



SCIENCE PROGRAM PROFILES

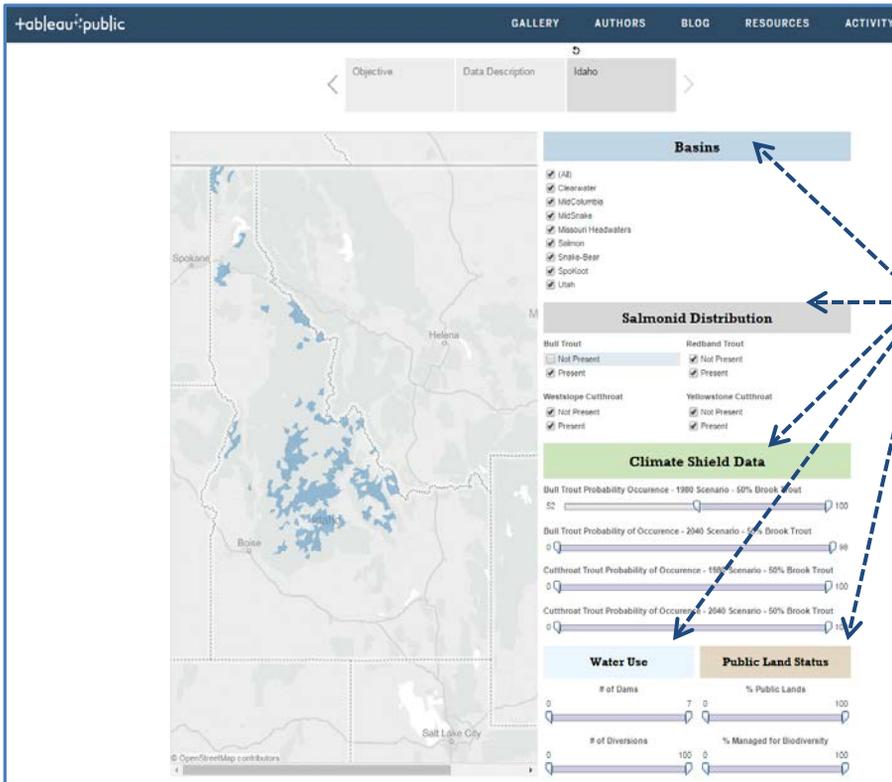
Idaho Water Transaction Tool

The Need: TU staff wanted to evaluate water transaction opportunities in locations where bull trout will likely persist in the future under a warming climate, as identified within the USFS Climate Shield analysis. By prioritizing restoration work within those bull trout “lifeboats”, TU and partners can ensure a lasting impact of their work.

The Tool: TU science staff developed two paired online tools – a data visualization for querying and filtering subwatershed-scale data summaries across the state, and a map viewer for investigating the source data at the scale where projects occur. Users begin by setting criteria in the data visualization and then hyperlink to the map viewer.

Step 1: The criteria on the right side of the data visualization are attributed to the subwatersheds (HUC12s, each ~ 15k ac.) on the left side of the map.

Use the check boxes and “slider” filters to dynamically update the subwatersheds visible in the map based on user-defined criteria, including river basins, salmonid species distribution, USFS Climate Shield projections, water diversion counts, dams, & public land status.



Trout Unlimited’s Science Program is based in Boise, ID and works in four primary areas: Conservation Planning, Restoration Design and Monitoring, Fisheries Research, and Science Interpretation and Transfer

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✓ Keep only ✕ Exclude ☰

Subwatershed Name: Bear Valley Creek
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Number of Dams: 0
Number of Diversions: 3
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Bull Trout 1980 (50% Brook Trout): 99%
Bull Trout 2080 (50% Brook Trout): 91%
Cutthroat 1980 (50% Brook Trout): 100%
Cutthroat 2080 (50% Brook Trout): 96%
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% Public Lands: 100
% Managed for Biodiversity: 12
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Bull Trout: Present
Redband Trout: Not Present
Westslope Trout: Present
Yellowstone Cutthroat: Not Present
[See more detailed data on arcgis.com](#)

Step 2: Click on any of the subwatersheds meeting your criteria to see details and access a hyperlink to the map viewer. From there, explore USFS Climate Shield reaches and Idaho Dept. of Water Resources points of diversion data relative to land ownership and other info. Click on features in the map to access pop-ups – water right data, for example, include descriptions of the owner, diversion rate, and link to IDWR documents. The basemap can be switched to USGS topo maps or aerial imagery, content controlled on the panel on the left, and maps shared as a hyperlink or printed from the viewer.

The screenshot shows the 'Water Transaction Tool' interface. On the left, there is a legend panel with sections for 'Points of Diversion', 'Climate Shield Reaches', 'World Hydro Reference Overlay', 'Subwatersheds', and 'Land Owner Type'. The main map area displays a topographic map of the Bear Valley Creek watershed with various colored overlays representing different data layers. A pop-up window is open over a point on the map, showing the following details:

- Status: Active
- SourceQualifier
- TributaryOf: BEAR VALLEY CREEK
- TributaryOfQualifier
- WaterDistrictNumber
- WRRReport: More info
- WRDocs: More info
- VersionNumber: 0
- Basis: Decreed
- OverallMaxDiversionRate: 0.37
- DiversionName: F-1
- DataSource: GPS - Downloaded

At the bottom of the map, there is a scale bar and the text 'USGS National Gap Analysis Program, The Nature Conservancy | WWF, USGS, EPA, Esri | Copied by Esri'.

To explore the Idaho Water Transaction Tool, visit:

<https://public.tableau.com/s/profile/sean.mcfall#!/vizhome/ClimateShieldIdaho/Story1>

For more information, contact Kurt Fesenmyer, TU's GIS Director kfesenmyer@tu.org or Sean McFall, Spatial Analyst smcfall@tu.org