

# Changes for 2020: New Basin Groups and New Basin Polygons

## New Basin Groups

- The NRCS has re-evaluated and updated basin groups and the interactive map basin polygons for Nevada and the Eastern Sierra.
- A basin group is the set the SNOTEL sites and snow courses used for basin percentage calculations for snow water equivalent or precipitation.
- This effort was undertaken to standardize basin calculations among the various basin products. These include: Daily Update Reports, Daily SWE and Precipitation Basin Fill Maps, Monthly Basin Reports, Water Supply Outlook Report, Interactive Basin Charts, and the Interactive Map's Basin Conditions.
- The primary change you will observe are additional sites in a basin group. SNOTEL and snow courses located near watershed divides have been added to basins on either side of the watershed divide. This change fills holes in the existing network by increasing the number of sites, widening the geographic extent and providing a better distribution of sites across the range of elevations. This will give a more comprehensive SWE and precipitation index. This practice is widely used across the NRCS snow survey program in other states.
- Most of the additions were made in the Lake Tahoe, Truckee and Carson basins. Other basins in Nevada already used nearby sites so only minor changes were made elsewhere in the state. A complete summary of basin groups follows at the end of this document.
- Some California Department of Water Resources snows courses which were not previously being reported were added to some Sierra basins.

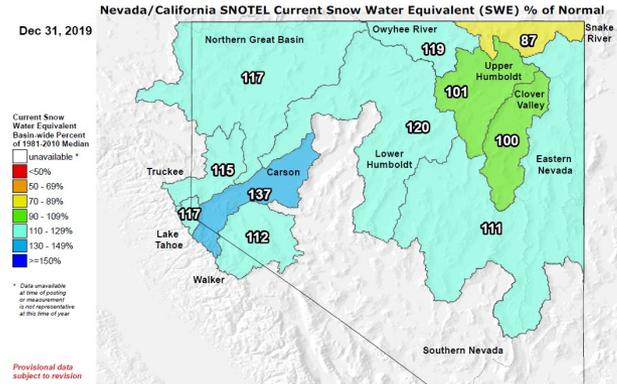


# Updated groups will standardize calculations between all basin products

## Daily Update Report

California/Nevada SNOTEL Snow/Precipitation Update Report							
Based on Mountain Data from NRCS SNOTEL Sites							
**Provisional data, subject to revision**							
Data based on the first reading of the day (typically 00:00) for Tuesday, December 31, 2019							
Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
<b>LAKE TAHOE</b>							
Mt Rose Ski Area	8801	16.1	13.5	119	17.9	18.4	97
Heavenly Valley	8534	7.4	8.7	85	9.4	10.5	90
Carson Pass	8360	14.0	9.3 <sub>a</sub>	151	13.6	15.3 <sub>a</sub>	89
Squaw Valley G.C.	8013	16.3	16.8	97	15.1	23.4	65
Marlette Lake	7884	9.5	7.5	127	10.4	10.9	95
Hagens Meadow	7742	8.0	5.2	154	8.3	10.1	82
Echo Peak	7653	15.6	13.8	113	16.3	22.0	74
Rubicon #2	7619	9.6	7.9	122	10.5	14.1	74
Tahoe City Cross	6797	6.5	4.9	133	11.3	12.6	90
Ward Creek #3	6745	12.2	10.1	121	19.6	24.9	79
Fallen Leaf	6242	2.1	2.5	84	9.2	11.4	81
<b>Basin Index (%)</b>				<b>117</b>			<b>82</b>

## Daily Basin GIS Maps



## Monthly Reports

USDA United States Department of Agriculture  
Natural Resources Conservation Service

### Nevada Water Supply Outlook Report

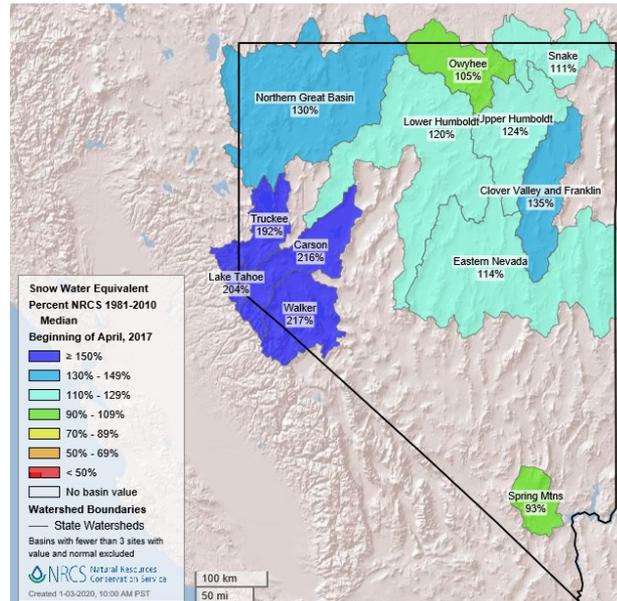
April 1, 2019

Rainbow Canyon SNOTEL taken 3/22/19 by Jim Hurja, USFS

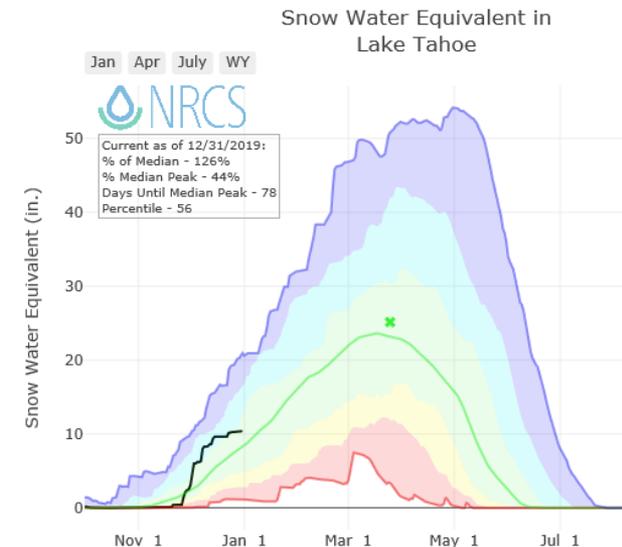
#### Big Winter North to South

April 1 snowpack across northern Nevada and the Eastern Sierra are 143-193% of median, but this year's highest snowpack percentage is found down south in the Spring Mountains, home to Mt. Charleston. Rainbow Canyon SNOTEL (pictured above) maxed out with snow 54 inches deep, containing 26 inches of water. This site was installed in 2008 along with two other nearby SNOTEL sites. Data since installation ranks 2019 second best, a bit behind 2011. These sites don't have enough years of data to produce meaningful gaugals from which to calculate a percent of median, however three snow courses in the area have data going back to 1941. Seth Shanahan and Greg French, ski patrollers at Lee Canyon Resort, volunteer to measure these snow courses. This month's measurements score the snowpack in the Spring Mountains at 268% of median! This ranks 9<sup>th</sup> highest since 1941. Most of Las Vegas' water comes from the Colorado River and there is more good news there. Snowpacks for the entire Colorado River basin above Glen Canyon Dam are currently 134% of median which is one of its best April 1 snowpacks in the SNOTEL era.

## Interactive Map



## Interactive Basin Charts

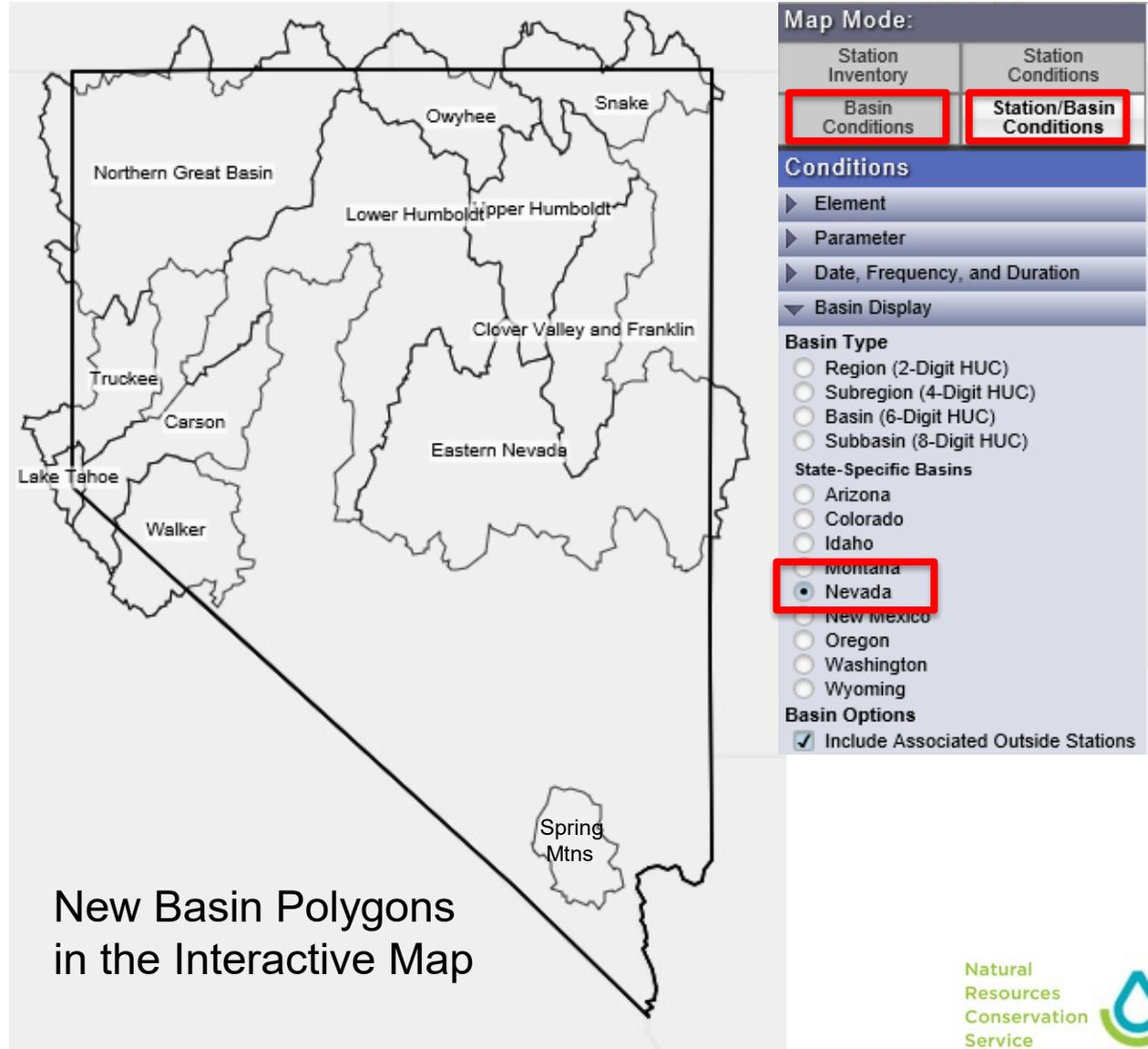


## New Basins Polygons used in Interactive Map

This map shows the new basin polygons that are used for Nevada in the Basin Conditions options of the Interactive Map.

These polygons better represent spatial distribution of SNOTEL sites across Nevada than older GIS products.

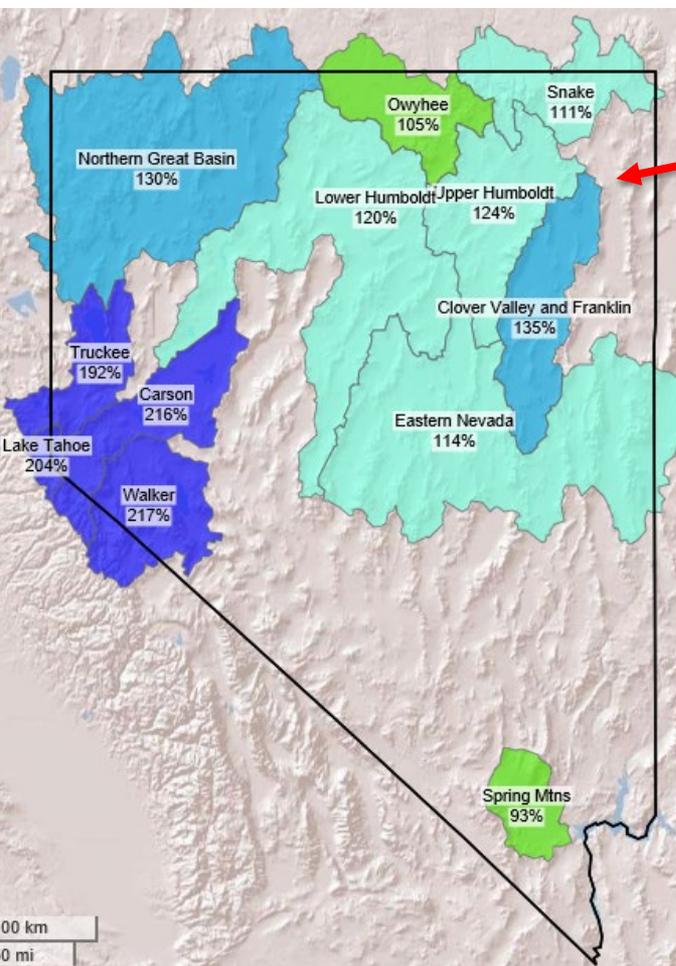
The interactive map draws data directly from the NRCS database, so it always has the most up to date data available. GIS products are static once created and do not receive updates if data are corrected.



New Basin Polygons in the Interactive Map

# Basin data can be displayed with or without station data

## Basin Shading Only



Map Mode:

Station Inventory	Station Conditions
<input checked="" type="checkbox"/> Basin Conditions	<input checked="" type="checkbox"/> Station/Basin Conditions

Conditions

- ▶ Element
- ▶ Parameter
- ▶ Date, Frequency, and Duration
- ▼ Basin Display

Basin Type

- Region (2-Digit HUC)
- Subregion (4-Digit HUC)
- Basin (6-Digit HUC)
- Subbasin (8-Digit HUC)

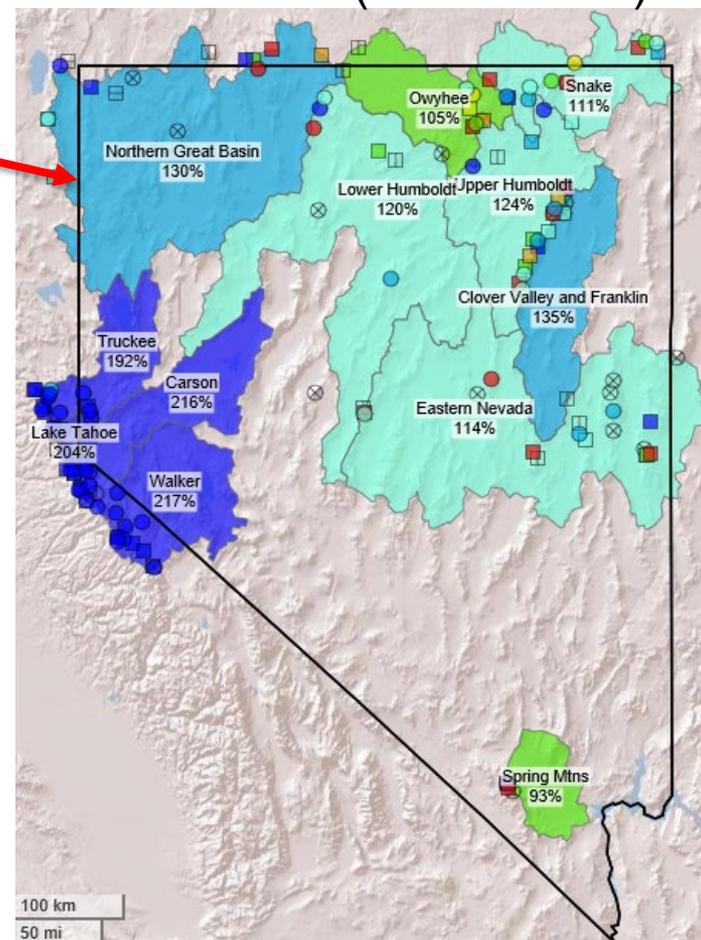
State-Specific Basins

- Arizona
- Colorado
- Idaho
- Montana
- Nevada
- New Mexico
- Oregon
- Washington
- Wyoming

Basin Options

- Include Associated Outside Stations

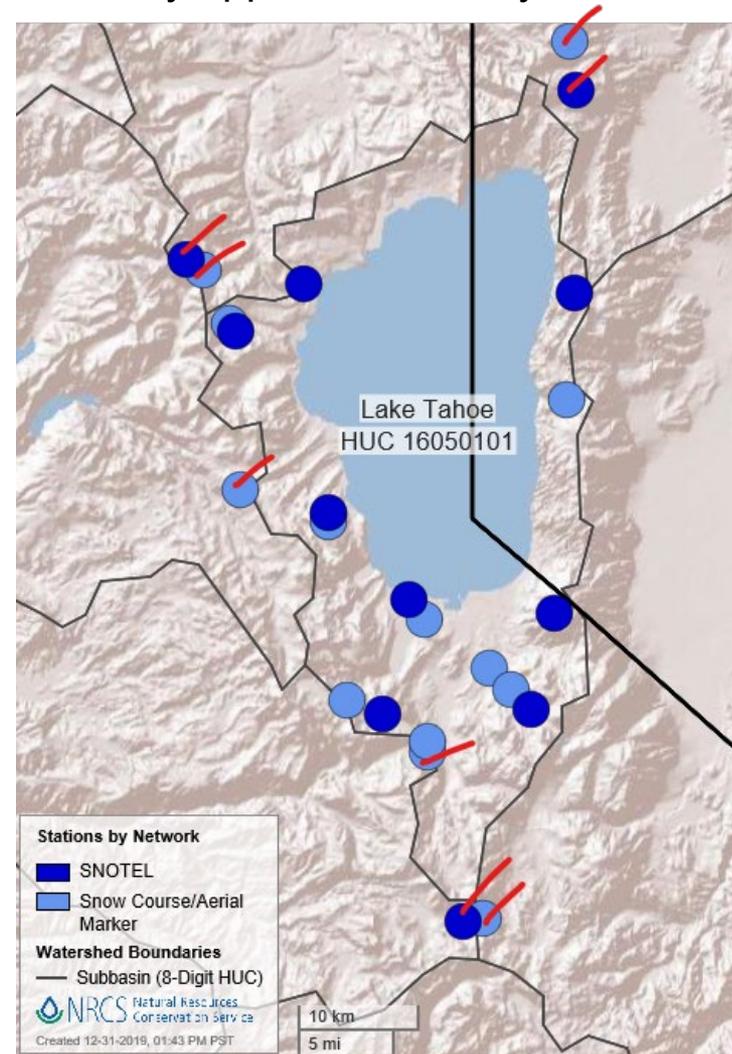
## Basin Shading + Station Data (small circles)



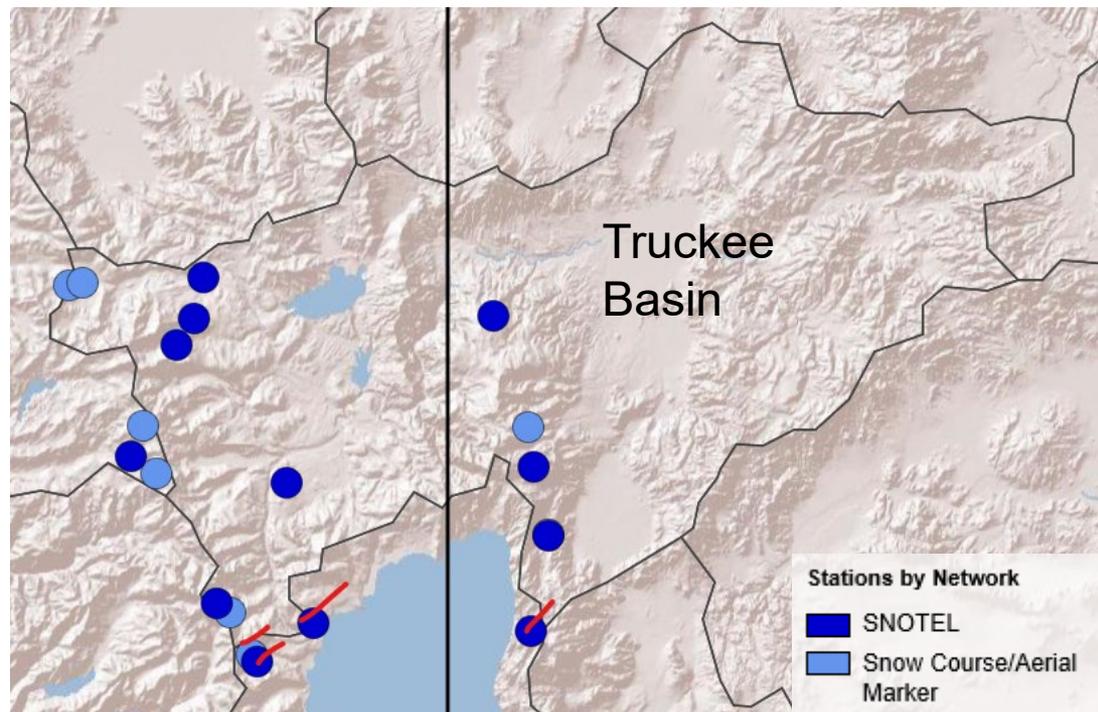
## The following slides summarize all basin groups

**Highlighted sites** (red ticks on map) have been added for 2020  
 SC stands for snow course, these sites only appear in monthly calculations

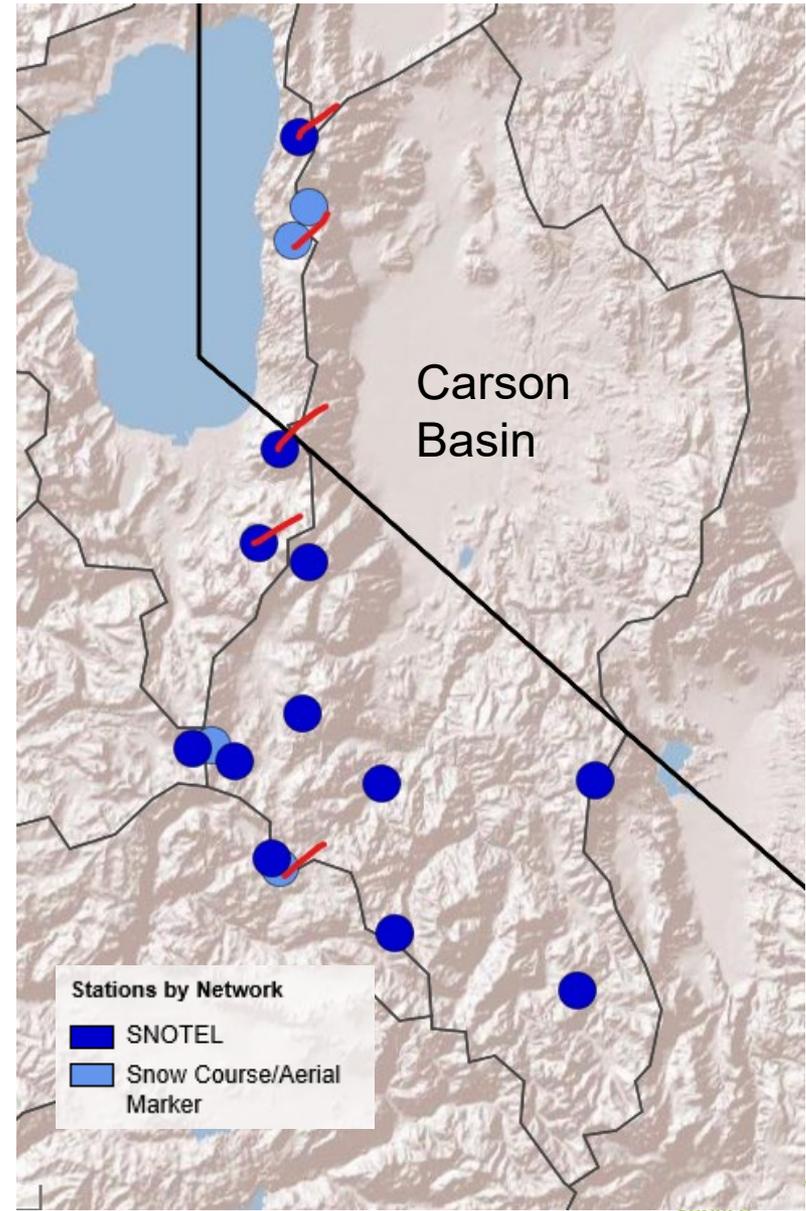
Lake Tahoe Basin	Network	Elevation (ft)
Mount Rose	SC	9200
Mt Rose Ski Area	SNOTEL	8801
Heavenly Valley	SNOTEL	8534
Upper Carson Pass	SC	8500
Carson Pass	SNOTEL	8360
Lake Lucille	SC	8188
Rubicon #1	SC	8100
Squaw Valley G.C.	SNOTEL	8013
Marlette Lake	SNOTEL	7884
Hagans Meadow	SNOTEL	7742
Squaw Valley #2	SC	7694
Echo Peak	SNOTEL	7653
Rubicon #2	SNOTEL	7619
Rubicon Peak 2	SC	7577
Lost Corner Mountain	SC	7500
Echo Summit	SC	7450
Lake Audrain	SC	7300
Freel Bench	SC	7132
Ward Creek #2	SC	7000
Glenbrook #2	SC	6966
Tahoe City Cross	SNOTEL	6797
Ward Creek #3	SNOTEL	6745
Richardsons #2	SC	6553
Truckee, Upper	SC	6396
Fallen Leaf	SNOTEL	6242



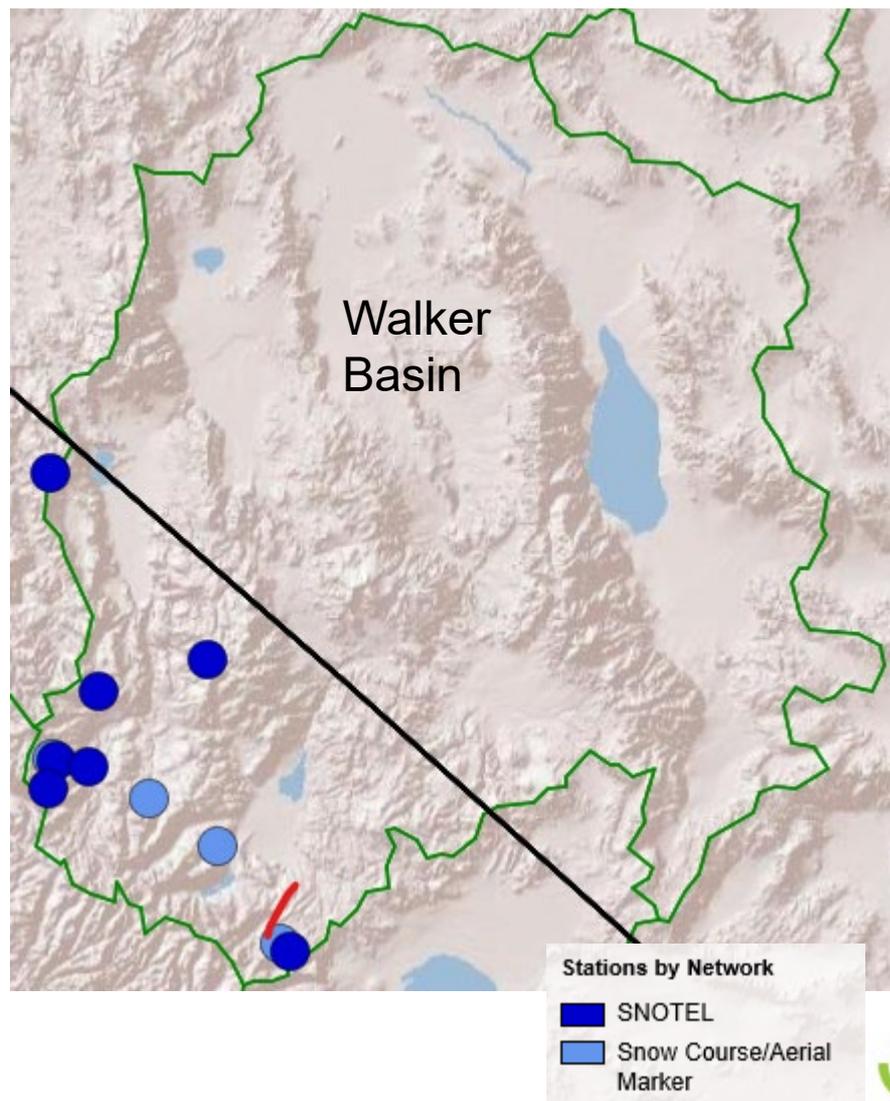
Truckee River Basin	Network	Elevation (ft)
Mount Rose	SC	9200
Mt Rose Ski Area	SNOTEL	8801
Independence Lake	SNOTEL	8338
Big Meadow	SNOTEL	8235
Squaw Valley G.C.	SNOTEL	8013
<b>Marlette Lake</b>	<b>SNOTEL</b>	<b>7884</b>
Webber Peak	SC	7800
Squaw Valley #2	SC	7694
Castle Creek 5	SC	7400
Webber Lake	SC	7000
<b>Ward Creek #2</b>	<b>SC</b>	<b>7000</b>
Independence Camp	SNOTEL	6980
Donner Summit	SC	6900
Css Lab	SNOTEL	6894
<b>Tahoe City Cross</b>	<b>SNOTEL</b>	<b>6797</b>
<b>Ward Creek #3</b>	<b>SNOTEL</b>	<b>6745</b>
Little Valley	SC	6510
Truckee #2	SNOTEL	6509
Little Valley	SNOTEL	6493
Independence Creek	SNOTEL	6436

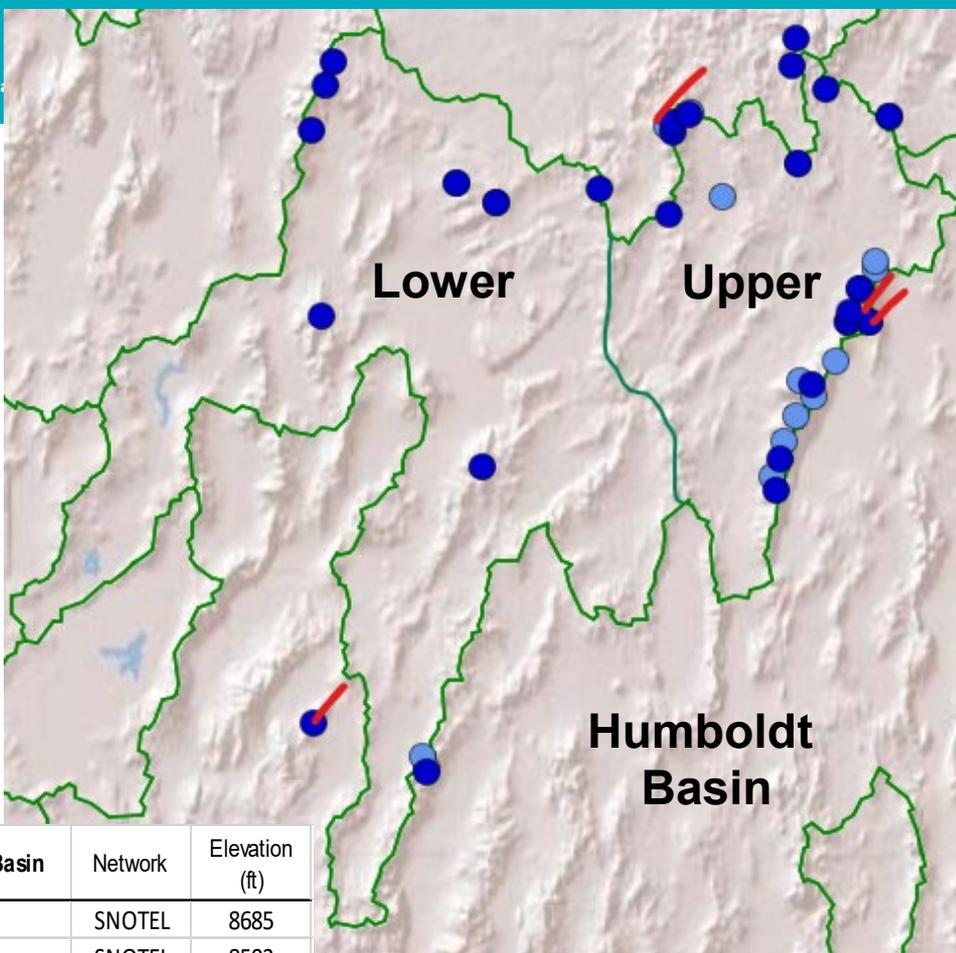


Carson River Basin	Network	Elevation (ft)
Ebbetts Pass	SNOTEL	8661
Horse Meadow	SNOTEL	8557
Heavenly Valley	SNOTEL	8534
Upper Carson Pass	SC	8500
Carson Pass	SNOTEL	8360
Monitor Pass	SNOTEL	8306
Burnside Lake	SNOTEL	8129
Blue Lakes	SNOTEL	8067
Forestdale Creek	SNOTEL	8017
Blue Lakes	SC	8000
Marlette Lake	SNOTEL	7884
Hagans Meadow	SNOTEL	7742
Poison Flat	SNOTEL	7736
Clear Creek	SC	7284
Glenbrook #2	SC	6966
Spratt Creek	SNOTEL	6063



Walker River Basin	Network	Elevation (ft)
Leavitt Lake	SNOTEL	9604
Virginia Lakes Ridge	SNOTEL	9400
Virginia Lakes Ridge	SC	9400
Summit Meadow	SNOTEL	9313
Lobdell Lake	SNOTEL	9249
Sonora Pass	SNOTEL	8770
Sawmill Ridge	SC	8761
Sonora Pass	SC	8750
Monitor Pass	SNOTEL	8306
Willow Flat	SC	8231
Leavitt Meadows	SNOTEL	7198





Lower Humboldt River Basin	Network	Elevation (ft)
Big Creek Sum	SNOTEL	8685
Granite Peak	SNOTEL	8503
Big Creek Mine	SC	7735
Toe Jam	SNOTEL	7690
Snowstorm Mtn	SNOTEL	7403
Snow Storm Mountain-Am	SC	7403
Lewis Peak	SNOTEL	7370
<b>Porter Canyon</b>	<b>SNOTEL</b>	<b>7187</b>
Buckskin Lower	SNOTEL	6930
Big Creek Campground	SC	6696
Midas	SNOTEL	6630
Midas	SC	6630
Golconda	SNOTEL	6616
Lamance Creek	SNOTEL	6395

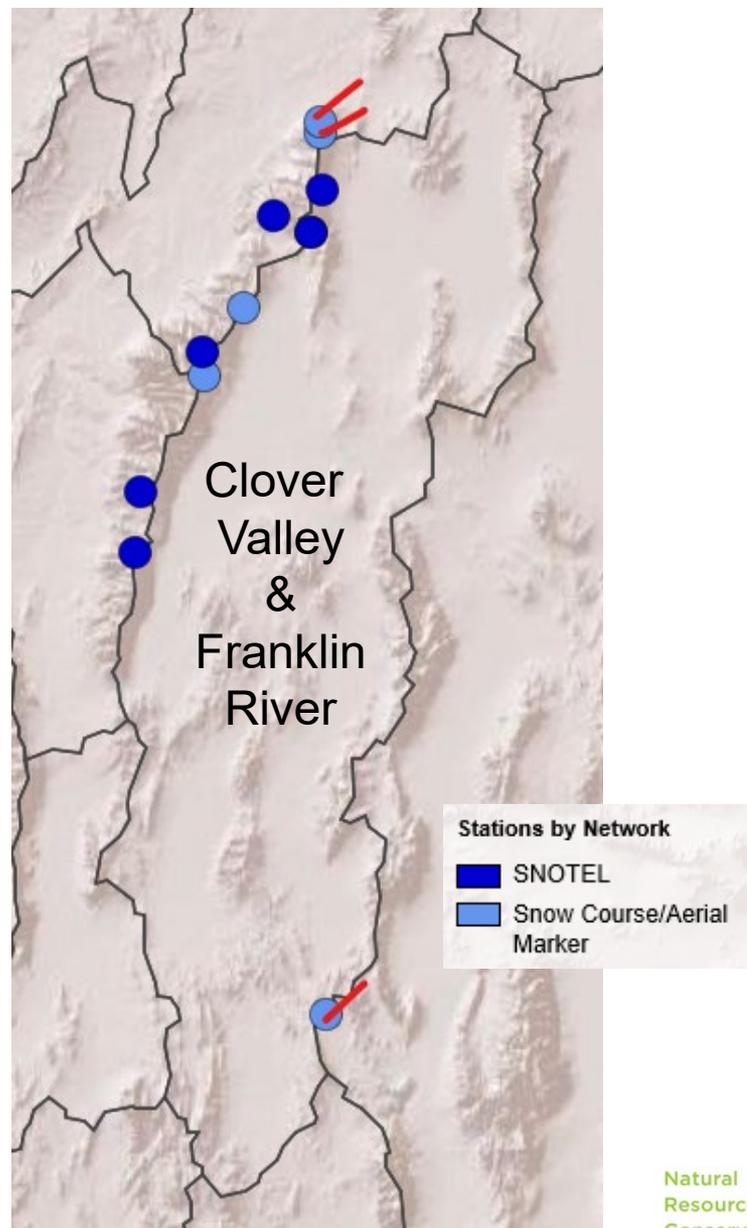
Upper Humboldt River Basin	Network	Elevation (ft)
Robinson Lake - Aerial Marker	SC	9194
Lamoille #5	SC	8814
Corral Canyon	SNOTEL	8445
Jacks Peak	SNOTEL	8424
Tent Mtn., Upper- Aerial Marker	SC	8333
Trout Creek, Upper - AM	SC	8280
Green Mountain	SNOTEL	8185
Lamoille #3	SNOTEL	8051
Bear Creek	SNOTEL	8040
Dorsey Basin	SNOTEL	7903
<b>Pole Canyon</b>	<b>SNOTEL</b>	<b>7760</b>
<b>Pole Canyon #2</b>	<b>SC</b>	<b>7700</b>
Stag Mountain	SNOTEL	7640
Stag Mountain AM	SC	7640
Smith Creek	SC	7588
American Beauty - Aerial Marker	SC	7545
Jakes Creek	SNOTEL	7380
Jakes Creek - Aerial Marker	SC	7380
Jack Creek Upper	SNOTEL	7377
Lamoille #1	SC	7364
Seventysix Creek	SNOTEL	7350
Draw Creek	SNOTEL	7332
Tent Mtn Lower	SNOTEL	7100
Tent Mtn., Lower - Aerial Marker	SC	7100
Trout Creek, Lower	SC	6900
<b>Jack Creek, Lower</b>	<b>SC</b>	<b>6800</b>
Fry Canyon	SNOTEL	6798
Fry Canyon	SC	6700
Harrison Pass #1	SC	6600
Dry Creek	SNOTEL	6555
Dry Creek	SC	6500
Taylor Canyon	SNOTEL	6325
Tremewan Ranch	SC	5700

Northern Great Basin	Network	Elevation (ft)
Granite Peak	SNOTEL	8503
Trout Creek AM	SC	7890
Summit Lk	SNOTEL	7615
Govt Corrals AM	SC	7400
Dismal Swamp	SNOTEL	7360
Oregon Canyon AM	SC	7050
Cedar Pass	SC	7050
Cedar Pass	SNOTEL	7030
Pueblo Summit AM	SC	6970
Buckskin Lower	SNOTEL	6930
Barley Camp AM	SC	6890
Blue Lake Ranch	SC	6830
Bald Mt.	SC	6720
Little Bally Mt. - Aerial Marker	SC	6580
Louse Canyon AM	SC	6530
Lamance Creek	SNOTEL	6395
Quinn Ridge AM	SC	6270
Disaster Peak	SNOTEL	6260
Sheldon	SNOTEL	5865

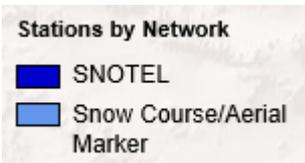
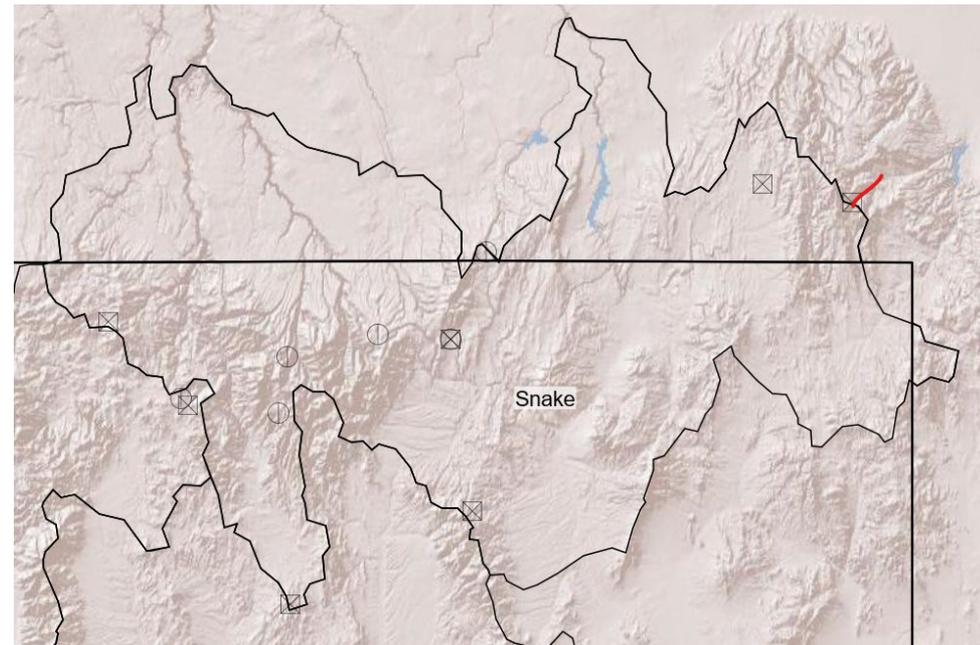
No changes were made in this group



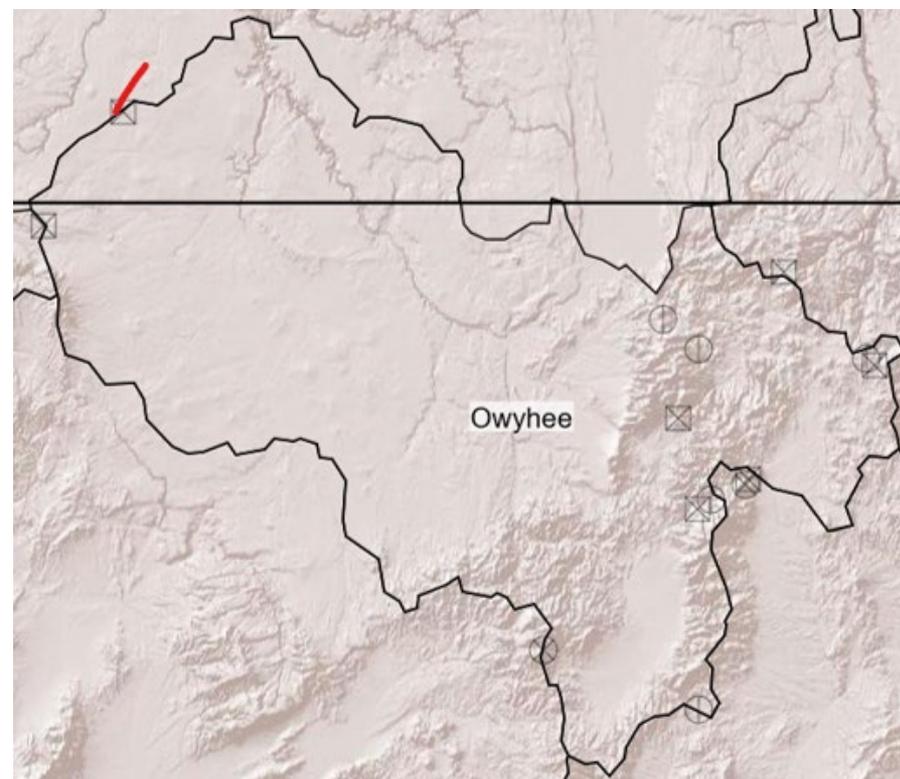
<b>Clover Valley &amp; Franklin River Basin</b>	<b>Network</b>	<b>Elevation (ft)</b>
Robinson Lake - Aerial Marker	SC	9194
Lamoille #5	SC	8814
Corral Canyon	SNOTEL	8445
<b>Trout Creek, Upper - AM</b>	<b>SC</b>	<b>8280</b>
Green Mountain	SNOTEL	8185
Hole-in-Mountain	SNOTEL	8163
Lamoille #3	SNOTEL	8051
Dorsey Basin	SNOTEL	7903
Pole Canyon	SNOTEL	7760
Pole Canyon #2	SC	7700
<b>Robinson Summit</b>	<b>SC</b>	<b>7600</b>
<b>Trout Creek, Lower</b>	<b>SC</b>	<b>6900</b>



Snake River Basin	Network	Elevation (ft)
Pole Creek R.S.	SNOTEL	8360
Bear Creek	SNOTEL	8040
Stag Mountain	SNOTEL	7640
Stag Mountain AM	SC	7640
Bostetter R.S.	SNOTEL	7500
Jakes Creek	SNOTEL	7380
Jakes Creek - Aerial Marker	SC	7380
Seventysix Creek	SNOTEL	7350
Wilson Creek	SNOTEL	7120
Merritt Mountain	SNOTEL	6915
Merritt Mountain - Aerial Marker	SC	6915
Big Bend	SNOTEL	6898
Magic Mountain	SNOTEL	6880
<b>Badger Gulch</b>	<b>SC</b>	<b>6756</b>
Gold Creek	SC	6707
ONeil Creek	SNOTEL	6520
ONeil Creek	SC	6430
Langford Flat Creek	SC	5916

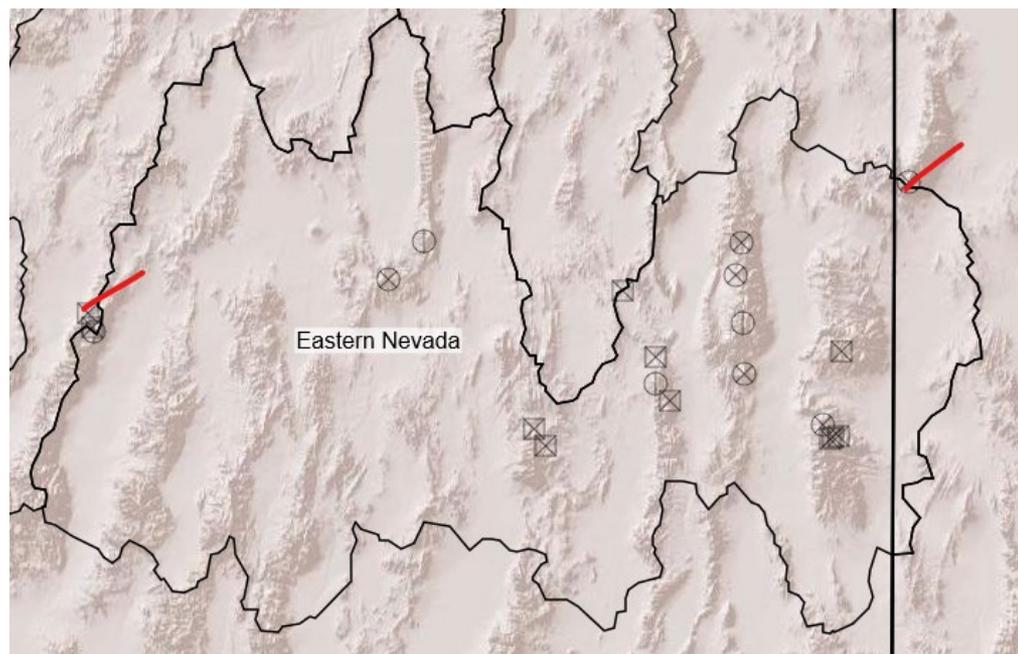


Owyhee River Basin	Network	Elevation (ft)
Jacks Peak	SNOTEL	8424
Toe Jam	SNOTEL	7690
Jack Creek Upper	SNOTEL	7377
Fawn Creek	SNOTEL	7031
Merritt Mountain	SNOTEL	6915
Merritt Mountain - Aerial Marker	SC	6915
Big Bend	SNOTEL	6898
Jack Creek, Lower	SC	6800
Fry Canyon	SNOTEL	6798
Gold Creek	SC	6707
Fry Canyon	SC	6700
Laurel Draw	SNOTEL	6682
Columbia Basin	SNOTEL	6483
Columbia Basin - Aerial Marker	SC	6483
Taylor Canyon	SNOTEL	6325
Quinn Ridge AM	SC	6270
Lookout Butte AM	SC	5740


**Stations by Network**

- SNOTEL
- Snow Course/Aerial Marker

Eastern Nevada	Network	Elevation (ft)
Cave Mountain	SNOTEL	10578
Wheeler Peak	SNOTEL	10060
Berry Creek	SNOTEL	9377
Defiance Mines, Aerial Marker	SC	9302
Defiance Mines	SNOTEL	9302
Baker Creek #3	SC	9250
Ward Mountain	SNOTEL	9163
<b>Takka Wiiya</b>	<b>SNOTEL</b>	<b>9122</b>
Baker Creek #2	SC	8950
Big Creek Sum	SNOTEL	8685
Corduroy Flat Aerial	SC	8640
Corduroy Flat	SNOTEL	8640
Silver Creek #2	SC	8200
Silver Creek Nv	SNOTEL	8200
Diamond Peak	SNOTEL	8017
Baker Creek #1	SC	7950
Vacarro Springs	SNOTEL	7890
Kalamazoo	SNOTEL	7775
Big Creek Mine	SC	7735
Robinson Summit	SC	7600
Bird Creek	SNOTEL	7537
White River Nv	SNOTEL	7367
White River #1	SC	7367
Murray Summit	SC	7250
<b>Big Creek Campground</b>	<b>SC</b>	<b>6696</b>


**Stations by Network**

- SNOTEL
- Snow Course/Aerial Marker

Spring Mountains & Southern Nevada	Network	Elevation (ft)
Lee Canyon #2	SC	9160
Bristlecone Trail	SNOTEL	8890
Lee Canyon	SNOTEL	8626
Lee Canyon #3	SC	8620
Kyle Canyon	SC	8300
Rainbow Canyon	SNOTEL	7860

No changes were made in this group

