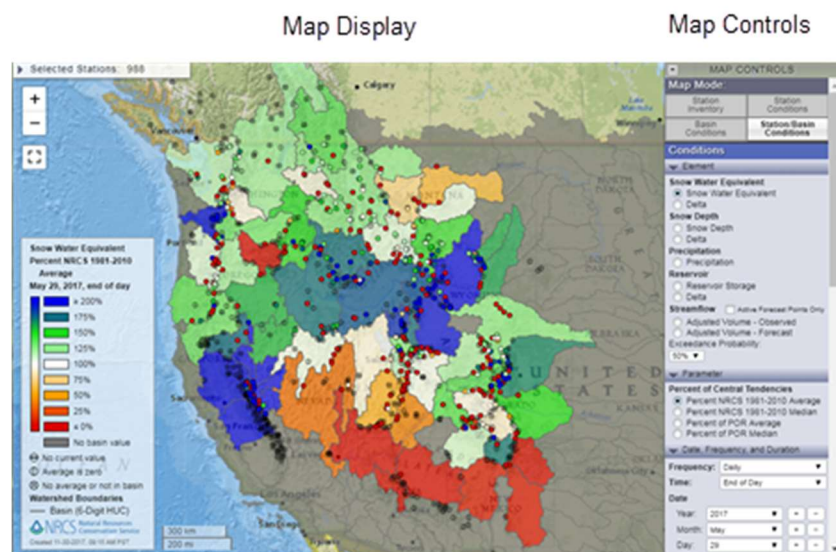


Interactive Map Guide to Views and Controls

The National Water and Climate Center's Interactive Map displays both current and historic hydrometeorological data in an easy-to-use, visual interface. The information on the map comes from many sources. Natural Resources Conservation Service snowpack and precipitation data are derived from manually-collected snow courses and automated Snow Telemetry (SNOTEL) and Soil Climate Analysis Network (SCAN) stations. Other data sources include precipitation, streamflow, and reservoir data from the U.S. Bureau of Reclamation (BoR), the Applied Climate Information System (ACIS), the U.S. Geological Survey (USGS), and other hydrometeorological monitoring entities.

The Interactive Map has two regions: the map display (on the left) and the map controls (on the right). You use the map controls to determine both the display mode and the types of data and stations to show on the map.

This page contains an overview of the features and capabilities of the Interactive Map.



Contents

Display Modes.....	2
Map Components.....	3
Station Conditions Controls	8
Basin Conditions Controls	9
Station Inventory Controls	11

Display Modes

The Interactive Map has four display modes:

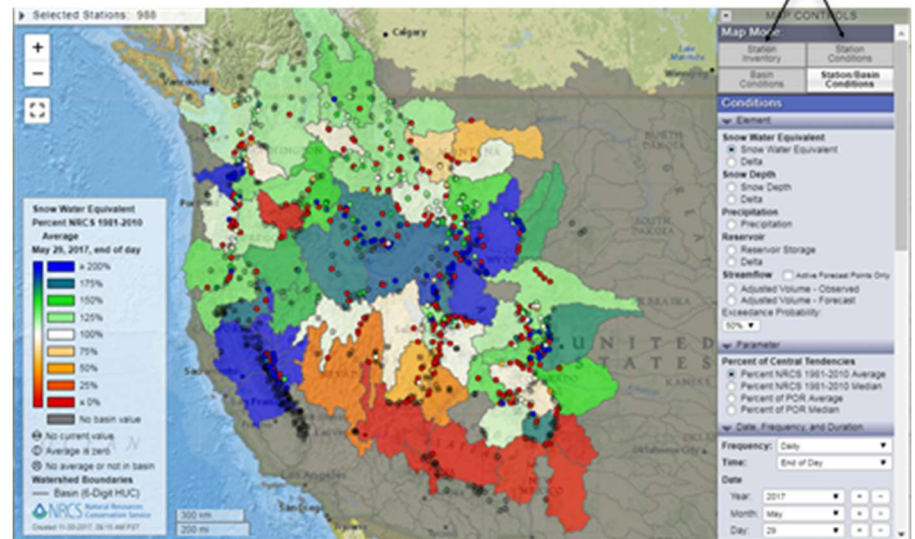
Station and Basin Conditions modes display stations, basins, or both stations and basins based on four criteria you supply:

1. Element, such as Precipitation.
2. Parameter, such as Period of Record (POR)
3. Hydrologic Unit Code (HUC) level (for basins only)
4. Frequency and Duration

Once these are selected, you can drill down to more information by simply hovering over or clicking on a station.

Station Inventory mode is a site-selector, allowing you to filter the display of stations by climatic Element, Location, and Data Collection Network.

Change Display Mode



Map Mode:

Station Inventory	Station Conditions
Basin Conditions	Station/Basin Conditions

Map Components

The map displays on the left portion of the page. Here are some tips for navigating the map.

Selected Stations list

The **Selected Stations** list at the top left portion of the map contains all the stations from the selected data collection networks (such as SNOTEL, SCAN, reservoir, and streamflow stations) meeting the selection criteria. Click the right arrow (►) to expand the list. All the stations meeting the selection criteria will be displayed alphabetically. Select a station in the list to jump to that station on the map and display metadata, site information, and access to reports. The **View Metadata Report** link at the top of the Selected Stations list creates a downloadable report with metadata for all the stations in the list. The **Export Data as CSV** link downloads a file in comma-separated value format.

Click a station to highlight it on the map

Selected Stations: 1099

[View Metadata Report](#)

[Export Data as CSV](#)

AAMU-JTG
860 ft. - AL - SCAN

Abrams
1194 ft. - KS - SCAN

Adams Ranch #1
6175 ft. - NM - SCAN

Adin Mtn
6190 ft. - CA - SNOTEL

Agua Canyon
8900 ft. - UT - SNOTEL

Albro Lake
8300 ft. - MT - SNOTEL

Alcalde
5693 ft. - NM - SCAN

Alexander Lake
160 ft. - AK - SNOTEL

Alkali Mesa
6445 ft. - UT - SCAN

Allen Farms
705 ft. - TN - SCAN

Alpine Meadows
3500 ft. - VA - SNOTEL

American Creek
1050 ft. - AK - SNOTEL

Ames
1073 ft. - IA - SCAN

Metadata Report

(As of: Wed Jun 14 06:34:59 GMT 05:00 2017)
"Provisional data, subject to revision"



Station Id	State Code	Network Code	Station Name	Elevation	Latitude	Longitude	County Name	Huc.huc
2057	AL	SCAN	AAMU-JTG	860	34.78333	-86.55000	Madison	06030002
2092	KS	SCAN	Abrams	1194	37.13130	-97.08590	Cowley	11030012
2015	NM	SCAN	Adams Ranch #1	6175	34.25000	-105.41667	Lincoln	13060006

	A	B	C	D	E	F	G	H
1	Name	ID	State	Network	County	Elevation	Latitude	Longitude
2	AAMU-JTG	2057	Alabama	SCAN	Madison	860	34.78333	-86.55
3	Abrams	2092	Kansas	SCAN	Cowley	1194	37.1313	-97.0859
4	Adams Ranch	2015	New Mexico	SCAN	Lincoln	6175	34.25	-105.417
5	Alcalde	2172	New Mexico	SCAN	Rio Arriba	5693	36.0908	-106.057
6	Alkali Mesa	2138	Utah	SCAN	San Juan	6445	37.67455	-109.364
7	Allen Farm	2076	Tennessee	SCAN	Giles	705	35.0747	-86.8938
8	Ames	2031	Iowa	SCAN	Boone	1073	42.01667	-93.7333

Zoom and Pan

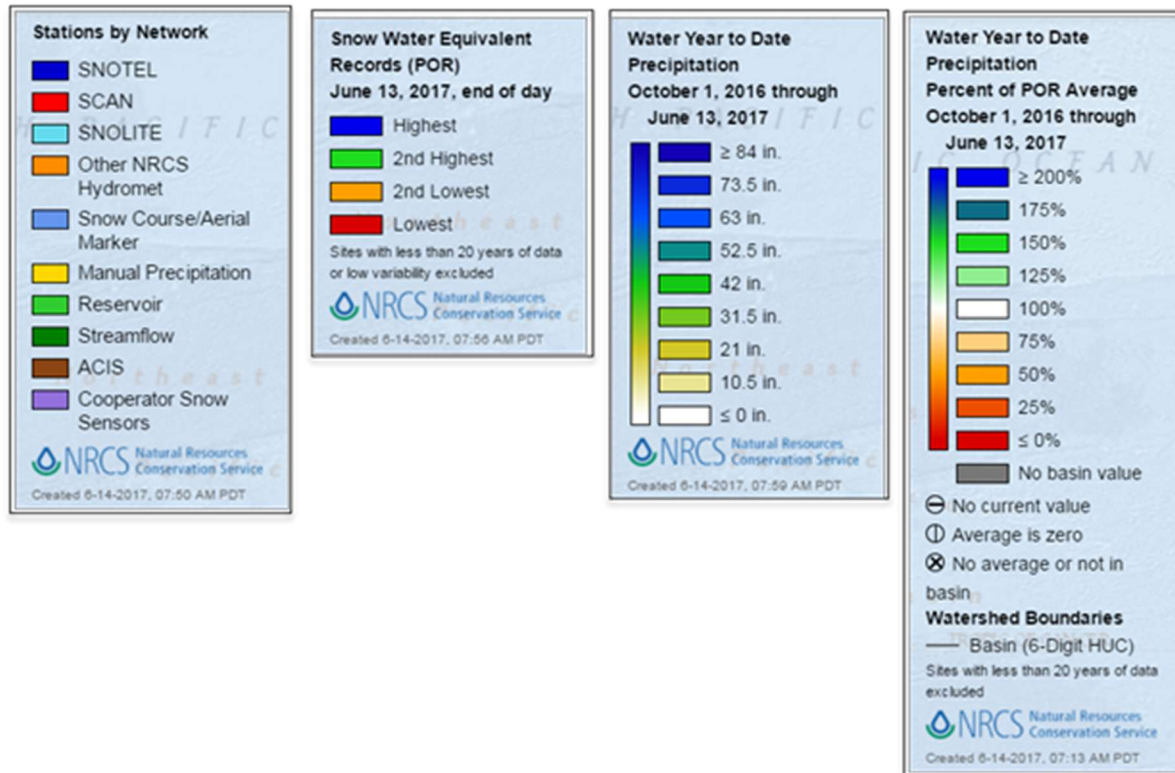
The Zoom (+) and Pan (-) controls let you focus your view of the Interactive Map. Zoom in or pan out to your area of interest. To move the map, simply left-click your mouse and slide to direct it to your desired location.

Full Screen Display

To view the map full-screen, click the  icon. The map will expand to the full extent of the monitor or display. To return to normal view, click the  icon, or select the **Esc** key.

Legends

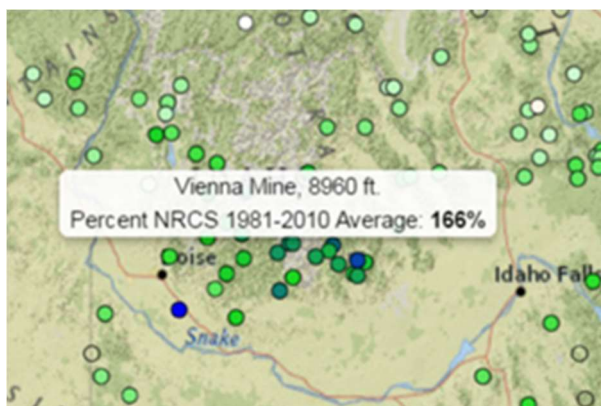
Map legends change depending on what view you're in, the selected elements and value types, and any overlays displayed. Here are four examples of legends. The first example depicts a typical legend when you're in **Station Inventory** view. The other examples show legends while in **Station Conditions** and **Basin Conditions** views.



The legend contains a label describing the type of data displayed on the map. The legend also contains the date and time the map was created.

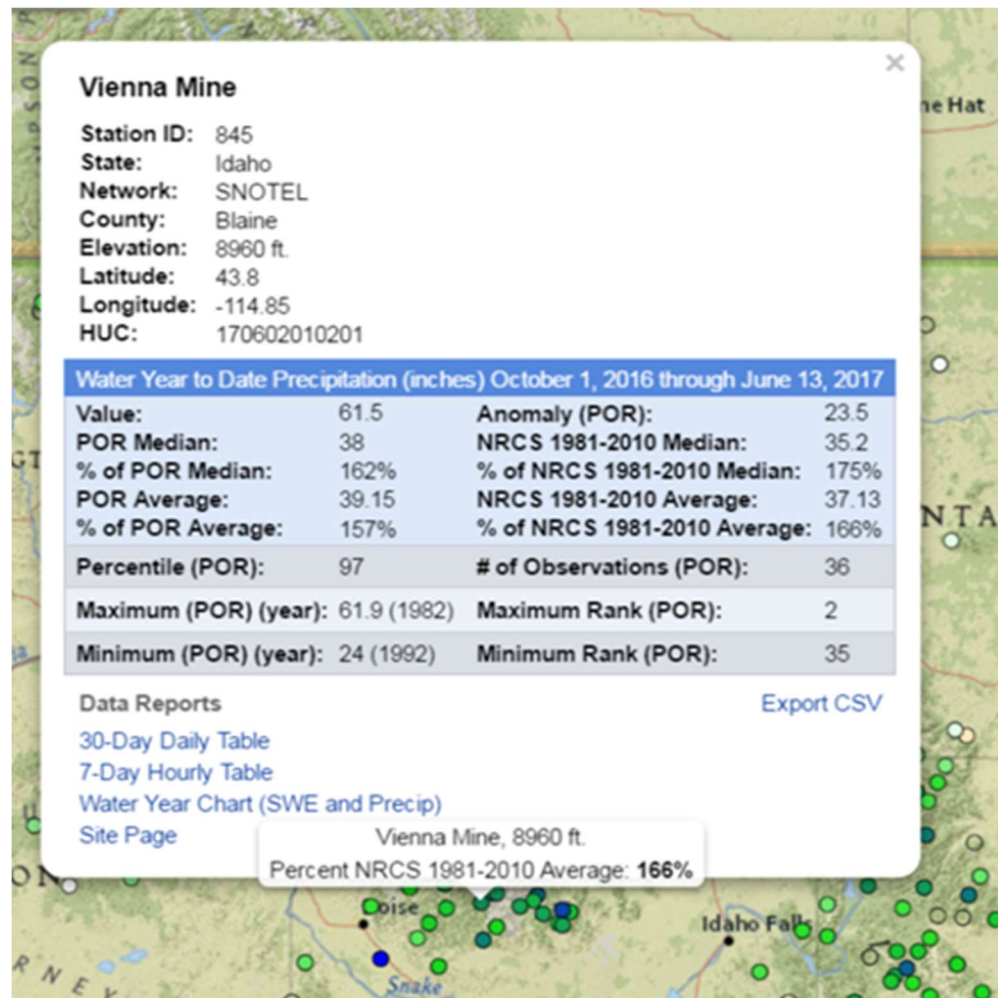
Display Station Information

The Interactive Map lets you display either abbreviated station information or drill down to more data and reports associated with the station. To display abbreviated information (such as site name and elevation), simply hover over the station with your mouse.



To display more information about the station, click on it. Depending on which view you're in and the selection criteria you've defined, the Interactive Map will display metadata, a table of related summary data for the station, and a selection of pre-defined data reports. You can also jump to the **Site Page** for the selected station, providing access to even more reports and data. In this example, the **Export**

CSV link downloads the Water Year to Date Precipitation data for the station in comma-separated value (CSV) format.



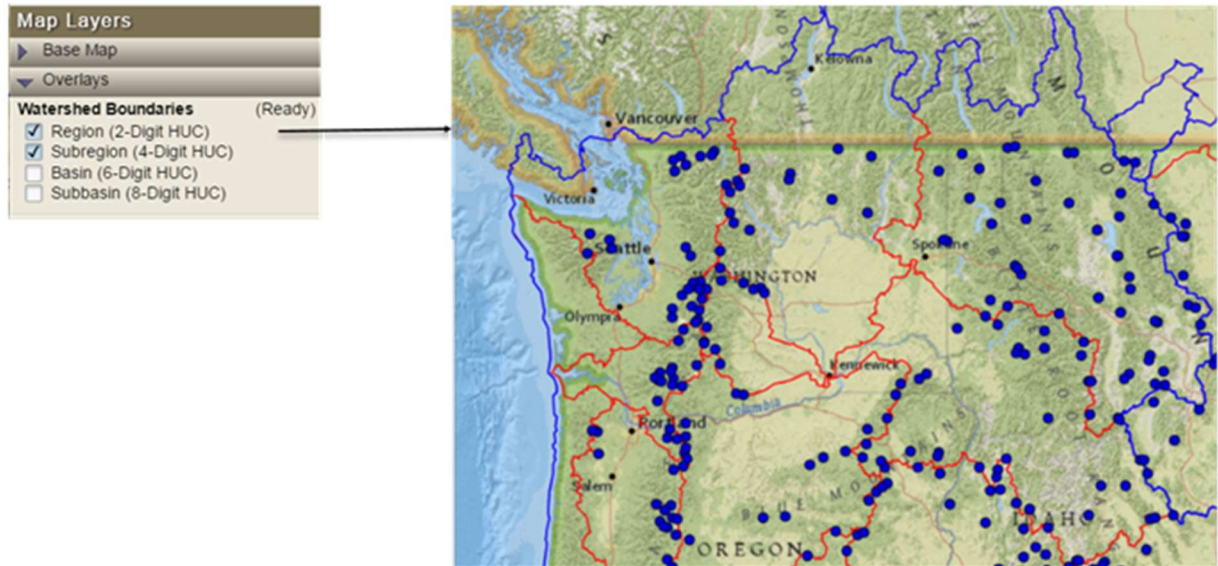
Comparing Map Views

The Interactive Map lets you display geographical regions using a variety of overlays and display options. The Interactive Map Boundary Views section shows what displays on the Interactive Map, depending on the view and label options you select.

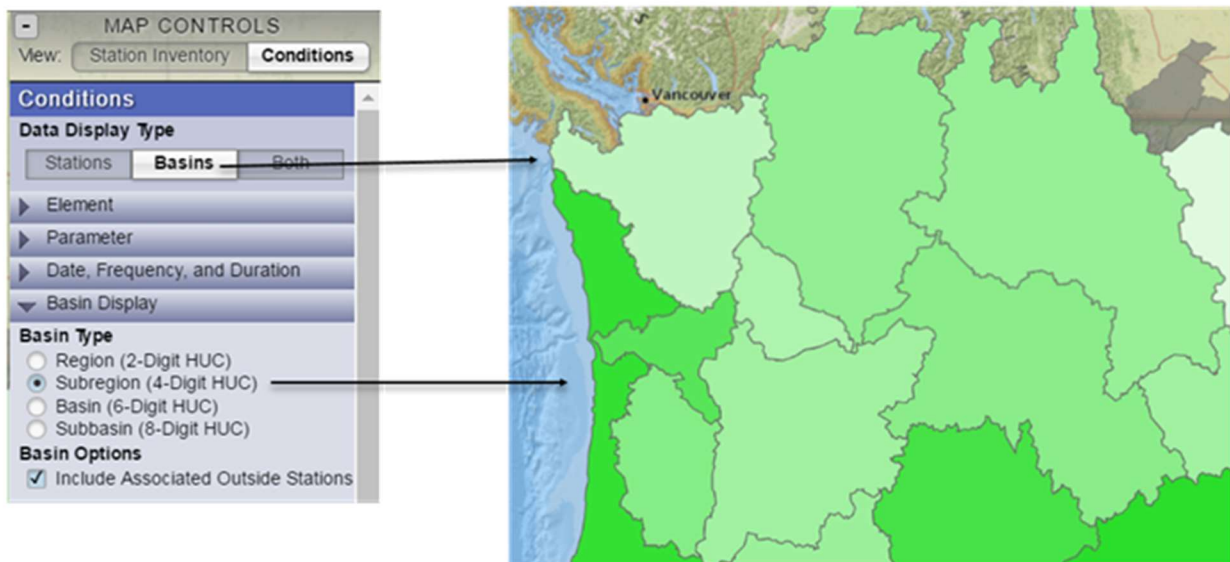
Interactive Map Boundary Views

There are several ways to view stations and watershed boundaries with the Interactive Map.

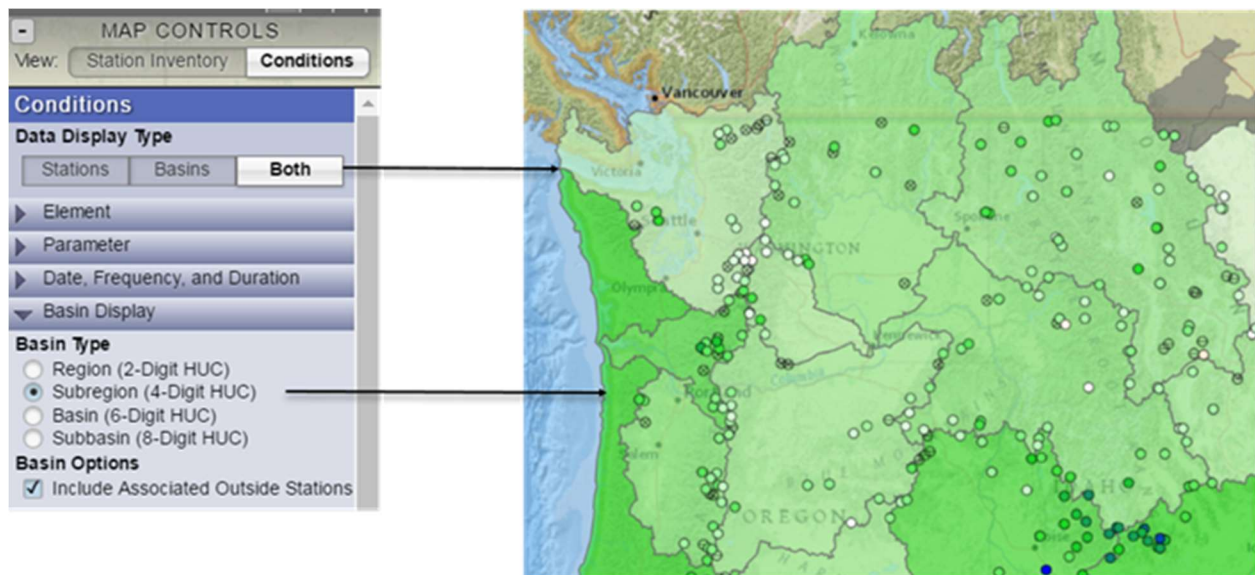
To display boundaries as outlines, at the bottom of the map controls, click the right arrow (►) on the Overlays list to expand it. Click the checkbox next to any or all of the hydrological unit code (HUC) boundaries levels you wish to display. The example uses both Region (2-Digit HUC) and Subregion (4-Digit HUC) boundaries.



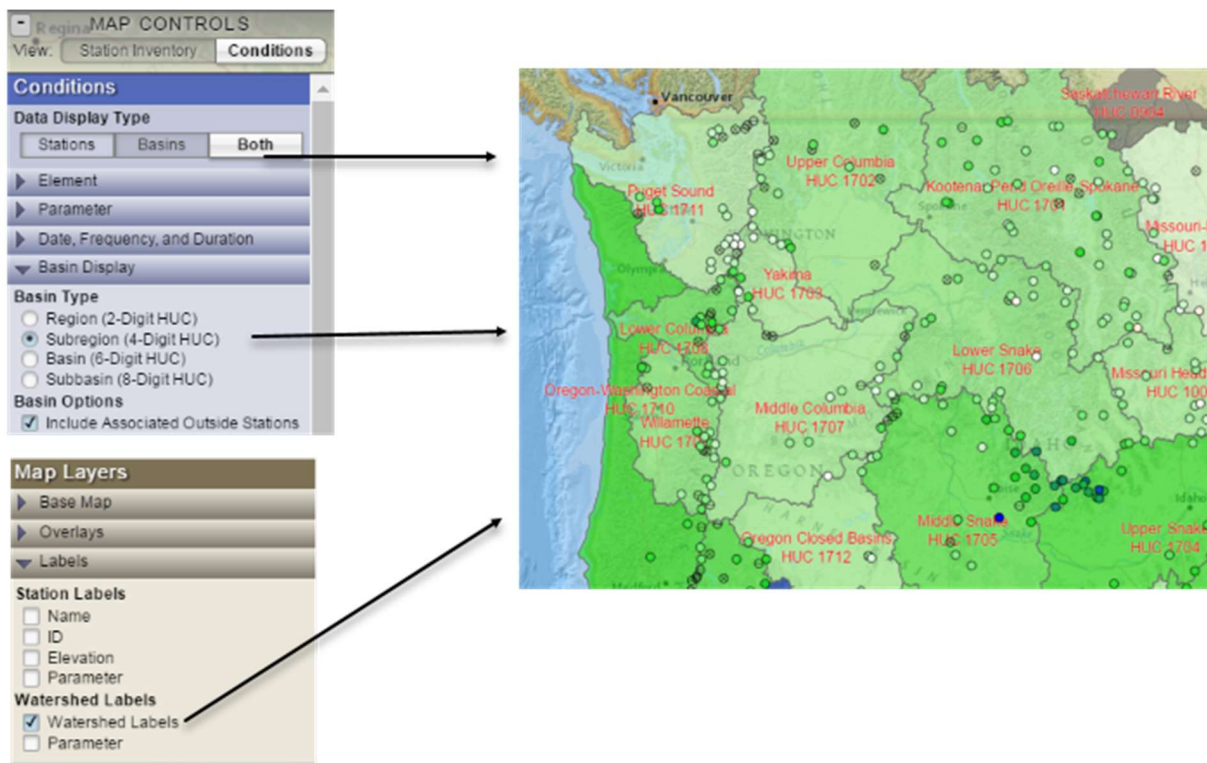
To show watershed boundaries as shaded regions only, go to Conditions View, select the Basins Data Display Type, then select the Basin Type, in this example, Subregion (4-Digit HUC).



To display both stations and shaded watershed boundaries, go to Conditions View, select the Both Data Display Type, then select the Basin Type, in this example, Subregion (4-Digit HUC).



To show labels associated with either stations or watershed boundaries, expand the Map Layers control and then select the Labels to display. This example uses Watershed Labels.



Map Controls

The Interactive Map controls display on the right side of the map.

Station Conditions Controls

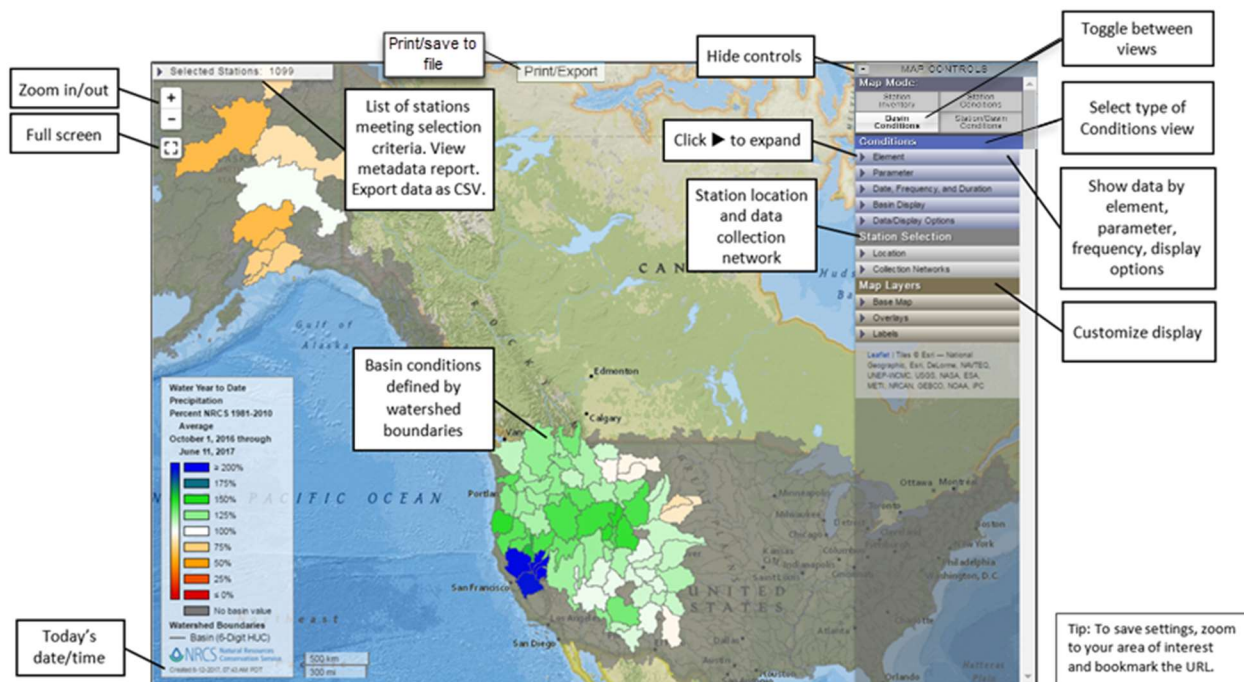
Station Conditions view displays stations based on three criteria you supply: the Element (such as Precipitation), the Parameter (such as Period of Record), and the desired Frequency and Duration. To minimize the display of any set of controls, select the down arrow (▼) next to the control name. Click the right arrow (►) to expand a list.

The image displays three screenshots of the MAP CONTROLS interface, with various controls highlighted by brackets and descriptive text labels:

- Conditions Section:**
 - Filter stations by hydrometeorological element:** Points to the **Element** dropdown and the list of elements (Snow Water Equivalent, Snow Depth, Snow Density, Precipitation, Soil Moisture, Soil Temperature, Reservoir, Streamflow).
 - Define parameter used for map display:** Points to the **Parameter** dropdown and the list of parameters (Value, Percent of Central Tendencies, Anomaly, Compared to Period of Record, Central Tendencies, Period of Record).
- Date, Frequency, and Duration Section:**
 - Define date, frequency, and duration of display; save URL with relative date:** Points to the **Date, Frequency, and Duration** section, including Frequency, Duration, and Date (Last Day of Period) controls.
 - Define reference period, display options, color sets, scale range, opacity:** Points to the **Data/Display Options** section, including Reference Period, Color Sets, Scale Range, and Opacity controls.
- Station Selection Section:**
 - Filter stations by location using any combination of political (state/county) or physical (hydrologic units/elevation) boundaries:** Points to the **Location** section, including States, Counties, and HUCs controls.
 - Change display of base map:** Points to the **Map Layers** section, including Base Map and Map Layers controls.
 - Overlay watershed boundaries by hydrologic unit code:** Points to the **Watershed Labels** section, including Name, HUC, and Parameter controls.
 - Show station and watershed labels:** Points to the **Station Labels** section, including Name, ID, Elevation, and Parameter controls.

Basin Conditions Controls

Basin Conditions view displays river basins and watersheds based on four criteria you supply: the Element (such as Precipitation), the Parameter (such as Period of Record), the Hydrologic Unit Code (HUC) level, and the desired Frequency and Duration. To minimize the display of any set of controls, select the down arrow (▼) next to the control name. Click the right arrow (►) to expand a list.



MAP CONTROLS

Map Mode: Station Inventory Station Conditions

Basin Conditions Station/Basin Conditions

Conditions

Element

Snow Water Equivalent

☐ Snow Water Equivalent

☐ Delta

Snow Depth

☐ Snow Depth

☐ Delta

Precipitation

☒ Precipitation

Soil Moisture

Soil Temperature

Soil Temperature

☐ Soil Temperature

☐ Delta

Reservoir

☐ Reservoir Storage

☐ Delta

Streamflow

☐ Active Forecast Points Only

☐ Adjusted Volume - Observed

☐ Adjusted Volume - Forecast

Exceedance Probability: 50%

Parameter

Percent of Central Tendencies

☒ Percent NRCS 1961-2010 Average

☐ Percent NRCS 1961-2010 Median

☐ Percent of POR Average

☐ Percent of POR Median

Date, Frequency, and Duration

Frequency: Daily

Duration: Month to Date

or days

Date (Last Day of Period)

Year: 2018

Month: October

Day: 29

Go to Now ☐ Relative date in URL

Basin Display

Basin Type

☐ Region (2-Digit HUC)

☐ Subregion (4-Digit HUC)

☒ Basin (6-Digit HUC)

☐ Subbasin (8-Digit HUC)

State-Specific Basins

☐ Arizona

☐ Colorado

☐ Idaho

☐ Montana

☐ Nevada

☐ New Mexico

☐ Oregon

☐ Washington

☐ Wyoming

Basin Options

☒ Include Associated Outside Stations

Filter stations by hydrometeorological element

Define parameter used for map display

Define date, frequency, and duration of display; save URL with relative date

Define basin display options

Define reference period, display options, color sets, scale range, opacity

Filter basins/stations by location using any combination of political (state/county) or physical (hydrologic units/elevation) boundaries

Filter display by data collection network

MAP CONTROLS

Map Mode: Station Inventory Station Conditions

Basin Conditions Station/Basin Conditions

Conditions

Element

Parameter

Date, Frequency, and Duration

Basin Display

Data/Display Options

Reference Period

☒ Period of Record

☐ Fixed: 1961 to 2010

Minimum Years for Display: 20

Color Sets

Colors for Sequential Parameters

Colors for Divergent Parameters

Scale Range

☒ Default [0% - 200%]

☐ Range of Data [15% - 354%]

☐ Custom: -

Opacity

Stations/Basins: 100

Basins (no data): 100

Basemap: 100

Mask: 0

Basin/Station Selection

Location

States All None Basins All None

Alabama

Alaska

Arizona

Arkansas

California

Colorado

Florida

Ga.

Alabama

Albemarle-Chero

Altamaha

Apalachicola

Barrow Alaska

Beaver Creek

Belle Fourche

Rio Rios

HUCs:

☒ Include Associated Outside Stations

Minimum Elevation: ft.

Maximum Elevation: ft.

Collection Networks

☒ Active Sites Only

Check All Uncheck All

USDA-NRCS Real-Time Networks

☒ SNOTEL (867)

☒ SCAN (220)

☒ SNOTITE (5)

☒ Other NRCS Hydromet (5)

USDA-NRCS Non-Real-Time Networks

☒ Snow Course/Aerial Marker (0)

☒ Manual Precipitation (0)

Other Networks

☒ Reservoir (0)

☒ Streamflow (0)

☒ ACIS (21)

☒ Cooperator Snow Sensors (0)

Change display of base map

Overlay watershed boundaries by hydrologic unit code (HUC), state watershed, or political boundaries

Show station and watershed labels

MAP CONTROLS

Map Mode: Station Inventory Station Conditions

Basin Conditions Station/Basin Conditions

Conditions

Element

Parameter

Date, Frequency, and Duration

Basin Display

Data/Display Options

Basin/Station Selection

Location

Collection Networks

Map Layers

Base Map

☐ OpenStreetMap Default

☐ OpenStreetMap German

☐ OpenStreetMap Black and White

☐ OpenStreetMap H.O.T.

☐ Esri WorldStreetMap

☐ Esri DeLorme

☐ Esri WorldTopoMap

☐ Esri WorldImagery

☐ Esri WorldTerrain

☐ Esri WorldShadedRelief

☐ Esri WorldPhysical

☐ Esri OceanBaseMap

☒ Esri NatGeoWorldMap

☐ Esri WorldGrayCanvas

Stamen Toner

Stamen Terrain

Stamen Watercolor

MapBox Example

Overlays

Watershed Boundaries (Ready)

☐ Region (2-Digit HUC)

☐ Subregion (4-Digit HUC)

☐ Basin (6-Digit HUC)

☐ Subbasin (8-Digit HUC)

State Watershed Boundaries (Ready)

☐ Arizona

☐ Colorado

☐ Idaho

☐ Montana

☐ Nevada

☐ New Mexico

☐ Oregon

☐ Washington

☐ Wyoming

Political Boundaries (Ready)

☐ States

Labels

Station Labels

☐ Name

☐ ID

☐ Elevation

☐ Parameter

Watershed Labels

☐ Name

☐ HUC

☐ Parameter

Station Inventory View and Controls

Station Inventory view is essentially a site-selector, allowing you to filter the display of stations by Climatic Element, Location, and Data Collection Network. To minimize the display of any set of controls, select the down arrow (▼) next to the control name. Click the right arrow (▶) to expand a list.



MAP CONTROLS

Map Mode:

Station Inventory	Station Conditions
Basin Conditions	Station/Basin Conditions

Conditions

Element

Snow Water Equivalent

☐ Snow Water Equivalent

☐ Delta

☐ Water Year Peak

☐ Date of Water Year Peak

Snow Depth

☐ Snow Depth

☐ Delta

☐ Water Year Peak

☐ Date of Water Year Peak

Snow Density

☐ Snow Density

☐ Delta

Precipitation

☒ Precipitation

Soil Moisture

☐ Soil Moisture

☐ Delta

☐ Water Year Peak

☐ Date of Water Year Peak

Soil Temperature

☐ Soil Temperature

☐ Delta

☐ Water Year Peak

☐ Date of Water Year Peak

Reservoir

☐ Reservoir Storage

☐ Delta

Streamflow

☐ Active Forecast Points Only

☐ Adjusted Volume - Observed

☐ Adjusted Volume - Forecast

Exceedance Probability: 50%

Parameter

Value

☐ Value

Percent of Central Tendencies

☒ Percent NRCS 1981-2010 Average

☐ Percent NRCS 1981-2010 Median

☐ Percent of POR Average

☐ Percent of POR Median

Anomaly

☐ POR Median Departure

Compared to Period of Record

☐ Percentile

☐ Maximum Rank

☐ Minimum Rank

☐ Records

Central Tendencies

☐ NRCS 1981-2010 Average

☐ NRCS 1981-2010 Median

☐ POR Average

☐ POR Median

Period of Record

☐ Minimum

☐ Maximum

☐ Year of Minimum

☐ Year of Maximum

☐ Number of Observations

Filter stations by hydrometeorological element

Define parameter used for map display

Define date, frequency, and duration of display; save URL with relative date

Define reference period, display options, color sets, scale range, opacity

Filter stations by location using any combination of political (state/county) or physical (hydrologic units/elevation) boundaries

MAP CONTROLS

Map Mode:

Station Inventory	Station Conditions
Basin Conditions	Station/Basin Conditions

Conditions

Element

Parameter

Date, Frequency, and Duration

Frequency: Daily

Duration: Month to Date

or days

Date (Last Day of Period)

Year: 2018

Month: October

Day: 29

Go to Now ☐ Relative date in URL

Data/Display Options

Reference Period

☒ Period of Record

☐ Fixed: 1981 to 2010

Minimum Years for Display: 20

Color Sets

Colors for Sequential Parameters

Colors for Divergent Parameters

Scale Range

☒ Default [0% - 200%]

☐ Range of Data [15% - 364%]

☐ Custom: -

Opacity

Stations/Basins: 100

Basins (no data): 100

Basemap: 100

Mask: 0

Station Selection

Location

States All None Counties All None

Alabama

Alaska

Arizona

Arkansas

California

Colorado

Florida

Georgia

Illinois

Indiana

Iowa

Kansas

Kentucky

Louisiana

Maine

Massachusetts

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

Nevada

New Hampshire

New Jersey

New Mexico

New York

North Carolina

North Dakota

Ohio

Oklahoma

Oregon

Pennsylvania

Rhode Island

South Carolina

South Dakota

Tennessee

Texas

Utah

Vermont

Virginia

Washington

West Virginia

Wisconsin

Wyoming

HUCs:

☒ Include Associated Outside Stations

Minimum Elevation: ft.

Maximum Elevation: ft.

Filter stations by data collection network

Change display of base map

Overlay watershed boundaries by hydrologic unit code

Show station and watershed labels

MAP CONTROLS

Map Mode:

Station Inventory	Station Conditions
Basin Conditions	Station/Basin Conditions

Conditions

Element

Parameter

Date, Frequency, and Duration

Data/Display Options

Station Selection

Location

Collection Networks

☒ Active Sites Only

Check All ☐ Uncheck All

USDA-NRCS Real-Time Networks

☒ SNOTEL (867)

☒ SCAN (222)

☒ SNOLOTE (5)

☒ Other NRCS Hydromet (5)

USDA-NRCS Non-Real-Time Networks

☒ Snow Course/Aerial Marker (0)

☒ Manual Precipitation (0)

Other Networks

☒ Reservoir (0)

☒ Streamflow (0)

☒ ACIS (21)

☒ Cooperator Snow Sensors (0)

Map Layers

Base Map

☐ OpenStreetMap Default

☐ OpenStreetMap German

☐ OpenStreetMap Black and White

☐ OpenStreetMap H.O.T.

☐ Esri WorldStreetMap

☐ Esri DeLorme

☐ Esri WorldTopoMap

☐ Esri WorldImagery

☐ Esri WorldTerrain

☐ Esri WorldShadedRelief

☐ Esri WorldPhysical

☐ Esri OceanBasemap

☒ Esri NatGeoWorldMap

☐ Esri WorldGrayCanvas

☐ Stamen Toner

☐ Stamen Terrain

☐ Stamen Watercolor

☐ MapBox Example

Overlays

Labels

Station Labels

☐ Name

☐ ID

☐ Elevation

☐ Parameter

Watershed Labels

☐ Name

☐ HUC

☐ Parameter

Display stations that have all or any of the selected elements

Filter stations by hydrometeorological element

Filter stations by location using any combination of political (state/county) or physical (hydrologic units/elevation)

MAP CONTROLS

Map Mode:

Station Inventory	Station Conditions
Basin Conditions	Station/Basin Conditions

Station Selection

Elements

☒ Stations with all checked elements

☐ Stations with any checked elements

Check All ☐ Uncheck All

Snow

☐ Snow Water Equivalent

☐ Snow Depth

Precipitation

☐ Precipitation

Soils

☐ Soil Moisture

☐ Soil Temperature

Reservoir

☐ Reservoir Storage

Streamflow

☐ Adjusted Volume

☐ Observed Volume

☐ Diversion Discharge

☐ Forecast Point

Location

States All None Counties All None

Alabama

Alaska

Arizona

Arkansas

California

Colorado

Florida

Georgia

Illinois

Indiana

Iowa

Kansas

Kentucky

Louisiana

Maine

Massachusetts

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

Nevada

New Hampshire

New Jersey

New Mexico

New York

North Carolina

North Dakota

Ohio

Oklahoma

Oregon

Pennsylvania

Rhode Island

South Carolina

South Dakota

Tennessee

Texas

Utah

Vermont

Virginia

Washington

West Virginia

Wisconsin

Wyoming

HUCs:

☒ Include Associated Outside Stations

Minimum Elevation: ft.

Maximum Elevation: ft.

Change display of base map

Overlay watershed boundaries by hydrologic unit code (HUC), state watershed

MAP CONTROLS

Map Mode:

Station Inventory	Station Conditions
Basin Conditions	Station/Basin Conditions

Station Selection

Elements

Location

Collection Networks

Map Layers

Base Map

☐ OpenStreetMap Default

☐ OpenStreetMap German

☐ OpenStreetMap Black and White

☐ OpenStreetMap H.O.T.

☐ Esri WorldStreetMap

☐ Esri DeLorme

☐ Esri WorldTopoMap

☐ Esri WorldImagery

☐ Esri WorldTerrain

☐ Esri WorldShadedRelief

☐ Esri WorldPhysical

☐ Esri OceanBasemap

☒ Esri NatGeoWorldMap

☐ Esri WorldGrayCanvas

☐ Stamen Toner

☐ Stamen Terrain

☐ Stamen Watercolor

☐ MapBox Example

Overlays

Watershed Boundaries (Ready)

☐ Region (2-Digit HUC)

☐ Subregion (4-Digit HUC)

☐ Basin (6-Digit HUC)

☐ Subbasin (8-Digit HUC)

State Watershed Boundaries (Ready)

☐ Arizona

☐ Colorado

☐ Idaho

☐ Montana

☐ Nevada

Interactive Map Mobile View and Controls

