this section of the Willow River has high intrinsic potential – this location might be a good candidate for evaluating opportunities for barrier removal.