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, 2023

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.

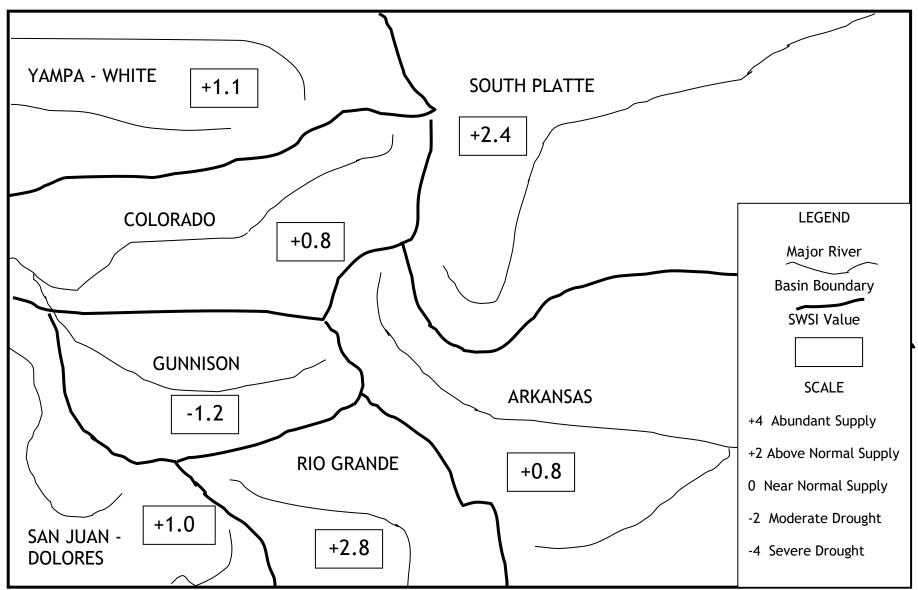
Time Period	SWSI Components		
January 1 - June 1 Forecasted Runoff + Reservoir Storage			
July 1 - September 1	Previous Month's Streamflow + Reservoir Storage		
October 1 -December 1	Reservoir Storage		

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>. Beginning March 1, 2022, this report no longer contains text 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 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, 2023. Water supply conditions as represented by water in storage, range from above normal in the Rio Grande and South Platte River Basins to below normal in the Gunnison River Basin.

Basin	November 1 SWSI	Change from Previous Month	Change from Previous Year	
Arkansas	0.8	0.0	1.7	
Colorado	0.8	-2.3	3.0	
Gunnison	-1.2	-0.5	2.5	
Rio Grande	2.8	-0.1	1.5	
San Juan-Dolores	1.0	-0.2	3.1	
South Platte	2.4	-0.8	2.8	
Yampa-White	1.1	-1.0	2.7	

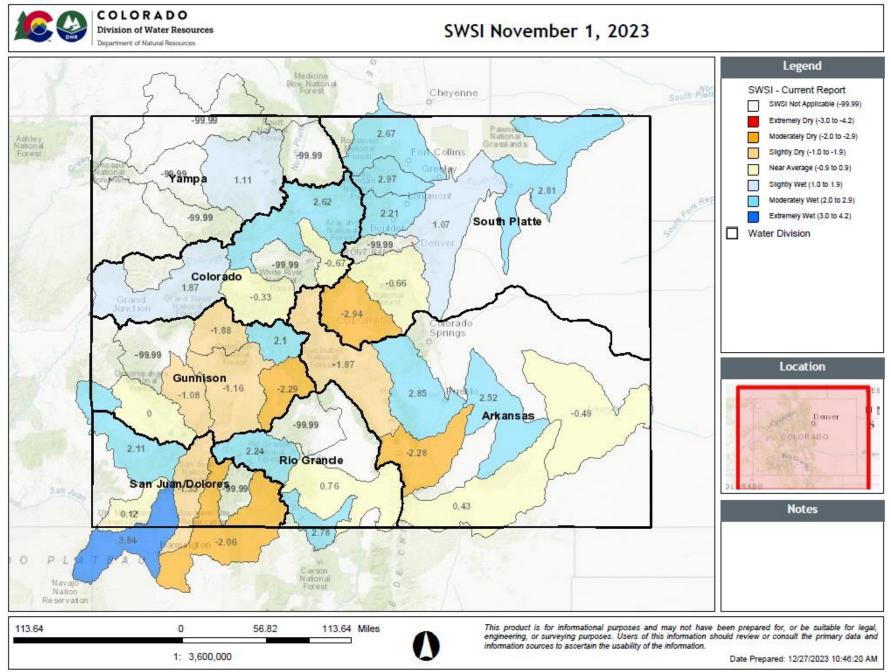
				SWSI Scale				
-4	-3	-2	-1	0	1	2	3	4
Severe		Moderate		Near Normal		Above Normal	Ab	undant
Drought		Drought		Supply		Supply		Supply



SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

November 1, 2023

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



Basin	HUC ID	, 2023 SWSI Values by HUC and Non Exc HUC Name	SWSI	Reservoir Storage NEP	Total Vol (AF)	
	11020006	Huerfano	-2.28	23	0	
Arkansas	11020010	Purgatoire	0.43	55	17,477	
	11020005	Upper Arkansas-Lake Meredith		80	35,038	
	11020009	Upper Arkansas-John Martin Reservoir	-0.50	44	36,207	
S	11020001	Arkansas Headwaters		28	182,985	
	11020002	Upper Arkansas	2.85	84	213,175	
	14010005	Colorado Headwaters-Plateau	1.88	73	13,437	
င်	14010002	Blue	-0.67	42	77,249	
Colorado	14010004	Roaring Fork	-0.34	46	81,026	
Ido	14010001	Colorado Headwaters	2.63	82	134,978	
	14010003	Eagle		N/A		
	14020003	Tomichi	-2.30	22	8	
	14020004	North Fork Gunnison	-1.89	27	824	
Gu	14020006	Uncompahgre	-1.09	37	60,388	
Gunnison	14020001	East-Taylor	2.11	75	76,505	
son	14020002	Upper Gunnison	-1.16	36	708,794	
	14020005	Lower Gunnison		N/A		
	14030003	San Miguel	N/A			
Ri	13010002	Alamosa-Trinchera	0.76	59	5,533	
Rio Grande	13010005	Conejos	2.78	83	33,721	
ran	13010001	Rio Grande Headwaters	2.24	77	35,547	
de	13010004	Saguache	N/A			
S	14080105	Middle San Juan	3.84	96	1,119	
ر n	14080107	Mancos	0.13	52	4,616	
San Juan-Dolores	14080104	Animas	-1.35	34	15,799	
-Do	14080101	Upper San Juan	-2.07	25	54,229	
lore	14030002	Upper Dolores	2.11	75	311,437	
es	14080102	Piedra		N/A		
	10190005	St. Vrain	2.21	77	61,554	
	10190003	Middle South Platte-Cherry Creek	1.07	63	70,086	
δοι	10190012	Middle South Platte-Sterling	2.81	84	114,194	
Jth	10190001	South Platte Headwater	-2.94	15	122,708	
South Platte	10190007	Cache La Poudre	2.67	82	150,393	
tte	10190002	Upper South Platte	-0.66	42	292,040	
	10190006	Big Thompson	2.97	86	560,798	
	10190004	Clear		N/A		
ž	14050001	Upper Yampa	1.12	63	36,242	
Jut	10180001	North Platte Headwaters		N/A		
a-∨	14050002	Lower Yampa		N/A		
Yampa-White	14050003	Little Snake	N/A			
ē	14050005	Upper White	N/A			

November 1, 2023 SWSI Values by HUC and Non Exceedance Probabilities (NEP)

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)

4.0 (Abundant Supply)

Component Component HUC ID HUC Name **Component Name** Volume (AF) NEP by Month CLEAR CREEK RESERVOIR 5,895 41 HOMESTAKE RESERVOIR 34,727 43 11020001 Arkansas Headwaters TWIN LAKES RESERVOIR 62,283 84 TURQUOISE LAKE 80,080 12 11020006 Huerfano **CUCHARAS RESERVOIR*** 0 23 11020010 Purgatoire TRINIDAD LAKE 17,477 55 213,175 11020002 Upper Arkansas PUEBLO RESERVOIR 84 59 ADOBE CREEK RESERVOIR 13,267 Upper Arkansas-John Martin 11020009 Reservoir JOHN MARTIN RESERVOIR 22,940 39 88 Upper Arkansas-Lake LAKE HENRY 6,496 11020005 Meredith 75 MEREDITH RESERVOIR 28,542 14010002 Blue **GREEN MOUNTAIN RESERVOIR** 77,249 42 92 WOLFORD MOUNTAIN RESERVOIR 55,120 **Colorado Headwaters** 14010001 WILLIAMS FORK RESERVOIR 79,858 64 14010005 Colorado Headwaters-Plateau **VEGA RESERVOIR** 13,437 73 14010004 46 **Roaring Fork** RUEDI RESERVOIR 81,026 14020001 TAYLOR PARK RESERVOIR 75 East-Taylor 76,505 14020004 North Fork Gunnison PAONIA RESERVOIR 824 27 Tomichi 22 14020003 VOUGA RESERVOIR NEAR DOYLEVILLE 8 14020006 Uncompahgre RIDGEWAY RESERVOIR 60,388 37 SILVER JACK RESERVOIR 193 2 3,220 95 FRUITLAND RESERVOIR 14020002 Upper Gunnison CRAWFORD RESERVOIR 4,380 45 MORROW POINT RESERVOIR 104,662 7 596,339 38 BLUE MESA RESERVOIR MOUNTAIN HOME 1,487 28 13010002 Alamosa-Trinchera 4,046 TERRACE RESERVOIR 68 83 13010005 PLATORO RESERVOIR 33,721 Conejos SANTA MARIA RESERVOIR 8,027 55 13010001 **Rio Grande Headwaters** 92 CONTINENTAL RESERVOIR 10,504 79 **RIO GRANDE RESERVOIR** 17,016 14080104 LEMON RESERVOIR 15,799 Animas 34 52 14080107 Mancos JACKSON GULCH RESERVOIR 4,616 14080105 Middle San Juan LONG HOLLOW RESERVOIR 96 1,119 GROUNDHOG RESERVOIR 12,668 41 14030002 Upper Dolores MCPHEE RESERVOIR 298,769 81 14080101 Upper San Juan VALLECITO RESERVOIR 54,229 25 MARIANO RESERVOIR 2,163 51 WILLOW CREEK RESERVOIR 4,277 4 LAKE LOVELAND RESERVOIR 6,983 43 10190006 **Big Thompson** LONE TREE RESERVOIR 7,333 93 BOYD LAKE 39,588 88 CARTER LAKE 90,893 99 LAKE GRANBY 409,561 70

November 1.	2023 SWSI Com	ponent Information	-Reservoir Storage	- By HUC
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HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
10190007		HALLIGAN RESERVOIR	1,217	28
		BLACK HOLLOW RESERVOIR	3,716	90
	Cache La Poudre	CACHE LA POUDRE	4,475	64
		CHAMBERS LAKE	5,120	76
		WINDSOR RESERVOIR	6,672	27
		FOSSIL CREEK RESERVOIR	8,085	87
		COBB LAKE	19,575	84
		HORSETOOTH RESERVOIR	101,533	82
		HORSECREEK RESERVOIR	2,100	33
10190003	Middle South Platte-Cherry	BARR LAKE	15,035	67
10190005	Creek	MILTON RESERVOIR	15,237	55
		STANDLEY RESERVOIR	37,714	71
	Middle South Platte-Sterling	JULESBURG RESERVOIR	8,658	36
		PREWITT RESERVOIR	13,327	45
10190012		EMPIRE RESERVOIR	17,708	79
10170012		JACKSON LAKE RESERVOIR	21,171	91
		RIVERSIDE RESERVOIR	24,333	82
		POINT OF ROCKS RESERVOIR	28,997	83
	South Platte Headwater	SPINNEY MOUNTAIN RESERVOIR	3,681	3
10190001		ANTERO RESERVOIR	19,678	66
		ELEVENMILE CANYON RESERVOIR	99,349	54
	St. Vrain	MARSHALL RESERVOIR	5,399	69
		TERRY RESERVOIR	6,060	88
10190005		UNION RESERVOIR	10,295	53
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,214	91
		GROSS RESERVOIR	23,586	60
10190002	Upper South Platte	CHEESMAN LAKE	73,199	72
10170002		DILLON RESERVOIR	218,841	20
14050001	Upper Yampa	YAMCOLO RESERVOIR	5,042	50
NED is non o	υμμει ταπιμα	STAGECOACH RESERVOIR NR OAK CREEK	31,200	63

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

50 (Normal)

*No longer exists

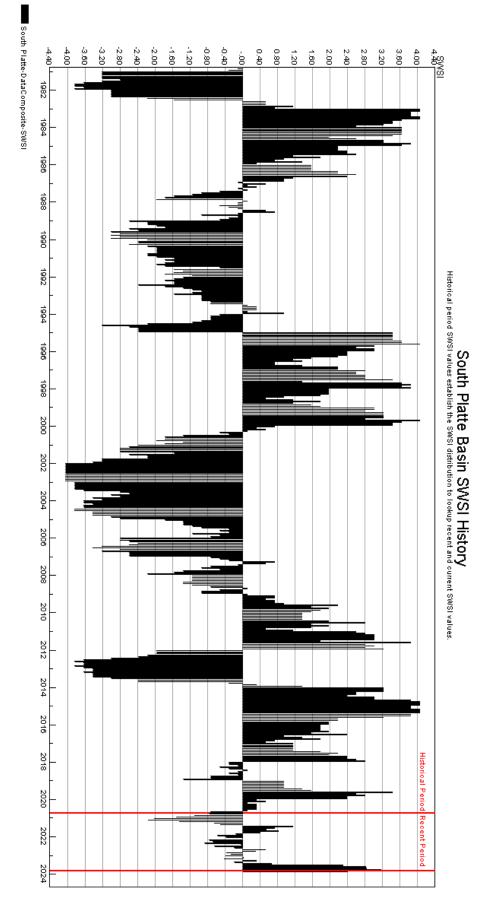
Water Volume NEP Color Scale:

0 (Well Below Normal)

100 (Well Above Normal)

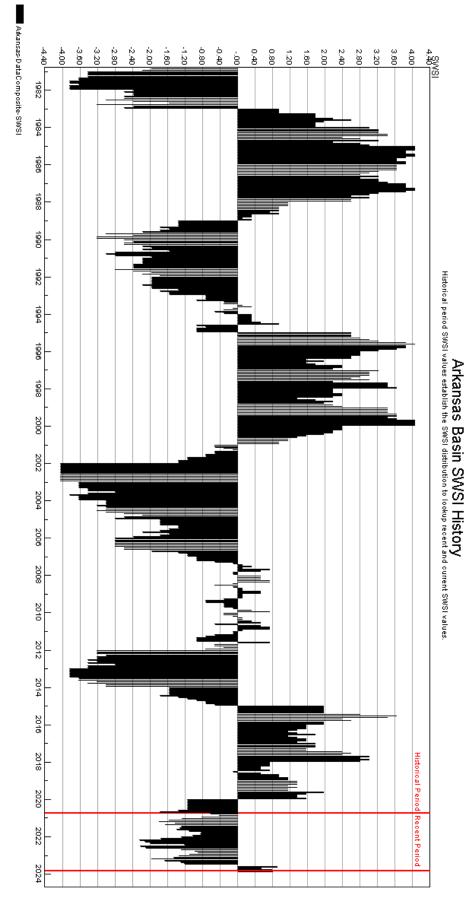
SOUTH PLATTE BASIN

The SWSI value for the month was +2.4.



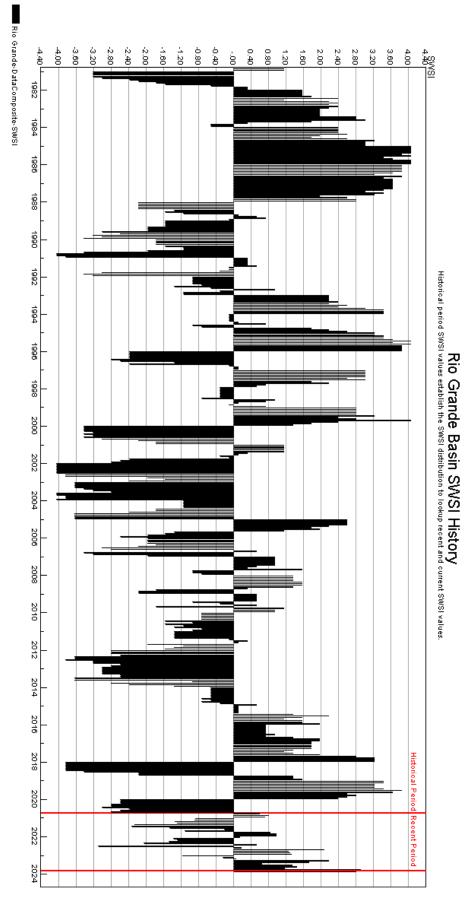
ARKANSAS BASIN

The SWSI value for the month was +0.8.



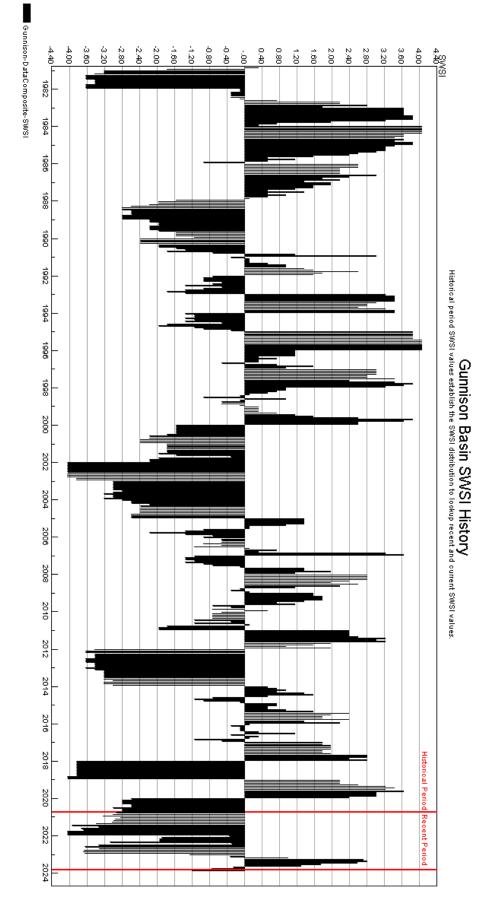
RIO GRANDE BASIN

The SWSI value for the month was +2.8.



GUNNISON BASIN

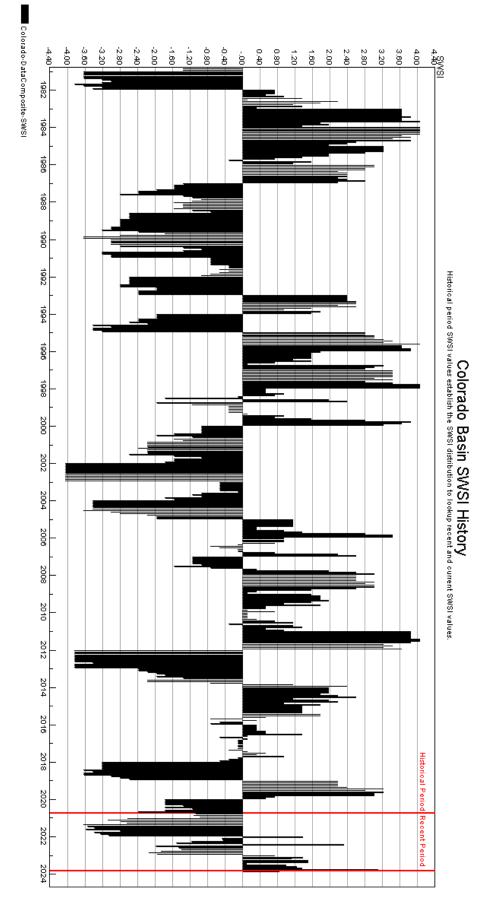
The SWSI value for the month was -1.2.



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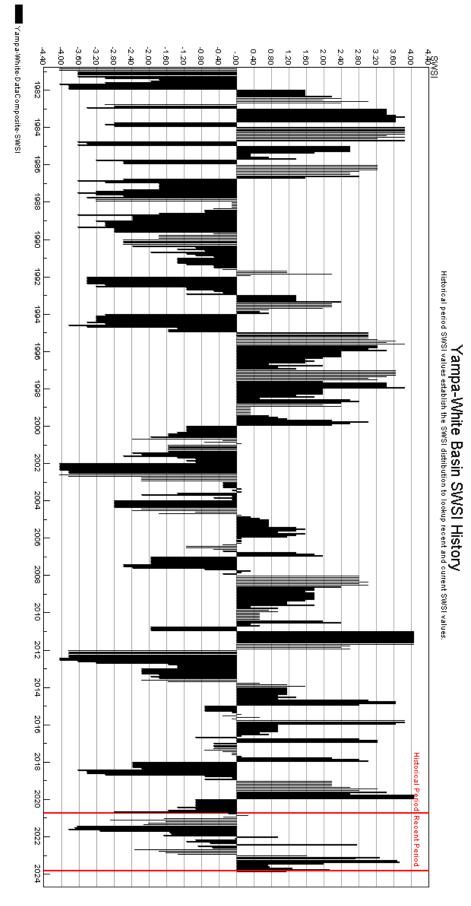
COLORADO BASIN

The SWSI value for the month was +0.8.



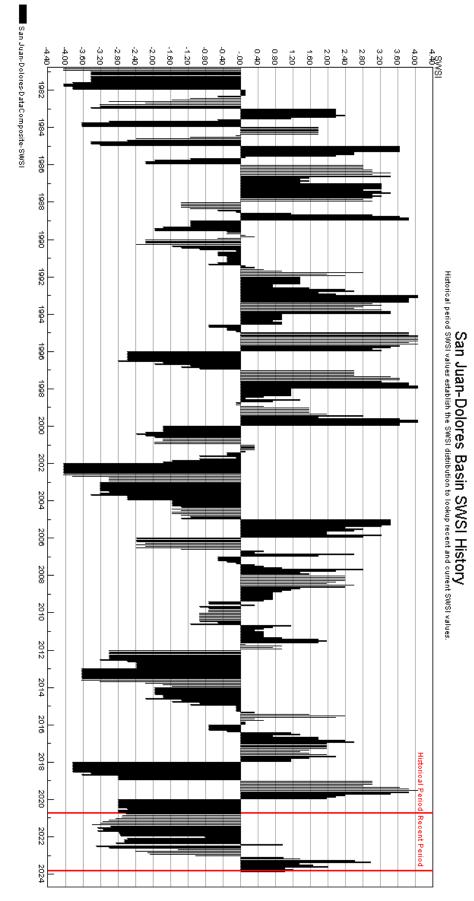
YAMPA/WHITE BASIN

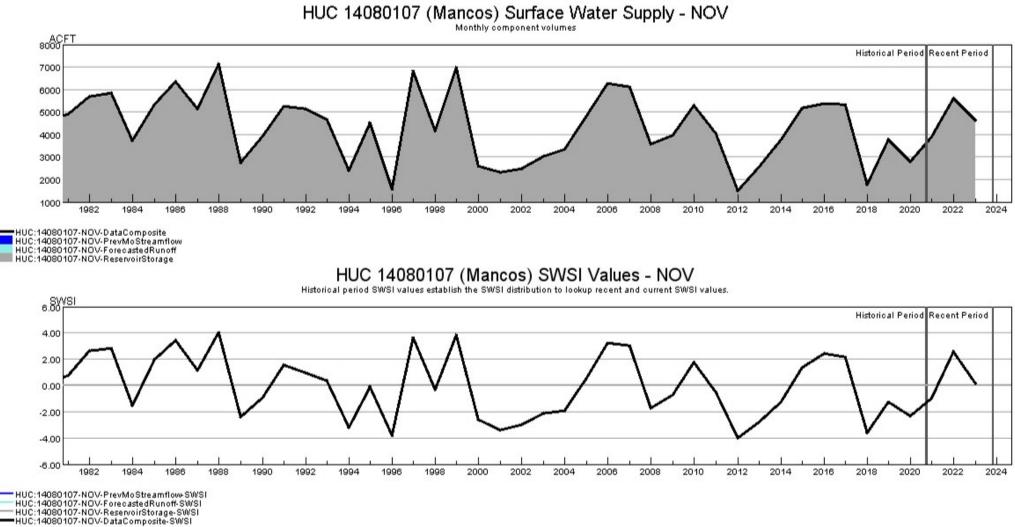
The SWSI value for the month was +1.1.



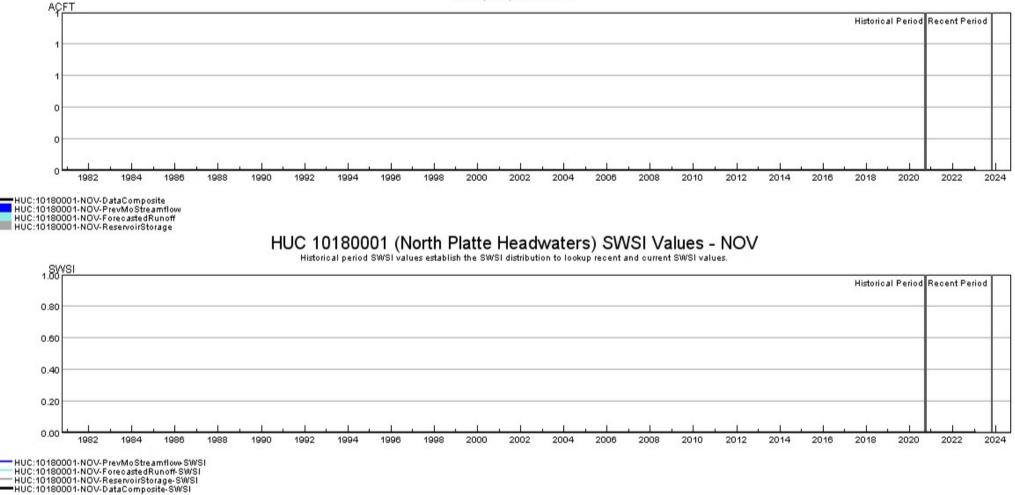
SAN JUAN-DOLORES BASIN

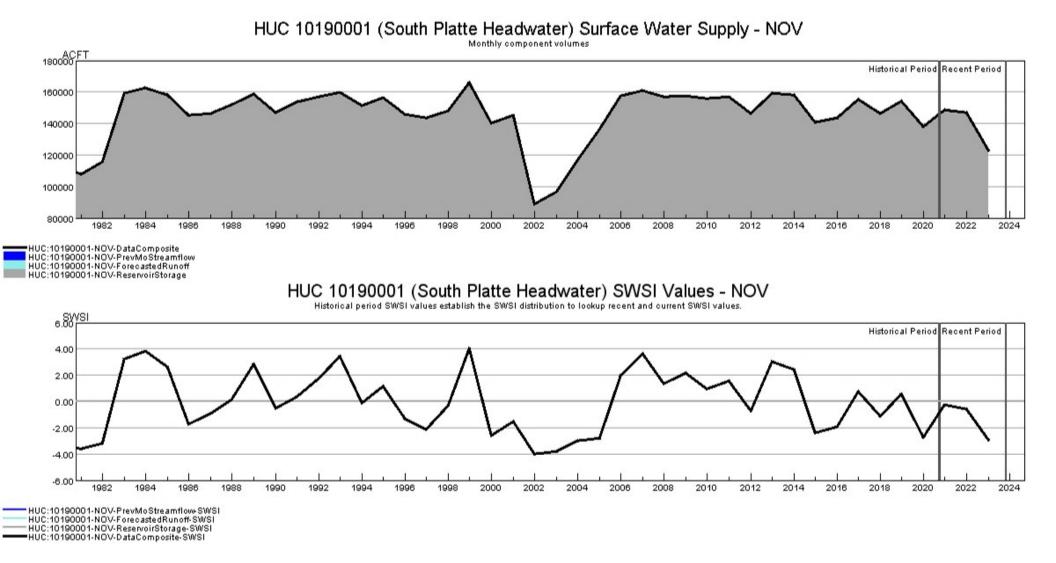
The SWSI value for the month was +1.0.

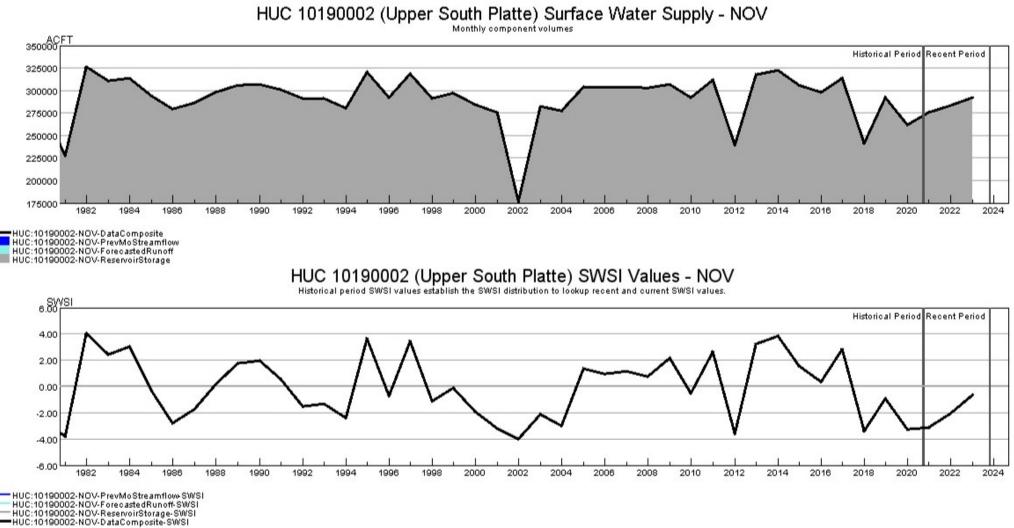


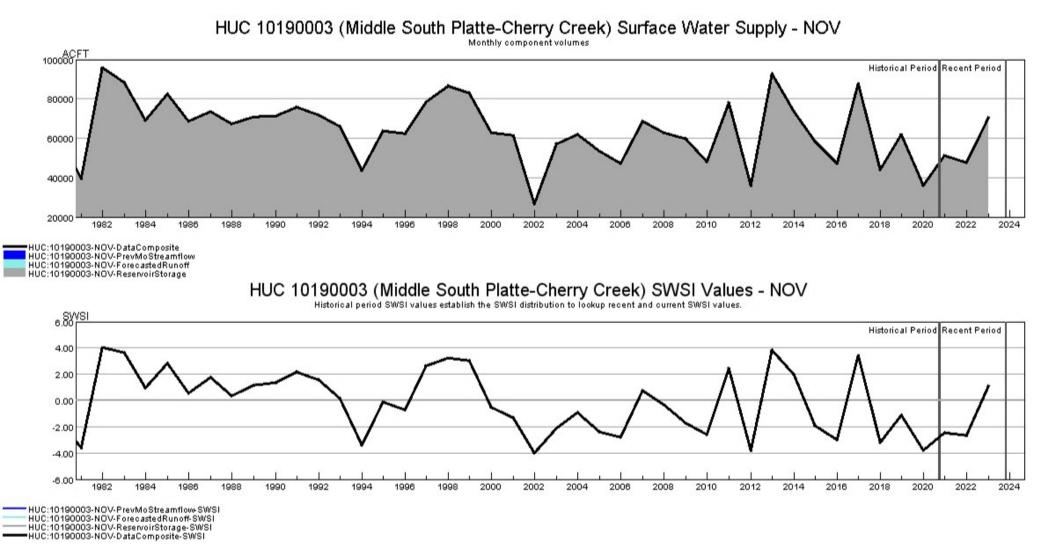


HUC 10180001 (North Platte Headwaters) Surface Water Supply - NOV

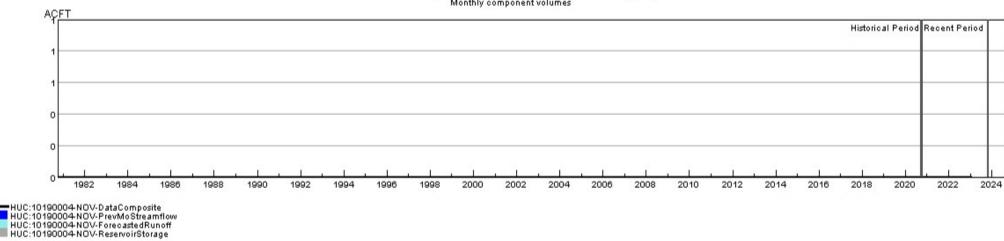






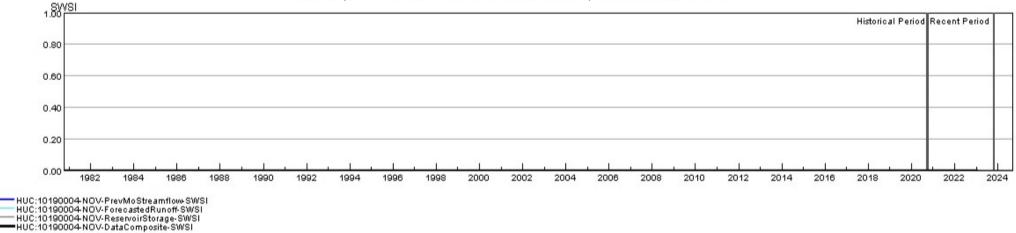


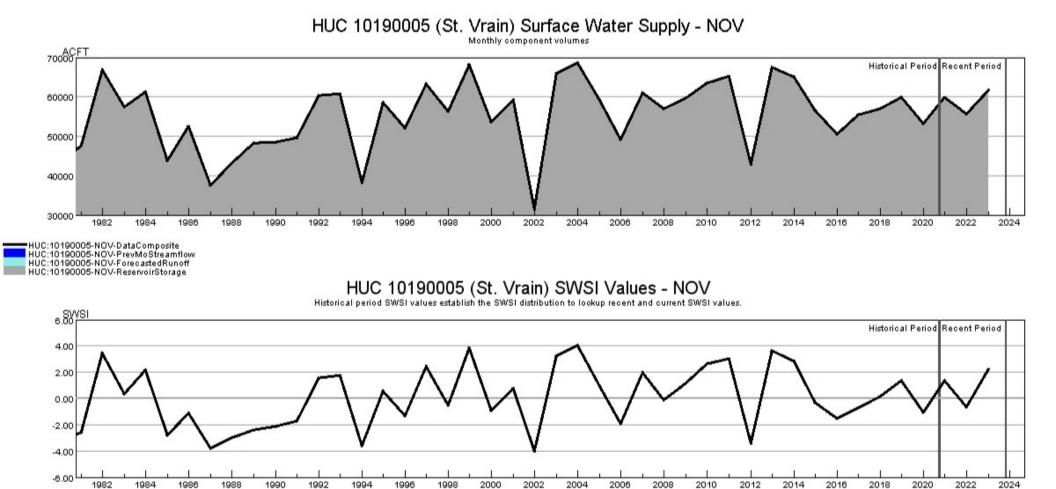
HUC 10190004 (Clear) Surface Water Supply - NOV



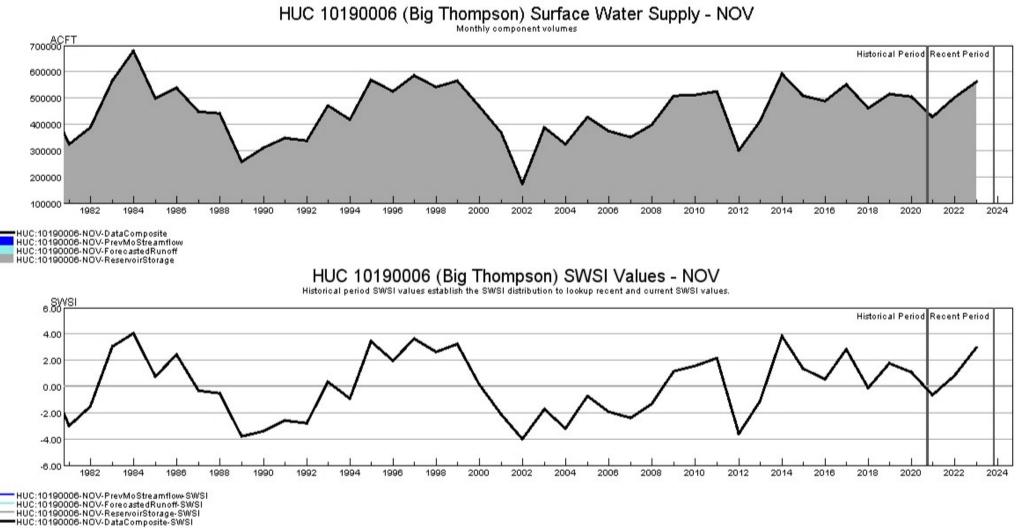
HUC 10190004 (Clear) SWSI Values - NOV

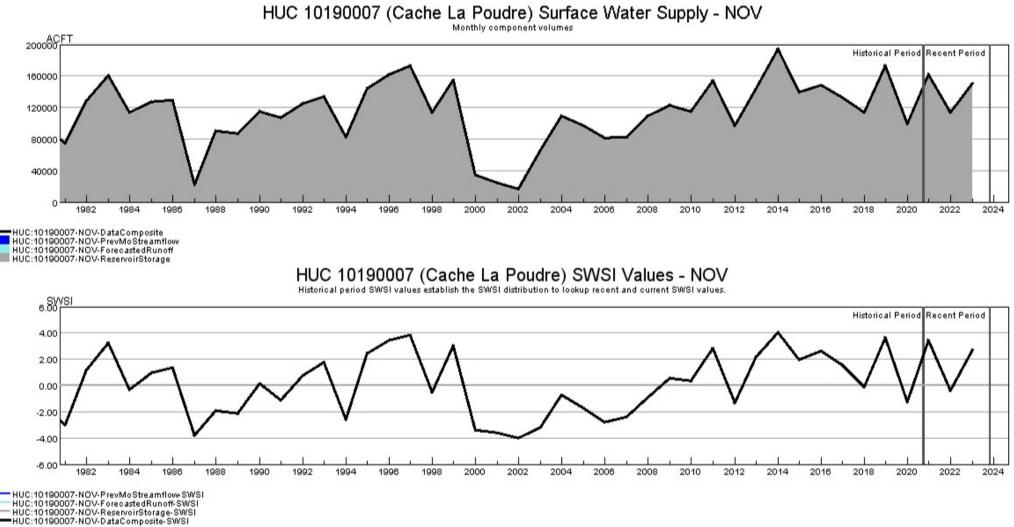
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

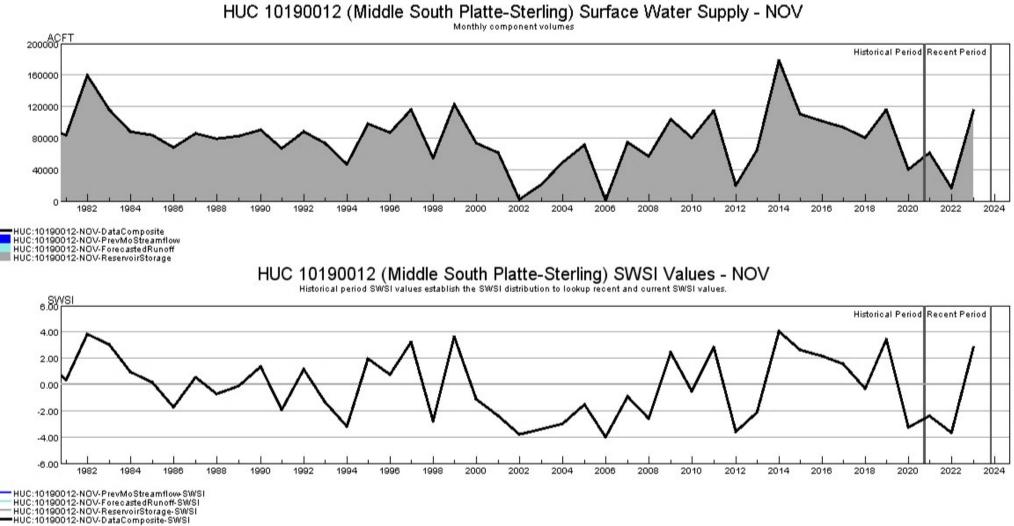


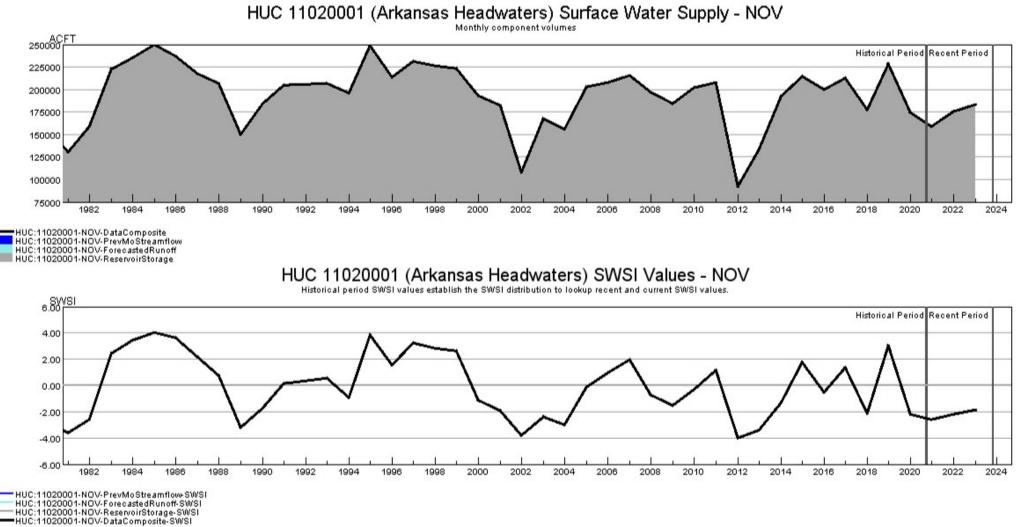


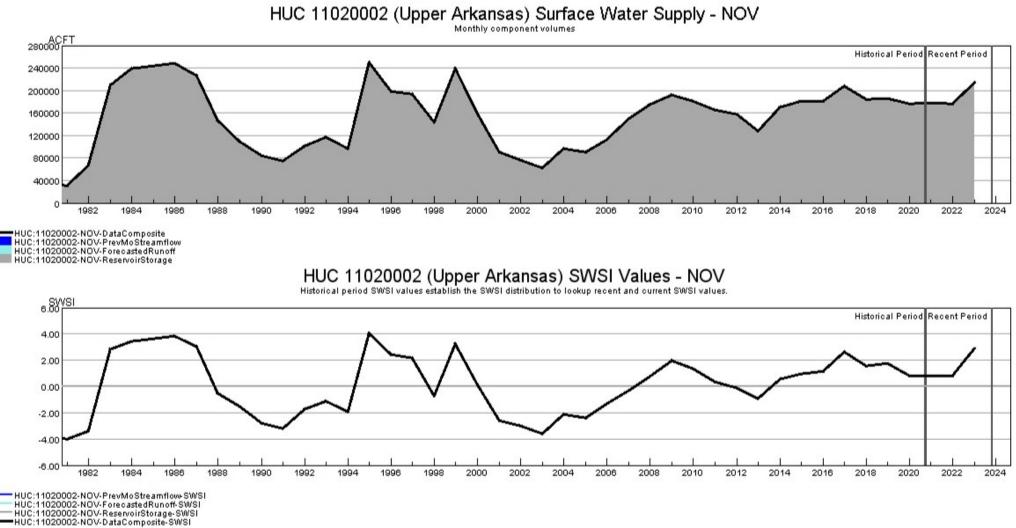
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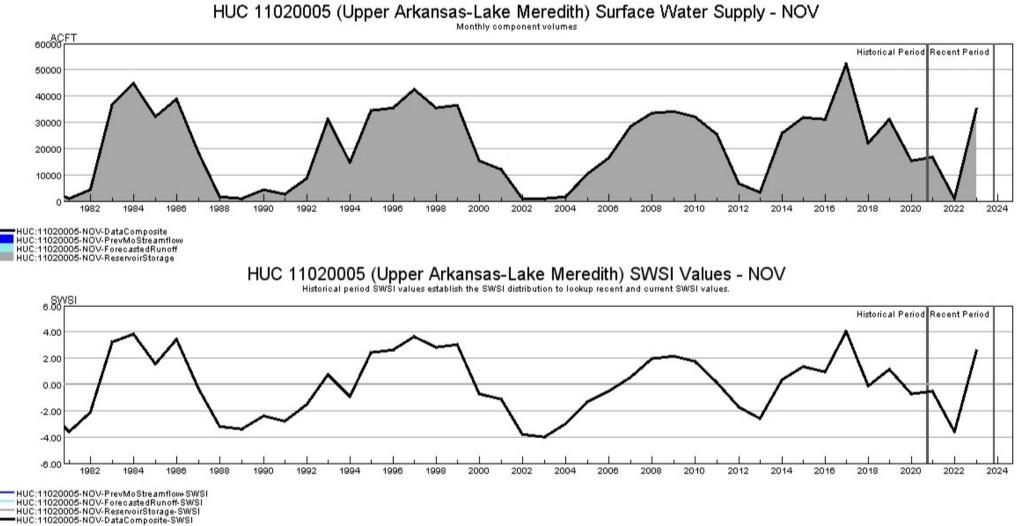


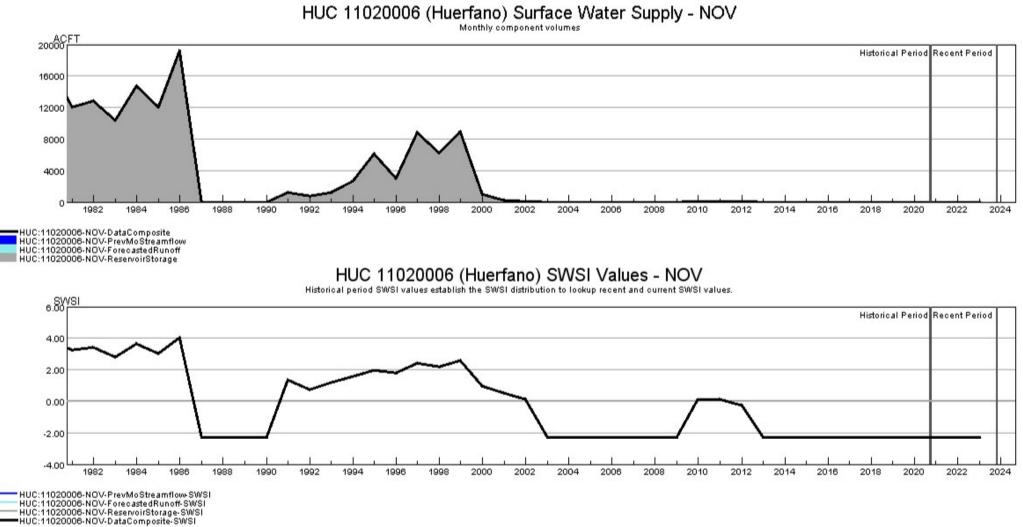


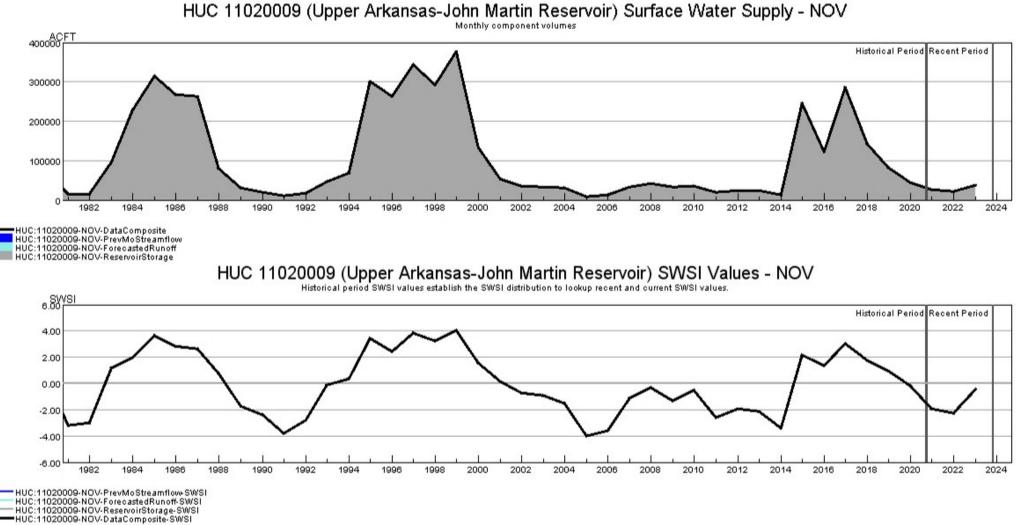


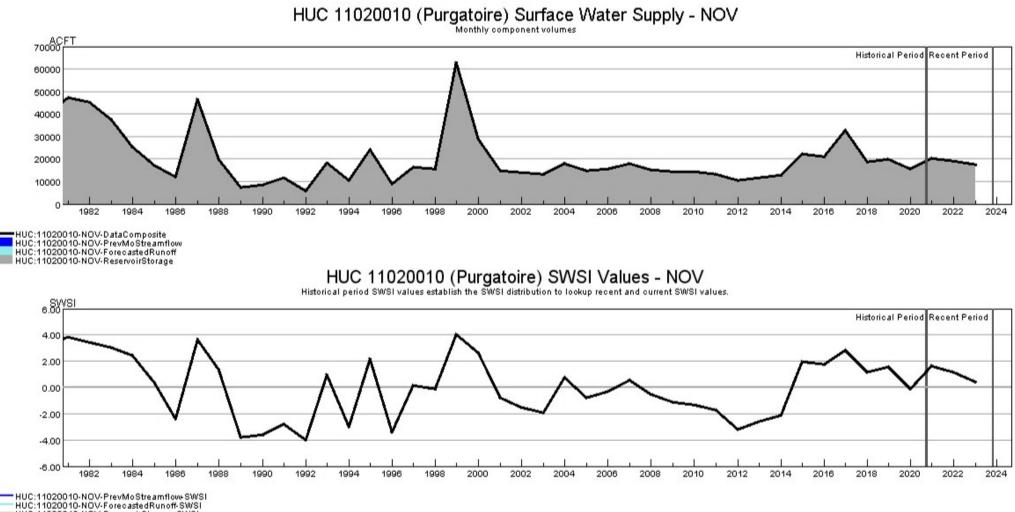




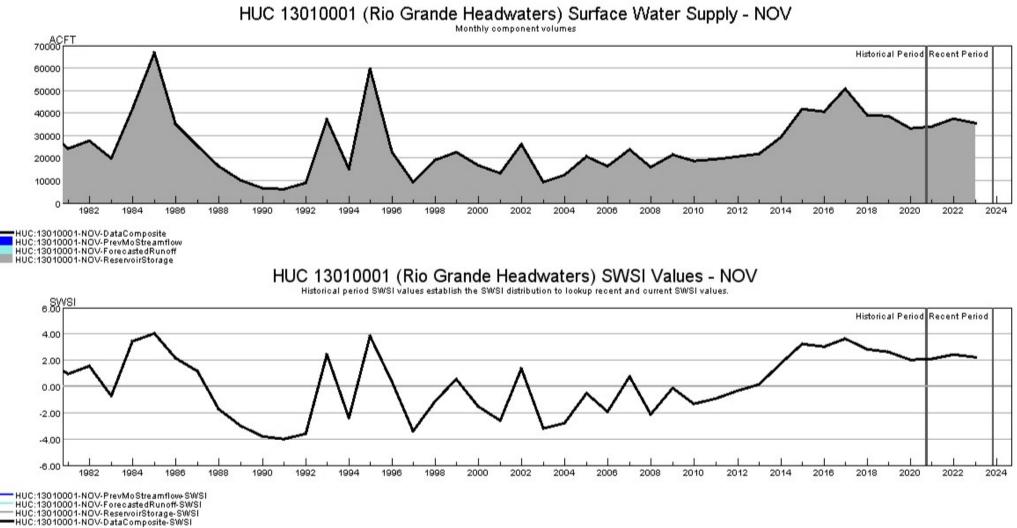


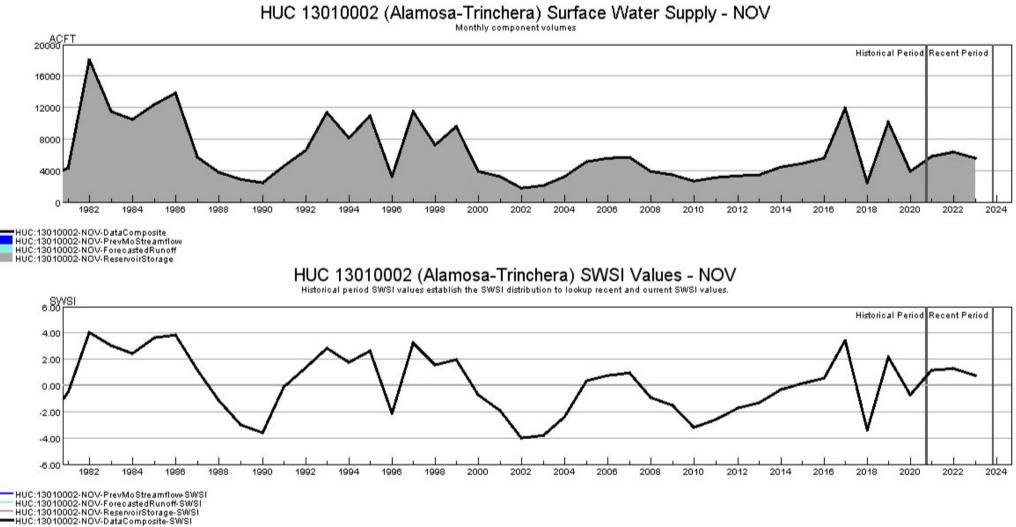




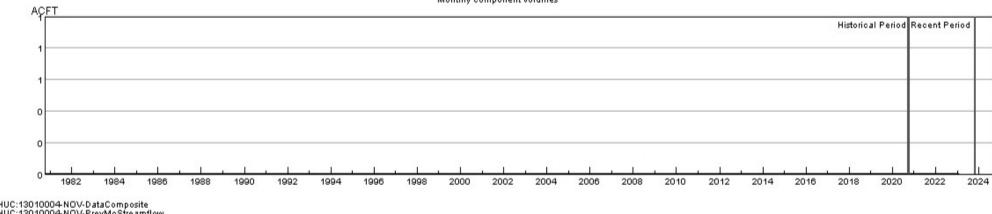


HUC:11020010-NOV-ForeoastedRunoff-SWS HUC:11020010-NOV-ReservoirStorage-SWSI HUC:11020010-NOV-DataComposite-SWSI



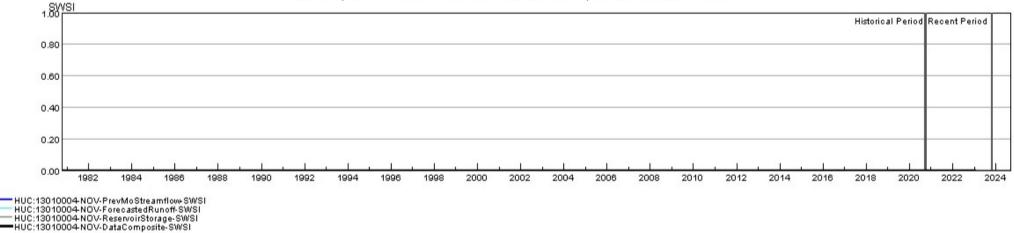


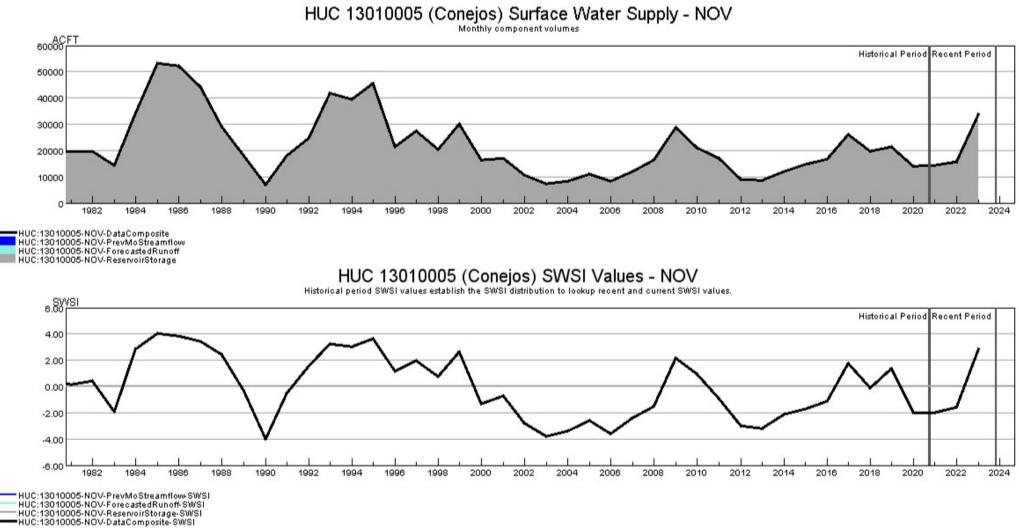
HUC 13010004 (Saguache) Surface Water Supply - NOV

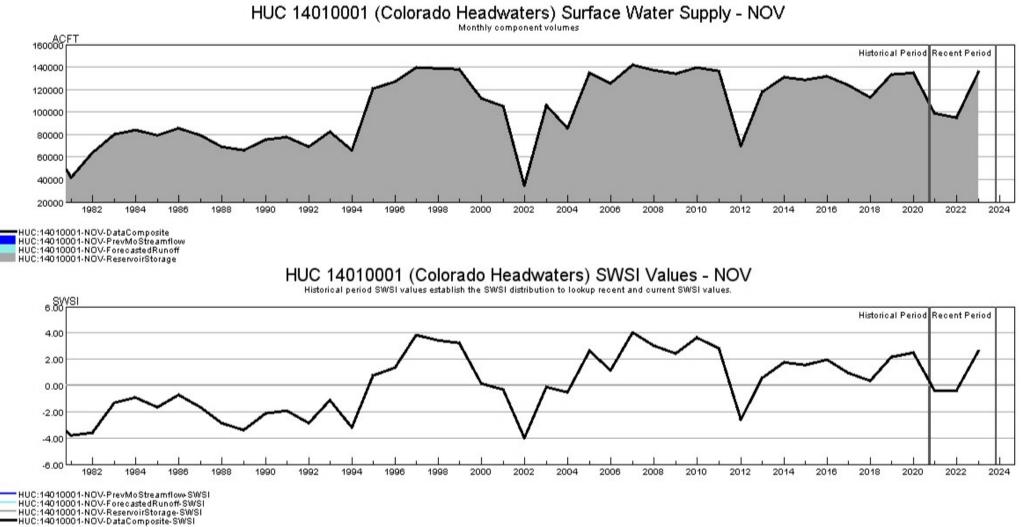


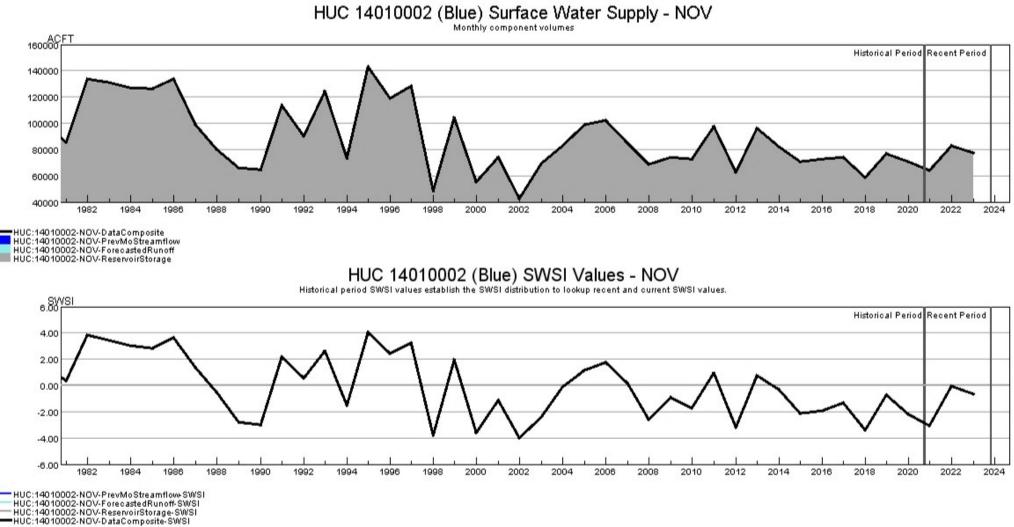
HUC:13010004NOV-DataComposite HUC:13010004NOV-PrevMoStreamflow HUC:13010004NOV-ForecastedRunoff HUC:13010004NOV-ReservoirStorage

HUC 13010004 (Saguache) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

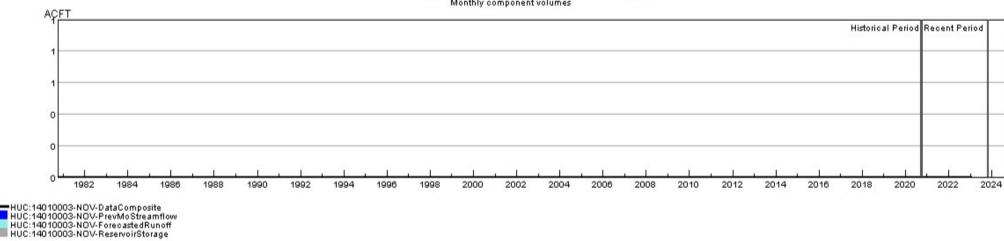




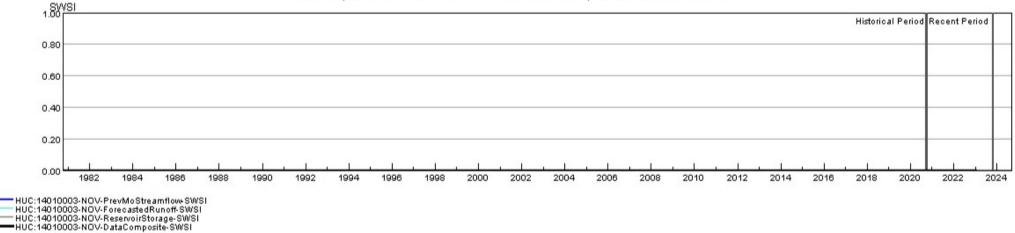


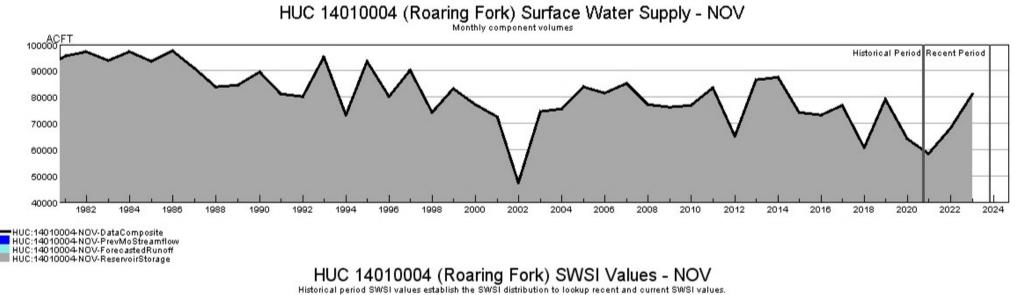


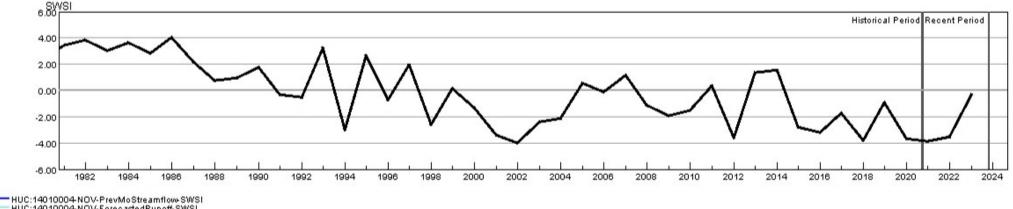
HUC 14010003 (Eagle) Surface Water Supply - NOV



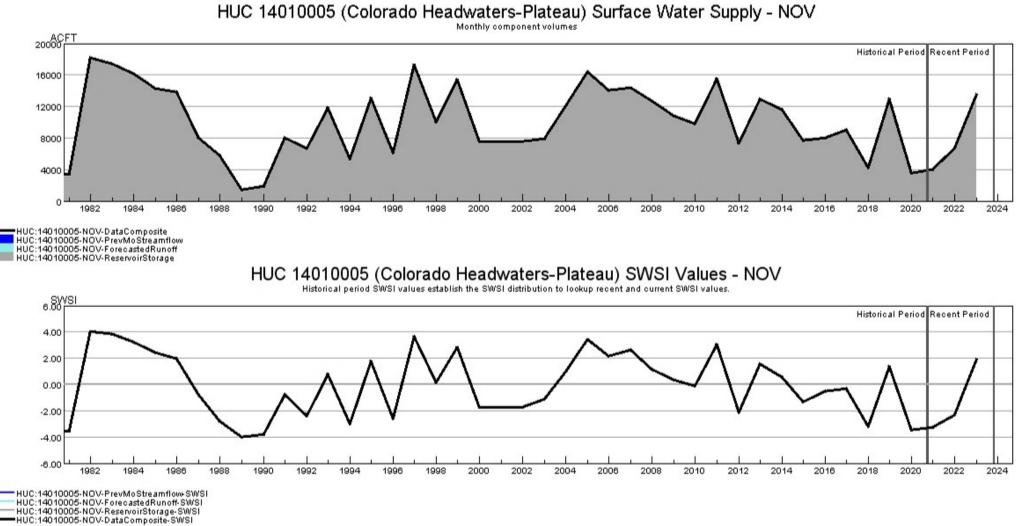
HUC 14010003 (Eagle) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

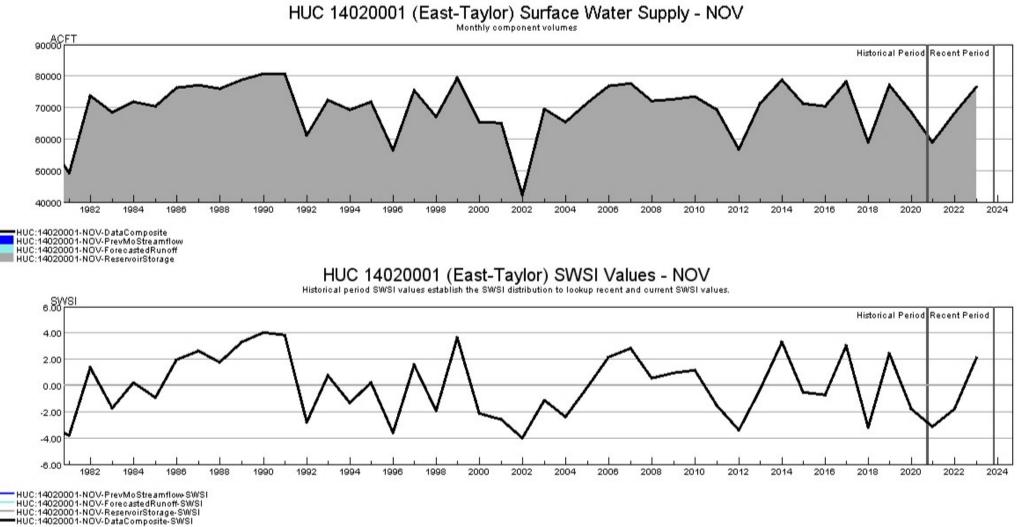


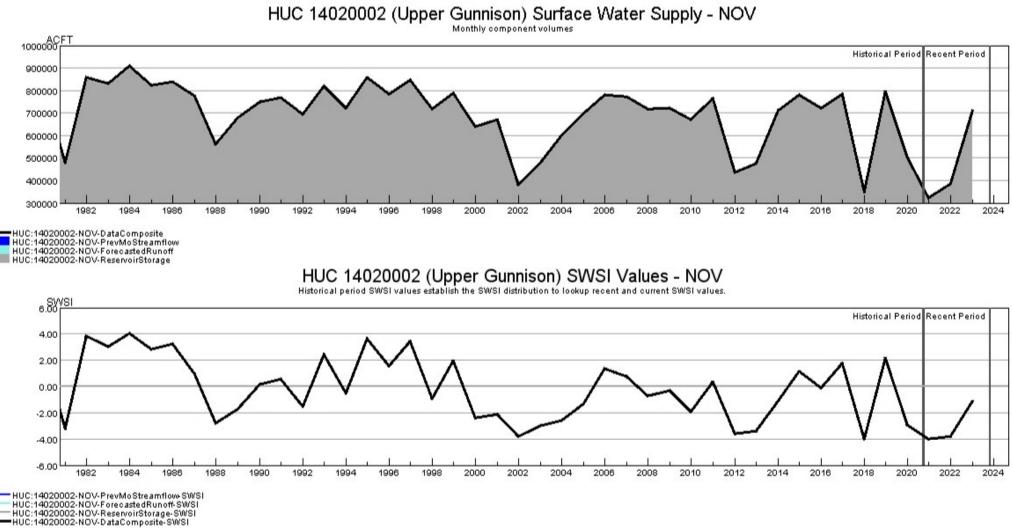


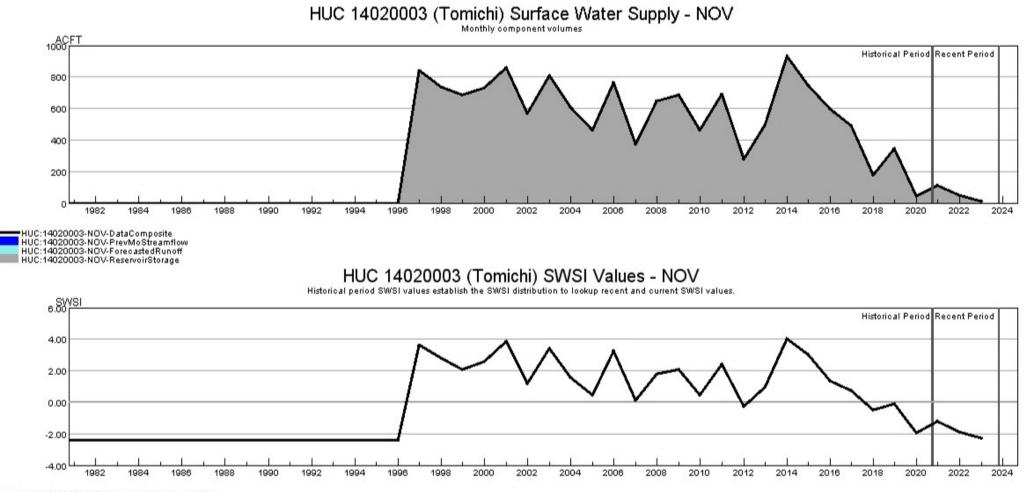


HUC:14010004-NOV-FreeMosteam1000-SWS HUC:14010004-NOV-ForecastedRunoff-SWSI HUC:14010004-NOV-DataComposite-SWSI

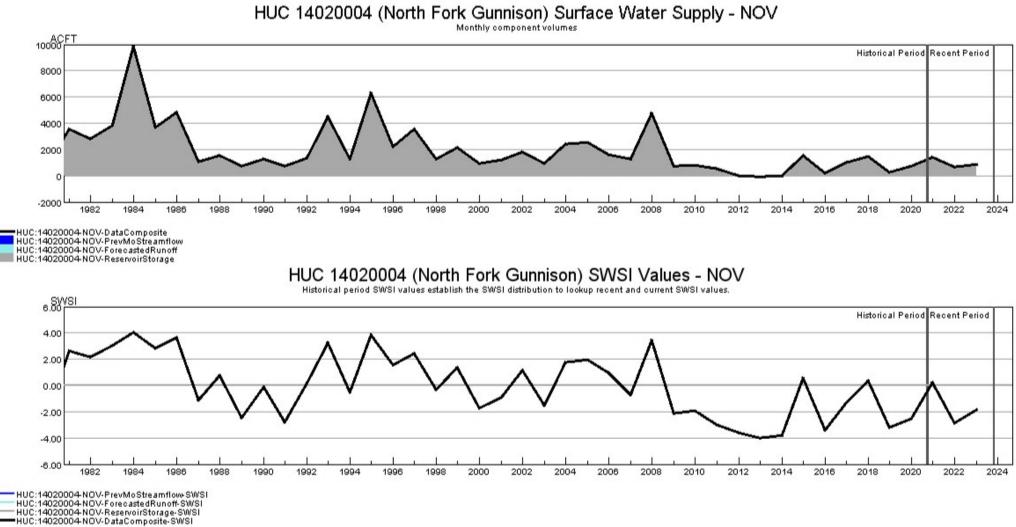




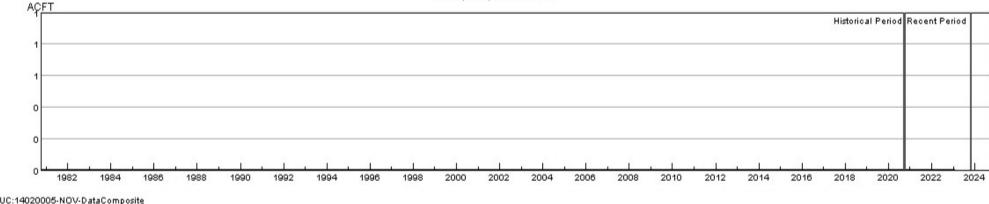




HUC:14020003-NOV-PrevMoStreamflow-SWSI HUC:14020003-NOV-Frevenosteam1000-SWS HUC:14020003-NOV-ForeoastedRunoff-SWSI HUC:14020003-NOV-DataComposite-SWSI

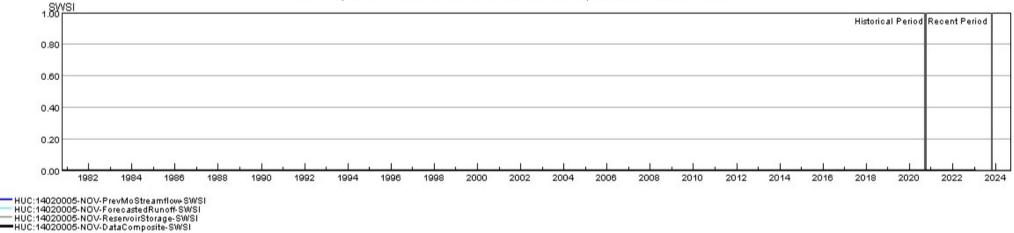


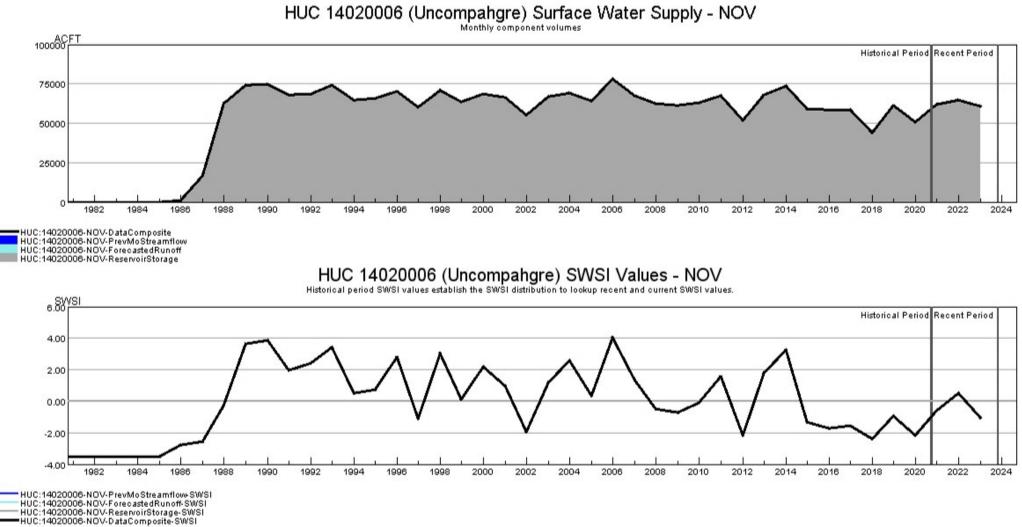
HUC 14020005 (Lower Gunnison) Surface Water Supply - NOV

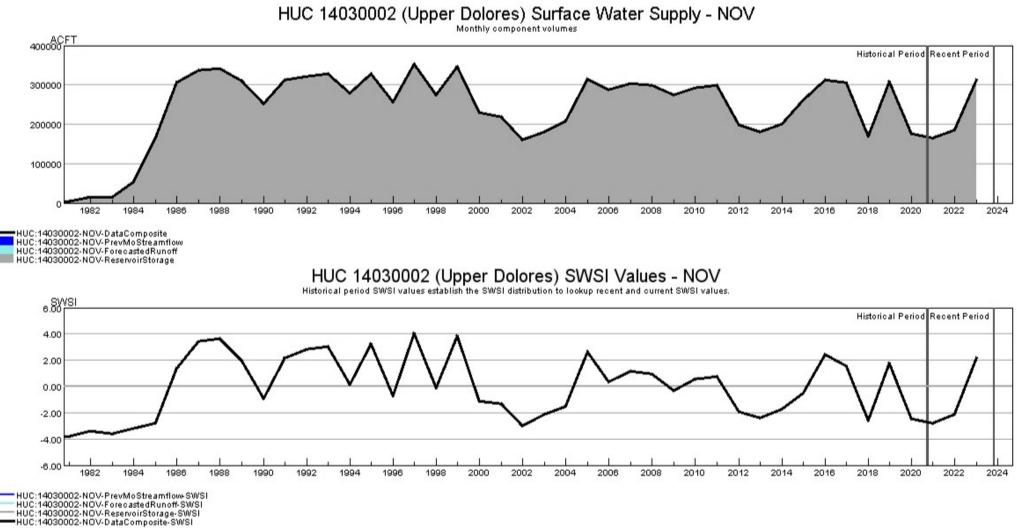


HUC:14020005-NOV-DataComposite HUC:14020005-NOV-PrevMoStreamflow HUC:14020005-NOV-ForecastedRunoff HUC:14020005-NOV-ReservoirStorage

HUC 14020005 (Lower Gunnison) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

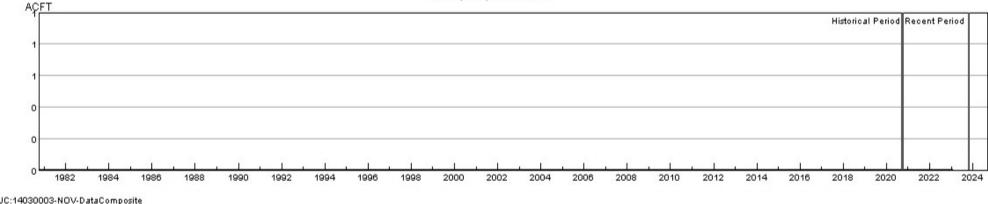






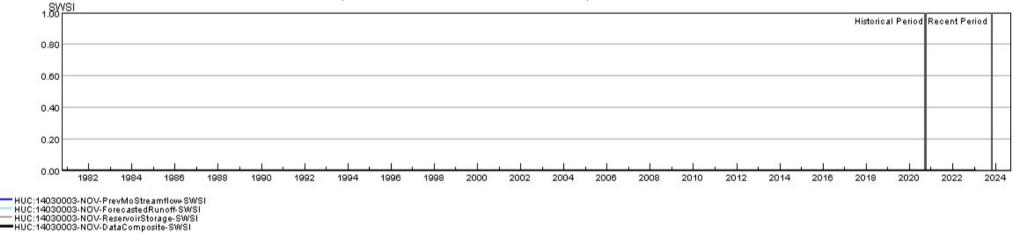
HUC 14030003 (San Miguel) Surface Water Supply - NOV

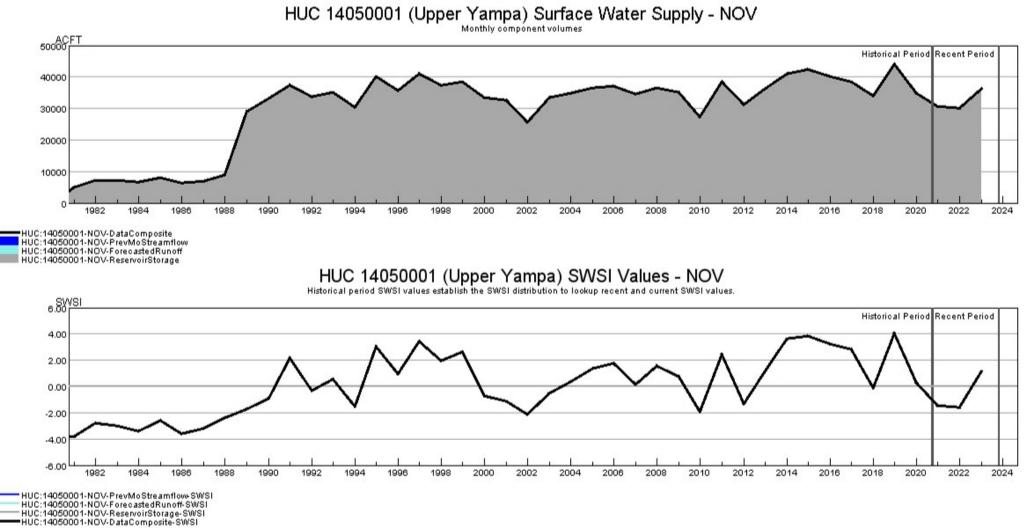




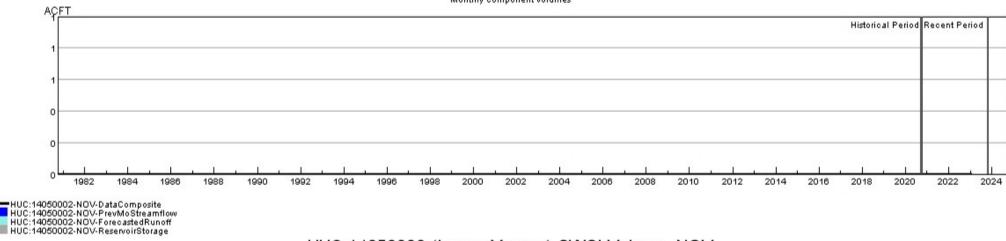
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HUC 14030003 (San Miguel) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

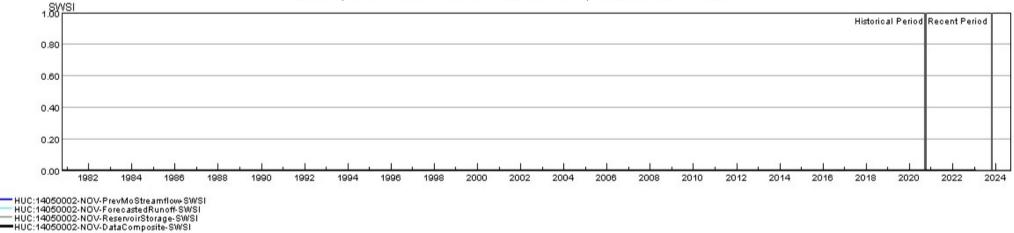




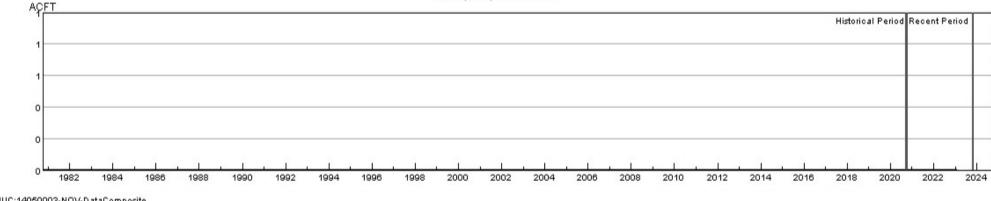
HUC 14050002 (Lower Yampa) Surface Water Supply - NOV



HUC 14050002 (Lower Yampa) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



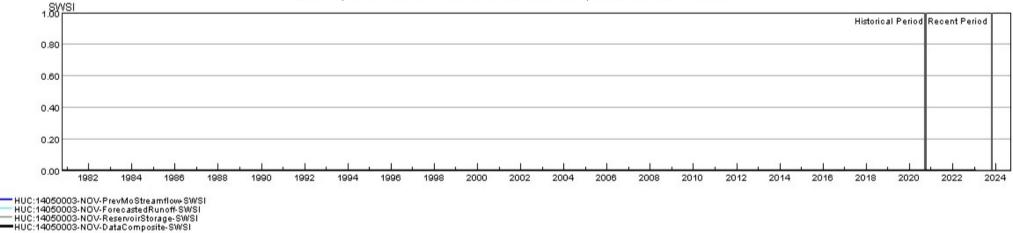
HUC 14050003 (Little Snake) Surface Water Supply - NOV



HUC:14050003-NOV-DataComposite HUC:14050003-NOV-PrevMoStreamflow HUC:14050003-NOV-ForecastedRunoff HUC:14050003-NOV-ReservoirStorage

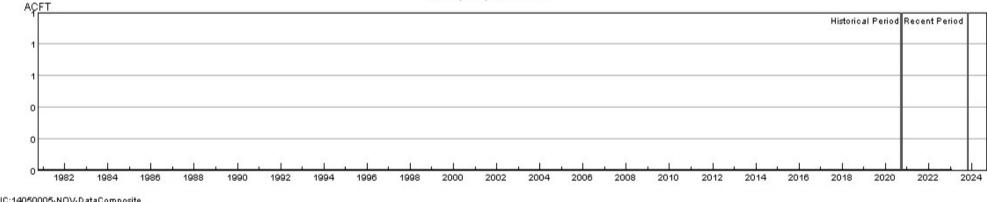
HUC 14050003 (Little Snake) SWSI Values - NOV

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



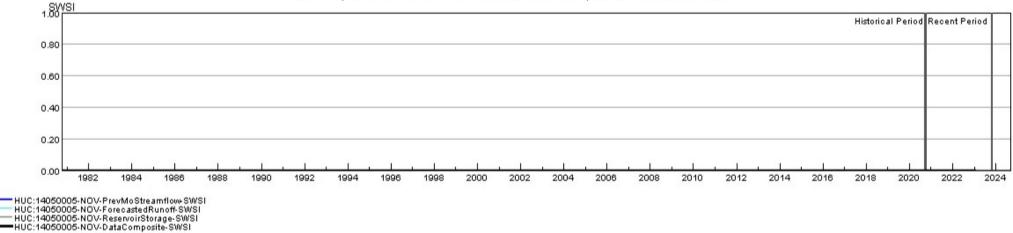
HUC 14050005 (Upper White) Surface Water Supply - NOV

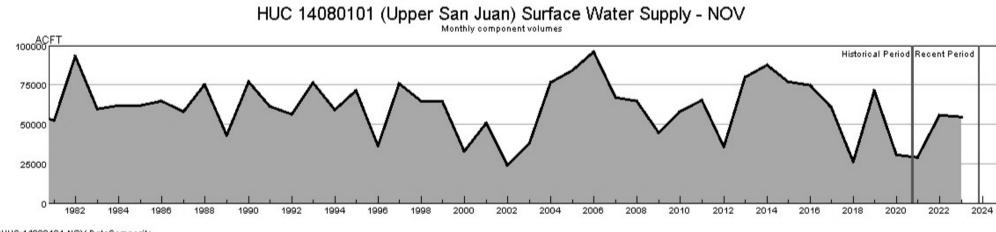




HUC:14050005-NOV-DataComposite HUC:14050005-NOV-PrevMoStreamflow HUC:14050005-NOV-ForecastedRunoff HUC:14050005-NOV-ReservoirStorage

HUC 14050005 (Upper White) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

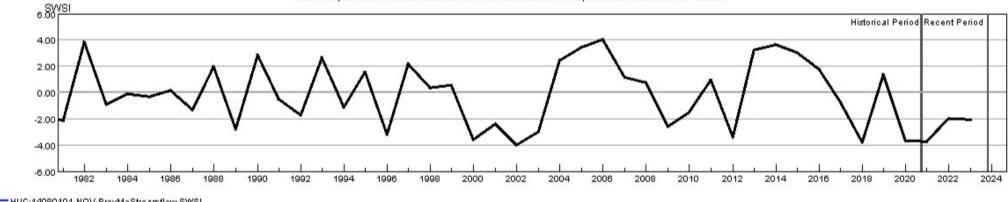




HUC:14080101-NOV-DataComposite HUC:14080101-NOV-PrevMoStreamflow HUC:14080101-NOV-ForecastedRunoff HUC:14080101-NOV-ReservoirStorage

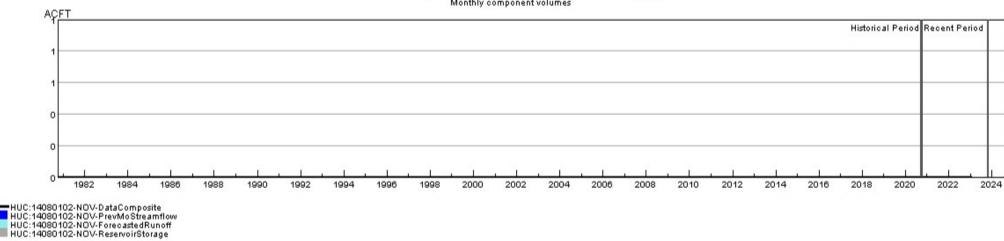
HUC 14080101 (Upper San Juan) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.





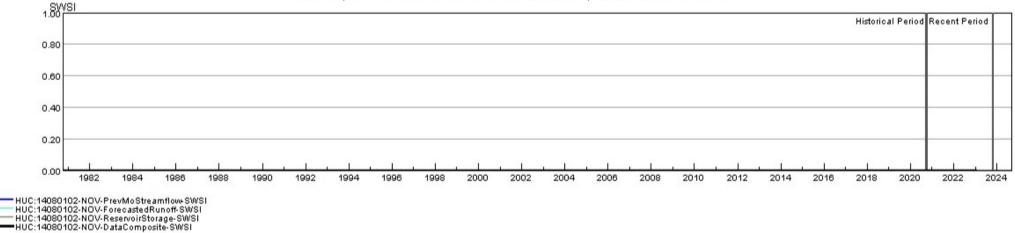
HUC:14080101-NOV-PrevMoStreamflow-SWSI HUC:14080101-NOV-FreeMostream1000-SWS HUC:14080101-NOV-ForecastedRunoff-SWSI HUC:14080101-NOV-ReservoirStorage-SWSI HUC:14080101-NOV-DataComposite-SWSI

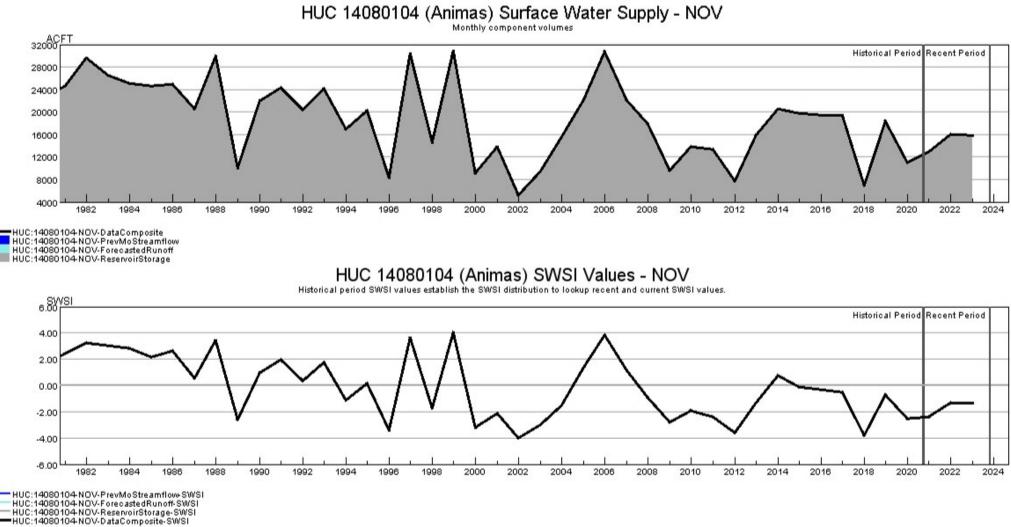
HUC 14080102 (Piedra) Surface Water Supply - NOV



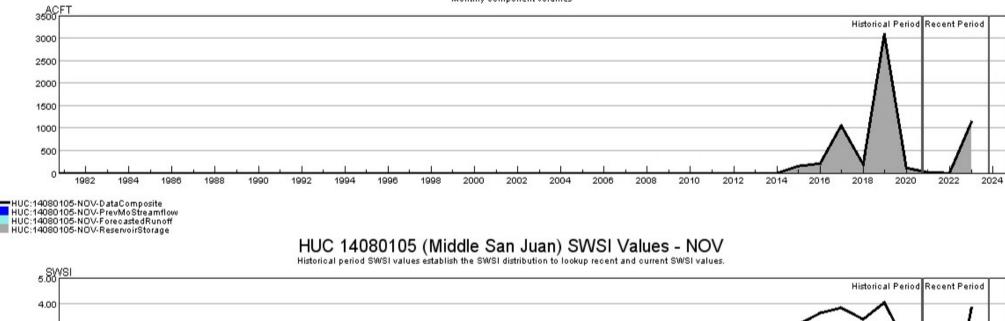
HUC 14080102 (Piedra) SWSI Values - NOV

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





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



HUC:14080105-NOV-PrevMoStreamflow-SWSI HUC:14080105-NOV-Freverosteam1000-SWS HUC:14080105-NOV-ForeoastedRunoff-SWSI HUC:14080105-NOV-DataComposite-SWSI

3.00 2.00 1.00 0.00 -1.00