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, 2022

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.

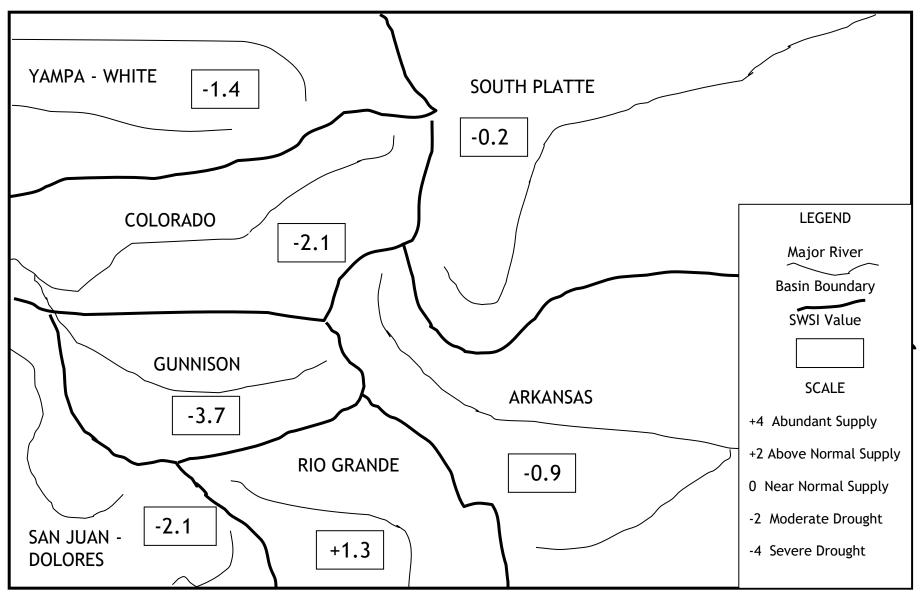
Time Period	SWSI Components
January 1 - June 1	Forecasted Runoff + Reservoir Storage
July 1 - September 1 Previous Month's Streamflow + Reservoir Storag	
October 1 -December 1	Reservoir Storage

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 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, 2022. 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	0.1	0.0	
Colorado	-2.1	-0.3	1.1	
Gunnison	-3.7	0.0	0.4	
Rio Grande	1.3	0.0	0.3	
San Juan-Dolores	-2.1	0.3	0.6	
South Platte	-0.2	-0.6	-0.1	
Yampa-White	-1.4	-0.1	0.1	

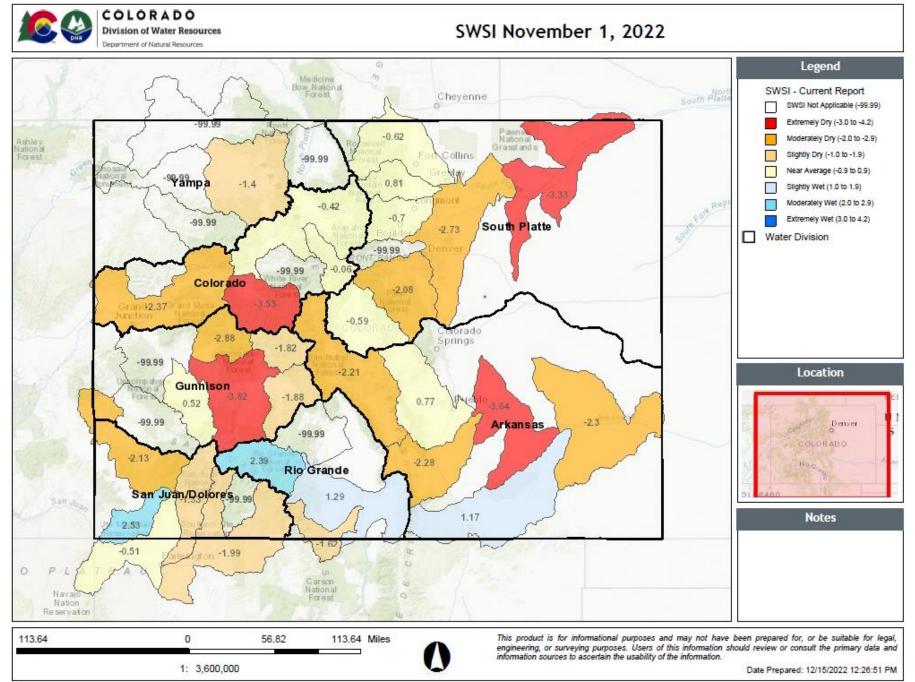
				SWSI Scale				
-4	-3	-2	-1	0	1	2	3	4
Severe		Moderate		Near Normal		Above Normal	Ab	undant
Drought		Drought		Supply		Supply		Supply



SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

November 1, 2022

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	-
Arkansas	11020005	Upper Arkansas-Lake Meredith	-3.64	6	793
	11020010	Purgatoire	1.17	64	18,862
nsa	11020009	Upper Arkansas-John Martin Reservoir	-2.30	22	20,903
S	11020002	Upper Arkansas	0.77	59	175,262
	11020001	Arkansas Headwaters	-2.22	23	175,429
	14010005	Colorado Headwaters-Plateau	-2.38	21	6,624
Col	14010004	Roaring Fork	-3.54	8	68,112
Colorado	14010002	Blue	-0.07	49	82,777
١do	14010001	Colorado Headwaters	-0.43	45	94,350
	14010003	Eagle		N/A	
	14020003	Tomichi	-1.89	27	47
	14020004	North Fork Gunnison	-2.89	15	637
Gunnison	14020006	Uncompahgre	0.52	56	64,666
nni	14020001	East-Taylor	-1.82	28	68,005
son	14020002	Upper Gunnison	-3.82	4	382,637
	14020005	Lower Gunnison		N/A	
	14030003	San Miguel	N/A		
Rio	13010002	Alamosa-Trinchera	1.29	66	6,306
၀ G	13010005	Conejos	-1.63	30	15,676
Rio Grande	13010001	Rio Grande Headwaters	2.40	79	37,199
de	13010004	Saguache	N/A		
Sa	14080105	Middle San Juan	-0.52	44	-
n L	14080107	Mancos	2.53	80	5,581
San Juan-Dolores	14080104	Animas	-1.33	34	15,891
I-Do	14080101	Upper San Juan	-1.99	26	55,725
olor	14030002	Upper Dolores	-2.14	24	184,030
.es	14080102	Piedra		N/A	
	10190012	Middle South Platte-Sterling	-3.33	10	31,824
	10190003	Middle South Platte-Cherry Creek	-2.74	17	47,304
δοι	10190005	St. Vrain	-0.70	42	55,559
ıth	10190007	Cache La Poudre	-0.63	42	111,145
Pla	10190001	South Platte Headwater	-0.60	43	146,479
South Platte	10190002	Upper South Platte	-2.09	25	283,113
	10190006	Big Thompson	0.81	60	499,345
	10190004	Clear		N/A	
Ϋ́	14050001	Upper Yampa	-1.41	33	30,929
Įщ	10180001	North Platte Headwaters		N/A	
oa-w	14050002	Lower Yampa		N/A	
	14050003	Little Snake		N/A	
ite	14050005	Upper White		N/A	

November 1, 2022 SWSI Values by HUC and Non Exceedance Probabilities (NE	EP)
november 1, 2022 Sivisi values by noe and non Exceedance Probabilities (ne	-• /

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)

HUC ID	HUC Name	/SI Component Information -Reservoir : Component Name	Component Volume (AF)	Component NEP by Month
11020001		CLEAR CREEK RESERVOIR	6,094	46
		HOMESTAKE RESERVOIR	29,549	32
	Arkansas Headwaters	TWIN LAKES RESERVOIR	57,279	74
		TURQUOISE LAKE	82,507	12
11020006	Huerfano	CUCHARAS RESERVOIR*	0	23
11020010	Purgatoire	TRINIDAD LAKE	18,862	64
11020002	Upper Arkansas	PUEBLO RESERVOIR	175,262	59
		ADOBE CREEK RESERVOIR	9,432	49
11020009	Upper Arkansas-John Martin Reservoir	JOHN MARTIN RESERVOIR	11,471	13
	Upper Arkansas-Lake	LAKE HENRY	96	1
11020005	Meredith	MEREDITH RESERVOIR	697	18
14010002	Blue	GREEN MOUNTAIN RESERVOIR	82,777	49
		WOLFORD MOUNTAIN RESERVOIR	41,750	52
14010001	Colorado Headwaters	WILLIAMS FORK RESERVOIR	52,600	8
14010005	Colorado Headwaters-Plateau	VEGA RESERVOIR	6,624	21
14010004	Roaring Fork	RUEDI RESERVOIR	68,112	8
14020001	East-Taylor	TAYLOR PARK RESERVOIR	68,005	28
14020004	North Fork Gunnison	PAONIA RESERVOIR	637	15
14020004	Tomichi	VOUGA RESERVOIR NEAR DOYLEVILLE	47	27
14020003		RIDGEWAY RESERVOIR	64,666	56
14020000	Uncompahgre	FRUITLAND RESERVOIR	300	59
	Upper Gunnison	SILVER JACK RESERVOIR	1,024	8
14020002		CRAWFORD RESERVOIR	1,024	8
11020002		MORROW POINT RESERVOIR	113,889	85
		BLUE MESA RESERVOIR	266,056	4
	Alamosa-Trinchera	TERRACE RESERVOIR	3,055	57
13010002			3,055	74
13010005	Conejos	PLATORO RESERVOIR	15,676	30
13010005	conejos	CONTINENTAL RESERVOIR	8,723	87
13010001	Rio Grande Headwaters	SANTA MARIA RESERVOIR	9,638	62
13010001				84
14080104	Animas	RIO GRANDE RESERVOIR LEMON RESERVOIR	18,838 15,891	34
14080104	Mancos	JACKSON GULCH RESERVOIR	5,581	80
14080105	Middle San Juan	LONG HOLLOW RESERVOIR GROUNDHOG RESERVOIR	0	44
14030002	Upper Dolores			
14080101	Linner Can Juan		184,030	26
14060101	Upper San Juan		55,725	26
	Dia Thomason		400	16
			2,300	14
10190006			2,600	22
10190000	Big Thompson		5,420	9
		BOYD LAKE	22,500	33
			57,046	63
		LAKE GRANBY	409,079	70

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		CACHE LA POUDRE	100	7
		HALLIGAN RESERVOIR	3,200	80
		FOSSIL CREEK RESERVOIR	3,500	25
10190007	Cache La Poudre	BLACK HOLLOW RESERVOIR	3,800	91
10190007		CHAMBERS LAKE	5,200	78
		WINDSOR RESERVOIR	7,500	36
		COBB LAKE	15,100	51
		HORSETOOTH RESERVOIR	72,745	54
		HORSECREEK RESERVOIR	1,400	18
10190003	Middle South Platte-Cherry	MILTON RESERVOIR	2,302	12
10190005	Creek	BARR LAKE	6,502	16
		STANDLEY RESERVOIR	37,100	64
	Middle South Platte-Sterling	JULESBURG RESERVOIR	2,983	14
		RIVERSIDE RESERVOIR	3,722	11
10190012		EMPIRE RESERVOIR	5,453	29
10190012		JACKSON LAKE RESERVOIR	5,915	24
		POINT OF ROCKS RESERVOIR	6,236	17
		PREWITT RESERVOIR	7,515	14
	South Platte Headwater	ANTERO RESERVOIR	20,100	91
10190001		SPINNEY MOUNTAIN RESERVOIR	25,579	15
		ELEVENMILE CANYON RESERVOIR	100,800	97
	St. Vrain	MARSHALL RESERVOIR	4,400	32
		TERRY RESERVOIR	7,500	98
10190005		UNION RESERVOIR	11,522	64
		GROSS RESERVOIR	16,000	22
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,137	70
10190002	Upper South Platte	CHEESMAN LAKE	66,413	57
10170002		DILLON RESERVOIR	216,700	19
14050001	Upper Yampa	YAMCOLO RESERVOIR	4,029	36
14050001	оррег таптра	STAGECOACH RESERVOIR NR OAK CREEK	26,900	29

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:

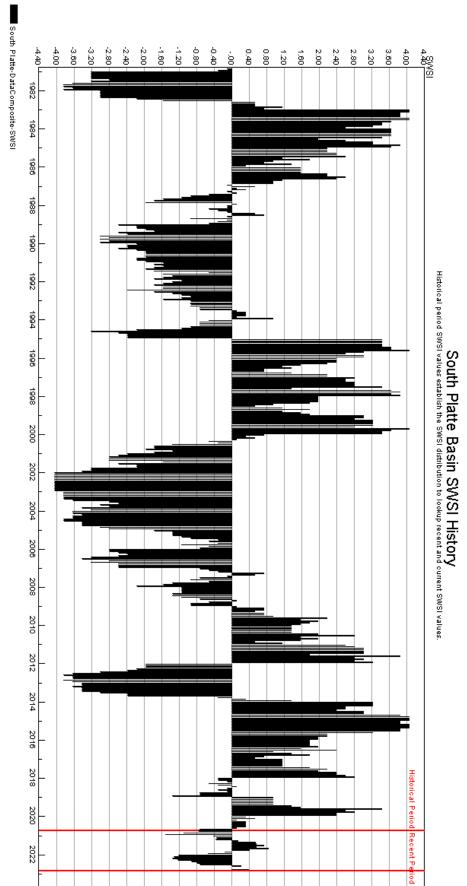
0 (Well Below Normal)

50 (Normal)

100 (Well Above Normal)

SOUTH PLATTE BASIN

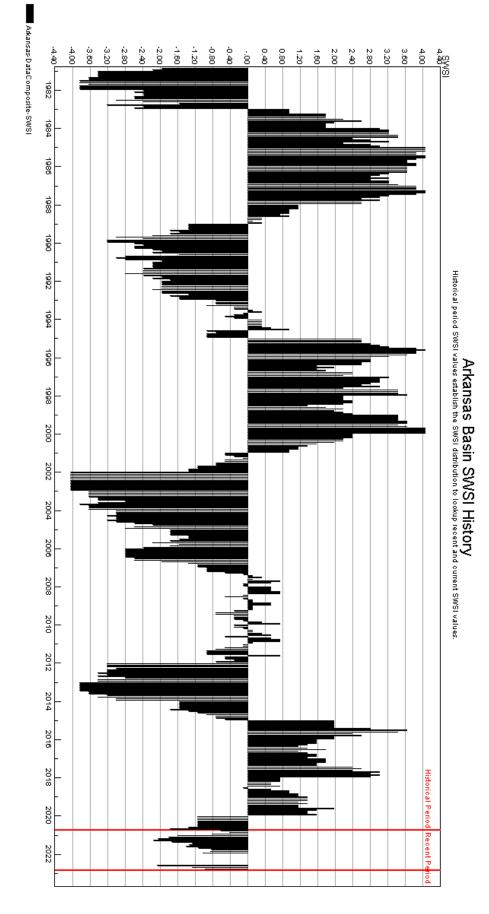
The SWSI value for the month was -0.2.



ARKANSAS BASIN

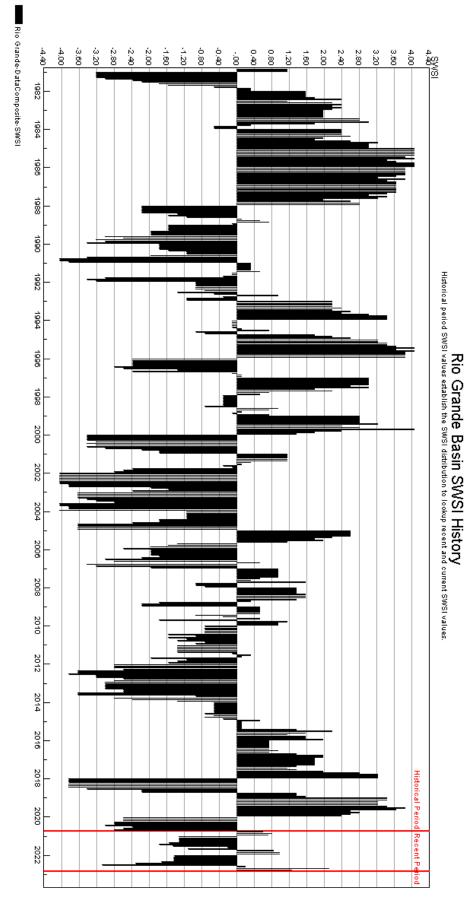
The SWSI value for the month was -0.9.

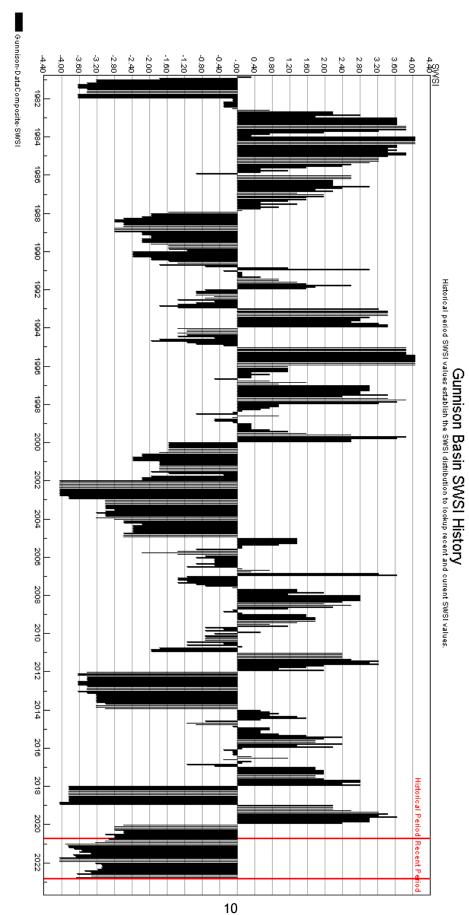
Nov-22



RIO GRANDE BASIN

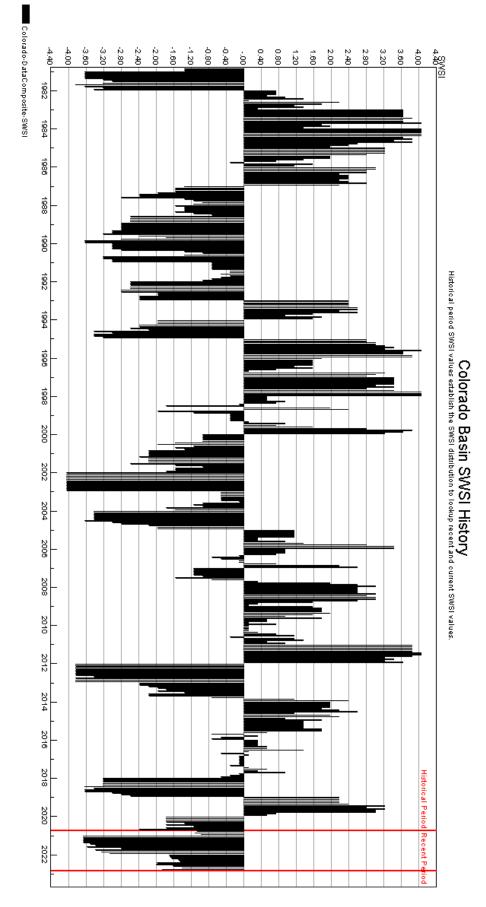
The SWSI value for the month was +1.3.

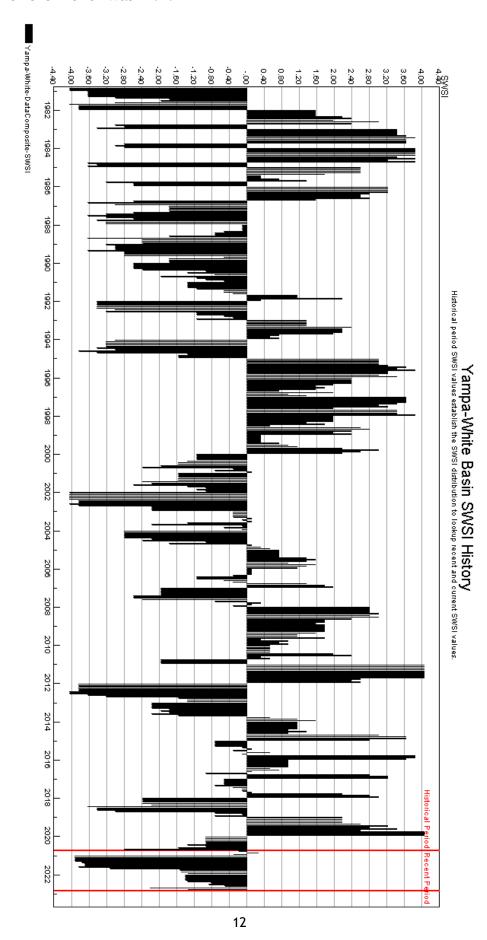




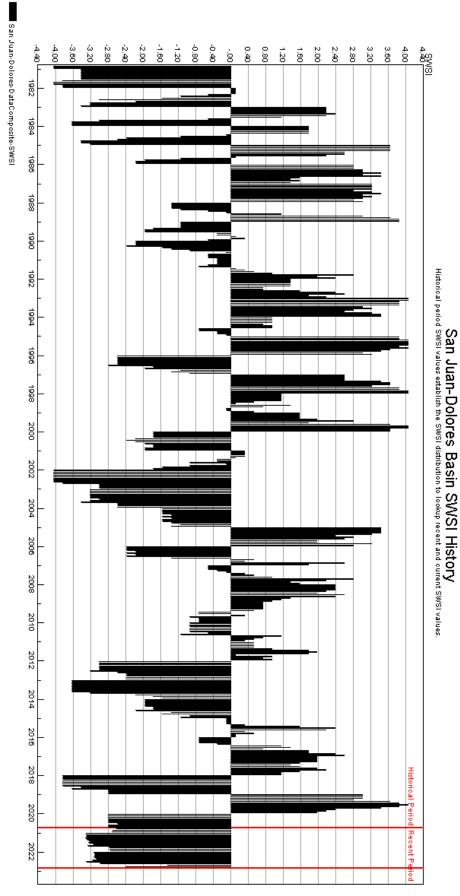
COLORADO BASIN

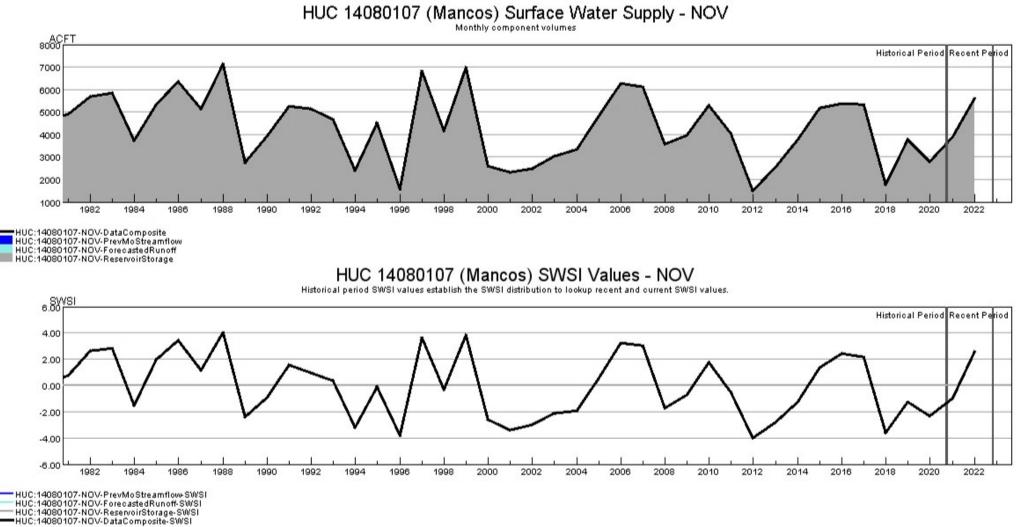
The SWSI value for the month was -2.1.



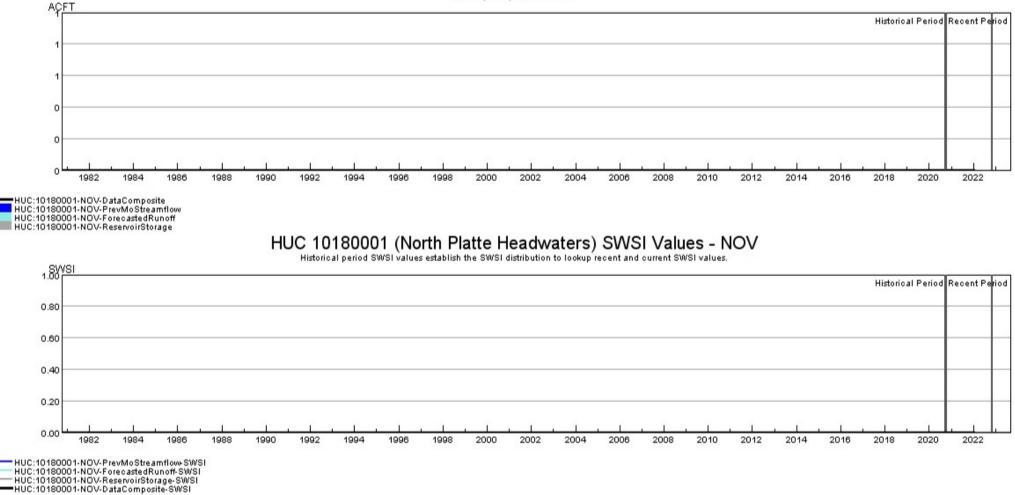


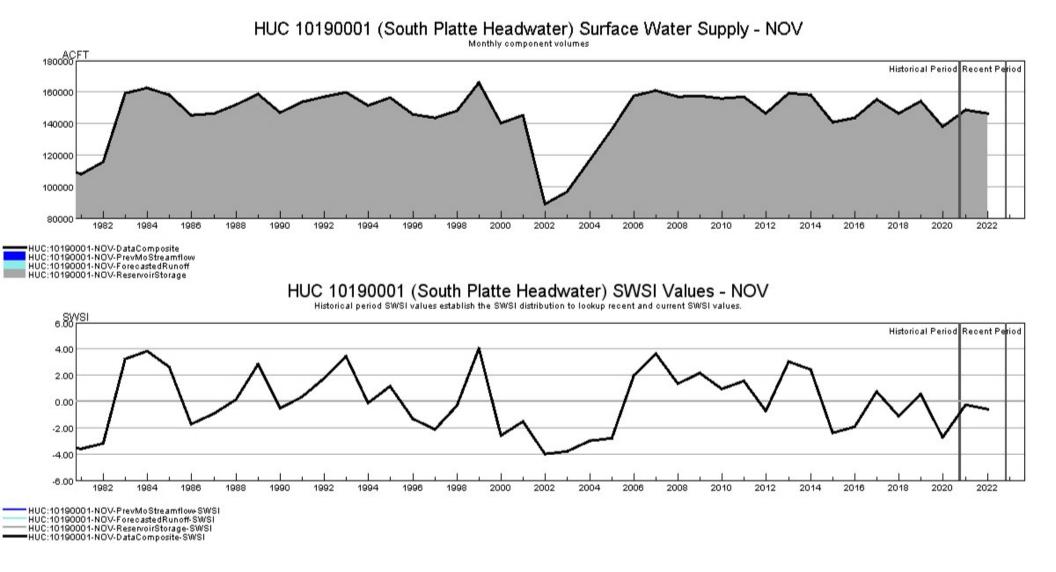
The SWSI value for the month was -1.4.

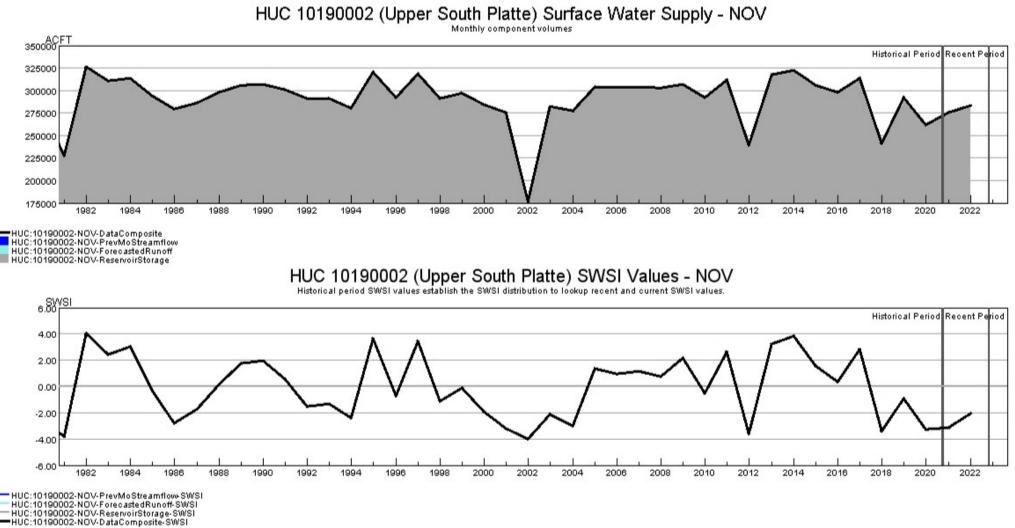


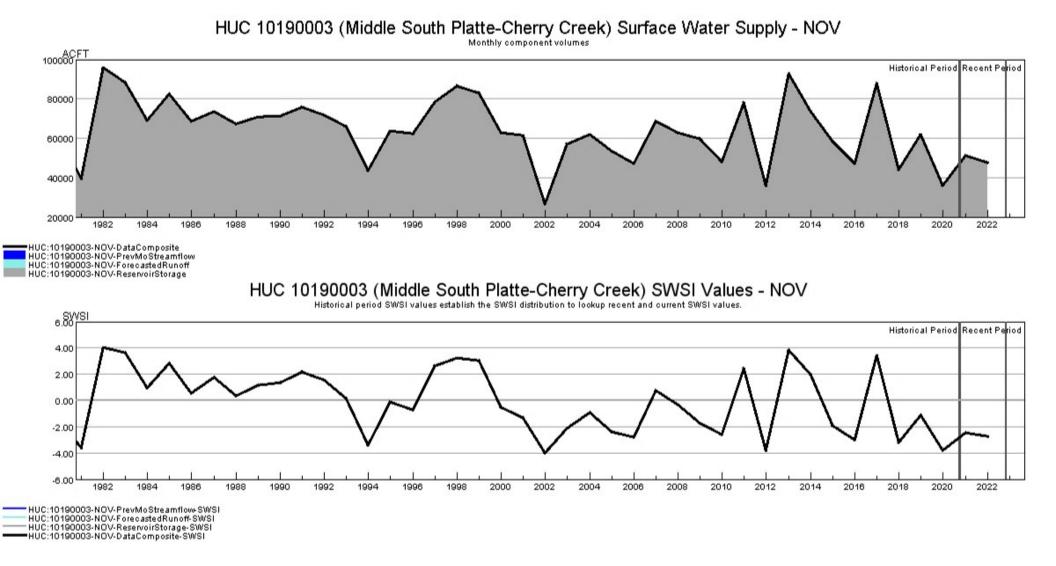


HUC 10180001 (North Platte Headwaters) Surface Water Supply - NOV

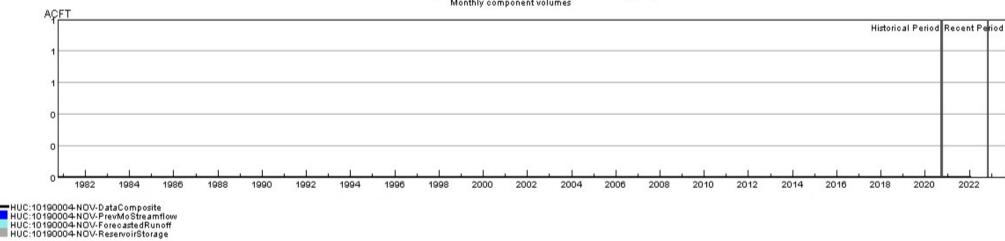






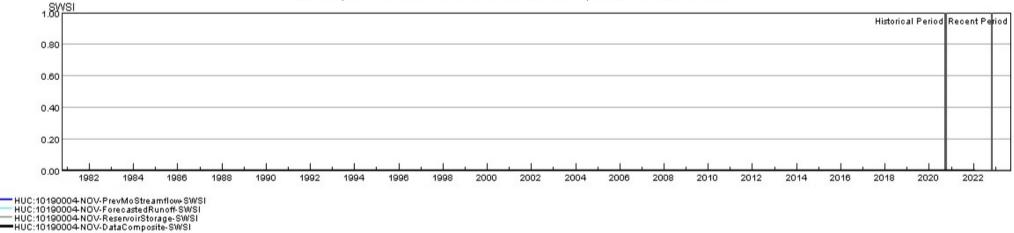


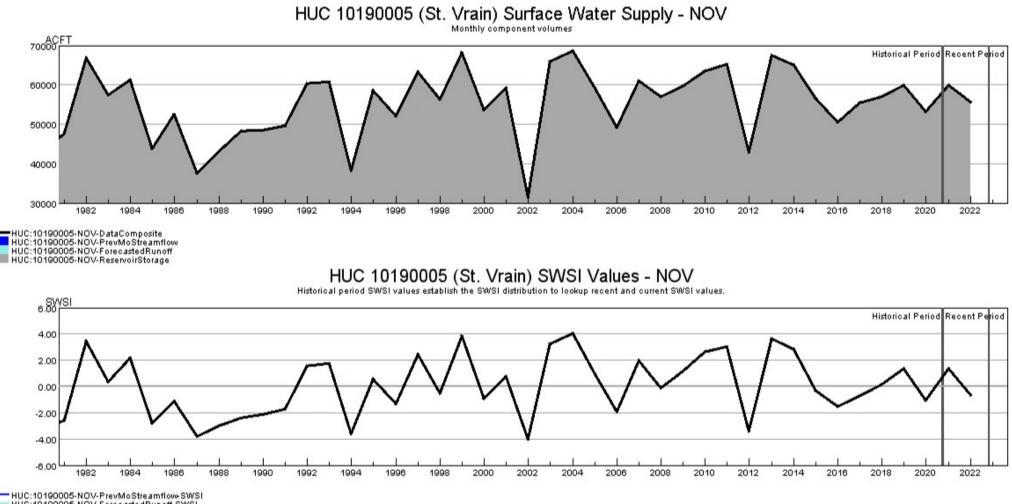
HUC 10190004 (Clear) Surface Water Supply - NOV



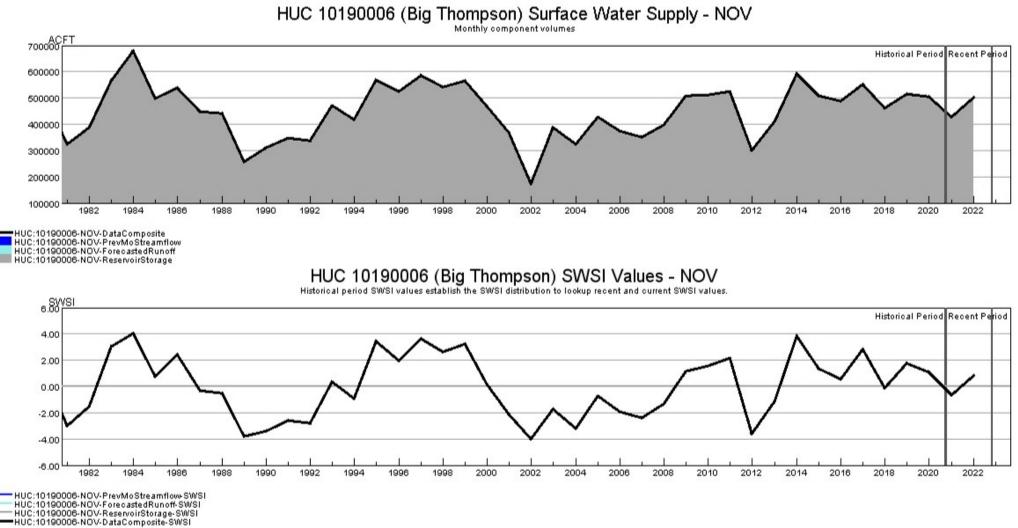
HUC 10190004 (Clear) SWSI Values - NOV

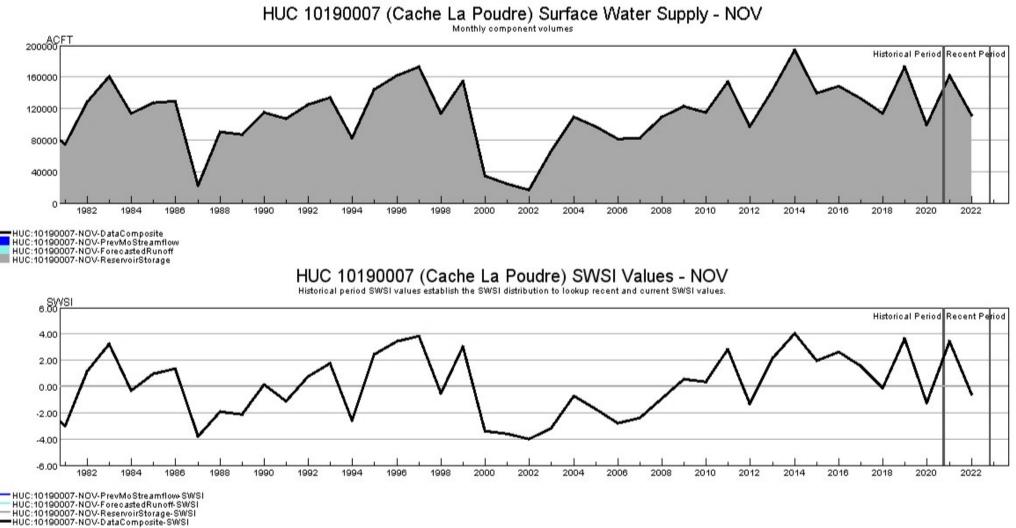
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

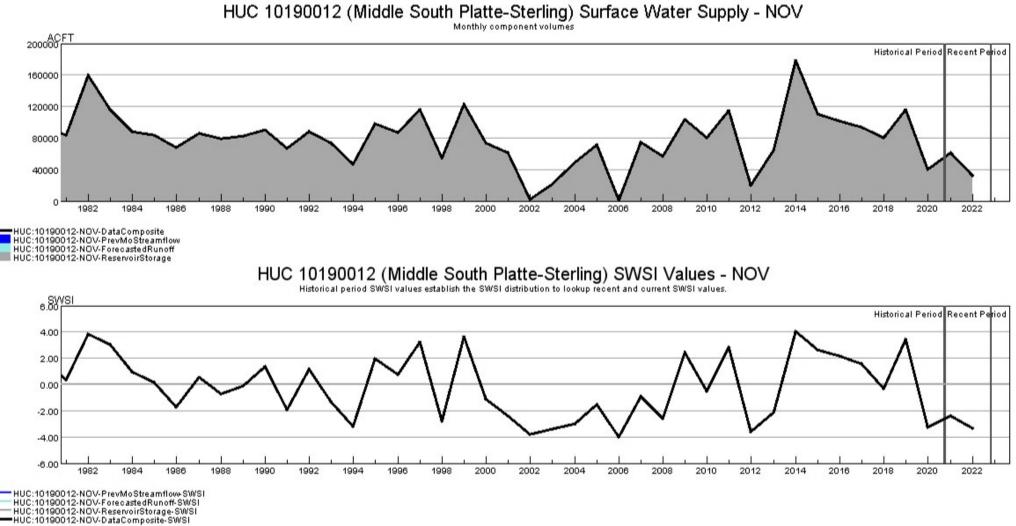


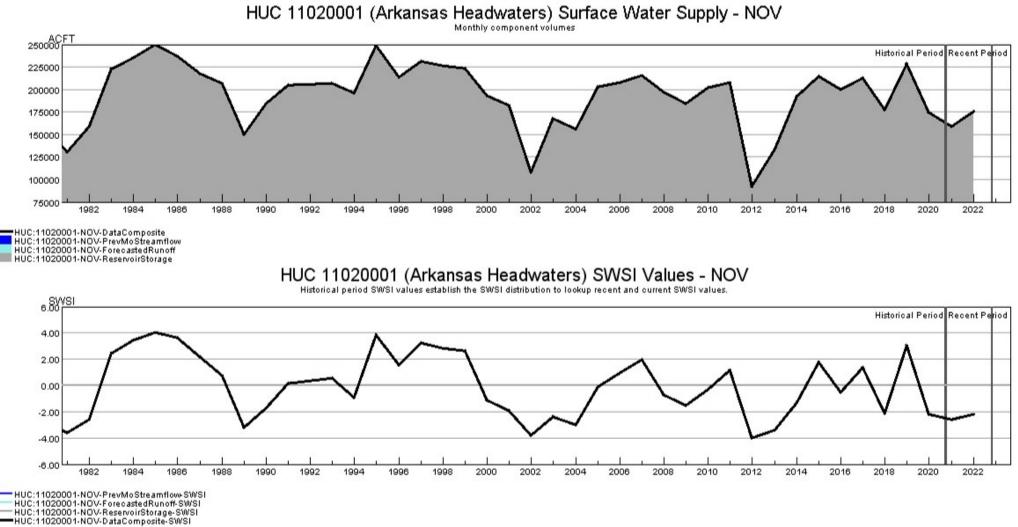


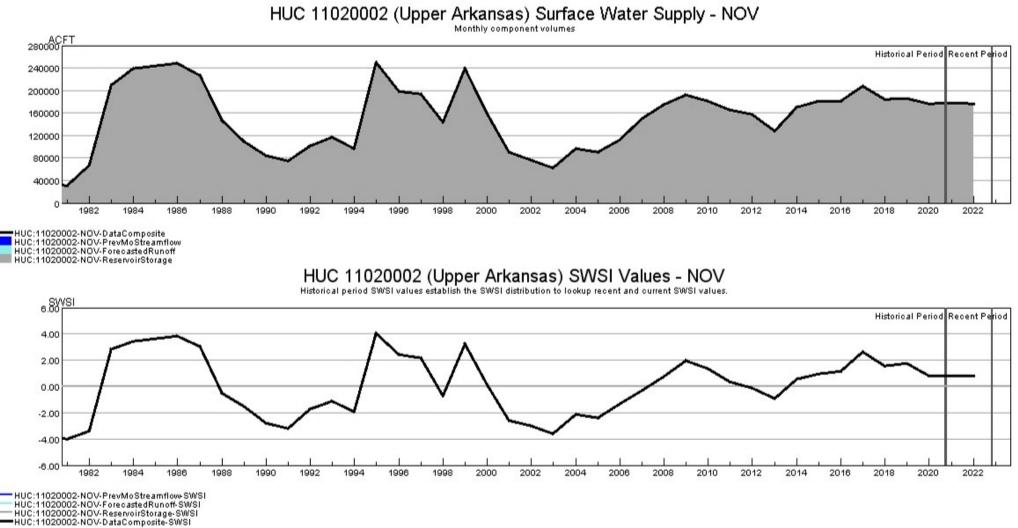
HUC:10190005-NOV-Freversteam100-SWS HUC:10190005-NOV-ForeoastedRunoff-SWSI HUC:10190005-NOV-DataComposite-SWSI

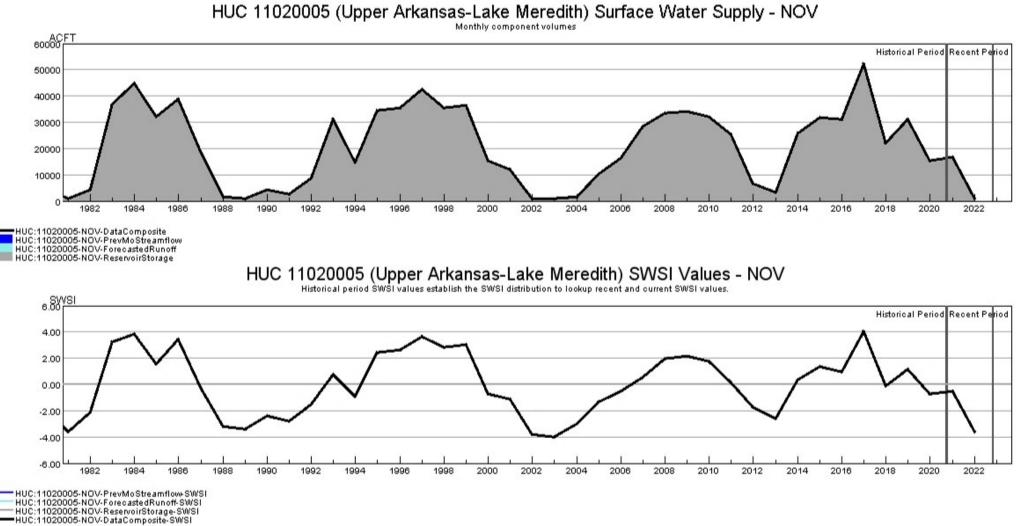


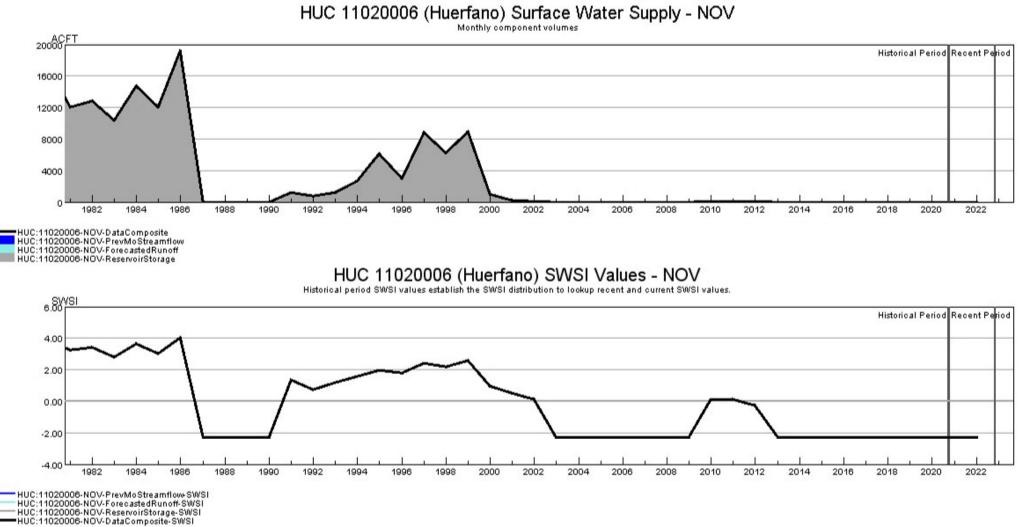


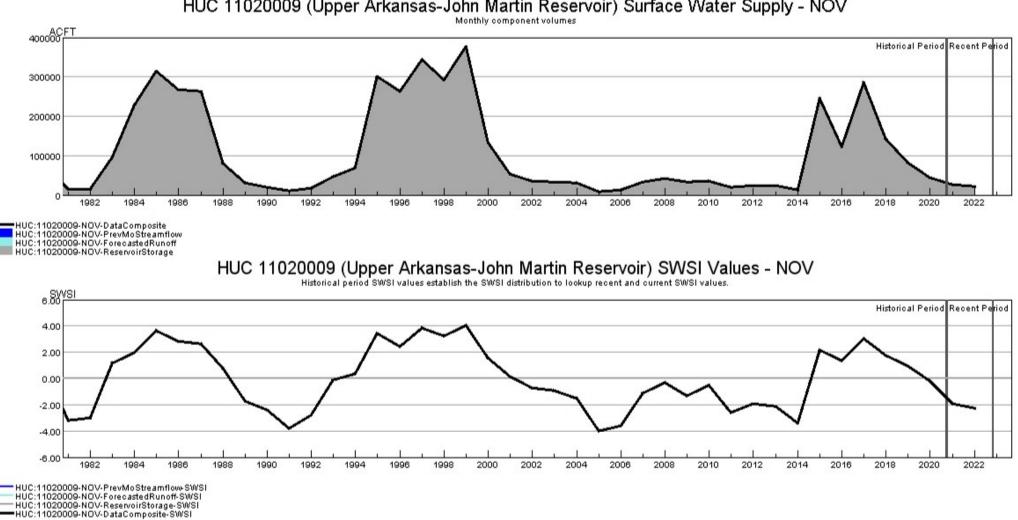




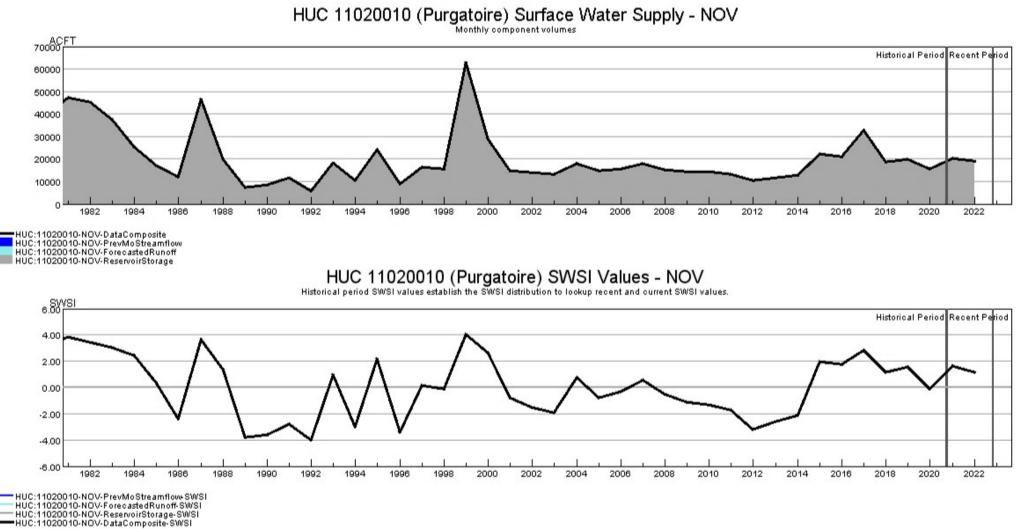


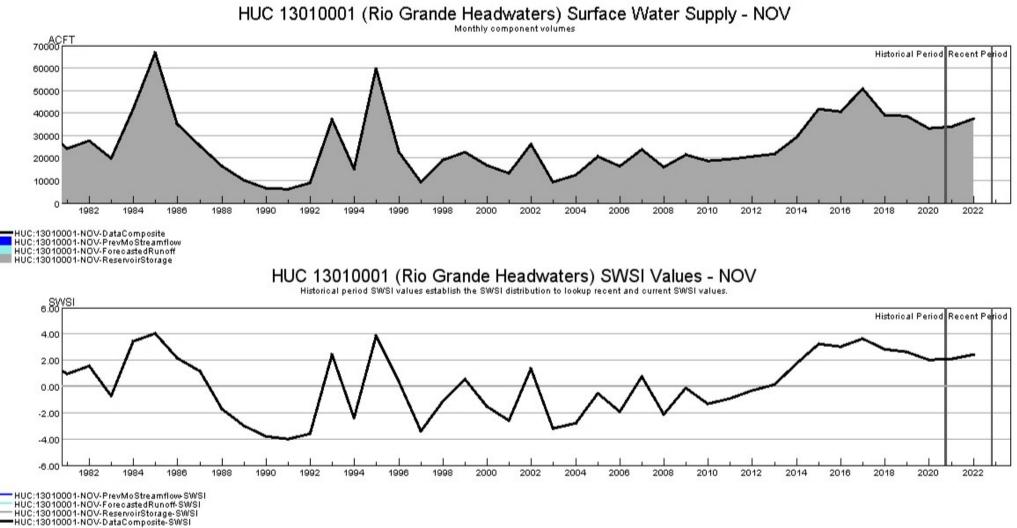


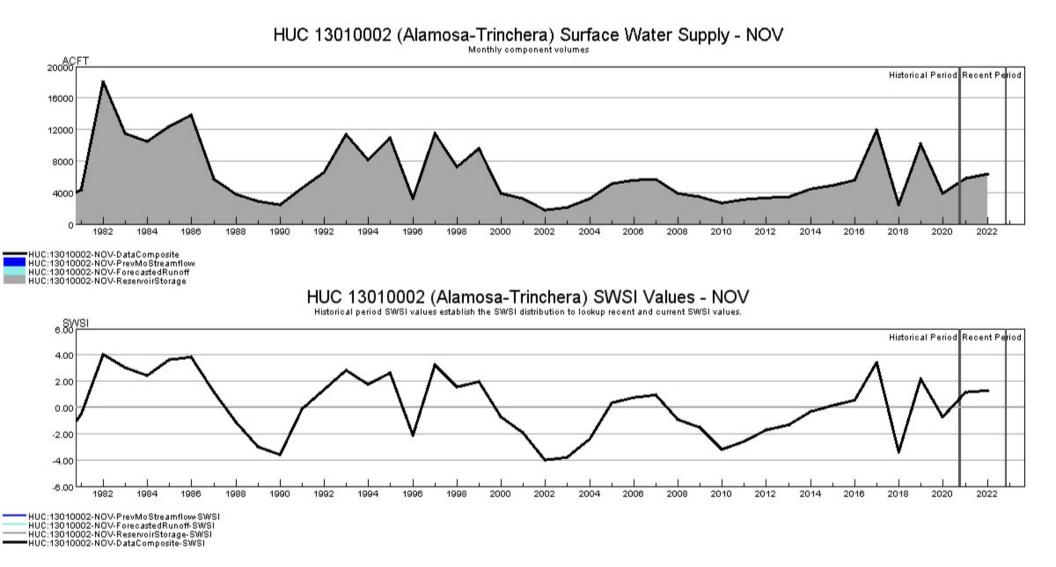




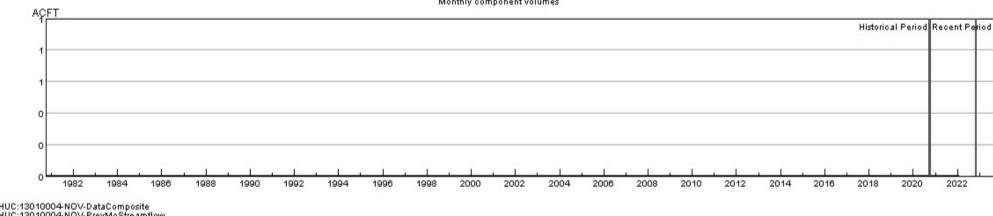
HUC 11020009 (Upper Arkansas-John Martin Reservoir) Surface Water Supply - NOV





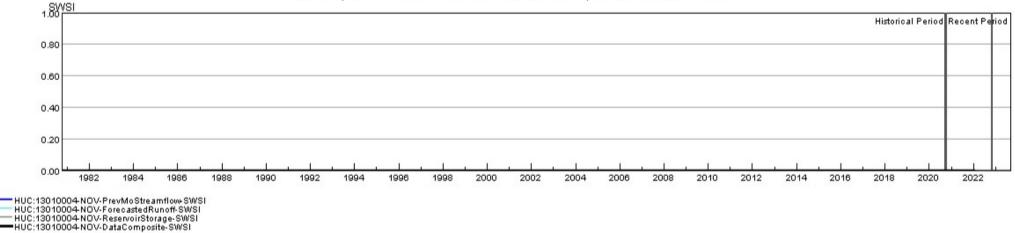


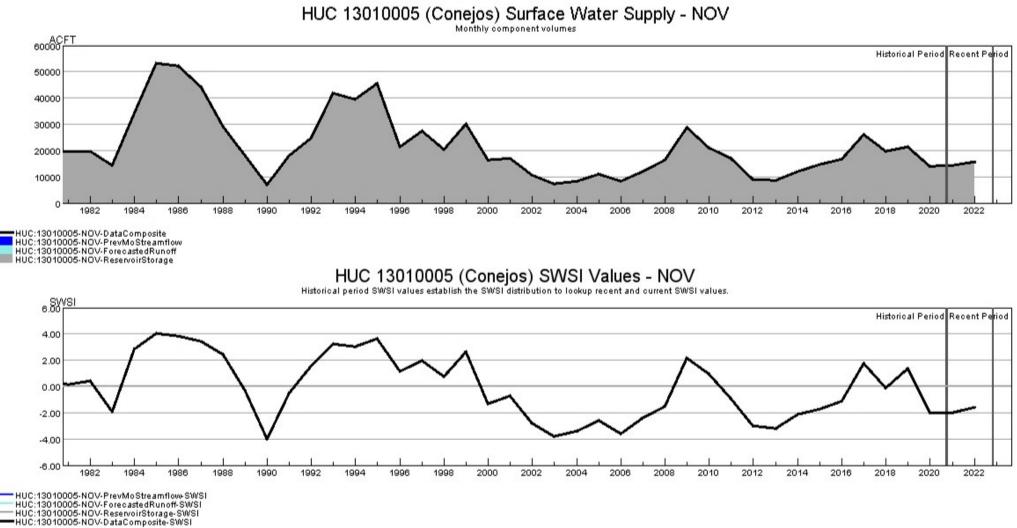
HUC 13010004 (Saguache) Surface Water Supply - NOV

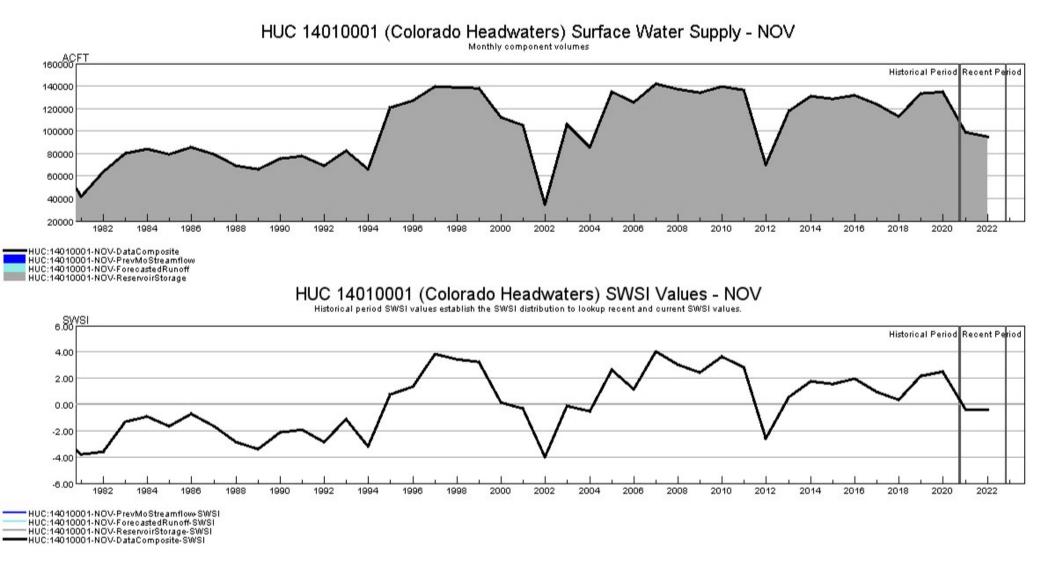


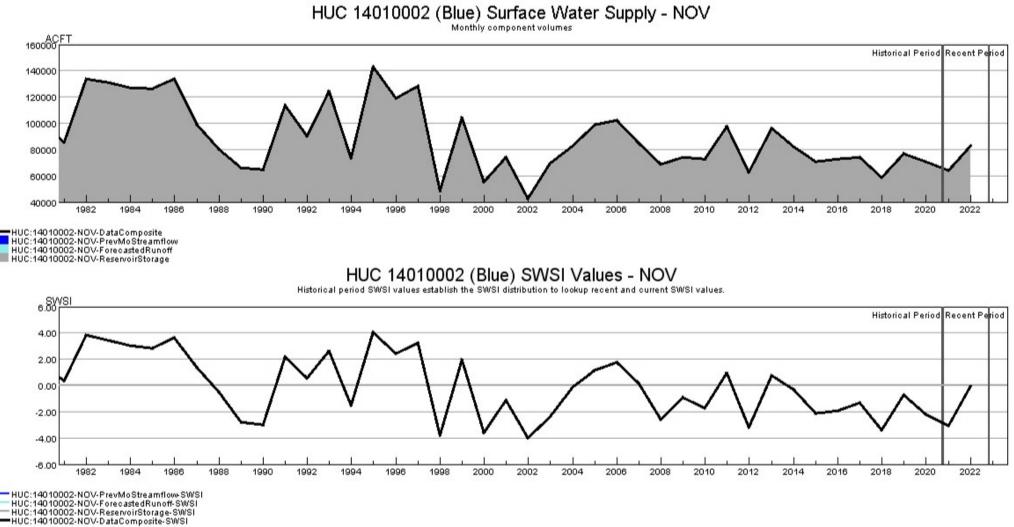
HUC:13010004NOV-DataComposite HUC:13010004NOV-PrevMoStreamflow HUC:13010004NOV-ForecastedRunoff HUC:13010004NOV-ReservoirStorage

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

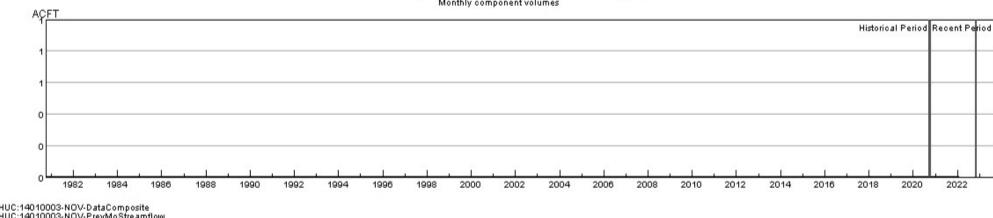






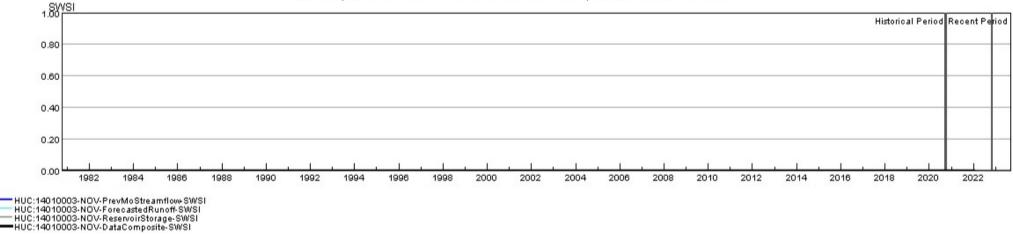


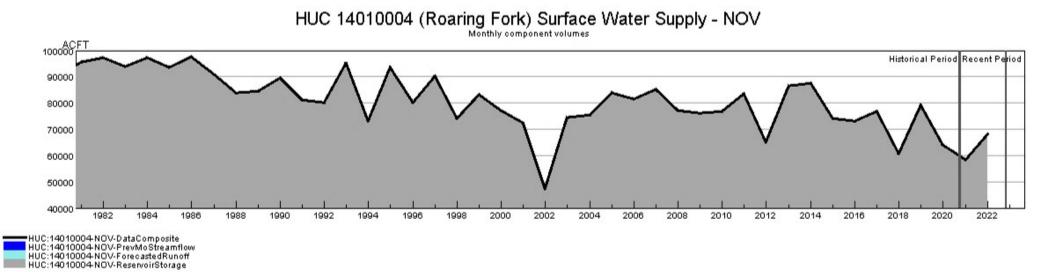
HUC 14010003 (Eagle) Surface Water Supply - NOV



HUC:14010003-NOV-DataComposite HUC:14010003-NOV-PrevMoStreamflow HUC:14010003-NOV-ForecastedRunoff HUC:14010003-NOV-ReservoirStorage

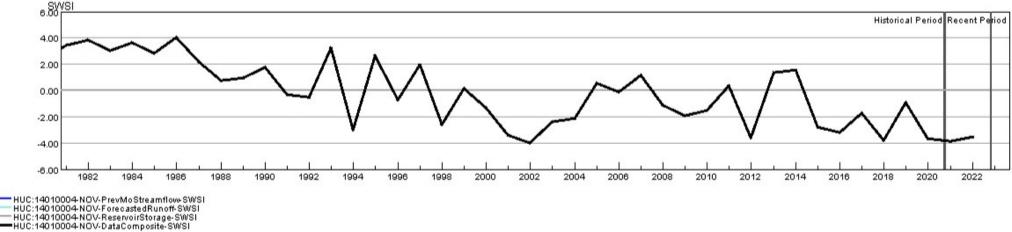
HUC 14010003 (Eagle) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

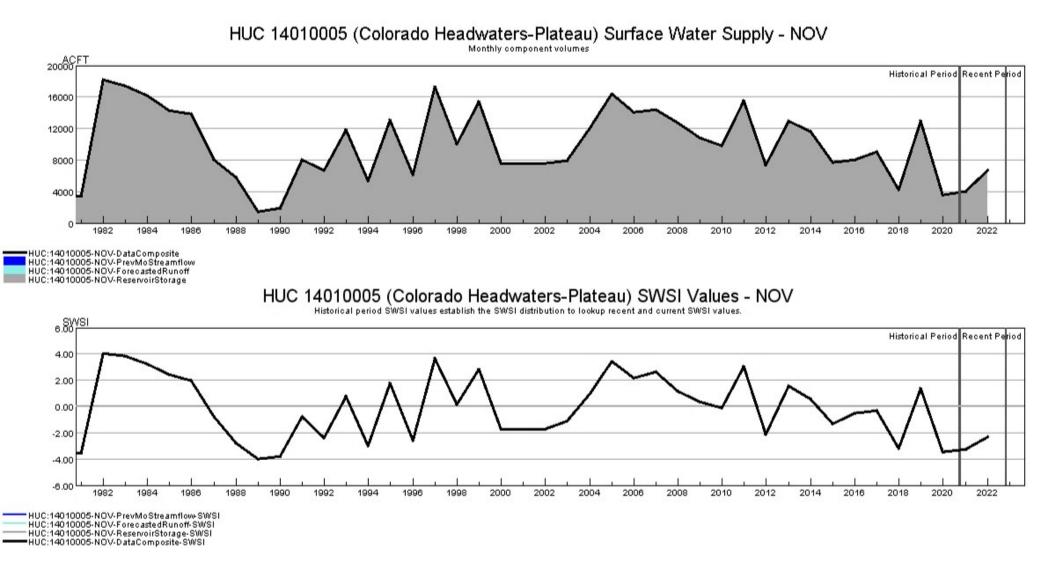


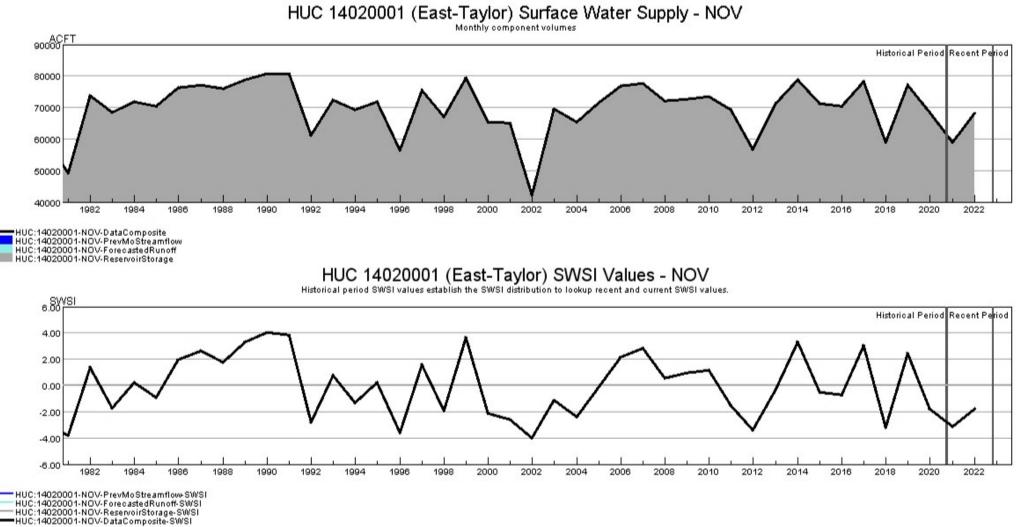


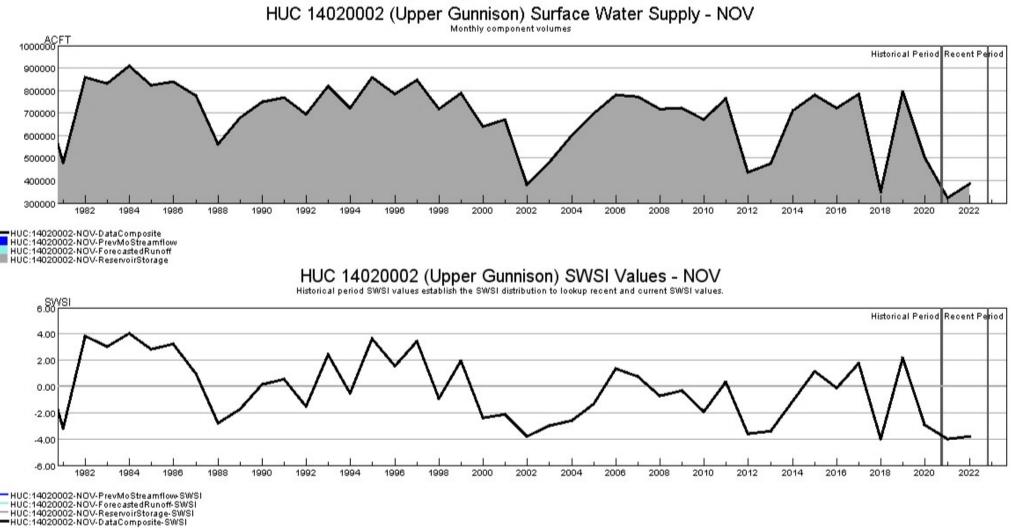
HUC 14010004 (Roaring Fork) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

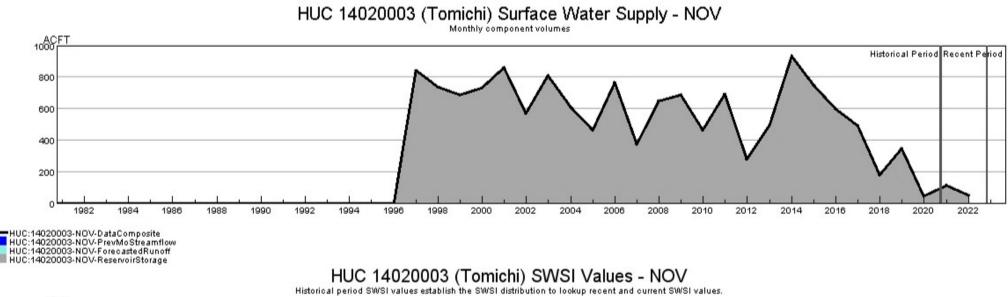


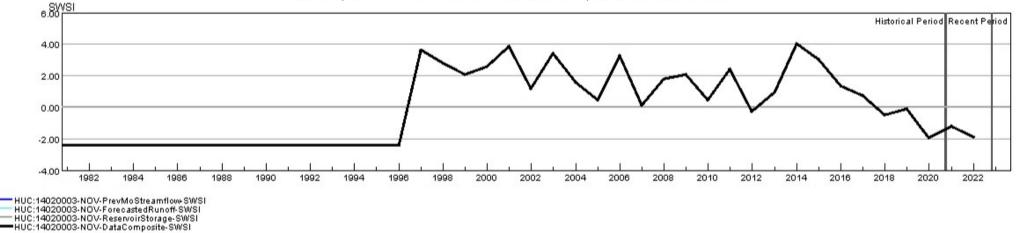


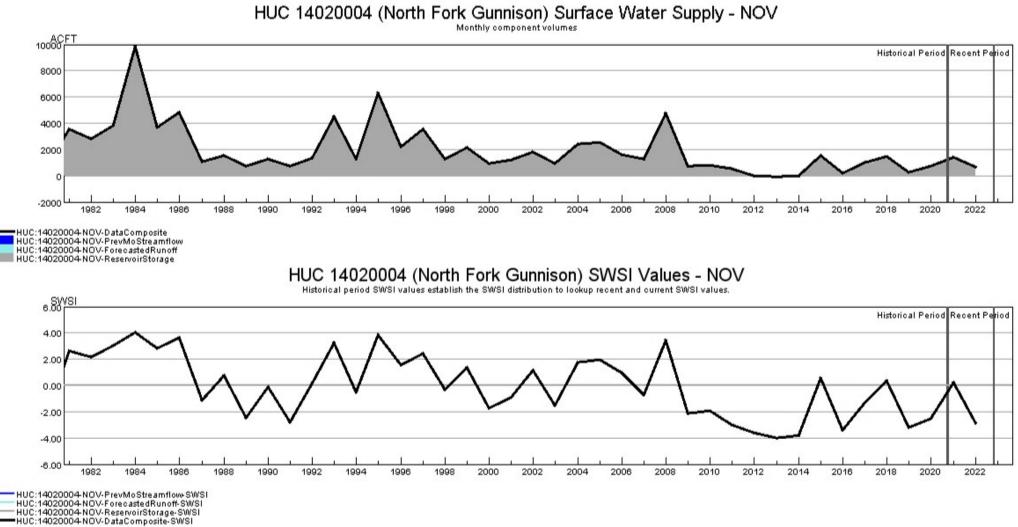




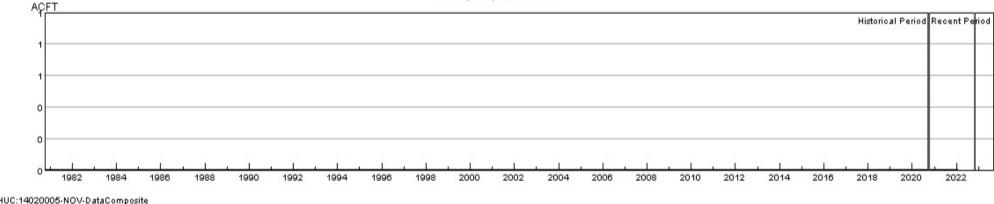






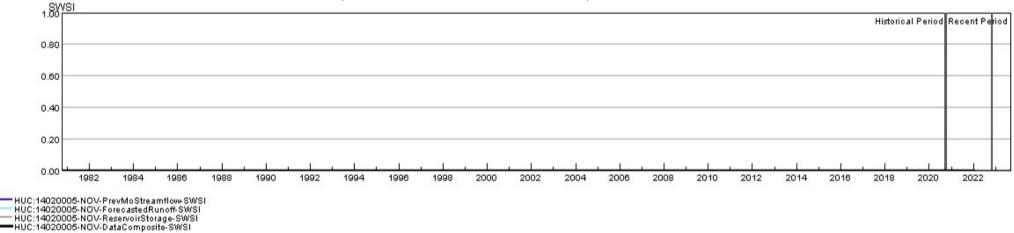


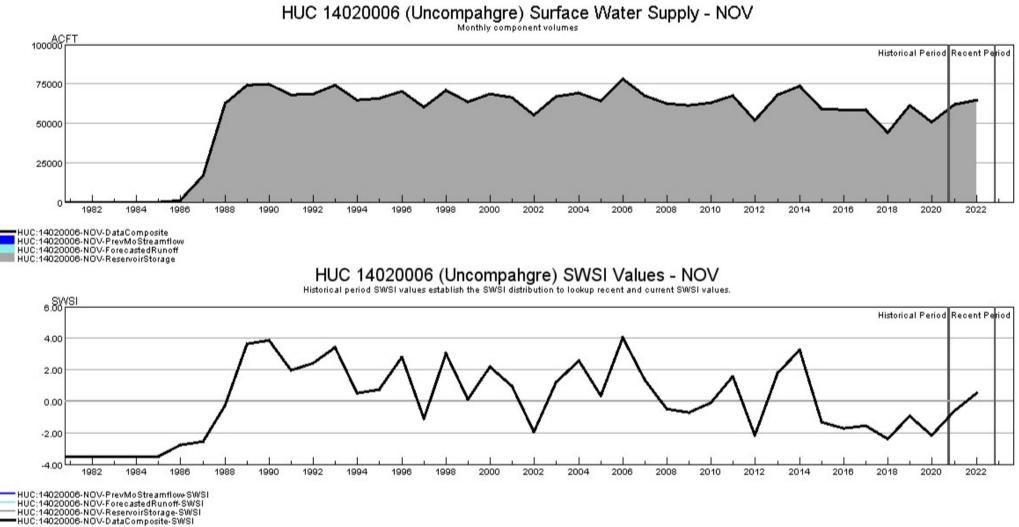
HUC 14020005 (Lower Gunnison) Surface Water Supply - NOV

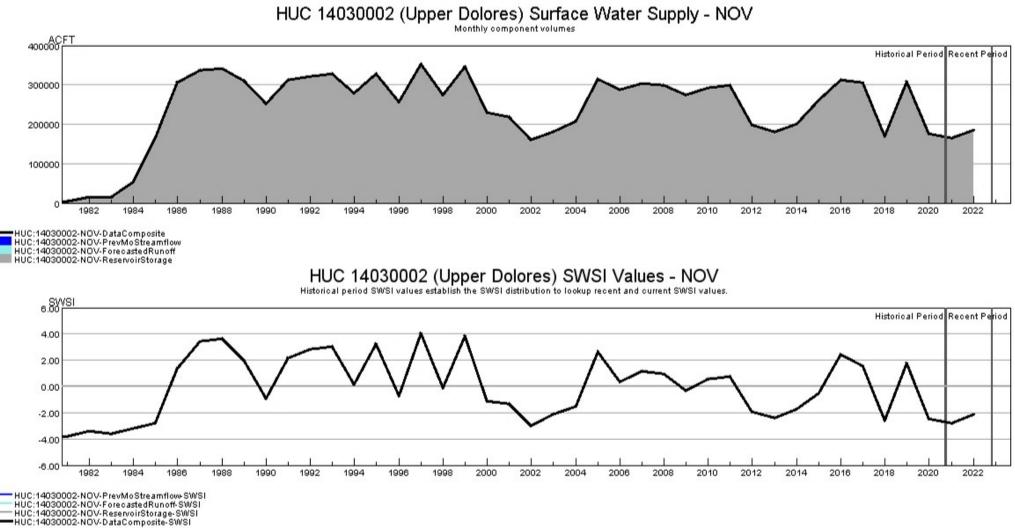


HUC:14020005-NOV-DataComposite HUC:14020005-NOV-PrevMoStreamflow HUC:14020005-NOV-ForecastedRunoff HUC:14020005-NOV-ReservoirStorage

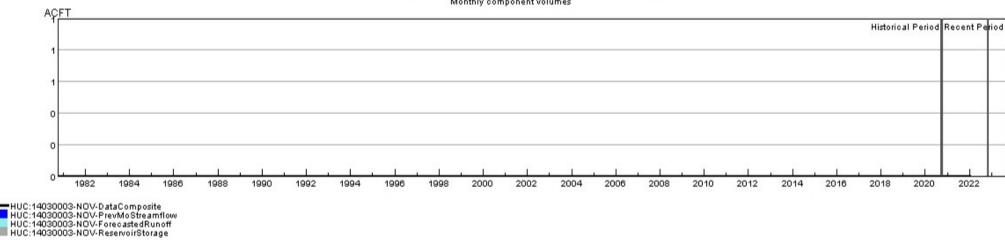
HUC 14020005 (Lower Gunnison) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



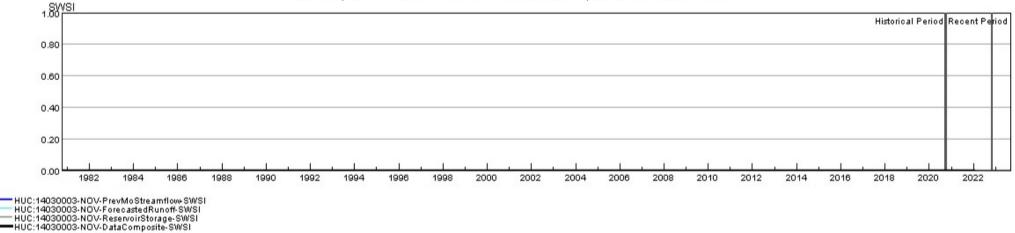


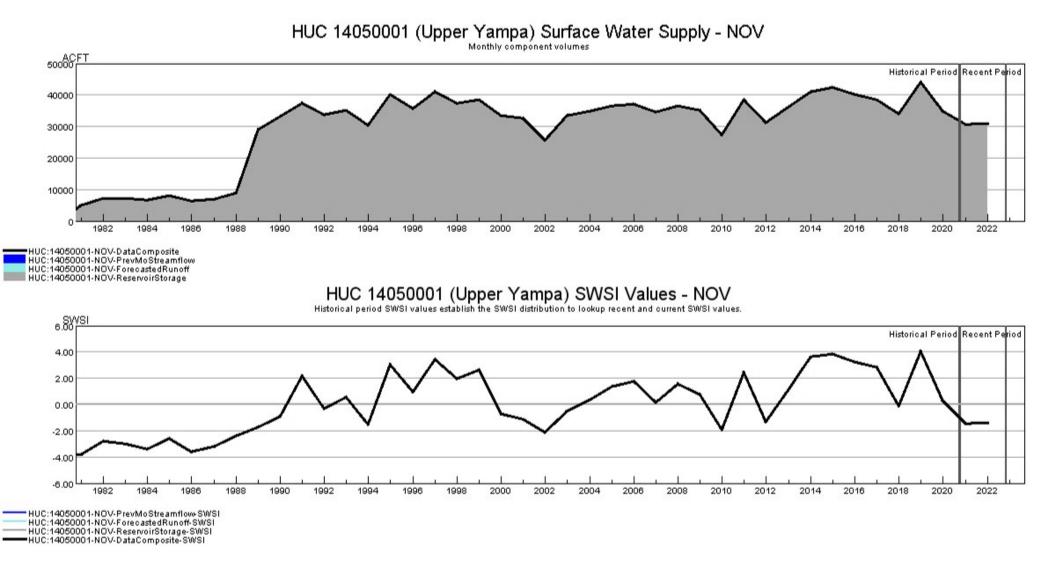


HUC 14030003 (San Miguel) Surface Water Supply - NOV

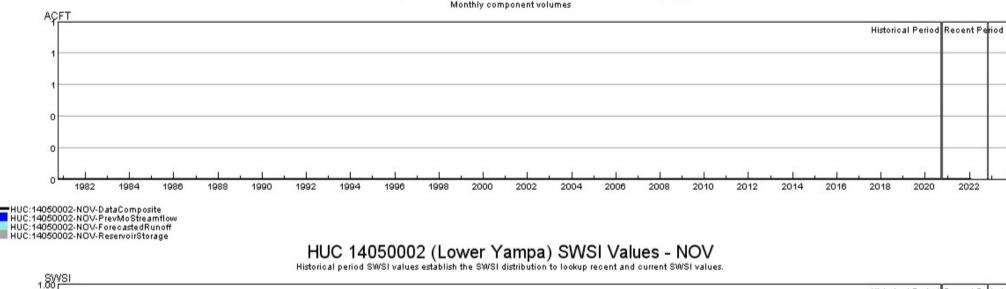


HUC 14030003 (San Miguel) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.





HUC 14050002 (Lower Yampa) Surface Water Supply - NOV

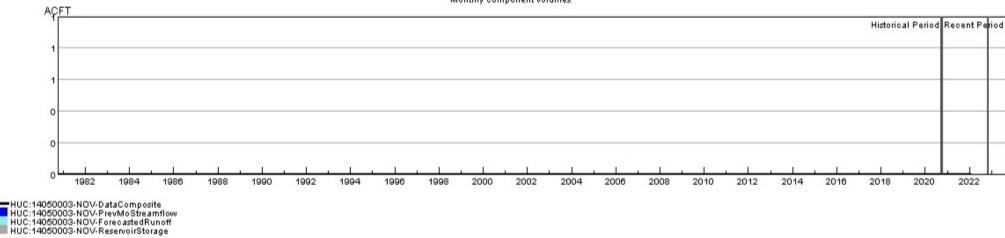


Historical Period Recent Period

0.60 0.40 0.20 0.00 HUC:14050002-NOV-PrevMoStreamflow-SWSI HUC:14050002-NOV-ForecastedRunoff-SWSI HUC:14050002-NOV-ReservoirStorage-SWSI HUC:14050002-NOV-DataComposite-SWSI

0.80

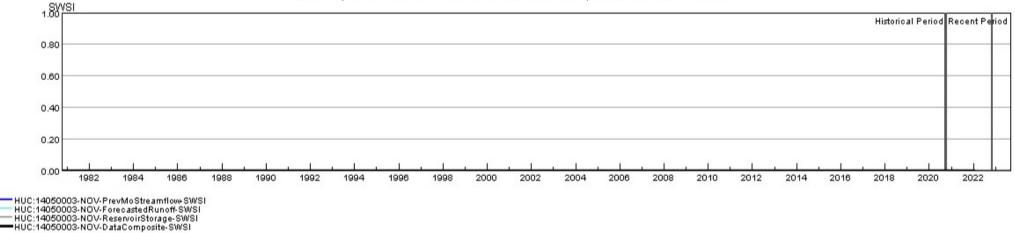
HUC 14050003 (Little Snake) Surface Water Supply - NOV



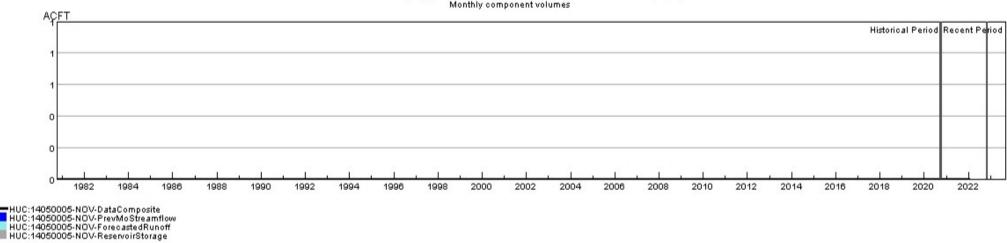
Monthly component volumes

HUC 14050003 (Little Snake) SWSI Values - NOV

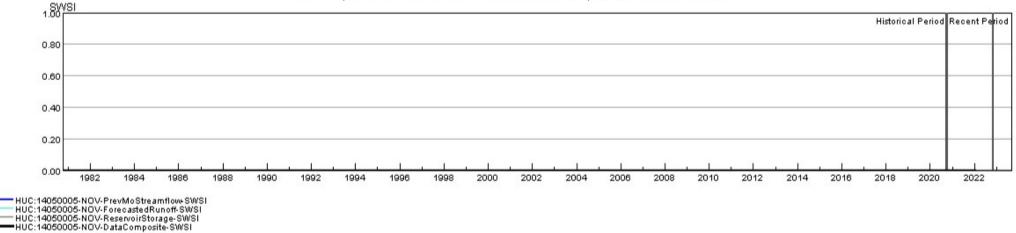
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

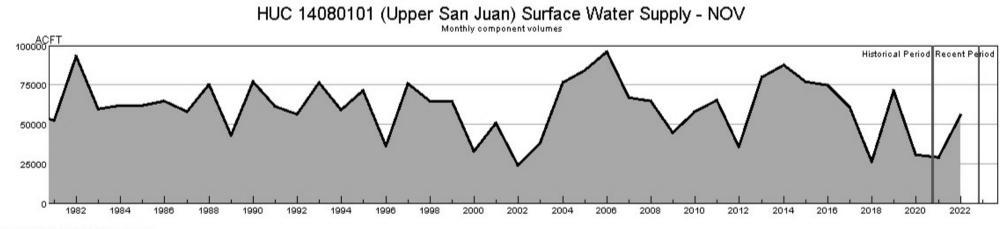


HUC 14050005 (Upper White) Surface Water Supply - NOV



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

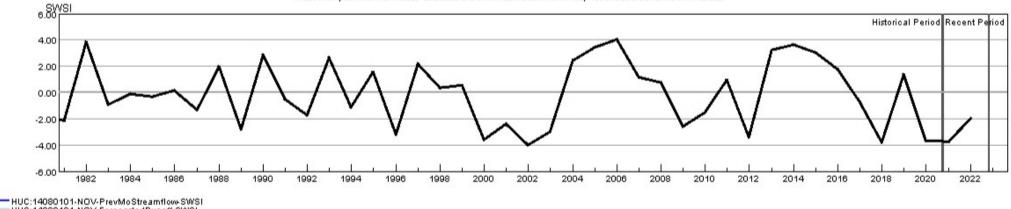




HUC:14080101-NOV-DataComposite HUC:14080101-NOV-PrevMoStreamflow HUC:14080101-NOV-ForecastedRunoff HUC:14080101-NOV-ReservoirStorage

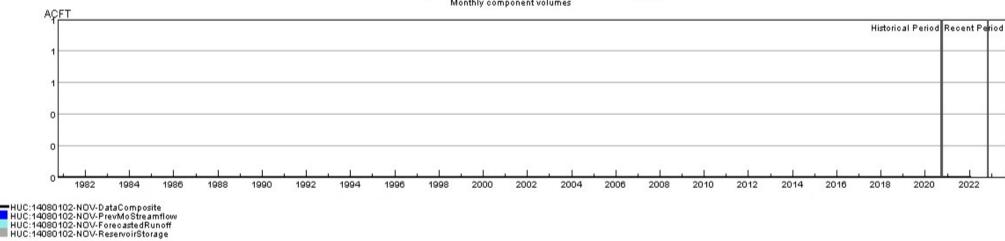
HUC 14080101 (Upper San Juan) SWSI Values - NOV Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.





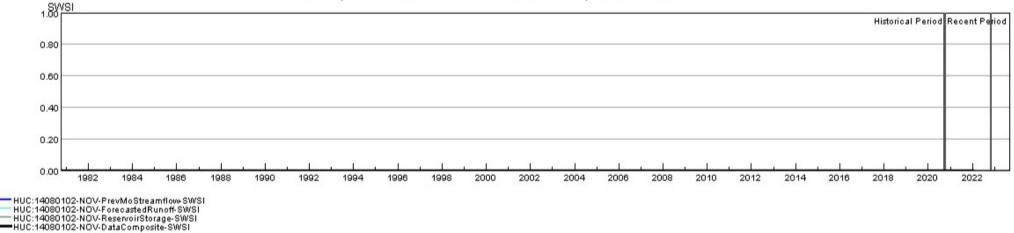
HUC:14080101-NOV-FreeMostream1000-SWS HUC:14080101-NOV-ForecastedRunoff-SWSI HUC:14080101-NOV-ReservoirStorage-SWSI HUC:14080101-NOV-DataComposite-SWSI

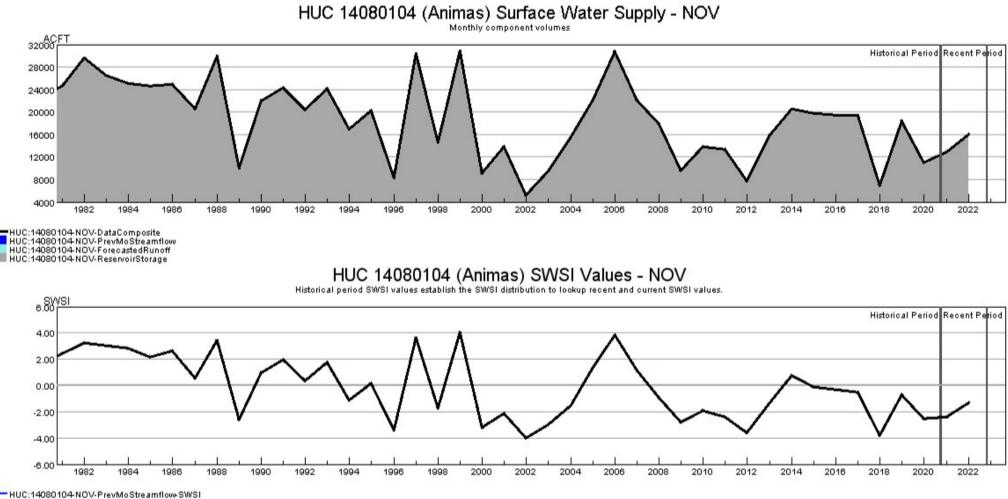
HUC 14080102 (Piedra) Surface Water Supply - NOV



HUC 14080102 (Piedra) SWSI Values - NOV

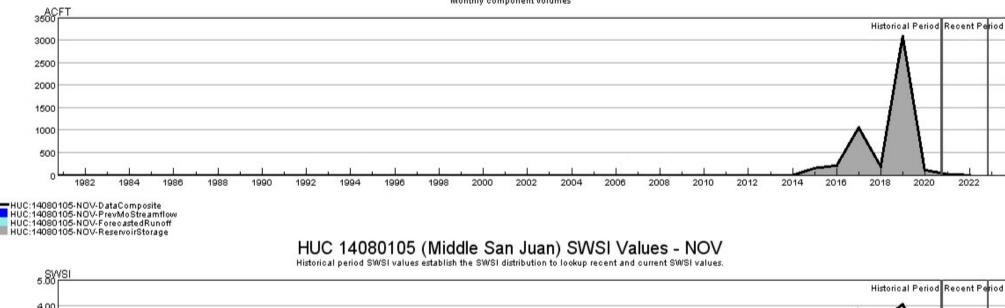
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.





HUC:14080104-NOV-FreeMostream100-SWS HUC:14080104-NOV-ForeastedRunoff-SWSI HUC:14080104-NOV-DataComposite-SWSI

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



4.00 3.00 2.00 1.00 0.00 -1.00 HUC:14080105-NOV-PrevMoStreamflow-SWSI

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