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.dwr.colorado.gov</u> March 1, 2022

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

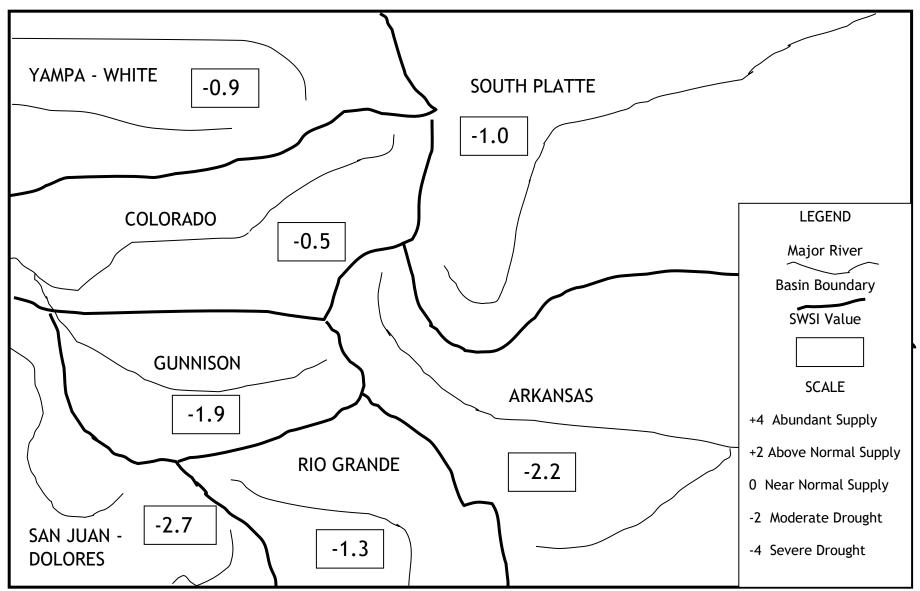
Time Period	SWSI Components
January 1 - June 1	Forecasted Runoff + Reservoir Storage
July 1 - September 1	Previous Month's Streamflow + Reservoir Storage
October 1 - December 1	Reservoir Storage

The results of each month's analysis are summarized within this report and additional information, maps & data are available at: <u>https://dwr.colorado.gov/services/water-administration/drought-and-swsi</u>. Beginning March 1, 2022, this report no longer contains text updates about current regional conditions and water matters prepared by each DWR Division Office.

The SWSI calculation for the winter/spring season (January 1 to June 1) is based on reservoir storage at the end of last month, in this case February 28, plus the forecasted streamflow runoff volume for the runoff season (April through September in most basins). The following SWSI values were computed for each of the seven major basins for March 1, 2022. Water supply conditions, as represented by water in storage and forecasted streamflow runoff, range from below normal in the Colorado, Yampa-White and South Platte Basins to well below normal in the Arkansas, Gunnison, San Juan-Dolores and Rio Grande Basins.

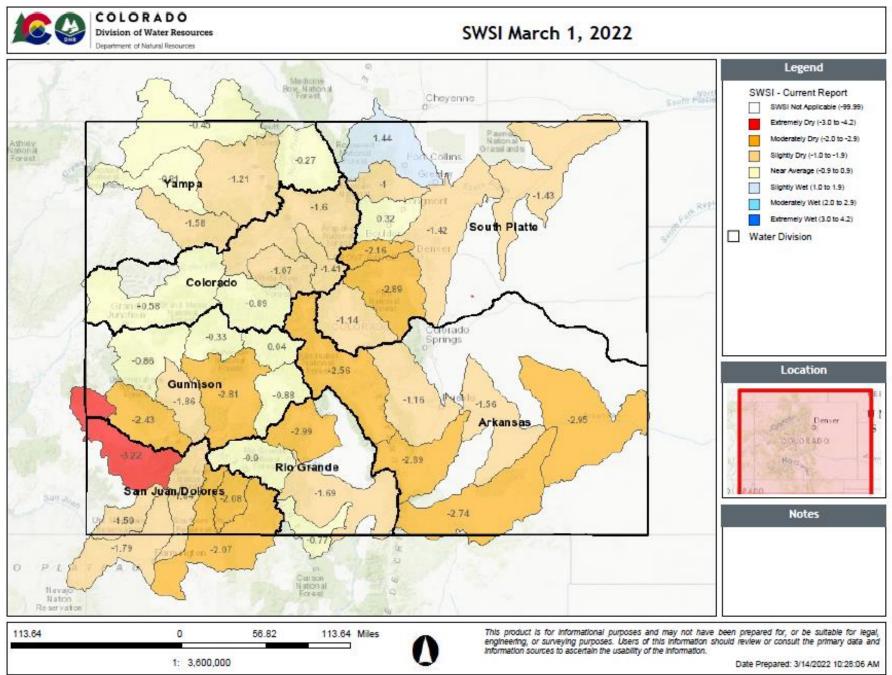
Basin	March 1 SWSI Change from Previous Month		Change from Previous Year
Arkansas	-2.2	-0.5	-0.5
Colorado	-0.5	0.0	2.3
Gunnison	-1.9	0.0	1.1
Rio Grande	-1.3	0.1	0.0
San Juan-Dolores	-2.7	-0.1	0.5
South Platte	-1.0	-0.9	0.5
Yampa-White	-0.9	-0.9	0.7

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



SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Forecast Flow NEP	Total Vol (AF)
	11020006	Huerfano	-2.90	16	20	10,300
	11020000	Purgatoire	-2.74	53	16	39,559
Ark	11020001	Arkansas Headwaters	-2.57	9	29	308,720
Arkansas	11020005	Upper Arkansas-Lake Meredith	-1.57	36	30	318,080
as	11020009	Upper Arkansas-John Martin Reservoir	-2.95	15	25	371,753
	11020002	Upper Arkansas	-1.17	46	33	490,194
	14010003	Eagle	-1.08	N/A	37	275,000
င	14010002	Blue	-1.41	8	42	290,274
lor	14010004	Roaring Fork	-0.90	6	41	650,705
Colorado	14010001	Colorado Headwaters	-1.60	45	34	1,249,941
0	14010005	Colorado Headwaters-Plateau	-0.58	7	43	2,125,034
	14020003	Tomichi	-0.88	44	40	45,226
	14030003	San Miguel	-2.44	N/A	21	81,000
նս	14020006	Uncompahgre	-1.87	46	26	153,354
Gunnison	14020004	North Fork Gunnison	-0.33	14	46	231,169
sor	14020001	East-Taylor	0.05	17	53	323,749
_	14020002	Upper Gunnison	-2.81	1	47	1,026,692
	14020005	Lower Gunnison	-0.86	N/A	40	1,130,000
Rio	13010004	Saguache	-3.00	N/A	14	16,500
о G	13010002	Alamosa-Trinchera	-1.69	48	28	86,026
ran	13010005	Conejos	-0.78	30	47	181,165
ıde	13010001	Rio Grande Headwaters	-0.90	80	30	439,025
Grande San Juan-Dolores	14080105	Middle San Juan	-1.80	92	30	14,666
ر ال	14080107	Mancos	-1.59	42	36	16,099
uar	14080102	Piedra	-2.09	N/A	25	125,000
I-Do	14030002	Upper Dolores	-3.22	18	26	341,812
olo	14080104	Animas	-1.84	22	32	360,278
res	14080101	Upper San Juan	-2.07	4	28	436,519
	10190004	Clear	-2.16	N/A	24	86,000
10	10190001	South Platte Headwater	-1.15	70	18	187,319
South Platte	10190005	St. Vrain	0.32	74	48	230,823
th	10190002	Upper South Platte	-2.90	15	17	355,169
Pla	10190007	Cache La Poudre	1.44	92	57	432,163
tte	10190006	Big Thompson	-1.01	44	56	479,133
	10190003	Middle South Platte-Cherry Creek	-1.42	12	34	765,696
	10190012	Middle South Platte-Sterling	-1.44	31	34	869,334
Ya	10180001	North Platte Headwaters	-0.27	N/A	47	200,000
mp	14050005	Upper White	-1.58	N/A	31	205,000
a-V	14050003	Little Snake	-0.46	N/A	45	255,000
Yampa-White	14050001	Upper Yampa	-1.21	25	35	590,865
te	14050002	Lower Yampa	-0.81	N/A	40	790,000

March 1, 2022 SWSI Values by HUC and Non Exceedance Probabilities (NEP)

NEP is non exceedance probability 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 1980-2020. The following table lists each component considered in each HUC.

SWSI Color Scale:

	-4.0 (Severe Drought)	0.0 (Normal)	4.0 (Abundant Supply)
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HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		CLEAR CREEK RESERVOIR	7,426	32
	Aulus uses a	HOMESTAKE RESERVOIR	28,704	40
11020001	Arkansas Headwaters	TWIN LAKES RESERVOIR	34,685	35
	incuditaters	TURQUOISE LAKE	43,905	6
		ARKANSAS RIVER AT SALIDA	194,000	29
		CUCHARAS RESERVOIR*	0	16
11020006	Huerfano	CUCHARAS RIVER AT BOYD RANCH NR LA VETA	4,900	23
		HUERFANO RIVER NEAR REDWING	5,400	15
11020010	Purgatoire	PURGATOIRE RIVER AT TRINIDAD	16,500	16
11020010	Fulgatone	TRINIDAD LAKE	23,059	53
11020002	Upper Arkansas	PUEBLO RESERVOIR	215,194	46
11020002	Opper Arkansas	PUEBLO RESERVOIR INFLOW	275,000	33
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	4,900	23
		HUERFANO RIVER NEAR REDWING	5,400	15
11020009	Upper Arkansas- John Martin	PURGATOIRE RIVER AT TRINIDAD	16,500	16
11020009	Reservoir	ADOBE CREEK RESERVOIR	33,563	25
	Reservon	JOHN MARTIN RESERVOIR	36,390	6
		PUEBLO RESERVOIR INFLOW	275,000	33
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	4,900	23
11020005		HUERFANO RIVER NEAR REDWING	5,400	15
	Upper Arkansas- Lake Meredith	LAKE HENRY	7,352	61
		MEREDITH RESERVOIR	25,428	31
		PUEBLO RESERVOIR INFLOW	275,000	33
14010002	Blue	GREEN MOUNTAIN RESERVOIR	50,274	8
14010002	Dide	BLUE RIVER INFLOW TO GREEN MOUNTAIN RES	240,000	42
	Colorado	WOLFORD MOUNTAIN RESERVOIR	30,230	47
14010001	Colorado Headwaters	WILLIAMS FORK RESERVOIR	59,711	27
		COLORADO RIVER NEAR DOTSERO	1,160,000	34
14010005	Colorado	VEGA RESERVOIR	5,034	7
14010003	Headwaters-Plateau	COLORADO RIVER NEAR CAMEO	2,120,000	43
14010003	Eagle	EAGLE RIVER BELOW GYPSUM	275,000	37
14010004	Roaring Fork	RUEDI RESERVOIR	55,705	6
	Nouring Fork	ROARING FORK AT GLENWOOD SPRINGS	595,000	41
	East-Taylor	TAYLOR PARK RESERVOIR	57,749	17
14020001		TAYLOR R INF TO TAYLOR PARK RESERVOIR	87,000	53
		EAST RIVER AT ALMONT	179,000	59
14020005	Lower Gunnison	GUNNISON RIVER NR GRAND JUNCTION	1,130,000	40
14020004	North Fork	PAONIA RESERVOIR	1,169	14
. 1020004	Gunnison	NORTH FORK GUNNISON R NR SOMERSET	230,000	46
14030003	San Miguel	SAN MIGUEL RIVER NEAR PLACERVILLE	81,000	21
14020003	Tomichi	VOUGA RESERVOIR NEAR DOYLEVILLE	226	44
. 1020003	Tomichi	TOMICHI CREEK AT GUNNISON, CO	45,000	40

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
14020006	Uncompahgre	RIDGEWAY RESERVOIR	65,354	46
14020000	oncompangre	UNCOMPAHGRE RIVER AT COLONA	88,000	26
		SILVER JACK RESERVOIR	1,097	3
		FRUITLAND RESERVOIR	1,444	57
		CRAWFORD RESERVOIR	2,678	5
14020002	Upper Gunnison	LAKE FORK AT GATEVIEW, CO	95,000	30
		MORROW POINT RESERVOIR	105,469	6
		BLUE MESA RESERVOIR	241,004	1
		GUNNISON R INF TO BLUE MESA RESERVOIR	580,000	48
		SANGRE DE CRISTO	2,800	16
		TRINCHERA CK	3,800	8
12010000		UTE CREEK	3,900	8
13010002	Alamosa-Trinchera	MOUNTAIN HOME	4,214	73
		TERRACE RESERVOIR	5,112	24
		CULEBRA CREEK AT SAN LUIS	6,200	8
		ALAMOSA CREEK ABOVE TERRACE RESERVOIR	60,000	46
13010005	Conejos	PLATORO RESERVOIR	14,165	30
	-	CONEJOS RIVER NEAR MOGOTE	167,000	47
			10,353	86
13010001	Rio Grande Headwaters	SANTA MARIA RESERVOIR	12,439	65
		RIO GRANDE RESERVOIR	21,233	58
13010004	Corrupation	RIO GRANDE NEAR DEL NORTE	395,000	30
13010004	Saguache	SAGUACHE CREEK NEAR SAGUACHE, CO	16,500	14
14080104	Animas		13,278	22
14000104	AIIIIIdS	FLORIDA RIVER INFLOW TO LEMON RESERVOIR	37,000	22 32
			310,000	42
14080107	Mancos		4,099	36
			12,000	92
14080105	Middle San Juan		666	30
14080102	Piedra	LA PLATA RIVER AT HESPERUS PIEDRA RIVER NEAR ARBOLES	14,000	25
14000102	ricula	GROUNDHOG RESERVOIR	125,000	10
14030002	Upper Dolores	MCPHEE RESERVOIR	168,412	20
11050002		DOLORES RIVER BELOW MCPHEE RESERVOIR	169,000	26
		VALLECITO RESERVOIR	41,519	4
14080101	Upper San Juan	LOS PINOS RIVER NEAR BAYFIELD	130,000	18
		SAN JUAN RIVER NEAR CARRACAS	265,000	31
		MARIANO RESERVOIR	3,500	52
		LAKE LOVELAND RESERVOIR	5,500	21
		WILLOW CREEK RESERVOIR	6,443	16
		LONE TREE RESERVOIR	7,200	62
10190006	Big Thompson	BOYD LAKE	28,200	38
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	89,000	56
		CARTER LAKE	100,238	76
		LAKE GRANBY	239,052	34

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		BLACK HOLLOW RESERVOIR	3,523	83
		CHAMBERS LAKE	4,635	70
		HALLIGAN RESERVOIR	5,481	58
		WINDSOR RESERVOIR	9,117	11
10190007	Cache La Poudre	FOSSIL CREEK RESERVOIR	9,392	72
		CACHE LA POUDRE	9,426	82
		COBB LAKE	17,814	69
		HORSETOOTH RESERVOIR	142,775	97
		CACHE LA POUDRE R AT CANYON MOUTH	230,000	57
10190004	Clear Creek	CLEAR CREEK AT GOLDEN	86,000	24
		HORSECREEK RESERVOIR	8,300	8
		MILTON RESERVOIR	18,451	58
		BARR LAKE	20,945	9
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	34,000	37
	Middle South	STANDLEY RESERVOIR	34,000	32
10190003	Platte-Cherry	BOULDER CREEK NEAR ORODELL	51,000	45
	Creek	CLEAR CREEK AT GOLDEN	86,000	24
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	89,000	56
		SAINT VRAIN CREEK AT LYONS	92,000	59
		SOUTH PLATTE RIVER AT SOUTH PLATTE	102,000	17
		CACHE LA POUDRE R AT CANYON MOUTH	230,000	57
		JULESBURG RESERVOIR	15,095	6
		PREWITT RESERVOIR	23,790	97
		JACKSON LAKE RESERVOIR	25,196	66
		EMPIRE RESERVOIR	30,668	69
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	34,000	37
		POINT OF ROCKS RESERVOIR	39,009	4
10190012	Middle South Platte-Sterling	BOULDER CREEK NEAR ORODELL	51,000	45
	Platte-sterting	RIVERSIDE RESERVOIR	51,576	81
		CLEAR CREEK AT GOLDEN	86,000	24
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	89,000	56
		SAINT VRAIN CREEK AT LYONS	92,000	59
		SOUTH PLATTE RIVER AT SOUTH PLATTE	102,000	17
		CACHE LA POUDRE R AT CANYON MOUTH	230,000	57
	South Platte Headwater	ANTERO RESERVOIR	20,079	91
40400004		SPINNEY MOUNTAIN RESERVOIR	33,200	65
10190001		ELEVENMILE CANYON RESV INFLOW	35,000	18
		ELEVENMILE CANYON RESERVOIR	99,040	19
		MARSHALL RESERVOIR	5,000	26
		TERRY RESERVOIR	5,848	78
		BUTTONROCK (RALPH PRICE) RESERVOIR	10,693	11
10100005	Ct. Martin	UNION RESERVOIR	10,965	48
10190005	St. Vrain	GROSS RESERVOIR	21,317	88
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	34,000	37
		BOULDER CREEK NEAR ORODELL	51,000	45
		SAINT VRAIN CREEK AT LYONS	92,000	59

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
		CHEESMAN LAKE	61,732	35
10190002	Upper South Platte	SOUTH PLATTE RIVER AT SOUTH PLATTE	102,000	17
		DILLON RESERVOIR	191,437	14
14050003	Little Snake	LITTLE SNAKE RIVER NEAR LILY	255,000	45
14050002	Lower Yampa	YAMPA RIVER NEAR MAYBELL	790,000	40
10180001	North Platte Headwaters	NORTH PLATTE R NR NORTHGATE	200,000	47
14050005	Upper White	WHITE RIVER NEAR MEEKER	205,000	31
		YAMCOLO RESERVOIR	1,565	1
14050001		STAGECOACH RESERVOIR NR OAK CREEK	27,300	52
	Upper Yampa	ELKHEAD CREEK ABOVE LONG GULCH	62,000	44
		YAMPA RIVER AT STEAMBOAT SPRINGS	200,000	34
		ELK RIVER NEAR MILNER, CO	300,000	40

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

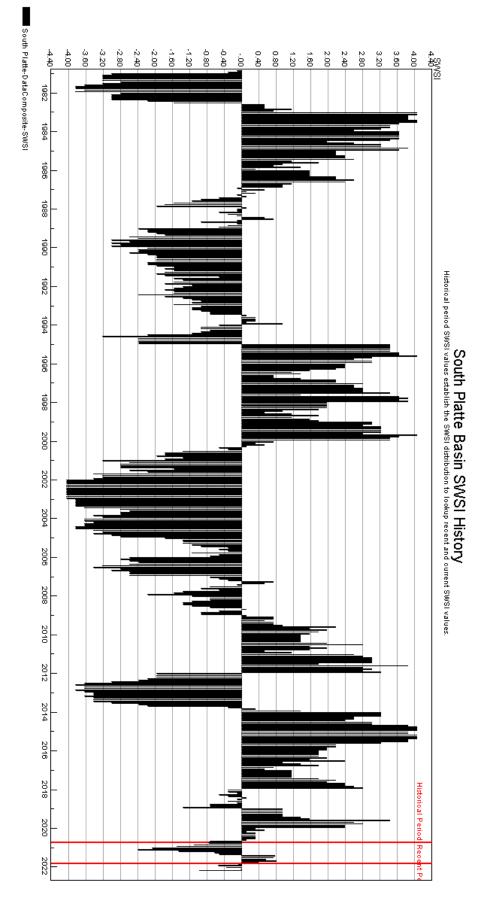
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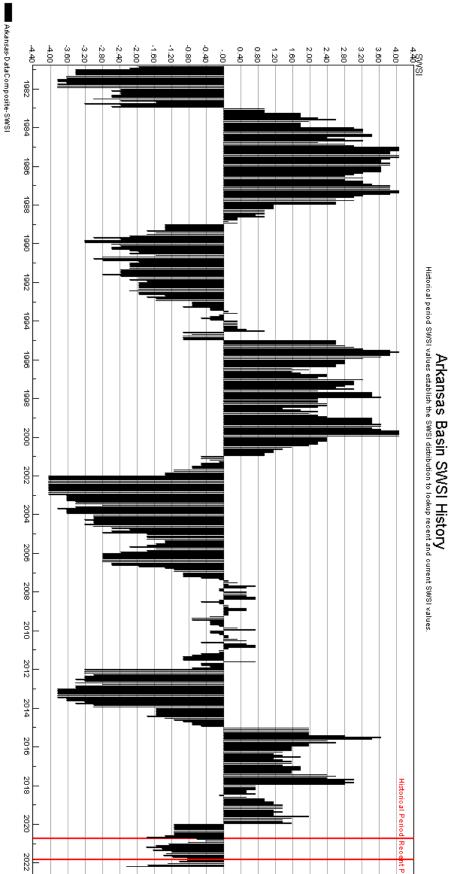
Water Volume NEP Color Scale:

0 (Well Below Normal) 50 (Normal)

100 (Well Above Normal)

The SWSI value for the month was -1.0.





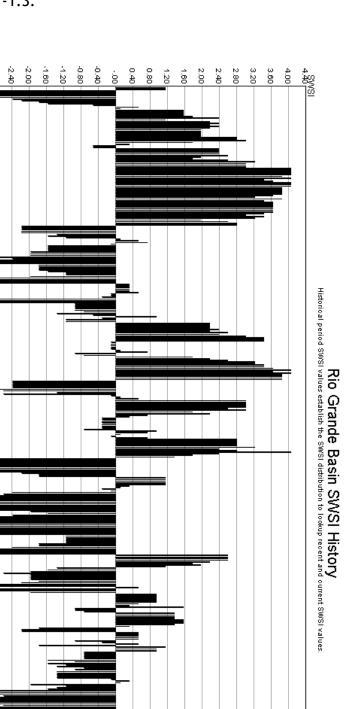
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Rio Grande-DataComposite-SWSI

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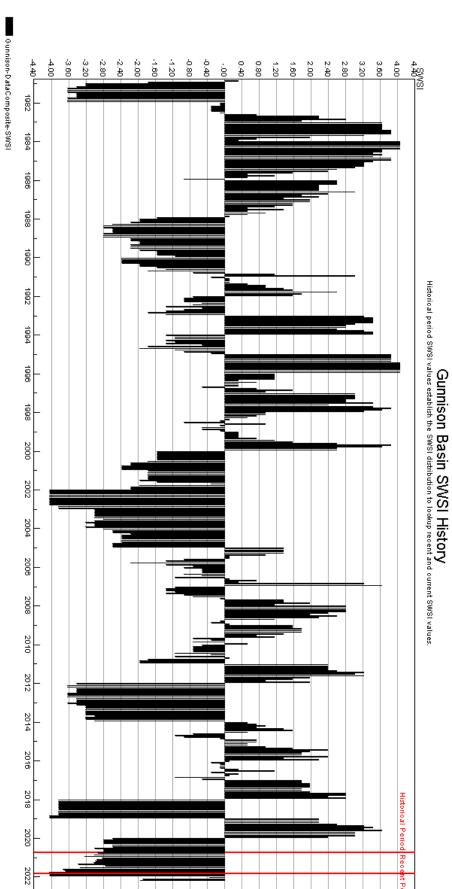
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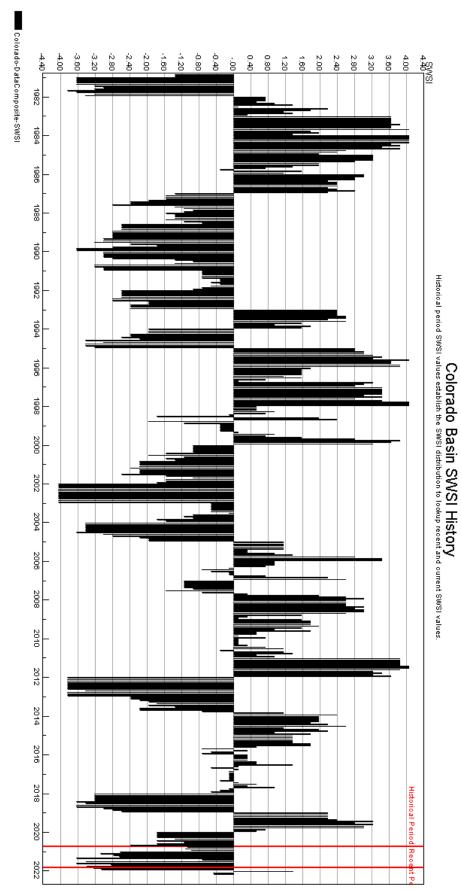


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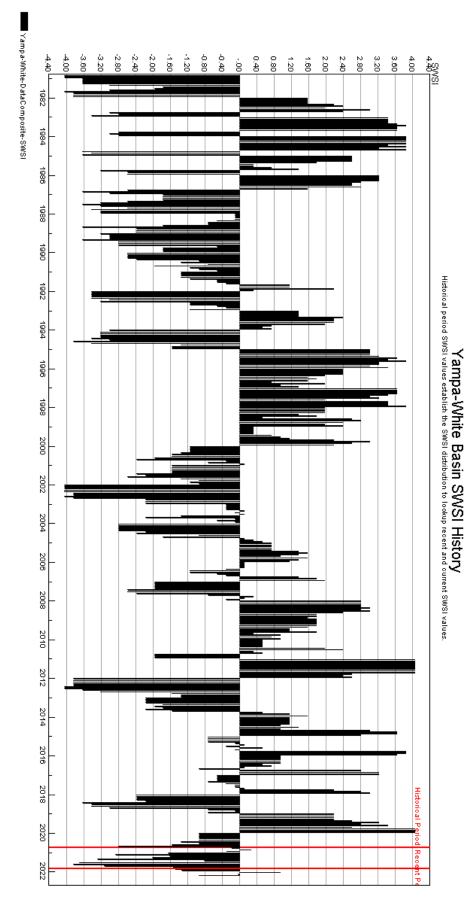
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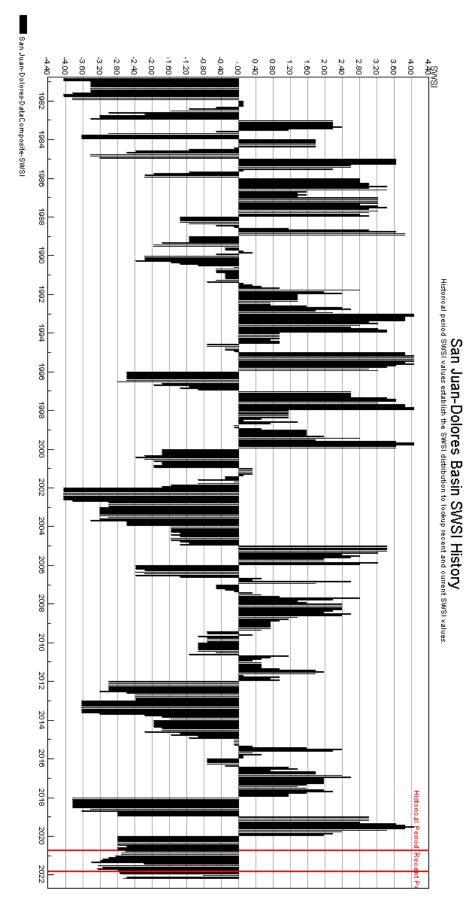
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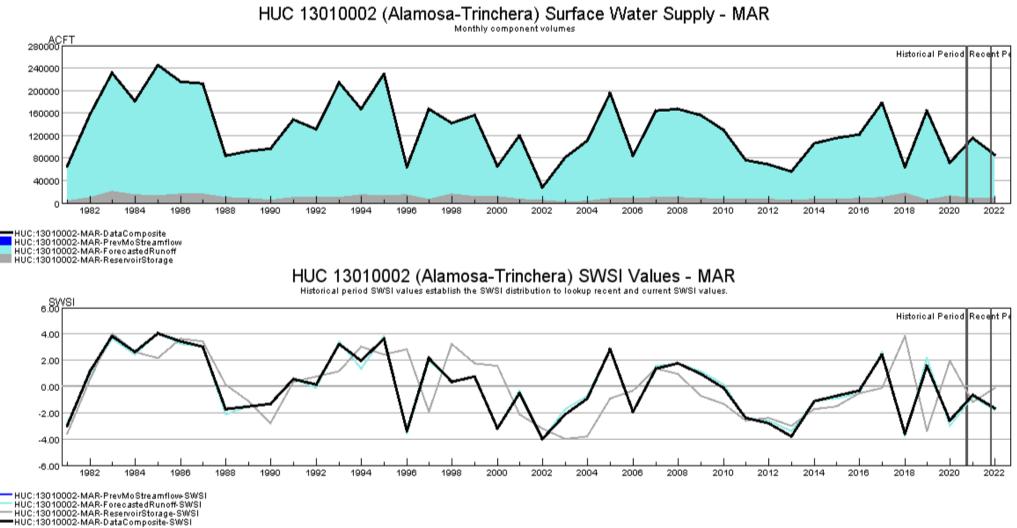


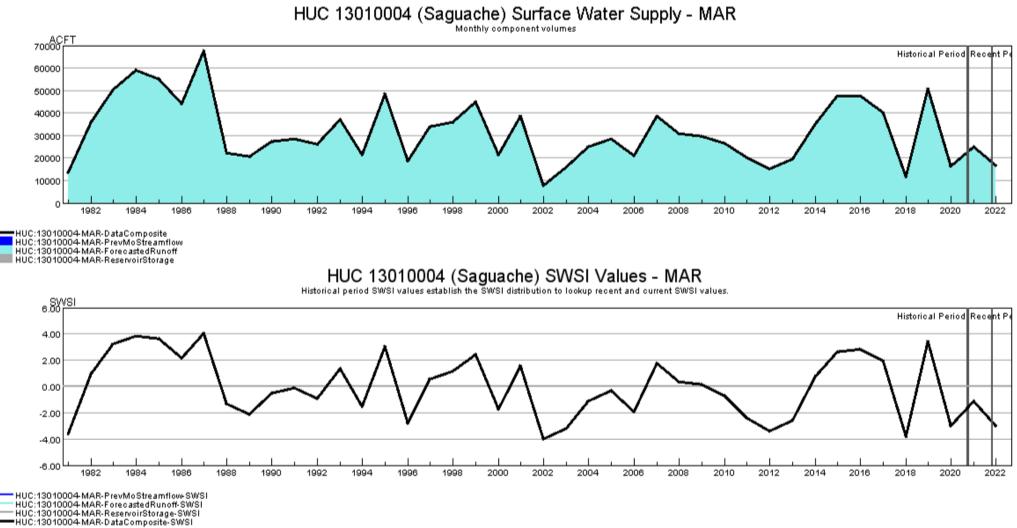
YAMPA/WHITE BASIN

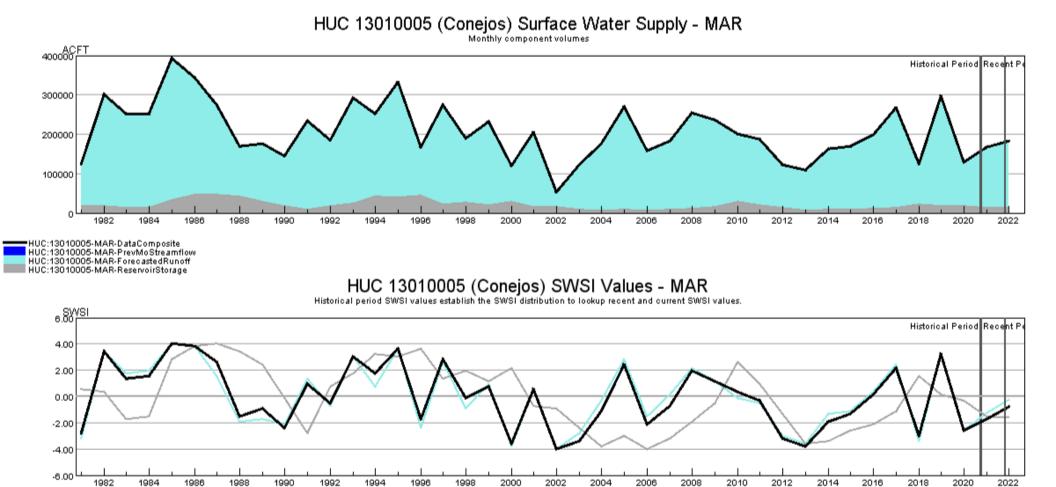
The SWSI value for the month was -0.9.

The SWSI value for the month was -2.7.

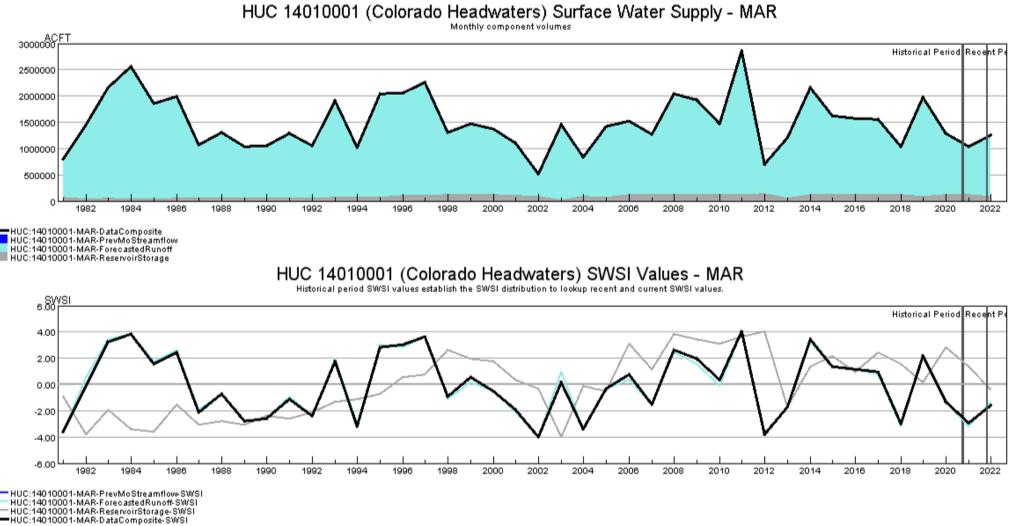


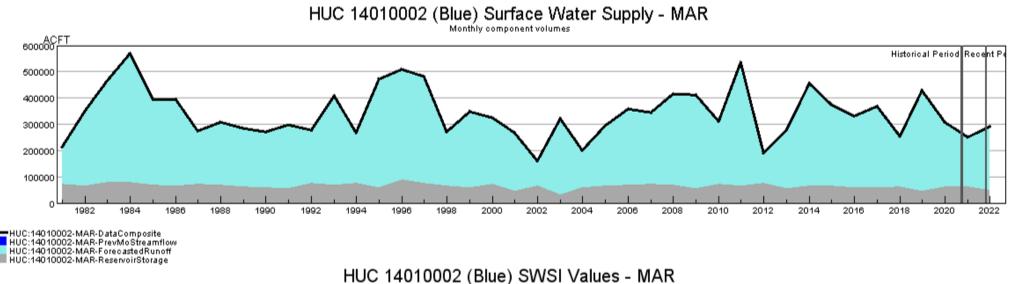




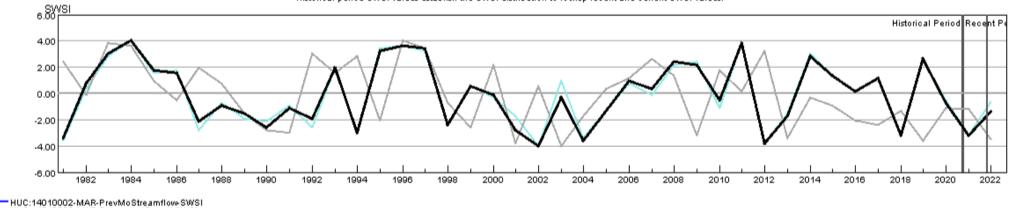


HUC:13010005-MAR-PrevMoStreamflow-SWSI HUC:13010005-MAR-ForeoastedRunoff-SWSI HUC:13010005-MAR-ReservoirStorage-SWSI HUC:13010005-MAR-DataComposite-SWSI

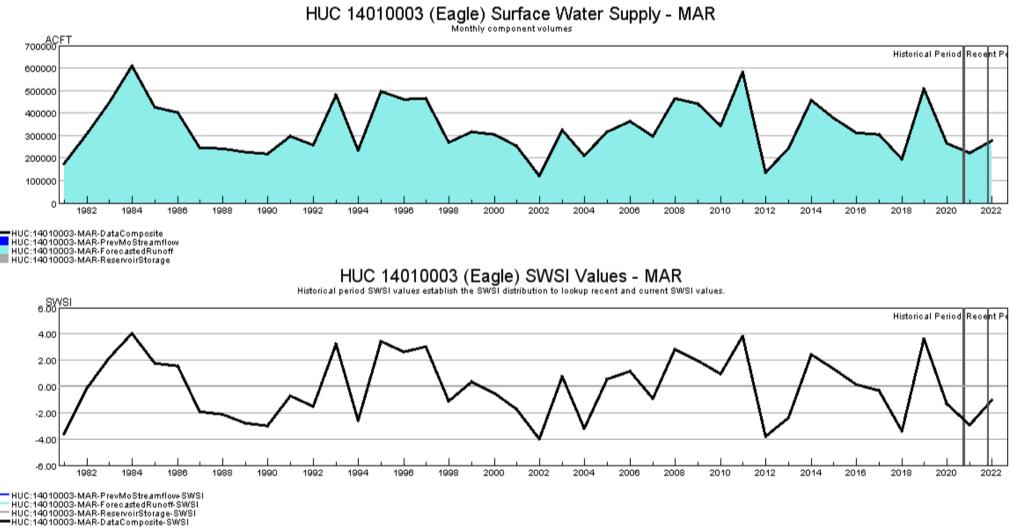


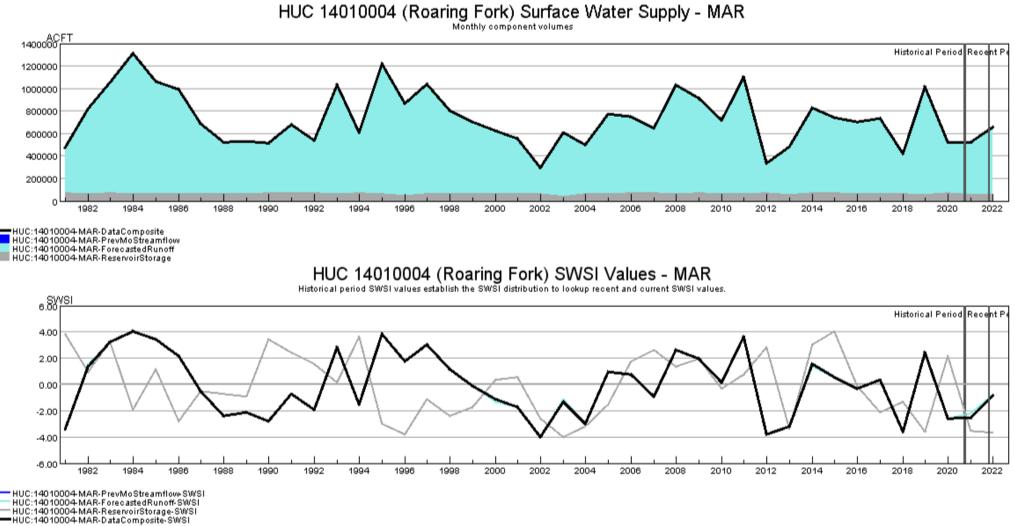


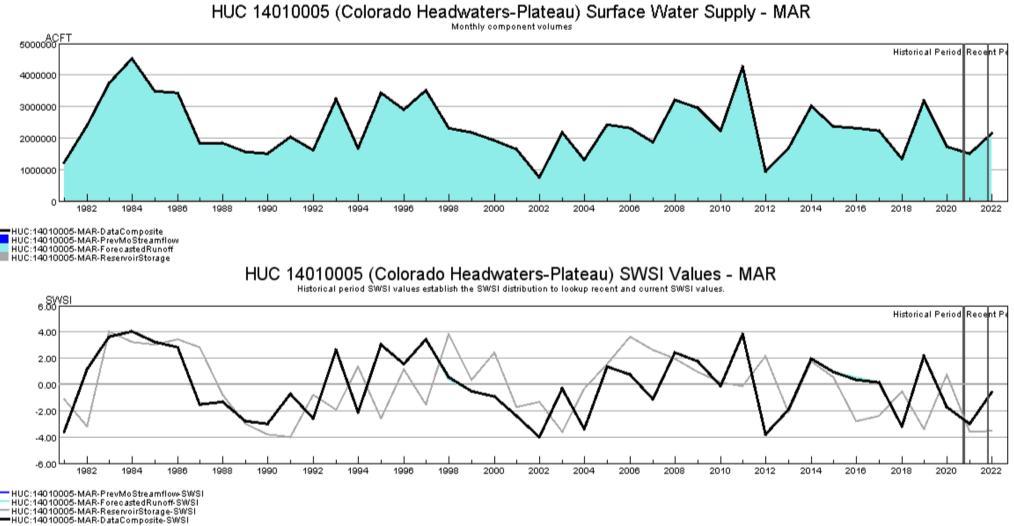
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

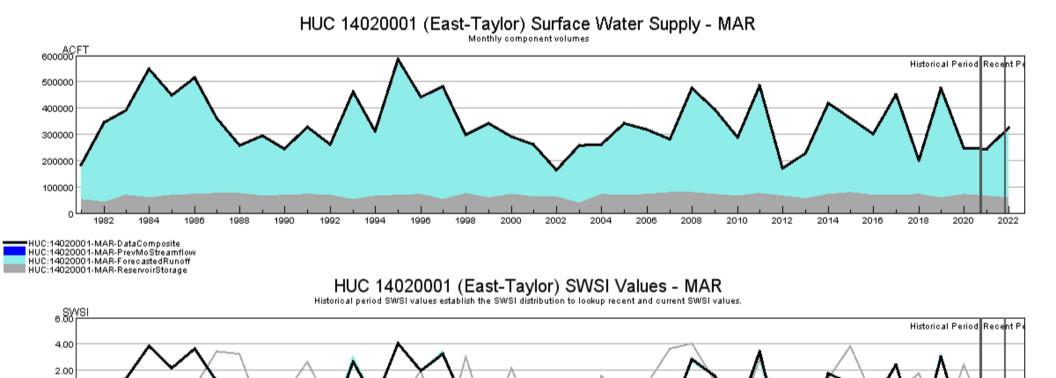


HUC:14010002-MAR-PrevMoStreamflow-SWSI HUC:14010002-MAR-ForecastedRunoff-SWSI HUC:14010002-MAR-ReservoirStorage-SWSI HUC:14010002-MAR-DataComposite-SWSI





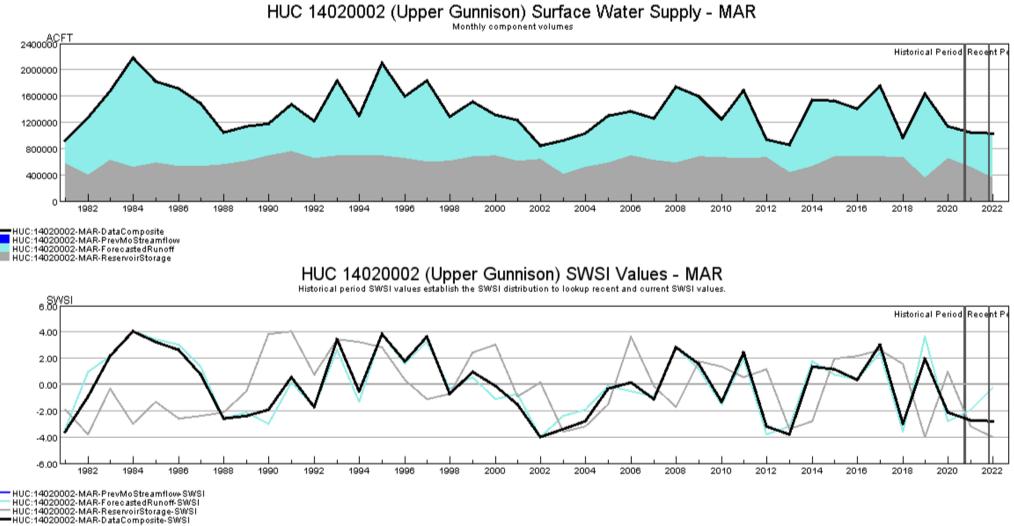


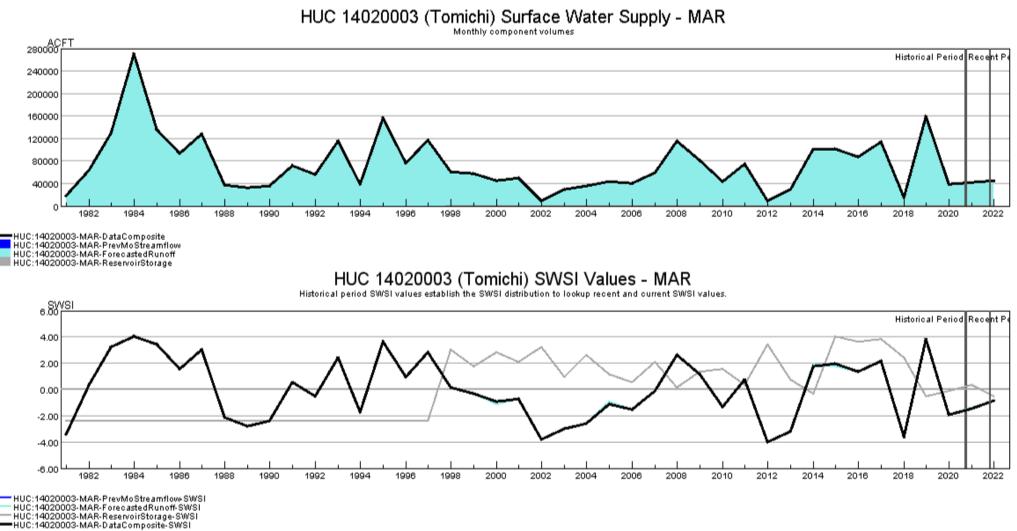


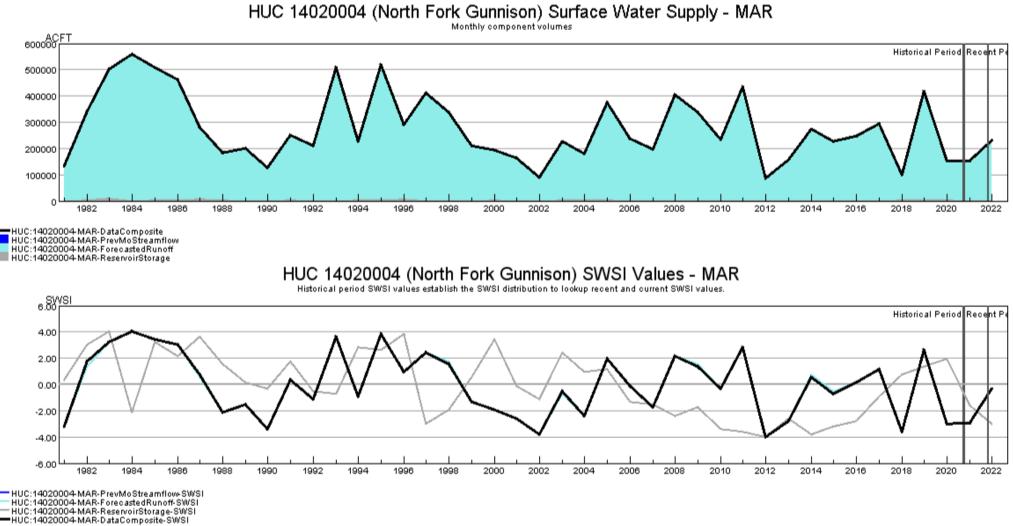
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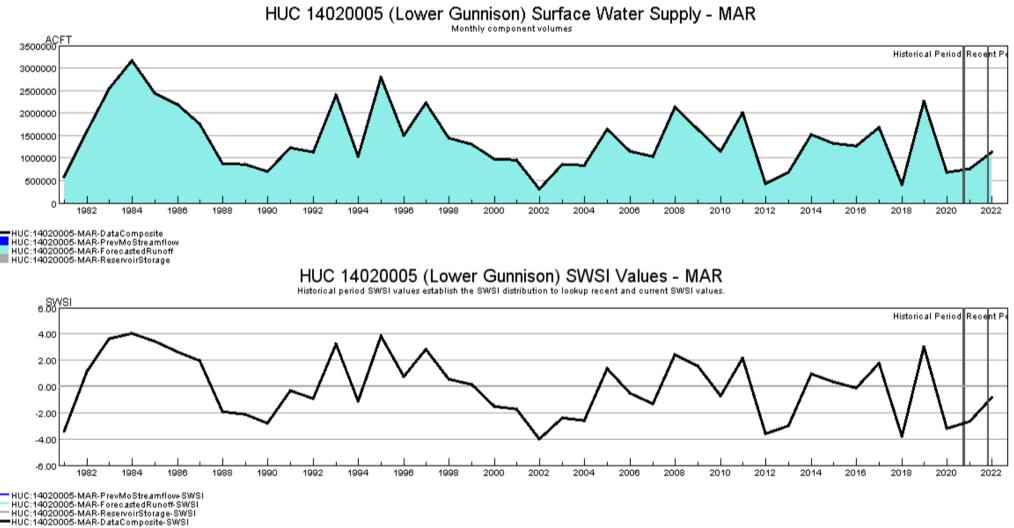
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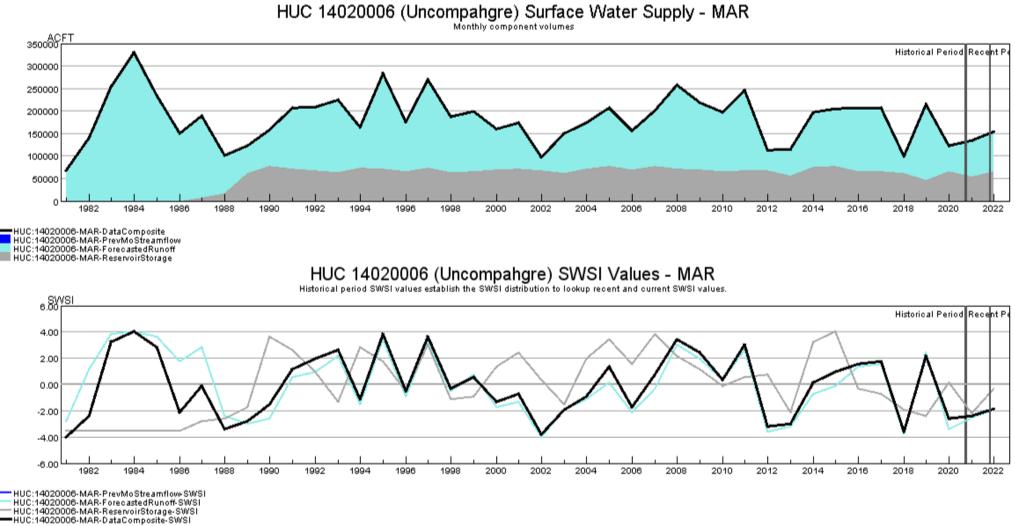
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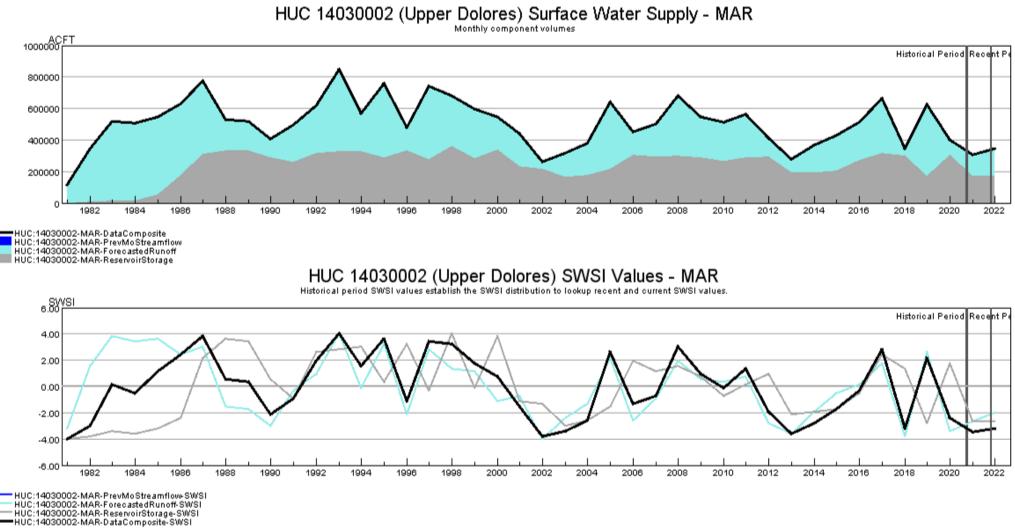


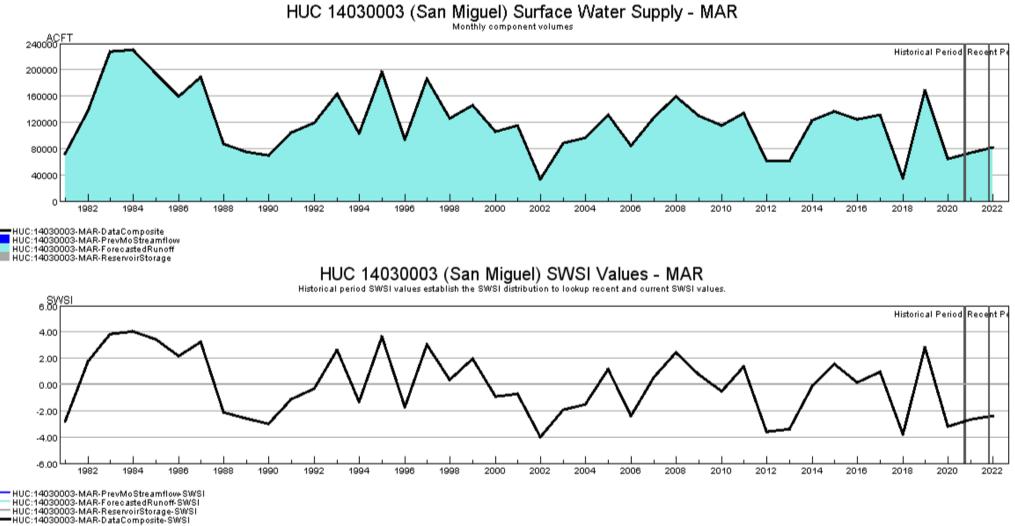


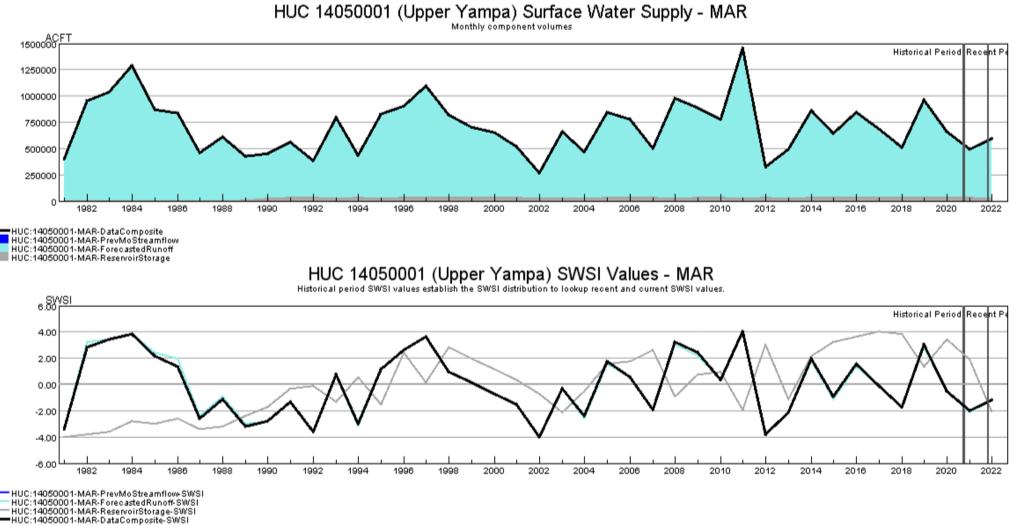


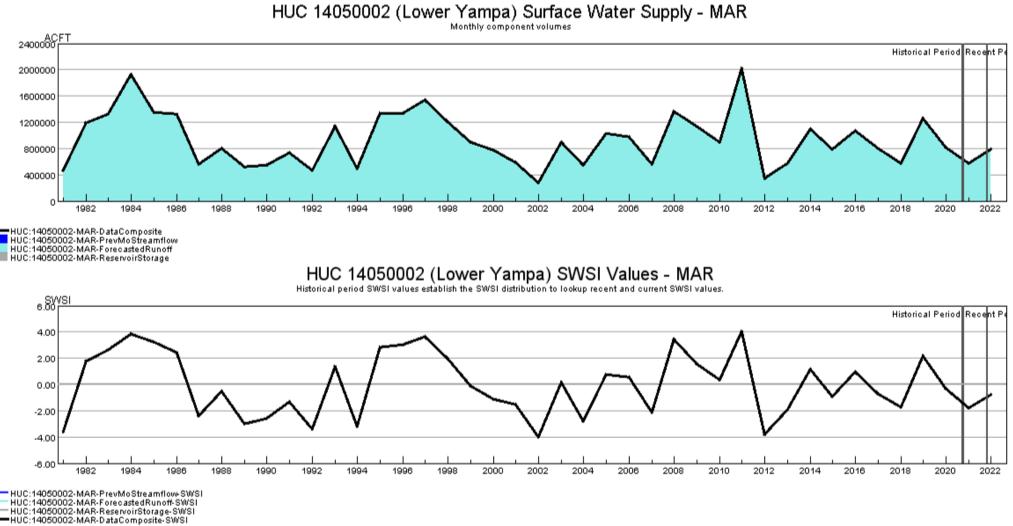


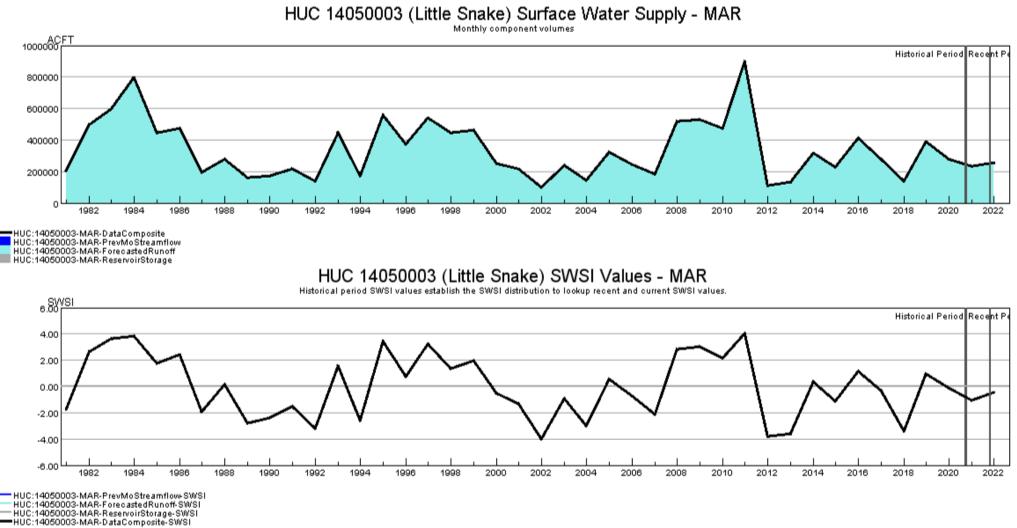


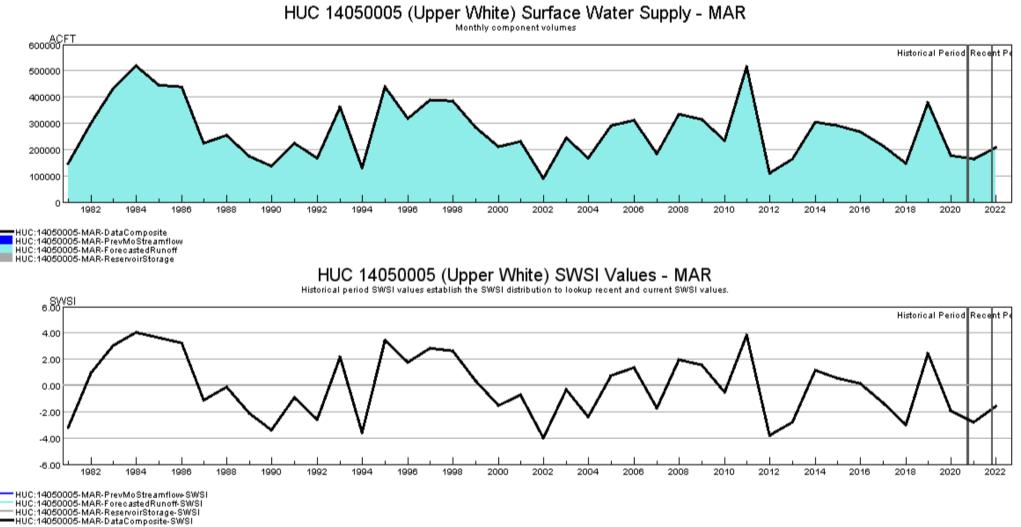


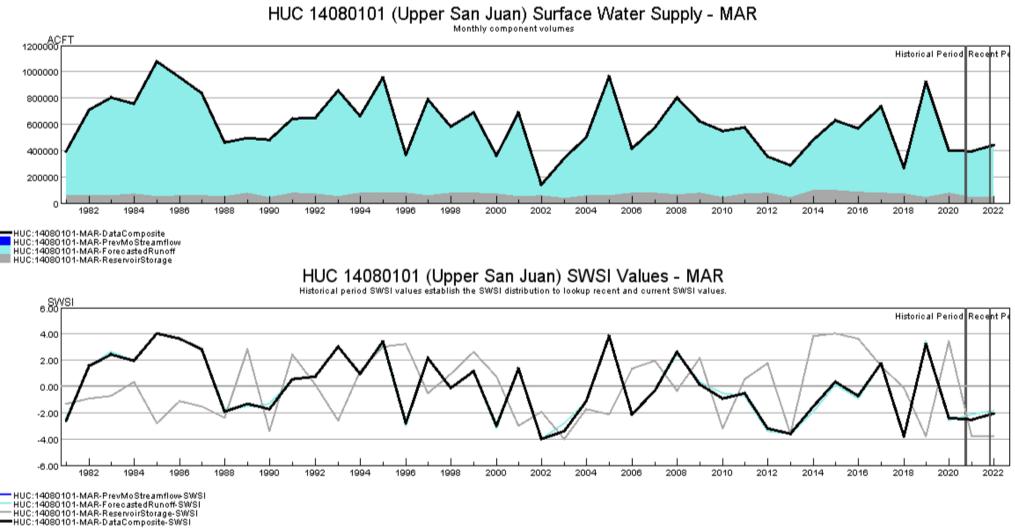


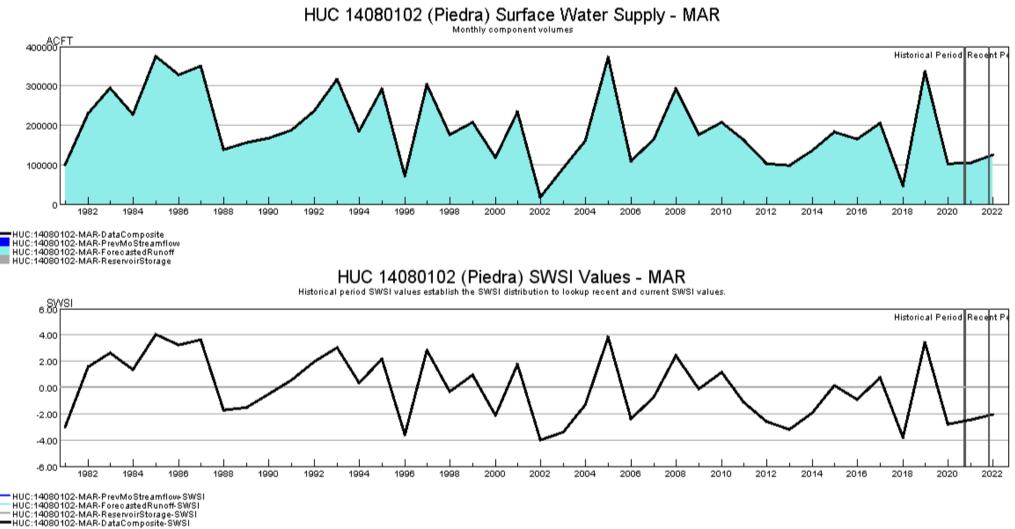


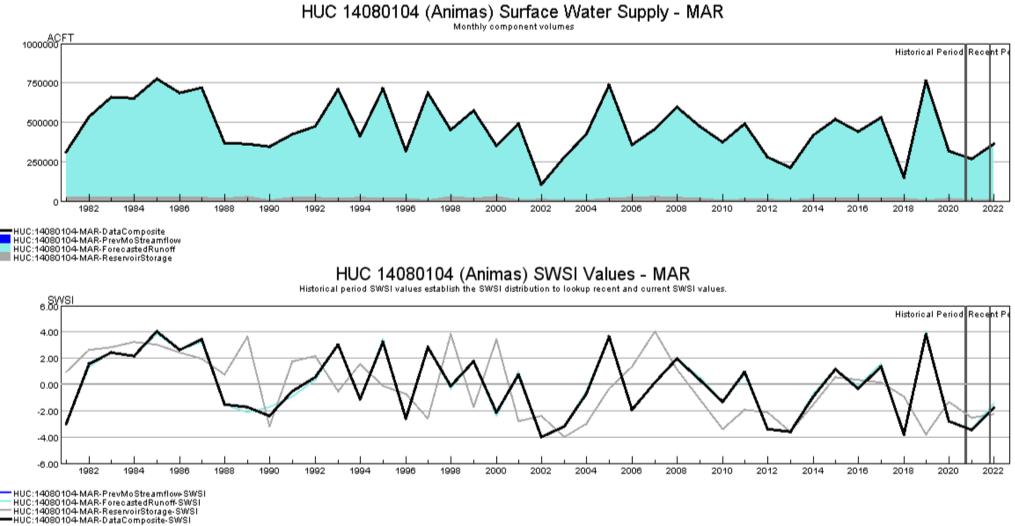


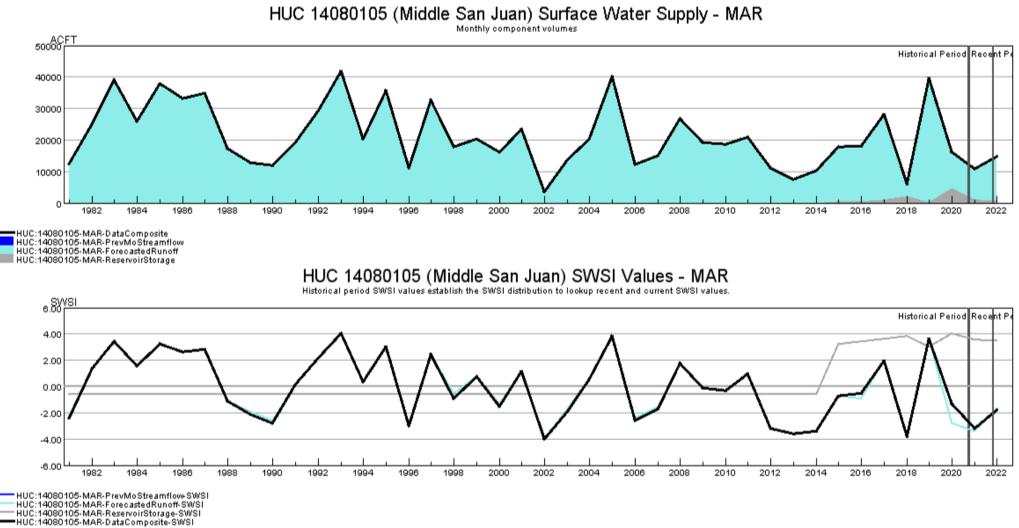


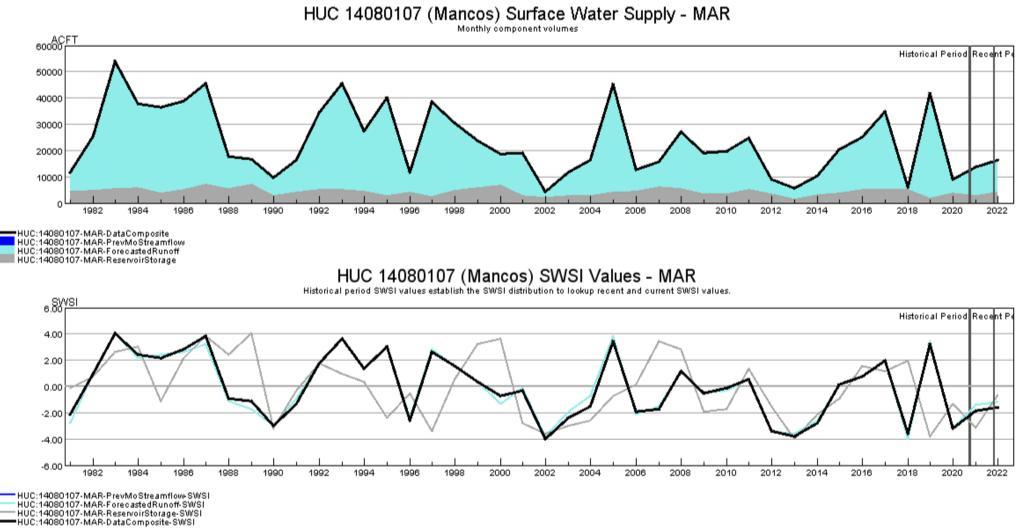


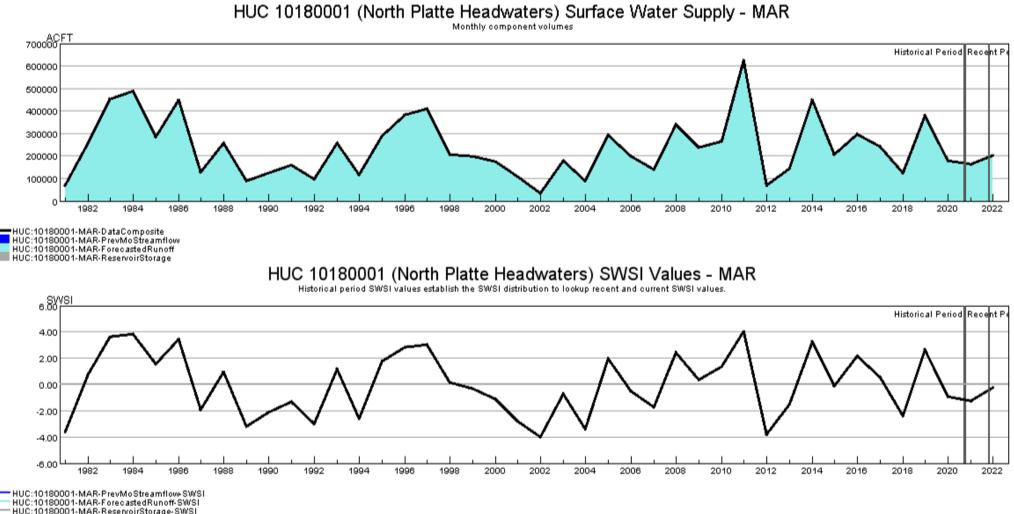




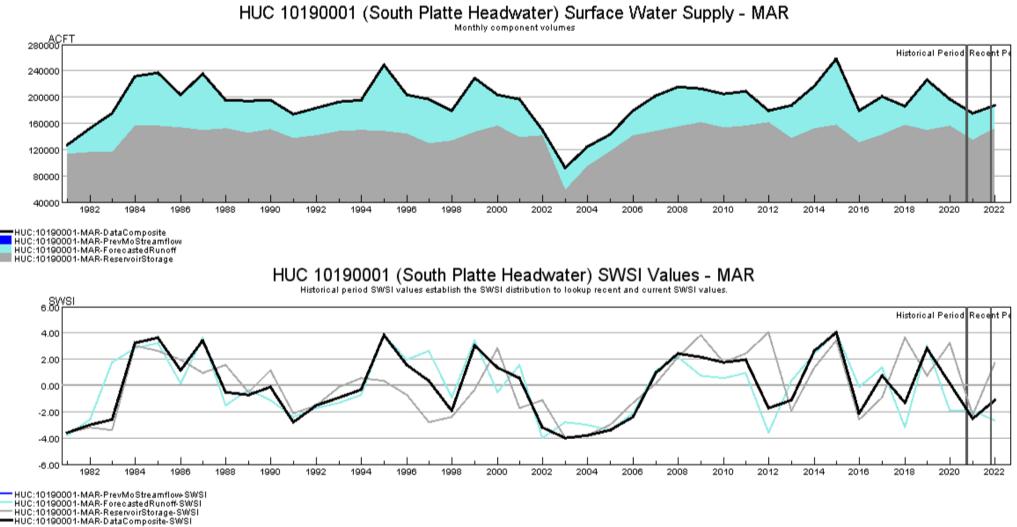


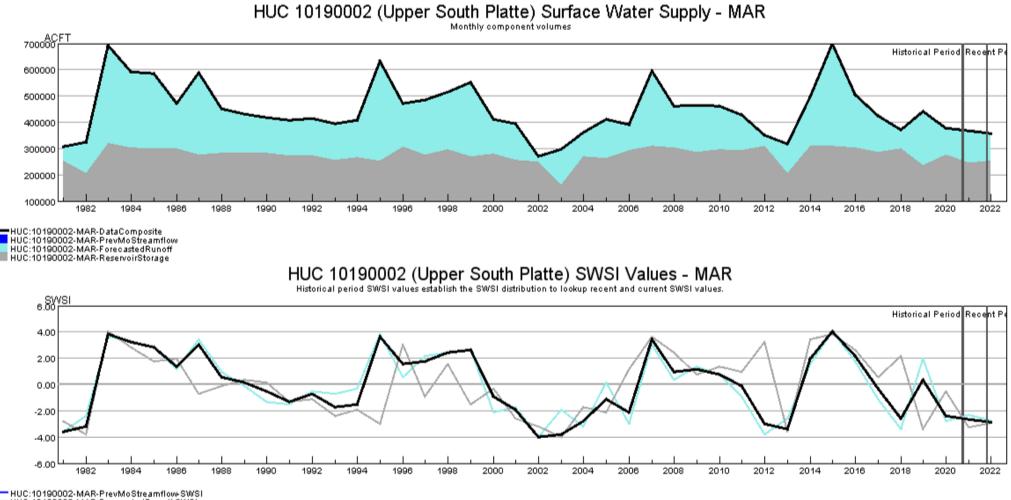




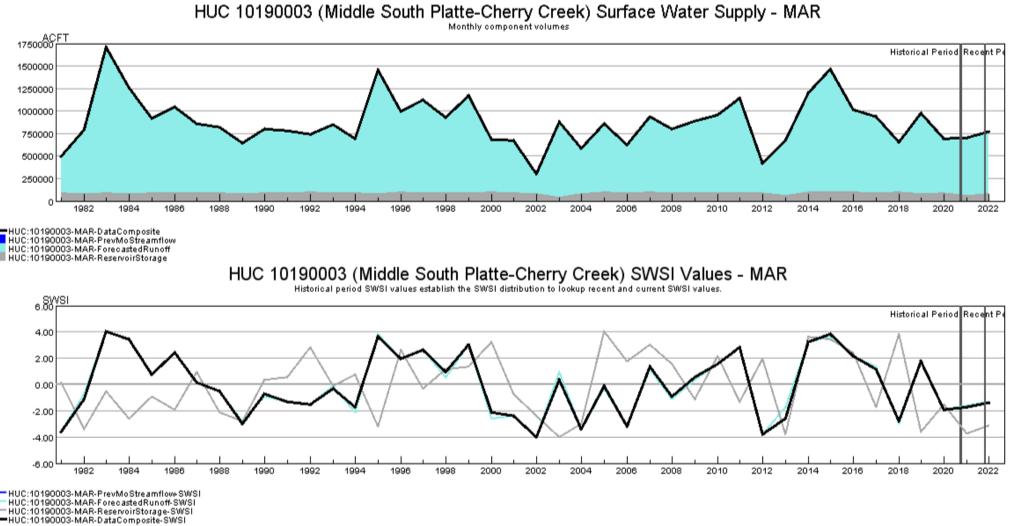


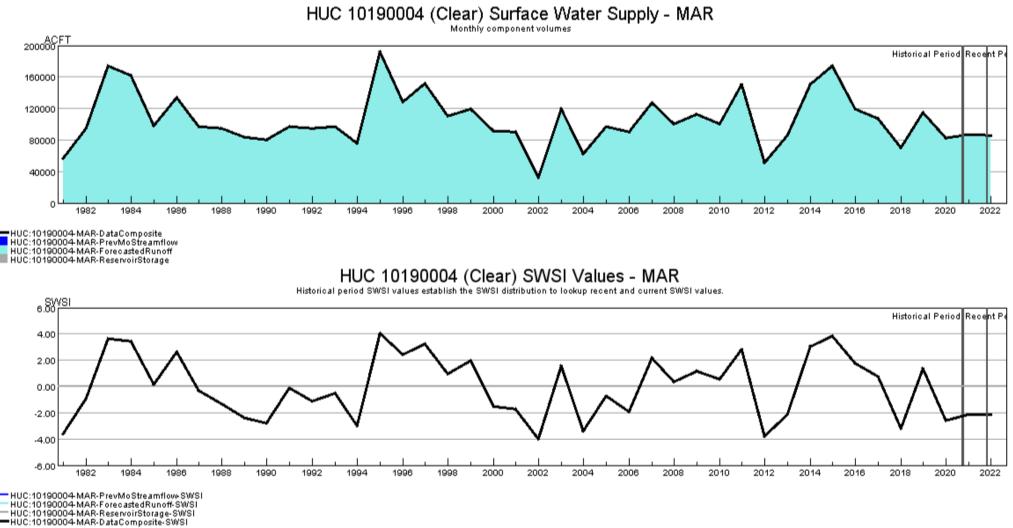
HUC:10180001-MAR-FreeMostedminow-Sws HUC:10180001-MAR-ForecastedRunoff-SwSI HUC:10180001-MAR-ReservoirStorage-SWSI HUC:10180001-MAR-DataComposite-SWSI

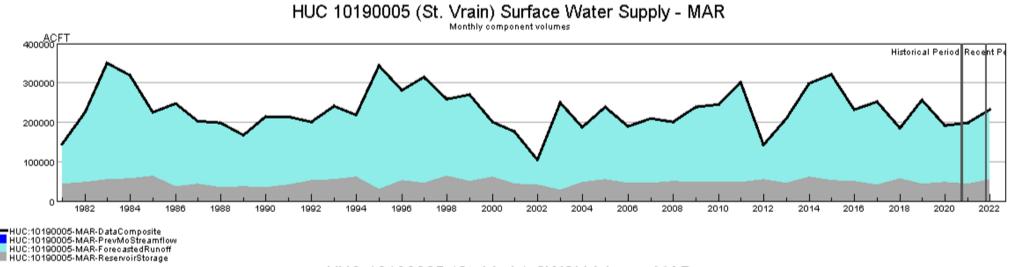




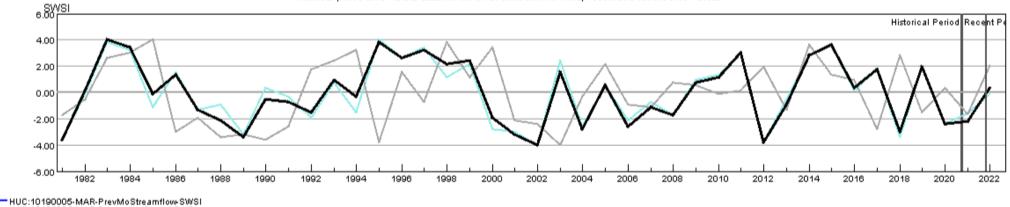
HUC:10190002-MAR-PrevMoStreamflow-SWSI HUC:10190002-MAR-ForecastedRunoff-SWSI HUC:10190002-MAR-ReservoirStorage-SWSI HUC:10190002-MAR-DataComposite-SWSI







HUC 10190005 (St. Vrain) SWSI Values - MAR Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



HUC:10190005-MAR-FreeMostream100-SWS HUC:10190005-MAR-ReservoirStorage-SWSI HUC:10190005-MAR-DataComposite-SWSI

