### COLORADO WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES ROOM 818, 1313 SHERMAN ST., DENVER, CO 80203 303-866-3581; <u>www.water.state.co.us</u>

November 1, 2021

The Surface Water Supply Index (SWSI) is used as an indicator of water supply conditions in the seven major river basins of the state and in each of the 41 smaller watersheds, or HUCs. The Colorado Water Conservation Board (CWCB) completed a major revision to the Colorado Drought Plan in 2010. At that time, Colorado adopted a revised SWSI analysis based on the components shown below, which vary depending on the time of year. The revised SWSI is based on a ranking of total volume in a HUC or major river basin ranked against similar volumes in historical years. For instance, in January, the total volume in a HUC is based on the forecasted runoff at specific locations plus the volume in storage in specific reservoirs, all within the HUC. That total volume is ranked against similar total volumes that occurred each January between 1980 and 2020.

Time Period	SWSI Components
January 1 - June 1	Forecasted Runoff + Reservoir Storage
July 1 - September 1	Previous Month's Streamflow + Reservoir Storage
October 1 -December 1	Reservoir Storage

In 2015, CWCB and the Division of Water Resources (DWR) (both Divisions of the Colorado Department of Natural Resources) completed a software project to implement an automated calculation of the SWSI and to document the underlying hydrologic data. July 1, 2015 was the first month that the automated DNR SWSI was published. The results of each month's analysis are summarized within this report and additional information, maps & data are available at: <u>https://dwr.colorado.gov/services/water-administration/drought-and-swsi</u>. This report also contains updates about current regional conditions and water matters prepared by each DWR Division Office.

The SWSI calculation for the fall season (October 1 to December 1) is based solely on reservoir storage at the end of last month, in this case October 31. The following SWSI values were computed for each of the seven major basins for November 1, 2021. Water supply conditions as represented by water in storage and previous month's streamflow, range from normal in the South Platte and Rio Grande Basins to well below normal in the Colorado, San Juan-Dolores and Gunnison River Basins.

Basin	November 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	-0.9	0.0	-0.4
Colorado	-3.2	0.1	-2.1
Gunnison	-4.0	0.0	-1.0
Rio Grande	1.0	0.1	0.2
San Juan-Dolores	-2.8	0.0	-0.1
South Platte	-0.1	-0.5	1.0
Yampa-White	-1.3	0.0	-1.5

				SWSI Scale				
-4	-3	-2	-1	0	1	2	3	4
Severe		Moderate		Near Normal		Above Normal	Ab	undant
Drought		Drought		Supply		Supply		Supply



SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

November 1, 2021

### SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	, Total Vol (AF)
	11020006	Huerfano	-2.28	23	-
▶ 11020005	Upper Arkansas-Lake Meredith	-0.51	44	16,445	
rka	11020010	Purgatoire	1.62	69	20,226
Insa	11020009	Upper Arkansas-John Martin Reservoir	-1.95	27	24,764
St	11020001	Arkansas Headwaters	-2.59	19	158,369
	11020002	Upper Arkansas	0.83	60	177,002
	14010005	Colorado Headwaters-Plateau	-3.31	10	3,947
Co	14010004	Roaring Fork	-3.87	4	58,227
lora	14010002	Blue	-3.05	13	63,861
opt	14010001	Colorado Headwaters	-0.38	45	98,310
	14010003	Eagle		N/A	
	14020003	Tomichi	-1.23	35	109
	14020004	North Fork Gunnison	0.20	52	1,369
Gu	14020001	East-Taylor	-3.18	12	58,892
nni	14020006	Uncompahgre	-0.64	42	61,713
son	14020002	Upper Gunnison	-4.04	1	319,834
	14030003	San Miguel	N/A		
	14020005	Lower Gunnison N/A		N/A	
		Alamosa-Trinchera	1.17	64	5,793
0 G	13010005	Conejos	-1.98	26	14,087
ran	13010001	Rio Grande Headwaters	2.09	75	33,959
de	13010004	Saguache		N/A	
Sa	14080105	Middle San Juan	-0.50	44	1
ר ר	14080107	Mancos	-1.01	38	3,868
uan	14080104	Animas	-2.41	21	12,902
I-D	14080101	Upper San Juan	-3.76	5	28,614
olor	14030002	Upper Dolores	-2.80	16	165,133
.es	14080102	Piedra		N/A	
	10190003	Middle South Platte-Cherry Creek	-2.49	20	50,742
	10190005	St. Vrain	1.28	65	59,840
Sou	10190012	Middle South Platte-Sterling	-2.42	21	60,184
Ŧ	10190001	South Platte Headwater	-0.29	47	148,100
Pla	10190007	Cache La Poudre	3.47	92	163,673
tte	10190002	Upper South Platte	-3.18	12	275,420
	10190006	Big Thompson	-0.57	43	436,679
	10190004	Clear		N/A	
Ya	14050001	Upper Yampa	-1.28	35	31,617
mp	10180001	North Platte Headwaters		N/A	
ia-V	14050002	Lower Yampa		N/A	
Vhi	14050003	Little Snake		N/A	
te	14050005	Upper White		N/A	

November 1.	. 2021 SWSI Values b	v HUC and Non Exceedance	Probabilities	(NEP)
november i,	, <u>Lot</u> 1 51151 Talacs 5	y noe and non Exceedance	i i obubilities (	(

NEP is non exceedance probability for total reservoir storage in HUC. Some HUCs do not have any reservoirs considered in the SWSI and are shown as "N/A". Total Vol is the volume of reservoir storage in the HUC is calculated compared to the volume historically occurring this month during the period 1980-2020. The following table lists each component considered in each HUC.

SWSI Color Scale:

-4.0 (Severe Drought) 0.0 (Normal)

November 1, 2021 SWSI Component Information -Reservoir Storage - By HUC

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
11020001	Arkansas Headwaters	CLEAR CREEK RESERVOIR	5,771	37
		HOMESTAKE RESERVOIR	28,789	31
		TWIN LAKES RESERVOIR	48,421	48
		TURQUOISE LAKE	75,388	8
11020006	Huerfano	CUCHARAS RESERVOIR*	0	23
11020010	Purgatoire	TRINIDAD LAKE	20,226	70
11020002	Upper Arkansas	PUEBLO RESERVOIR	177,002	60
11020000	Upper Arkansas-John Martin	ADOBE CREEK RESERVOIR	8,181	40
11020009	Reservoir	JOHN MARTIN RESERVOIR	16,583	24
11020005	Upper Arkansas-Lake	LAKE HENRY	5,763	84
11020005	Meredith	MEREDITH RESERVOIR	10,682	38
14010002	Blue	GREEN MOUNTAIN RESERVOIR	63,861	13
1/010001	Colorado Headwaters	WOLFORD MOUNTAIN RESERVOIR	32,510	47
14010001	colorado neadwaters	WILLIAMS FORK RESERVOIR	65,800	22
14010005	Colorado Headwaters-Plateau	VEGA RESERVOIR	3,947	10
14010004	Roaring Fork	RUEDI RESERVOIR	58,227	4
14020001	East-Taylor	TAYLOR PARK RESERVOIR	58,892	12
14020004	North Fork Gunnison	PAONIA RESERVOIR	1,369	52
14020003	Tomichi	VOUGA RESERVOIR NEAR DOYLEVILLE	109	35
14020006	Uncompahgre	RIDGEWAY RESERVOIR	61,713	42
	Upper Gunnison	FRUITLAND RESERVOIR	438	68
		SILVER JACK RESERVOIR	767	4
14020002		CRAWFORD RESERVOIR	918	3
		MORROW POINT RESERVOIR	108,819	21
		BLUE MESA RESERVOIR	208,892	1
12010002	Alamosa-Trinchera	TERRACE RESERVOIR	2,729	54
13010002		MOUNTAIN HOME	3,064	70
13010005	Conejos	PLATORO RESERVOIR	14,087	26
		CONTINENTAL RESERVOIR	8,032	86
13010001	Rio Grande Headwaters	SANTA MARIA RESERVOIR	11,617	67
		RIO GRANDE RESERVOIR	14,310	73
14080104	Animas	LEMON RESERVOIR	12,902	21
14080107	Mancos	JACKSON GULCH RESERVOIR	3,868	38
14080105	Middle San Juan	LONG HOLLOW RESERVOIR	1	44
1/030002	Lipper Dolores	GROUNDHOG RESERVOIR	4,100	15
14030002	upper Dotores	MCPHEE RESERVOIR	161,033	17
14080101	Upper San Juan	VALLECITO RESERVOIR	28,614	5
		MARIANO RESERVOIR	1,990	48
	Big Thompson	LONE TREE RESERVOIR	3,854	54
		WILLOW CREEK RESERVOIR	6,229	22
10190006		LAKE LOVELAND RESERVOIR	8,421	70
		BOYD LAKE	35,283	78
		CARTER LAKE	67,457	85
		LAKE GRANBY	313,445	36

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		CACHE LA POUDRE	857	13
		HALLIGAN RESERVOIR	1,719	47
		FOSSIL CREEK RESERVOIR	4,197	36
10100007	Cacho La Poudro	CHAMBERS LAKE	4,522	66
10190007	Cache La Foudre	BLACK HOLLOW RESERVOIR	4,760	99
		WINDSOR RESERVOIR	11,739	81
		COBB LAKE	18,066	71
		HORSETOOTH RESERVOIR	117,813	92
		HORSECREEK RESERVOIR	1,994	32
10100003	Middle South Platte-Cherry	MILTON RESERVOIR	4,892	22
10190003	Creek	BARR LAKE	8,756	25
		STANDLEY RESERVOIR	35,100	45
	Middle South Platte-Sterling	POINT OF ROCKS RESERVOIR	4,457	9
		JULESBURG RESERVOIR	5,555	21
10100012		EMPIRE RESERVOIR	6,196	36
10170012		JACKSON LAKE RESERVOIR	11,767	36
		RIVERSIDE RESERVOIR	12,857	48
		PREWITT RESERVOIR	19,352	84
	South Platte Headwater	ANTERO RESERVOIR	19,900	68
10190001		SPINNEY MOUNTAIN RESERVOIR	28,400	24
		ELEVENMILE CANYON RESERVOIR	99,800	85
		MARSHALL RESERVOIR	4,100	25
		TERRY RESERVOIR	5,890	85
10190005	St. Vrain	UNION RESERVOIR	12,619	96
		BUTTONROCK (RALPH PRICE) RESERVOIR	14,131	21
		GROSS RESERVOIR	23,100	59
10100002	Upper South Platte	CHEESMAN LAKE	74,420	78
10190002	opper south Platte	DILLON RESERVOIR	201,000	11
14050001	Upper Yampa	YAMCOLO RESERVOIR	2,717	25
14050001		STAGECOACH RESERVOIR NR OAK CREEK	28,900	34

NEP is non exceedance probability for volume of the component compared to this month during the historical period 1980-2020.

\*No longer exists

Water Volume NEP Color Scale:

0 (Well Below Normal) 50 (Normal) 100 (Well Above Normal)

#### SOUTH PLATTE BASIN

#### **Basinwide Conditions Assessment**

The SWSI value for the month was -0.1.

The pattern of above average temperatures and below average precipitation continued during the months of June through the end of November throughout the entire South Platte and Republican River basins. Precipitation throughout the basin was below average at 74% of the median basin wide, ranging from near 20% of average on the eastern plains to 80% of average in the mountainous areas for the month of November. Temperatures were warmer than average for the month of November as reported by NOAA with the mountain regions ranging between 5 and 10-degrees Fahrenheit above average, and the plains ranging between 3 and 7-degrees Fahrenheit above average. Continued warm and dry conditions throughout the basin resulted in a snowpack at the end of November near 75% of average as monitored and reported by NRCS SNOTEL data. However, projections of dry and warm conditions do not provide an optimistic future that the basin will experience average to above average snowpack.

Below average precipitation and above average temperatures throughout the South Platte and Republican River basins beginning in June through the month of November resulted in increasing areas and severity of drought throughout much of the basin. During the month of November the basin drought conditions worsened, beginning the month with much of the South Platte River Basin with a USDA Drought Monitor drought rating of D1 (Moderate Drought) throughout much of the basin, with portions of Larimer County with a drought rating of D0 (Abnormally dry), and portions of Larimer Boulder, Broomfield, Adams, Arapahoe, northern Weld and Washington Counties with a rating of D2(Severe Drought). The month of November ended with a drought rating of D1 in portions of Larimer, Boulder, Gilpin, Park, Douglas, Elbert and Logan Counties; a rating of D2 (Severe Drought) in portions of the eastern plains including Weld, Morgan, Logan, Washington, Yuma, Kit Carson, Elbert, Jefferson, Clear Creek Counties, with the most severe drought rating of D3 (Extreme Drought) located in portion s of South Weld, Adams, Arapahoe, Washington, Yuma, Kit Carson and Lincoln Counties.

The continued trend of above average temperatures and below average precipitation during the summer and continuing through

the month of November, resulted in demand for water by more senior reservoirs in the mountains and on the eastern plains. The November daily average flows for the month of November at the Kersey stream gage located downstream of the City of Greeley of approximately 808 cfs, 105% of the historic mean value of 766 cfs. The Julesburg stream gage located near the Colorado and Nebraska border experienced well below average flows with the average daily flow of 45 cfs, only 13% of the historic mean value of 343 cfs for the month of November.

The month of November represented the start of the reservoir storage filling season. With the continued trend of below average precipitation and below average streamflows, many reservoirs on the eastern plains are depleted and some near empty resulting in senior calling water rights on the mainstem of the South Platte River and tributaries by reservoirs. The month of November was controlled by a call at Riverside Canal 1907 storage right call located east of the Town of Kersey, impacting the mainstem of the South Platte River and tributaries upstream. The lower end of the basin was controlled primarily by a 1910 Prewitt Reservoir fill right during the first half of November, and a North Sterling 1922 call during the last half of November impacting water rights upstream of these diversions near the Town of Hillrose. The lower end of the river was controlled primarily by a 1974 Julesburg Reservoir fill right diverted at the Harmony Ditch on the lower end of the South Platte River near the state line. With many of the reservoirs near or below average and below average stream flows, it is anticipated that the calls on the South Platte will be controlled by senior reservoir calls until they reach winter fill, into the Spring of 2021 snowmelt runoff season.

Reservoir storage levels throughout the South Platte River mainstem ended the month of November above the historical average at the 6 SWSI Representative Reservoirs (Dillon, Horsetooth, Eleven Mile, Cheeseman, Jackson, and Barr Lake) at 533,943 acre-feet volume, which is 109% of the





long term average (1961-current). Additionally, 32 indexed reservoirs throughout the Division 1 basin ended the month of November at 111% of the long-term average with a storage volume of 755,701 acre-feet representing 66% of total full capacity for the reservoirs. This is above the long term average of 60% of total full capacity for the end of November storage in the 32 indexed reservoirs throughout Division 1. Given the current below average precipitation and native flows in the rivers and streams, it is expected much competition by reservoir priorities to fill in priority will be experienced throughout the winter and spring.

The temperature and precipitation outlook into December, January, and February prepared by the National Weather Service, in northeastern Colorado indicates an equal chance of average temperatures in the northern most portions of Colorado, and a 33-50% probability of above average temperatures in the remainder of the South Platte River basin. The outlook for precipitation in the South Platte River basin is "equal chances" of above or below average precipitation.



8

### **Basinwide Conditions Assessment**

The SWSI value for the month was -0.9.

No Arkansas Report is available for November 1, 2021.





Arkansas-DataComposite-SWSI



#### **Basinwide Conditions Assessment**

The SWSI value for the month was +1.0.

Flow at the gaging station Rio Grande near Del Norte averaged 275 cfs (57% of normal). The Conejos River near Mogote had a mean flow of 76 cfs (56% of normal). Streamflow in the majority of the upper Rio Grande basin was below average during October due to the lack of precipitation since July.

Reservoir storage in the basin has been severely depleted to help meet irrigation demand.

The snowpack accumulation in the San Juan and Sangre de Cristo mountains is off to a very disappointing start this Fall. There is much time left to recover, but it's always better to start of the winter snowpack on a strong note.

### <u>Outlook</u>

Recently released National Weather Service 90-day precipitation and temperature outlooks call for above average temperatures this winter and below average precipitation. This would certainly

continue the trend of the past two years. There is some optimism in the predictions that the Rio Grande Basin could have wetter conditions late next Spring.

### Administrative/Management Concerns

The State Engineer's policy no. 2010-01 addressing the irrigation season within Water Division No. 3 is in effect. The presumptive irrigation season of April 1 through November 1 was also confirmed in the Groundwater Use Rules, Case No. 15CW3024. With the exception of the Conejos River system, irrigators in all other drainages in the upper Rio Grande basin were required to discontinue diversion of water from ditches, reservoirs and wells at the end-ofday November 1. The Conejos River system had an early shut-off of October 21 to re-establish water delivery to the State Line for Compact delivery obligation.

### Public Use Impact

Autumn is the ideal time for ranchers, irrigators, and hydrographers to fix their water diversion and measurement structures. The fall weather patterns have been unseasonably warm and dry this year, thus extending the season for repairs and well drilling.



Rio Grande-DataComposite-SWSI



#### <u>Basinwide Conditions Assessment</u> The SWSI value for the month was -4.0.

#### Basin Wide Conditions Outlook

Following a decent monsoon season, which we have not had the previous two years, this water year finished with October offering a glimmer of hope to start the new water year with above average precipitation across the Gunnison basin. Precipitation was greater than 110% of average in all areas, with the western portions, such as the Uncompany Plateau and Grand Mesa, receiving 150-200% of average. In fact, the Park Reservoir Snotel gauge received nearly 5 inches of precipitation during October, which is greater than 200% of average. Streamflows increased following the precipitation, resulting in base stream flows returning to normal conditions throughout the Gunnison Basin.

#### Outlook

NOAA climate forecasts continue to show the Gunnison basin area in a warmer than normal outlook for the December, January, and February periods, due to the effect of LaNina conditions pushing the jet stream northward. The precipitation outlook forecasts are indicating equal chances of normal precipitation for the next three months.

#### Administrative/Management Concerns

Blue Mesa Reservoir contained approximately 209,800 acre-feet on November 1st, which is lower than the 262,000 minimum in 2002 and lower than the end of season minimum from 1977 of 214,000 acre-feet. According to the US Bureau of Reclamation, 36,000 acre feet of water was released for emergency drought response operations. Blue Mesa Reservoir finished the irrigation season with the lowest storage amount since the reservoir first filled in 1966.

The Uncompany Valley Water Users Association (UVWUA) came into October with diversions at the Gunnison Tunnel running 960 cfs, then immediately began to reduce diversions in a stepwise fashion to about 500 cfs until November 1st when the tunnel diversions ceased. Tunnel diversions will resume periodically during the winter to refill Fairview Reservoir for municipal uses through the Project 7 Water Authority system that provides treated water to most of the Uncompany Valley. Taylor Park Reservoir finished the season with 58.893 acre-feet of physical storage in the reservoir and 74.293 acre-

feet of the UVWUA Taylor Park First fill accounted for as being moved down into and remaining in Blue Mesa Reservoir as of

October 31st. Therefore, based on the rollover accounting principals, the UVWUA will begin the 2022 irrigation year with the Taylor Park Reservoir first fill of 106,230 acre-feet already stored, which will be a huge benefit in WY2022 should the drought conditions persist in Western Colorado.

A severe record cold snap that occurred in Western Colorado in October of 2020 resulted in heavy damage to cherry and apple orchards in the Cedaredge area. In fact, thousands of cherry trees were killed by the frost, and postharvest buds (which would turn into blossoms in 2021) on apple trees were frozen out as well. As a result, the demand for storage from the Grand Mesa Water Users Association (GMWUA) reduced because of the lack of crop for the 2021 season. The reservoir system ended up with approximately 25 percent carryover storage.

#### Public Use Impacts

Lower fall temperatures and increase in stream base flows due to the precipitation events in September and October allowed streams that had been closed by the Colorado Division of Wildlife to fishing during the summer to be once again reopened for public use. The Bureau of Reclamation made emergency drought response releases from the Aspinall Unit, on the order of 36,000 acre-feet, to help prop up the water surface elevation at Lake Powell and protect the ability of the facility to produce power at its hydroelectric power generation units. This resulted in Blue Mesa Reservoir being reduced to its lowest level since it filled in 1966. The marinas at the reservoir were closed six weeks earlier than normal as a result.





Gunnison-DataComposite-SW/SI



Basinwide Conditions Assessment The SWSI value for the month was -3.2.

No Colorado Basin Report is available for November 1, 2021.



Colorado-DataComposite-SWSI



### **Basinwide Conditions Assessment**

The SWSI value for the month was -1.3.

No Yampa/White Basin Report is available for November 1, 2021.



Yampa-White-DataComposite-SWSI



Basinwide Conditions Assessment The SWSI value for the month was -2.8.

Flows at the Animas River at Durango averaged 250 cfs (61% of average). The flow at the Dolores River at Dolores averaged 81 cfs (62% of average). The La Plata River at Hesperus averaged 8.3 cfs (75% of average). Precipitation in Durango was 1.90 inches for the month, 100% of the 30-year average of 1.91 inches. Precipitation to date in Durango for the water year is 1.90 inches, 100% of the 30-year average of 1.91 inches. The average high and low temperatures for the month of October in Durango were 65° and 33°. In comparison, the 30-year average high and low for the month is 66° and 34°. At the end of the month Vallecito Reservoir contained 29,853 acre-feet compared to its average content of 52,910 acre-feet (56% of average). McPhee Reservoir was up to 161,052 acrefeet compared to its average content of 258,311 (62% of average), while Lemon Reservoir was up to 13,240 acre-feet as compared to its average content of 18,898 acre-feet (70% of average).

### <u>Outlook</u>

Precipitation (1.90 inches) was right at average for October in Durango. There were 45 years out of 127 years of record where there was more precipitation than this year. The flows remain below average for the month but with average precipitation for the month, the flows crept closer to average when compared to last month. There were 85 out of 111 years of record where there was more flow at the Animas River at Durango gage than this year. There were 67 out of 113 years of record where the total flow past the Dolores stream gauge was more than this There were 45 out of 105 years of year. record where the total flow past the La Plata River at Hesperus gauge was more than this vear. All of the reservoirs within the basin are well below average for this time of year. Mcphee Reservoir has not been this low since 2002. The content in 2002 was 156,548 acrefeet.



San Juan-Dolores-DataComposite-SWSI





## HUC 10180001 (North Platte Headwaters) Surface Water Supply - NOV





![](_page_23_Figure_0.jpeg)

![](_page_24_Figure_0.jpeg)

# HUC 10190004 (Clear) Surface Water Supply - NOV

![](_page_25_Figure_1.jpeg)

Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

![](_page_25_Figure_3.jpeg)

![](_page_26_Figure_0.jpeg)

HUC:10190005-NOV-FreeMosteam100-SWS HUC:10190005-NOV-ForecastedRunoff-SWSI HUC:10190005-NOV-ReservoirStorage-SWSI HUC:10190005-NOV-DataComposite-SWSI

![](_page_27_Figure_0.jpeg)

![](_page_28_Figure_0.jpeg)

![](_page_29_Figure_0.jpeg)

![](_page_30_Figure_0.jpeg)

![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)

![](_page_34_Figure_0.jpeg)

![](_page_35_Figure_0.jpeg)

HUC:11020010-NOV-Free/dostedRunoff-SWS HUC:11020010-NOV-ForecastedRunoff-SWSI HUC:11020010-NOV-ReservoirStorage-SWSI HUC:11020010-NOV-DataComposite-SWSI

![](_page_36_Figure_0.jpeg)

![](_page_37_Figure_0.jpeg)

# HUC 13010004 (Saguache) Surface Water Supply - NOV

![](_page_38_Figure_1.jpeg)

![](_page_38_Figure_3.jpeg)

![](_page_39_Figure_0.jpeg)

![](_page_40_Figure_0.jpeg)

![](_page_41_Figure_0.jpeg)

# HUC 14010003 (Eagle) Surface Water Supply - NOV

![](_page_42_Figure_1.jpeg)

HUC 14010003 (Eagle) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

![](_page_42_Figure_4.jpeg)

HUC:14010003-NOV-Previnostream100-SWS HUC:14010003-NOV-ForecastedRunoff-SWSI HUC:14010003-NOV-ReservoirStorage-SWSI HUC:14010003-NOV-DataComposite-SWSI

![](_page_43_Figure_0.jpeg)

HUC:14010004-NOV-PrevioastedRunoff-SWS HUC:14010004-NOV-ReservoirStorage-SWSI HUC:14010004-NOV-DataComposite-SWSI

![](_page_44_Figure_0.jpeg)

![](_page_45_Figure_0.jpeg)

![](_page_46_Figure_0.jpeg)

![](_page_47_Figure_0.jpeg)

HUC:14020003-NOV-PrevioastedRunoff-SWS HUC:14020003-NOV-PorecastedRunoff-SWSI HUC:14020003-NOV-DataComposite-SWSI

![](_page_48_Figure_0.jpeg)

## HUC 14020005 (Lower Gunnison) Surface Water Supply - NOV

![](_page_49_Figure_2.jpeg)

HUC:14020005-NOV-PrevMoStreamflow-SWSI HUC:14020005-NOV-FreeWostream100-SWS HUC:14020005-NOV-ReservoirStorage-SWSI HUC:14020005-NOV-DataComposite-SWSI

![](_page_50_Figure_0.jpeg)

![](_page_51_Figure_0.jpeg)

## HUC 14030003 (San Miguel) Surface Water Supply - NOV

![](_page_52_Figure_1.jpeg)

![](_page_52_Figure_4.jpeg)

HUC:14030003-NOV-Previolostedminiou-SWS HUC:14030003-NOV-ReservoirStorage-SWSI HUC:14030003-NOV-DataComposite-SWSI

![](_page_53_Figure_0.jpeg)

## HUC 14050002 (Lower Yampa) Surface Water Supply - NOV

![](_page_54_Figure_1.jpeg)

HUC:14050002-NOV-PrevMoStreamflow-SWSI HUC:14050002-NOV-ForecastedRunoff-SWSI HUC:14050002-NOV-ReservoirStorage-SWSI HUC:14050002-NOV-DataComposite-SWSI

0.20

0.00

### HUC 14050003 (Little Snake) Surface Water Supply - NOV

![](_page_55_Figure_1.jpeg)

Monthly component volumes

HUC 14050003 (Little Snake) SWSI Values - NOV

Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

![](_page_55_Figure_5.jpeg)

HUC:14050003-NOV-PrevioastedRunoff-SWS HUC:14050003-NOV-ReservoirStorage-SWSI HUC:14050003-NOV-DataComposite-SWSI

## HUC 14050005 (Upper White) Surface Water Supply - NOV

![](_page_56_Figure_1.jpeg)

![](_page_56_Figure_3.jpeg)

![](_page_57_Figure_0.jpeg)

HUC:14080101-NOV-DataComposite HUC:14080101-NOV-PrevMoStreamflow HUC:14080101-NOV-ForecastedRunoff HUC:14080101-NOV-ReservoirStorage

HUC 14080101 (Upper San Juan) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

![](_page_57_Figure_3.jpeg)

![](_page_57_Figure_4.jpeg)

HUC:14080101-NOV-PrevMoStreamflow-SWSI HUC:14080101-NOV-PrevioastedRunoff-SWS HUC:14080101-NOV-ReservoirStorage-SWSI HUC:14080101-NOV-DataComposite-SWSI

## HUC 14080102 (Piedra) Surface Water Supply - NOV

![](_page_58_Figure_1.jpeg)

Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

![](_page_58_Figure_4.jpeg)

![](_page_59_Figure_0.jpeg)

HUC:14080104-NOV-PrevioastedRunoff-SWS HUC:14080104-NOV-ReservoirStorage-SWSI HUC:14080104-NOV-DataComposite-SWSI

# HUC 14080105 (Middle San Juan) Surface Water Supply - NOV

![](_page_60_Figure_1.jpeg)

![](_page_60_Figure_2.jpeg)

HUC:14080105-NOV-PrevMoStreamflow-SWSI HUC:14080105-NOV-ForecastedRunoff SWSI HUC:14080105-NOV-eservoirStorage-SWSI HUC:14080105-NOV-DataComposite-SWSI