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>

September 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.

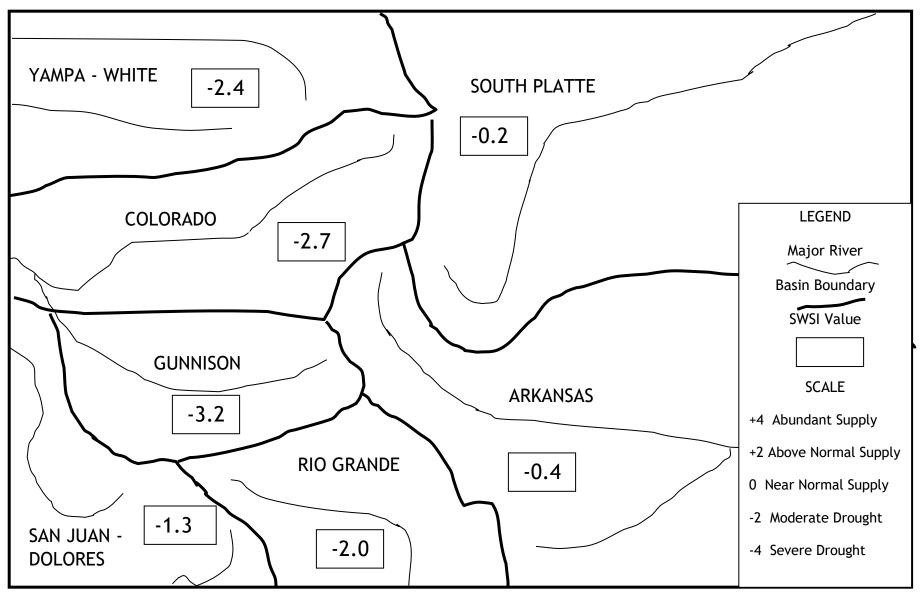
Time Period	SWSI Components
January 1 - June 1	Forecasted Runoff + Reservoir Storage
July 1 - September 1	Previous Month's Streamflow + Reservoir Storage
October 1 -December 1	Reservoir Storage

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

The SWSI calculation for the summer season (July 1 to September 1) is based on the previous month's natural streamflow (the estimate of flow without the impacts of diversions and imports), combined with reservoir storage at the end of last month, in this case August 31. Water supply conditions vary across the state from below normal to well below normal. Storage varies statewide, from average to below average, and the previous month's streamflow is well below normal in every basin.

Basin	September 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	-0.4	-0.4	-2.5
Colorado	-2.7	-0.4	-6.0
Gunnison	-3.2	-0.2	-6.3
Rio Grande	-2.0	0.3	-4.8
San Juan-Dolores	-1.3	0.6	-4.7
South Platte	-0.2	-0.3	-3.4
Yampa-White	-2.4	-0.5	-5.5

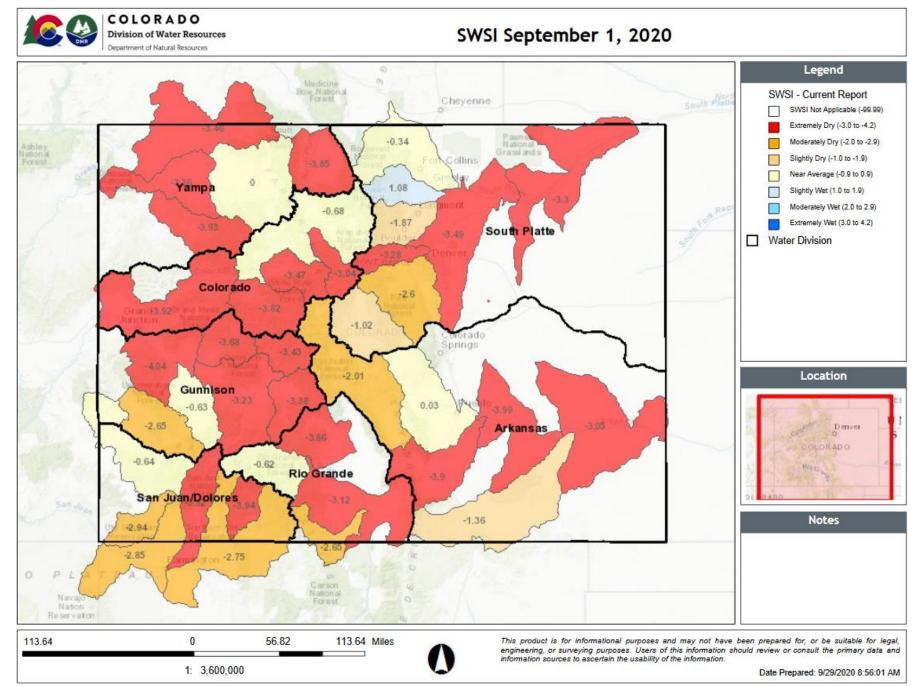
				SWSI Scale				
-4	-3	-2	-1	0	1	2	3	4
Severe		Moderate		Near Normal		Above Normal	Ab	oundant
Drought		Drought		Supply		Supply		Supply



SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

September 1, 2020

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Previous Months Streamflow NEP	Total Vol (AF)
	11020006	Huerfano	-3.91	36	3	1,014
Þ	11020010	Purgatoire	-1.36	63	2	16,514
vrka	11020005	Upper Arkansas-Lake Meredith	-4.00	55	1	16,832
Arkansas	11020009	Upper Arkansas-John Martin Reservoir	-3.05	18	1	53,246
S	11020002	Upper Arkansas	0.04	57	1	161,932
	11020001	Arkansas Headwaters	-2.01	45	5	192,601
	14010003	Eagle	-3.47	80	8	10,476
Co	14010005	Colorado Headwaters-Plateau	-3.92	19	3	77,367
Colorado	14010004	Roaring Fork	-3.82	N/A	5	106,481
ado	14010002	Blue	-3.04	4	9	129,942
	14010001	Colorado Headwaters	-0.69	11	3	196,882
	14020004	North Fork Gunnison	-3.68	15	12	4,121
	14020003	Tomichi	-3.38	12	6	4,421
նս	14030003	San Miguel	-2.66	64	18	6,710
Gunnison	14020005	Lower Gunnison	-4.04	2	1	29,224
son	14020006	Uncompahgre	-0.64	N/A	1	55,318
	14020001	East-Taylor	-3.44	44	5	82,950
	14020002	Upper Gunnison	-3.23	N/A	4	629,770
Rio	13010004	Saguache	-3.87	79	4	1,441
0 G	13010002	Alamosa-Trinchera	-3.12	26	12	7,432
Grande	13010005	Conejos	-2.65	N/A	16	19,374
de	13010001	Rio Grande Headwaters	-0.63	24	4	45,758
Sa	14080105	Middle San Juan	-2.86	42	8	593
an J	14080102	Piedra	-3.95	18	3	1,545
San Juan-Dolores	14080107	Mancos	-2.94	N/A	33	3,520
ı-Dc	14080104	Animas	-3.33	16	6	26,176
olor	14080101	Upper San Juan	-2.75	50	3	63,950
es	14030002	Upper Dolores	-0.64	12	20	217,416
	10190004	Clear	-3.29	38	11	7,915
	10190005	St. Vrain	-1.87	34	17	69,915
Sou	10190012	Middle South Platte-Sterling	-3.31	23	3	75,176
South Platte	10190003	Middle South Platte-Cherry Creek	-3.50	N/A	3	87,376
Pla	10190007	Cache La Poudre	-0.34	44	9	128,327
tte	10190001	South Platte Headwater	-1.03	65	7	150,139
	10190002	Upper South Platte	-2.61	58	3	310,006
	10190006	Big Thompson	1.08	18	2	552,364
×	14050003	Little Snake	-3.46	N/A	8	252
amp	10180001	North Platte Headwaters	-3.85	84	4	5,128
oa-∖	14050002	Lower Yampa	-3.36	N/A	10	5,228
Yampa-White	14050005	Upper White	-3.93	N/A	3	8,364
ťe	14050001	Upper Yampa	-0.01	N/A	4	44,756

September 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)
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HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		CLEAR CREEK RESERVOIR	4,645	34
		ARKANSAS RIVER AT SALIDA	13,782	5
11020001	Arkansas Headwaters	TWIN LAKES RESERVOIR	28,703	18
		HOMESTAKE RESERVOIR	42,377	78
		TURQUOISE LAKE	103,094	34
		CUCHARAS RESERVOIR*	0	18
11020006	Huerfano	CUCHARAS RIVER AT BOYD RANCH NR LA VETA	304	4
		HUERFANO RIVER NEAR REDWING	710	4
11020010	Purgatoire	PURGATOIRE RIVER AT TRINIDAD	514	2
11020010	Turgatone	TRINIDAD LAKE	16,000	45
11020002	Upper Arkansas	PUEBLO RESERVOIR INFLOW	0	1
11020002	opper Arkansas	PUEBLO RESERVOIR	161,932	63
		PUEBLO RESERVOIR INFLOW	0	1
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	304	4
11020009	Upper Arkansas-John	PURGATOIRE RIVER AT TRINIDAD	514	2
11020009	Martin Reservoir	HUERFANO RIVER NEAR REDWING	710	4
		ADOBE CREEK RESERVOIR	11,177	36
		JOHN MARTIN RESERVOIR	40,541	59
	Upper Arkansas-Lake Meredith	PUEBLO RESERVOIR INFLOW	0	1
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	304	4
11020005		HUERFANO RIVER NEAR REDWING	710	4
		LAKE HENRY	3,503	44
		MEREDITH RESERVOIR	12,315	56
14010002	Blue	BLUE RIVER INFLOW TO GREEN MOUNTAIN RES	18,121	9
14010002	Dide	GREEN MOUNTAIN RESERVOIR	111,821	19
		COLORADO RIVER NEAR DOTSERO	50,922	3
14010001	Colorado Headwaters	WOLFORD MOUNTAIN RESERVOIR	59,760	87
		WILLIAMS FORK RESERVOIR	86,200	59
14010005	Colorado Headwaters-	VEGA RESERVOIR	5,663	11
14010005	Plateau	COLORADO RIVER NEAR CAMEO	71,704	3
14010003	Eagle	EAGLE RIVER BELOW GYPSUM	10,476	8
14010004	Depring Fork	ROARING FORK AT GLENWOOD SPRINGS	22,579	5
14010004	Roaring Fork	RUEDI RESERVOIR	83,902	4
		TAYLOR R INF TO TAYLOR PARK RESERVOIR	3,955	5
14020001	East-Taylor	EAST RIVER AT ALMONT	6,152	5
		TAYLOR PARK RESERVOIR	72,843	15
14020005	Lower Gunnison	GUNNISON RIVER NR GRAND JUNCTION	29,224	1
1 402000 4	North Forly Currices	PAONIA RESERVOIR	298	2
14020004	North Fork Gunnison	NORTH FORK GUNNISON R NR SOMERSET	3,823	12
14030003	San Miguel	SAN MIGUEL RIVER NEAR PLACERVILLE	6,710	18
1 4020002	Tomishi	VOUGA RESERVOIR NEAR DOYLEVILLE	344	64
14020003	Tomichi	TOMICHI CREEK AT GUNNISON, CO	4,077	6

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
14020006	Uncompahgre	UNCOMPAHGRE RIVER AT COLONA	1,517	1
14020000	oncompangre	RIDGEWAY RESERVOIR	53,801	44
		FRUITLAND RESERVOIR	300	55
		CRAWFORD RESERVOIR	2,604	16
		SILVER JACK RESERVOIR	3,423	4
14020002	Upper Gunnison	LAKE FORK AT GATEVIEW, CO	6,685	17
		GUNNISON RIVER NEAR GUNNISON, CO	1,364	3
		MORROW POINT RESERVOIR	10,057	4
		BLUE MESA RESERVOIR	95,337	13
		SANGRE DE CRISTO	50	5
		UTE CREEK	432	9
		TRINCHERA CK	443	4
13010002	Alamosa-Trinchera	MOUNTAIN HOME	971	16
		CULEBRA CREEK AT SAN LUIS	1,272	28
		ALAMOSA CREEK ABOVE TERRACE RESERVOIR	1,341	11
		TERRACE RESERVOIR	2,923	37
13010005	Conejos	CONEJOS RIVER NEAR MOGOTE	4,783	16
13010003	conejos	PLATORO RESERVOIR	4,591	24
		CONTINENTAL RESERVOIR	6,584	82
13010001	Rio Grande	RIO GRANDE NEAR DEL NORTE	2,703	4
13010001	Headwaters	RIO GRANDE RESERVOIR	2,783	61
		SANTA MARIA RESERVOIR	3,688	83
13010004	Saguache	SAGUACHE CREEK NEAR SAGUACHE, CO	1,441	4
		FLORIDA RIVER INFLOW TO LEMON RESERVOIR	1,382	9
14080104	Animas	LEMON RESERVOIR	0,949	16
		ANIMAS RIVER AT DURANGO	3,845	6
14080107	Mancos	MANCOS RIVER NEAR MANCOS	587	33
14000107	Maricos	JACKSON GULCH RESERVOIR	2,933	12
14080105	Middle San Juan	LONG HOLLOW RESERVOIR	123	50
14000105	Middle Sail Suail	LA PLATA RIVER AT HESPERUS	470	8
14080102	Piedra	PIEDRA RIVER NEAR ARBOLES	1,545	3
		DOLORES RIVER BELOW MCPHEE RESERVOIR	7,950	20
14030002	Upper Dolores	GROUNDHOG RESERVOIR	0,900	29
		MCPHEE RESERVOIR	98,566	42
		SAN JUAN RIVER NEAR CARRACAS	4,070	4
14080101	Upper San Juan	LOS PINOS RIVER NEAR BAYFIELD	5,397	3
		VALLECITO RESERVOIR	54,483	18
		LONE TREE RESERVOIR	0	1
		MARIANO RESERVOIR	800	32
		LAKE LOVELAND RESERVOIR	3,500	7
10100007		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	3,971	2
10190006	Big Thompson	WILLOW CREEK RESERVOIR	7,878	48
		BOYD LAKE	32,400	62
		CARTER LAKE	91,603	96
		LAKE GRANBY	412,212	57

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		HALLIGAN RESERVOIR	1,900	11
		CACHE LA POUDRE	2,600	42
		WINDSOR RESERVOIR	2,800	13
		BLACK HOLLOW RESERVOIR	3,500	79
10190007	Cache La Poudre	FOSSIL CREEK RESERVOIR	4,400	63
		CHAMBERS LAKE	6,400	95
		CACHE LA POUDRE R AT CANYON MOUTH	7,223	9
		COBB LAKE	16,100	63
		HORSETOOTH RESERVOIR	83,404	51
10190004	Clear Creek	CLEAR CREEK AT GOLDEN	7,915	11
		HORSECREEK RESERVOIR	0	1
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	1,262	11
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	3,971	2
		BARR LAKE	4,500	19
		BOULDER CREEK NEAR ORODELL	5,584	57
10190003	Middle South Platte- Cherry Creek	SAINT VRAIN CREEK AT LYONS	6,288	16
	Cherry Creek	MILTON RESERVOIR	6,900	36
		CACHE LA POUDRE R AT CANYON MOUTH	7,223	9
		CLEAR CREEK AT GOLDEN	7,915	11
		SOUTH PLATTE RIVER AT SOUTH PLATTE	8,333	3
		STANDLEY RESERVOIR	35,400	41
	Middle South Platte- Sterling	SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	1,262	11
		RIVERSIDE RESERVOIR	3,900	15
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	3,971	2
		JULESBURG RESERVOIR	4,100	28
		EMPIRE RESERVOIR	4,200	13
		JACKSON LAKE RESERVOIR	4,700	15
10190012		BOULDER CREEK NEAR ORODELL	5,584	57
		SAINT VRAIN CREEK AT LYONS	6,288	16
		PREWITT RESERVOIR	7,200	29
		CACHE LA POUDRE R AT CANYON MOUTH	7,223	9
		CLEAR CREEK AT GOLDEN	7,915	11
		SOUTH PLATTE RIVER AT SOUTH PLATTE	8,333	3
		POINT OF ROCKS RESERVOIR	10,500	37
		ELEVENMILE CANYON RESV INFLOW	3,139	7
10100001	South Platte	ANTERO RESERVOIR	19,600	54
10190001	Headwater	SPINNEY MOUNTAIN RESERVOIR	32,600	37
		ELEVENMILE CANYON RESERVOIR	94,800	20
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	1,262	11
		TERRY RESERVOIR	3,100	14
		MARSHALL RESERVOIR	5,000	24
1010000-	C . M . I	BOULDER CREEK NEAR ORODELL	5,584	57
10190005	St. Vrain	SAINT VRAIN CREEK AT LYONS	6,288	16
		UNION RESERVOIR	11,281	71
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,200	68
		GROSS RESERVOIR	21,200	33

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		SOUTH PLATTE RIVER AT SOUTH PLATTE	8,333	3
10190002	Upper South Platte	CHEESMAN LAKE	65,973	30
		DILLON RESERVOIR	235,700	40
14050003	Little Snake	LITTLE SNAKE RIVER NEAR LILY	252	8
14050002	Lower Yampa	YAMPA RIVER NEAR MAYBELL	5,228	10
10180001	North Platte Headwaters	NORTH PLATTE R NR NORTHGATE	5,128	4
14050005	Upper White	WHITE RIVER NEAR MEEKER	8,364	3
		ELKHEAD CREEK ABOVE LONG GULCH	82	18
		ELK RIVER NEAR MILNER, CO	2,887	3
14050001	Upper Yampa	YAMCOLO RESERVOIR	3,289	49
		YAMPA RIVER AT STEAMBOAT SPRINGS	3,798	6
		STAGECOACH RESERVOIR NR OAK CREEK	34,700	99

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

50 (Normal)

*No longer exists

Water Volume NEP Color Scale:

0 (Well Below Normal)

100 (Well Above Normal)

Basinwide Conditions Assessment

The SWSI value for the month was -0.2.

The basin wide pattern of below average precipitation and above average temperatures that became dominant during the month of May has continued throughout the month of August. The entire South Platte River basin experienced below average monthly precipitation at 20 to 50-percent of average and above average temperatures on average 1 to 3 degrees Fahrenheit above the monthly average for August in the eastern plains, with temperatures 5-7 degrees Fahrenheit above normal in portions of the mountainous regions.

Below average precipitation and native river flows in the rivers along with above average temperatures throughout the South Platte River and Republican River Basin continued during the month of August. These 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 August. The USDA Drought Monitor rating for the mountainous and foothill areas increased throughout the month of August from a rating of D0 (abnormally dry) and D1 (moderate drought), ending the month with a rating of D2 (severe drought). The central portion of the basin and much of the eastern plains increased in severity throughout, beginning the month with a rating primarily of D1(moderate drought) or D2 (severe drought) conditions and ending the month primarily with a rating of D2 (severe drought) and D3 (extreme drought) in portions of Washington, Yuma, Lincoln, Kit Carson, and Cheyenne Counties.

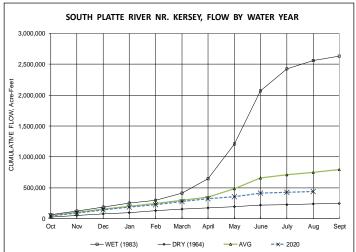
The above conditions along with high a demand for irrigation and other uses, resulted in flows on the mainstem of the South Platte River basin well below normal during the month of August. Flows at the Kersey gage downstream of the City of Greeley, were well below average with average daily flows for the month of August approximately 215.23 cfs, 43% of the historic mean value of 501 cfs. The average daily flow at the Julesburg gage for the month of August was 46.62 cfs, only 25.5% of the historic mean value of 183 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 August.

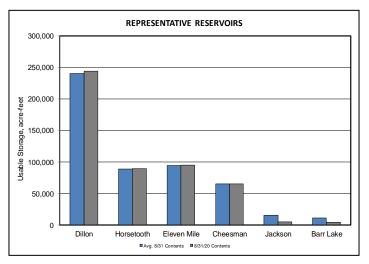
The month of August experienced consistent well below average streamflows, resulting in steady but fairly senior calling water rights on the mainstem of the South Platte and most tributaries. The month of August was controlled on the upper end with a call at the Western Ditch located just downstream of the Town of Platteville with a circa 1871 priority. The Lower Latham Ditch located just upstream of the City of Evans controlled the central portion of the mainstem of the South Platte River in

Division 1 with a call circa 1881. The Lower end of the river was controlled by an 1882 call at the Lowline Ditch located near the Town of Sterling, and the Harmony #1 Ditch with a 1897 priority call located just upstream of the Town of Crook. The month of August continued the same trend from July with the South Platte River Compact Call on the entire month 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 August.

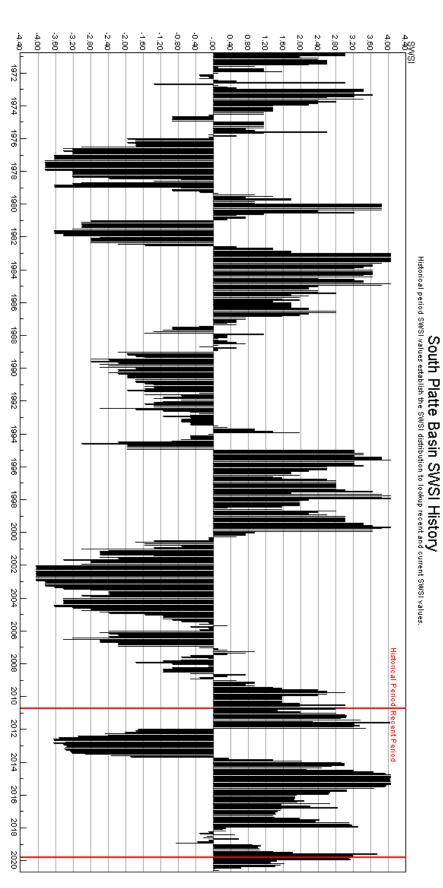
Reservoir storage levels throughout the South Platte River mainstem ended the month of August slightly below average at the 6 SWSI Representative Reservoirs at 502,900 acre-feet volume, which is 98% of the long term average. Additionally, 32 indexed reservoirs throughout Division 1 basin at 94% of the long term average with a storage volume of 627,992 acre-feet at the end of August, representing approximately 55% of full capacity. This is below the long term average of 58% full for the end of August storage in the 32 indexed reservoirs throughout Division 1. The rapid drop from above the historical average to below the historical average at the end of the month of August has been driven by the low stream flows, senior calls, and increased demands for irrigation water to sustain irrigated crops and other water activities during the month of August requiring significant releases from storage reservoirs.

The temperature and precipitation outlook into September, October and November prepared by the National Weather Service, in northeastern Colorado indicates a 50% chance of above average temperatures and a 33-45% probability of below average precipitation throughout the South Platte River Basin and Republican River Basin.





South Platte-DataComposite-SWSI



Basinwide Conditions Assessment

The SWSI value for the month was -0.4.

Outlook

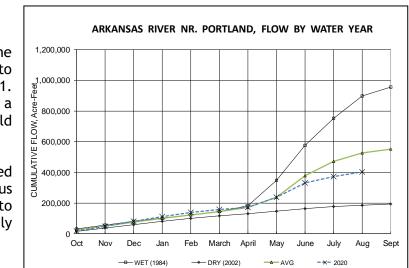
Drought conditions persisted in August and the month was very dry. River calls during August started with the Fort Lyon Canal 12/3/1884 pass thru call to the Catlin Canal and ended with the Bessemer Ditch 3/31/1882 call. For 4 days in August, the senior call was the 12/31/1878 Bessemer Ditch call. This is somewhat similar to the droughty conditions of 2018.

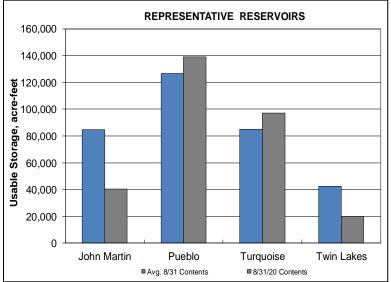
Administrative Concerns

A La Nina effect has been developing in the Pacific, which likely cause drought conditions to persist through the fall and winter of 2020-2021. The forecast at the end of August predicted a "cold snap" to hit in early September that could bring temporary relief to the Division 2 area.

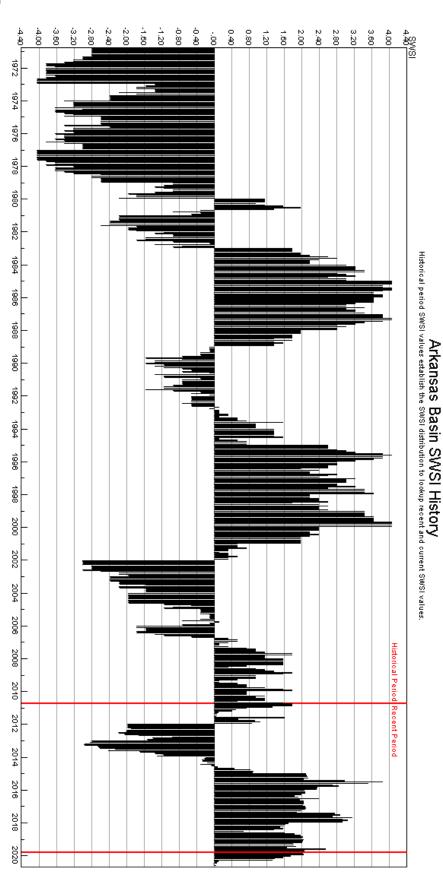
Nearly 3,200 acre-feet of water was moved downstream from Pueblo Reservoir out of various accounts and into John Martin Reservoir. Due to transit losses, less than 2,400 acre-feet actually made it to the reservoir.

On a more positive note, the Division of Water Resources rolled out a new website. This has allowed online reporting through the online reporting uploader tool. This organizes documents that are submitted to the Division office and enters the data directly into laser fiche. This will help streamline reporting and will eventually lead to including dry-up affidavits, annual projects, continued irrigation reports and photos and maps.





Arkansas-DataComposite-SWSI



Basinwide Conditions Assessment

The SWSI value for the month was -2.0.

Flow at the gaging station Rio Grande near Del Norte averaged 215 cfs (33% of normal). The Conejos River near Mogote had a mean flow of 100 cfs (46% of normal). The streamflow in the Rio Grande at the State line averaged only 16 cfs during August when Compact delivery requirement was no longer needed to meet the 2020 required delivery. Streamflow in the upper Rio Grande basin was severely below average during August as rainfall on the mountains and plains was scarce.

<u>Outlook</u>

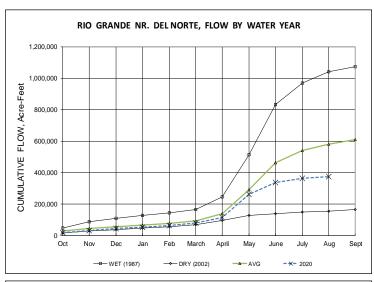
The month of August had warmer and drier conditions when compared to long-term records. Year to date precipitation is below normal for the San Luis Valley. NOAA weather forecasts for the next month and beyond call for below precipitation and warmer than normal temperatures.

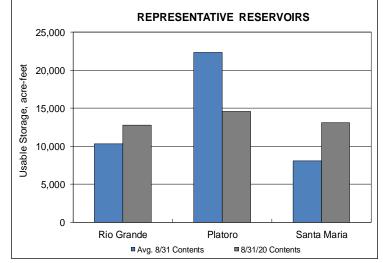
Administrative/Management Concerns

Drought years like this one and 2018 take a toll on the environment, the farmers, ranchers and those who visit the San Luis Valley for recreation. Reservoir levels have receded and streamflow has diminished as the poor snow pack

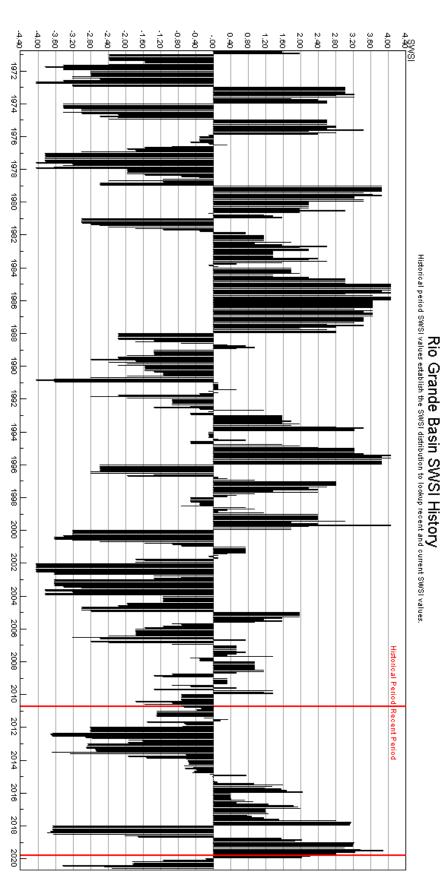
gave way to well below normal precipitation. Very senior calls exist on every stream in the upper Rio Grande basin. Junior water rights had little or no diversion this year. The aquifers are further stressed by pumping for irrigation demand. This makes sustainability requirements under the Case No. 15CW3024 Groundwater Use Rules even more difficult to achieve.

These are issues a few good snowstorms won't fix. The expected La Nina conditions for this winter won't help a quick recovery. The American southwest has lower precipitation patterns during La Nina. These overall conditions harken back to the drought of the early 2000's.





Rio Grande-DataComposite-SWSI



Basin Wide Conditions Outlook

August was extremely dry in the Gunnison basin with many areas setting records for heat and lack of precipitation. In fact, no areas received greater than 50% of average precipitation and many received between 0 and 30% of average precipitation during a month when the high country relies on monsoon moisture to keep vegetation alive. Streamflows at all stations on major streams, including the Uncompany River, East River, Taylor River, Tomichi Creek, and North Fork Gunnison River dropped to levels below the 25th percentile for the date. Temperatures during August throughout the Gunnison basin were as high as 9 degrees above normal, resulting in extremely high evaporation and evapotranspiration, which helped drive the lower streamflow amounts as well.

Outlook

Unfortunately, the National Climate Prediction Center forecasts for the October to December period predict lower than average precipitation combined with much above average temperatures.

Administrative/Management Concerns

The Uncompandere Valley Water Users (UVWUA) project continued at 80% delivery for August and their demand remained high to finish corn, beans and a final cutting of hay. As a result, diversions at the Gunnison Tunnel remained above 1,050 cfs for the entire month. During August the UVWUA used 21,362 ac-ft of first fill storage from their account in Blue Mesa Reservoir and over 9,671 ac-ft released from Taylor Park Reservoir second fill and used for recreation and fishery use before being diverted at the Tunnel per the 86CW203 decree. This results in a total for Taylor Park storage diverted of 31,033 ac-ft, which is near the amount used in August of 2018.

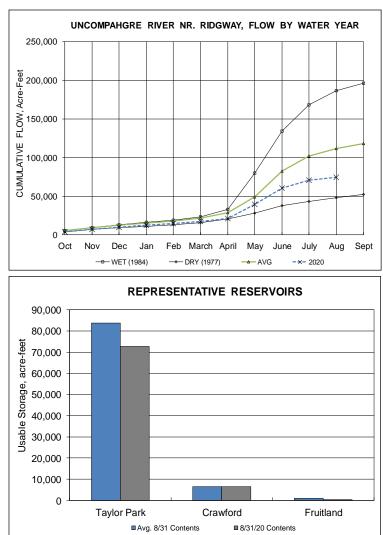
Use of Ridgway Reservoir storage remained at higher than normal levels as well and the UVWUA exhausted their 11,200 ac-ft normal irrigation credits, plus 2,235 ac-ft provided by Tri-County Water Conservancy District, on August

27th. The UVWUA purchased an additional 5,000 ac-ft of irrigation storage from the Bureau of Reclamation, bringing their total credits to 18,435 ac-ft. Of that amount the UVWUA had 3,790 ac-ft remaining on September 1st. The total amount of storage used from Ridgway Reservoir during August, including exchange credits built by diverting water from the South Canal to Project 7's water treatment facility, was significantly greater than average at 22,664 ac-ft. The call from the M&D Canal was released by the Division of Water Resources (DWR) on September 1st because of the amount of water leaving the end of their seven main canals without being beneficially used. This resulted in a few ditches in Ouray County getting to divert some additional water for irrigation.

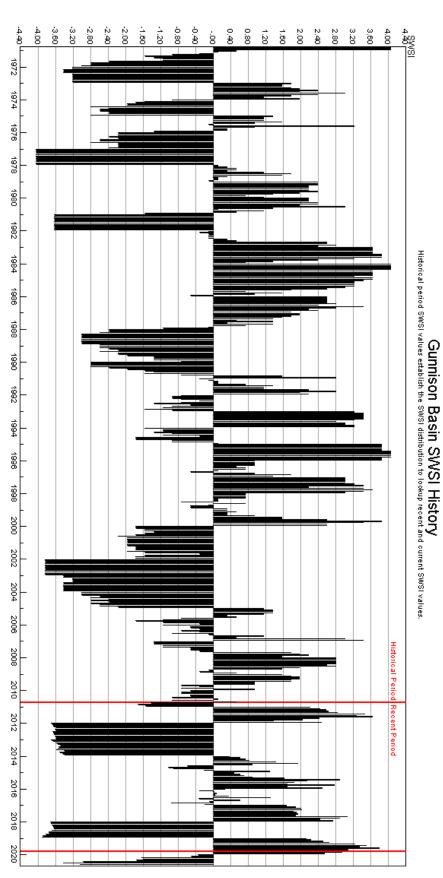
Storage orders and resulting releases from Grand Mesa Reservoirs remained extremely high during July due to the high temperatures that produced elevated irrigation demand. If weather conditions continue to be dry it is possible that carryover in this system could be lower than in 2018, which was a record low at only eight percent. Evaporation measured by the DWR at 10,200 ft elevation near Alexander Lake was 5.7 inches, which actually exceeded the July evaporation of 5.4 inches.

Public Use Impacts

The base flow target in the Gunnison River at Whitewater specified in the Aspinall Unit reoperations ROD remained at 900 cfs in July due to a drought provision that applies when storage in Blue Mesa Reservoir is less than 600,000 acre-feet. This resulted in releases from Crystal Dam remaining at levels that kept flows in the Gunnison Gorge near 450 cfs throughout the month.



Gunnison-DataComposite-SWSI



<u>Basinwide Conditions Assessment</u> The SWSI value for the month was -2.7.

<u>Outlook</u>

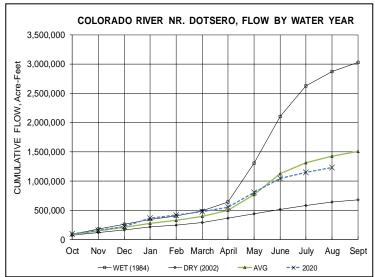
Colorado River flows and tributary flows are running below average and are forecasted to continue below average through September. Above average temperatures and average to below average precipitation are forecast for September.

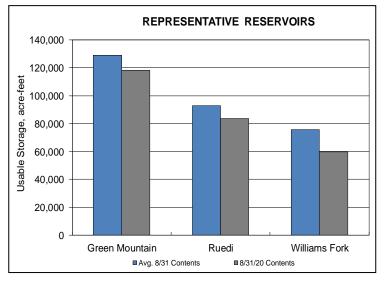
Administrative/Management Concerns

The call on the Colorado River mainstem is the Senior Shoshone (1250cfs) water right and the Grand Valley Canal junior (119 cfs) water right. Grand Valley Irrigation diversions (Government Highline/Orchard Mesa Irrigation, Grand Valley Irrigation canals) continue at or near full capacity. Wolford and Ruedi Reservoirs are releasing fish recovery water for the 15 mile reach. Wolford is also releasing contract and Middle Park water. 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.

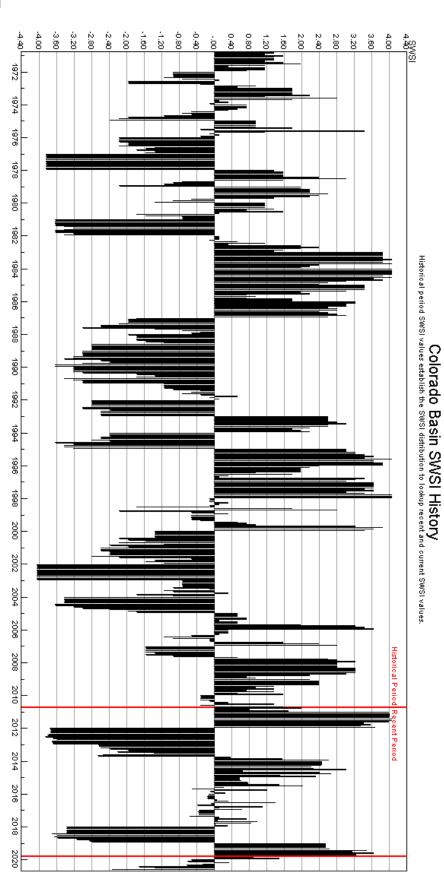
Public Use Impacts

Because of the Grizzly Creek Fire in Glenwood Canyon, the area surrounding Glenwood Springs could be susceptible to landslides for many years to come. A potential fire-impact report presented soil burn estimates and debris flow models predicting an 80-100 percent chance of a debris flow event. A quarter of an inch of rain in a 15 minute time period is all it would take to trigger an event.





Colorado-DataComposite-SWSI



18

YAMPA/WHITE BASIN

Basinwide Conditions Assessment

The SWSI value for the month was -2.4.

Precipitation (24 sites) - Entire Yampa, White, and North Platte basins were **23%** of the monthly average, putting the basin at 87% of average for the water year to date. This is down from last year's monthly average of 41%, and for last year's water year to date, 114%. For the month, the lowest percent of average, at 0%, was the Bear River, Columbine, Elk River, Old Battle, Ripple Creek, and Sandstone RS SNOTEL stations. The highest, at 82%, was the Battle Mountain SNOTEL station. **Averages are from 1981-2010 records*

Temperatures - The average temperature for NOAA Colorado Climate Division 2: Colorado River Drainage was **67.8**° **F**. This is +6.1°F from the average of 61.7°F. This temperature ranks 126th for lowest of the previous 126 years of data. For the NOAA Colorado Climate Division 4: Platte Drainage, the average temperature was **70.0°F**, +4.7°F from the average of 65.3°F, ranking 126th. **Averages are from 1901-2000 records*

Reservoir Outlook

Elkhead Reservoir -August 31st, 2020 gage height was 74.6' and 21,067 AF of 25,550 AF - 82.4% capacity.

- Fish Creek Reservoir August 31st, 2020 elevation was 9,875.3' at 2,836 AF of 4,160 AF 68.1% capacity.
- Stagecoach Reservoir August 31st, 2020 capacity level was at 34,009 AF of 36,500 AF 93% capacity, 107% average, 93% last year.
- Yamcolo Reservoir August 31st, 2020 capacity level was at 3300 AF of 8,700 AF 37.9% capacity.

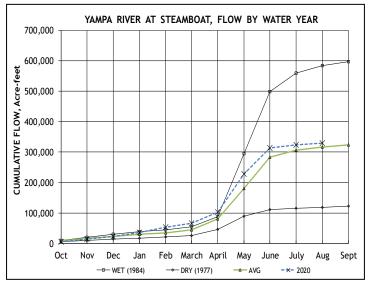
*Averages are from 1981-2010 records

Administrative Concerns

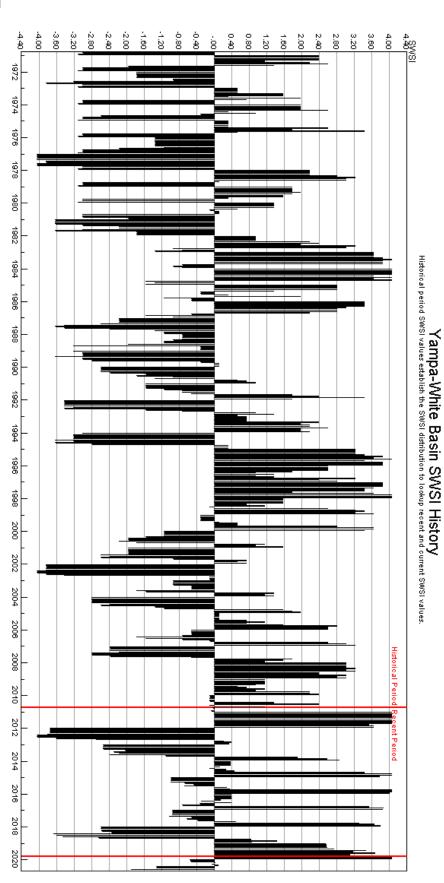
Administrative Calls placed in the month of August are as follows:

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

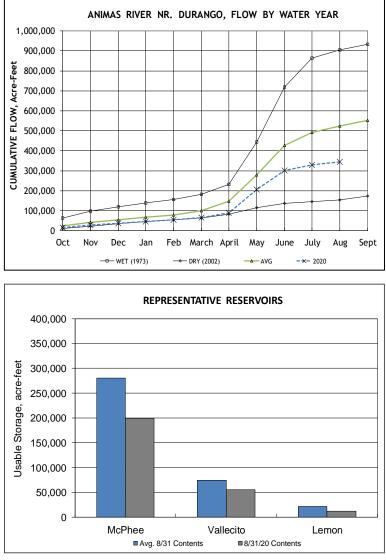


Basinwide Conditions Assessment The SWSI value for the month was -1.3.

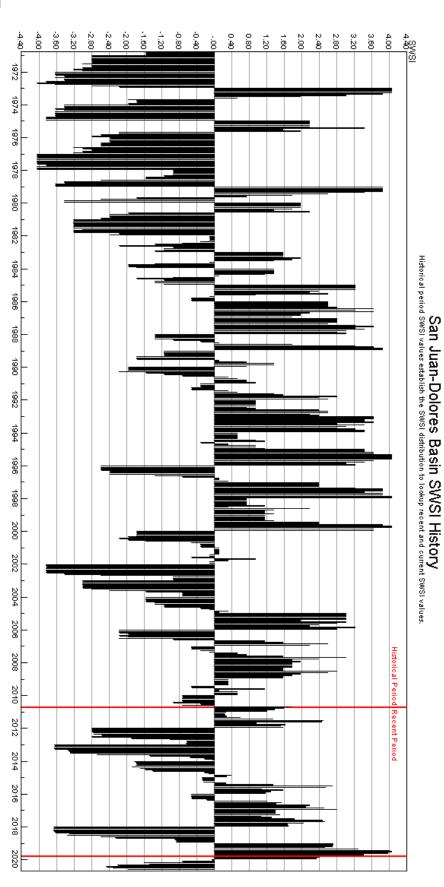
Flow at the Animas River at Durango averaged 226 cfs (40% of average). The flow at the Dolores River at Dolores averaged 146 cfs (61% of average). The La Plata River at Hesperus averaged 7.6 cfs (35% of average). Precipitation in Durango was 0.37 inches for the month, 15% of the 30-year average of 2.50 inches. Precipitation to date in Durango, for the water year is 10.87 inches, 62% of the 30-year average of 17.57 inches. The average high and low temperatures for the month of August in Durango were 91° and 52°. In comparison, the 30-year average high and low for the month is 840 and 530. At the end of the month Vallecito Reservoir contained 55,303 acre-feet compared to its average content of 284,411 (70% of average), while Lemon Reservoir was up to 11,300 acre-feet as compared to its average content of 21,416 acre-feet (53% of average).

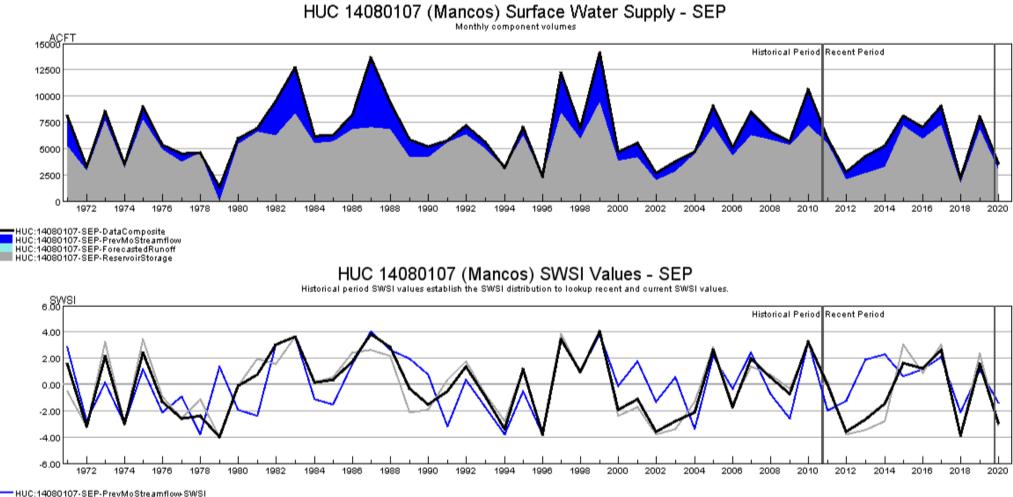
<u>Outlook</u>

Precipitation (0.37 inches) was well below average for August in Durango. There were 123 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 August 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 103 out of 109 years of record where the total flow past the Animas River at Durango stream gauge was more than this year. There were 80 out of 110 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 96 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.

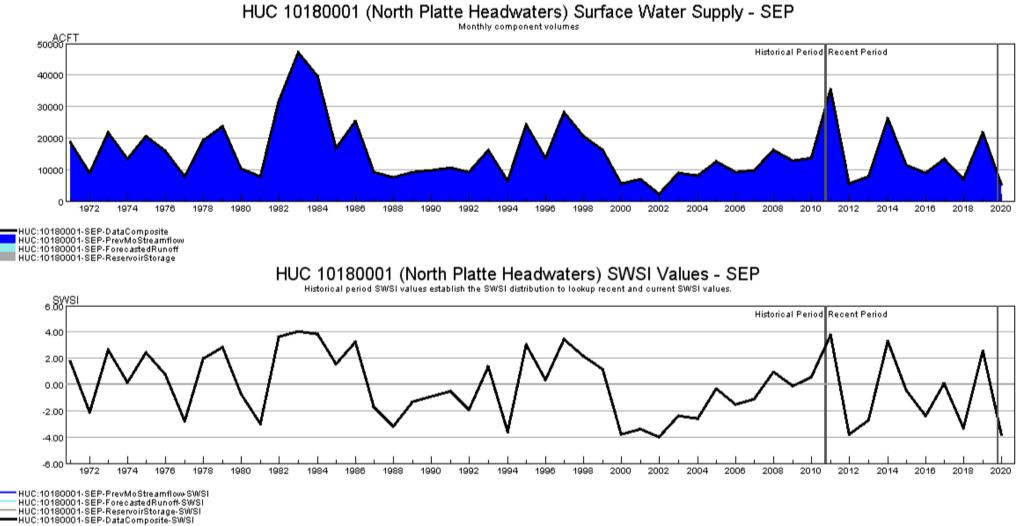


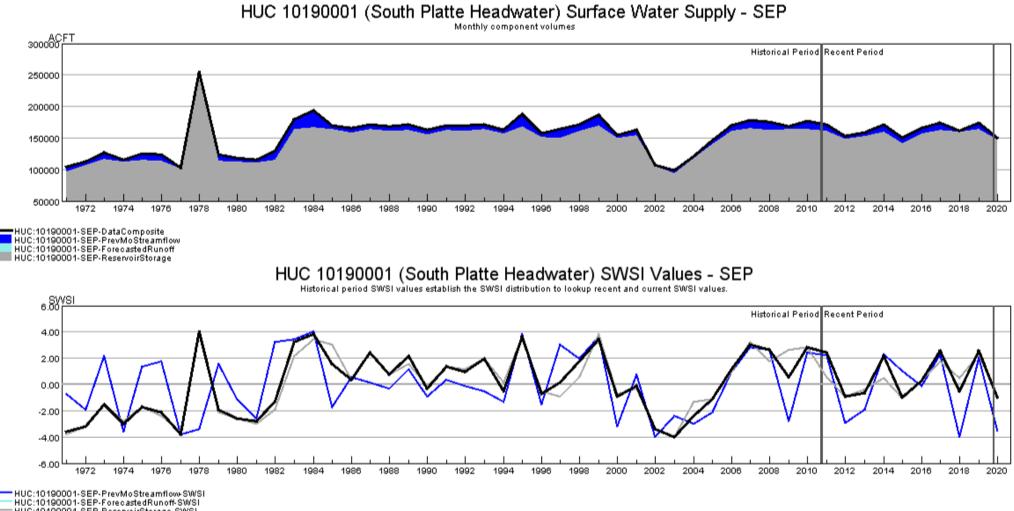
San Juan-Dolores-DataComposite-SWSI



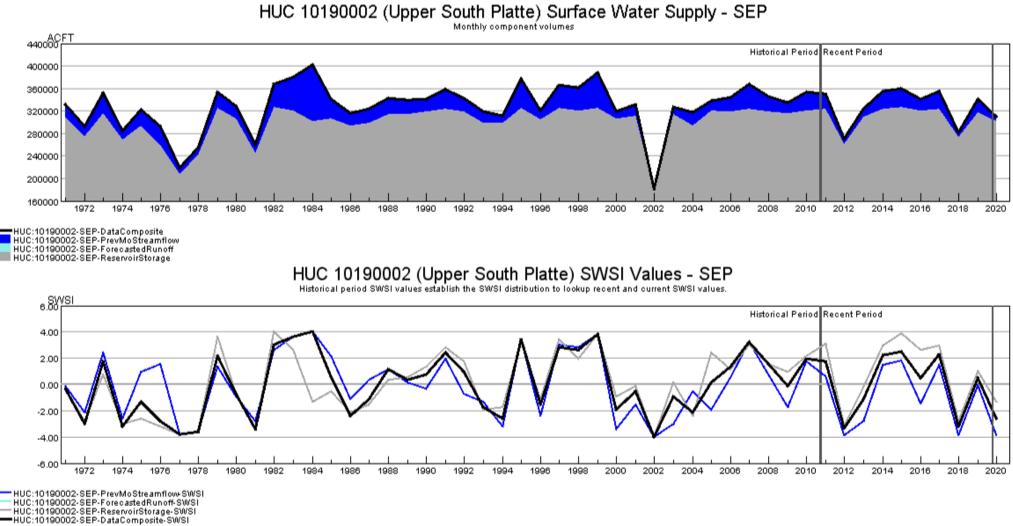


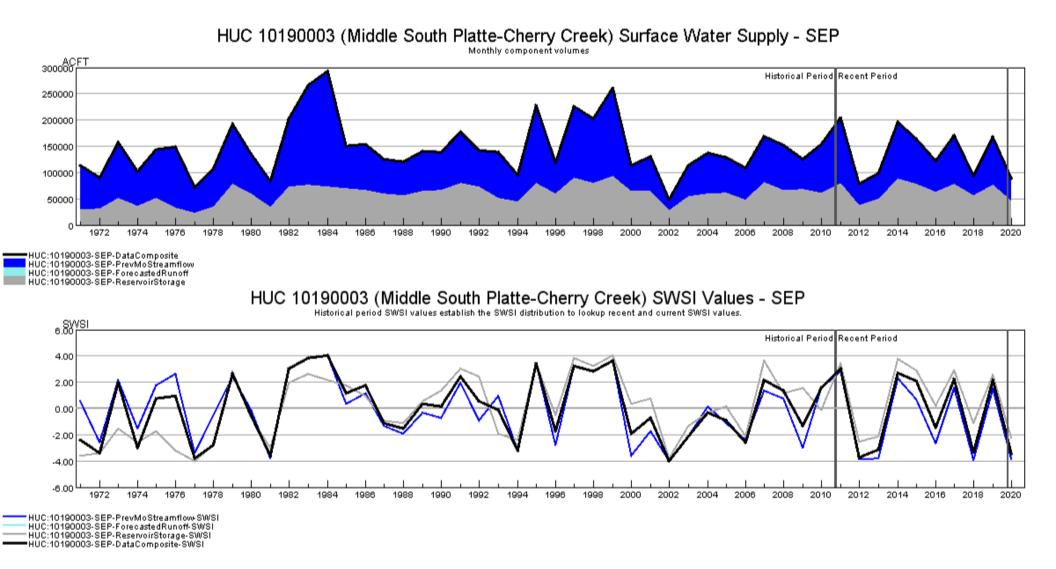
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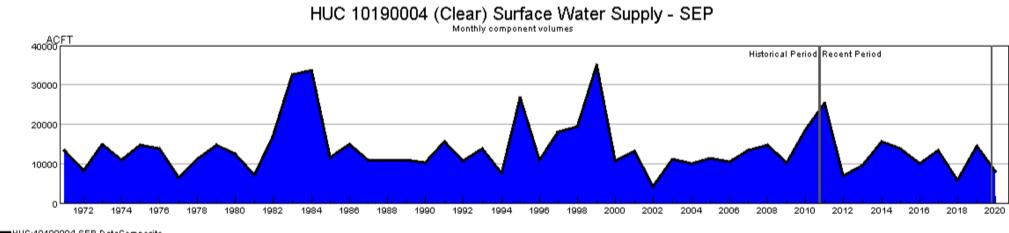




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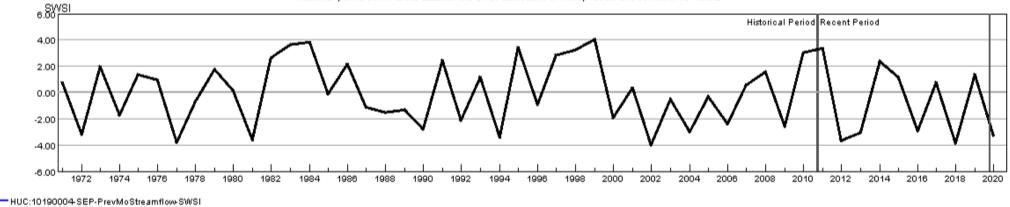




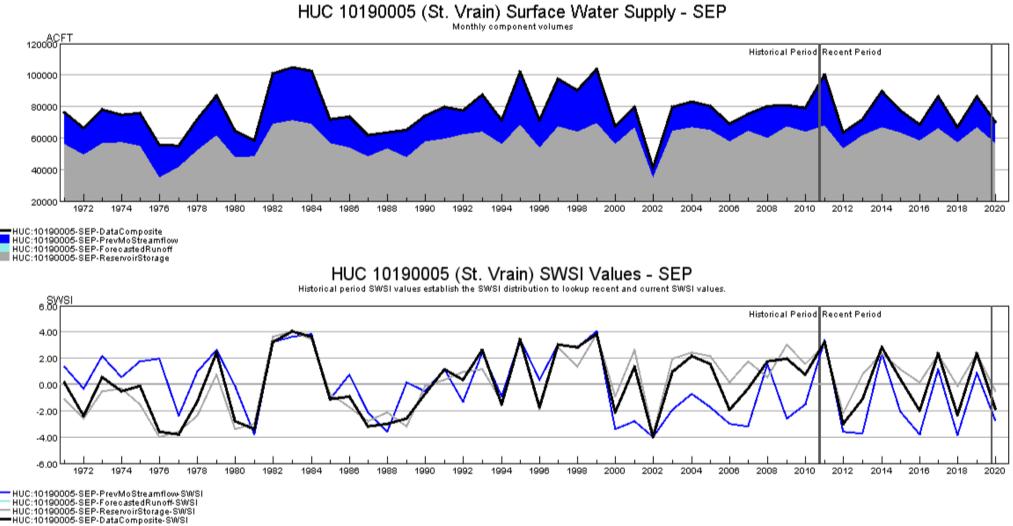


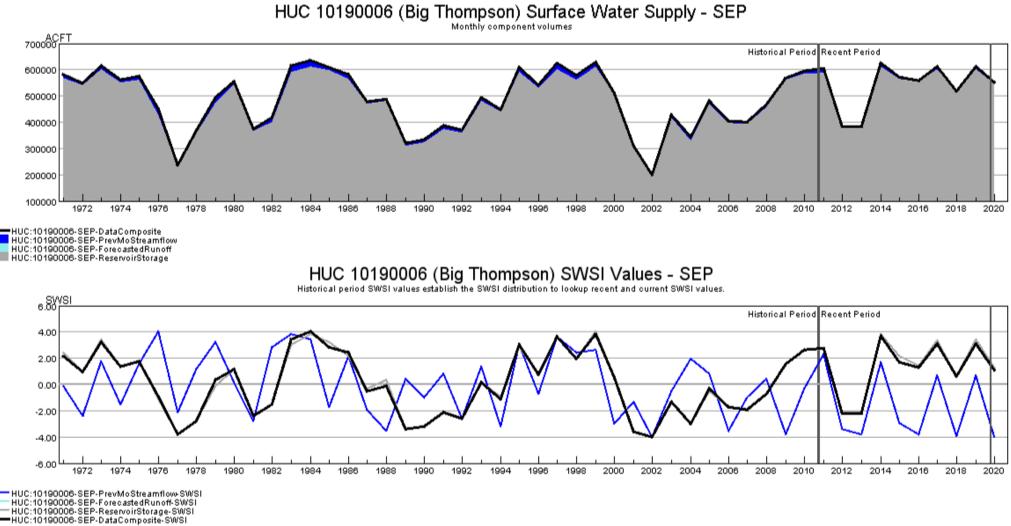
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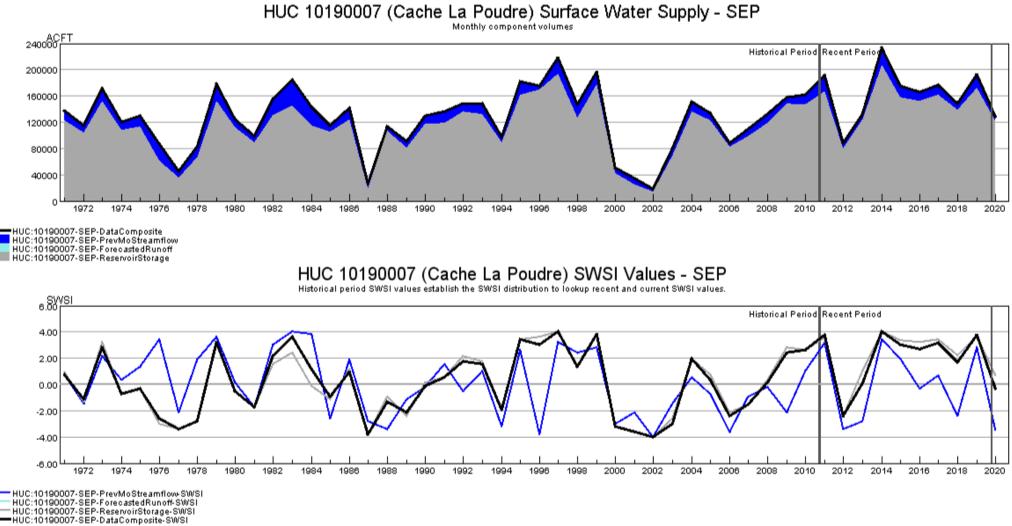
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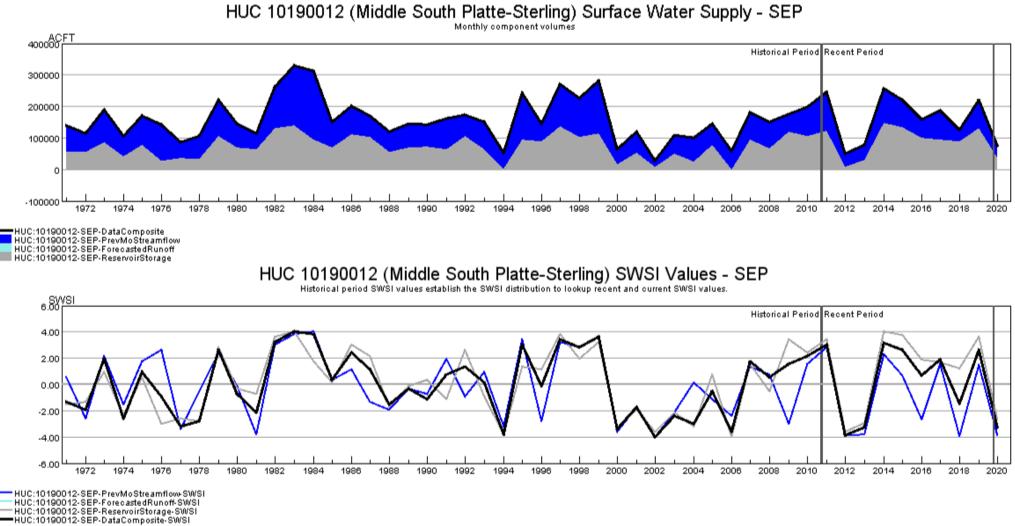


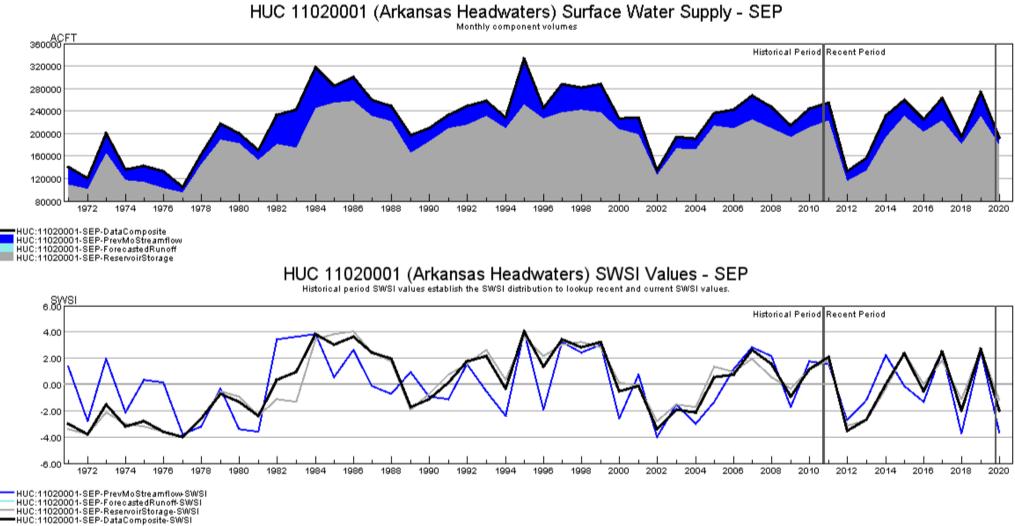
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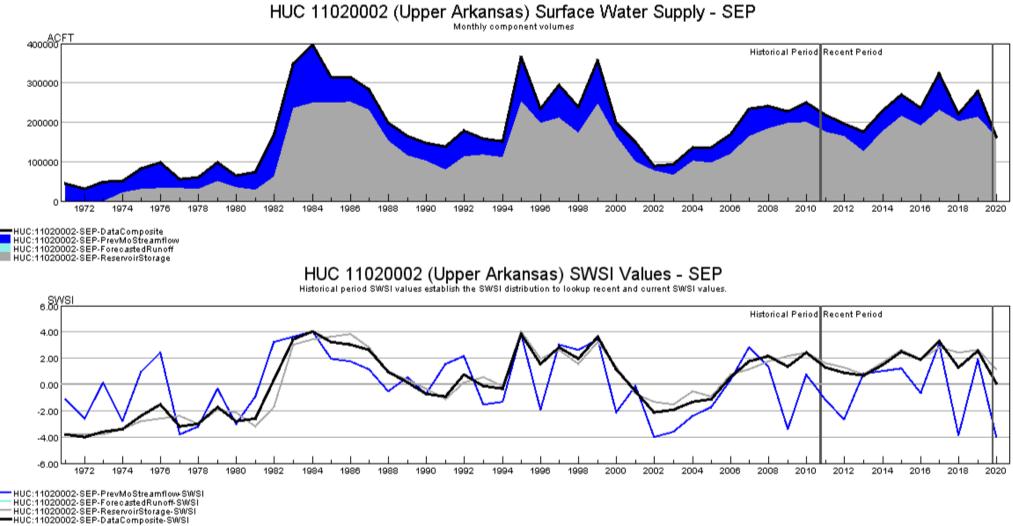


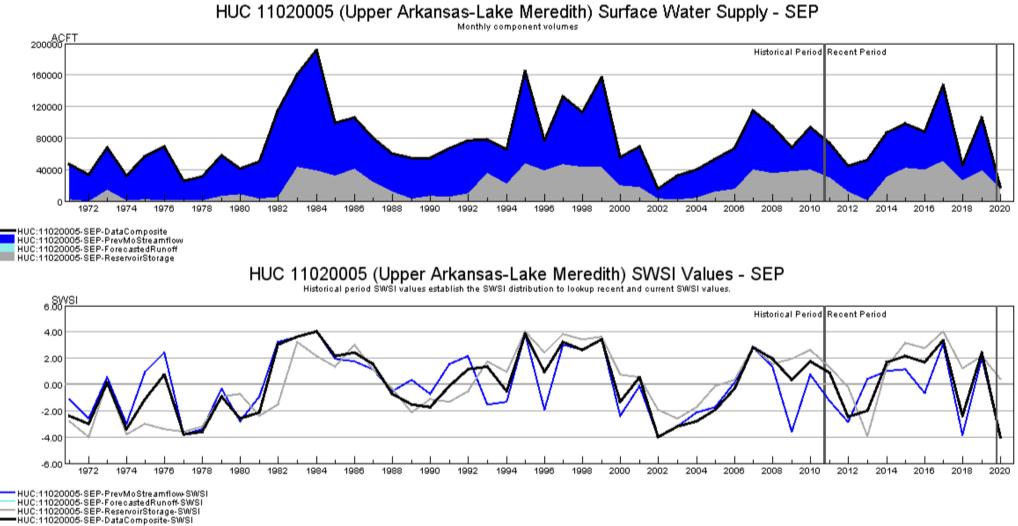


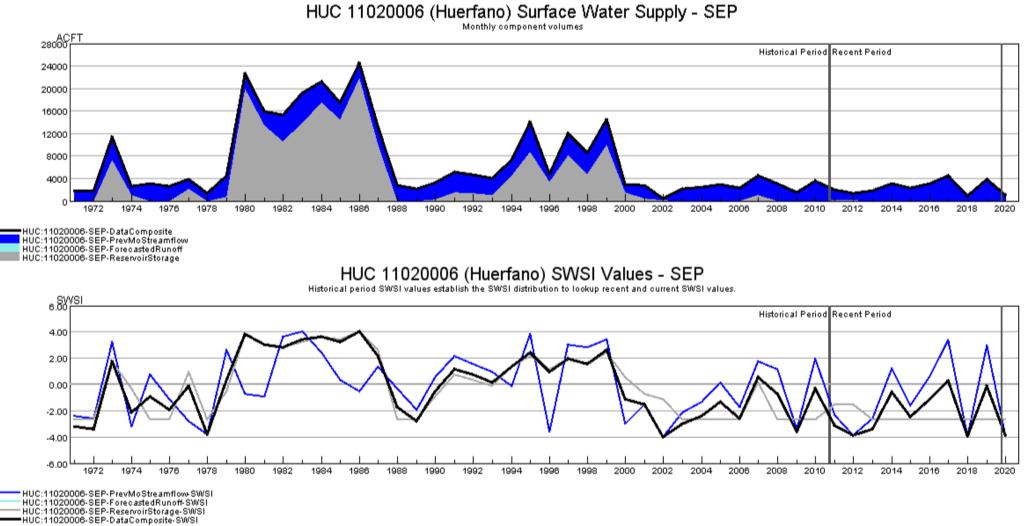


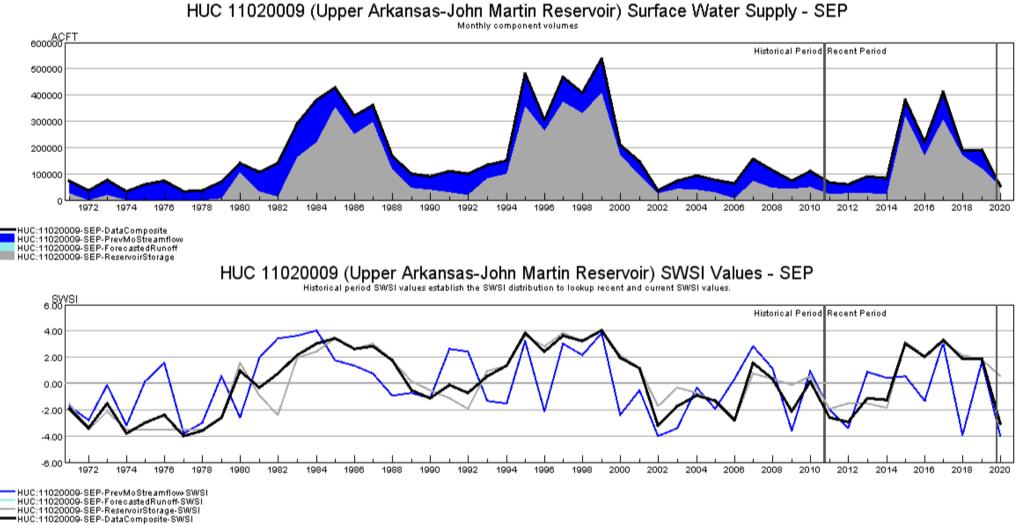


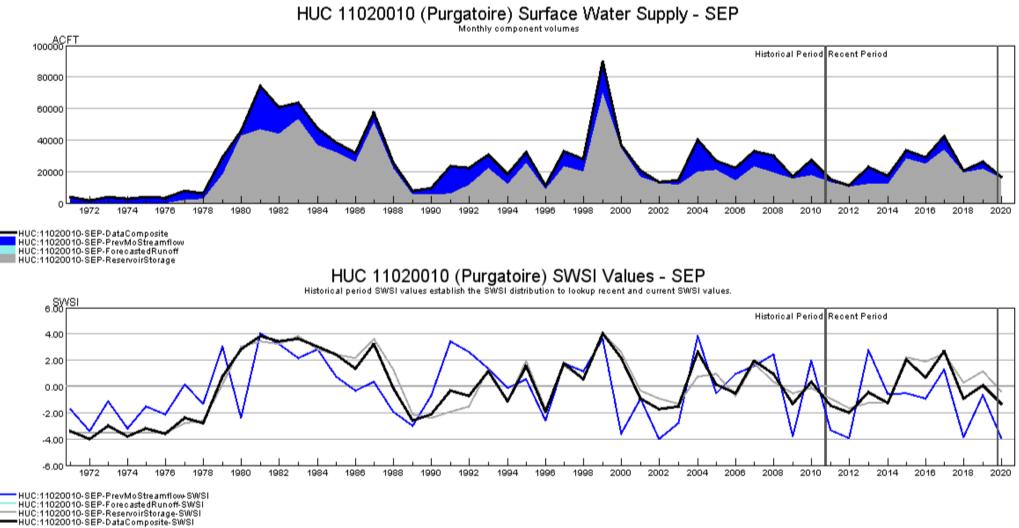


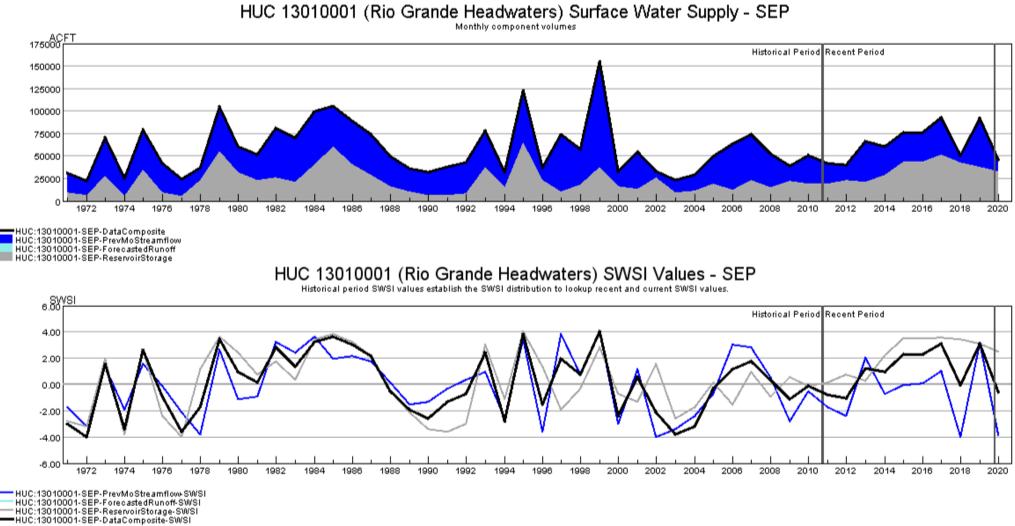


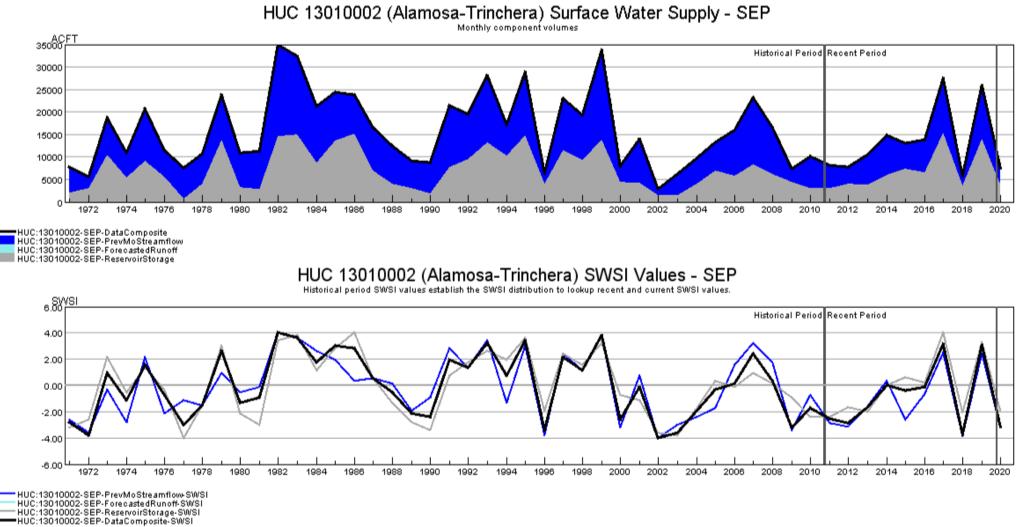


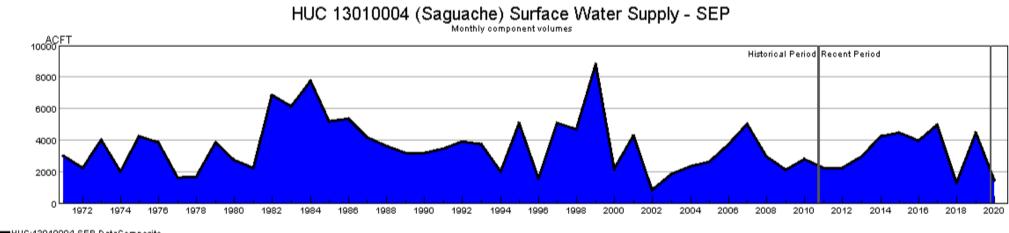






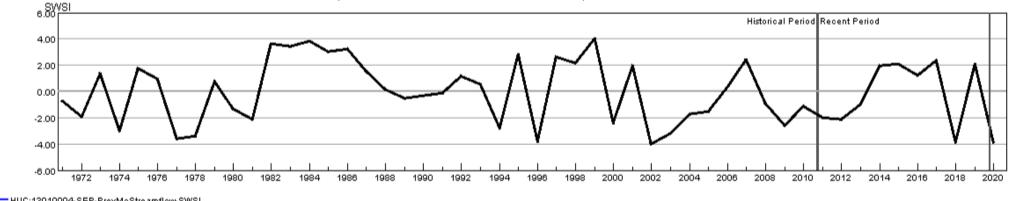




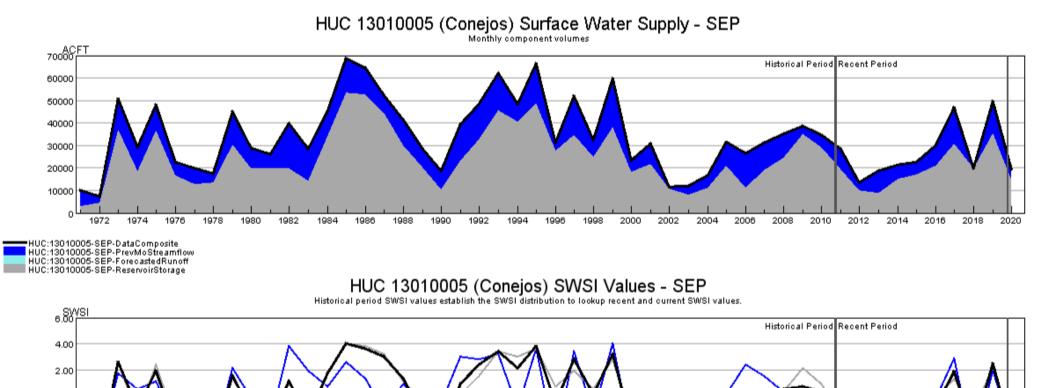


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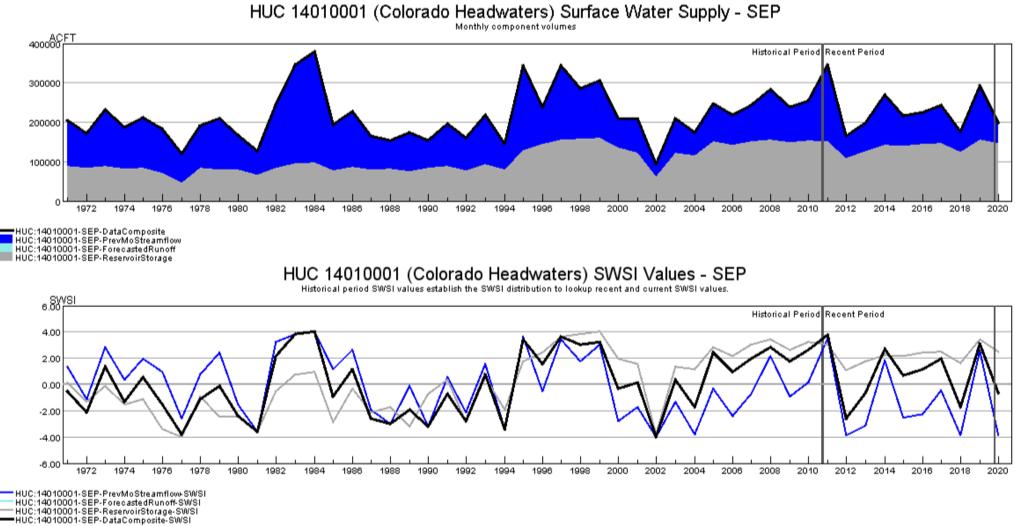
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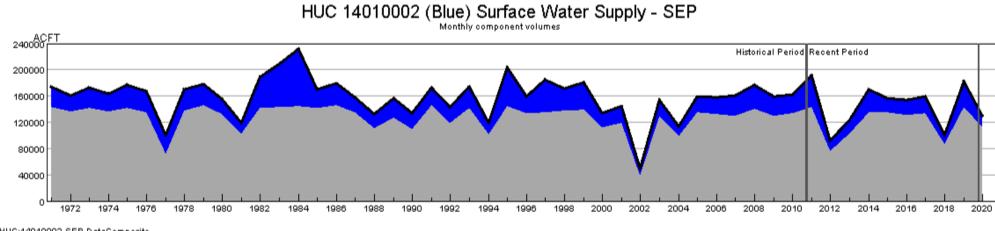


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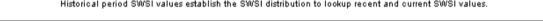
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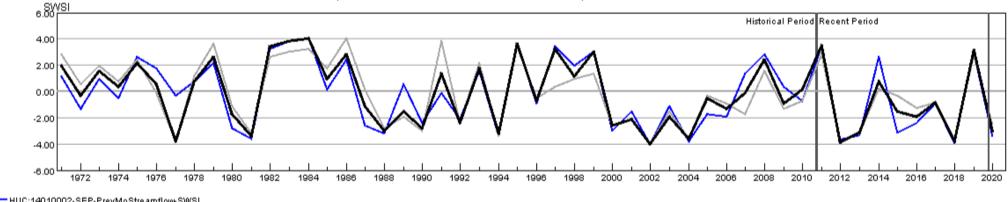




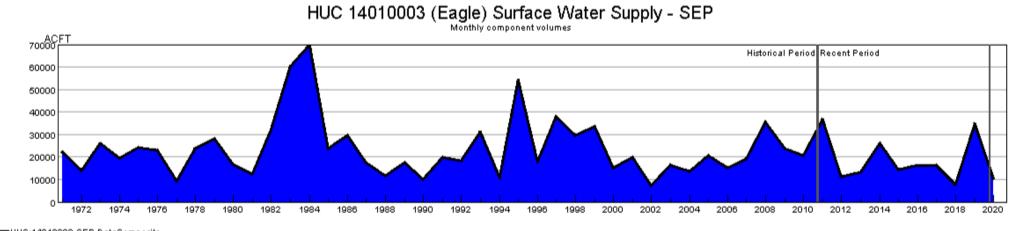
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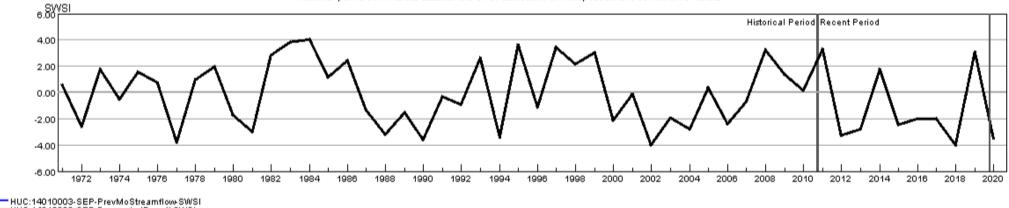


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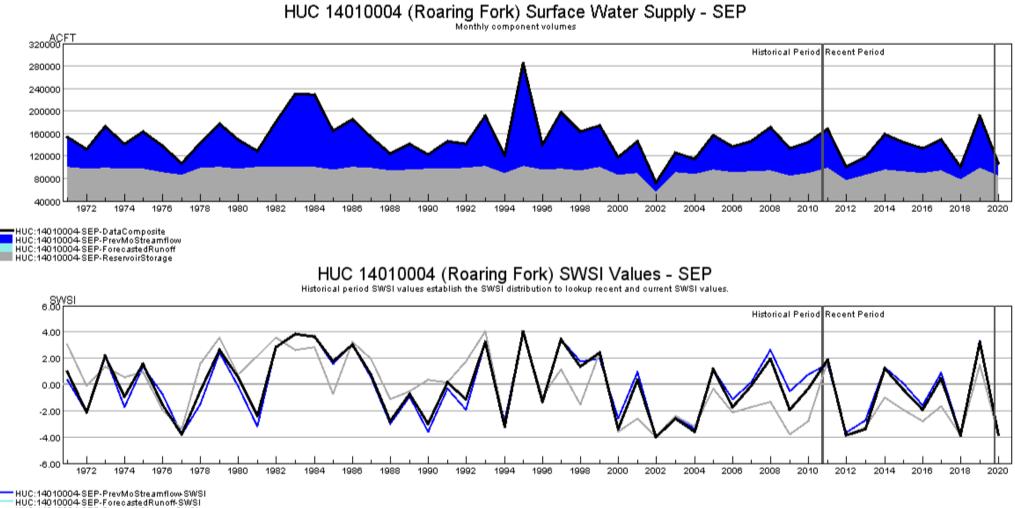


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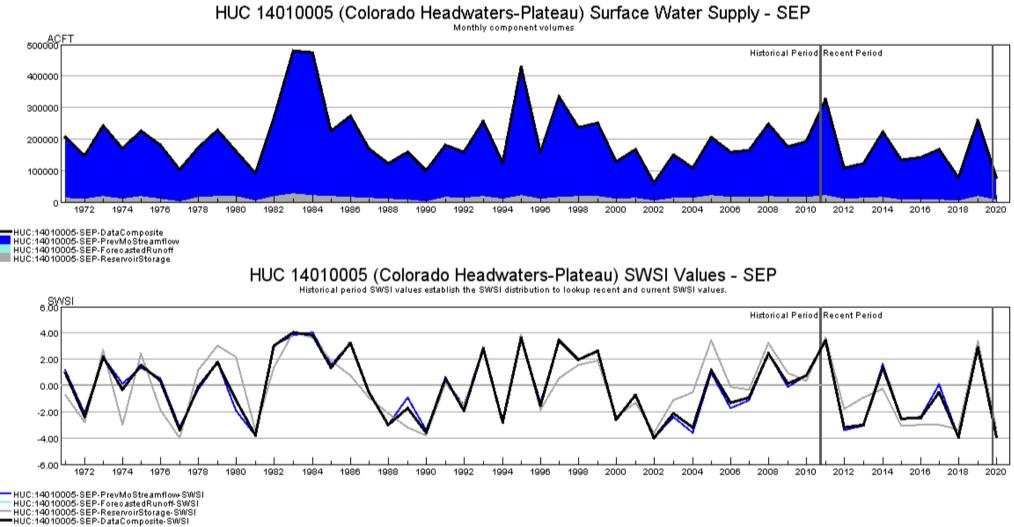
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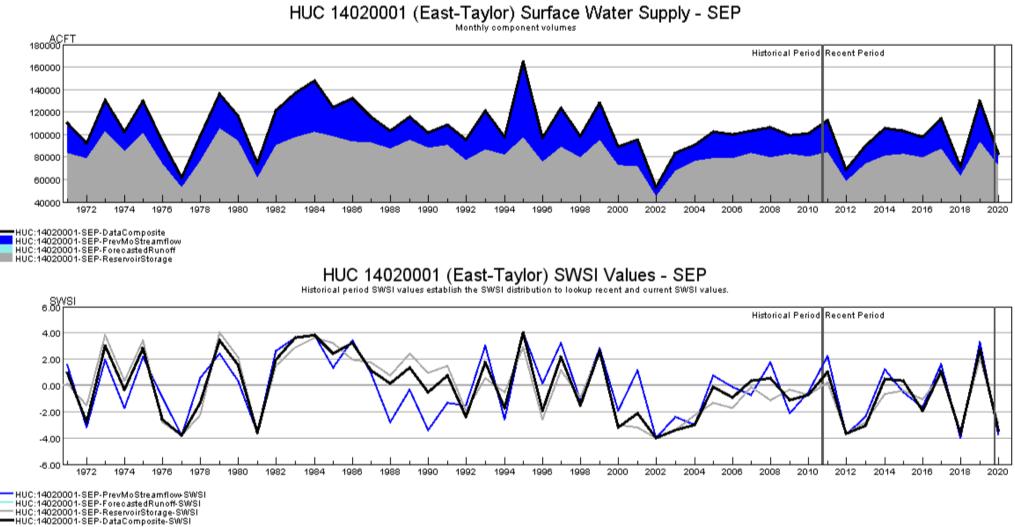


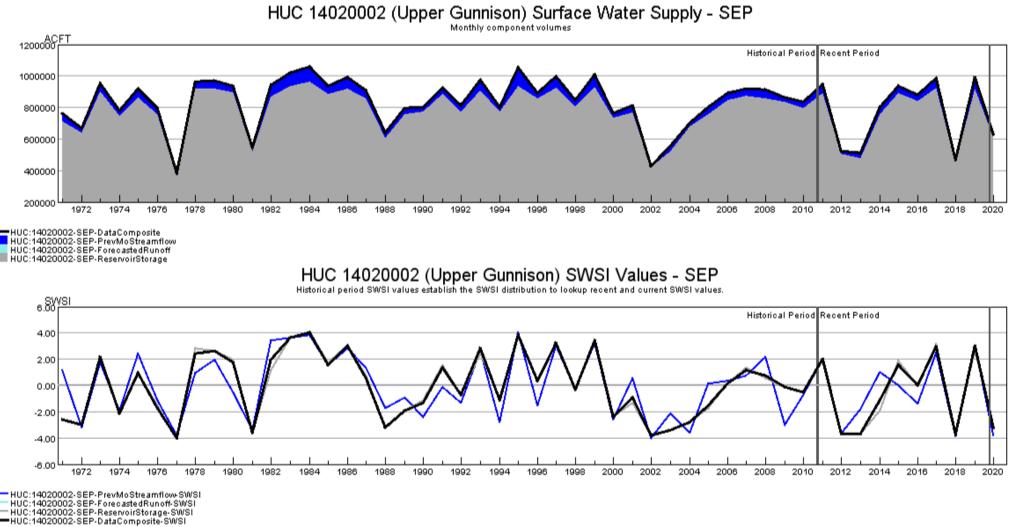
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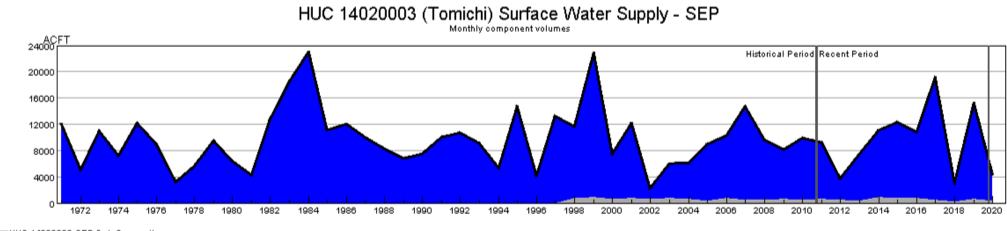


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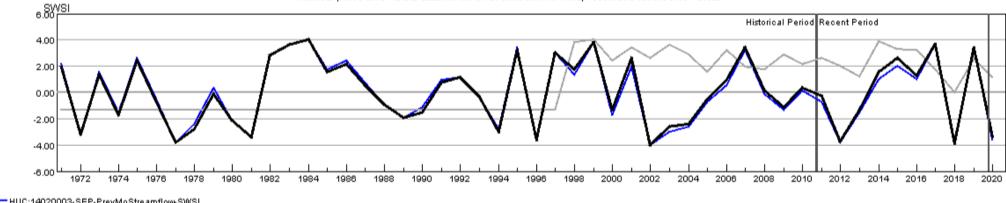




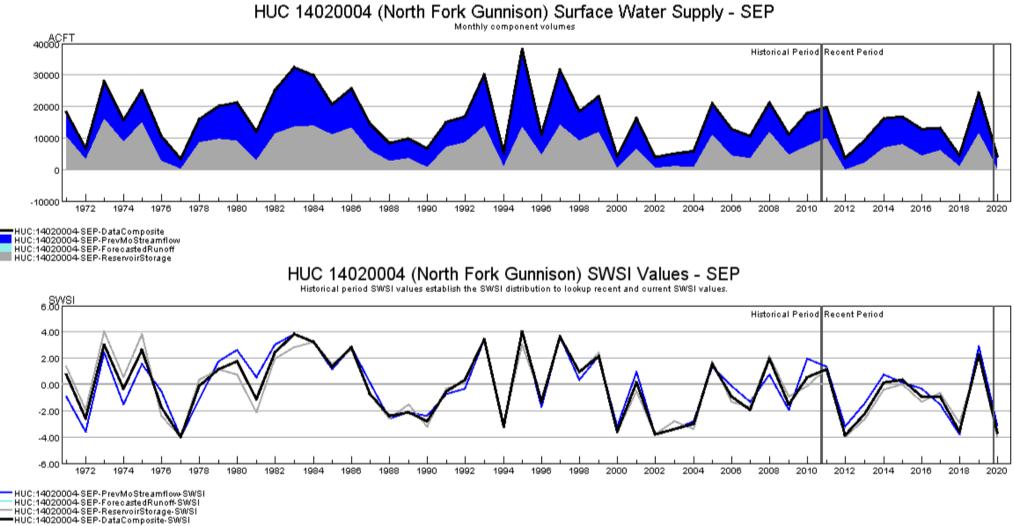
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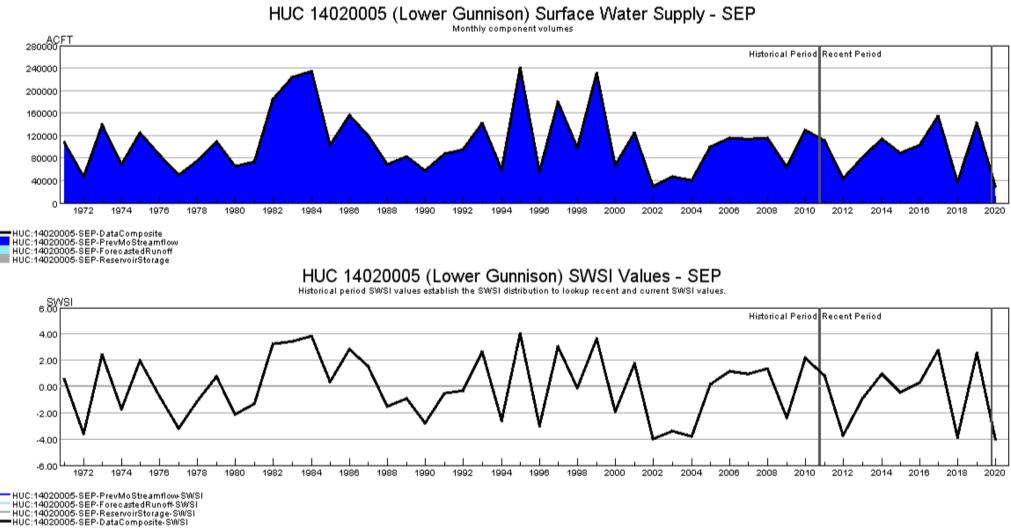
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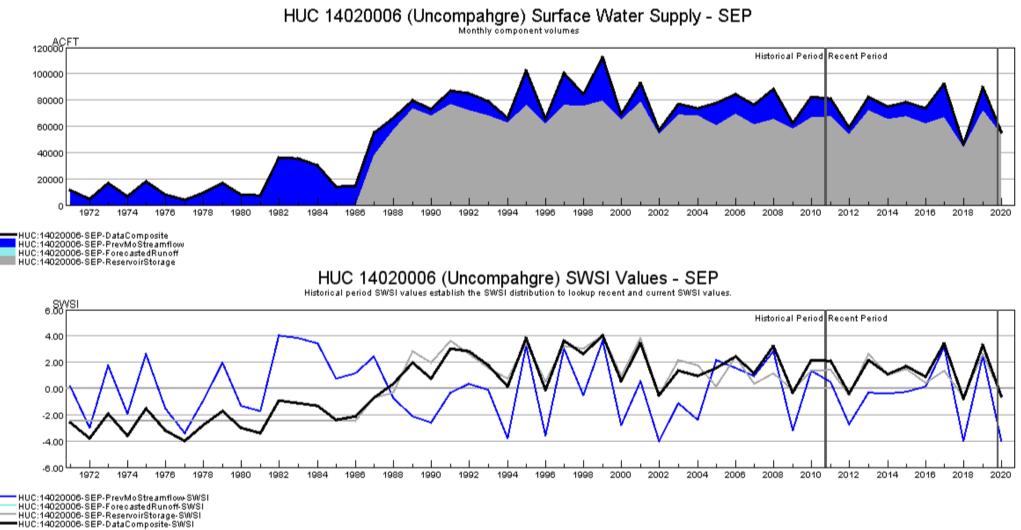


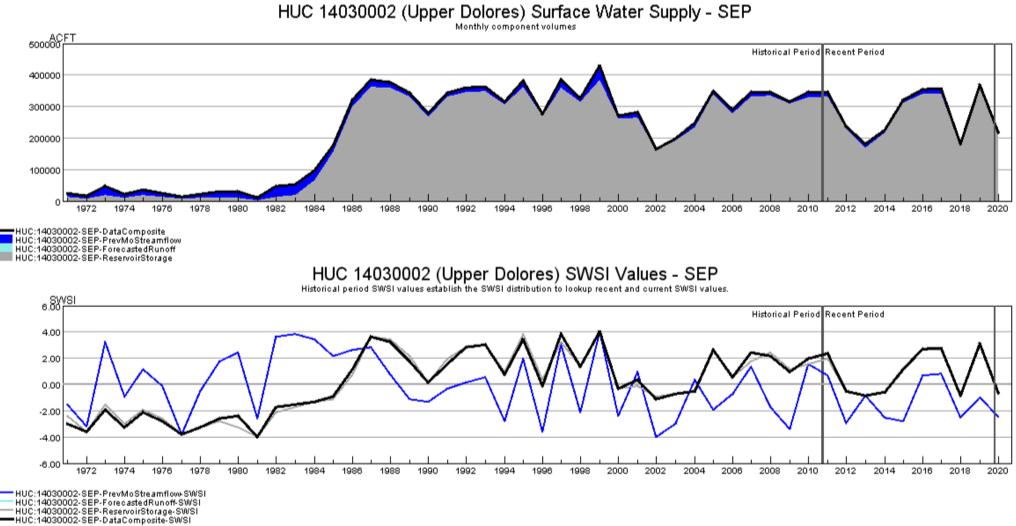


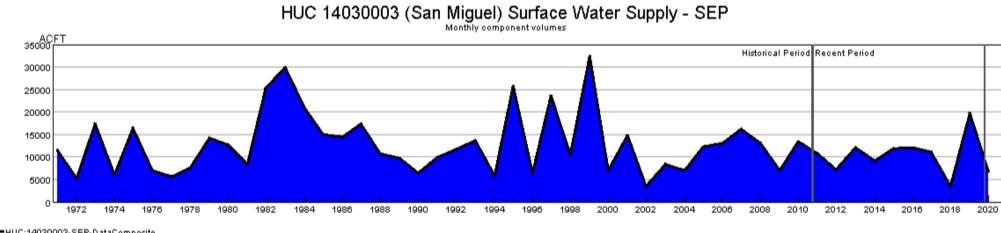
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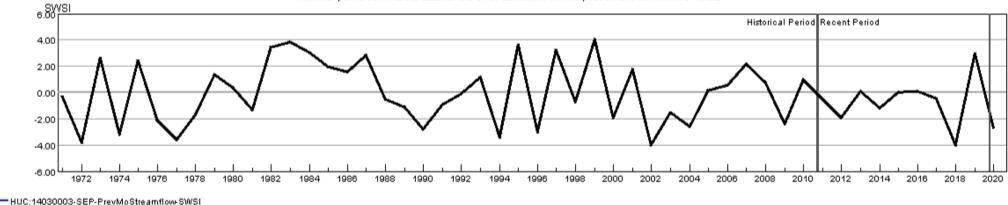




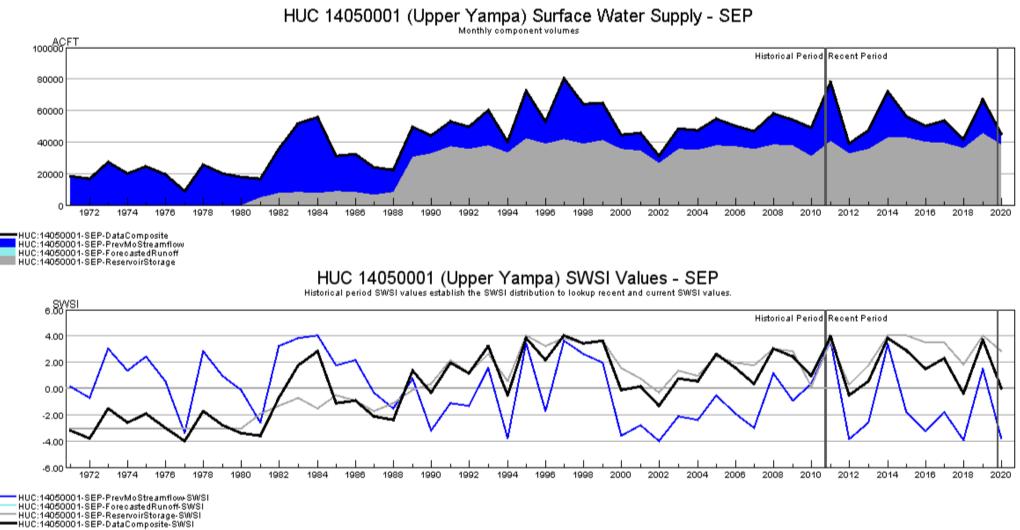
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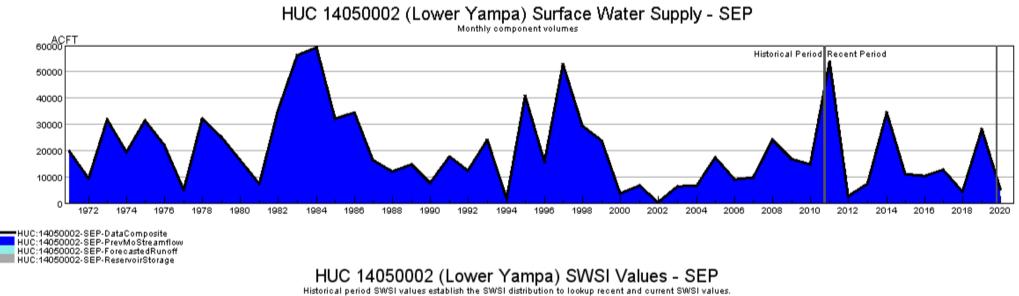
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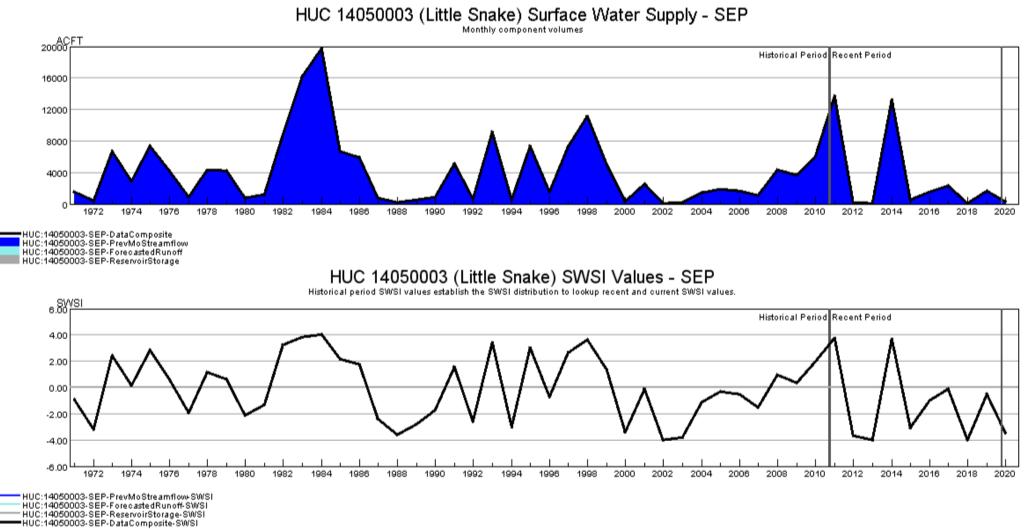
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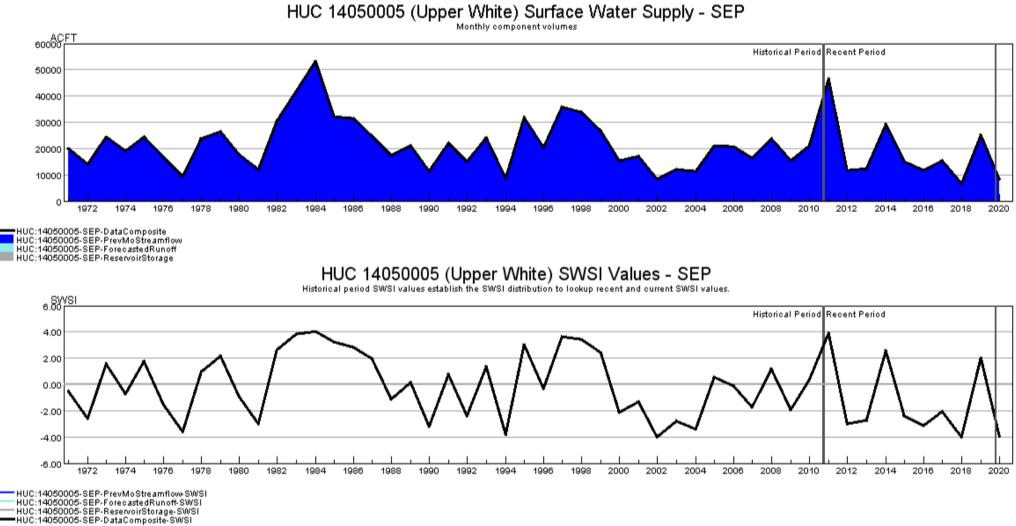


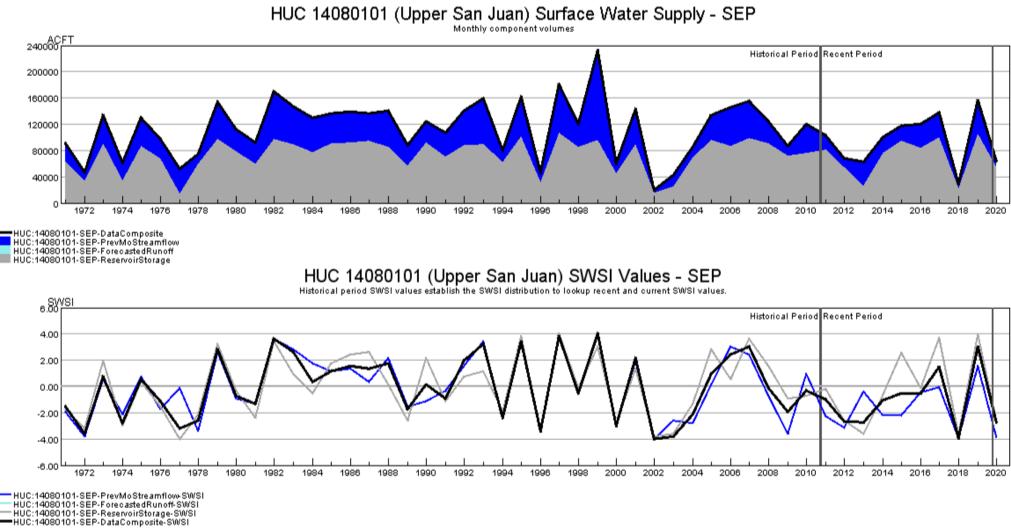


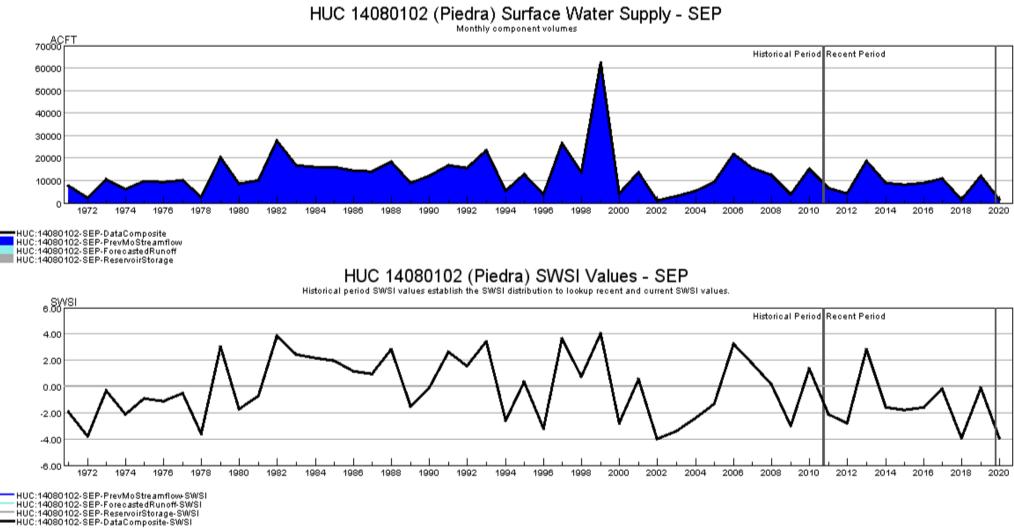


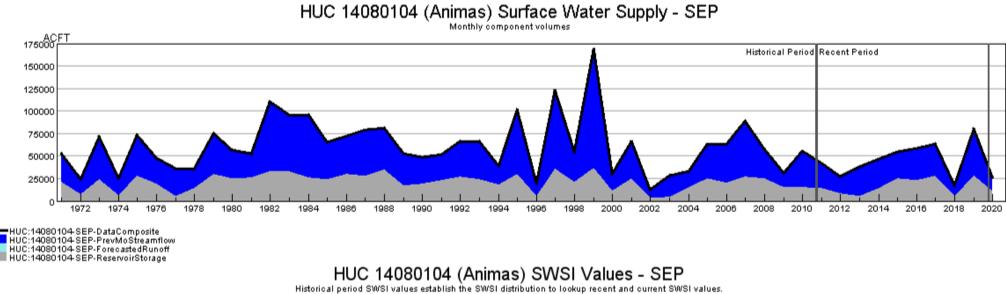
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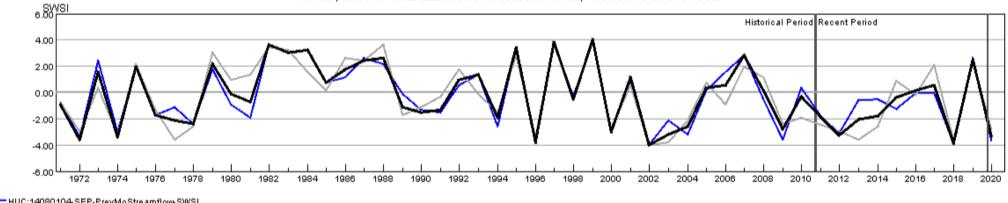












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