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
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November 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: https://dwr.colorado.gov/services/water-administration/drought-and-swsi. This report also contains updates about current regional conditions and water matters prepared by each DWR Division Office.

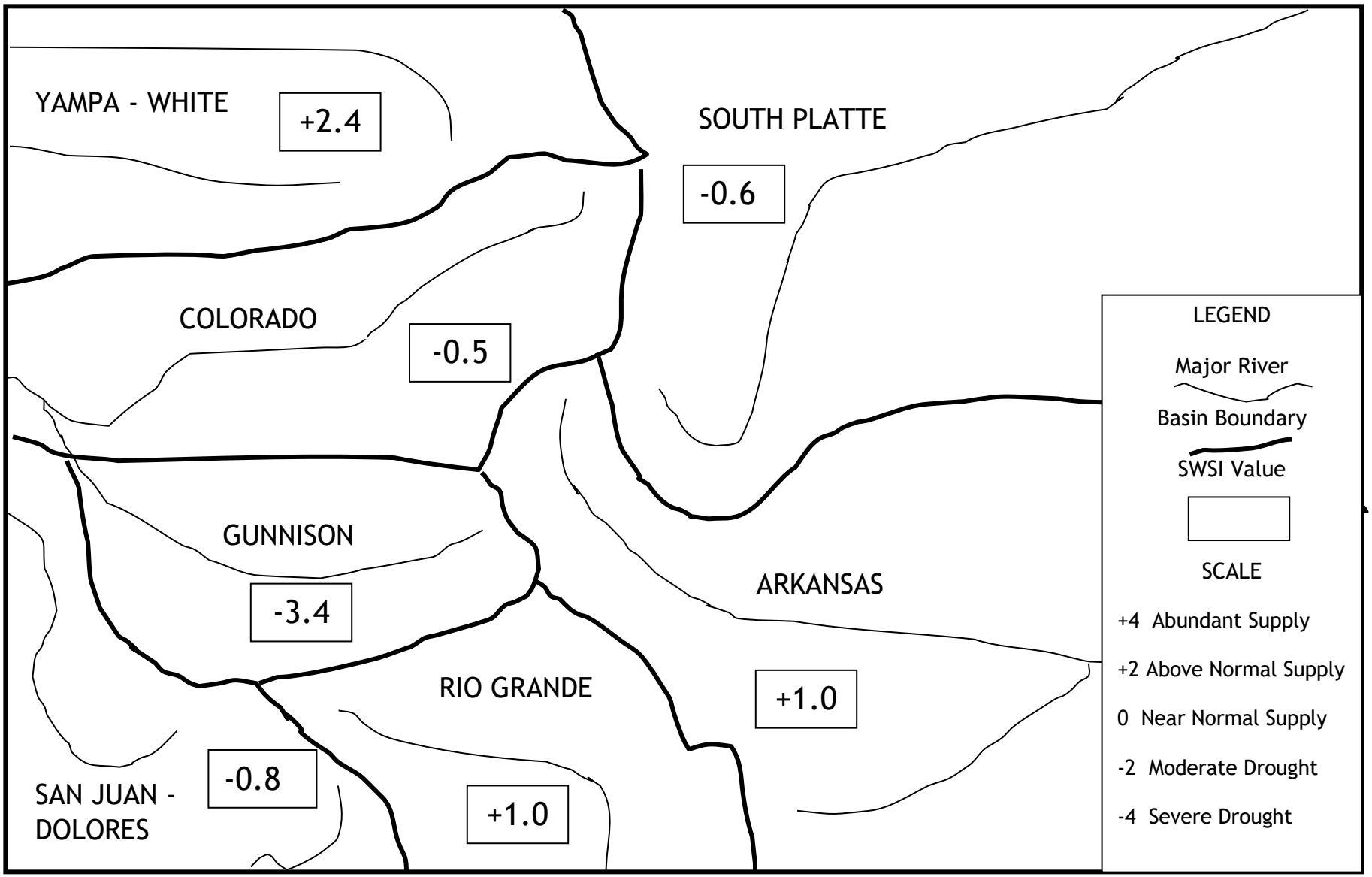
The SWSI calculation for the fall season (October 1 to December 1) is based solely on reservoir storage at the end of last month, in this case October 31. The following SWSI values were computed for each of the seven major basins for November 1, 2020. Water supply conditions, as represented by water in storage, range from well below normal in the Gunnison River Basin to above normal in the Yampa-White Platte River Basin.

Basin	November 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	1.0	0.1	-1.0
Colorado	-0.5	0.1	-1.4
Gunnison	-3.4	-0.1	-6.3
Rio Grande	1.0	0.2	-1.2
San Juan-Dolores	-0.8	0.0	-3.2
South Platte	-0.6	-0.6	-3.7
Yampa-White	2.4	0.5	-1.7

SWSI Scale

-4	-3	-2	-1	0	1	2	3	4
Severe Drought		Moderate Drought		Near Normal Supply		Above Normal Supply		Abundant Supply

SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

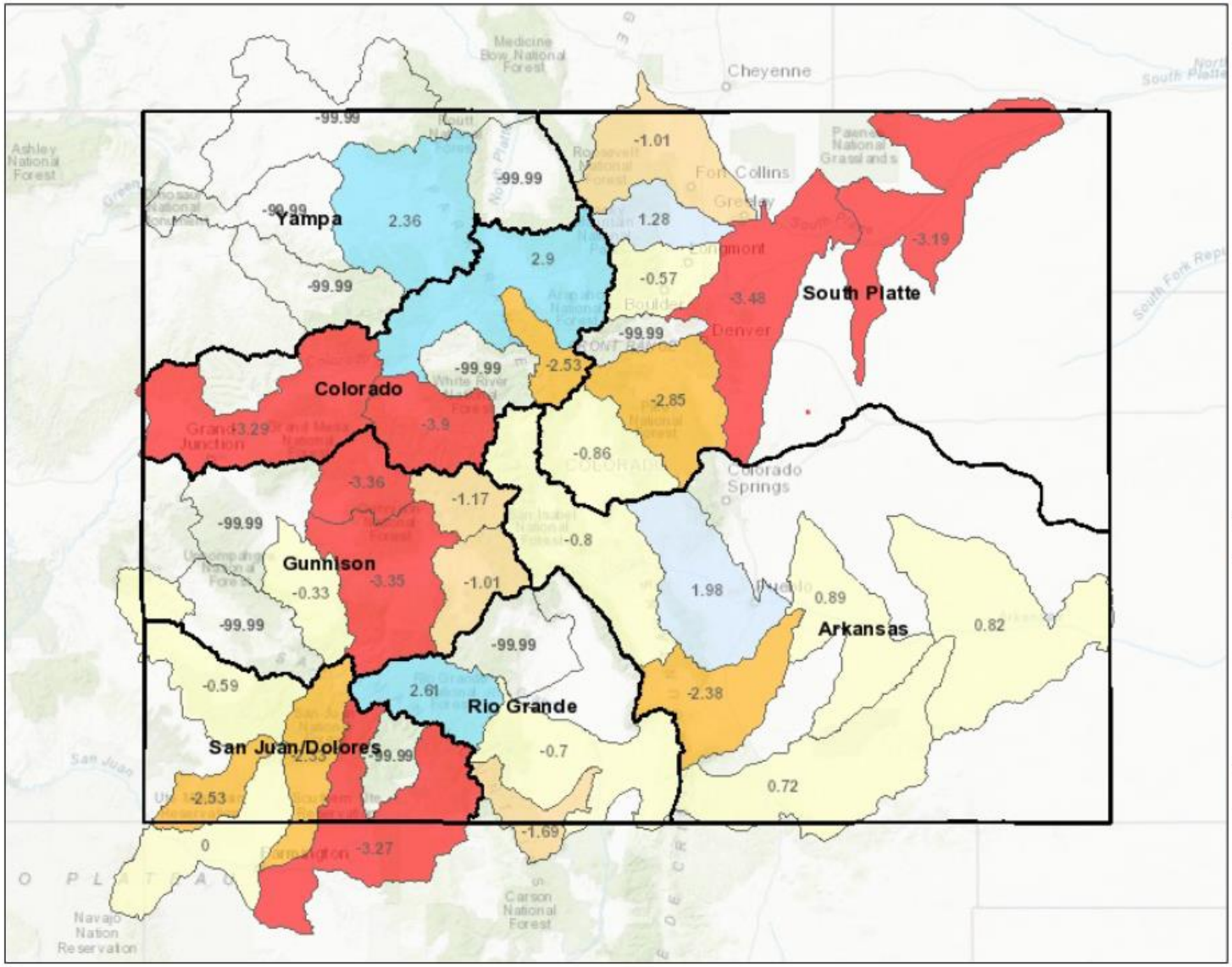


November 1, 2020

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC

COLORADO
Division of Water Resources
Department of Natural Resources

SWSI November 1, 2020

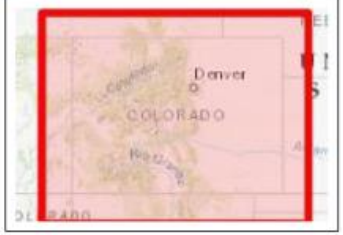


Legend

SWSI - Current Report

- SWSI Not Applicable (-99.99)
- Extremely Dry (-3.0 to -4.2)
- Moderately Dry (-2.0 to -2.9)
- Slightly Dry (-1.0 to -1.9)
- Near Average (-0.9 to 0.9)
- Slightly Wet (1.0 to 1.9)
- Moderately Wet (2.0 to 2.9)
- Extremely Wet (3.0 to 4.2)
- Water Division

Location



Notes

113.64 0 56.82 113.64 Miles

1: 3,600,000

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Date Prepared: 11/13/2020 9:02:40 AM

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

Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Total Vol (AF)
Arkansas	11020006	Huerfano	-2.38	21	-
	11020005	Upper Arkansas-Lake Meredith	0.90	61	15,259
	11020010	Purgatoire	0.73	59	15,500
	11020009	Upper Arkansas-John Martin Reservoir	0.83	60	42,617
	11020001	Arkansas Headwaters	-0.81	40	174,083
	11020002	Upper Arkansas	1.98	74	175,262
Colorado	14010005	Colorado Headwaters-Plateau	-3.29	10	3,525
	14010004	Roaring Fork	-3.91	3	63,885
	14010002	Blue	-2.53	20	70,364
	14010001	Colorado Headwaters	2.91	85	134,280
	14010003	Eagle	N/A		
Gunnison	14020003	Tomichi	-1.02	38	42
	14020004	North Fork Gunnison	-3.36	10	730
	14020006	Uncompahgre	-0.33	46	50,691
	14020001	East-Taylor	-1.17	36	68,239
	14020002	Upper Gunnison	-3.36	10	504,049
	14020005	Lower Gunnison	N/A		
	14030003	San Miguel	N/A		
Rio Grande	13010002	Alamosa-Trinchera	-0.71	42	3,848
	13010005	Conejos	-1.70	30	13,787
	13010001	Rio Grande Headwaters	2.62	81	32,936
	13010004	Saguache	N/A		
San Juan-Dolores	14080105	Middle San Juan	0.00	50	117
	14080107	Mancos	-2.54	20	2,794
	14080104	Animas	-2.34	22	10,885
	14080101	Upper San Juan	-3.28	11	30,472
	14030002	Upper Dolores	-0.60	43	174,983
	14080102	Piedra	N/A		
South Platte	10190003	Middle South Platte-Cherry Creek	-3.48	8	36,560
	10190012	Middle South Platte-Sterling	-3.19	12	39,829
	10190005	St. Vrain	-0.57	43	51,375
	10190007	Cache La Poudre	-1.02	38	91,714
	10190001	South Platte Headwater	-0.86	40	137,600
	10190002	Upper South Platte	-2.86	16	261,200
	10190006	Big Thompson	1.28	65	505,393
	10190004	Clear	N/A		
Yampa-White	14050001	Upper Yampa	2.36	78	35,643
	10180001	North Platte Headwaters	N/A		
	14050002	Lower Yampa	N/A		
	14050003	Little Snake	N/A		
	14050005	Upper White	N/A		

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)

November 1, 2020 SWSI Component Information – Streamflow Forecast & Reservoir Storage - By HUC

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
11020001	Arkansas Headwaters	CLEAR CREEK RESERVOIR	4,452	39
		HOMESTAKE RESERVOIR	40,375	70
		TWIN LAKES RESERVOIR	42,388	40
		TURQUOISE LAKE	86,868	33
11020006	Huerfano	CUCHARAS RESERVOIR	-	21
11020010	Purgatoire	TRINIDAD LAKE	15,500	59
11020002	Upper Arkansas	PUEBLO RESERVOIR	175,262	74
11020009	Upper Arkansas-John Martin Reservoir	ADOBE CREEK RESERVOIR	8,698	54
		JOHN MARTIN RESERVOIR	33,919	60
11020005	Upper Arkansas-Lake Meredith	LAKE HENRY	5,127	90
		MEREDITH RESERVOIR	10,132	55
14010002	Blue	GREEN MOUNTAIN RESERVOIR	70,364	20
14010001	Colorado Headwaters	WOLFORD MOUNTAIN RESERVOIR	56,180	99
		WILLIAMS FORK RESERVOIR	78,100	62
14010005	Colorado Headwaters-Plateau	VEGA RESERVOIR	3,525	10
14010004	Roaring Fork	RUEDI RESERVOIR	63,885	3
14020001	East-Taylor	TAYLOR PARK RESERVOIR	68,239	36
14020004	North Fork Gunnison	PAONIA RESERVOIR	730	10
14020003	Tomichi	VOUGA RESERVOIR NEAR DOYLEVILLE	42	38
14020006	Uncompahgre	RIDGEWAY RESERVOIR	50,691	46
14020002	Upper Gunnison	SILVER JACK RESERVOIR	-	1
		FRUITLAND RESERVOIR	200	42
		CRAWFORD RESERVOIR	1,038	3
		MORROW POINT RESERVOIR	109,901	24
		BLUE MESA RESERVOIR	392,975	10
13010002	Alamosa-Trinchera	MOUNTAIN HOME	1,307	24
		TERRACE RESERVOIR	2,541	46
13010005	Conejos	PLATORO RESERVOIR	13,787	30
13010001	Rio Grande Headwaters	CONTINENTAL RESERVOIR	6,747	89
		SANTA MARIA RESERVOIR	12,916	83
		RIO GRANDE RESERVOIR	13,273	62
14080104	Animas	LEMON RESERVOIR	10,885	22
14080107	Mancos	JACKSON GULCH RESERVOIR	2,794	20
14080105	Middle San Juan	LONG HOLLOW RESERVOIR	117	50
14030002	Upper Dolores	GROUNDHOG RESERVOIR	4,400	9
		MCPHEE RESERVOIR	170,583	43
14080101	Upper San Juan	VALLECITO RESERVOIR	30,472	11
10190006	Big Thompson	LONE TREE RESERVOIR	-	1
		MARIANO RESERVOIR	200	10
		LAKE LOVELAND RESERVOIR	3,000	15
		WILLOW CREEK RESERVOIR	5,978	9
		BOYD LAKE	29,000	46
		CARTER LAKE	74,163	92
		LAKE GRANBY	393,052	61

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
10190007	Cache La Poudre	WINDSOR RESERVOIR	300	2
		HALLIGAN RESERVOIR	700	26
		CACHE LA POUDRE	1,100	15
		BLACK HOLLOW RESERVOIR	2,800	42
		FOSSIL CREEK RESERVOIR	4,300	45
		CHAMBERS LAKE	7,100	95
		COBB LAKE	15,700	61
		HORSETOOTH RESERVOIR	59,714	35
10190003	Middle South Platte-Cherry Creek	HORSECREEK RESERVOIR	-	1
		BARR LAKE	2,000	9
		MILTON RESERVOIR	3,360	17
		STANDLEY RESERVOIR	31,200	39
10190012	Middle South Platte-Sterling	EMPIRE RESERVOIR	-	4
		JULESBURG RESERVOIR	4,279	22
		JACKSON LAKE RESERVOIR	6,696	25
		POINT OF ROCKS RESERVOIR	6,700	15
		RIVERSIDE RESERVOIR	10,754	41
		PREWITT RESERVOIR	11,400	36
10190001	South Platte Headwater	ANTERO RESERVOIR	19,000	58
		SPINNEY MOUNTAIN RESERVOIR	26,300	41
		ELEVENMILE CANYON RESERVOIR	92,300	21
10190005	St. Vrain	MARSHALL RESERVOIR	3,900	29
		TERRY RESERVOIR	6,700	84
		UNION RESERVOIR	8,975	39
		GROSS RESERVOIR	15,600	33
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,200	91
10190002	Upper South Platte	CHEESMAN LAKE	34,200	7
		DILLON RESERVOIR	227,000	35
14050001	Upper Yampa	YAMCOLO RESERVOIR	3,343	52
		STAGECOACH RESERVOIR NR OAK CREEK	32,300	92

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) | 50 (Normal) | 100 (Well Above Normal)

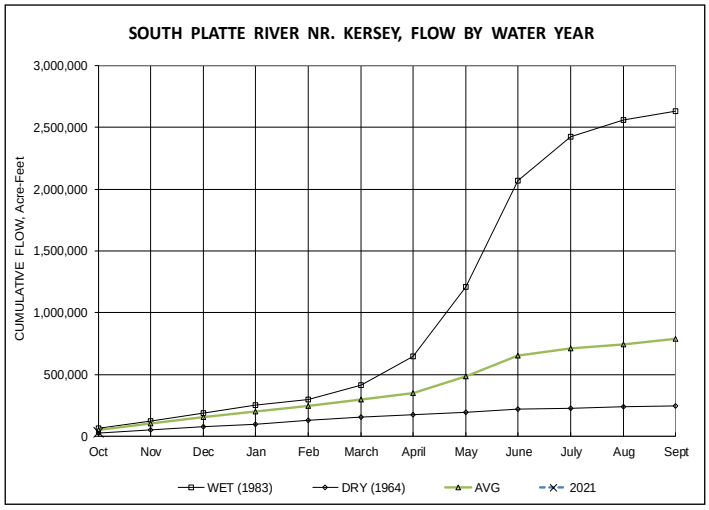
Basinwide Conditions Assessment

The SWSI value for the month was -0.6.

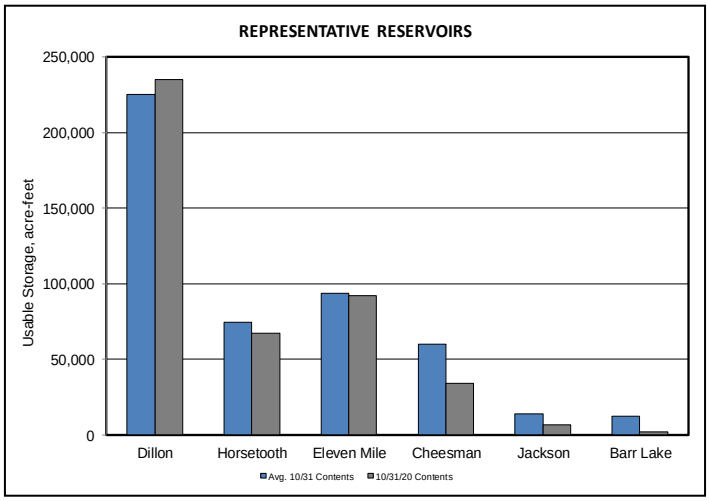
The South Platte basin continued a pattern of above average temperatures that controlled throughout the summer and fall shifted with temperatures throughout the mountains and foothills near average and slightly below average on the eastern plains during the month of October. The mountains and plains did receive precipitation in the form of snow during the month of October, however the mountain and foothill regions received only 50% of average, with portions of the eastern plains being near 0 to 25% of average precipitation during the month of October. Although several mountainous and foothill snowstorms in late September and late October were very much welcomed to bring some moisture and help combat several wildfires throughout the basin, the basin remains well below average precipitation for the season. The USDA South Platte River Basin High/Low Snowpack Summary indicated a decent start to the seasonal snowpack late in October, ending the month just below normal for the month.

With the continued trend of below average precipitation, the basin ends the month of October with continued basin-wide drought conditions. The continued trend of below average precipitation conditions resulted in drought conditions throughout the basin increasing in severity, continuing to encompass the entirety of the South Platte and Republican River basins through the month of October. The USDA Drought Monitor rating for the mountainous and foothill areas increased throughout the month of October from a rating of mostly D2 (severe drought) throughout much of the foothills and plains, to a rating of D3 (Extreme drought), with the exception of portions of Larimer, Weld and Morgan Counties remaining at a rating of D2. Drought conditions in the mountainous areas in the South Platte River Basin east of the continental divide increased in severity ending the month of October with a drought rating of D3 (Extreme drought) conditions throughout, with portions of Clear Creek, Park, Jefferson and Douglas Counties increasing to a drought rating of D4 (Exceptional Drought).

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 October. Flows at the Kersey gage downstream of the City of Greeley, were well below average with average daily flows for the month of October approximately 501 cfs, 74% of the historic mean value of 680 cfs. The average daily flow at the Julesburg gage for the month of October was 95 cfs, only 31% of the historic mean value of 308 cfs. The demand for filling of depleted reservoirs throughout Division 1 and below average flows of native water in the rivers will continue the trend of below average flows throughout the Winter into Spring.



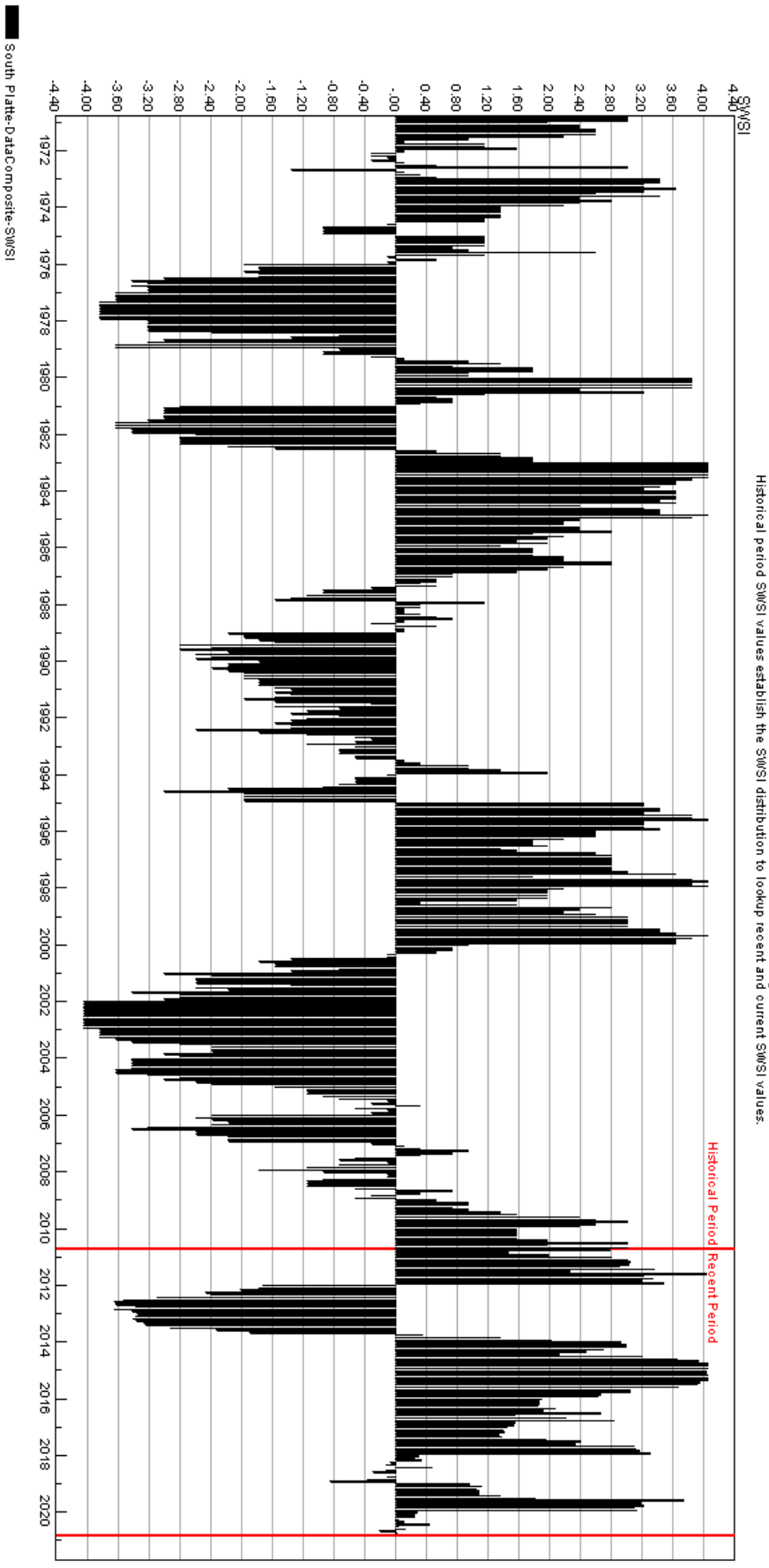
The month of October continued the trend of below average precipitation and below average streamflows, resulting in senior calling water rights on the mainstem of the South Platte River and tributaries. The month of October was controlled by senior direct flow irrigation rights on the upper end of the South Platte River mainstem with calls at the Burlington Ditch Headgate just downstream of Denver with an 1885 and 1909 calling water right. The lower portion of the river was controlled by a call at the Harmony No. # Ditch 1909 priority and the South Platte River Compact with a calling right of June 14, 1897 downstream of the westerly Washington County line. The calls on the lower end of the South Platte River mainstem went more junior during the middle to end of October with a 1922 North Sterling Reservoir call, the the South Platte River Compact call being removed after October 15th in accordance with the Compact. Given the below average stream flows and empty to near empty reservoirs on the eastern plains, a circa 1922 reservoir call is anticipated on the lower end of the river through April, 2021 with more senior reservoir calls on the upper mainstem and tributaries.



Reservoir storage levels throughout the South Platte River mainstem ended the month of October below the historical average at the 6 SWSI Representative Reservoirs at 437,567 acre-feet volume, which is 92% of the long term average (1961-current). Additionally, 32 indexed reservoirs

throughout Division 1 basin at 88% of the long term average with a storage volume of 536,409 at the end of October, representing 47% full capacity for the reservoirs at the end of October. This is below the long term average of 53% full for the end of October storage in the 32 indexed reservoirs throughout Division 1. November 1 marked the start of the reservoir fill season, 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 October. Given the current below average precipitation and native flows in the rivers and streams, it is expected much competition by reservoir priorities to fill in priority will be experienced throughout the winter and spring.

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



Basinwide Conditions Assessment

The SWSI value for the month was +1.0.

Outlook

River calls during October ranged from a senior Rocky Ford Ditch 5/15/1874 call junior Fort Lyon Canal call of 3/1/1887 upstream of John Martin Reservoir. Return flows above John Martin Reservoir allowed the junior X-Y Irrigating Ditch Canal call of 7/22/1889 call in District 67 to come into priority during October.

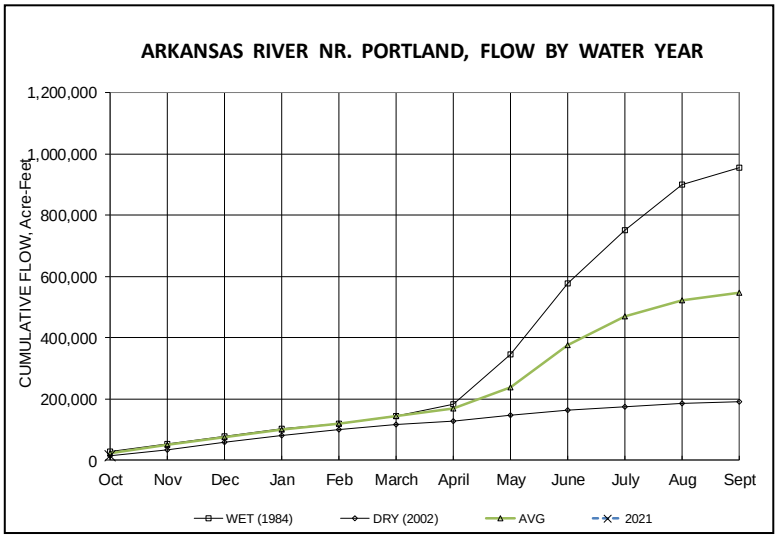
The Winter Water Storage Program met virtually on October 16, 2020. Planning for the upcoming Winter Water storage season, which runs from November 15, 2020 through March 14, 2021, was the topic at this meeting as well as a discussion on the outgoing water year.

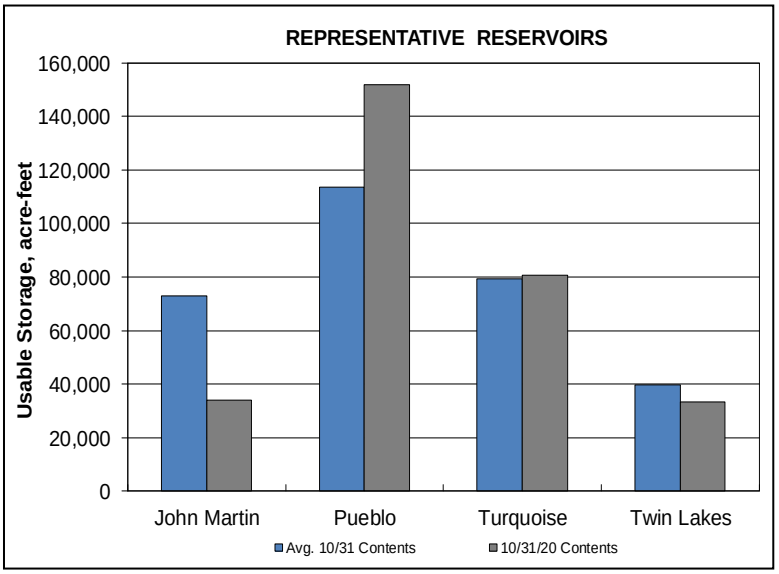
Winter Compact storage in John Martin Reservoir began on November 1, 2020. Storage in Trinidad Reservoir began on October 15, 2020.

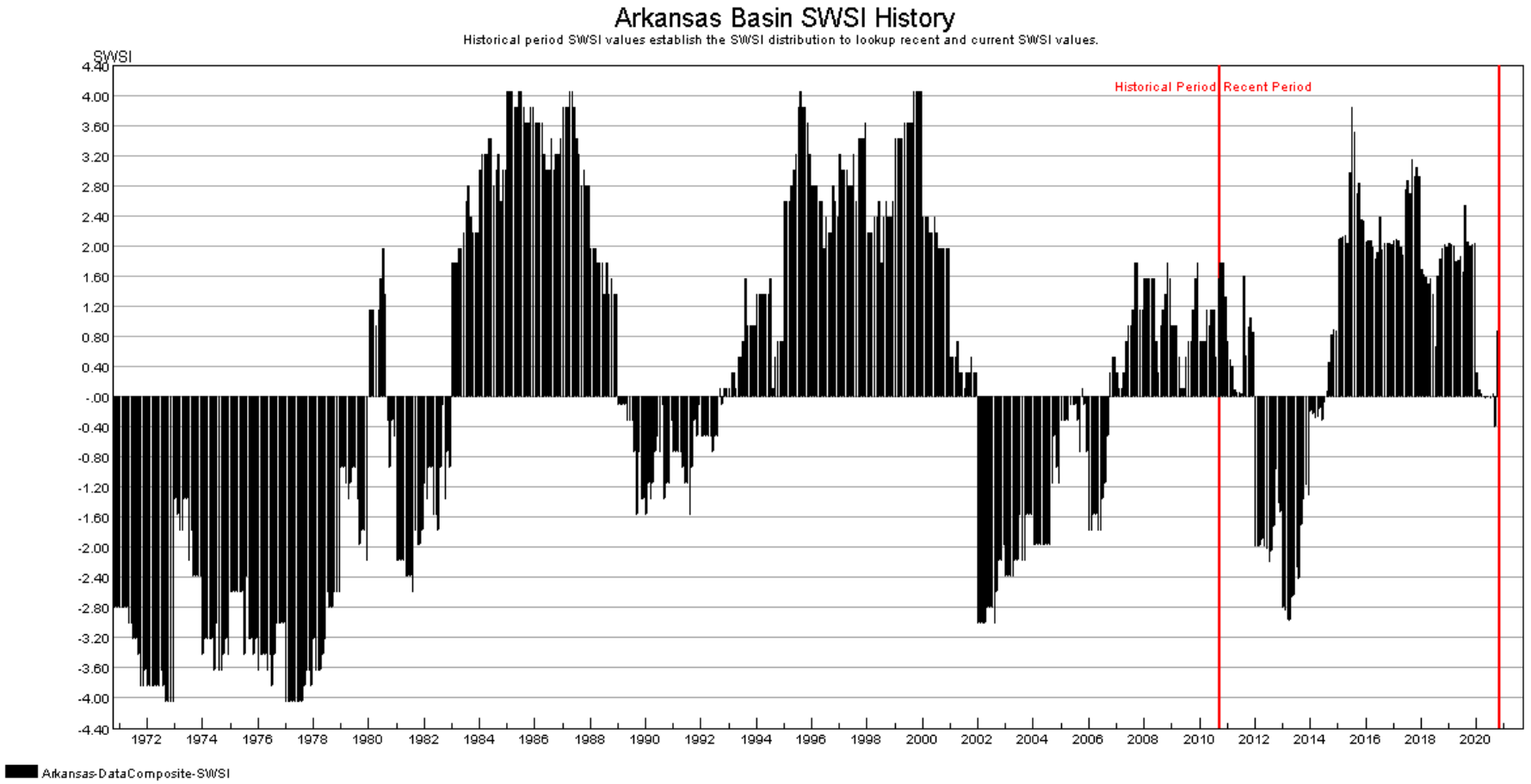
Administrative Concerns

The Winter Water Meeting further discussed the ongoing concern that Winter Water storage for municipal use in Pueblo Reservoir combined with the movement of Fryingpan-Arkansas Project water from Turquoise and Twin Lake to make room for 2021 Transmountain imports, will likely cause a spill to occur from accounts in Pueblo Reservoir. This will likely occur in April or May of 2021 unless the excess capacity in the affected accounts is not moved out voluntarily.

The Division of Water Resources, Division 2 has proposed being the primary party on performing the 10-year review on the Trinidad Reservoir Project. The Bureau of Reclamation had previously performed the review, which had been financially burdensome. The proposal is under consideration from the different partners to the Project.






Arkansas Basin SWSI History
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.
SWSI
Historical Period
Recent Period
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Arkansas-DataComposite-SWSI

Basinwide Conditions Assessment

The SWSI value for the month was +1.0.

Flow at the gaging station Rio Grande near Del Norte averaged 194 cfs (40% of normal). The Conejos River near Mogote had a mean flow of 64 cfs (48% of normal). Streamflow in the majority of the upper Rio Grande basin was below average during October due to lack of rain. There were a couple of good snowstorms in the high country during October – a welcome relief for the parched conditions in the area mountains. There was enough snowfall to get Wolf Creek Ski Area open before November 1.

Reservoir storage in the basin has been severely depleted to help meet irrigation demand.

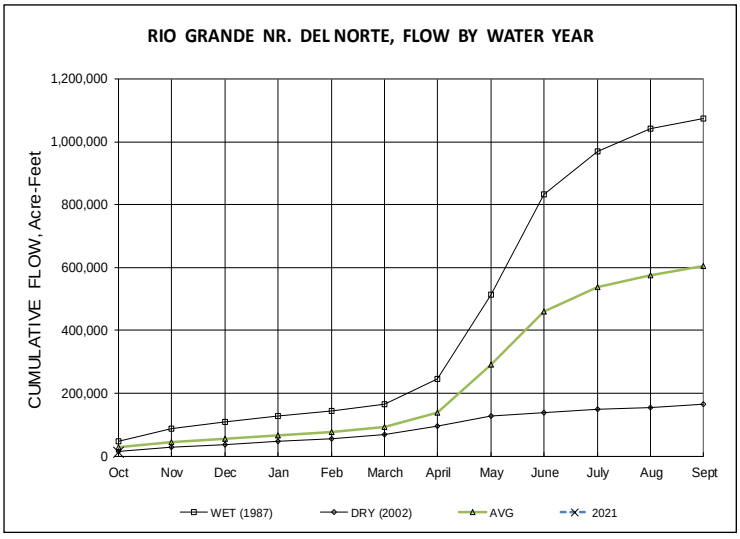
Outlook

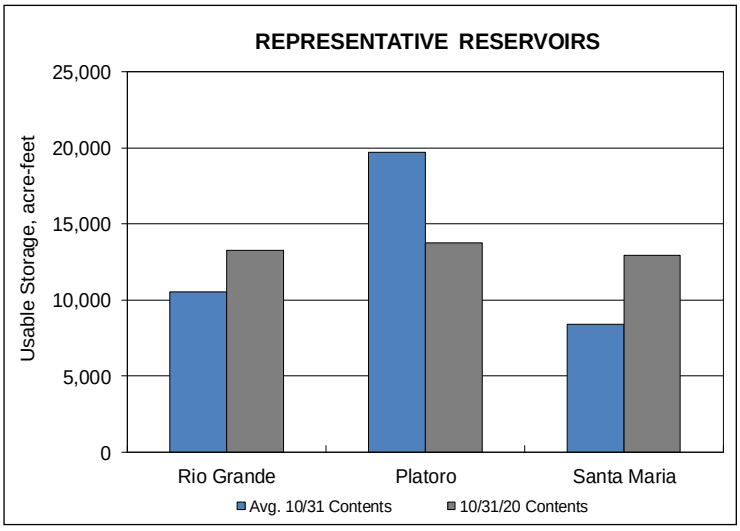
Recently-released National Weather Service 90-day precipitation and temperature outlooks call for a poor chance of above average precipitation for December, 2020 through April, 2021 for this region.

Administrative/Management Concerns

Reservoirs! These valuable vessels help capture winter inflows and flood flows to re-regulate for the benefit of several irrigation companies in the San Luis Valley. The upper Rio Grande basin in Colorado has about 300,000 acre-feet of usable storage in the above-ground reservoirs. These reservoirs typically benefit a particular group of irrigators, i.e. Sanchez Ditch and Reservoir Company shareholders. Storage in these reservoirs was heavily used during the 2020 irrigation season, leaving many in no or low storage levels.

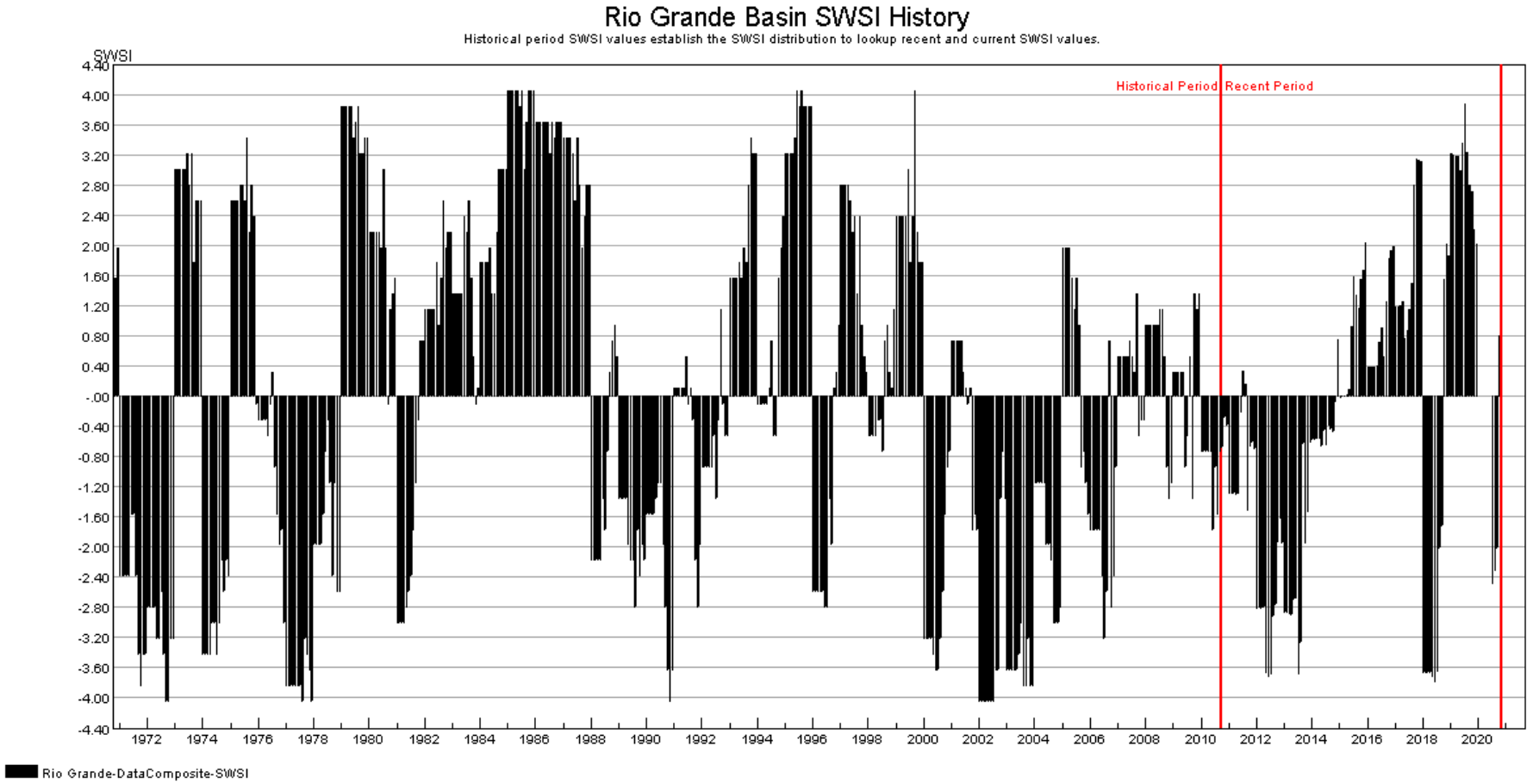
Reservoirs with very low carryover storage for 2020 include: Terrace, Sanchez, Mountain Home, Continental, and Smith. The effect of the 2018 and 2020 drought years will be felt for several years.





Public Use Impact

After the big snowstorm in September, the autumn weather patterns have been very comfortable and have had little or no effect on crop harvest. Low streamflow conditions are hard on the stream environment and those who use the creeks for stockwatering.


Rio Grande Basin SWSI History
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SWSI
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Rio Grande-DataComposite-SWSI

Basinwide Conditions Assessment

The SWSI value for the month was -3.4.

Basin Wide Conditions Outlook

It's not surprising that most of the Gunnison basin resides within the exceptional drought category in the USDA's drought monitor when you realize that precipitation has been significantly below normal for the past seven months. The lack of precipitation continued in October when most of the basin only received between 0 and 30% of the average precipitation. Temperatures were much warmer than average again in October at 5 to 7 degrees above normal. As a result of the lack of precipitation and warm temperatures, streamflows on major streams remained at levels below the 25th percentile for the date for most of October. Unfortunately, this has resulted in soil moisture conditions, as modeled by the Colorado Basin River Forecast Center, at only 30 to 50% of average going into winter.

Outlook

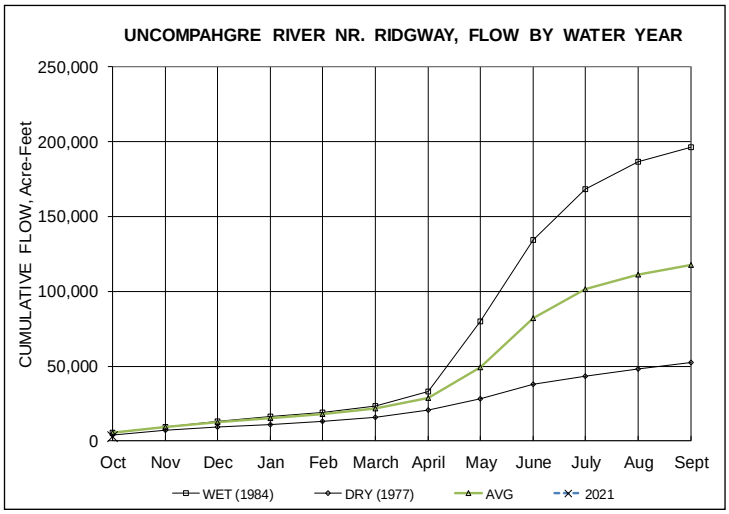
Unfortunately, NOAA's El-Nino/Southern Oscillation (ENSO) forecast predicts a 95% chance of La-Nina conditions continuing through March of 2021. Typical La-Nina conditions are reflected in the National Climate Prediction Center forecasts for the December to February period, which predict lower than average precipitation in southern parts of the Gunnison basin and equal chances of below or above average precipitation in the northern areas.

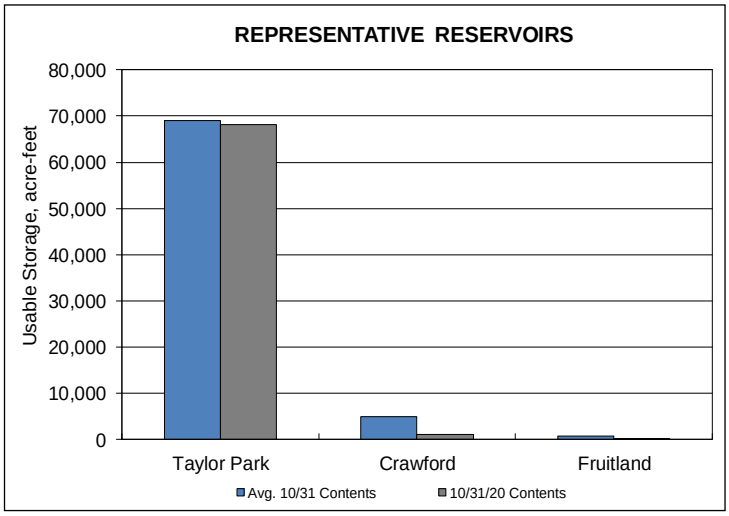
Administrative/Management Concerns

The UVWUA reduced Gunnison Tunnel diversions from 800 cfs to 580 cfs on October 23rd. Diversions were further reduced to 400 cfs on October 26th, which resulted in diversions that were less than inflows and curtailed the use of storage to fill demand. Diversions were then ramped down to 0 cfs on October 31st. October diversions resulted in the use of 18,767 ac-ft of first fill storage in the Aspinall Unit and 846 ac-ft of storage released from Taylor Park second fill account. At the end of October 13,135 ac-ft remained in the Taylor Park first fill account in the Aspinall Unit and 68,234 ac-ft was physically stored in Taylor Park Reservoir. Consequently, per the accounting conditions in the 86CW203 decree, which allow the storage of Taylor Park first fill credits in the Aspinall Unit, on November 1st the Taylor Park first fill account contains a total of 81,369 ac-ft. This is 24,861 ac-ft less (76% of full) than the 106,230 ac-ft full amount that can be carried over.

Outlets at all reservoirs on the Grand Mesa were shut at the end of the irrigation season on October 31st to facilitate filling during the winter and spring. Carryover in the system ended at a dismal 14%, which is lower than the previously recorded minimum from 2018 of 17%. It is notable that two of the worst years in the history of the Grand Mesa Water Users Association (GMWUA) system occurred in the last three years. Given the climate forecast there is significant concern from local orchardists that dry weather and low soil moisture conditions may result in low reservoirs to begin the next irrigation season.

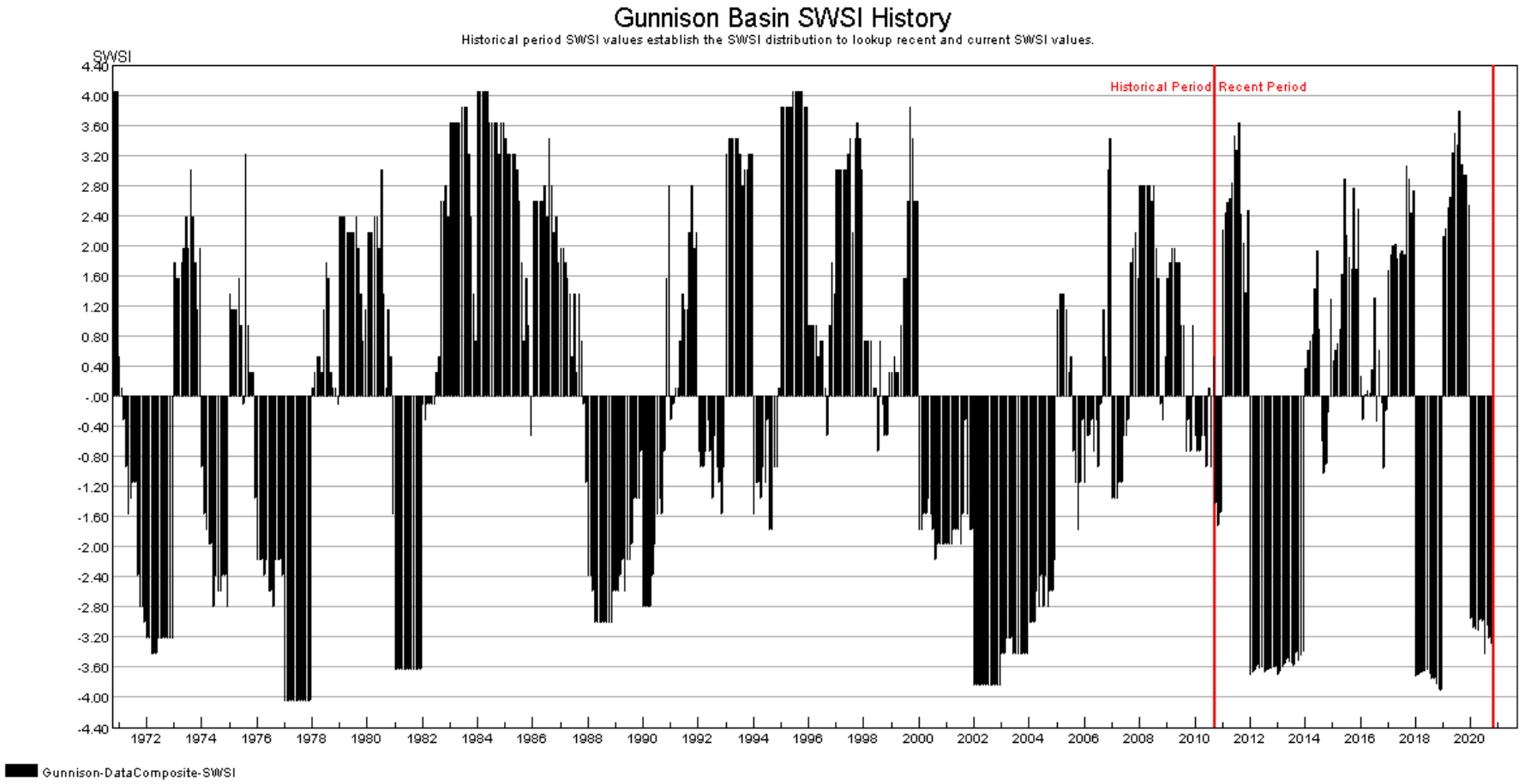
Extremely dry conditions in the summer and fall of 2020 resulted in many streams being on call that were not expected to be based upon the near average snowpack late in the season. It also caused a significant reduction in availability of high country forage for those with USFS or BLM livestock leases. This resulted in many ranchers bringing livestock down earlier, thus driving up the demand for water and the local price of feed.





Public Use Impacts

Releases from Crystal Dam were reduced in conjunction with the reduction of diversions at the Gunnison Tunnel and by November 4th reached 400 cfs, which resulted in about 385 cfs flowing through the Black Canyon of the Gunnison National Park and Gunnison Gorge. Releases will remain at this level except when the Gunnison Tunnel is turned on every six weeks to supply water to Fairview Reservoir for the Project 7 water treatment plant that supplies municipal water for the entire Uncompahgre valley. Taylor Park releases were further reduced from 125 cfs to 85 cfs at the beginning of the month to preserve storage going into the winter at near 68,000 ac-ft.


Gunnison Basin SWSI History
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.
SWSI
Historical Period
Recent Period
4.40
4.00
3.60
3.20
2.80
2.40
2.00
1.60
1.20
0.80
0.40
-.00
-0.40
-0.80
-1.20
-1.60
-2.00
-2.40
-2.80
-3.20
-3.60
-4.00
-4.40
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Gunnison-DataComposite-SWSI

Basinwide Conditions Assessment
The SWSI value for the month was -0.5.

Outlook

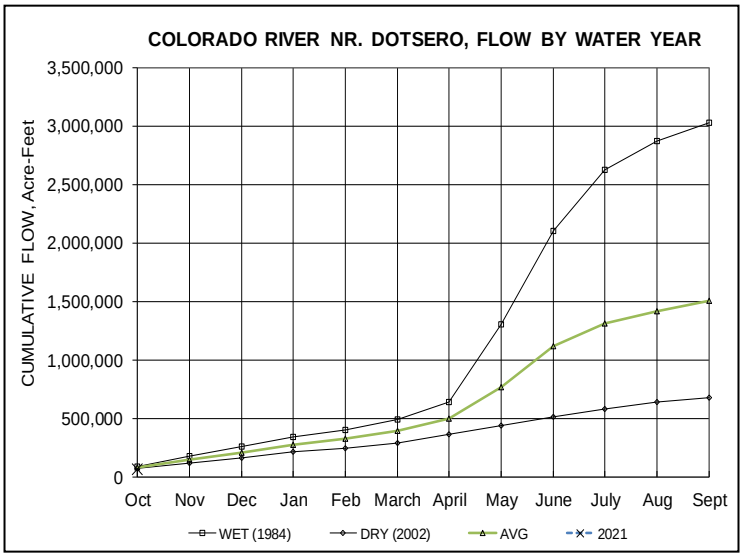
Colorado River flows and tributary flows are running below average and are forecasted to continue below average through November. Below average precipitation with average to above average temperature is forecast for western Colorado through November.

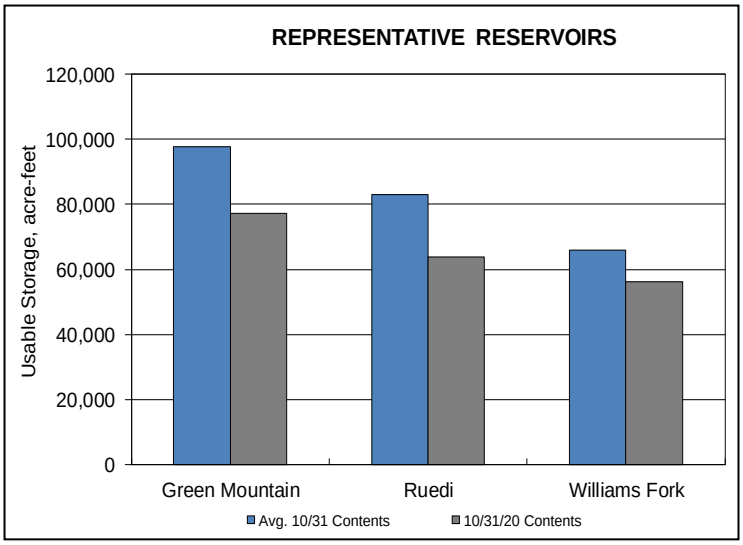
Administrative/Management Concerns

The call on the Colorado River mainstem is the Senior Shoshone (1250cfs) water right. Grand Valley Irrigation diversions (Government Highline/Orchard Mesa Irrigation, Grand Valley Irrigation canals) have discontinued irrigating for the season. Green Mountain is releasing to pass inflows, release contract water, CB-T replacement water and HUP water.

Public Use Impacts

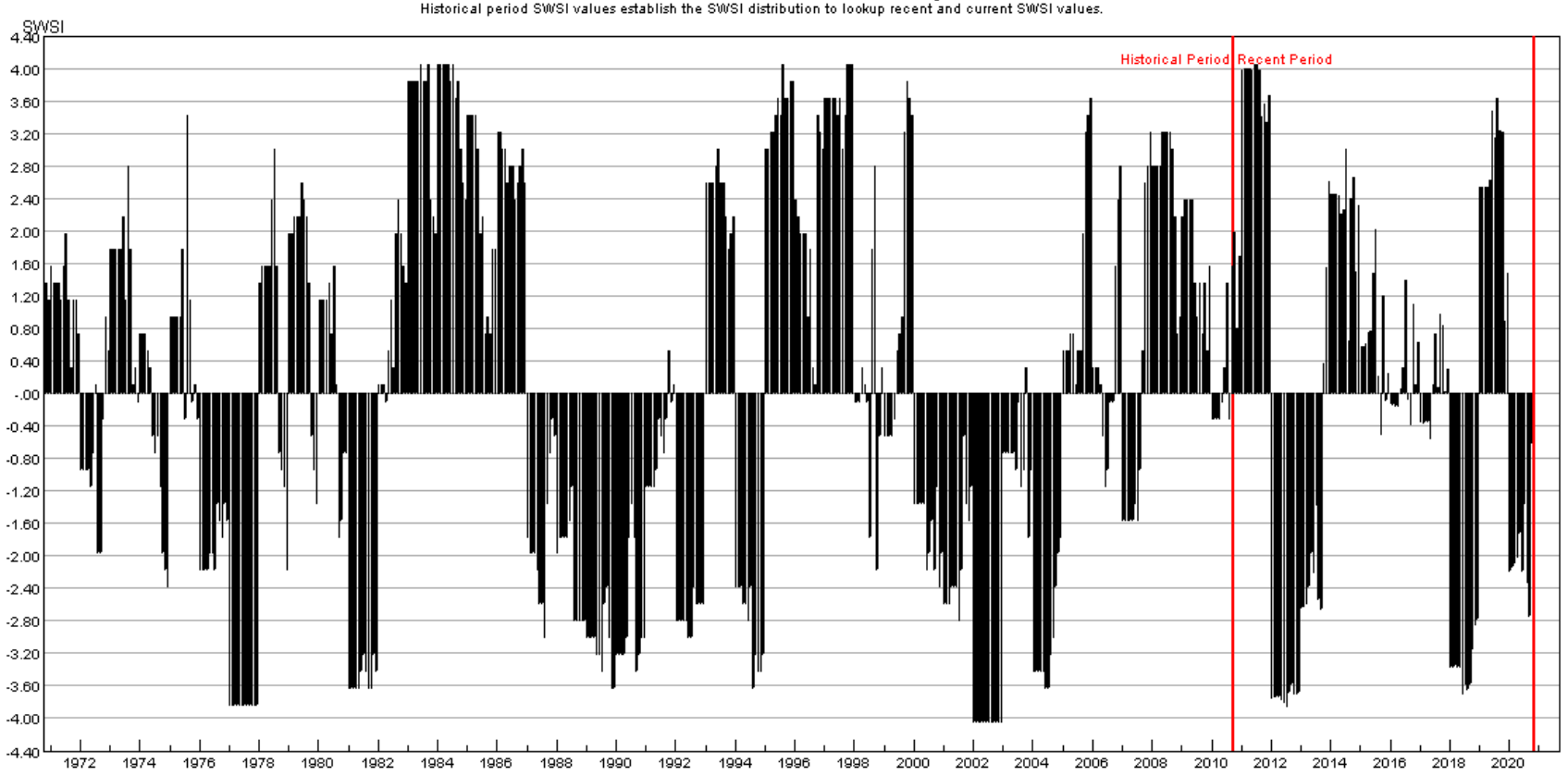
Ski areas are opening for the 2020-21 ski season, with a number of changes attempting to curb the Coronavirus and keep employees and guests safe. As the weather cools down, most, if not all of the ski areas will be making snow and will continue through November.





Colorado Basin SWSI History

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



Basinwide Conditions Assessment

The SWSI value for the month was +2.4.

Precipitation (24 sites) - Entire Yampa, White, and North Platte basins were **44%** of the monthly average, putting the basin at 44% of average for the water year to date. This is down from last year's monthly average of 116%, and for last year's water year to date, 116%. For the month, the lowest percent of average, at 4%, was the Elk River SNOTEL station. The highest, at 89%, was the Crosho SNOTEL station, with 1.6 inches. The highest recorded precipitation was 2.1 inches at Deadman Hill, elev. 10220', for 84% of average.
**Averages are from 1981-2010 records*

Temperatures – The average temperature for NOAA Colorado Climate Division 2: Colorado River Drainage was **46.9° F**. This is +3.4°F from the average of 43.5°F. This temperature ranks 117th for lowest of the previous 126 years of data. For the NOAA Colorado Climate Division 4: Platte Drainage, the average temperature was **45.3°F**, -0.9°F from the average of 46.2F, ranking 42nd.
**Averages are from 1901-2000 records*

Reservoir Outlook

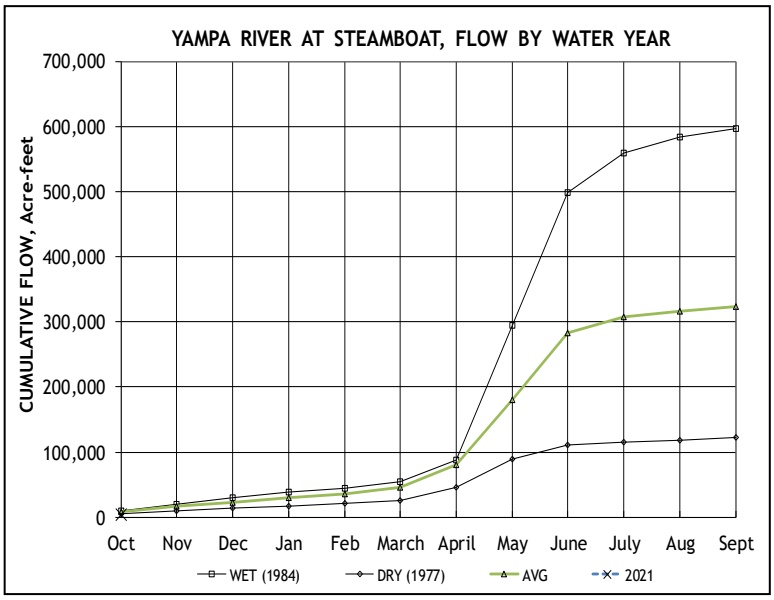
Elkhead Reservoir – October 31st, 2020 capacity level was 15,931 AF of 25,550 AF – 62.4% capacity.

Fish Creek Reservoir – October 31st, 2020 elevation was 9865.9' at 1,863 AF of 4,160 AF – 44.7% capacity.

Stagecoach Reservoir – October 31st, 2020 elevation was 7198.8' at 32,400 AF of 36,500 AF – 89% of capacity, 106% of average, 91% of last year.

Yamcolo Reservoir – October 31st, 2020 capacity level was at 3300 AF of 8,700 AF – 38% of capacity, 79% of average, 38% of last year.

**Averages are from 1981-2010 records*



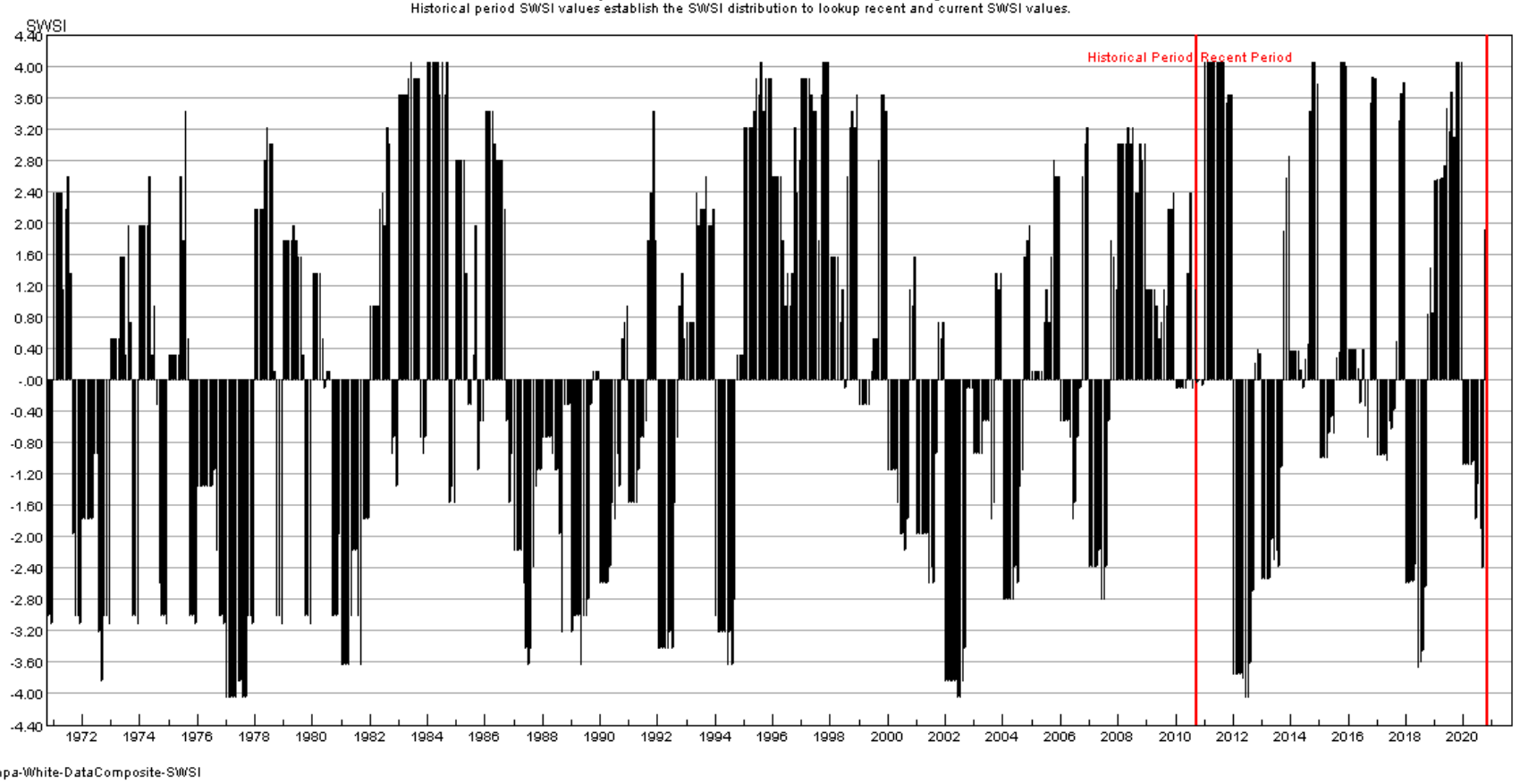
Administrative Concerns

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

- *Yampa River Basin:* Bear River, Little Bear Creek and Talamantes Creek.
- *White River Basin:* Piceance Creek.

Yampa-White Basin SWSI History

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



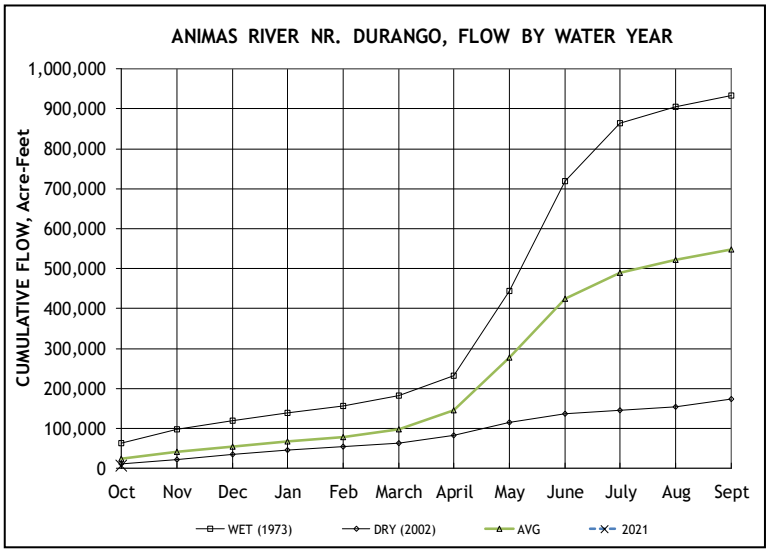
Basinwide Conditions Assessment

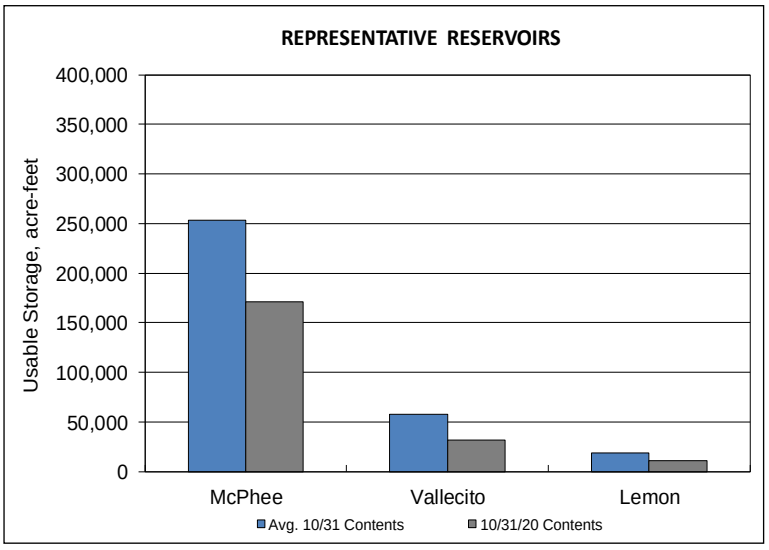
The SWSI value for the month was -0.8.

Flow at the Animas River at Durango averaged 120 cfs (29% of average). The flow at the Dolores River at Dolores averaged 33 cfs (25% of average). The La Plata River at Hesperus averaged 5.4 cfs (35% of average). Precipitation in Durango was 0.06 inches for the month, 3% of the 30-year average of 1.89 inches. Precipitation to date in Durango, for the water year is 0.03 inches, 3% of the 30-year average of 1.89 inches. The average high and low temperatures for the month of October in Durango were 73º and 33º. In comparison, the 30-year average high and low for the month is 66º and 34º. At the end of the month Vallecito Reservoir contained 31,344 acre-feet compared to its average content of 53,186 acre-feet (59% of average). McPhee Reservoir was up to 170,608 acre-feet compared to its average content of 260,817 (65% of average), while Lemon Reservoir was up to 11,230 acre-feet as compared to its average content of 19,038 acre-feet (59% of average).

Outlook

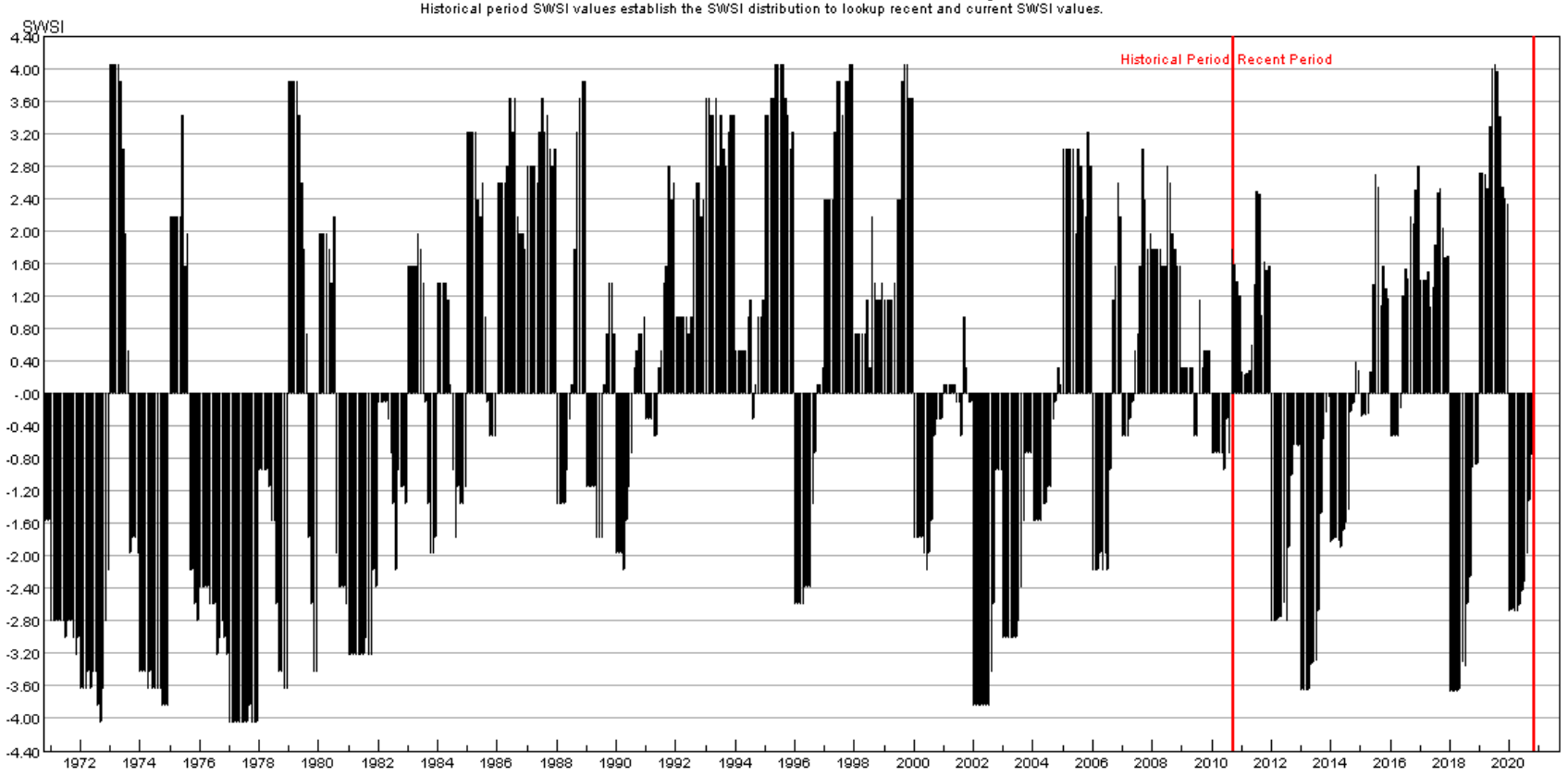
Precipitation (0.06 inches) was well below average for October in Durango. There were 121 years out of 126 years of record where there was more precipitation than this year. The area has only had 2 periods of rain last summer. Those periods occurred in the last week of July and the second week of September. The area has not had rain since the September storm. This October has shaped up to be one of the hottest and driest on record. This October was the 4th warmest on record out of 126 years of record. With the lack of rain, the flows in the rivers are well below average for the month. This is the worst period of record on the Animas River at Durango stream gauge out of 110 years of record. There were 110 out of 112 years of record where the total flow past the Dolores stream gauge was more than this year. The two years worse than this year was 1902 & 1957. There were 97 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.





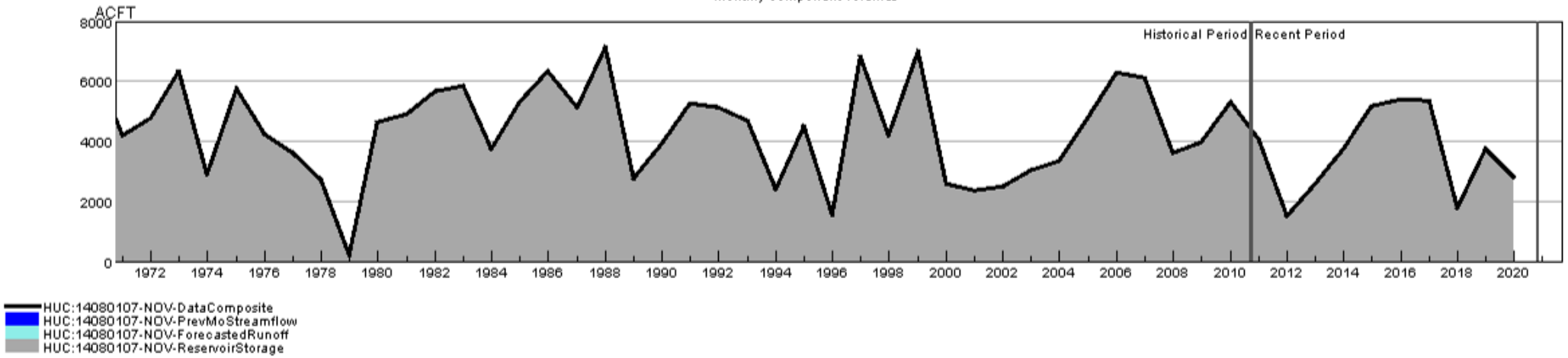
San Juan-Dolores Basin SWSI History

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



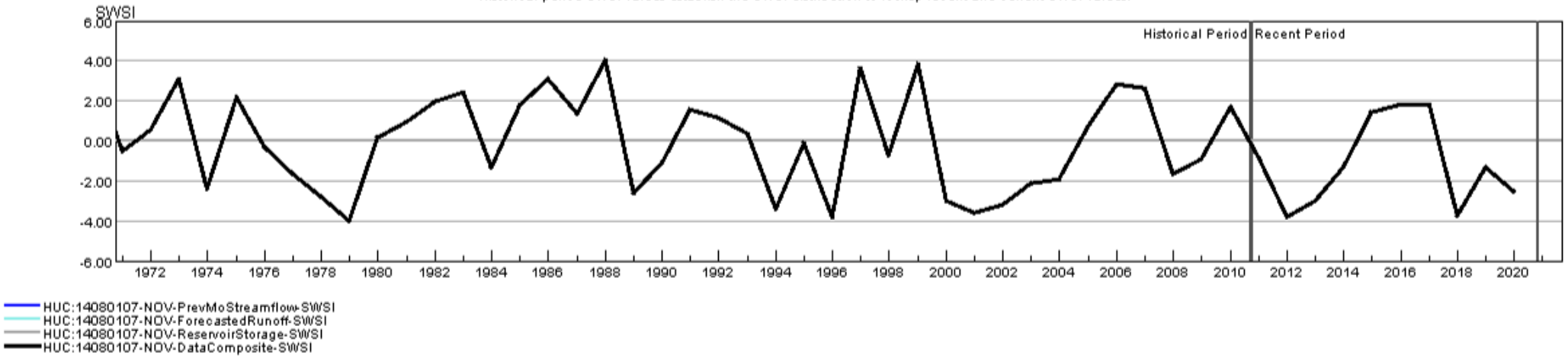
HUC 14080107 (Mancos) Surface Water Supply - NOV

Monthly component volumes



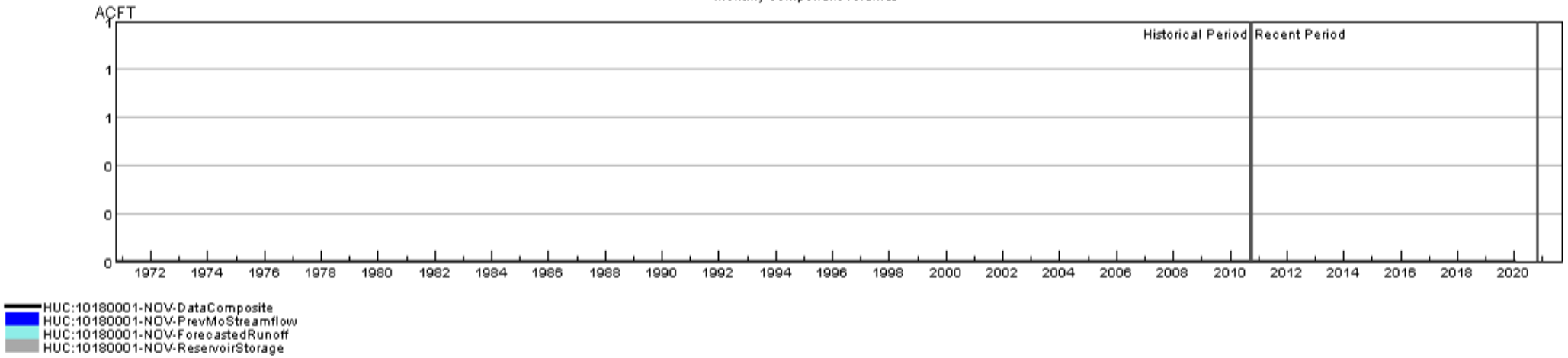
HUC 14080107 (Mancos) SWSI Values - NOV

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



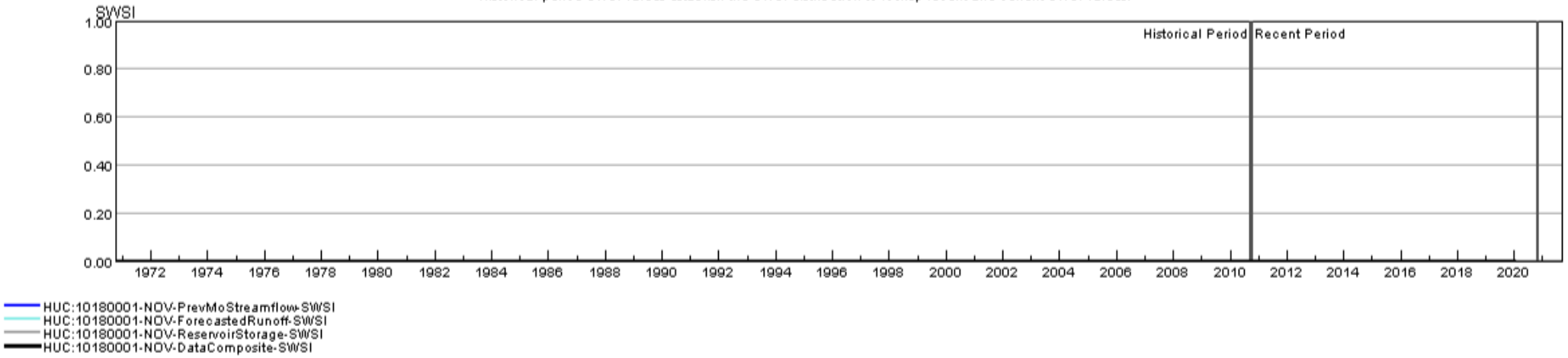
HUC 10180001 (North Platte Headwaters) Surface Water Supply - NOV

Monthly component volumes



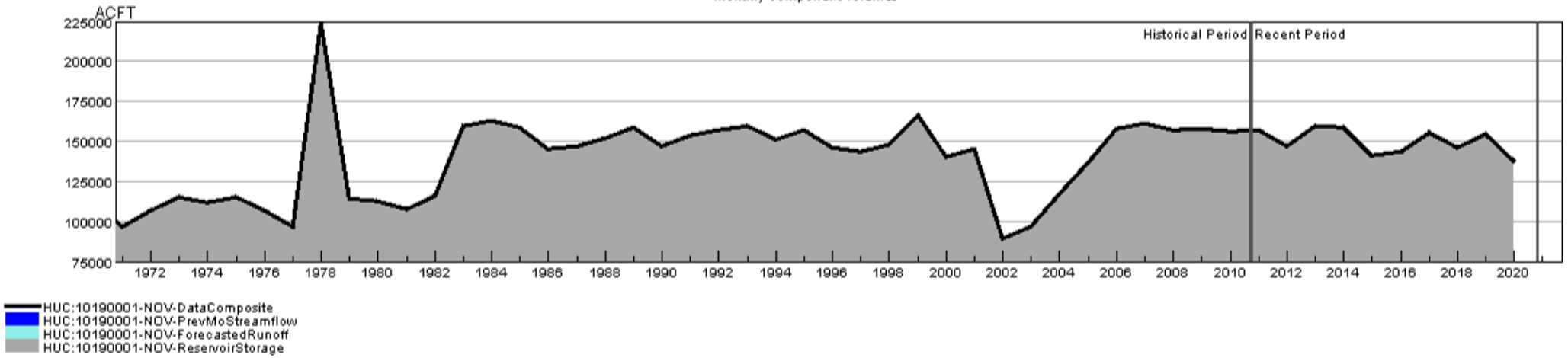
HUC 10180001 (North Platte Headwaters) SWSI Values - NOV

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



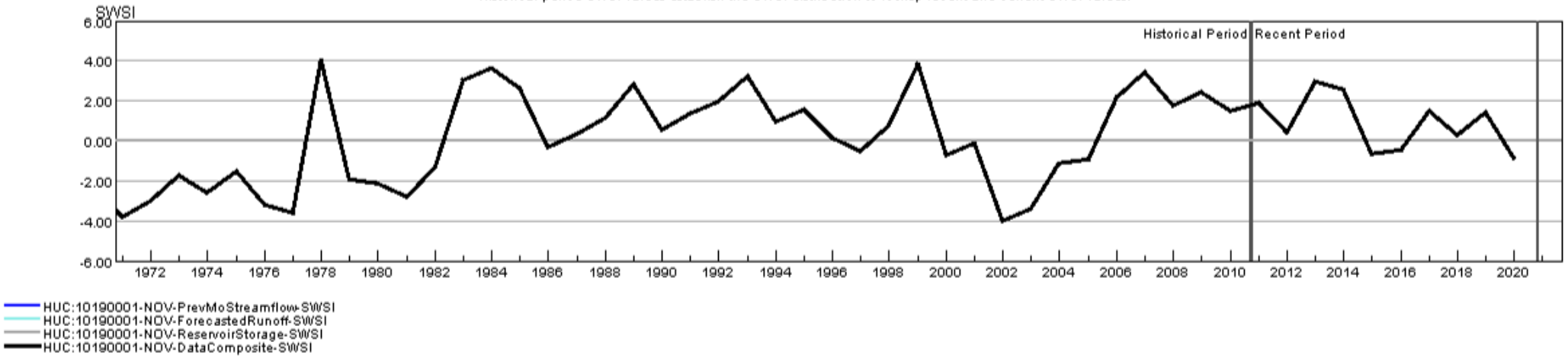
HUC 10190001 (South Platte Headwater) Surface Water Supply - NOV

Monthly component volumes



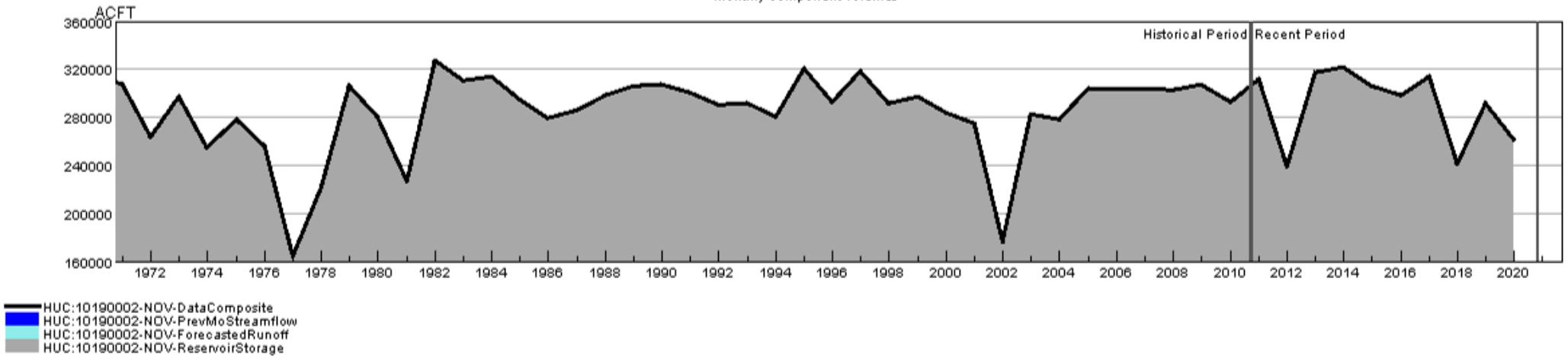
HUC 10190001 (South Platte Headwater) SWSI Values - NOV

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



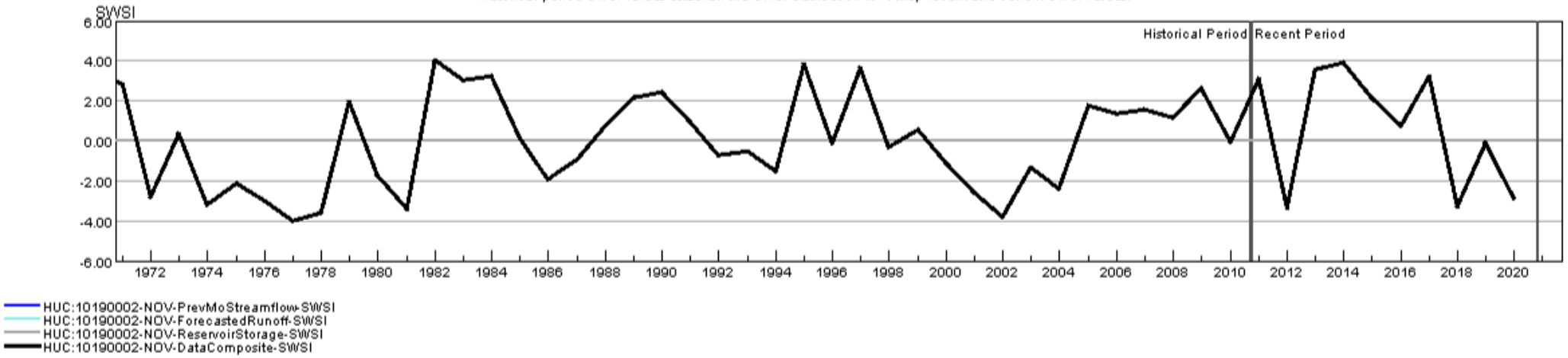
HUC 10190002 (Upper South Platte) Surface Water Supply - NOV

Monthly component volumes



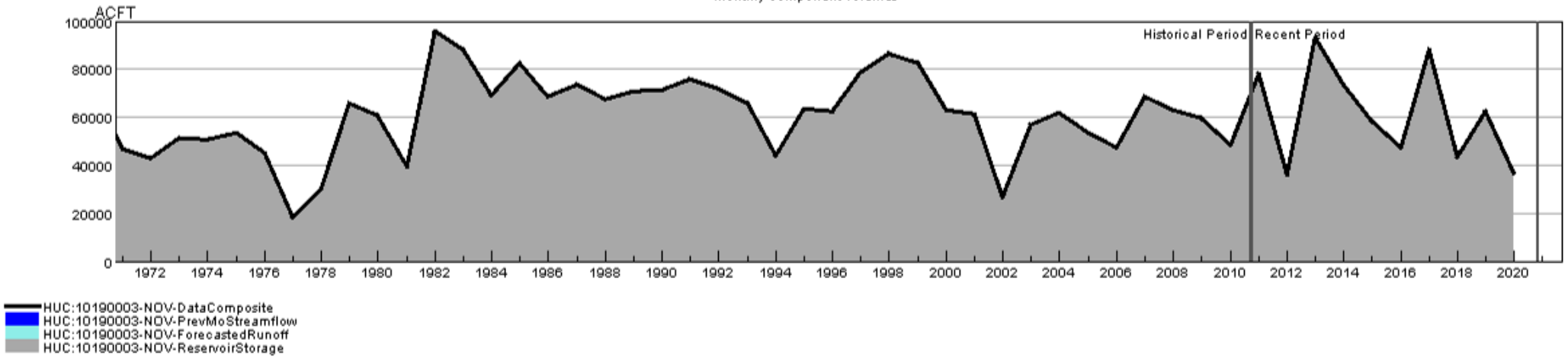
HUC 10190002 (Upper South Platte) SWSI Values - NOV

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



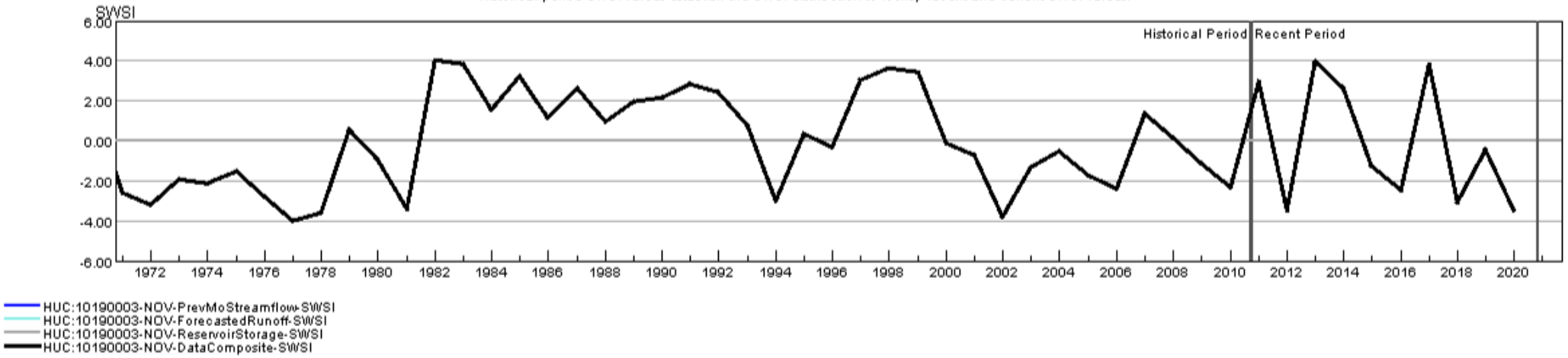
HUC 10190003 (Middle South Platte-Cherry Creek) Surface Water Supply - NOV

Monthly component volumes



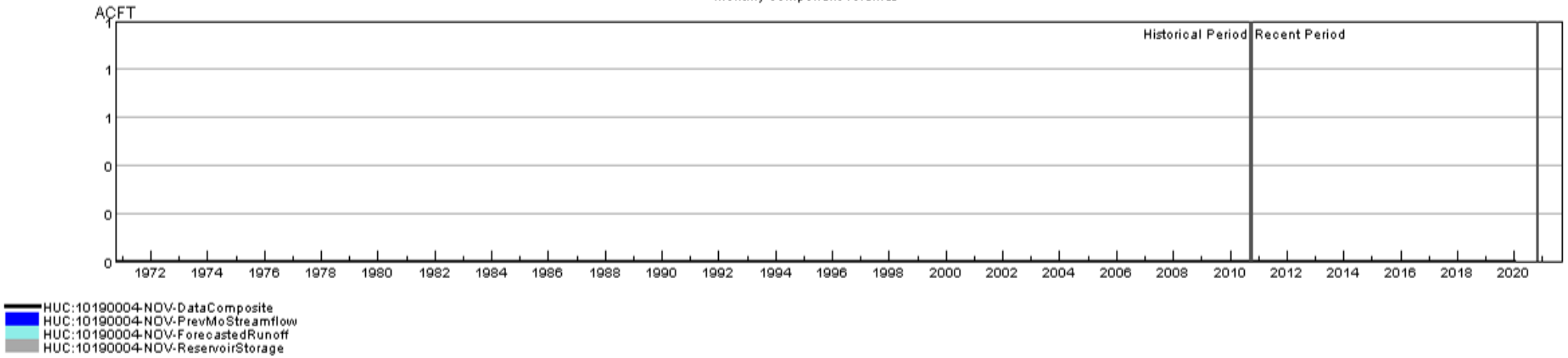
HUC 10190003 (Middle South Platte-Cherry Creek) SWSI Values - NOV

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



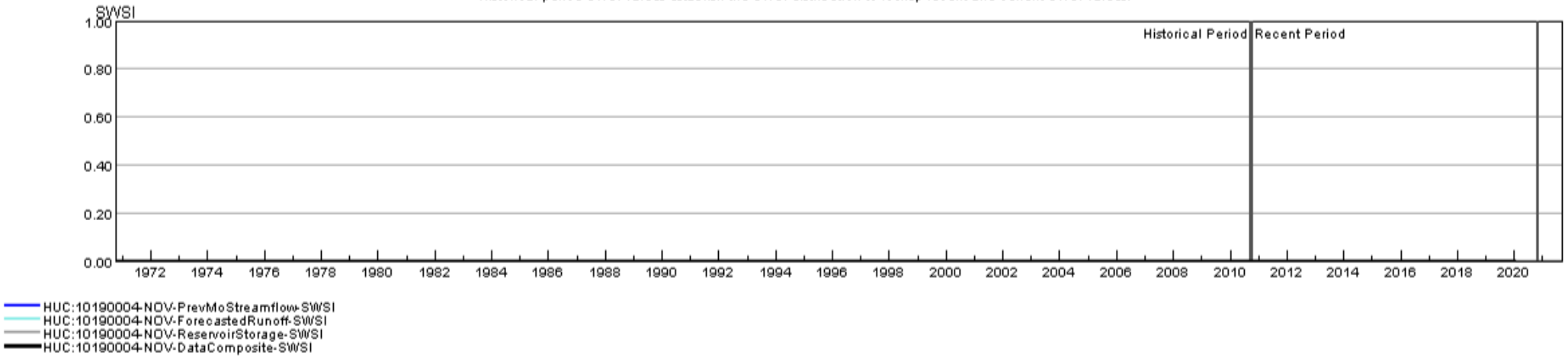
HUC 10190004 (Clear) Surface Water Supply - NOV

Monthly component volumes



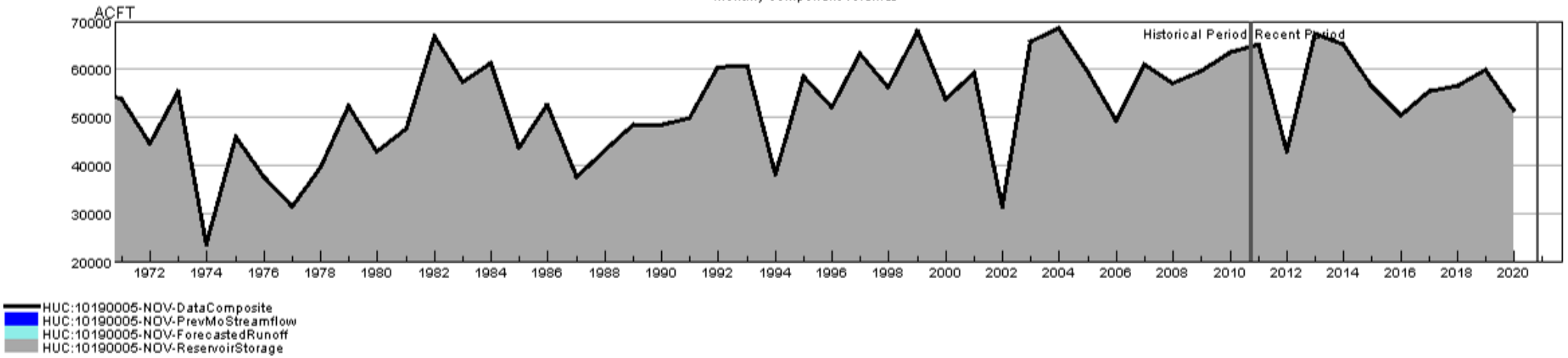
HUC 10190004 (Clear) SWSI Values - NOV

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



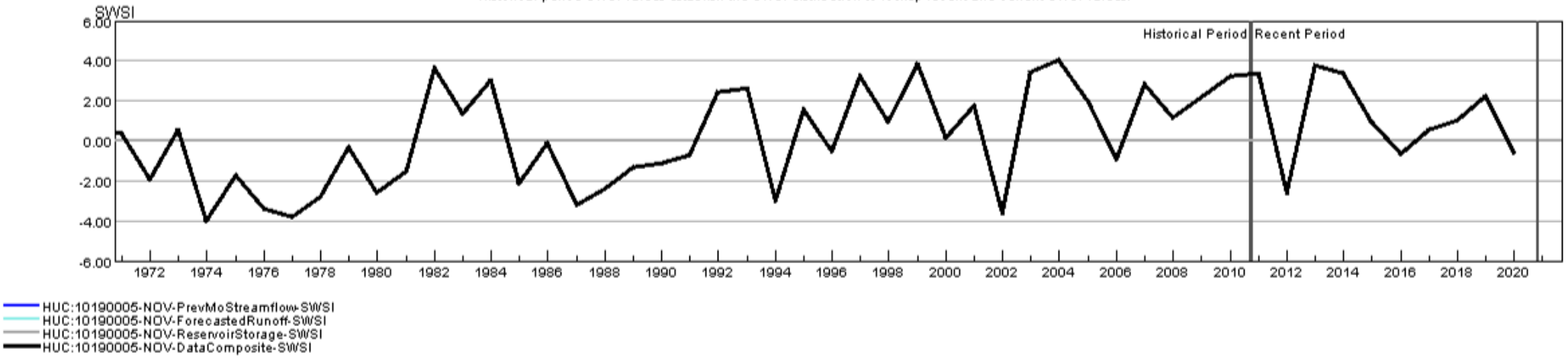
HUC 10190005 (St. Vrain) Surface Water Supply - NOV

Monthly component volumes



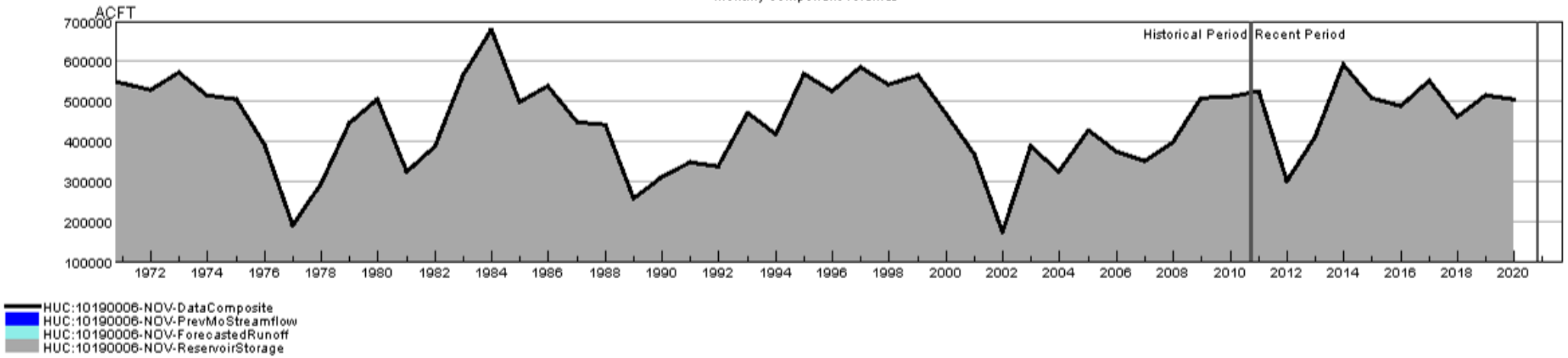
HUC 10190005 (St. Vrain) SWSI Values - NOV

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



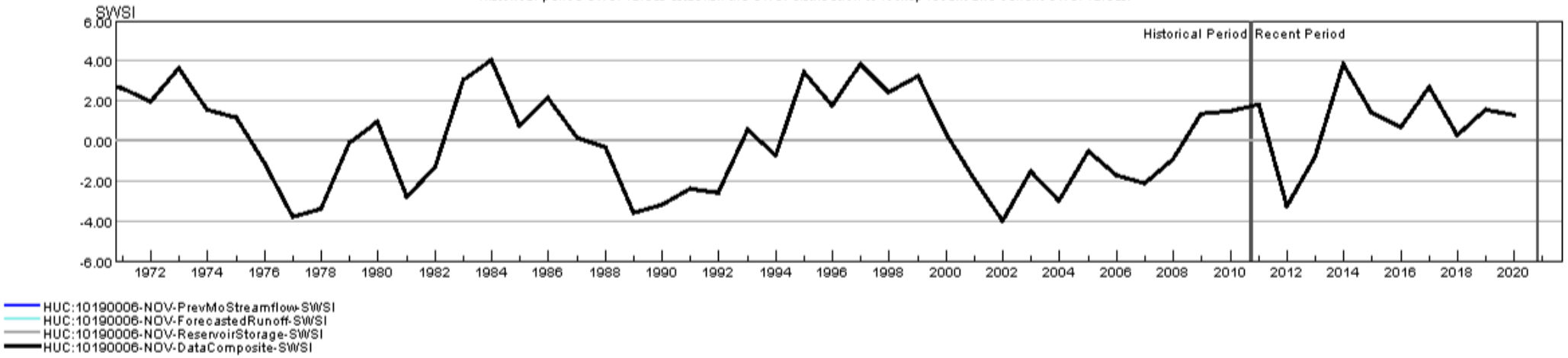
HUC 10190006 (Big Thompson) Surface Water Supply - NOV

Monthly component volumes



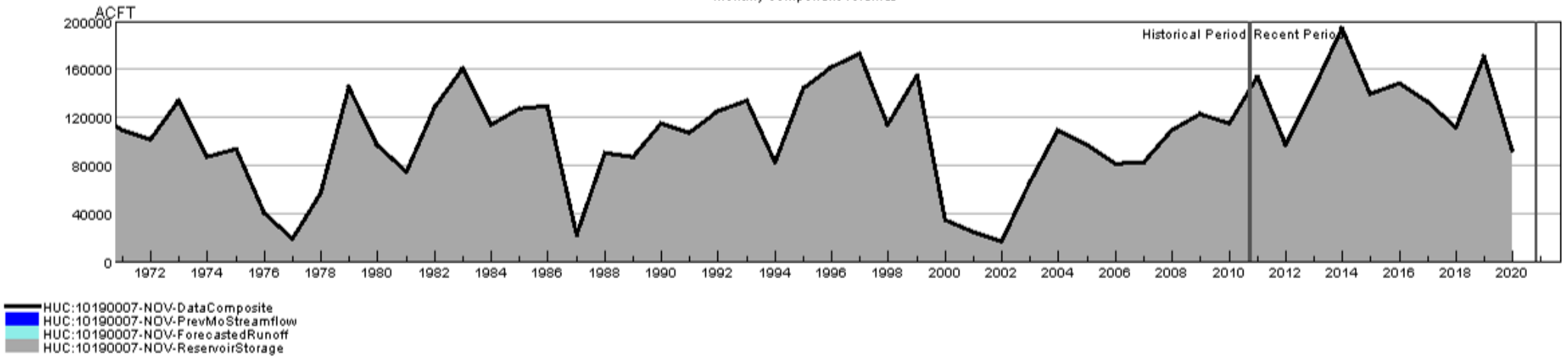
HUC 10190006 (Big Thompson) SWSI Values - NOV

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



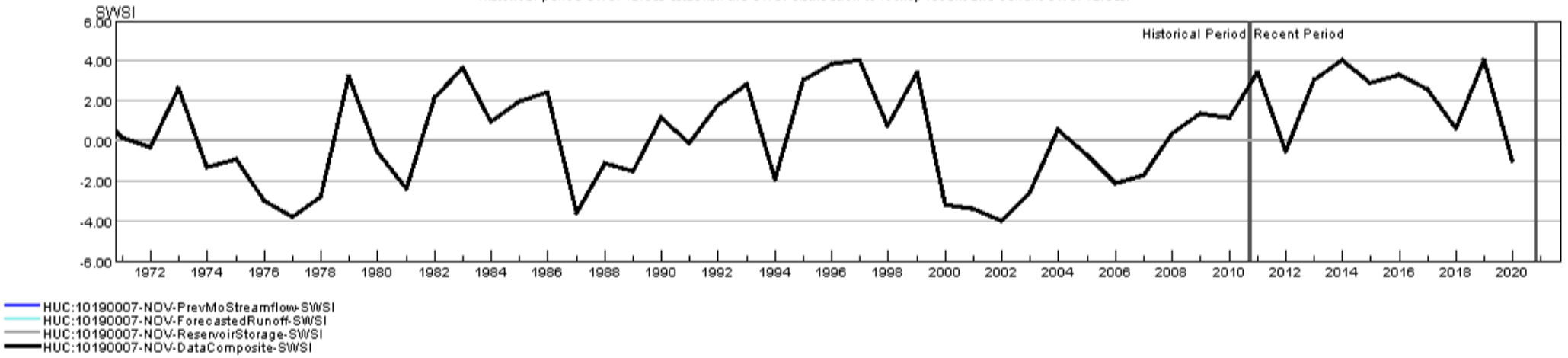
HUC 10190007 (Cache La Poudre) Surface Water Supply - NOV

Monthly component volumes



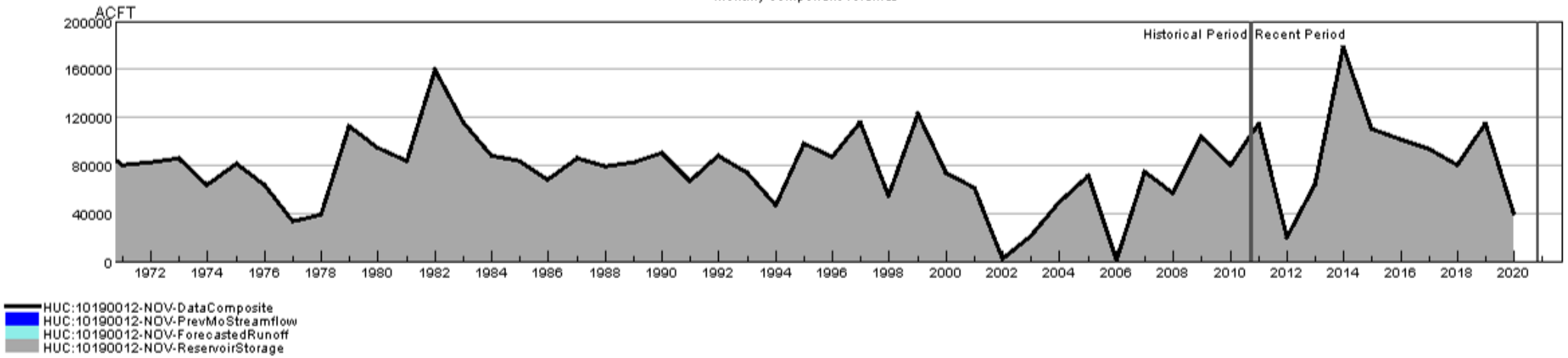
HUC 10190007 (Cache La Poudre) SWSI Values - NOV

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



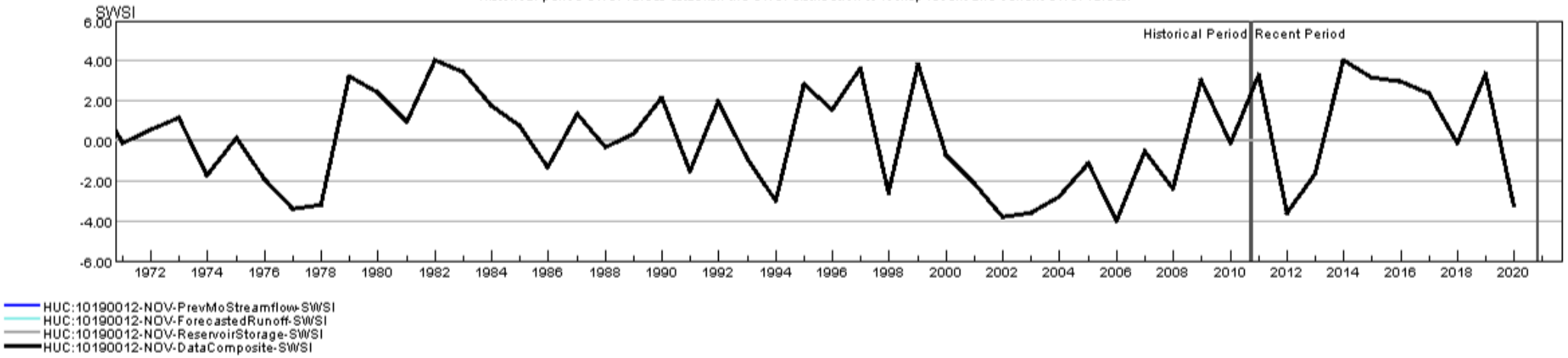
HUC 10190012 (Middle South Platte-Sterling) Surface Water Supply - NOV

Monthly component volumes



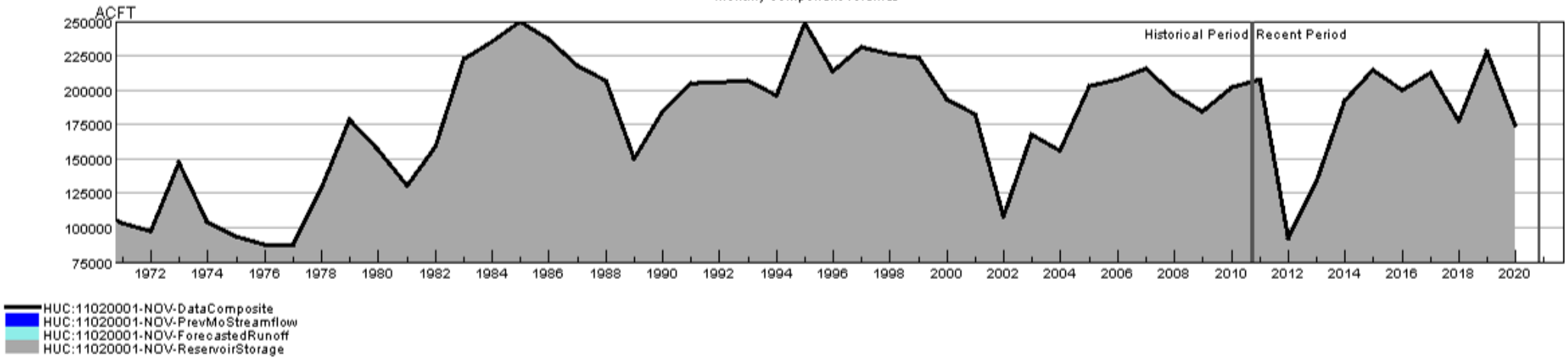
HUC 10190012 (Middle South Platte-Sterling) SWSI Values - NOV

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



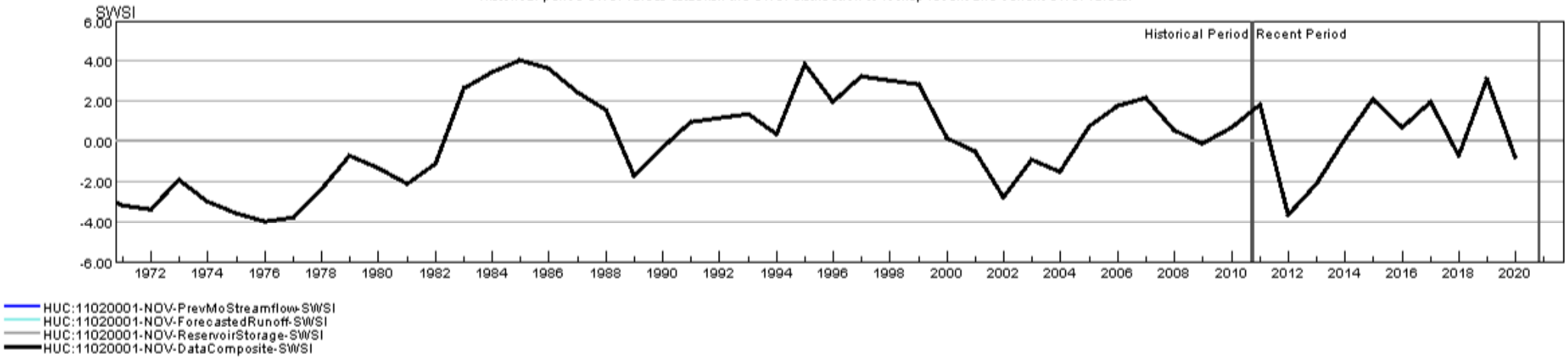
HUC 11020001 (Arkansas Headwaters) Surface Water Supply - NOV

Monthly component volumes



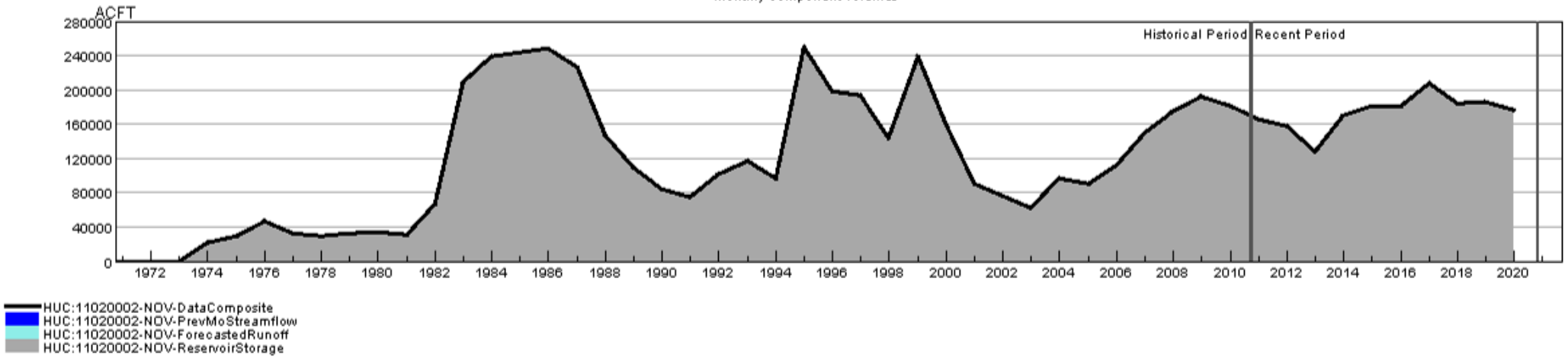
HUC 11020001 (Arkansas Headwaters) SWSI Values - NOV

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



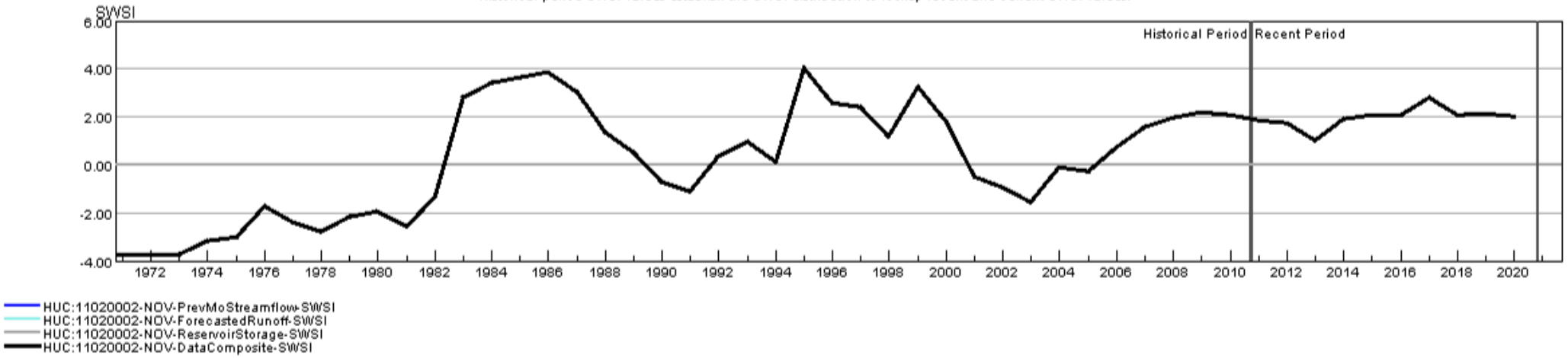
HUC 11020002 (Upper Arkansas) Surface Water Supply - NOV

Monthly component volumes



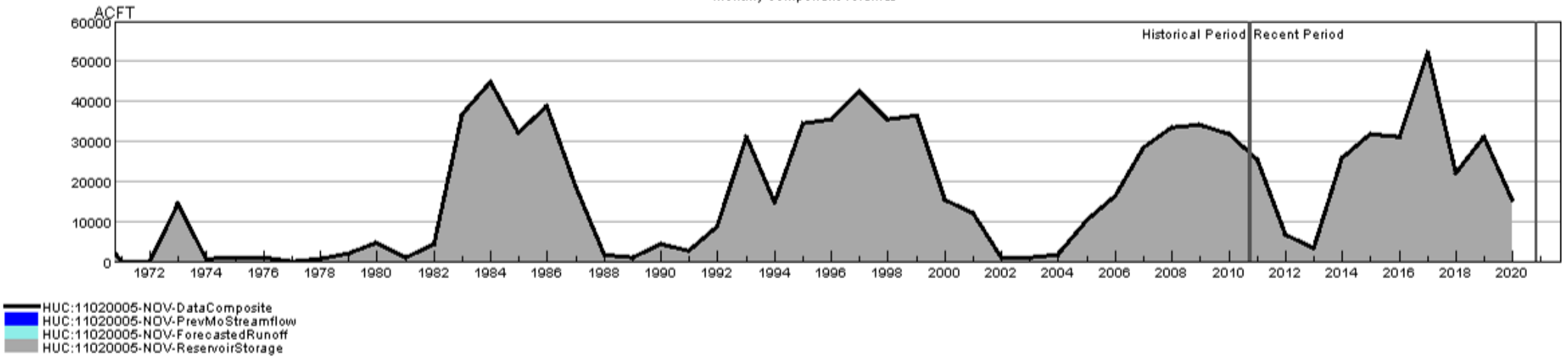
HUC 11020002 (Upper Arkansas) SWSI Values - NOV

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



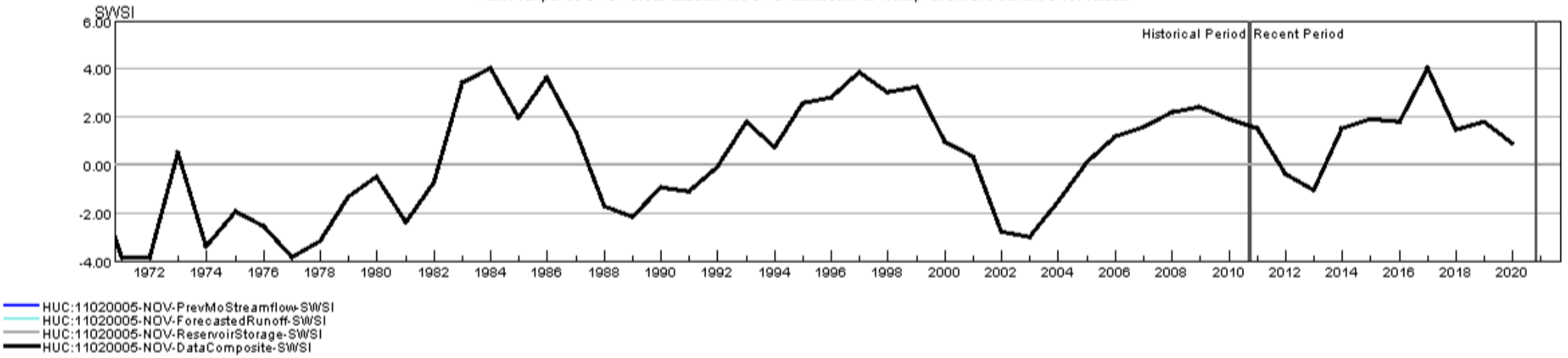
HUC 11020005 (Upper Arkansas-Lake Meredith) Surface Water Supply - NOV

Monthly component volumes



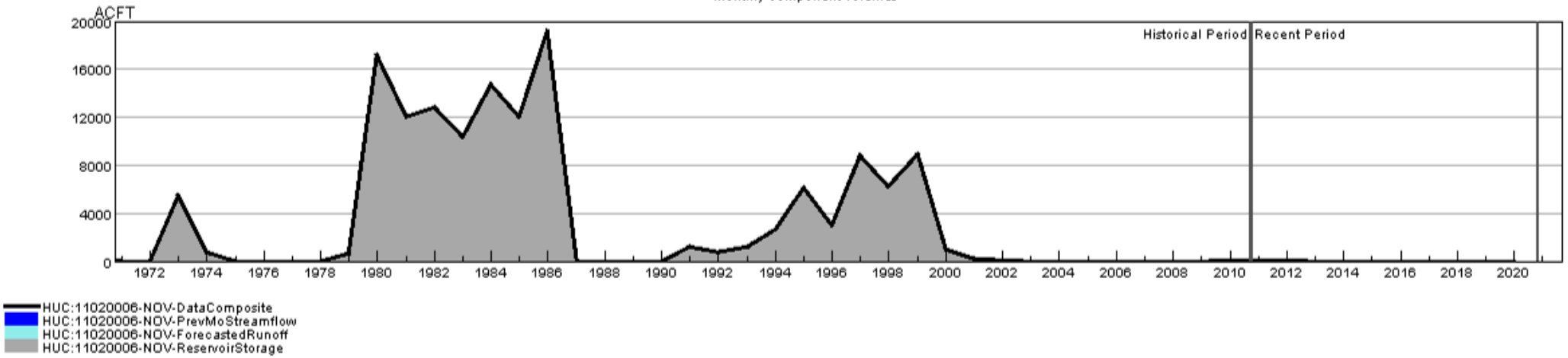
HUC 11020005 (Upper Arkansas-Lake Meredith) SWSI Values - NOV

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



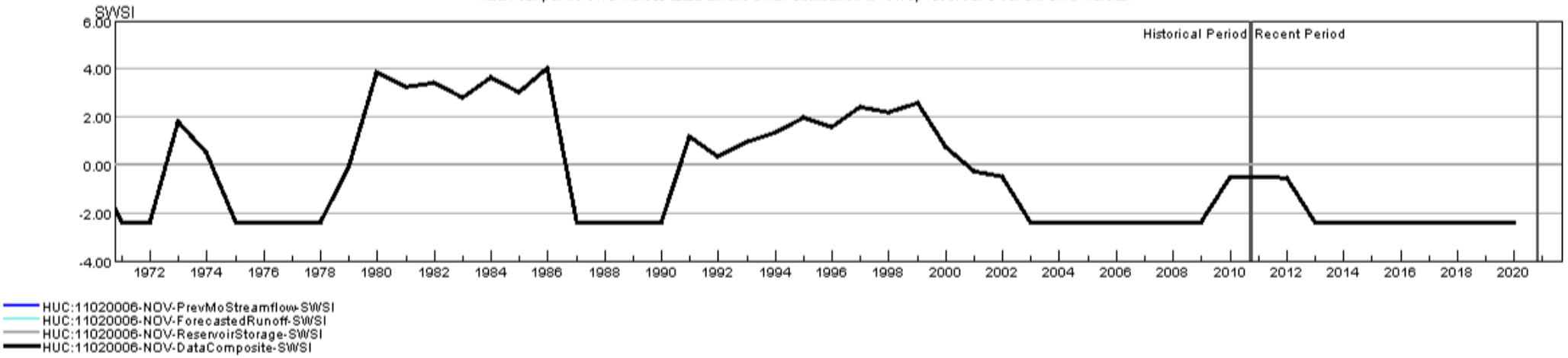
HUC 11020006 (Huerfano) Surface Water Supply - NOV

Monthly component volumes



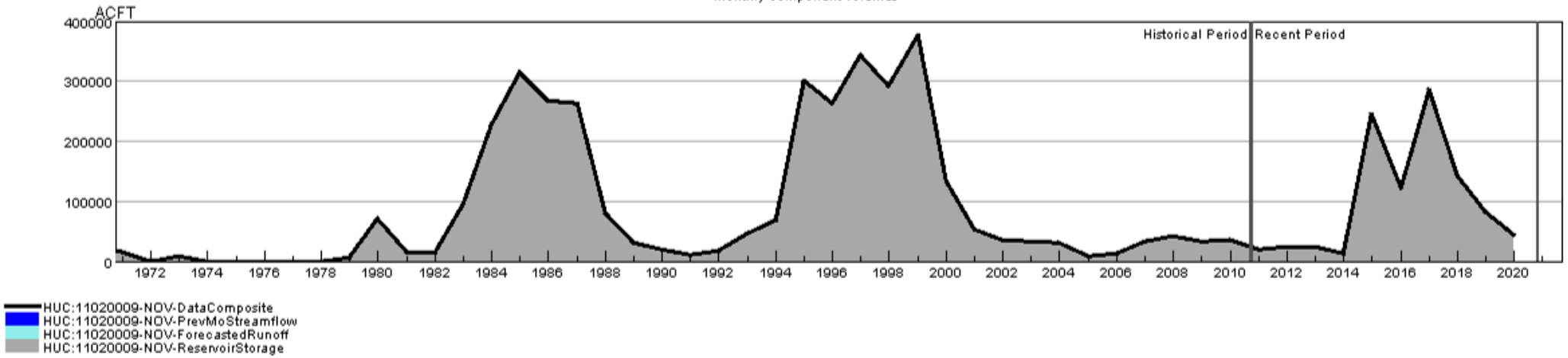
HUC 11020006 (Huerfano) SWSI Values - NOV

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



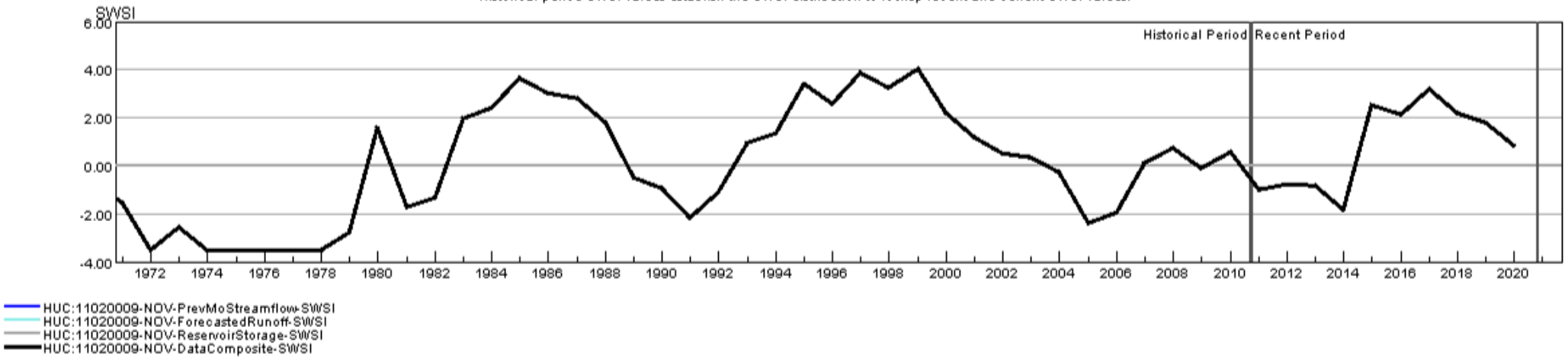
HUC 11020009 (Upper Arkansas-John Martin Reservoir) Surface Water Supply - NOV

Monthly component volumes



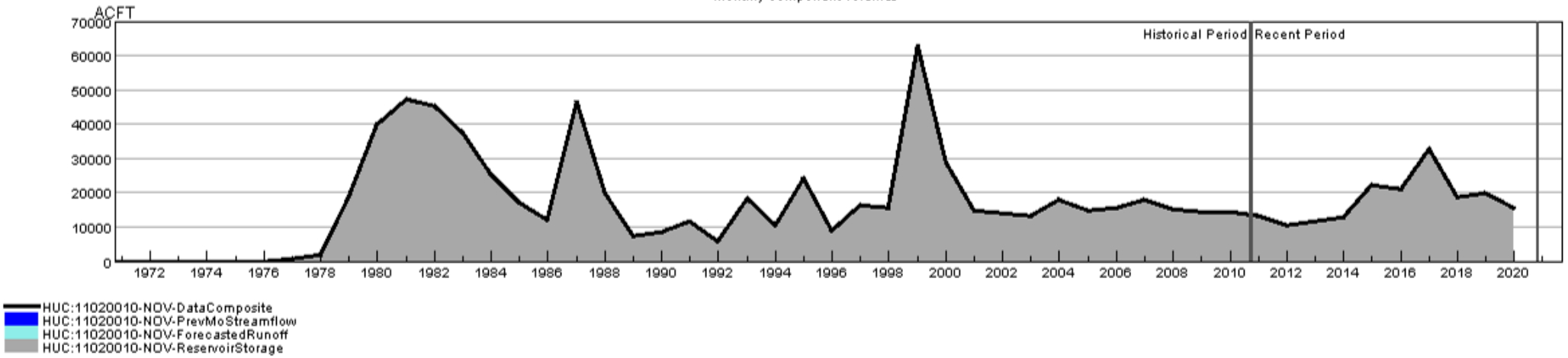
HUC 11020009 (Upper Arkansas-John Martin Reservoir) SWSI Values - NOV

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



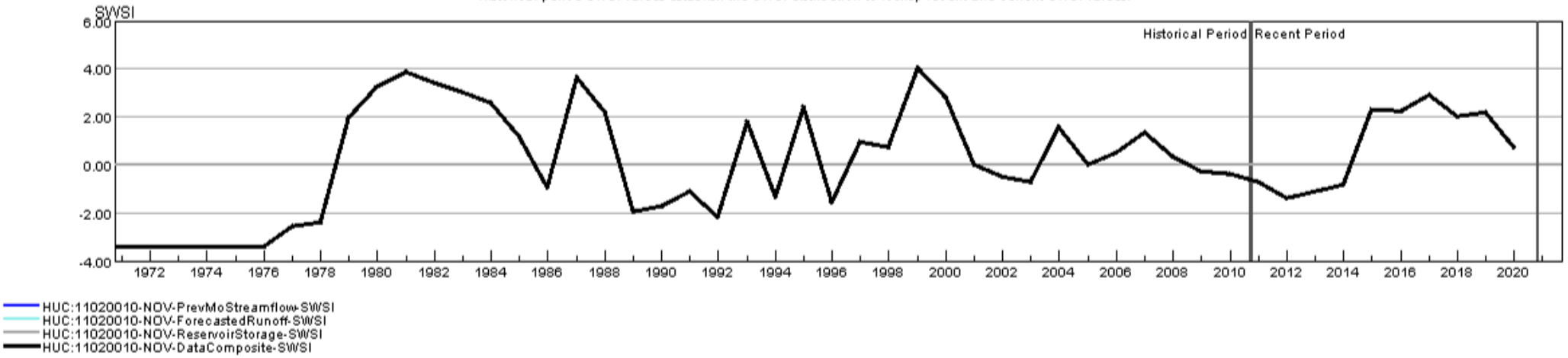
HUC 11020010 (Purgatoire) Surface Water Supply - NOV

Monthly component volumes



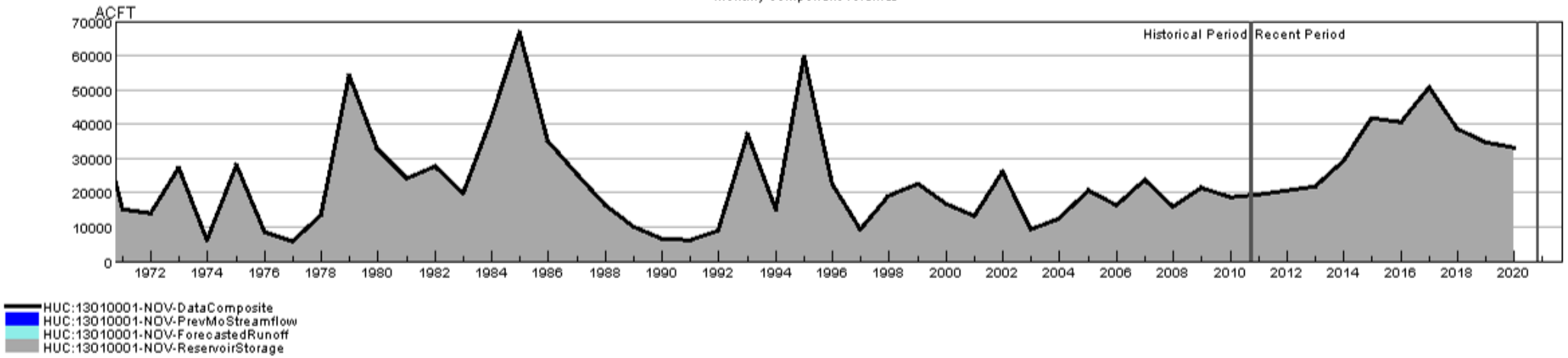
HUC 11020010 (Purgatoire) SWSI Values - NOV

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



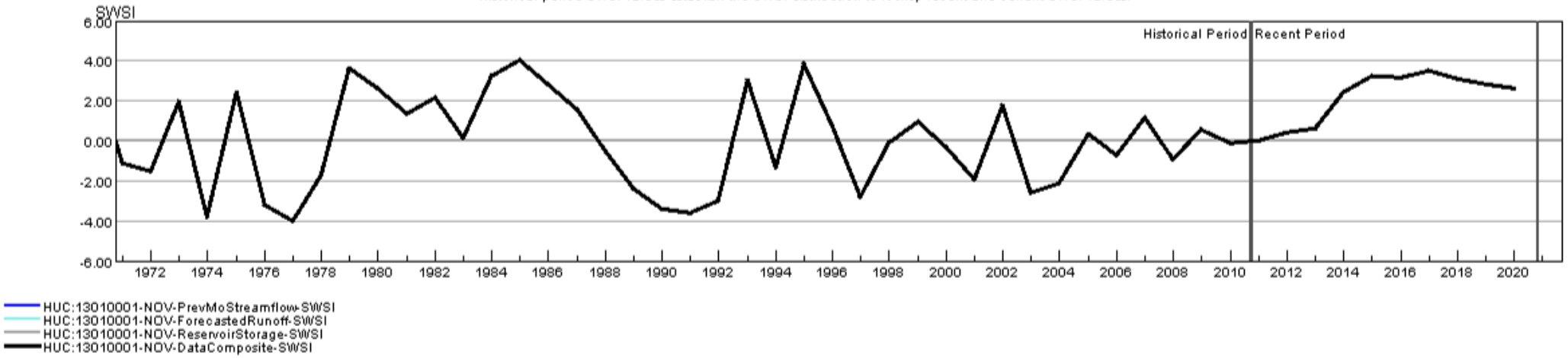
HUC 13010001 (Rio Grande Headwaters) Surface Water Supply - NOV

Monthly component volumes



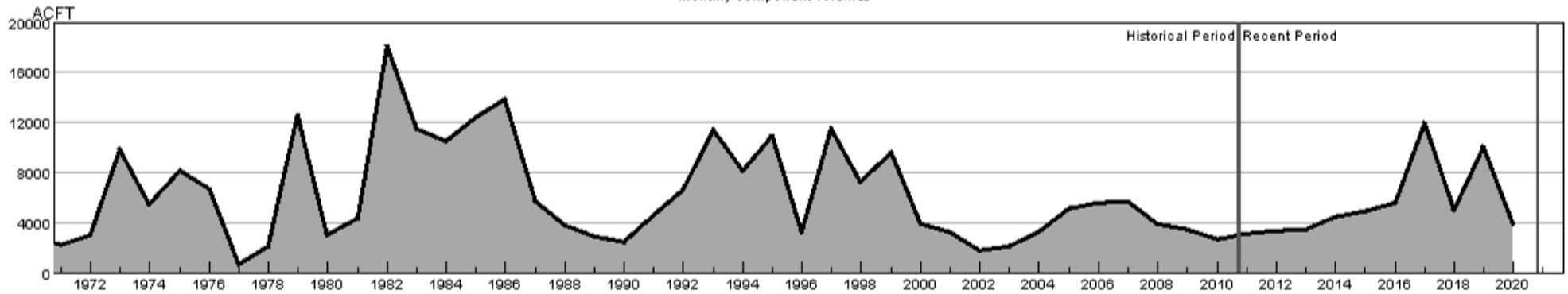
HUC 13010001 (Rio Grande Headwaters) SWSI Values - NOV

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



HUC 13010002 (Alamosa-Trinchera) Surface Water Supply - NOV

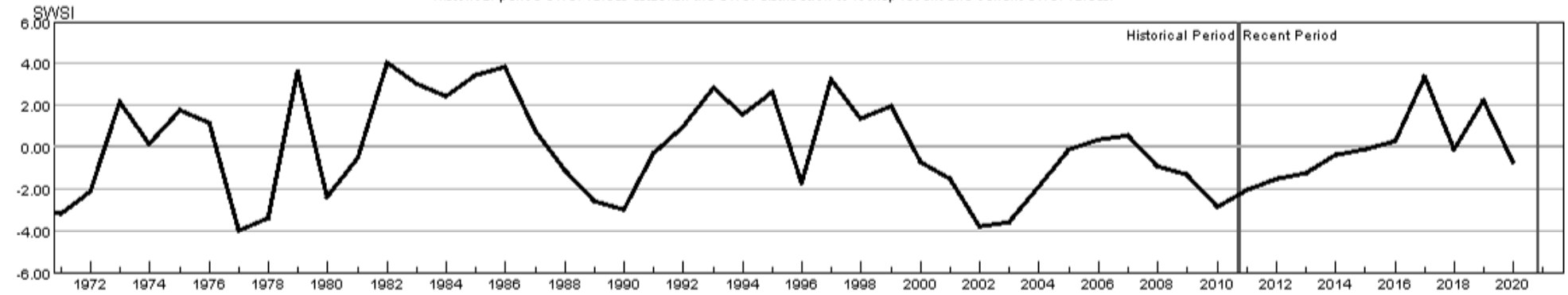
Monthly component volumes



HUC:13010002-NOV-DataComposite
HUC:13010002-NOV-PrevMoStreamflow
HUC:13010002-NOV-ForecastedRunoff
HUC:13010002-NOV-ReservoirStorage

HUC 13010002 (Alamosa-Trinchera) SWSI Values - NOV

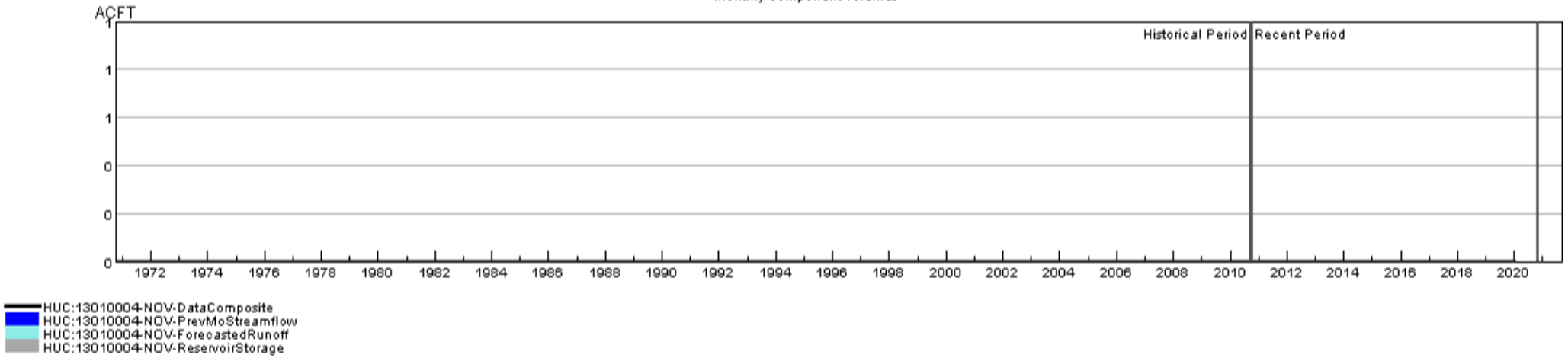
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



HUC:13010002-NOV-PrevMoStreamflow-SWSI
HUC:13010002-NOV-ForecastedRunoff-SWSI
HUC:13010002-NOV-ReservoirStorage-SWSI
HUC:13010002-NOV-DataComposite-SWSI

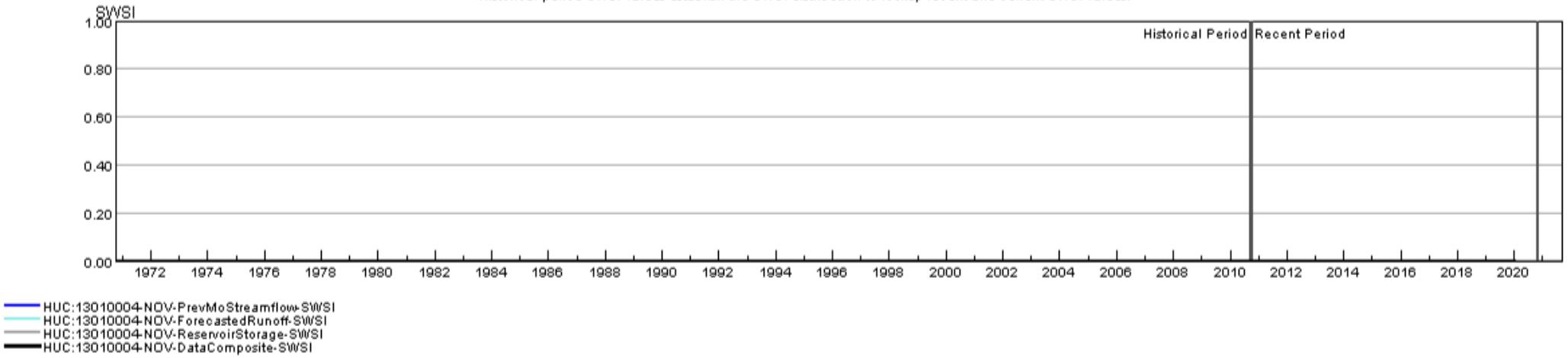
HUC 13010004 (Saguache) Surface Water Supply - NOV

Monthly component volumes



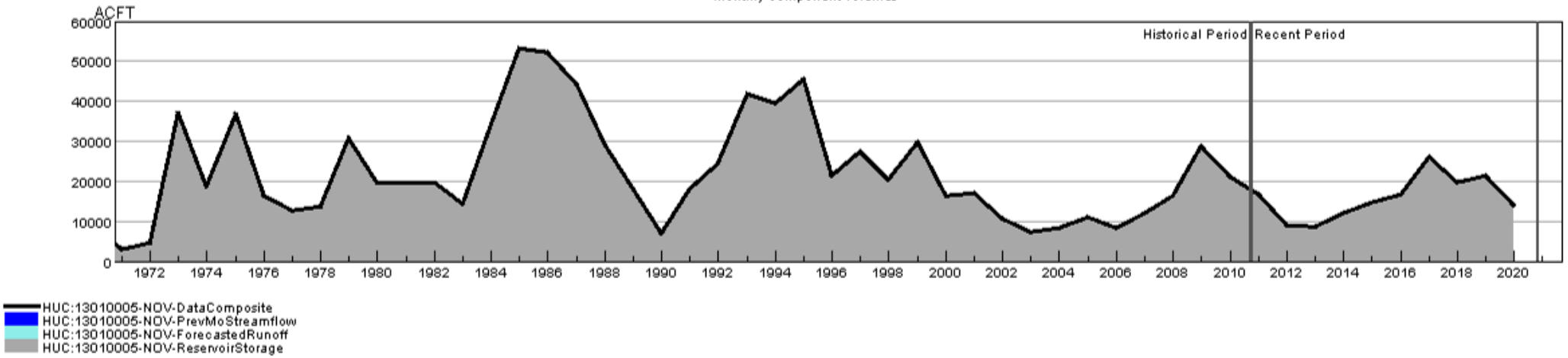
HUC 13010004 (Saguache) SWSI Values - NOV

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



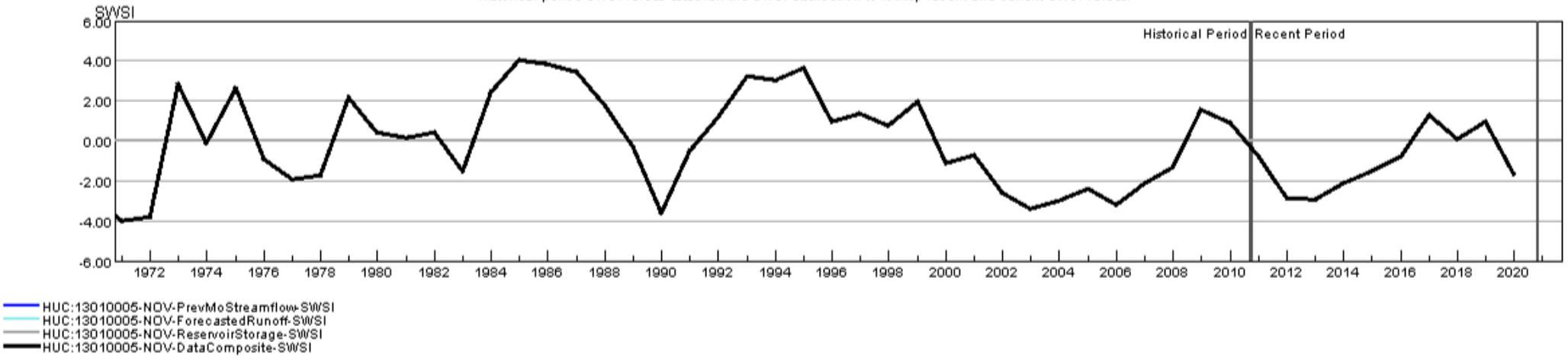
HUC 13010005 (Conejos) Surface Water Supply - NOV

Monthly component volumes



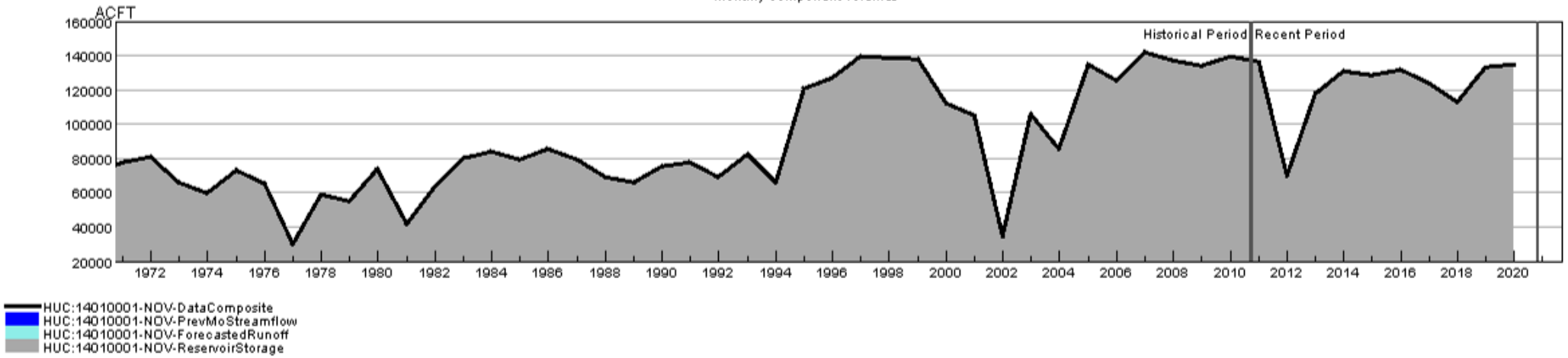
HUC 13010005 (Conejos) SWSI Values - NOV

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



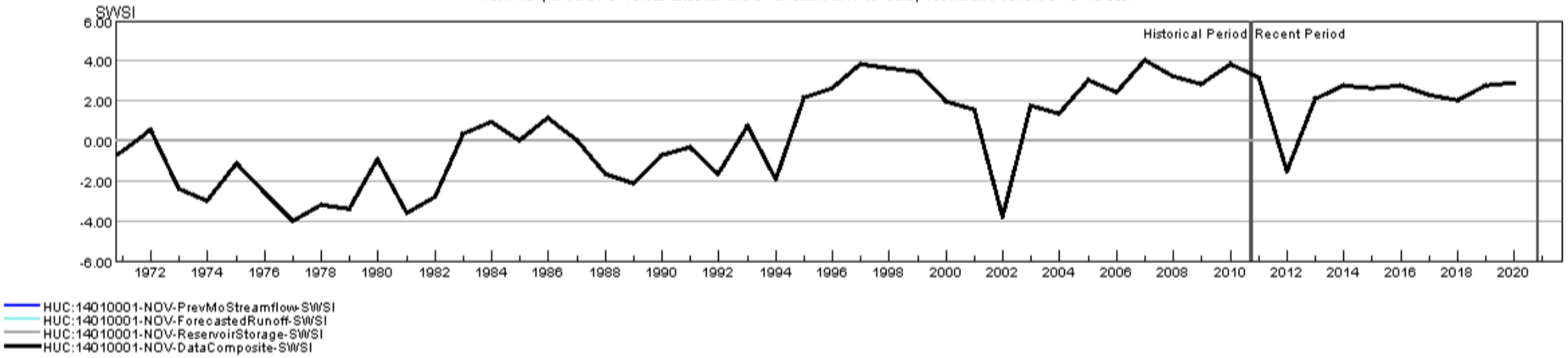
HUC 14010001 (Colorado Headwaters) Surface Water Supply - NOV

Monthly component volumes



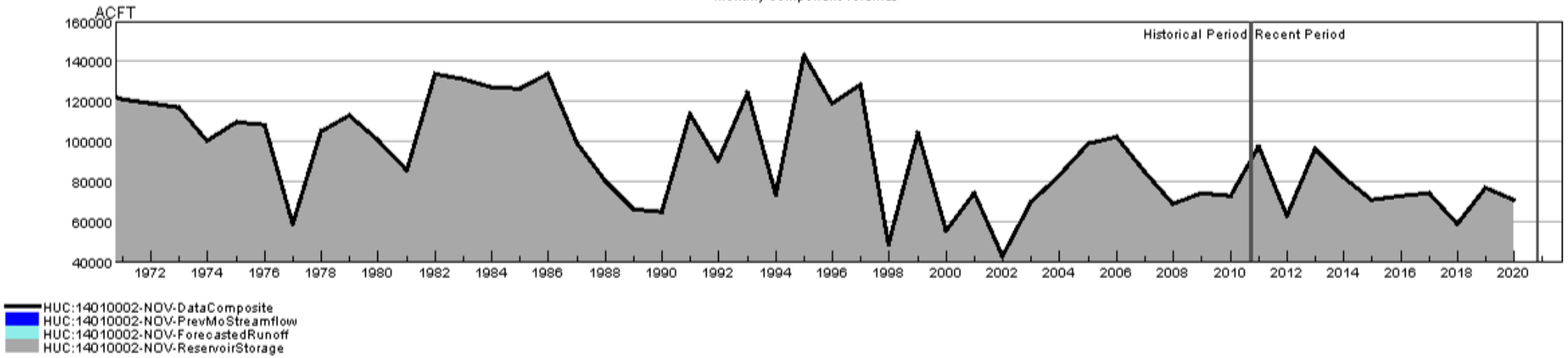
HUC 14010001 (Colorado Headwaters) SWSI Values - NOV

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



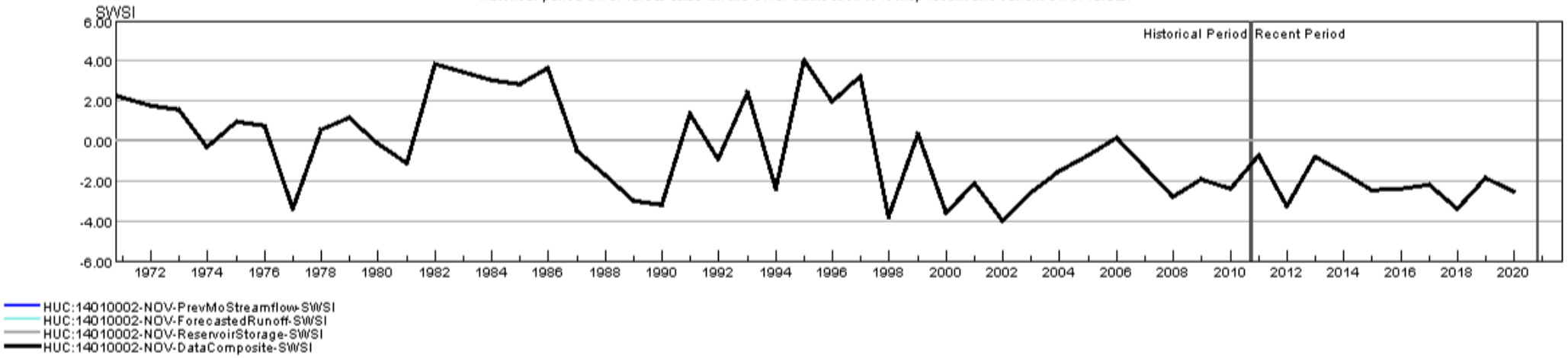
HUC 14010002 (Blue) Surface Water Supply - NOV

Monthly component volumes



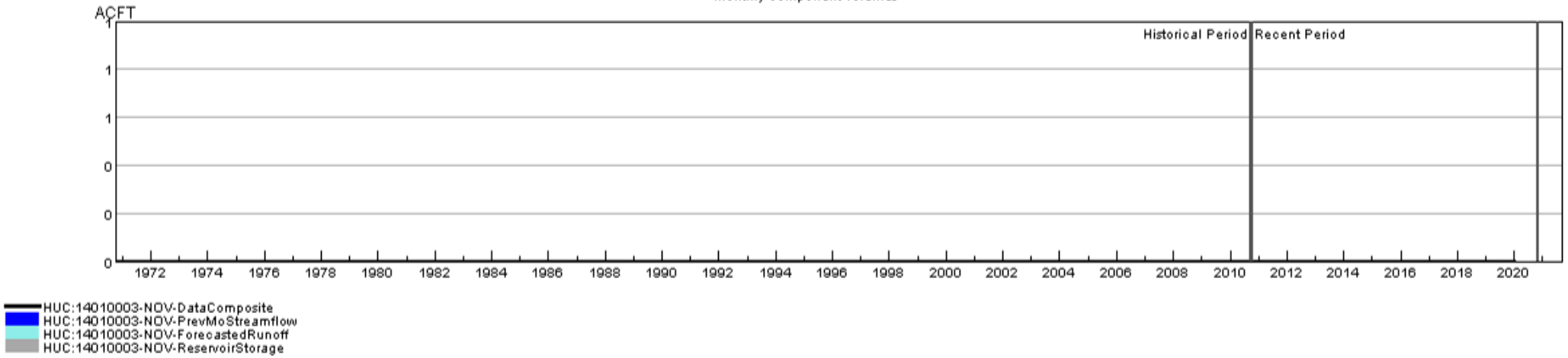
HUC 14010002 (Blue) SWSI Values - NOV

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



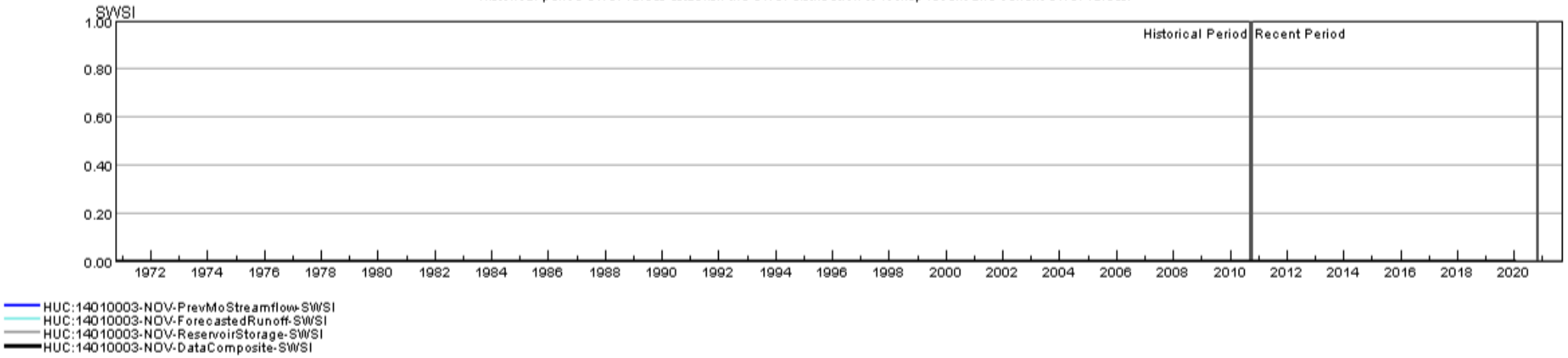
HUC 14010003 (Eagle) Surface Water Supply - NOV

Monthly component volumes



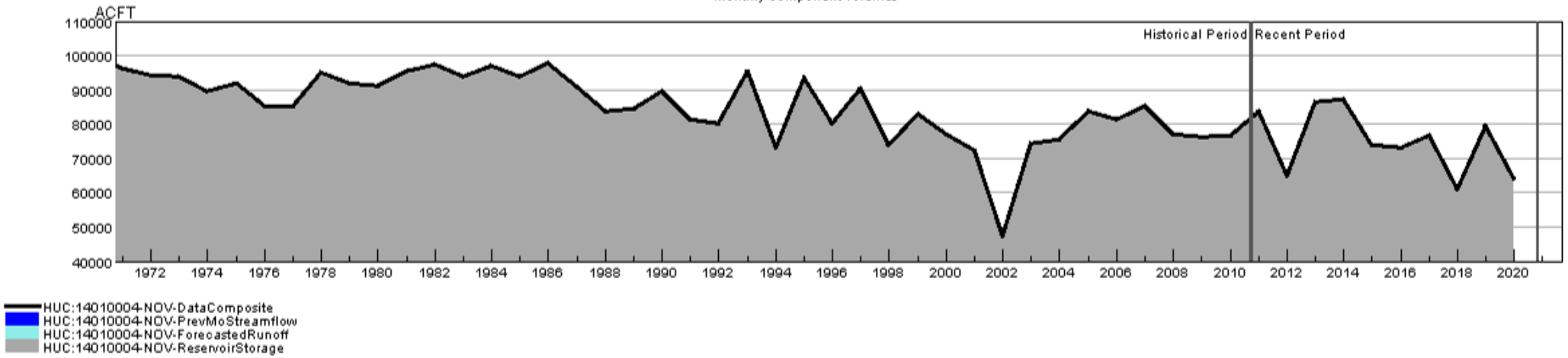
HUC 14010003 (Eagle) SWSI Values - NOV

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



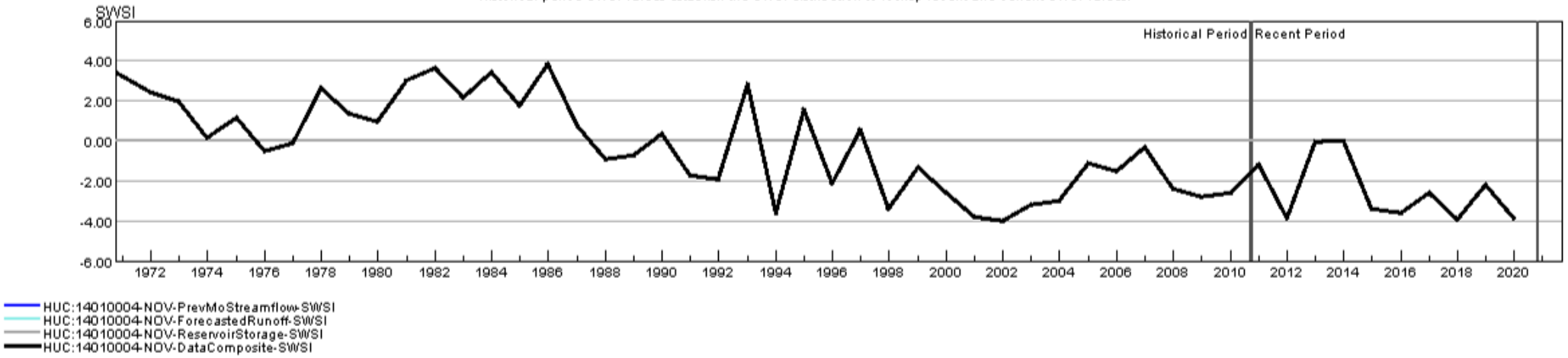
HUC 14010004 (Roaring Fork) Surface Water Supply - NOV

Monthly component volumes



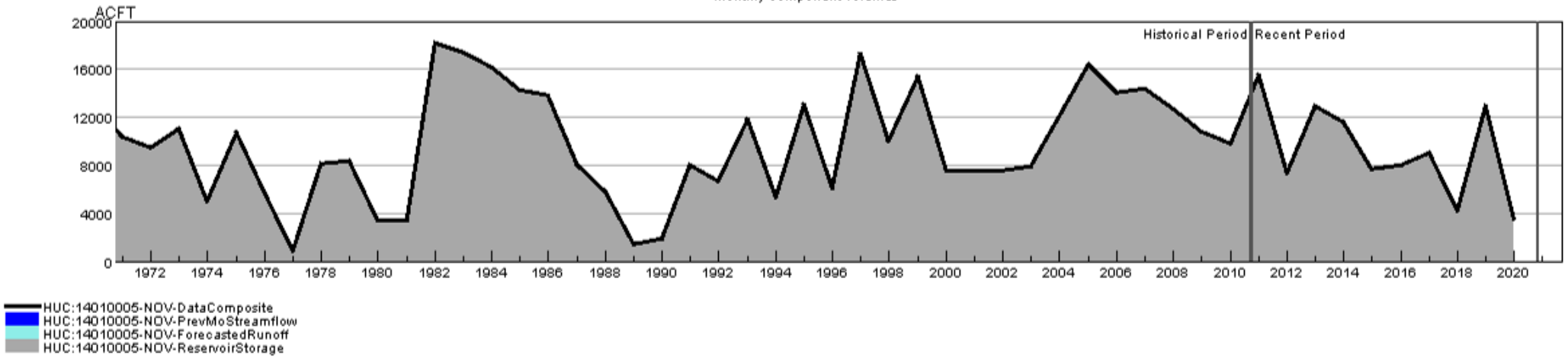
HUC 14010004 (Roaring Fork) SWSI Values - NOV

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



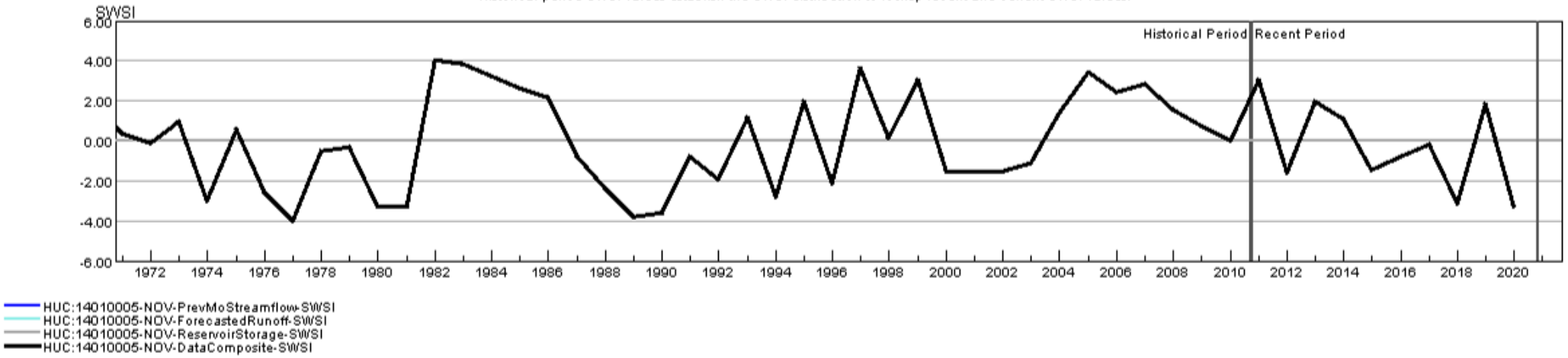
HUC 14010005 (Colorado Headwaters-Plateau) Surface Water Supply - NOV

Monthly component volumes



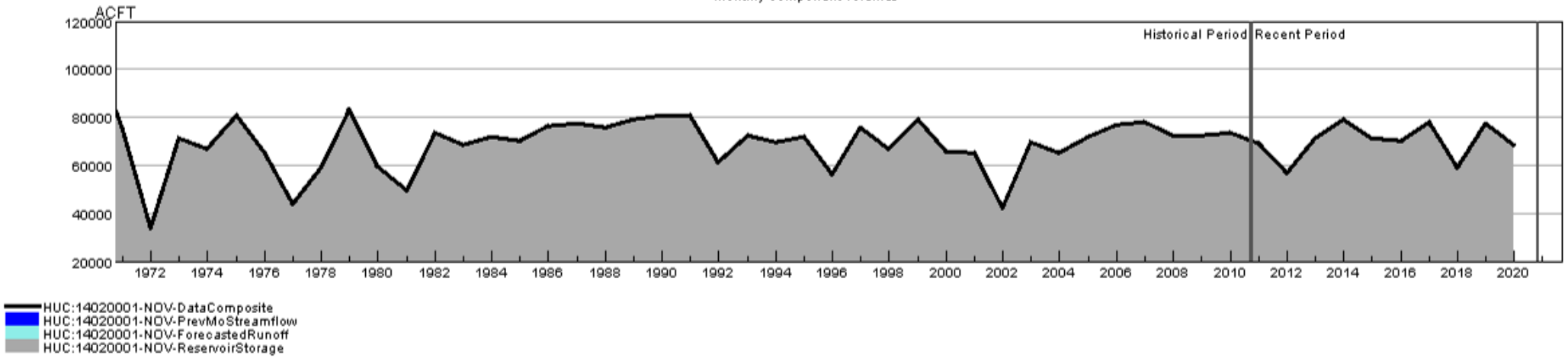
HUC 14010005 (Colorado Headwaters-Plateau) SWSI Values - NOV

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



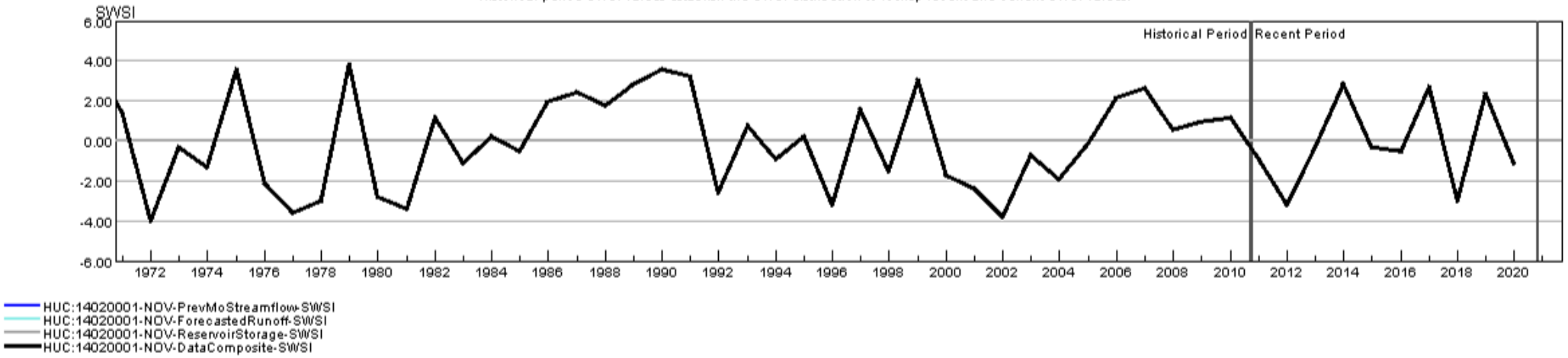
HUC 14020001 (East-Taylor) Surface Water Supply - NOV

Monthly component volumes



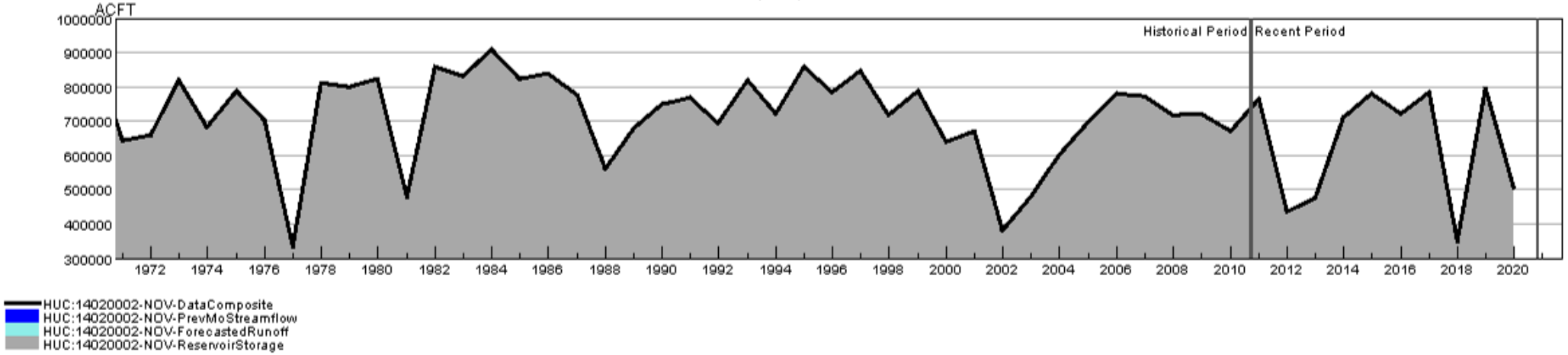
HUC 14020001 (East-Taylor) SWSI Values - NOV

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



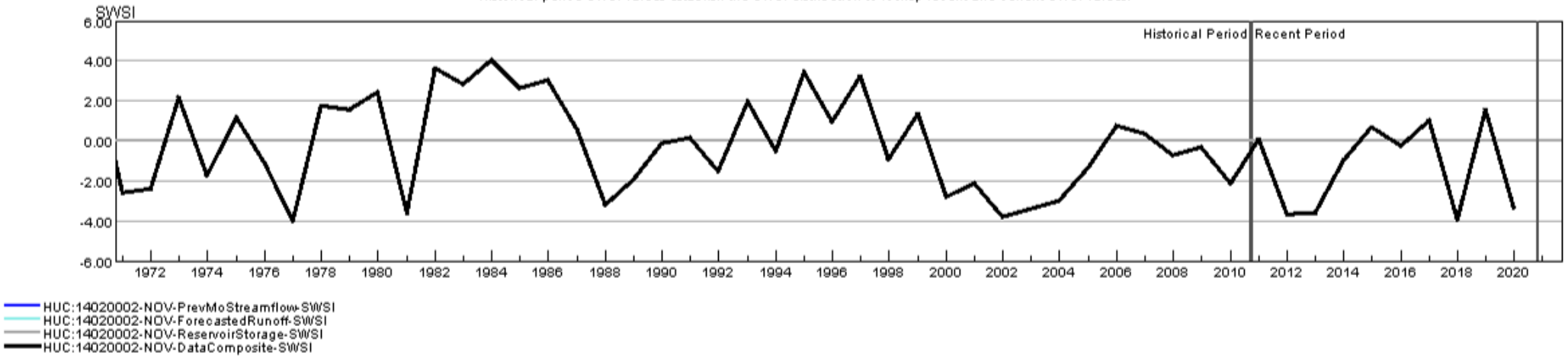
HUC 14020002 (Upper Gunnison) Surface Water Supply - NOV

Monthly component volumes



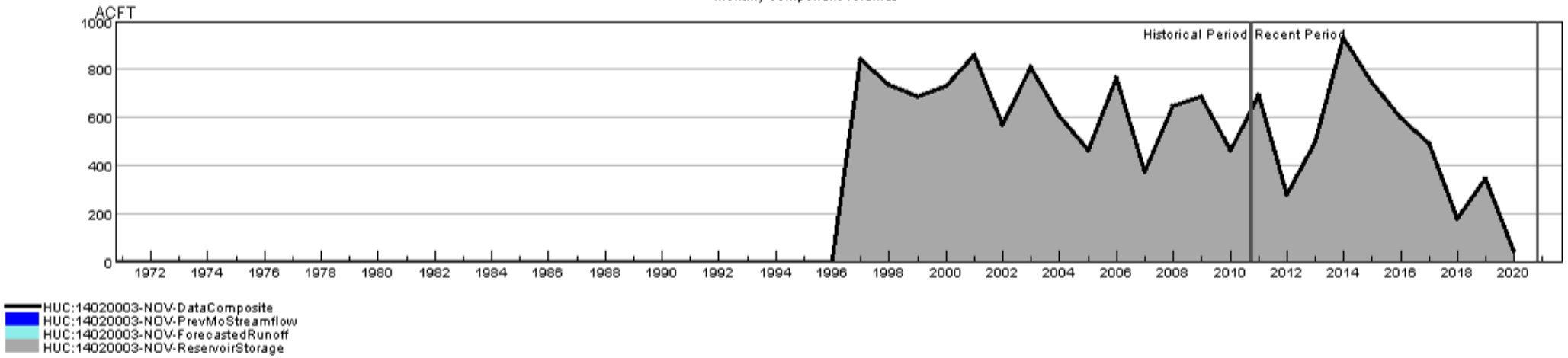
HUC 14020002 (Upper Gunnison) SWSI Values - NOV

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



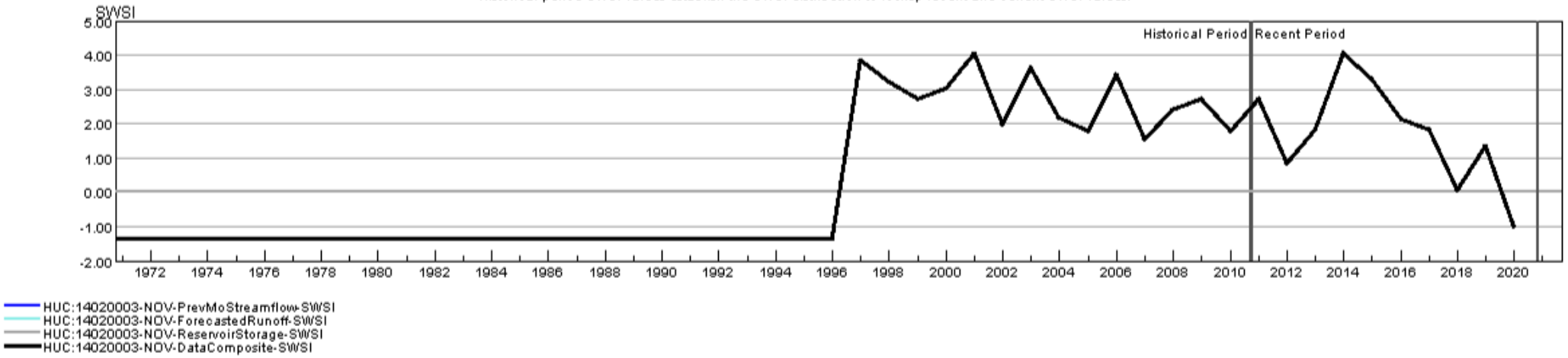
HUC 14020003 (Tomichi) Surface Water Supply - NOV

Monthly component volumes



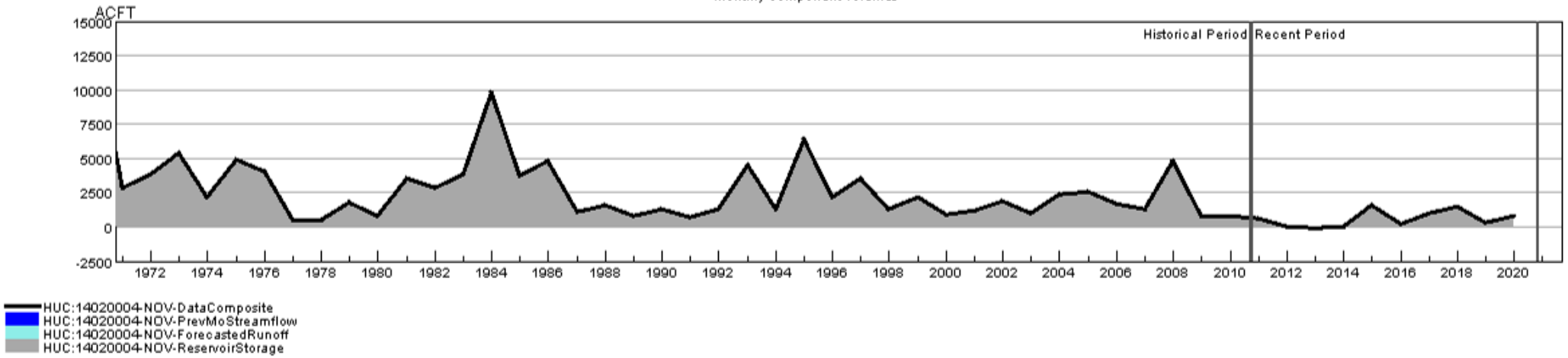
HUC 14020003 (Tomichi) SWSI Values - NOV

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



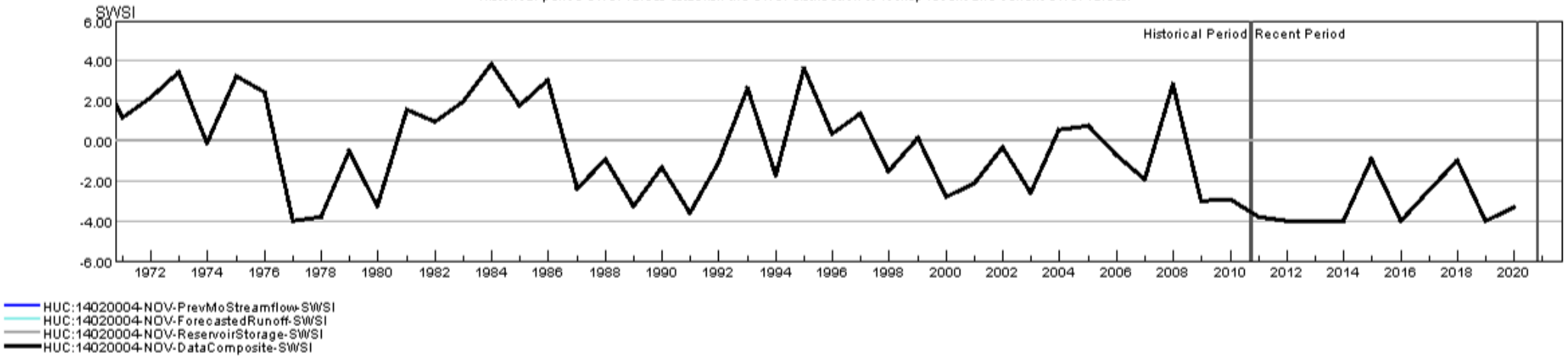
HUC 14020004 (North Fork Gunnison) Surface Water Supply - NOV

Monthly component volumes



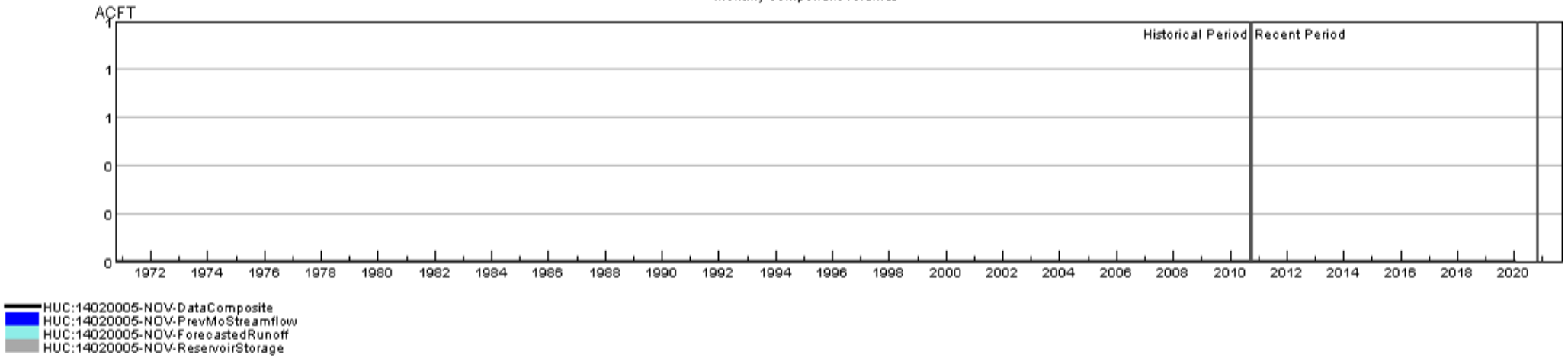
HUC 14020004 (North Fork Gunnison) SWSI Values - NOV

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



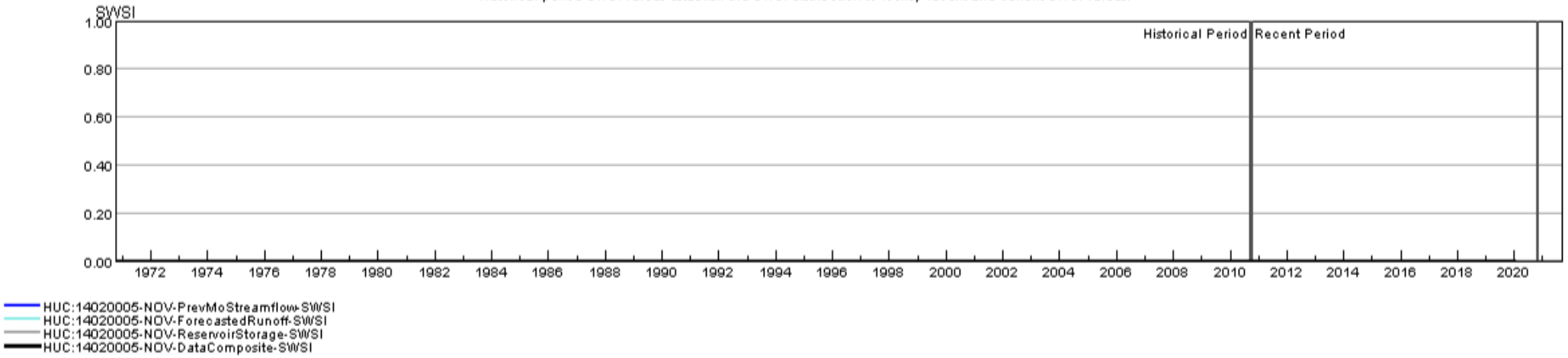
HUC 14020005 (Lower Gunnison) Surface Water Supply - NOV

Monthly component volumes



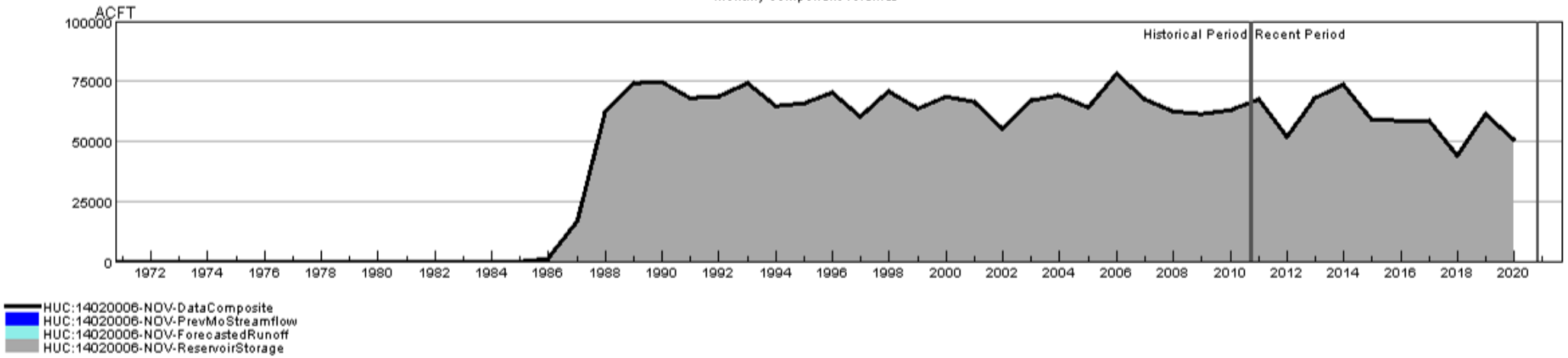
HUC 14020005 (Lower Gunnison) SWSI Values - NOV

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



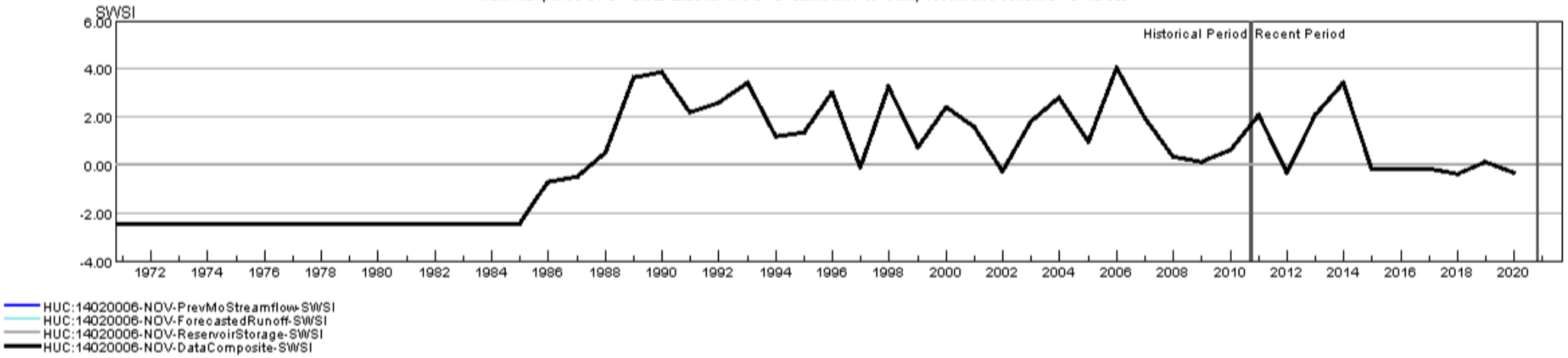
HUC 14020006 (Uncompahgre) Surface Water Supply - NOV

Monthly component volumes



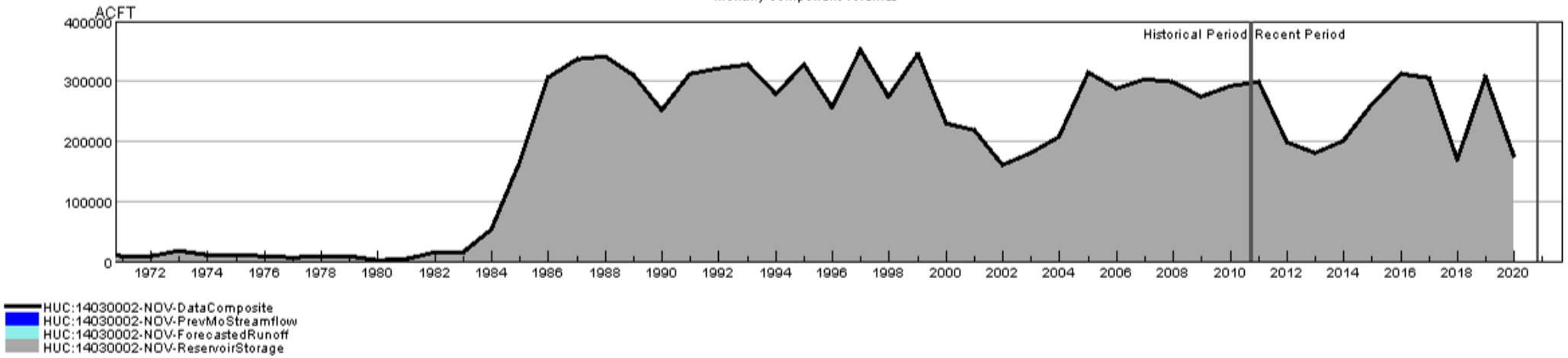
HUC 14020006 (Uncompahgre) SWSI Values - NOV

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



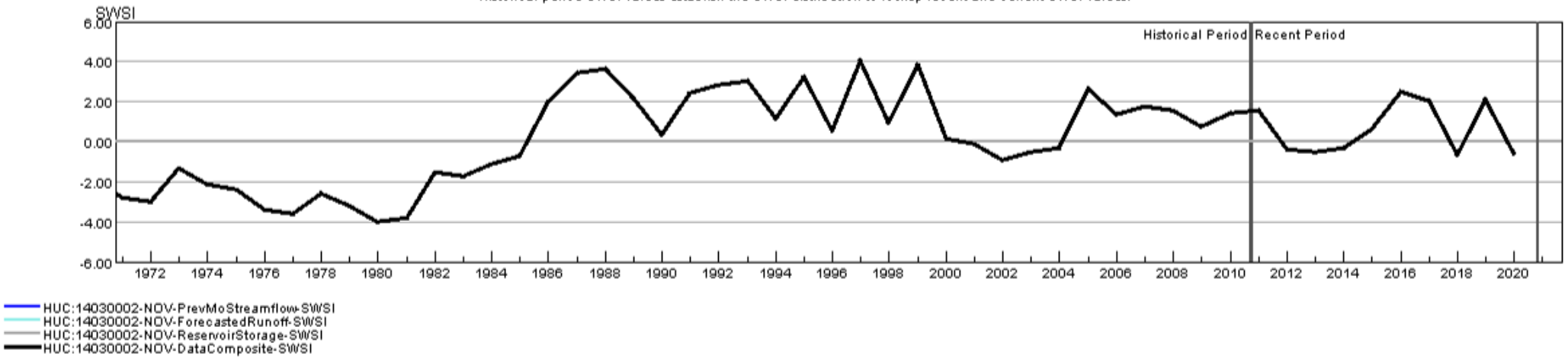
HUC 14030002 (Upper Dolores) Surface Water Supply - NOV

Monthly component volumes



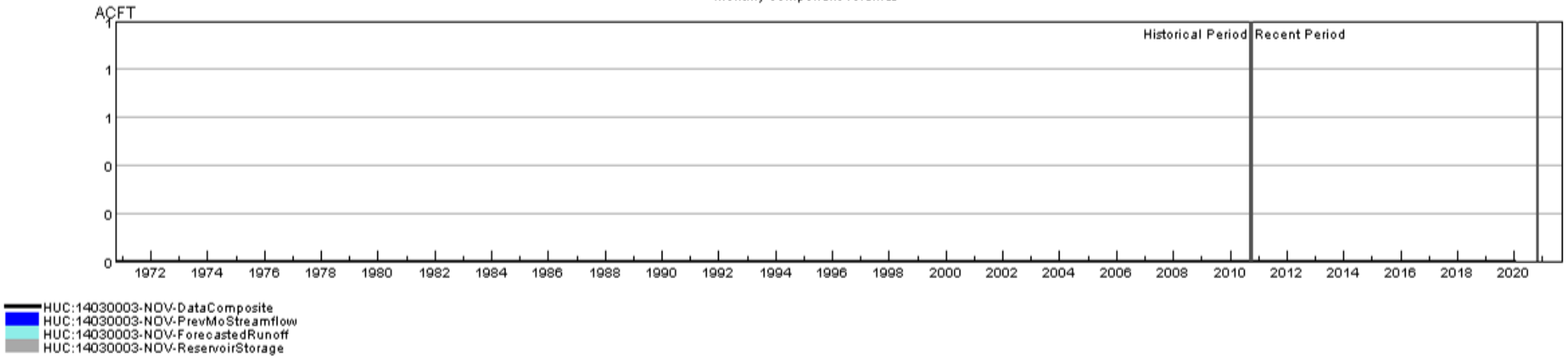
HUC 14030002 (Upper Dolores) SWSI Values - NOV

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



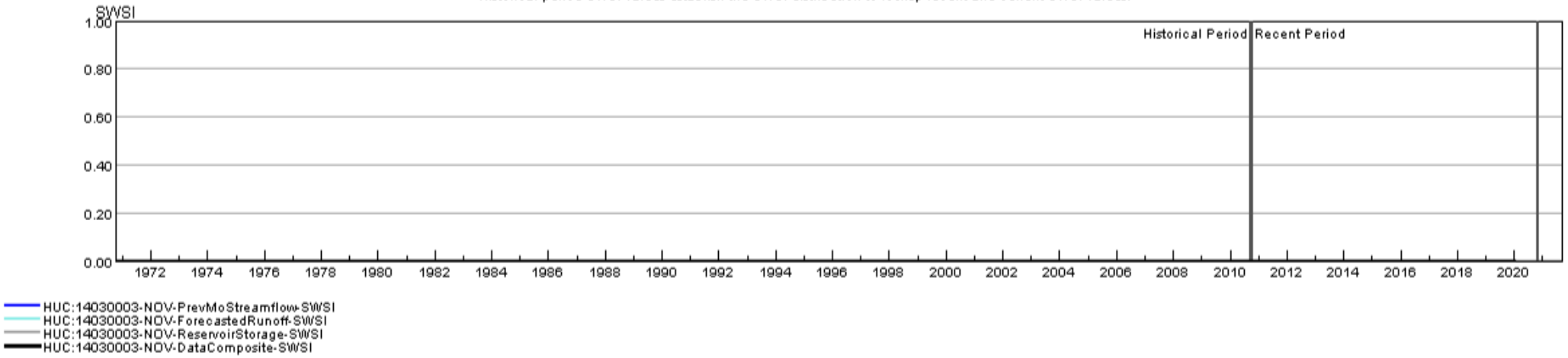
HUC 14030003 (San Miguel) Surface Water Supply - NOV

Monthly component volumes



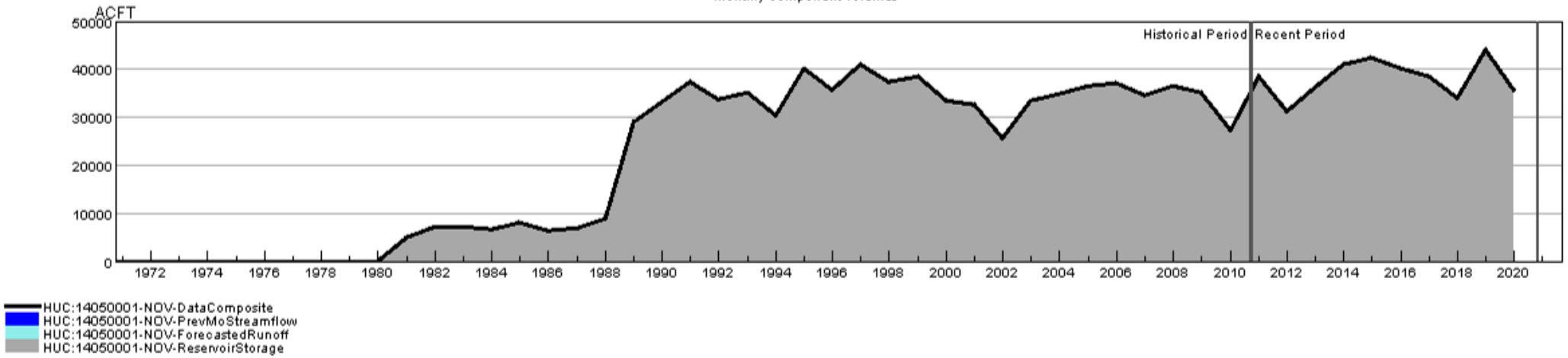
HUC 14030003 (San Miguel) SWSI Values - NOV

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



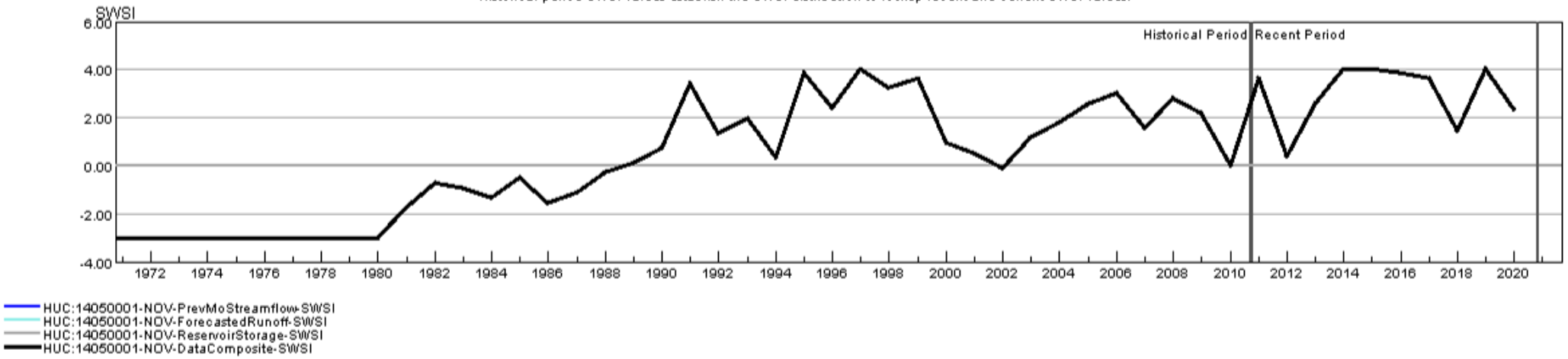
HUC 14050001 (Upper Yampa) Surface Water Supply - NOV

Monthly component volumes



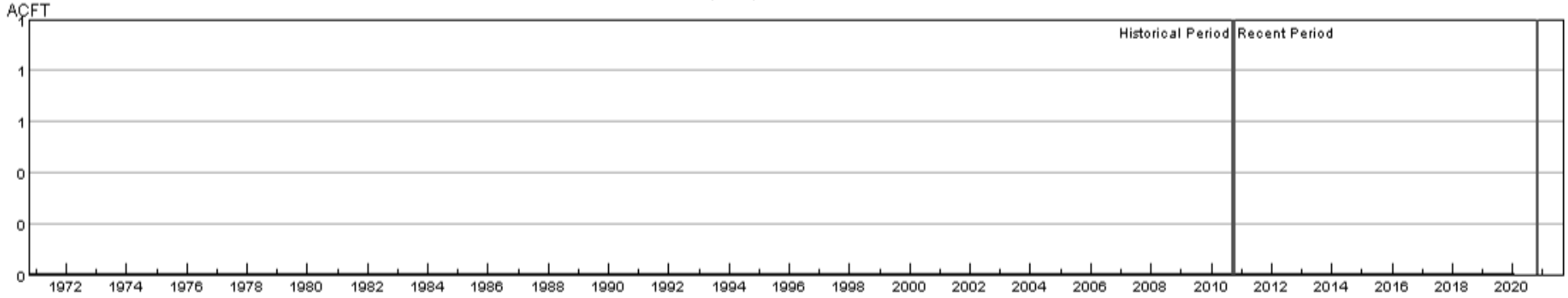
HUC 14050001 (Upper Yampa) SWSI Values - NOV

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



HUC 14050002 (Lower Yampa) Surface Water Supply - NOV

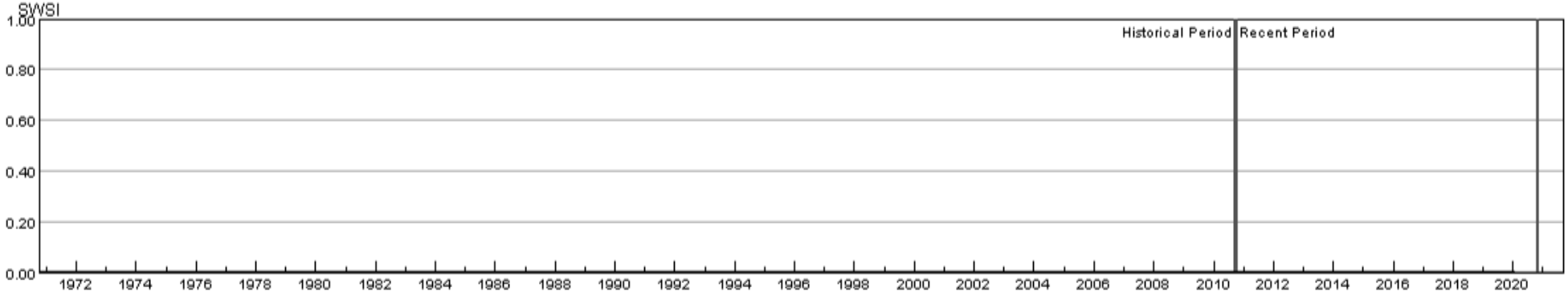
Monthly component volumes



HUC:14050002-NOV-DataComposite
HUC:14050002-NOV-PrevMoStreamflow
HUC:14050002-NOV-ForecastedRunoff
HUC:14050002-NOV-ReservoirStorage

HUC 14050002 (Lower Yampa) SWSI Values - NOV

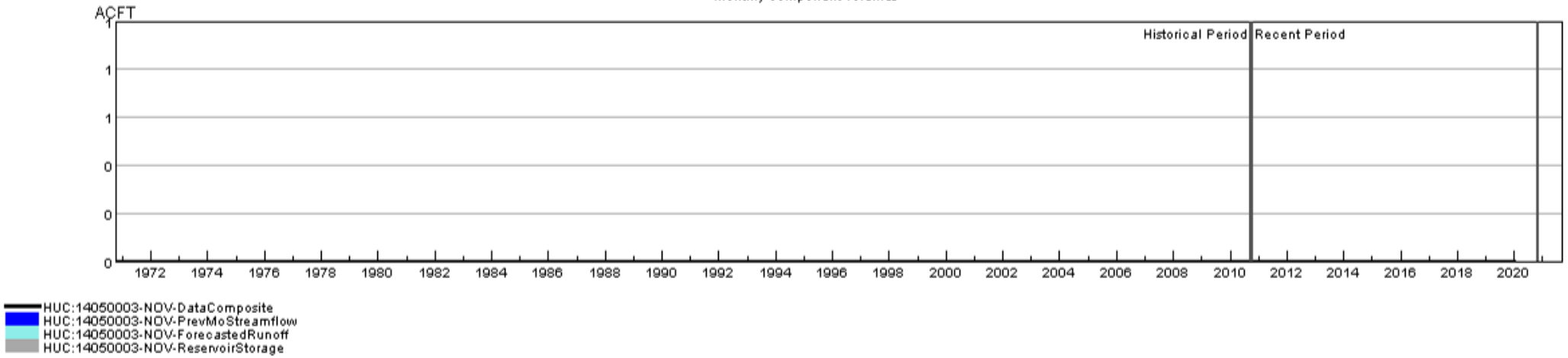
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



HUC:14050002-NOV-PrevMoStreamflow-SWSI
HUC:14050002-NOV-ForecastedRunoff-SWSI
HUC:14050002-NOV-ReservoirStorage-SWSI
HUC:14050002-NOV-DataComposite-SWSI

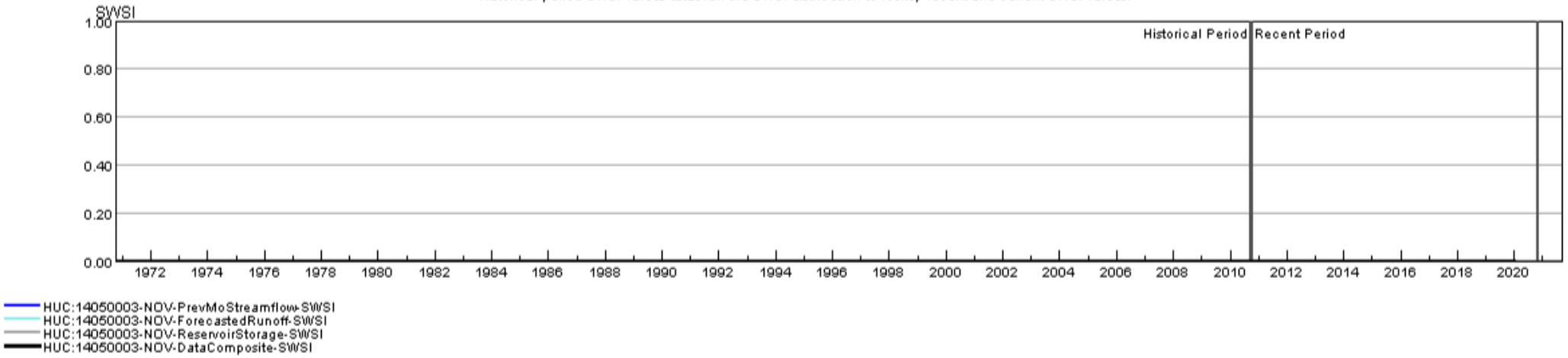
HUC 14050003 (Little Snake) Surface Water Supply - NOV

Monthly component volumes



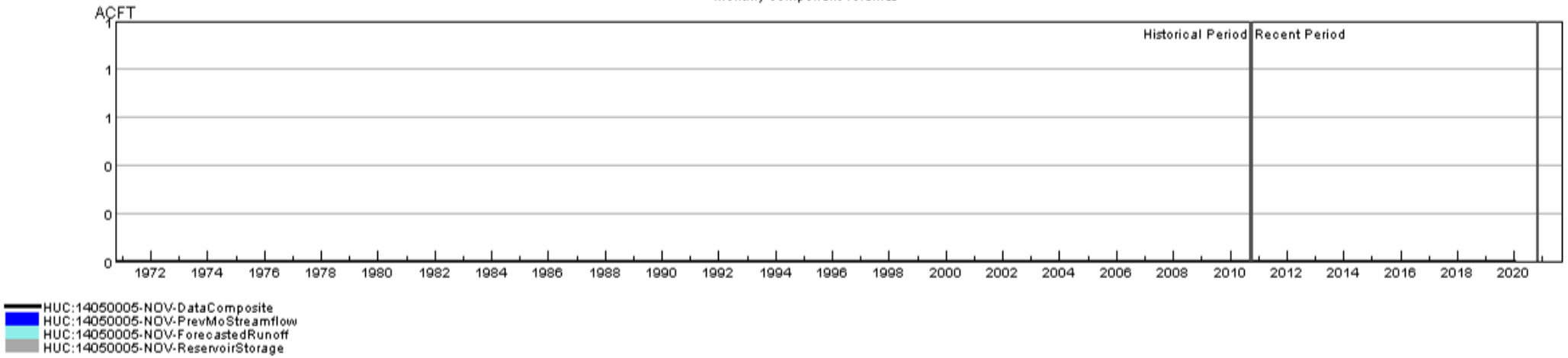
HUC 14050003 (Little Snake) SWSI Values - NOV

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



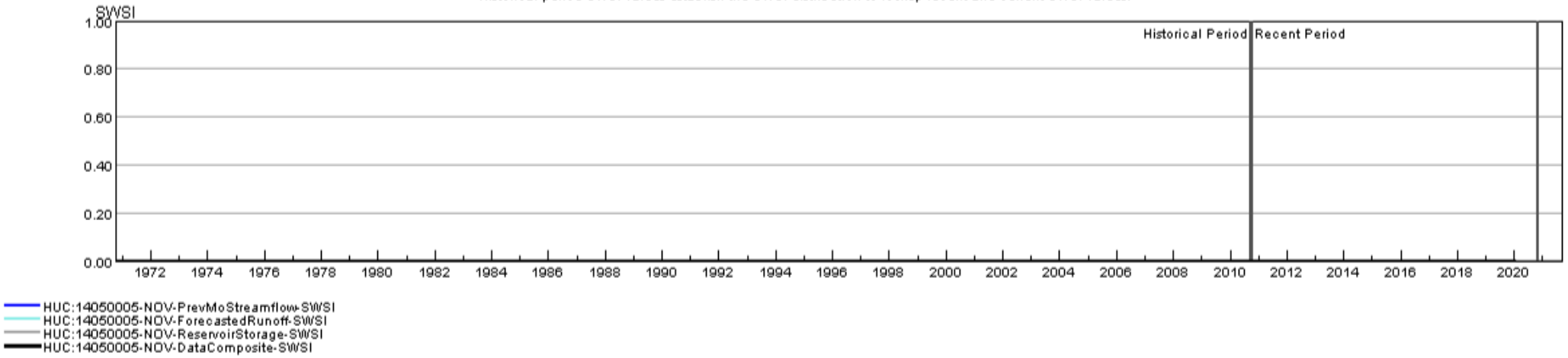
HUC 14050005 (Upper White) Surface Water Supply - NOV

Monthly component volumes



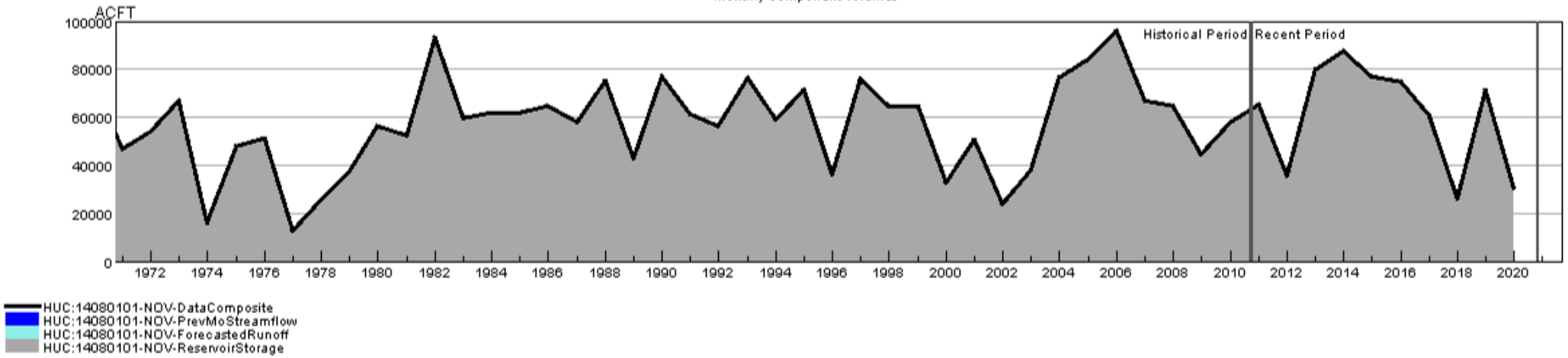
HUC 14050005 (Upper White) SWSI Values - NOV

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



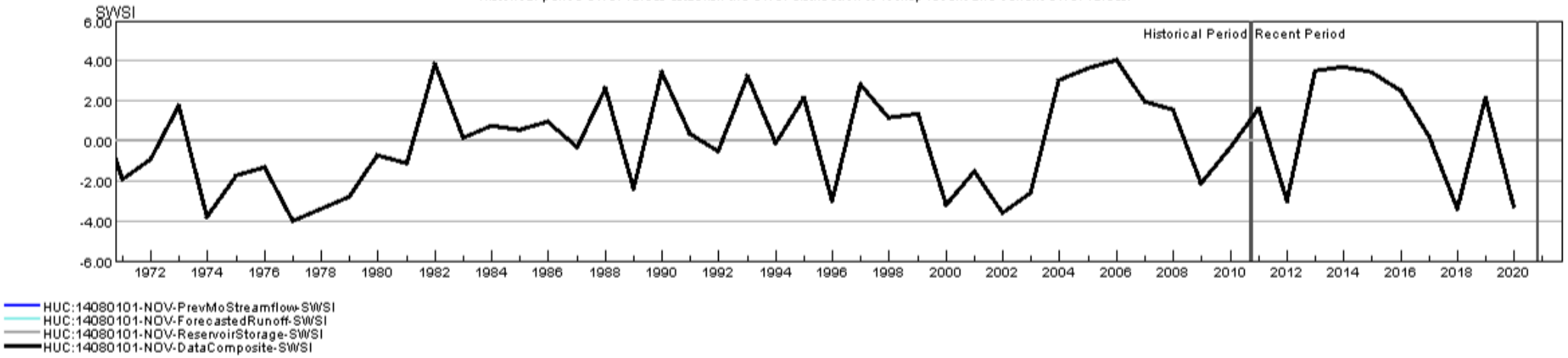
HUC 14080101 (Upper San Juan) Surface Water Supply - NOV

Monthly component volumes



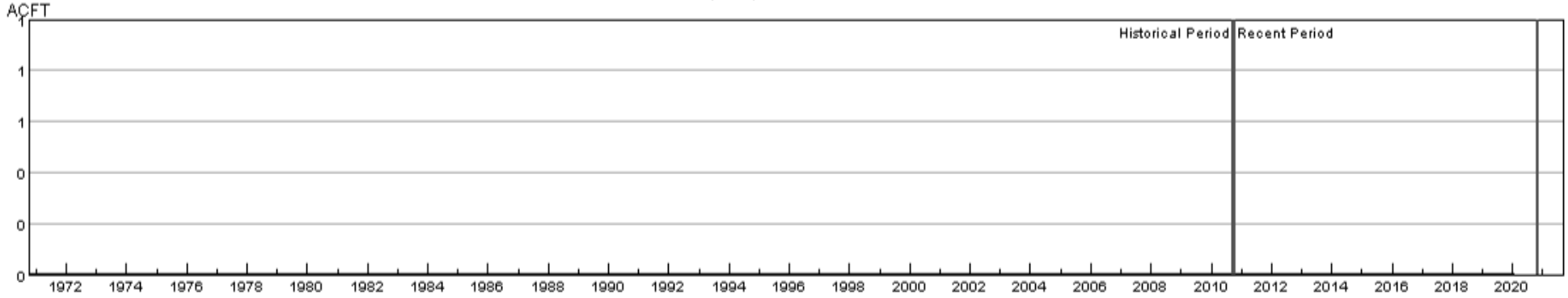
HUC 14080101 (Upper San Juan) SWSI Values - NOV

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



HUC 14080102 (Piedra) Surface Water Supply - NOV

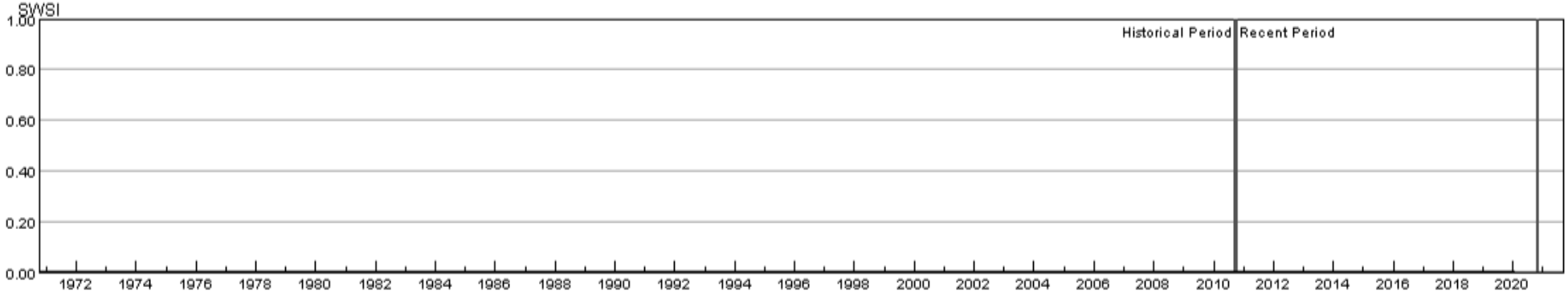
Monthly component volumes



HUC:14080102-NOV-DataComposite
HUC:14080102-NOV-PrevMoStreamflow
HUC:14080102-NOV-ForecastedRunoff
HUC:14080102-NOV-ReservoirStorage

HUC 14080102 (Piedra) SWSI Values - NOV

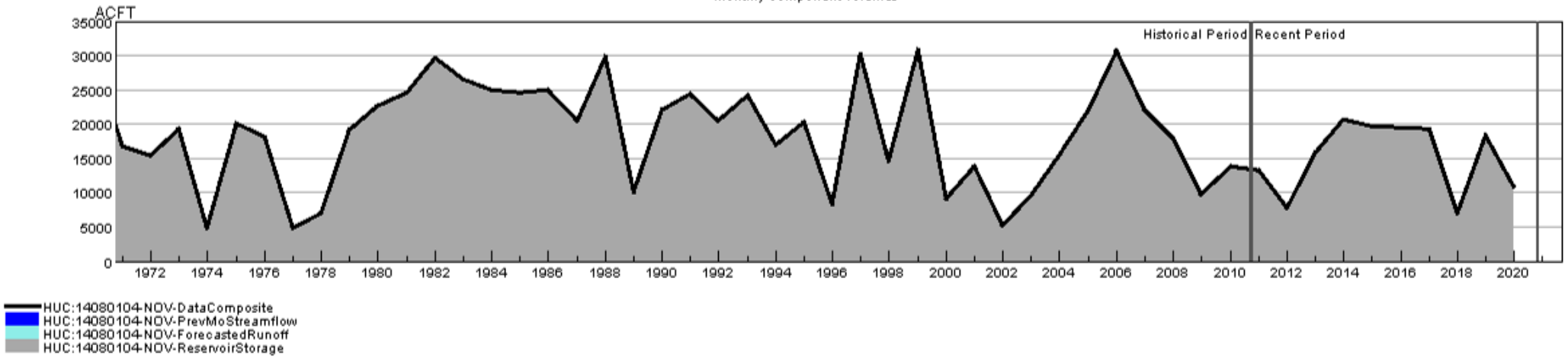
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



HUC:14080102-NOV-PrevMoStreamflow-SWSI
HUC:14080102-NOV-ForecastedRunoff-SWSI
HUC:14080102-NOV-ReservoirStorage-SWSI
HUC:14080102-NOV-DataComposite-SWSI

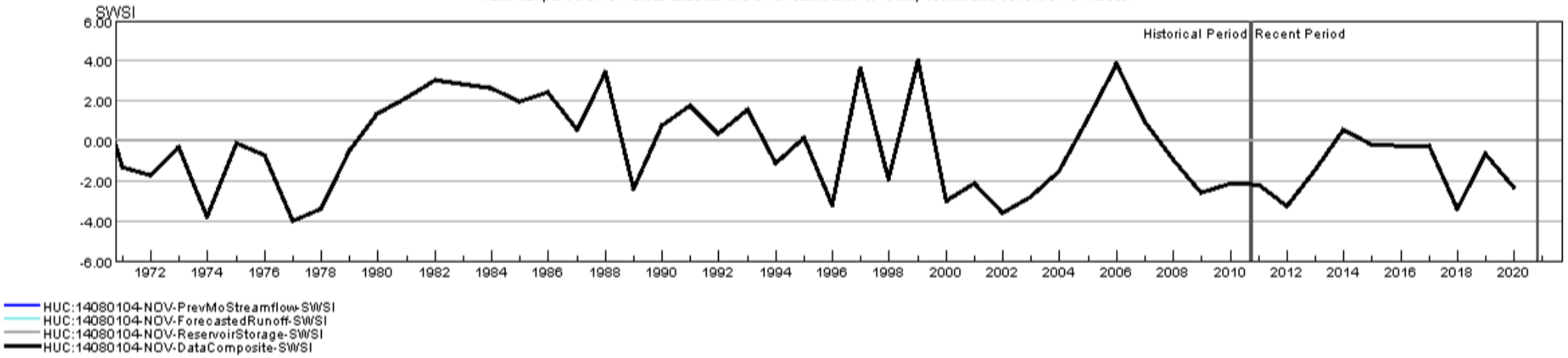
HUC 14080104 (Animas) Surface Water Supply - NOV

Monthly component volumes



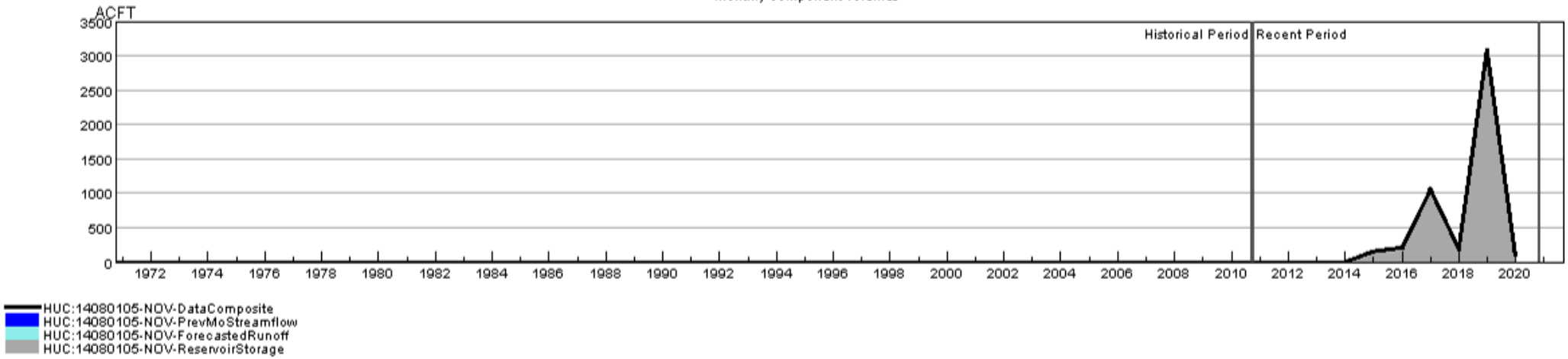
HUC 14080104 (Animas) SWSI Values - NOV

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



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

Monthly component volumes



HUC 14080105 (Middle San Juan) SWSI Values - NOV

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