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> October 1, 2020

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 1970 and 2010.

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

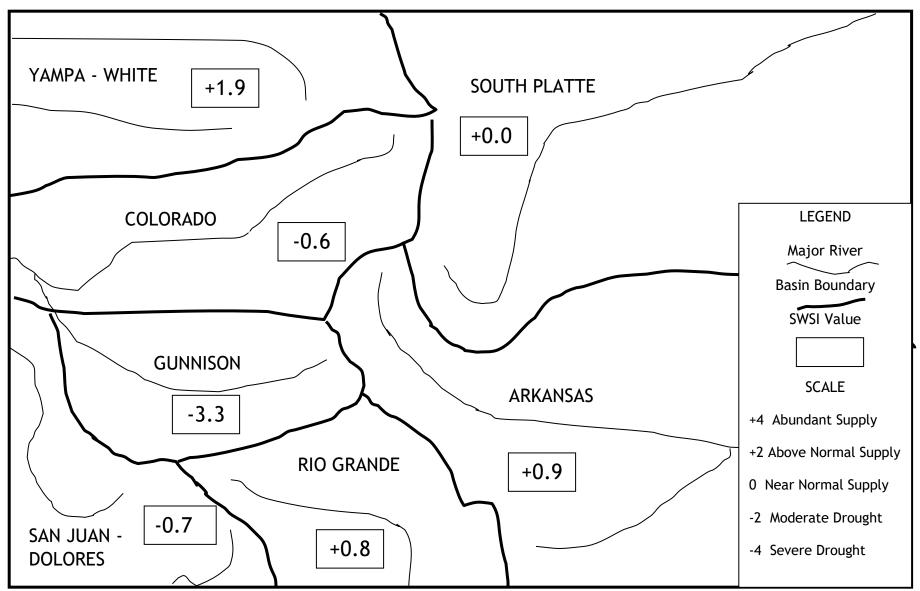
In 2015, CWCB and the Division of Water Resources (DWR) (both Divisions of the Colorado Department of Natural Resources) completed a software project to implement an automated calculation of the SWSI and to document the underlying hydrologic data. July 1, 2015 was the first month that the automated DNR 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 January 1) is based solely on reservoir storage at the end of last month, in this case September 30. The following SWSI values were computed for each of the seven major basins for October 1, 2020. Water supply conditions, as represented by water in storage, are well below normal in the Gunnison River Basin to above normal in the Yampa-White Platte River Basin.

Basin	October 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	0.9	1.3	-1.1
Colorado	-0.6	2.1	-3.8
Gunnison	-3.3	-0.1	-6.2
Rio Grande	0.8	2.8	-1.9
San Juan-Dolores	-0.7	0.6	-3.3
South Platte	0.0	0.2	-3.2
Yampa-White	1.9	4.3	-2.1

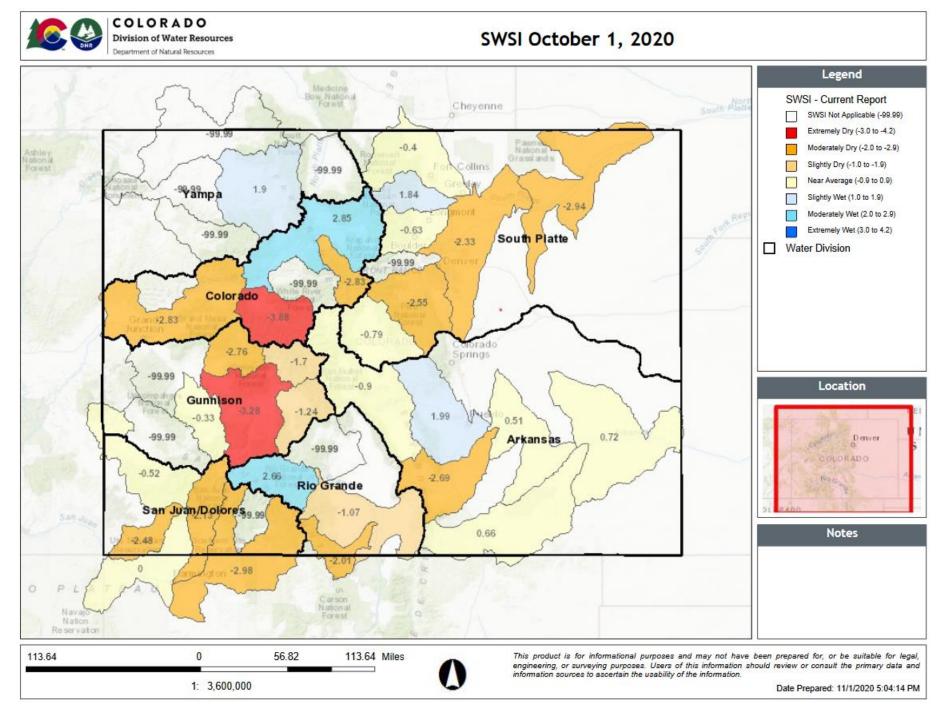
*Last month's SWSI, September 1, 2020, is based on streamflow plus reservoir storage. This month's SWSI is based only on reservoir storage. Direct comparisons of the two should be made with caution since they are based on different metrics.

				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

October 1, 2020



Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Total Vol (AF)
	11020006	Huerfano	-2.69	18	0
▶ 11020005		Upper Arkansas-Lake Meredith	0.51	56	14,980
Tra 11020010	Purgatoire	0.66	58	15,440	
Arian 11020009 11020009 11020001 11020001 11020002		Upper Arkansas-John Martin Reservoir	0.72	59	44,286
		Arkansas Headwaters	-0.90	39	175,455
		Upper Arkansas	1.99	74	178,000
	14010005	Colorado Headwaters-Plateau	-2.84	16	3,520
င်	14010004	Roaring Fork	-3.88	3	70,623
Colorado	14010002	Blue	-2.83	16	88,199
do	14010001	Colorado Headwaters	2.86	84	139,730
	14010003	Eagle		N/A	•
	14020003	Tomichi	-1.24	35	0
	14020004	North Fork Gunnison	-2.77	17	463
ଜୁ	14020006	Uncompahgre	-0.33	46	50,864
Gunnison	14020001	East-Taylor	-1.71	30	69,293
son	14020002	Upper Gunnison	-3.28	11	550,229
	14020005	Lower Gunnison	N/A		
	14030003	San Miguel		N/A	
Ri	13010002	Alamosa-Trinchera	-1.08	37	3,691
Rio Grande	13010005	Conejos	-2.01	26	14,375
ran	13010001	Rio Grande Headwaters	2.66	82	32,808
de	13010004 Saguache			N/A	
S	14080105	Middle San Juan	0.00	50	117
J UE	14080107	Mancos	-2.49	20	2,858
San Juan-Dolores	14080104	Animas	-2.14	24	11,007
ר-Do	14080101	Upper San Juan	-2.98	14	30,167
olor	14030002	Upper Dolores	-0.52	44	185,323
es	14080102	Piedra		N/A	
	10190012	Middle South Platte-Sterling	-2.95	15	15,200
	10190003	Middle South Platte-Cherry Creek	-2.33	22	40,100
		St. Vrain	-0.63	42	50,950
uth	10190007	Cache La Poudre	-0.41	45	102,381
South 10190005 10190007 10190001 10190001 10190002		South Platte Headwater	-0.79	41	142,400
itte	10190002	Upper South Platte	-2.55	19	277,200
	10190006	Big Thompson	1.85	72	527,660
	10190004	Clear		N/A	
~	14050001	Upper Yampa	1.90	73	35,656
ām	10180001	North Platte Headwaters		N/A	
pa-'	14050002	Lower Yampa		N/A	
Yampa-White	14050003	Little Snake	N/A		
te	14050005	Upper White		N/A	

October 1, 2020 SWSI Values by HUC and Non Exceedance Probabilities (NEP)

NEP is non exceedance percentage for total reservoir storage and streamflow forecast 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 plus the streamflow forecast. NEP is calculated compared to the volume historically occurring this month during the period 1970-2010. 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 Name	Component Name	Component Volume (AF)	Component NEP by Month
	CLEAR CREEK RESERVOIR	4,535	42
Arkapsas Hoadwators	TWIN LAKES RESERVOIR	39,091	34
Arkansas neauwaters	HOMESTAKE RESERVOIR	40,613	70
	TURQUOISE LAKE	91,216	34
Huerfano	CUCHARAS RESERVOIR*	0	18
Purgatoire	TRINIDAD LAKE	15,440	58
Upper Arkansas	PUEBLO RESERVOIR	178,000	74
Upper Arkansas-John Martin	ADOBE CREEK RESERVOIR	9,177	50
Reservoir	JOHN MARTIN RESERVOIR	35,109	61
Upper Arkansas-Lake	LAKE HENRY	3,757	61
Meredith	MEREDITH RESERVOIR	11,223	56
Blue	GREEN MOUNTAIN RESERVOIR	88,199	16
Calana da Ulas duratana	WOLFORD MOUNTAIN RESERVOIR	57,630	95
Colorado Headwaters	WILLIAMS FORK RESERVOIR		66
Colorado Headwaters-Plateau			16
Roaring Fork	RUEDI RESERVOIR		3
	TAYLOR PARK RESERVOIR	,	30
· · · · · · · · · · · · · · · · · · ·			17
		0	35
		50.864	46
Upper Gunnison			2
			75
			7
			11
			11
Alamosa-Trinchera			28
			43
Coneios			26
concjos			84
Rio Grande Headwaters			60
			84
Animas			24
			20
			50
			10
Upper Dolores			44
llpper San Juan			14
			1
Big Thompson			56
			28
	WILLOW CREEK RESERVOIR	8,064	76
		0.004	70
big mompson			
big mompson	BOYD LAKE CARTER LAKE	29,600 81,959	56 96
	HUC Name Arkansas Headwaters Upper Arkansas Upper Arkansas-John Martin Reservoir Upper Arkansas-Lake Meredith Blue Colorado Headwaters Colorado Headwaters Colorado Headwaters East-Taylor Roaring Fork East-Taylor North Fork Gunnison Tomichi Uncompahgre Upper Gunnison Alamosa-Trinchera Conejos Rio Grande Headwaters Rio Grande Headwaters	HUC NameComponent NameArkansas HeadwatersCLEAR CREEK RESERVOIRHuerfanoCUEAR CREEK RESERVOIRHuerfanoCUCHARAS RESERVOIR*PurgatoireTRINIDAD LAKEPurgatoireTRINIDAD LAKEUpper ArkansasPUEBLO RESERVOIRUpper Arkansas-John Martiin ReservoirAODBE CREEK RESERVOIRUpper Arkansas-Lake MeredithLAKE HENRYWeredithGREEN MOUNTAIN RESERVOIRBlueGREEN MOUNTAIN RESERVOIRColorado Headwaters-PlateauVEGA RESERVOIRColorado Headwaters-PlateauVEGA RESERVOIRRoaring ForkRUEDI RESERVOIRNorth Fork GunnisonPAONIA RESERVOIRNorth Fork GunnisonPAONIA RESERVOIRUpper GunnisonSILVER JACK RESERVOIRUpper GunnisonCRAWFORD RESERVOIRAlamosa-Trinchera Rio Grande HeadwatersRIO GRANDE RESERVOIRRio Grande HeadwatersRIO GRANDE RESERVOIRRio Grande HeadwatersRIO GRANDE RESERVOIRAlamosa Trinchera Rio Grande HeadwatersRIO GRANDE RESERVOIRRio Grande HeadwatersSANTA MARIA RESERVOIRRio Grande HeadwatersGROUNTAIN HOMEAnimasLEMON RESERVOIRMiddle San JuanLONG HOLLOW RESERVOIRMidd	HUC NameComponent NameVolume (AF)Arkansas HeadwatersCLEAR CREEK RESERVOIR4,535TWIN LAKES RESERVOIR30,091HOMESTAKE RESERVOIR40,613TURQUOISE LAKE91,216HuerfanoCUCHARAS RESERVOIR*0PurgatoireTRINIDAD LAKE15,440Upper ArkansasPUEBLO RESERVOIR178,000Upper ArkansasPUEBLO RESERVOIR9,171AboBe CREEK RESERVOIR9,1713,177MeredithADOBE CREEK RESERVOIR3,109Upper Arkansas-LakeLAKE HENRY3,757MeredithGREEN MOUNTAIN RESERVOIR88,199Colorado HeadwatersQICPORD MOUNTAIN RESERVOIR88,199Colorado Headwaters-PlateauVEGA RESERVOIR82,100Colorado HeadwatersPLATOR PARK RESERVOIR69,293North Fork GunnisonPAONIA RESERVOIR69,293North Fork GunnisonPAONIA RESERVOIR303FRUTLAND RESERVOIR10,000ChampangreRIDGEWAY RESERVOIR10,000Upper GunnisonPAONIA RESERVOIR10,000ConciposPLATORO RESERVOIR1,331MORROW POINT RESERVOIR1,333Alamosa-TrincheraCONTINENTAL RESERVOIR14,353Middle San JuanLONG HOLLOW RESERVOIR11,007MancosJACKSON GULCH RESERVOIR11,007MancosJACKSON GULCH RESERVOIR11,007MancosJACKSON GULCH RESERVOIR11,007MancosJACKSON GULCH RESERVOIR11,007MancosJ

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
10190007		HALLIGAN RESERVOIR	600	31
		CACHE LA POUDRE	1,400	32
		BLACK HOLLOW RESERVOIR	2,500	41
	Cache La Poudre	WINDSOR RESERVOIR	2,500	8
	Cache La Fouure	FOSSIL CREEK RESERVOIR	4,400	70
		CHAMBERS LAKE	6,400	94
		COBB LAKE	15,800	64
		HORSETOOTH RESERVOIR	68,781	41
		HORSECREEK RESERVOIR	0	1
10190003	Middle South Platte-Cherry	BARR LAKE	2,100	10
10190003	Creek	MILTON RESERVOIR	4,800	30
		STANDLEY RESERVOIR	33,200	41
	Middle South Platte-Sterling	EMPIRE RESERVOIR	0	6
		RIVERSIDE RESERVOIR	0	14
10190012		JACKSON LAKE RESERVOIR	700	14
10190012		JULESBURG RESERVOIR	3,800	38
		PREWITT RESERVOIR	5,100	20
		POINT OF ROCKS RESERVOIR	5,600	49
	South Platte Headwater	ANTERO RESERVOIR	19,300	58
10190001		SPINNEY MOUNTAIN RESERVOIR	29,600	44
		ELEVENMILE CANYON RESERVOIR	93,500	23
	St. Vrain	TERRY RESERVOIR	3,400	24
		MARSHALL RESERVOIR	4,200	33
10190005		UNION RESERVOIR	10,250	55
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,200	78
		GROSS RESERVOIR	16,900	38
10190002	Upper South Platte	CHEESMAN LAKE	41,700	13
10170002		DILLON RESERVOIR	235,500	49
14050001	Upper Yampa	YAMCOLO RESERVOIR	2,956	45
		STAGECOACH RESERVOIR NR OAK CREEK	32,700	93

NEP is non exceedance percentage (percentile) for volume of the component compared to this month during the historical period 1970-2010.

*No longer exists

Water Volume NEP Color Scale:

0 (Well Below Normal)

lormal) 50 (Normal)

100 (Well Above Normal)

<u>Basinwide Conditions Assessment</u> The SWSI value for the month was -+0.0.

The South Platte basin wide pattern of above average temperatures controlled during the month of September. The northern portion of the South Platte River Basin experienced slightly above precipitation, while the southern portion of the basin experienced slightly below average precipitation during the month of September. However, the basin wide drought conditions and well below average streamflows prevailed throughout the month of September.

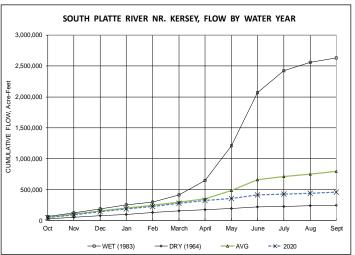
These relatively drier and warmer than average conditions resulted in drought conditions throughout the basin increasing in severity and area, encompassing the entirety of the South Platte and Republican River basins at the end of September. The USDA Drought Monitor rating for the mountainous and foothill areas increased throughout the month of September from a rating of D2 (severe drought), ending the month with a rating of D3 (extreme drought) in the central mountains including Gilpin, Jefferson, Clear Creek, Park County and the northwest portion of Larimer Counties. Some precipitation isolated to portions of Larimer and Weld counties provided some relief, but the end of September found most areas with a rating of mostly D2 (severe drought) throughout much of the foothills and plains and D3 in the central mountains and foothills as well as the eastern plains in Lincoln, Kit Carson, and Cheyenne Counties. Unfortunately the dry conditions are a reality of several large wildfires in the northern and central mountains in Division 1 as well as in the Laramie River headwaters.

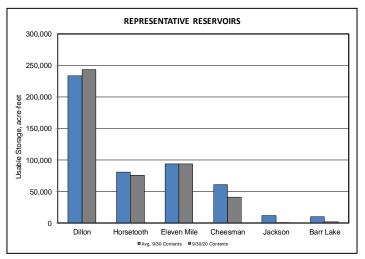
The above conditions along with high demand for irrigation and other uses, resulted in flows on the mainstem of the South Platte River basin well below normal during the month of September. Flows at the Kersey gage downstream of the City of Greeley, were well below average with average daily flows for the month of September approximately 408 cfs, 79% of the historic mean value of 514 cfs. The average daily flow at the Julesburg gage for the month of September was 73.0 cfs, only 26% of the historic mean value of 280 cfs. The outlook for flows on the South Platte River mainstem remains well below average with many of the tributaries below 50 to 25% of average flows during the month of September.

The month of September experienced consistent well below average streamflows, resulting in senior calling water rights on the mainstem of the South Platte River and tributaries. The month of September was controlled on the upper end with calls at the Western Ditch or Burlington Ditch, or both, located just downstream of the metro Denver area, with

calls at the beginning of the month of 1871, ending the month with a 1909 call at the Burlington Ditch. The central portion of the river was controlled by a call or bypass call at the Harmony #1 Ditch of 1886 at the start of the month, going more junior toward the end of the month with a 1922 North Sterling bypass call. The lower end of the river was controlled at the beginning third of the month with a Lowline Ditch 1882 priority, with the South Platte River Compact Call controlling the lower end of the river for the last two-thirds of the month. The South Platte River Compact Call was in effect the entire month of September with a priority date of June 14, 1897 impacting water district 64 from the Washington County westerly line to the state line. Many of the tributaries were controlled by one or more internal calls senior to the calls on the downstream South Platte River mainstem during the month of September.

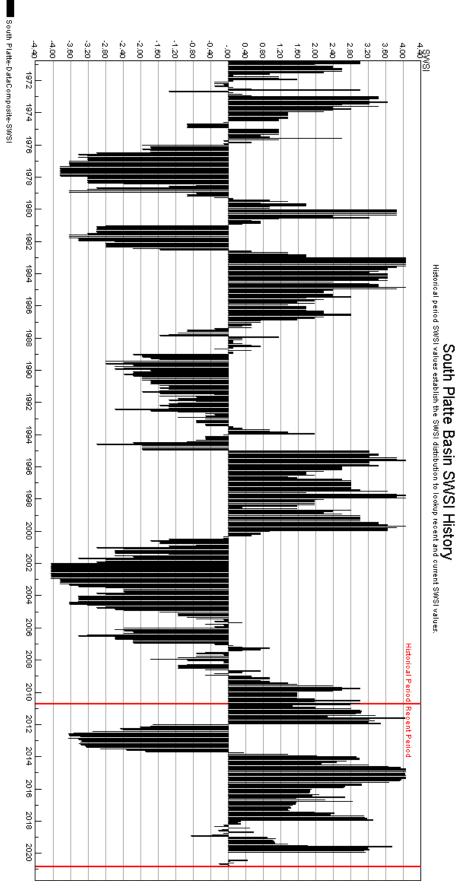
Reservoir storage levels throughout the South Platte River mainstem ended the month of September below the historical average at the 6 SWSI Representative Reservoirs at 456,505 acre-feet volume, which is 93% of the long term average (1961-current). Additionally, 32 indexed reservoirs throughout Division 1 basin at 91% of the long term average with a storage volume of 540,721 at the end of September, down from the end of August volume of 627,992 acre-feet, representing 57% full capacity for the reservoirs at the end of September. This is below the long term average of 52% full for the end of September storage in the 32 indexed reservoirs throughout Division 1. However, many lower elevation reservoirs, primarily irrigation reservoirs, are at much lower storage volumes than the overall combined average, many of which were near empty or empty at the





end of September. The decrease in reservoir levels throughout the basin are due to the low stream flows, senior calls, and increased demands for irrigation water to sustain irrigated crops and other water activities during the month of September requiring significant releases from storage reservoirs.

The temperature and precipitation outlook into November, December and January prepared by the National Weather Service, in northeastern Colorado indicates a 40 50% to probability of above average temperatures and a probability of average precipitation in the northern portion of the basin and 33% probability below average precipitation of throughout the southern portion of the South Platte River Basin and Republican River Basin.



Basinwide Conditions Assessment

The SWSI value for the month was +0.9.

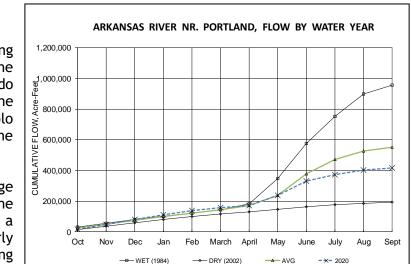
Outlook

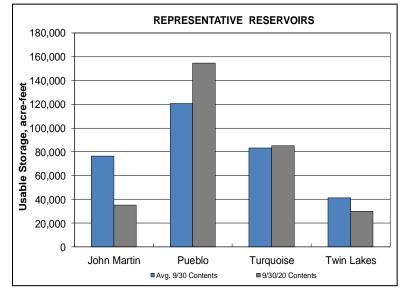
River calls during September ranged from the junior Catlin Canal 12/3/1884 call to the senior Bessemer Ditch pass through call to the Rocky Ford Ditch of 12/31/1876. Return flows above John Martin Reservoir allowed several junior calls in District 67 to come into priority during September. These ranged in dates from a Fort Bent pass through call to the Lamar Canal call of 4/1/1886 to the Lamar Canal call of 11/4/1886.

Administrative Concerns

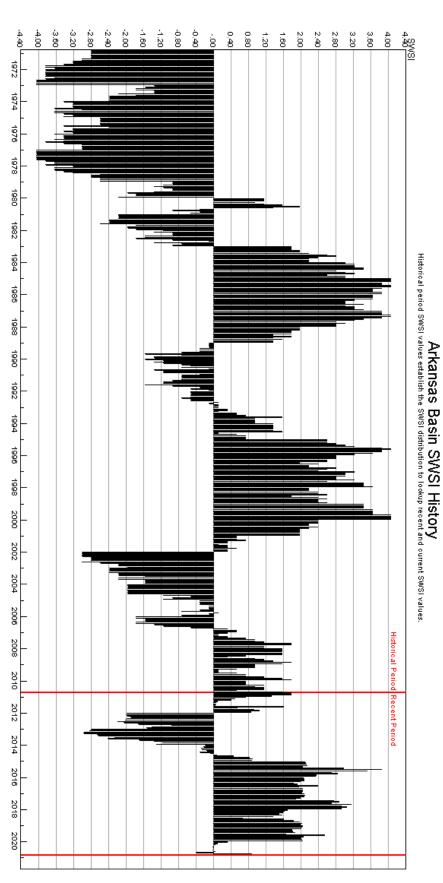
On September 28, 2020, the Special Engineering Committee met to continue discussing the potential pilot project related to a Colorado Multi-Use account in John Martin Reservoir. The focus of the discussion was on Rule 10, Pueblo Reservoir Spill and Exchange Operations in the Arkansas Basin.

Forecasting out ahead, the Winter Water Storage program is predicting a doughtier season. The National Weather Service has called for a warmer, drier winter in the Arkansas basin. Early predictions do not foresee account water spilling in either Pueblo Reservoir or John Martin.





Arkansas-DataComposite-SWSI



Basinwide Conditions Assessment

The SWSI value for the month was +0.8.

Flow at the gaging station Rio Grande near Del Norte averaged 224 cfs (44% of normal). The Conejos River near Mogote had a mean flow of 98 cfs (65% of normal). Streamflow in the San Luis Valley was well below average during September despite the big snowstorm on September 9. This massive event brought much-needed relief to the dry mountains and plain. Many of the streams temporarily returned to near normal flow in the wake of the snowstorm that dropped 12+ inches of wet snow throughout the basin. Unfortunately, that storm had a devastating effect on trees that had not shed leaves.

<u>Outlook</u>

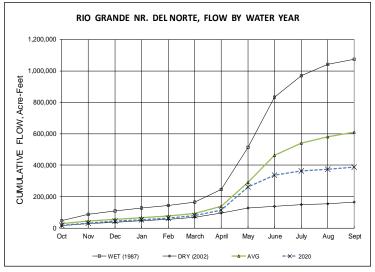
September in the upper Rio Grande drainage had warmer and drier conditions when compared to long-term records. Year to date precipitation remains below normal for the San Luis Valley. NOAA weather forecasts for the next month and beyond call for below normal precipitation and warmer than normal temperatures.

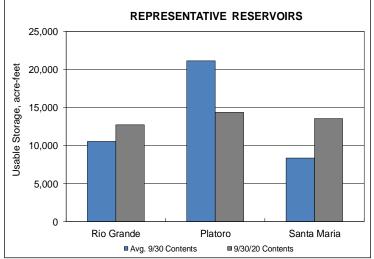
Administrative/Management Concerns

Preparation for full implementation of the 15CW3024 Groundwater Case No. Use Rules continues. The Rules approved by the local Water Court on March 15, 2019 are necessary to prevent injury to vested water rights, set sustainability standards for the stressed aguifers, and eliminate well impacts on compliance with the Rio Grande Compact. Full implementation is set for March 15, 2021. These Rules also established criteria for the beginning and end of the irrigation season in Water Division No. 3 for all irrigation water rights. The Rio Grande, its tributaries, and the other areas of the San Luis Valley have a presumptive April 1st start-up date and a November 1st shut-off date for decreed irrigation rights.

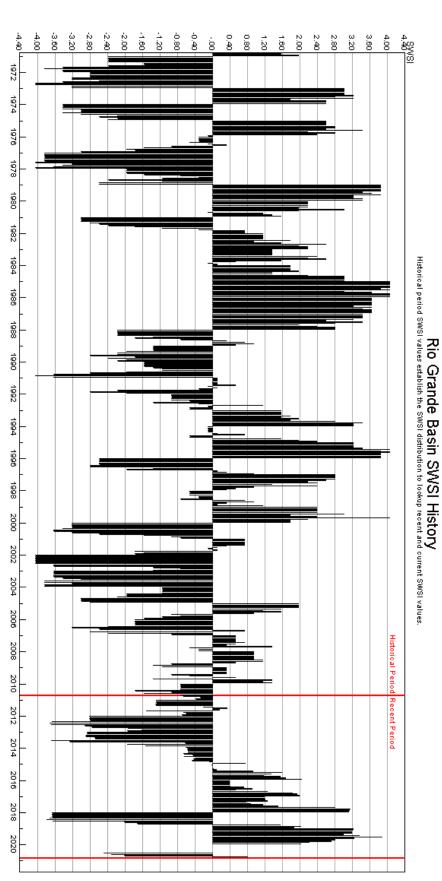
Public Use Impact

As the 2020 irrigation moves to conclusion, the dry conditions throughout the upper Rio Grande basin were detrimental to crop and pasture production. Crop yields were down this year in the San Luis Valley with the exception of potatoes - the result is fickle prices in the potato market.





Rio Grande-DataComposite-SWSI



<u>Basinwide Conditions Assessment</u> The SWSI value for the month was -3.3.

Basin Wide Conditions Outlook

September was not as dry as August, but that's not saying much since August was a record dry month in many locations in the Gunnison Basin. With the exception of a storm from September 9th to 11th, the Gunnison basin received almost no precipitation. Most areas received only between 30 and 70 percent of average precipitation, which almost entirely fell from September 9th to 11th. Streamflows at all stations on major streams briefly increased for a week, but returned quickly to base flows below the 25th percentile for the date. Temperatures during September throughout the Gunnison basin were 1 to 5 degrees above normal. Lack of precipitation for the last three weeks of the month and high temperatures will result in much lower than normal high county soil moisture going into the winter. Unfortunately, this will likely result in similar conditions to 2019, which could cause a significant drop in streamflows in 2021 regardless of snowpack conditions.

<u>Outlook</u>

Unfortunately, the National Climate Prediction Center forecasts for the November through January continue to predict lower than average precipitation combined with much above average temperatures.

Administrative/Management Concerns

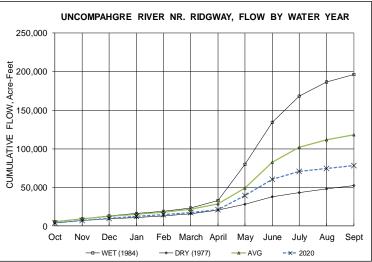
The Uncompandere Valley Water Users (UVWUA) project continued to divert 1,050 cfs at the Gunnison Tunnel until September 15th when they reduced diversions by 50 cfs. During September the average shortage in natural flow at the Tunnel was 497 cfs resulting in the use of 26,530 ac-ft of first fill storage from their account in Blue Mesa Reservoir and 3,424 ac-ft released from Taylor Park Reservoir second fill. This results in a total for Taylor Park storage diverted of 29,954 ac-ft, which is near the amount used in the previous month.

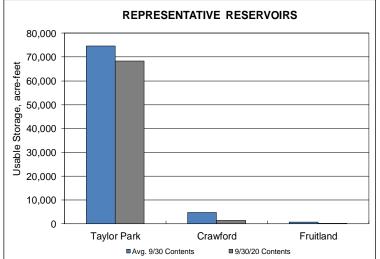
Blue Mesa Reservoir physically contains 438,313 ac-ft in storage at the end of September, which is 47 percent of capacity. This amount corresponds to a water surface elevation of 7470 ft, which is 20 ft below the level needed to prevent icing in Gunnison. As a result, no releases will be necessary to attain the December icing target in 2020.

Storage orders and resulting releases from Grand Mesa Reservoirs remained higher than average during September, including up to 17 cfs of delivery to Surface Creek, due to continued irrigation demand. Carryover in the system is already at 16 percent, which is equal to 2018, meaning that carryover into 2021 will be at historically low levels. If weather conditions continue to be dry a big concern is that soil moisture will be so low that much of what snowpack we get will not fill the reservoirs, but seep into the ground. Evaporation measured by DWR at 10,200 ft elevation in September near Alexander Lake was 3.3 inches, which is a decrease from August, but was still extremely high compared with what would be expected late in the season above 10,000 ft.

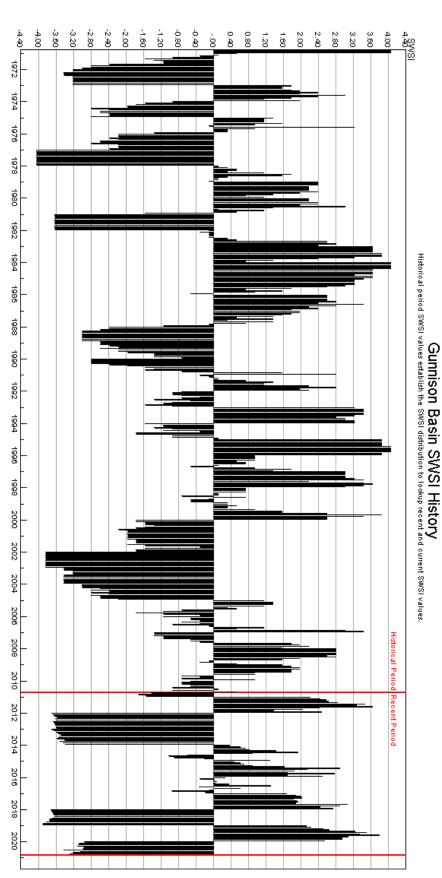
Public Use Impacts

Releases from Ridgway Reservoir were decreased between September 8th and 11th from 200 cfs to 60 cfs as the UVWUA completely stopped using storage from Ridgway. This is partly due to the fact that the combination of a large and small turbine at the hydropower unit results in a range of flows between 60 and 160 cfs that the system cannot operate efficiently. Taylor Park releases were also reduced from 230 to 125 cfs at the beginning of the month to preserve storage going into the winter at near 68,000 ac-ft.





Gunnison-DataComposite-SW/SI



<u>Basinwide Conditions Assessment</u> The SWSI value for the month was -0.6.

<u>Outlook</u>

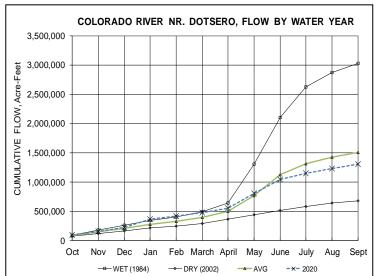
Colorado River flows and tributary flows are running below average and are forecasted to continue below average through October. Below average precipitation with below average temperature is forecast for western Colorado through October.

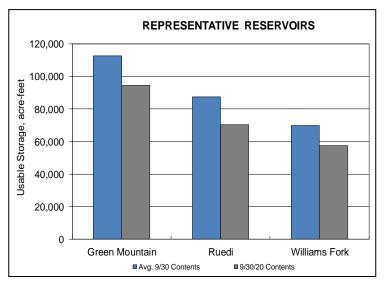
Administrative/Management Concerns

The call on the Colorado River mainstem is the Grand Valley Canal junior water right. Grand Valley Irrigation diversions (Government Highline/Orchard Mesa Irrigation, Grand Valley Irrigation canals) continue at or near full capacity. Green Mountain is releasing inflow, storage for contracts, Silt Project replacement, HUP, Green Mountain Reservoir losses and Colorado River Collection System out of priority diversions. Wolford Mountain is releasing inflows and contract water and water for the endangered fish in the 15 mile reach less Moser exchange water into Wolford Reservoir from Green Mountain Reservoir.

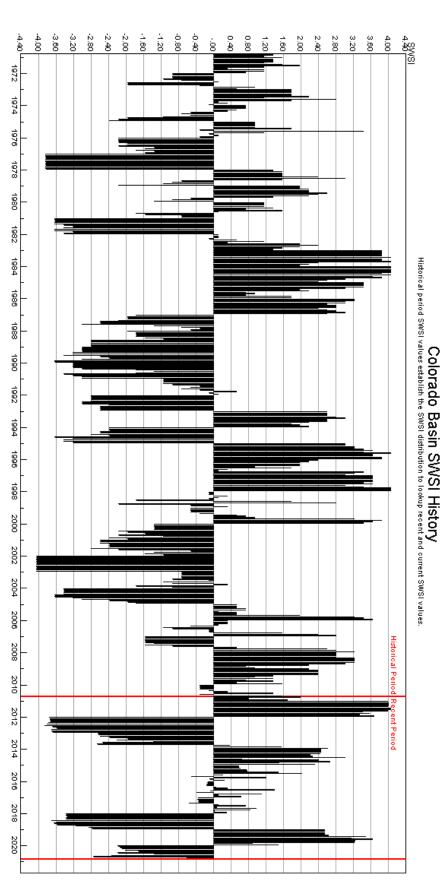
Public Use Impacts

Three of the five largest wildfires in Colorado history have and are burning in Colorado this year. Fires are being fueled in part by the dead, dry timber from the beetle kill trees. The town of Grand Lake has been evacuated and Rocky Mountain National Park is closed.





Colorado-DataComposite-SW/SI



Basinwide Conditions Assessment

The SWSI value for the month was 1.9.

Precipitation (24 sites) - Entire Yampa, White, and North Platte basins were **40%** of the monthly average, putting the basin at 84% of average for the water year to date. This is down from last year's monthly average of 53%, and for last year's water year to date, 111%. For the month, the lowest percent of average, at 0%, was the Ripple Creek SNOTEL stations. The highest, at 74%, was the Crosho SNOTEL station.

*Averages are from 1981-2010 records

Temperatures - The average temperature for NOAA Colorado Climate Division 2: Colorado River Drainage was **56.7**° **F**. This is +2.7°F from the average of 54.0 °F. This temperature ranks 112th for lowest of the previous 126 years of data. For the NOAA Colorado Climate Division 4: Platte Drainage, the average temperature was **59.0°F**, +2.0°F from the average of 57.0°F, ranking 88th. **Averages are from 1901-2000 records*

Reservoir Outlook

Elkhead Reservoir -September 30th, 2020 capacity level was 16,393 AF of 25,550 AF - 64.2% capacity.

- Fish Creek Reservoir September 30th, 2020 elevation was 9870.4' at 2300 AF of 4,160 AF 55.2% capacity.
- Stagecoach Reservoir September 30th, 2020 capacity level was at 32,700 AF of 36,500 AF 90% of capacity, 106% of average, 95% of last year.
- Yamcolo Reservoir September 30th, 2020 capacity level was at 3000 AF of 8,700 AF 34% of capacity, 70% of average, 34% of last year.

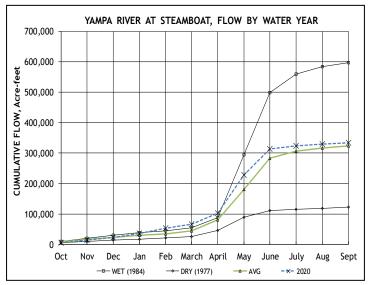
*Averages are from 1981-2010 records

Administrative Concerns

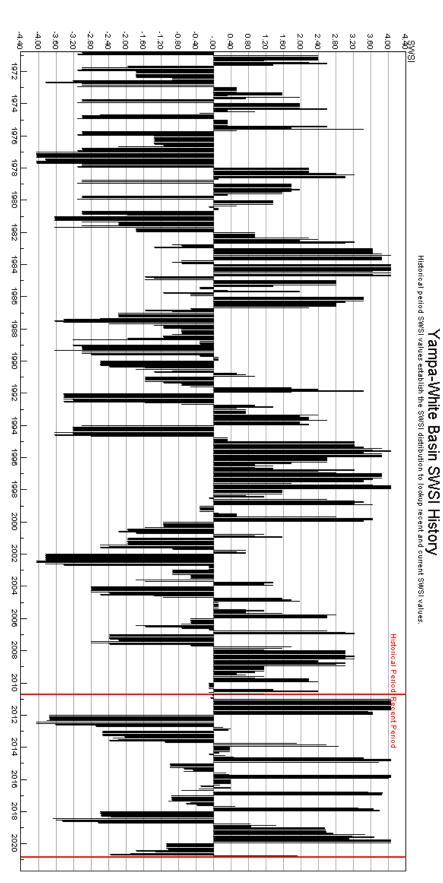
Administrative Calls placed in the month of August are as follows:

- Yampa River Basin: Yampa River, Bear River, Elk River, Little Bear Creek, South Fork Williams Fork and Talamantes Creek.
- White River Basin: Piceance Creek.
- North Platte River Basin: Michigan River.

The Yampa River was placed on call for the second time in history. The calling structure was the Lily Park Ditch No 1 and the priority administration number was #37149. The call lasted from 8/25/2020 to 9/1/2020. The call was changed on 9/1/2020 to the priority admin number #41402 and lasted until 9/3/2020.



Yampa-White-DataComposite-SWSI

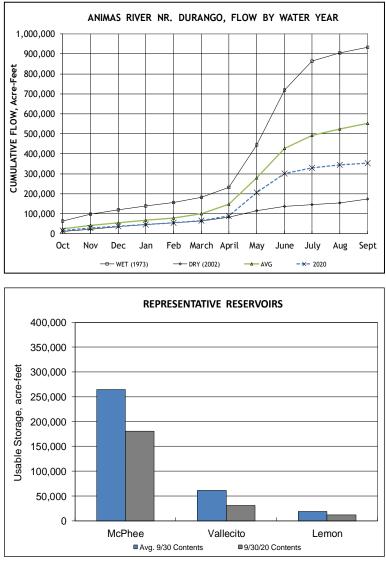


Basinwide Conditions Assessment The SWSI value for the month was -0.7.

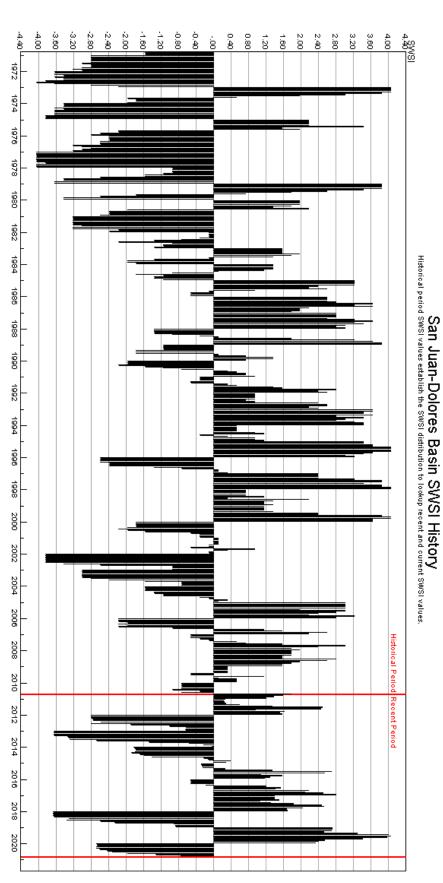
Flow at the Animas River at Durango averaged 166 cfs (37% of average). The flow at the Dolores River at Dolores averaged 146 cfs (82% of average). The La Plata River at Hesperus averaged 6.3 cfs (33% of average). Precipitation in Durango was 1.29 inches for the month, 54% of the 30-year average of 2.38 inches. Precipitation to date in Durango, for the water year is 12.16 inches, 63% of the 30-year average of 19.95 inches. The average high and low temperatures for the month of September in Durango were 81° and 42°. In comparison, the 30-year average high and low for the month is 77° and 45°. At the end of the month Vallecito Reservoir contained 31,066 acre-feet compared to its average content of 267,787 (68% of average), while Lemon Reservoir was up to 11,350 acre-feet as compared to its average content of 18,498 acre-feet (61% of average).

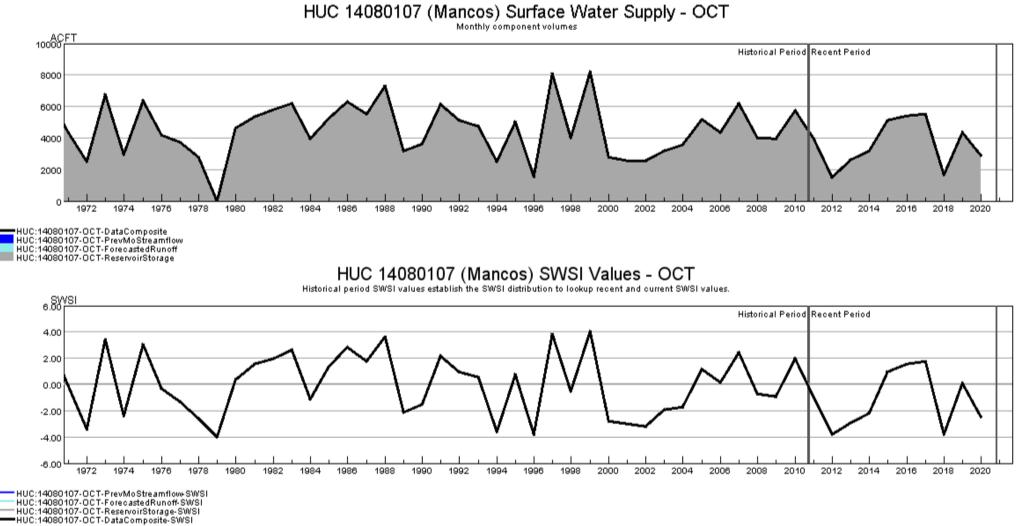
<u>Outlook</u>

Precipitation (1.29 inches) was well below average for September in Durango. There were 79 years out of 125 years of record where there was more precipitation than this year. The monsoon rains typically start in July, and that was the case this year but the area has received very little rain since the last week in July. This September has shaped up to be one of the hottest and driest on record. With the lack of monsoon rains, the flows in the rivers are well below average for the month. There are 108 out of 110 years of record where the total flow past the Animas River at Durango stream gauge was more than this year. There were 52 out of 111 years of record where the total flow past the Dolores stream gauge was more than this year and that was with the help of releases from Groundhog Reservoir. There were 94 out of 104 years of record where the total flow past the La Plata River at Hesperus gauge was more than this year. All of the reservoirs within the basin are below average for this time of year.

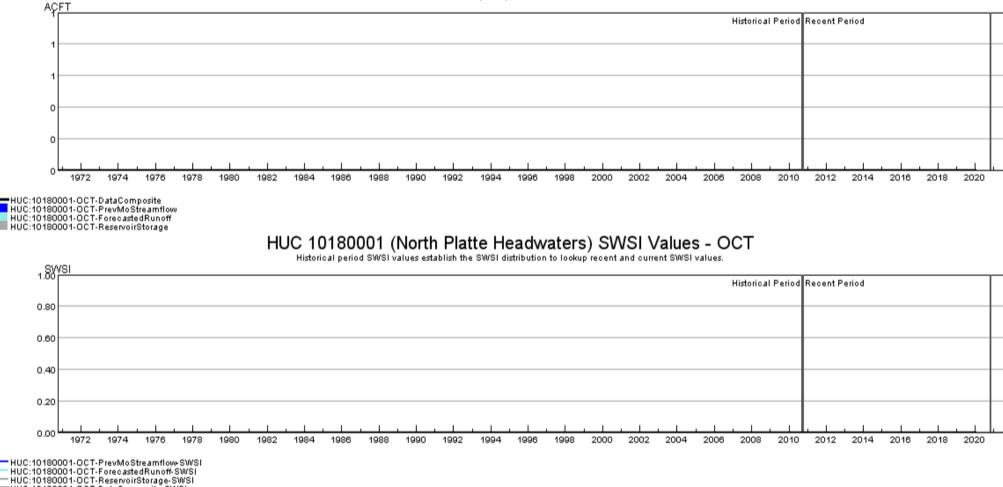


San Juan-Dolores-DataComposite-SWSI

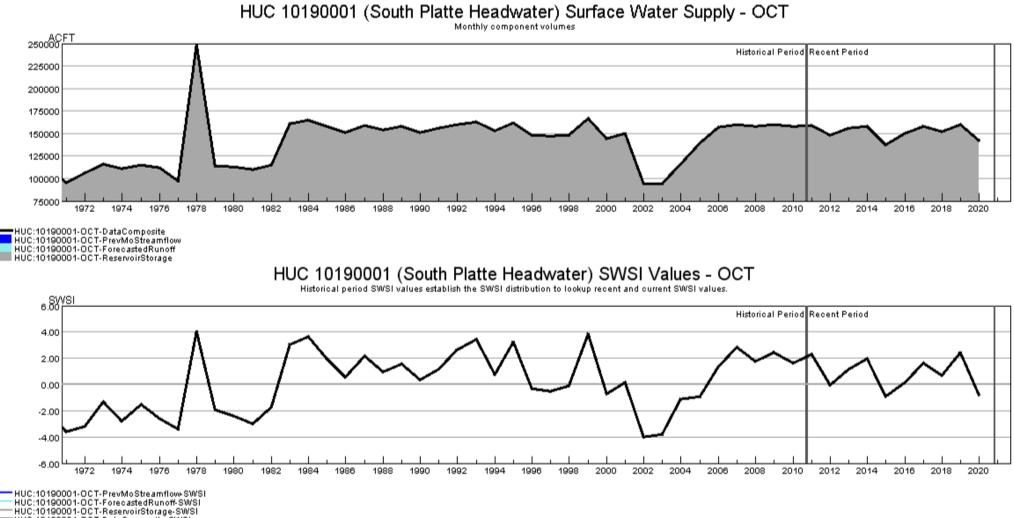




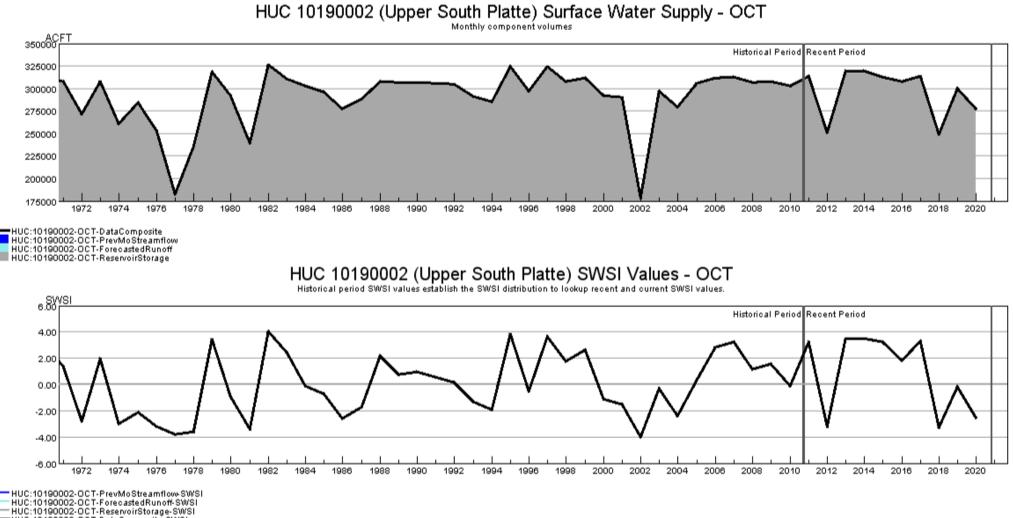
HUC 10180001 (North Platte Headwaters) Surface Water Supply - OCT



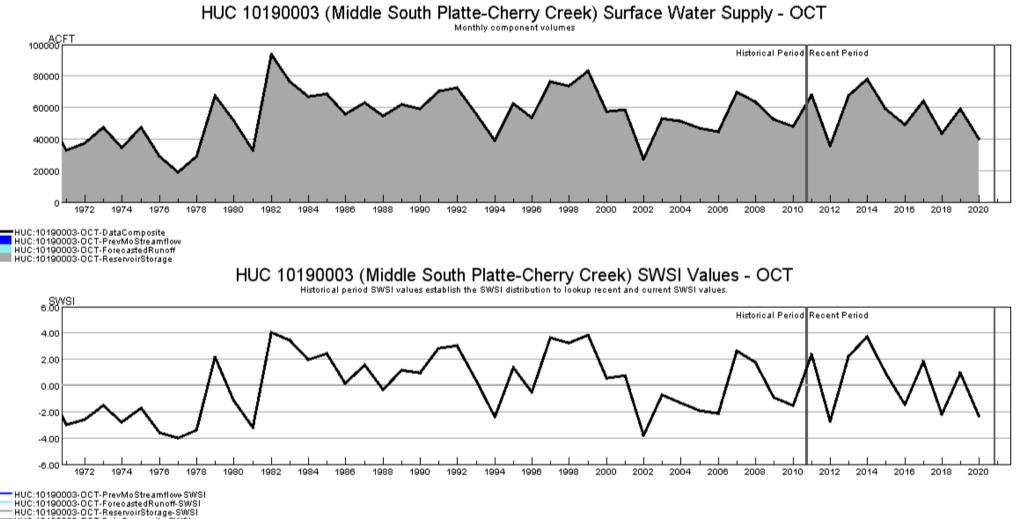
HUC:10180001-OCT-DataComposite-SWSI



HUC:10190001-OCT-DataComposite-SWSI

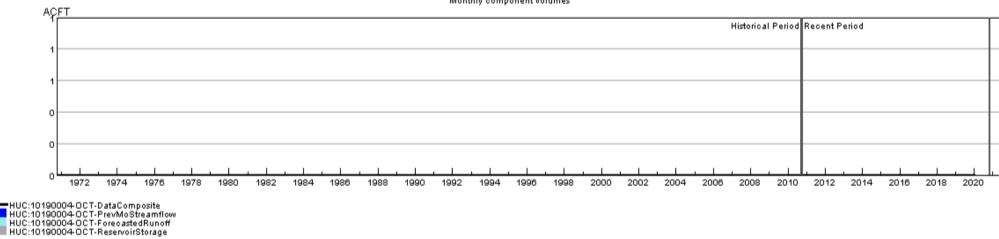


HUC:10190002-OCT-DataComposite-SWSI



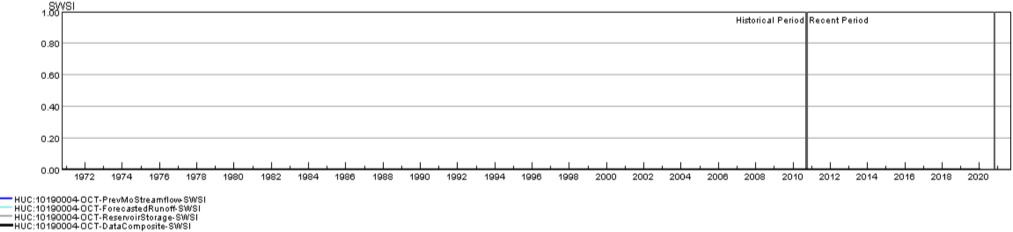
HUC:10190003-OCT-DataComposite-SWSI

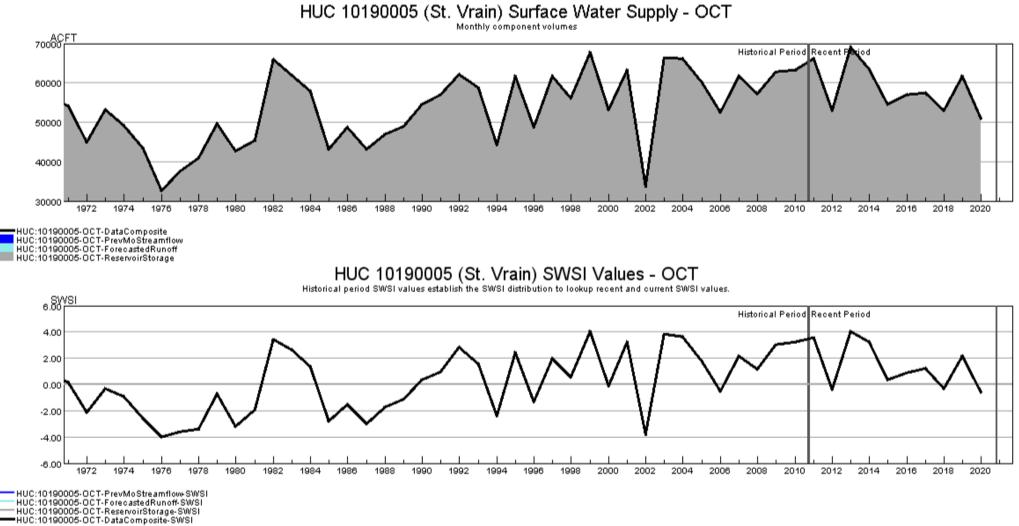
HUC 10190004 (Clear) Surface Water Supply - OCT

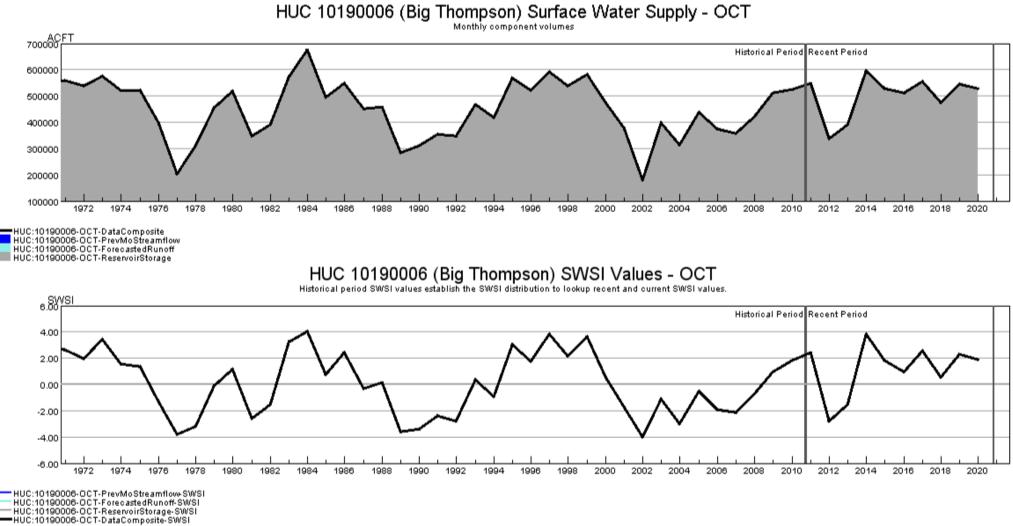


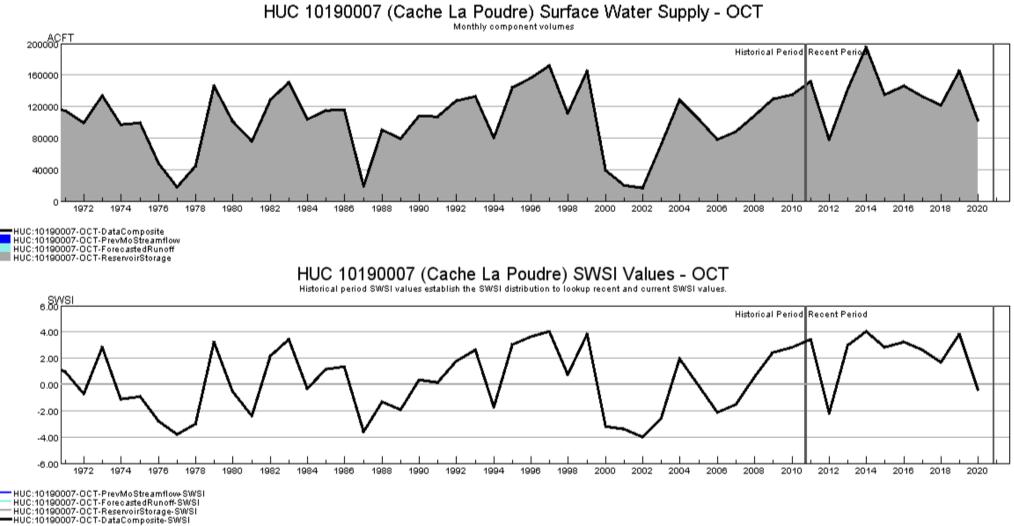
HUC 10190004 (Clear) SWSI Values - OCT

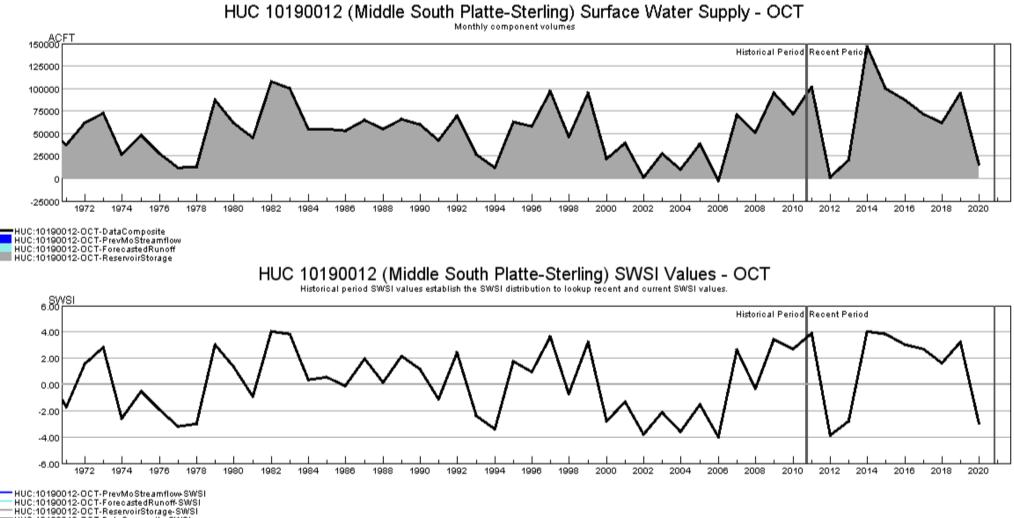
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



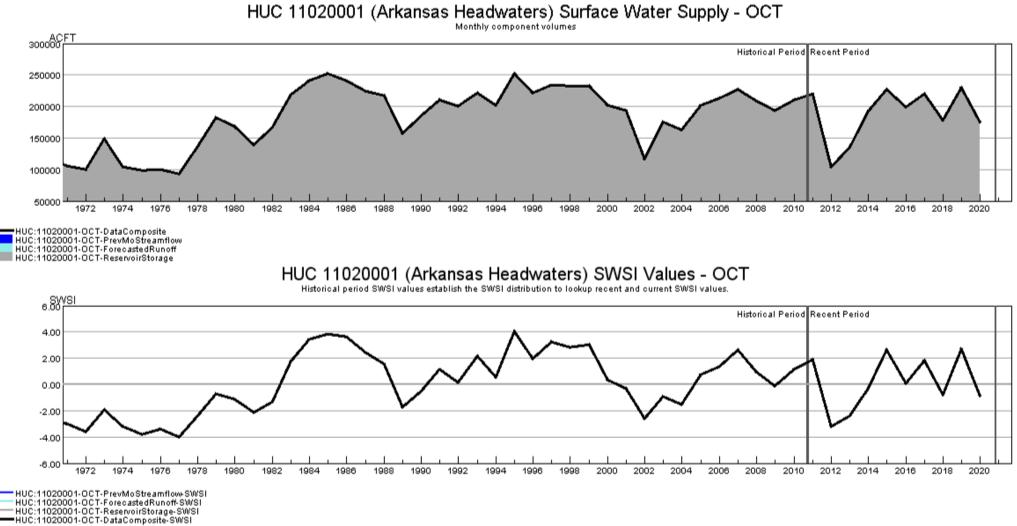


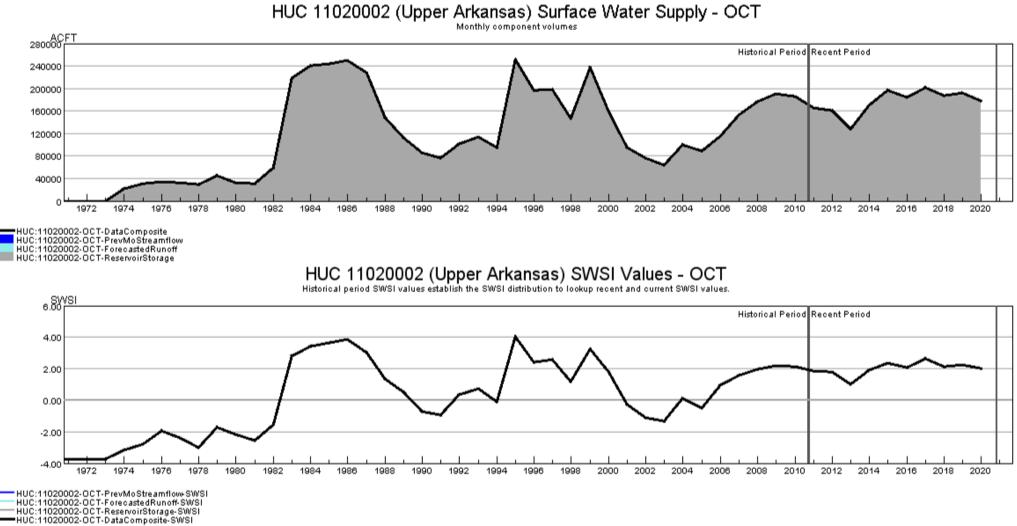


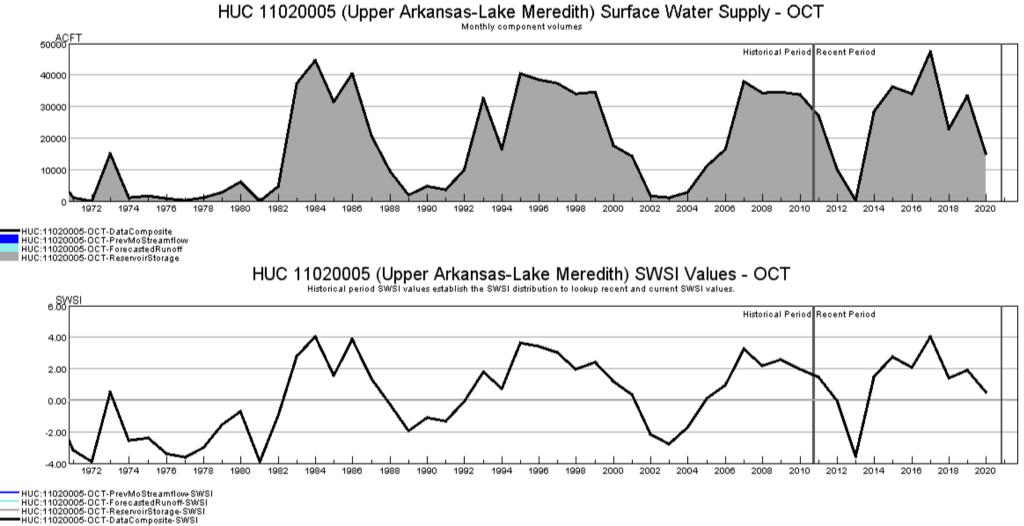


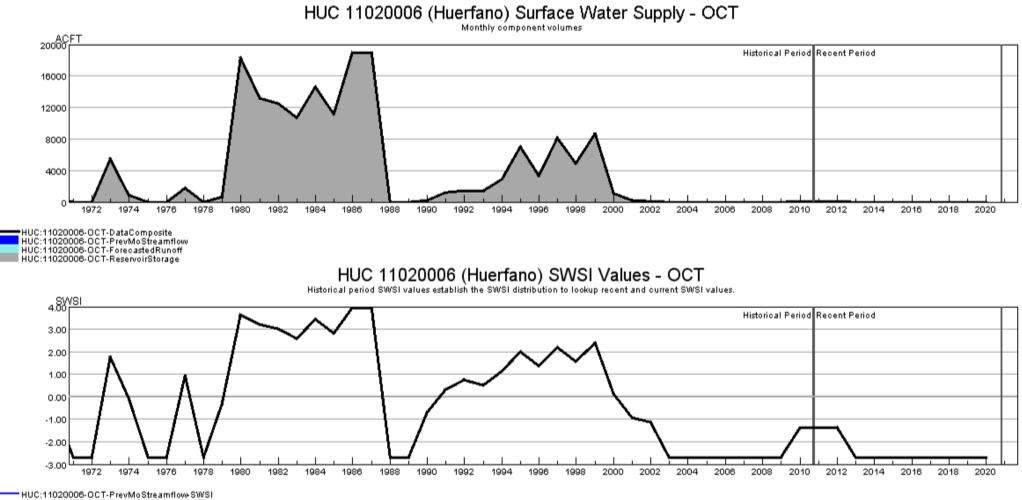


HUC:10190012-OCT-DataComposite-SWSI



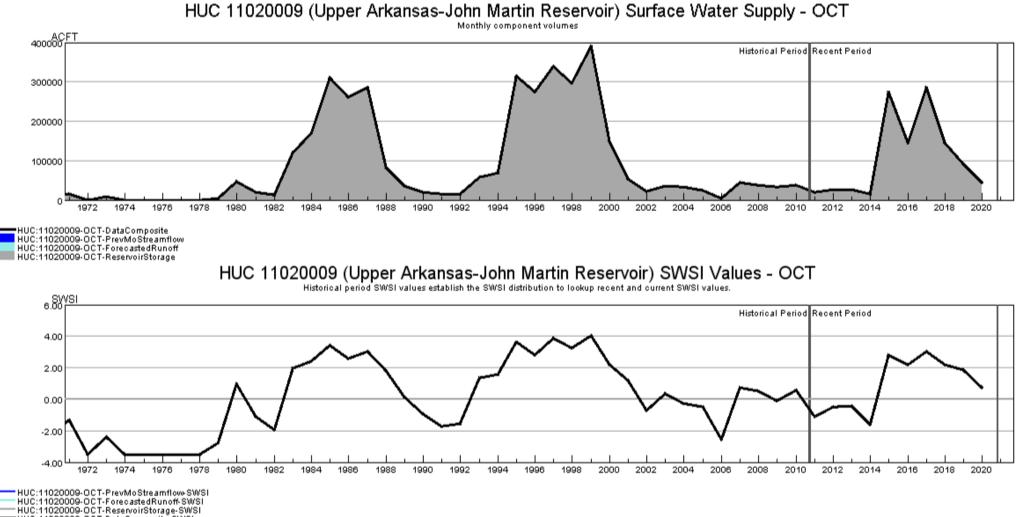




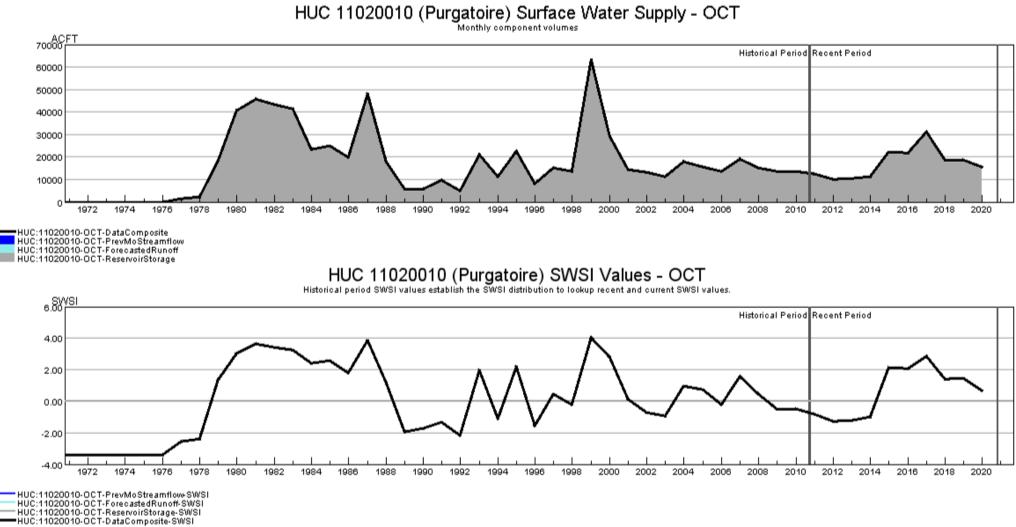


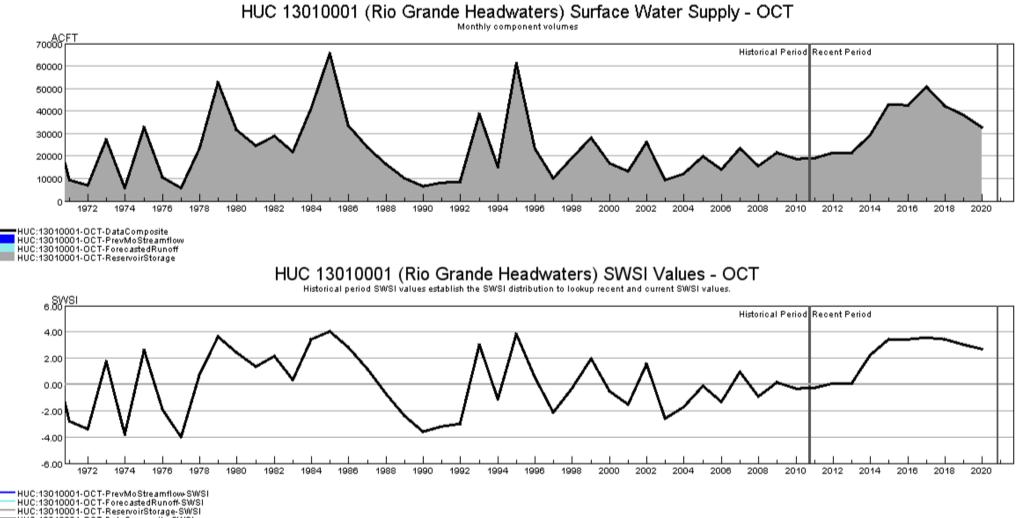
HUC:11020006-0CT-ForecastedRunoff-SWSI HUC:11020006-0CT-ReservoirStorage-SWSI

HUC:11020006-OCT-DataComposite-SWSI

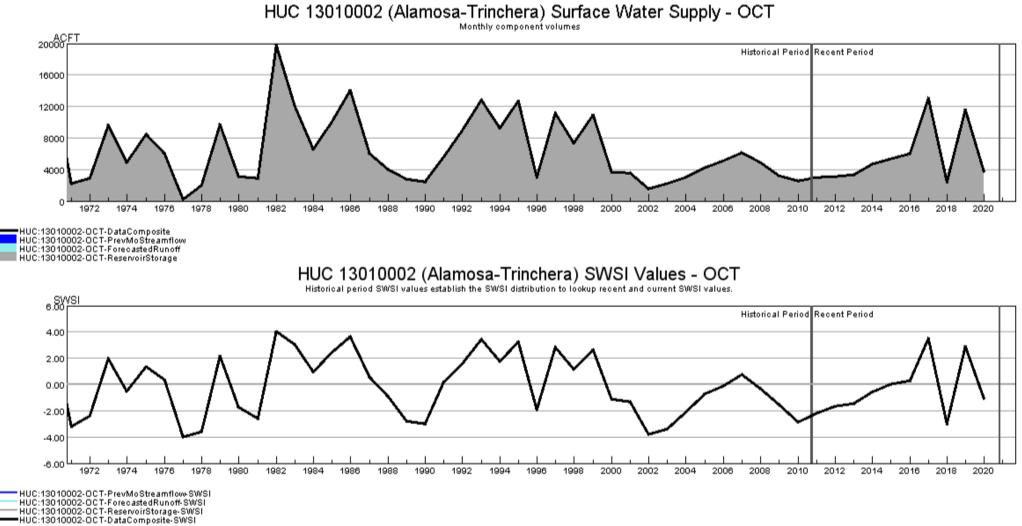


HUC:11020009-OCT-DataComposite-SWSI

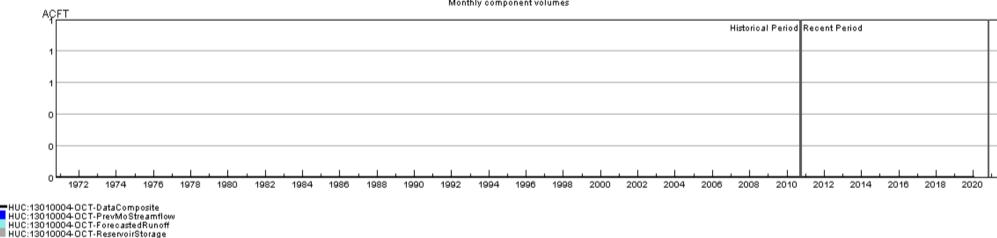




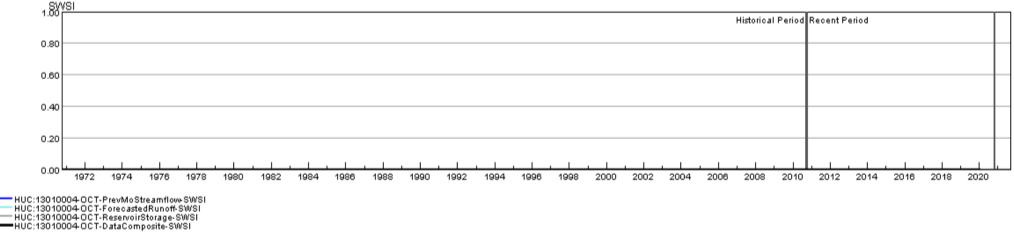
- HUC:13010001-OCT-DataComposite-SWSI

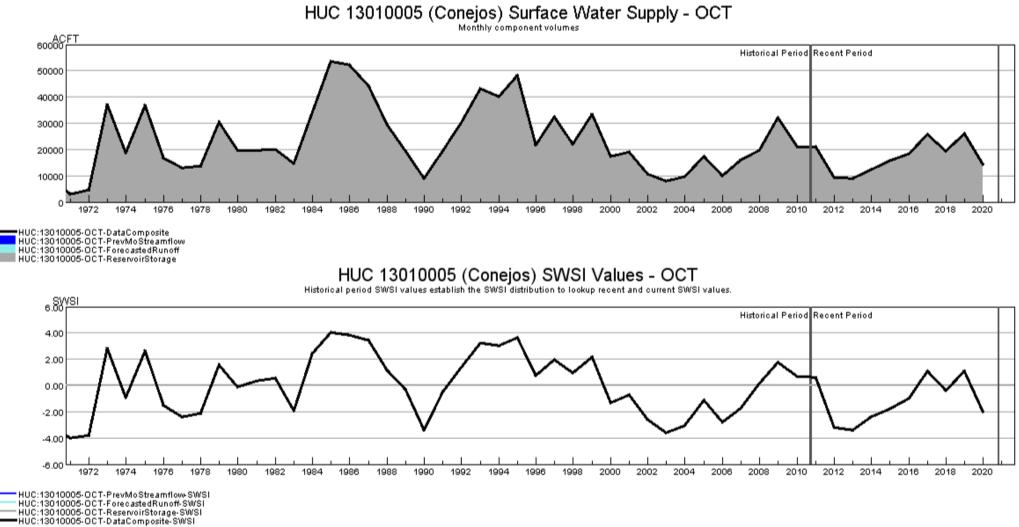


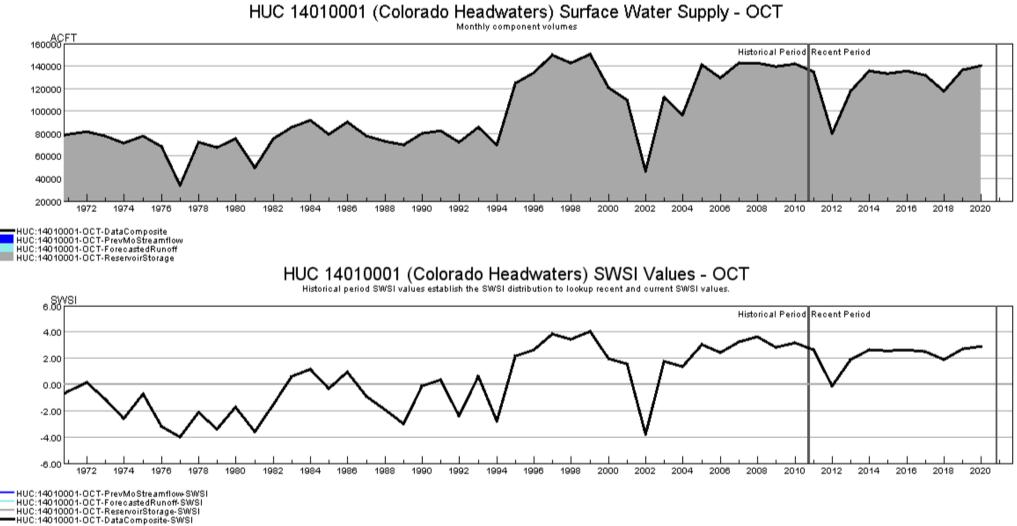
HUC 13010004 (Saguache) Surface Water Supply - OCT

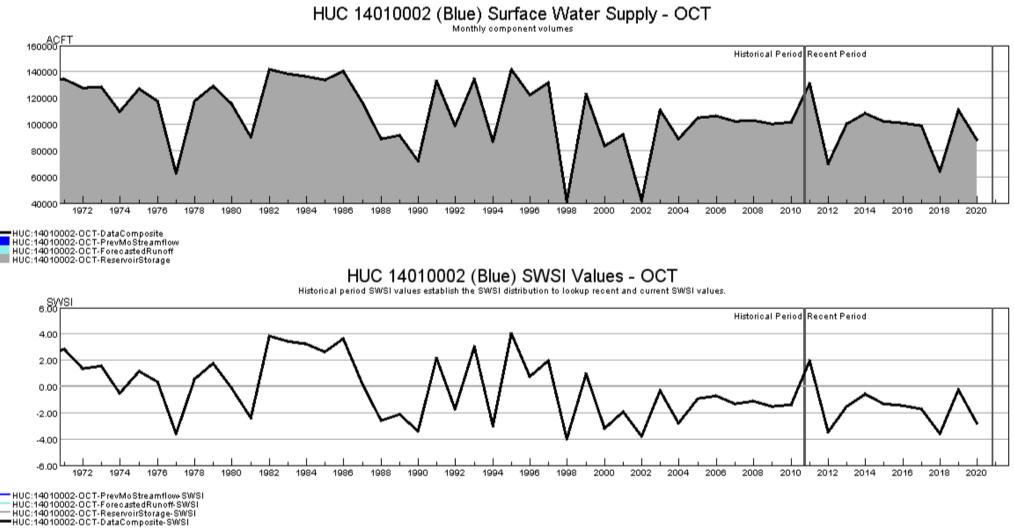


HUC 13010004 (Saguache) SWSI Values - OCT Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

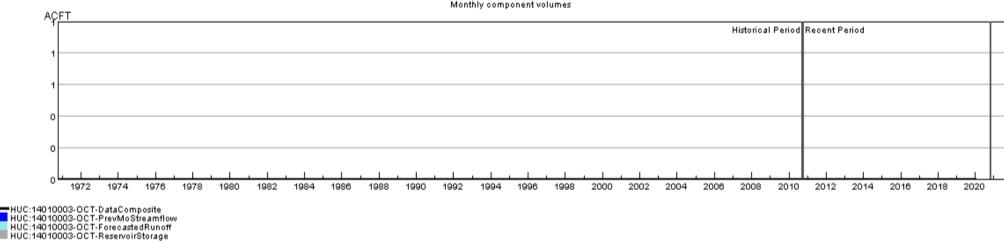




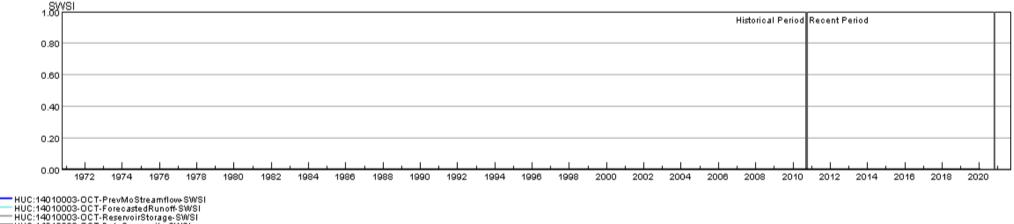




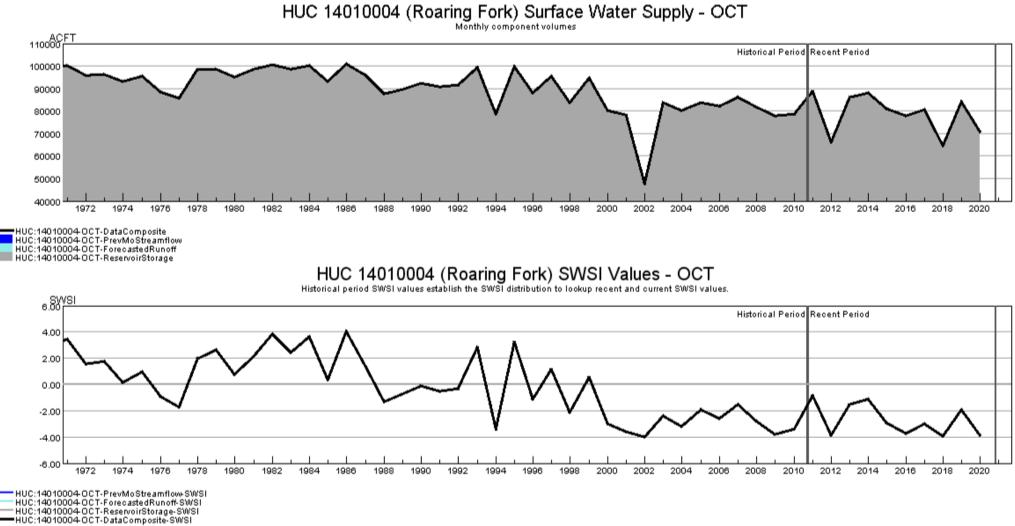
HUC 14010003 (Eagle) Surface Water Supply - OCT

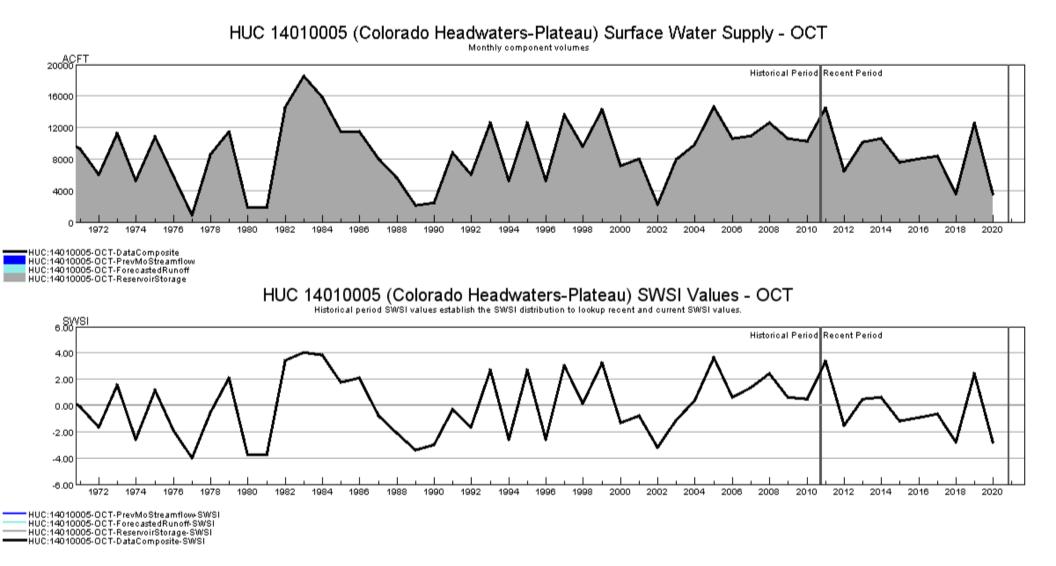


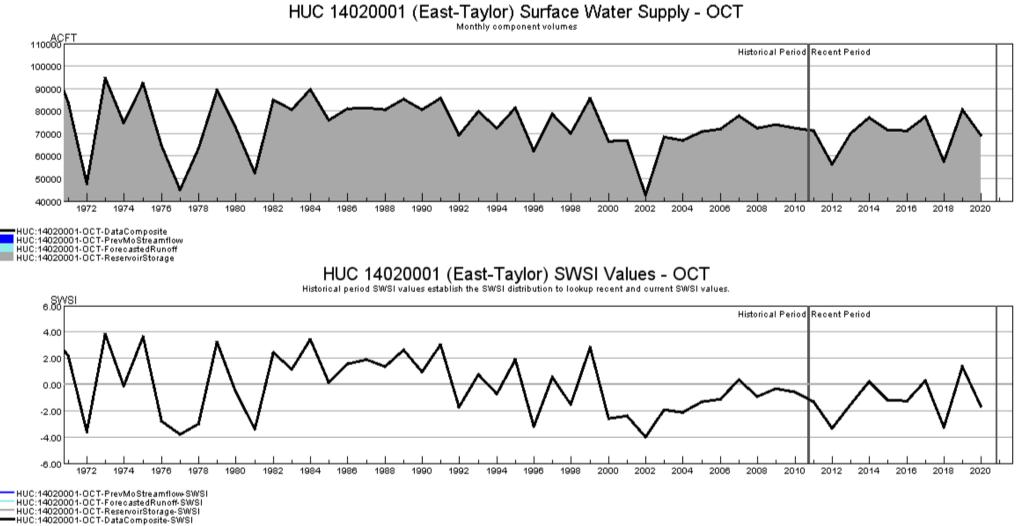
HUC 14010003 (Eagle) SWSI Values - OCT Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

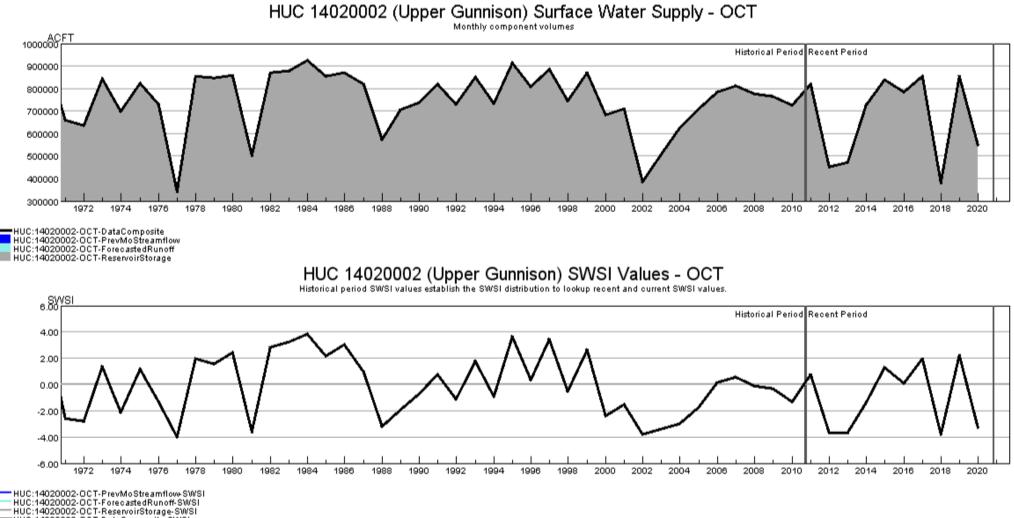


HUC:14010003-OCT-DataComposite-SWSI



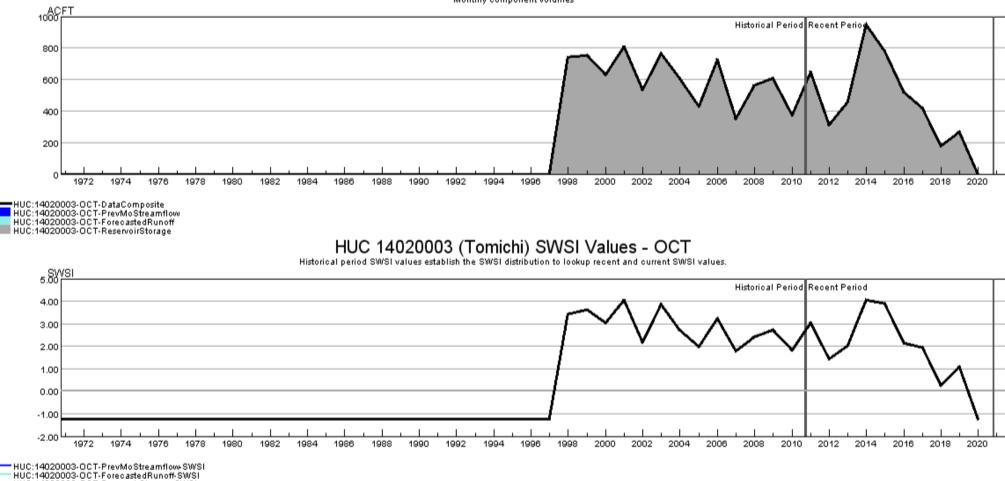






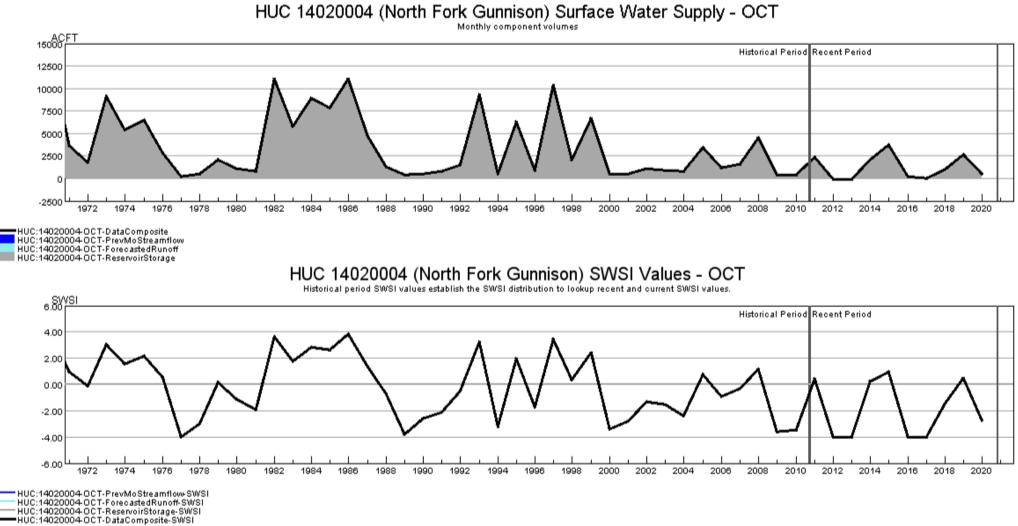
HUC:14020002-OCT-DataComposite-SWSI

HUC 14020003 (Tomichi) Surface Water Supply - OCT

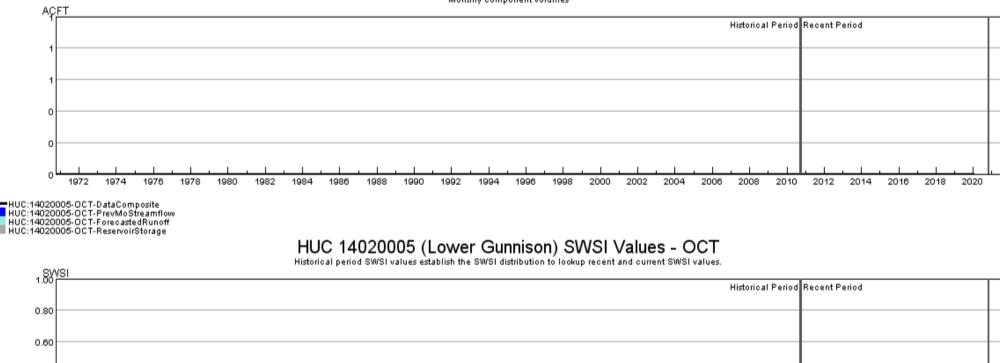


HUC:14020003-0CT-ForecastedRunoff-SWSI HUC:14020003-0CT-ReservoirStorage-SWSI

HUC:14020003-OCT-DataComposite-SWSI



HUC 14020005 (Lower Gunnison) Surface Water Supply - OCT

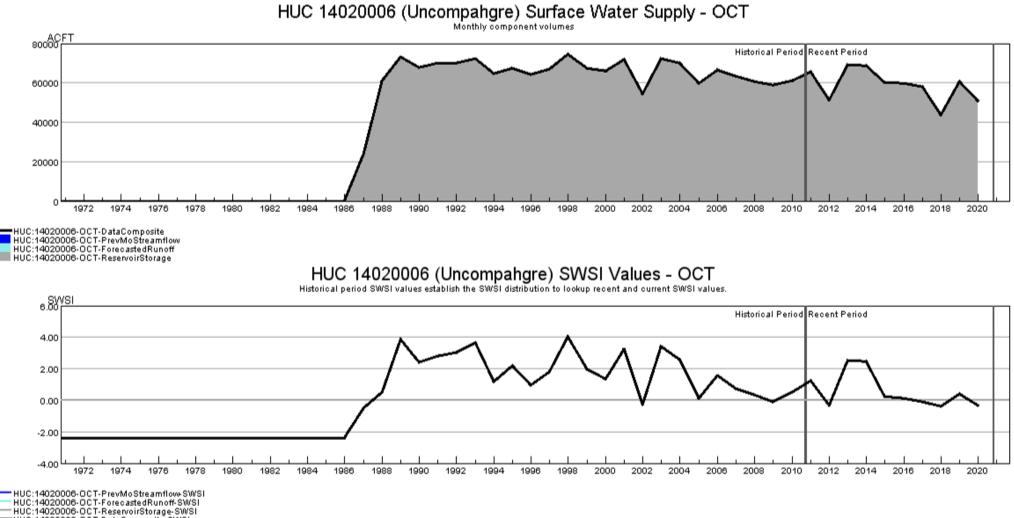


HUC:14020005-OCT-PrevMoStreamflow-SWSI HUC:14020005-0CT-Forevisiostream1000-SWS HUC:14020005-0CT-ReservoirStorage-SWSI HUC:14020005-0CT-DataComposite-SWSI

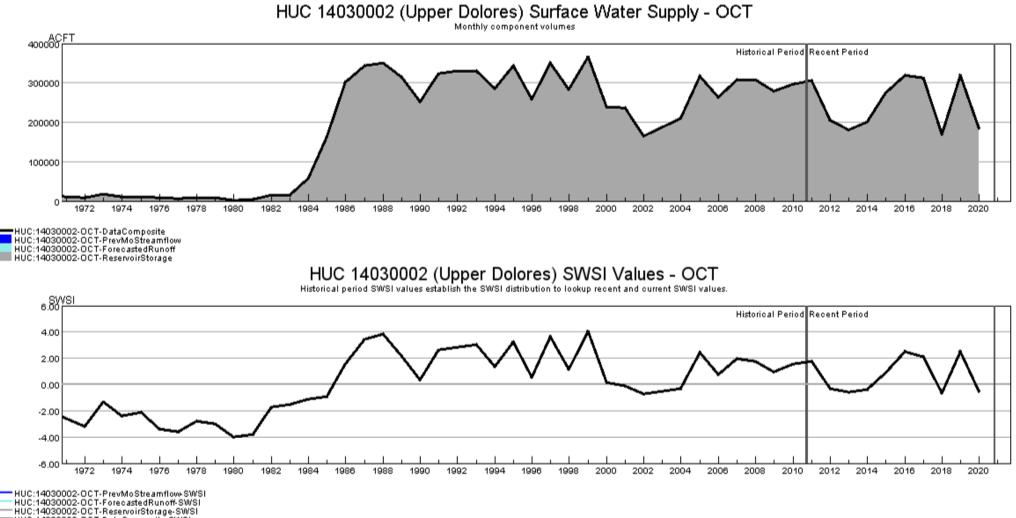
0.40

0.20

0.00

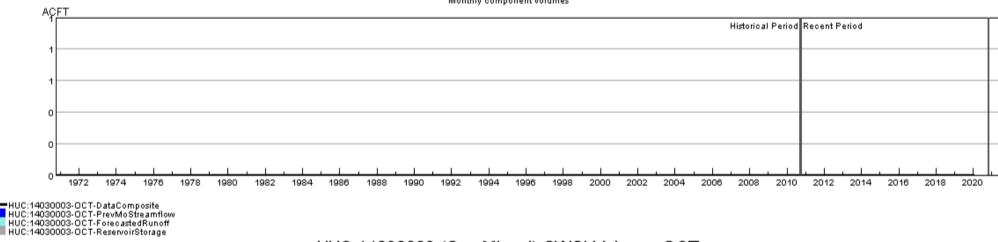


HUC:14020006-OCT-DataComposite-SWSI

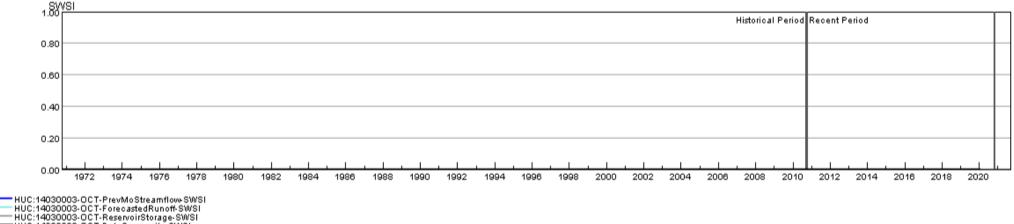


HUC:14030002-OCT-DataComposite-SWSI

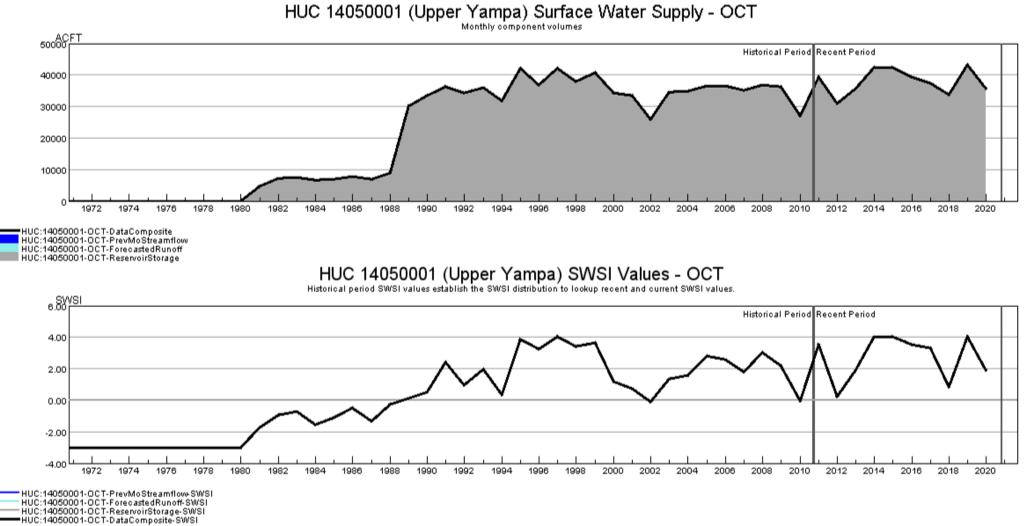
HUC 14030003 (San Miguel) Surface Water Supply - OCT



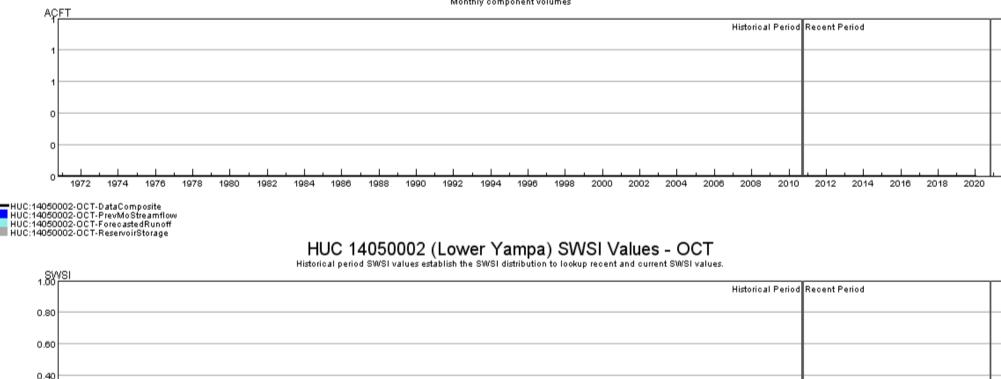
HUC 14030003 (San Miguel) SWSI Values - OCT Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

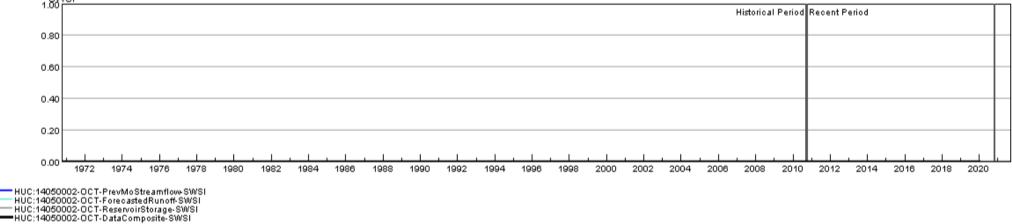


HUC:14030003-OCT-DataComposite-SWSI

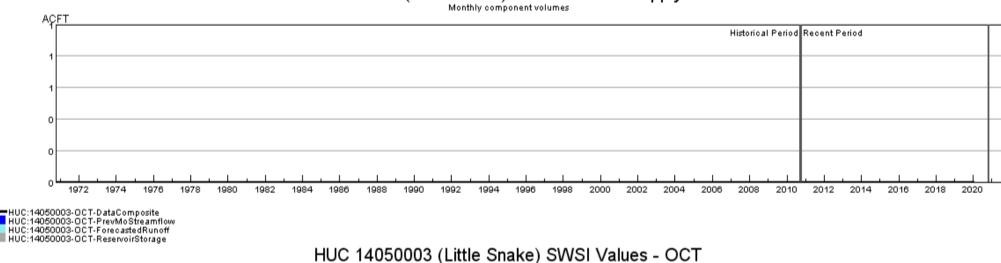


HUC 14050002 (Lower Yampa) Surface Water Supply - OCT

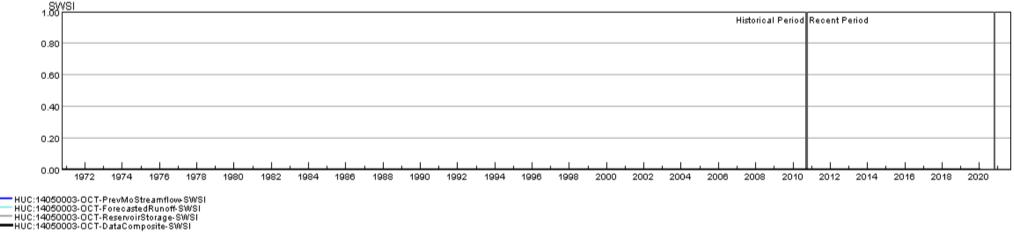




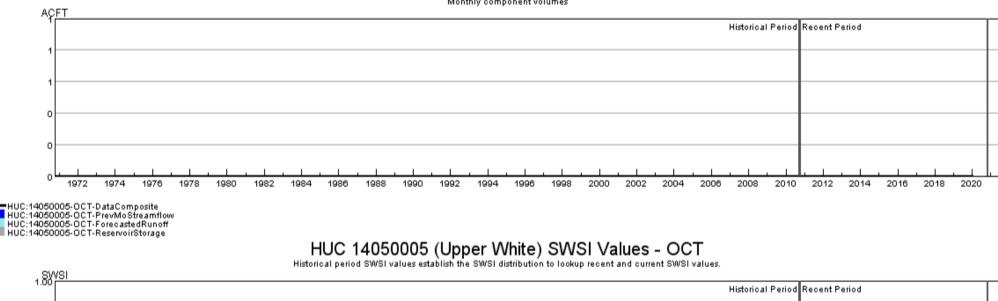
HUC 14050003 (Little Snake) Surface Water Supply - OCT



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

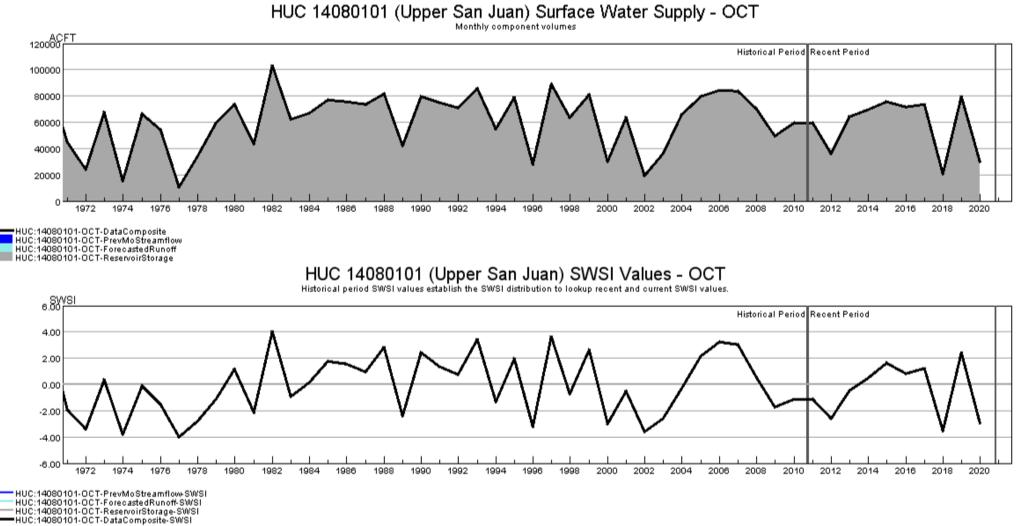


HUC 14050005 (Upper White) Surface Water Supply - OCT

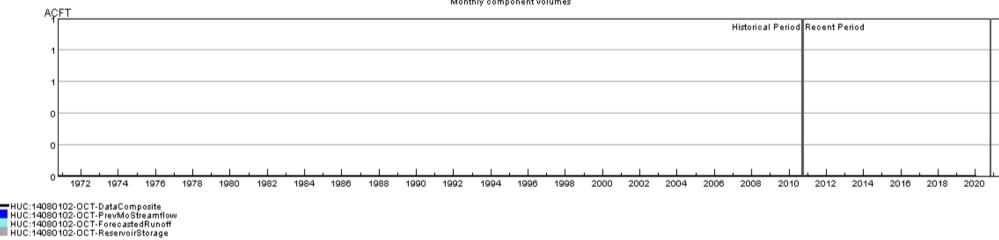


0.80 0.60 0.40 0.20 0.00 HUC:14050005-OCT-PrevMoStreamflow-SWSI

HUC:14050005-0CT-Forevisionstream1000-SWS HUC:14050005-0CT-ReservoirStorage-SWSI HUC:14050005-0CT-DataComposite-SWSI

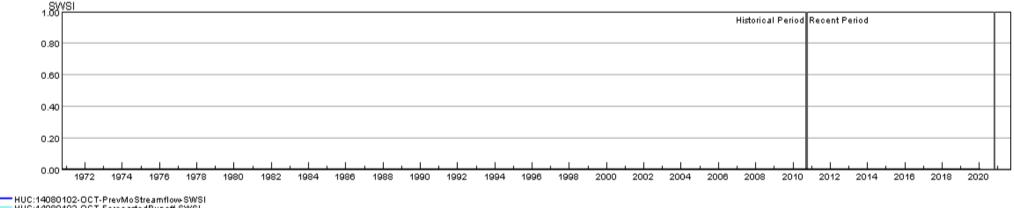


HUC 14080102 (Piedra) Surface Water Supply - OCT



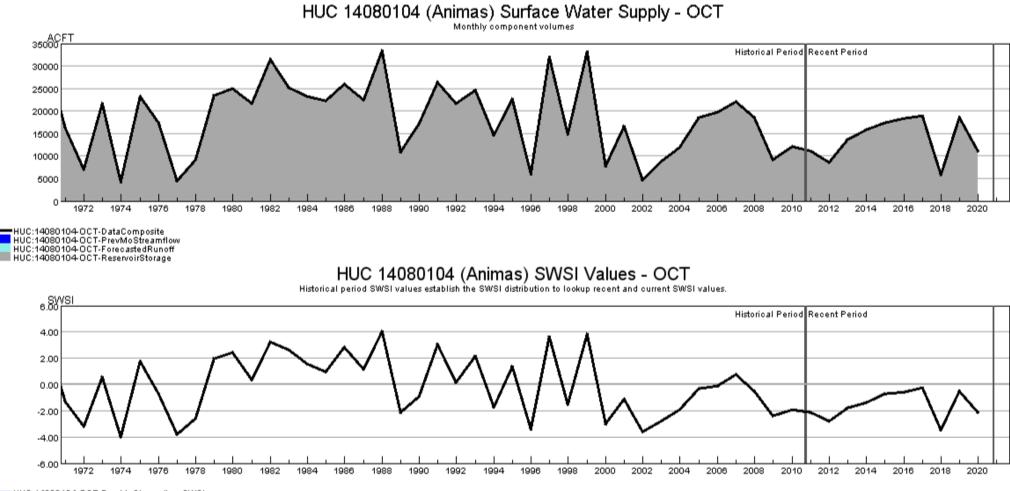
HUC 14080102 (Piedra) SWSI Values - OCT

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



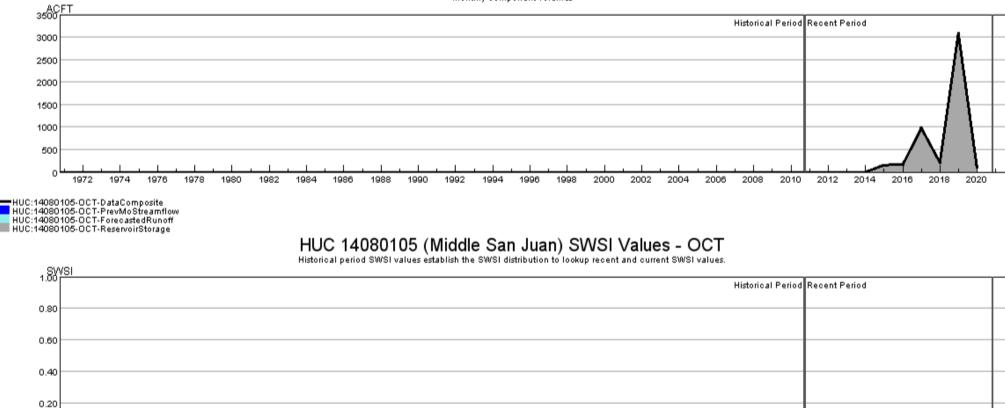
HUC:14080102-OCT-PrevMoStreamflow-SWSI HUC:14080102-OCT-ForecastedRunoff-SWSI HUC:14080102-OCT-ReservoirStorage-SWSI

HUC:14080102-OCT-DataComposite-SWSI



HUC:14080104-0CT-PrevMoStreamflow-SWSI HUC:14080104-0CT-ForecastedRunoff-SWSI HUC:14080104-0CT-ReservoirStorage-SWSI HUC:14080104-0CT-DataComposite-SWSI

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



HUC:14080105-OCT-PrevMoStreamflow-SWSI HUC:14080105-0CT-Forevisionsteam1000-SWS HUC:14080105-0CT-ForevastedRunoff-SWSI HUC:14080105-0CT-DataComposite-SWSI

0.00