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; www.water.state.co.us

December 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.

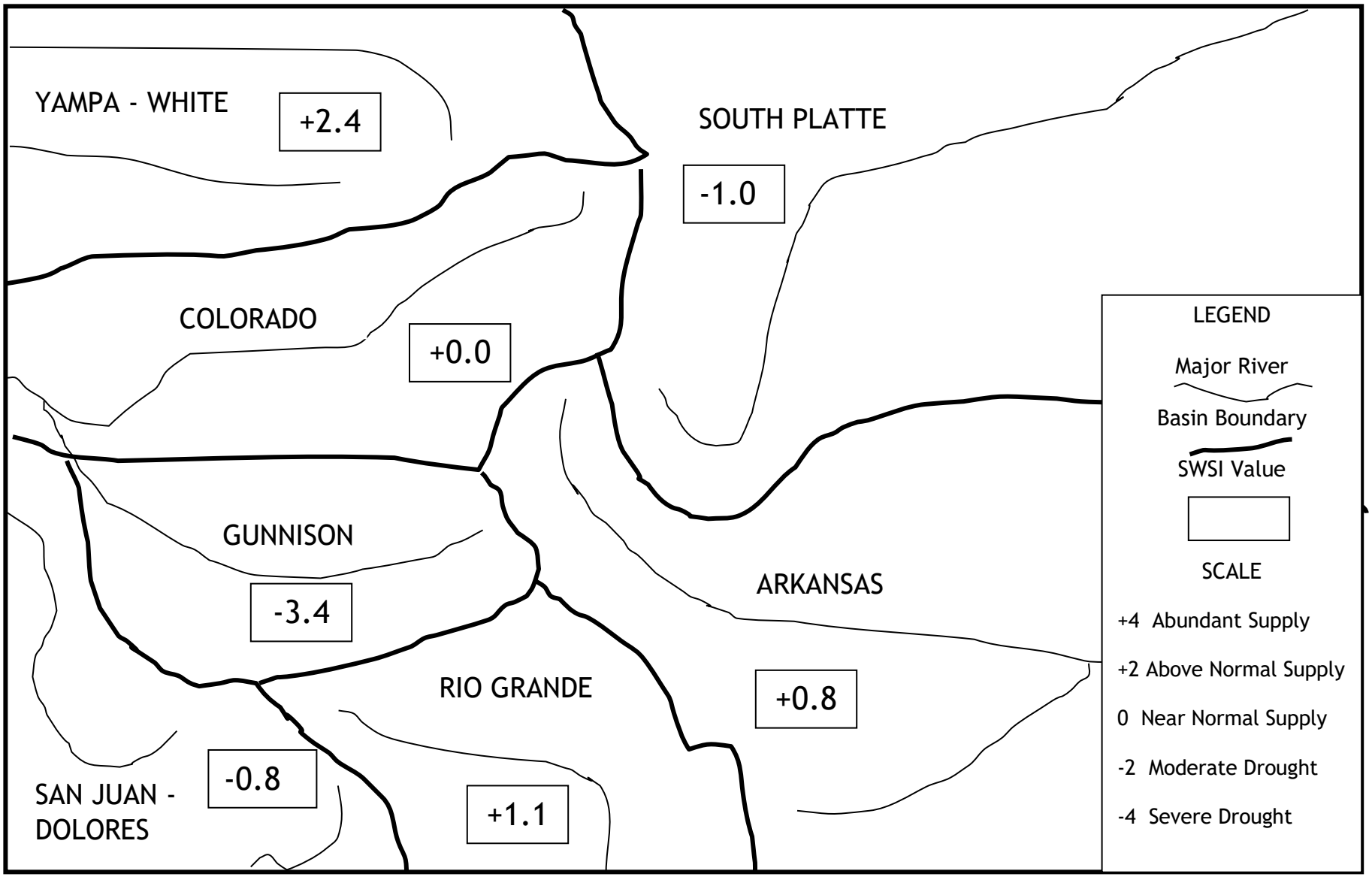
The SWSI calculation for the fall season (October 1 to December 1) is based solely on reservoir storage at the end of last month, in this case November 30. The following SWSI values were computed for each of the seven major basins for December 1, 2020. Water supply conditions, as represented by water in storage, range from well below normal in the Gunnison River Basin to above normal in the Yampa-White Platte River Basin.

Basin	December 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	0.8	-0.2	-1.2
Colorado	0.0	0.5	-1.4
Gunnison	-3.4	0.0	-6.0
Rio Grande	1.1	0.1	-0.9
San Juan-Dolores	-0.8	0.0	-3.1
South Platte	-1.0	-0.5	-4.2
Yampa-White	2.4	0.1	-1.6

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

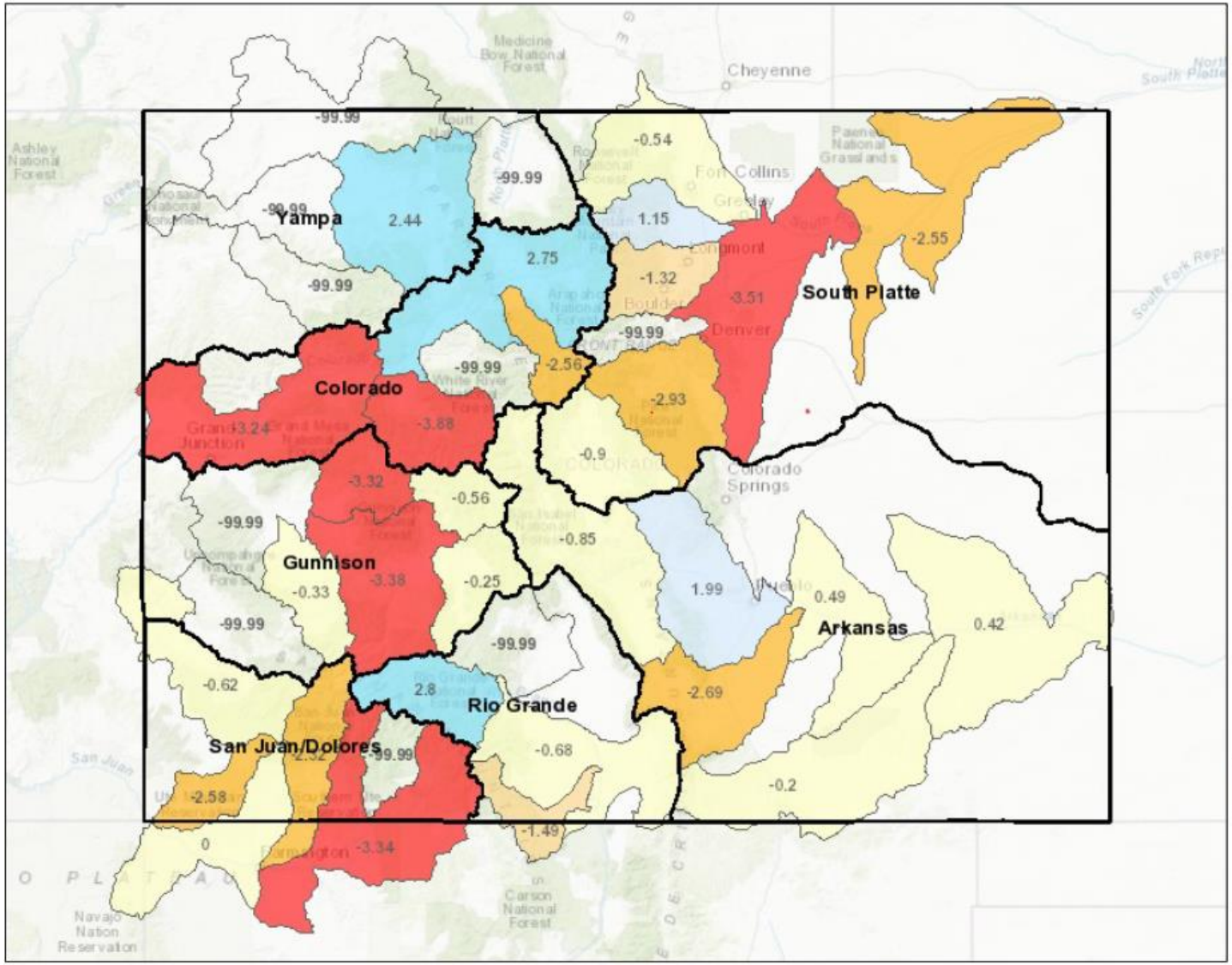


December 1, 2020

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC

COLORADO
Division of Water Resources
Department of Natural Resources

SWSI December 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: 12/22/2020 8:38:25 AM

December 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	-2.69	18	0
	11020005	Upper Arkansas-Lake Meredith	0.49	56	14,565
	11020010	Purgatoire	-0.21	48	15,900
	11020009	Upper Arkansas-John Martin Reservoir	0.42	55	51,348
	11020001	Arkansas Headwaters	-0.85	40	161,426
	11020002	Upper Arkansas	2.00	74	182,211
Colorado	14010005	Colorado Headwaters-Plateau	-3.24	11	3,806
	14010004	Roaring Fork	-3.89	3	63,270
	14010002	Blue	-2.57	19	67,908
	14010001	Colorado Headwaters	2.75	83	129,850
	14010003	Eagle	N/A		
Gunnison	14020003	Tomichi	-0.26	47	139
	14020004	North Fork Gunnison	-3.32	10	896
	14020006	Uncompahgre	-0.34	46	52,177
	14020001	East-Taylor	-0.57	43	67,444
	14020002	Upper Gunnison	-3.38	9	505,196
	14020005	Lower Gunnison	N/A		
	14030003	San Miguel	N/A		
Rio Grande	13010002	Alamosa-Trinchera	-0.69	42	5,126
	13010005	Conejos	-1.50	32	14,111
	13010001	Rio Grande Headwaters	2.80	84	35,884
	13010004	Saguache	N/A		
San Juan-Dolores	14080105	Middle San Juan	0.00	50	132
	14080107	Mancos	-2.58	19	2,763
	14080104	Animas	-2.33	22	10,458
	14080101	Upper San Juan	-3.34	10	33,478
	14030002	Upper Dolores	-0.63	42	173,786
	14080102	Piedra	N/A		
South Platte	10190003	Middle South Platte-Cherry Creek	-3.52	8	40,638
	10190005	St. Vrain	-1.32	34	47,044
	10190012	Middle South Platte-Sterling	-2.55	19	94,514
	10190007	Cache La Poudre	-0.55	43	108,108
	10190001	South Platte Headwater	-0.90	39	137,300
	10190002	Upper South Platte	-2.94	15	256,700
	10190006	Big Thompson	1.15	64	496,604
	10190004	Clear	N/A		
Yampa-White	14050001	Upper Yampa	2.44	79	36,424
	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)

December 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	4,826	40
		TWIN LAKES RESERVOIR	38,711	31
		HOMESTAKE RESERVOIR	40,308	70
		TURQUOISE LAKE	77,581	34
11020006	Huerfano	CUCHARAS RESERVOIR*	0	18
11020010	Purgatoire	TRINIDAD LAKE	5,900	48
11020002	Upper Arkansas	PUEBLO RESERVOIR	82,211	74
11020009	Upper Arkansas-John Martin Reservoir	ADOBE CREEK RESERVOIR	3,962	52
		JOHN MARTIN RESERVOIR	7,386	56
11020005	Upper Arkansas-Lake Meredith	LAKE HENRY	4,941	73
		MEREDITH RESERVOIR	9,624	53
14010002	Blue	GREEN MOUNTAIN RESERVOIR	7,908	19
14010001	Colorado Headwaters	WOLFORD MOUNTAIN RESERVOIR	5,350	99
		WILLIAMS FORK RESERVOIR	4,500	69
14010005	Colorado Headwaters-Plateau	VEGA RESERVOIR	3,806	11
14010004	Roaring Fork	RUEDI RESERVOIR	3,270	3
14020001	East-Taylor	TAYLOR PARK RESERVOIR	7,444	43
14020004	North Fork Gunnison	PAONIA RESERVOIR	896	10
14020003	Tomichi	VOUGA RESERVOIR NEAR DOYLEVILLE	139	47
14020006	Uncompahgre	RIDGEWAY RESERVOIR	2,177	46
14020002	Upper Gunnison	FRUITLAND RESERVOIR	183	27
		SILVER JACK RESERVOIR	847	3
		CRAWFORD RESERVOIR	1,300	2
		MORROW POINT RESERVOIR	106,962	4
		BLUE MESA RESERVOIR	95,904	10
13010002	Alamosa-Trinchera	MOUNTAIN HOME	1,610	25
		TERRACE RESERVOIR	3,516	50
13010005	Conejos	PLATORO RESERVOIR	4,111	32
13010001	Rio Grande Headwaters	CONTINENTAL RESERVOIR	7,348	91
		SANTA MARIA RESERVOIR	3,342	84
		RIO GRANDE RESERVOIR	5,194	66
14080104	Animas	LEMON RESERVOIR	0,458	22
14080107	Mancos	JACKSON GULCH RESERVOIR	2,763	19
14080105	Middle San Juan	LONG HOLLOW RESERVOIR	132	50
14030002	Upper Dolores	GROUNDHOG RESERVOIR	4,400	7
		MCPHEE RESERVOIR	69,386	43
14080101	Upper San Juan	VALLECITO RESERVOIR	3,478	10
10190006	Big Thompson	LONE TREE RESERVOIR	0	1
		MARIANO RESERVOIR	1,000	15
		LAKE LOVELAND RESERVOIR	2,400	12
		WILLOW CREEK RESERVOIR	6,377	87
		BOYD LAKE	8,800	43
		CARTER LAKE	9,468	79
		LAKE GRANBY	88,559	68

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP by Month
10190007	Cache La Poudre	HALLIGAN RESERVOIR	1,904	33
		CACHE LA POUDRE	1,925	15
		BLACK HOLLOW RESERVOIR	3,933	99
		FOSSIL CREEK RESERVOIR	4,776	32
		CHAMBERS LAKE	6,420	93
		WINDSOR RESERVOIR	8,647	41
		COBB LAKE	5,574	59
		HORSETOOTH RESERVOIR	4,929	41
10190003	Middle South Platte-Cherry Creek	HORSECREEK RESERVOIR	0	1
		MILTON RESERVOIR	2,893	9
		BARR LAKE	6,345	10
		STANDLEY RESERVOIR	31,400	33
10190012	Middle South Platte-Sterling	EMPIRE RESERVOIR	5,831	20
		PREWITT RESERVOIR	10,600	26
		JULESBURG RESERVOIR	13,975	26
		JACKSON LAKE RESERVOIR	19,818	58
		POINT OF ROCKS RESERVOIR	19,900	16
		RIVERSIDE RESERVOIR	24,390	40
10190001	South Platte Headwater	ANTERO RESERVOIR	19,400	59
		SPINNEY MOUNTAIN RESERVOIR	25,100	41
		ELEVENMILE CANYON RESERVOIR	92,800	19
10190005	St. Vrain	MARSHALL RESERVOIR	4,500	36
		TERRY RESERVOIR	6,256	84
		UNION RESERVOIR	8,476	28
		GROSS RESERVOIR	11,600	27
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,212	97
10190002	Upper South Platte	CHEESMAN LAKE	6,200	4
		DILLON RESERVOIR	20,500	31
14050001	Upper Yampa	YAMCOLO RESERVOIR	3,824	34
		STAGECOACH RESERVOIR NR OAK CREEK	2,600	97

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

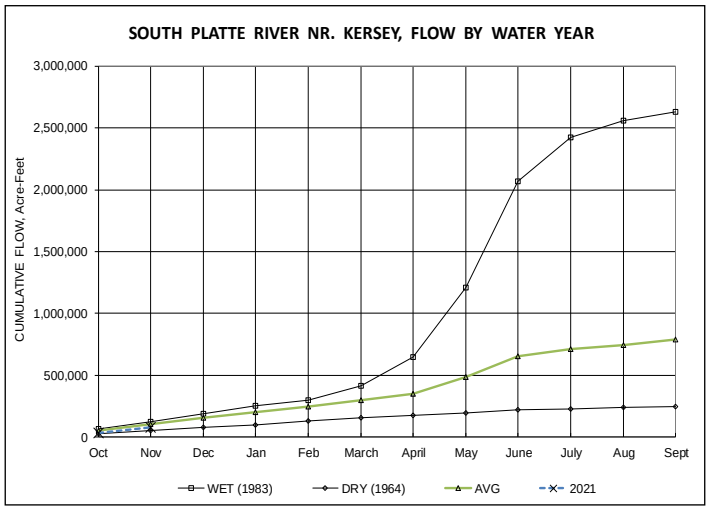
The SWSI value for the month was -1.0.

The South Platte basin experienced above average temperatures throughout the basin during the month of November, with the mountainous areas approximately 3-5 degrees Fahrenheit above average, and temperatures on the eastern plains greater than 5 degrees above average. The mountains and plains did receive precipitation in the form of snow during the latter part of October and several storms throughout the month of November, however the basin remains below average for precipitation throughout the month of November. The USDA South Platte Basin High/Low Snowpack Summary indicates that the basin snowpack was near 85% of average on December 1. However, the easterly foothills and eastern plains received less than 50% of average precipitation during the month of November.

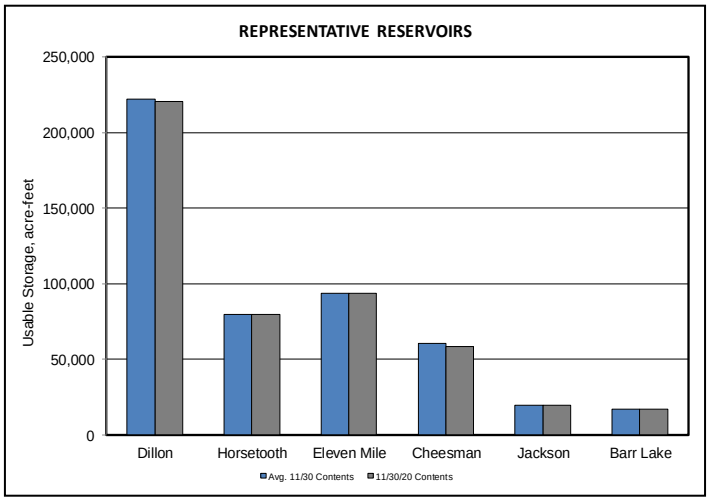
The trend of above average temperatures and precipitation throughout the basin resulted in continued widespread drought throughout. The month of November ended almost identical to the month of October with the USDA Drought Monitor rating for the mountainous and foothill areas with a rating of D3 (Extreme drought), with the exception of portions of Larimer, Weld and Morgan Counties remaining at a rating of D2 (Severe Drought). Drought conditions in Clear Creek and Park Counties were the one exception, lessening from a rating of D3 to a rating of D2 during the month of November.

The above conditions along with high demand for the filling of storage reservoirs throughout the basin, resulted in flows on the mainstem of the South Platte River basin below normal during the month of November. Flows at the Kersey gage downstream of the City of Greeley, were slightly below average with average daily flows for the month of November approximately 720 cfs, 94% of the historic mean value of 766 cfs. The average daily flow at the Julesburg gage for the month of November was 54 cfs, only 16% of the historic mean value of 343 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, especially at the Julesburg gage near the state line.

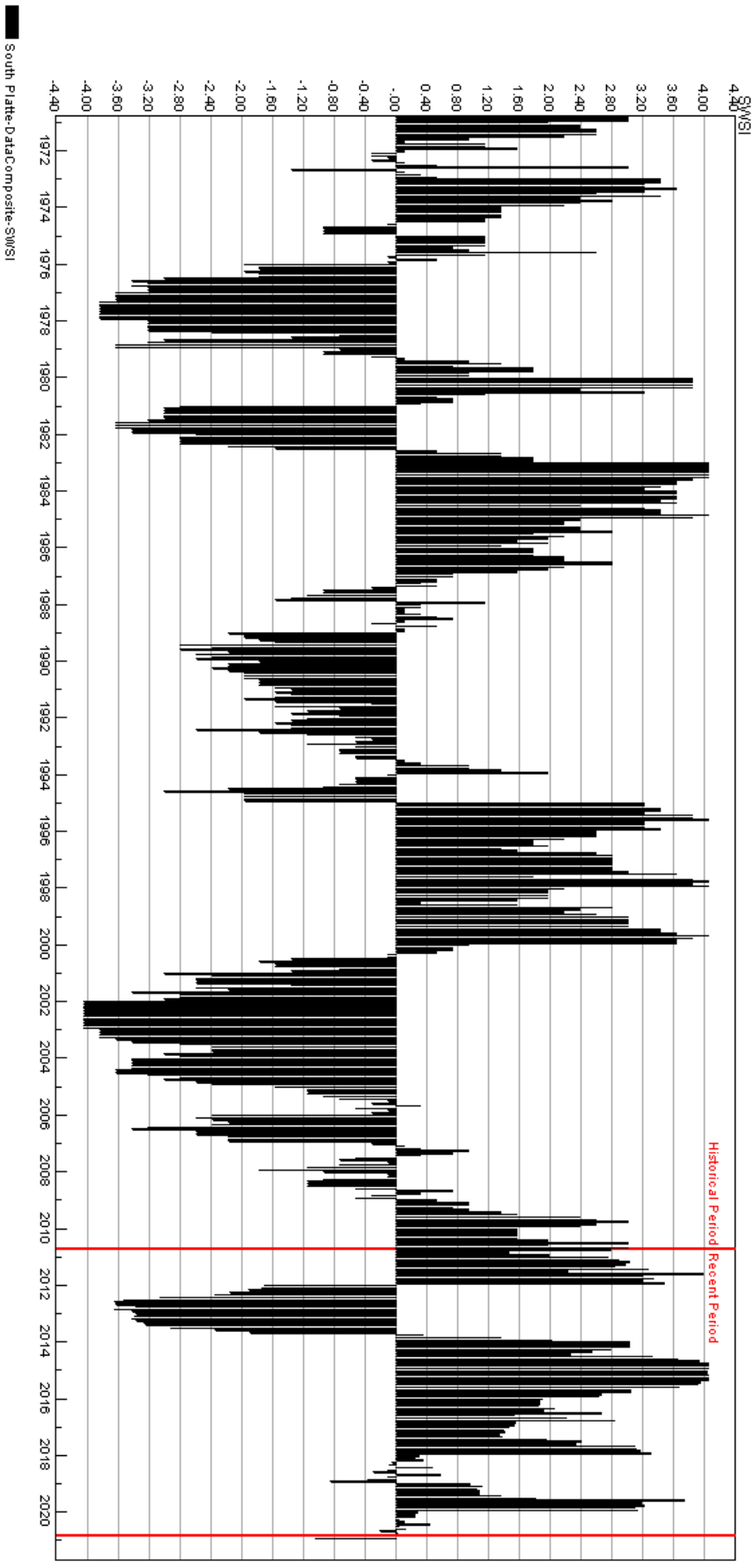
The month of November represented the start of the reservoir storage filling season. With the continued trend of below average precipitation and below average streamflows, many reservoirs on the eastern plains are empty or near empty resulting in senior calling water rights on the mainstem of the South Platte River and tributaries by reservoirs. The month of November was controlled by a Jackson Reservoir 1902 first fill and 1907 storage right call on the upper end of the South Platte River Basin. The lower end of the basin was controlled by a North Sterling 1922 call placed during all of November and a downstream 1995 Julesburg Reservoir (Harmony #1 Ditch) on the lower end of the South Platte River near the state line. With many of the reservoirs below average and the reservoirs on the eastern plains empty to near empty at the start of November, it is anticipated that the calls on the South Platte will be controlled by senior reservoir calls until they reach winter fill, into the Spring of 2021 snowmelt runoff season.



Reservoir storage levels throughout the South Platte River mainstem ended the month of November below the historical average at the 6 SWSI Representative Reservoirs at 454,579 acre-feet volume, which is 93% of the long term average (1961-current). Additionally, 32 indexed reservoirs throughout Division 1 basin at 86% of the long term average with a storage volume of 588,364 at the end of November, representing 51% full capacity for the reservoirs at the end of November. This is below the long term average of 60% full for the end of November storage in the 32 indexed reservoirs throughout Division 1. 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 start of November. 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 an equal probability of either above or below average temperatures and precipitation throughout the South Platte River Basin and Republican River Basin.



Basinwide Conditions Assessment

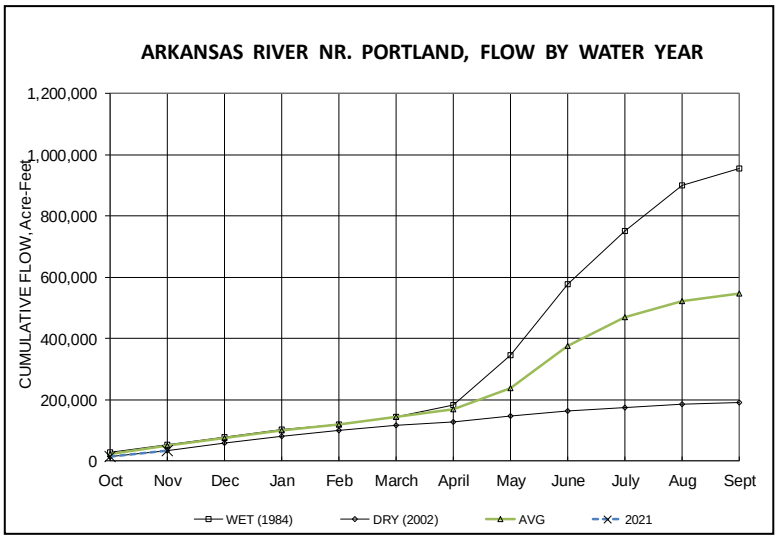
The SWSI value for the month was +0.8.

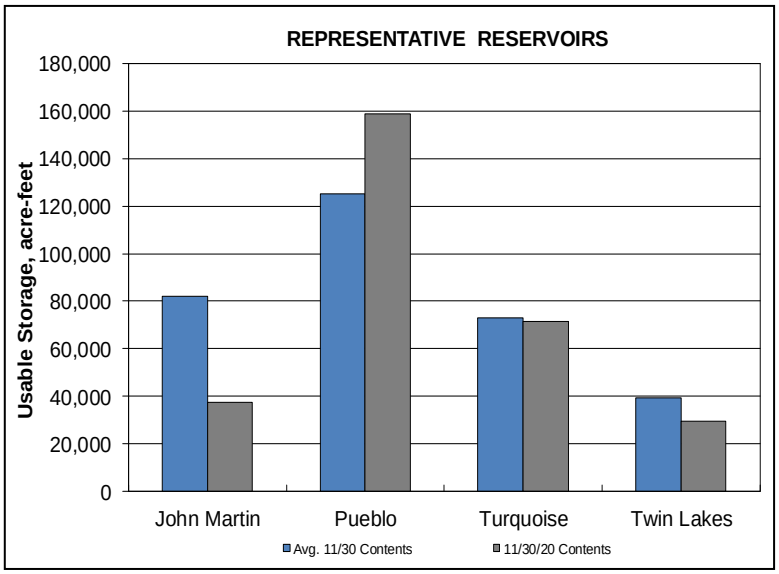
Outlook

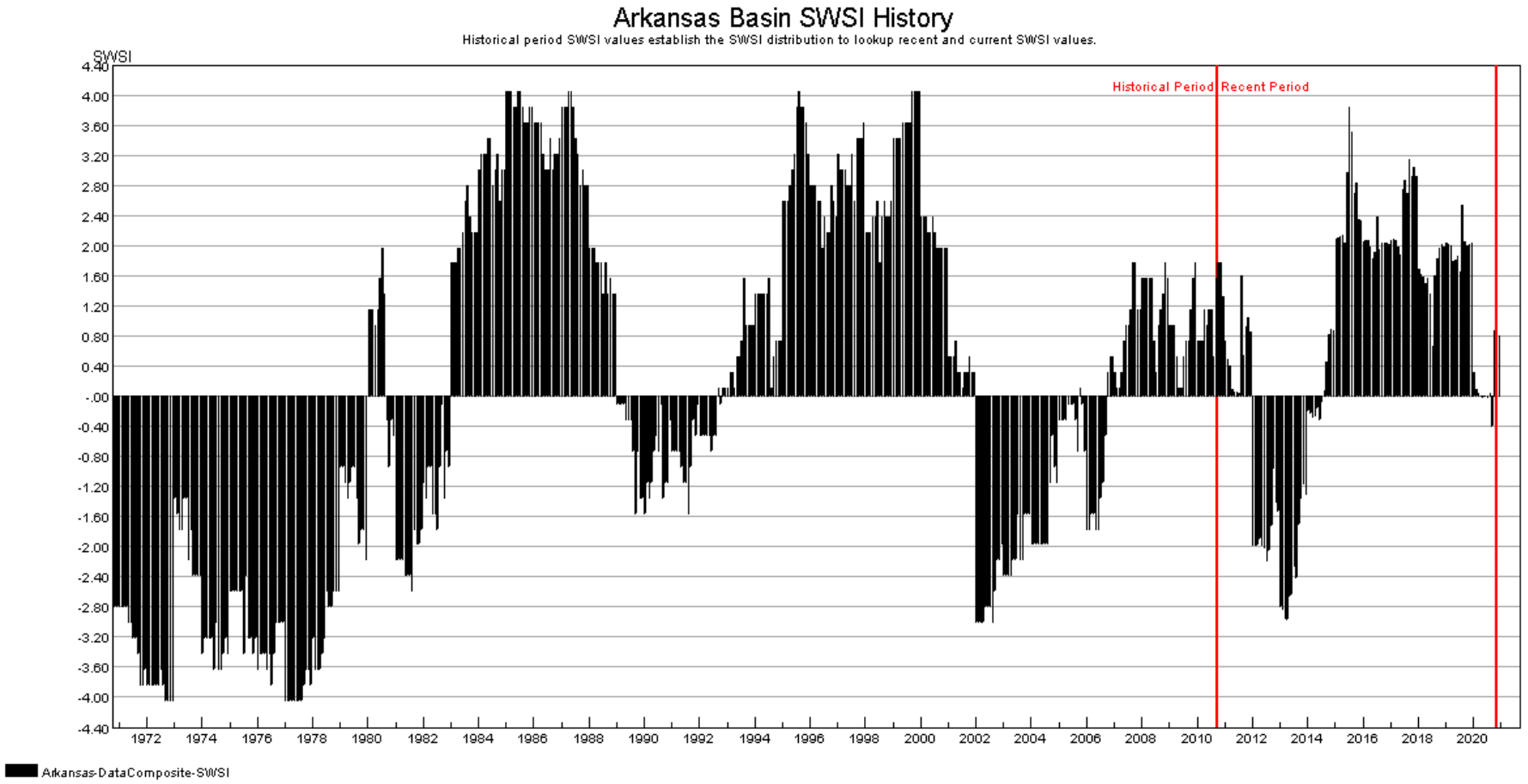
The Pueblo Winter Water Program began operation on November 15, 2020 with storage taking place initially in Pueblo and John Martin Reservoirs and under the Fort Lyon Canal system in Adobe Reservoir. Storage in John Martin Reservoir during November totaled approximately 2,055 acre-feet for Conservation Storage and only 1,295 acre-feet for Winter Water participants. These reported values are lower and higher, respectively, than last year. Storage overall under the Pueblo Winter Water Program in November totaled approximately 13,231 acre-feet in all storage locations, with 4,956 acre-feet in Pueblo Reservoir alone. These storage levels are generally lower than 2019.

Administrative Concerns

The Division of Water Resources completed the selection process and awarded the contract to Brown and Caldwell to work with DWR on the expanded "Colors of Water" tool. Brown and Caldwell will work with DWR to develop "The Arkansas River Colors of Water and Forecasting Tool" which will provide users with the ability to "see" water operations as they happen on the river in real-time. The tool will support transparent river administration and water management throughout the basin.






Arkansas 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
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-3.20
-3.60
-4.00
-4.40
1972
1974
1976
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1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
Arkansas-DataComposite-SWSI

Basinwide Conditions Assessment

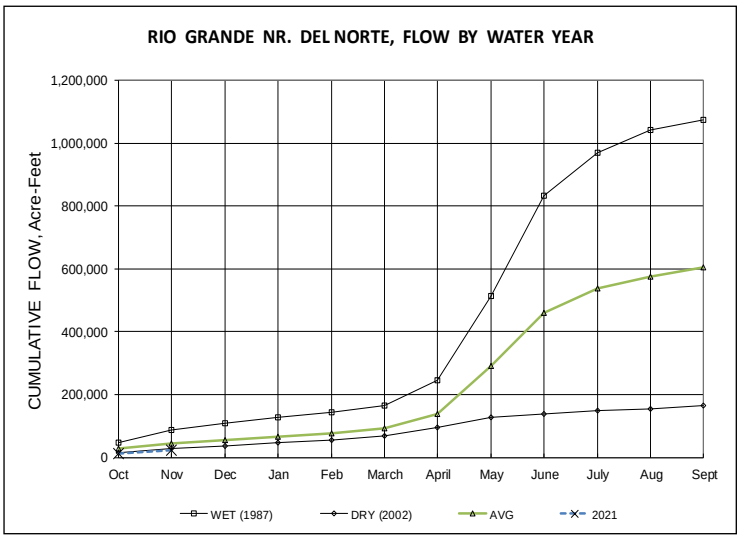
The SWSI value for the month was +1.1.

Flow at the gaging station Rio Grande near Del Norte averaged only 202 cfs (74% of normal). The Conejos River near Mogote had a mean flow of 82 cfs (92% of normal). Precipitation during November in Alamosa was 0.33 inches, 0.09 inches below normal. A decent snowstorm on November 24 blanketed most of the valley floor.

Streamflow levels in most drainages of the upper Rio Grande basin continued to be below normal during November. But the declining historic streamflow level has dropped to nearly the same as current streamflow in the Valley. Hopefully, the general trend of below average streamflow since July has been reversed.

Outlook

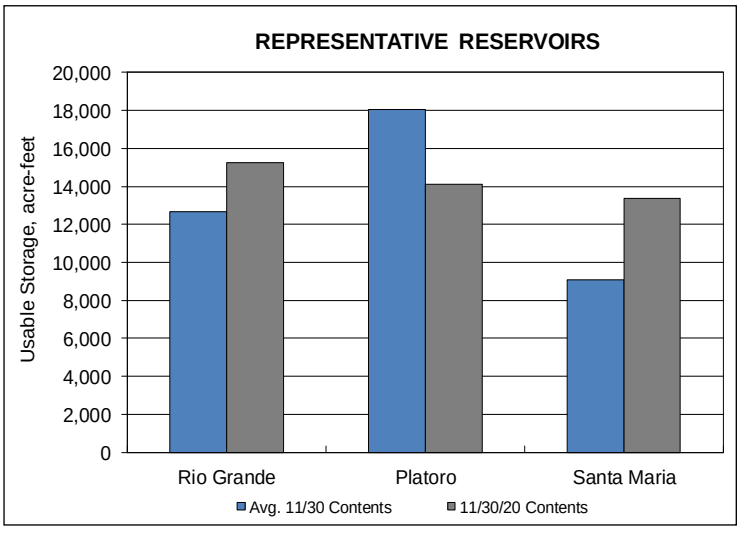
Weather conditions have been generally very pleasant with sunny days and mild temperatures this autumn. A glance at the snowpack conditions during the first week of December indicates most of the upper Rio Grande basin is near average after four good snowstorms in the mountains so far this Fall. Long-range weather forecasts continue to predict above normal temperatures and below normal precipitation for the next several months.



Administrative/Management Concerns

Colorado will slightly over-deliver on the amount required to meet the Rio Grande Compact delivery requirement to New Mexico and Texas during 2020. Each basin could have around 4,000 acre-feet of delivery credit to begin 2021.

December 1st was the deadline for annual submittal of meter readings on irrigation wells in Water Division 3. This year, on-line reporting was required in an effort to streamline the process and save a few trees. Compliance has been generally good, with a few stragglers still working out data submittal issues with the staff.

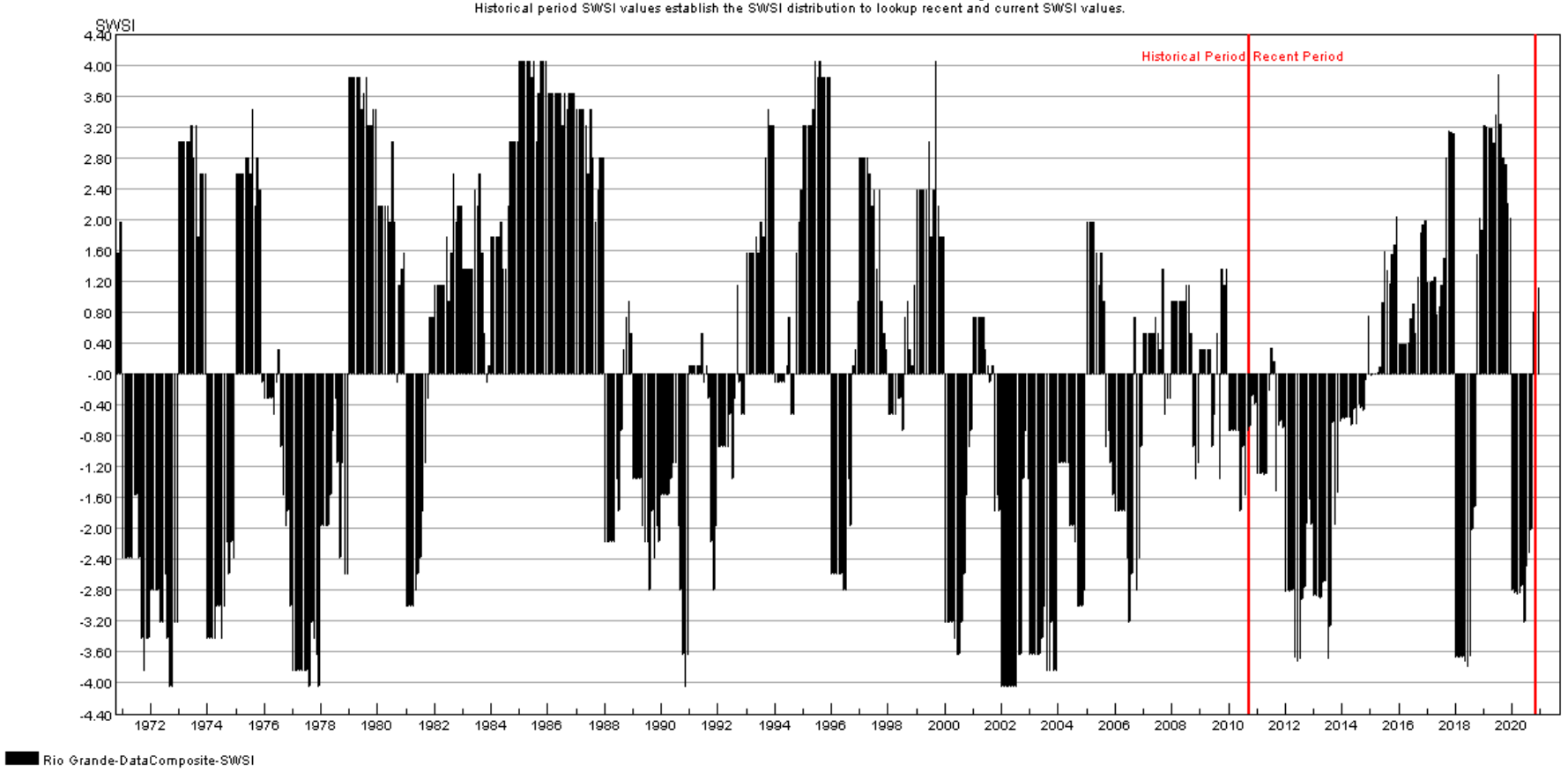


Public Use Impact

The early snowstorms helped put the "basin to bed wet". This is a situation water users prefer to hear and is a very welcome situation after the very dry summer weather.

Rio Grande 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 -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

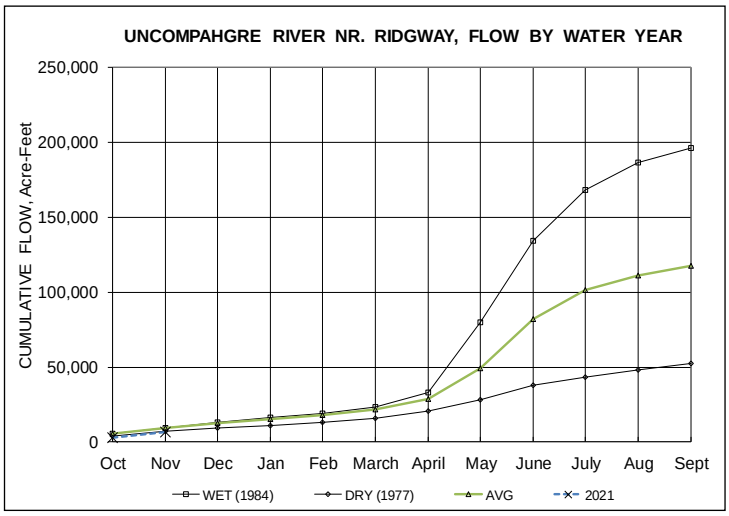
Unfortunately, NOAA's El-Nino/Southern Oscillation (ENSO) forecast predicts a 95% chance of La-Nina conditions continuing through March of 2021. Typical La-Nina conditions are reflected in the National Climate Prediction Center forecasts for the December to February period, which predict lower than average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

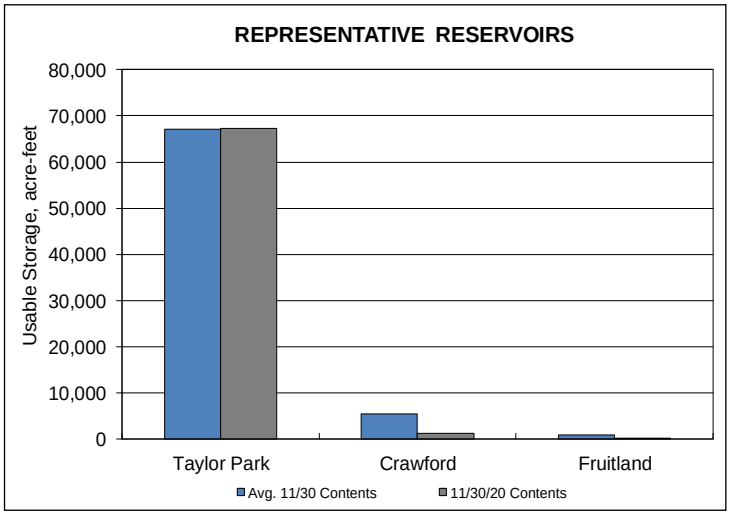
Administrative/Management Concerns

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.



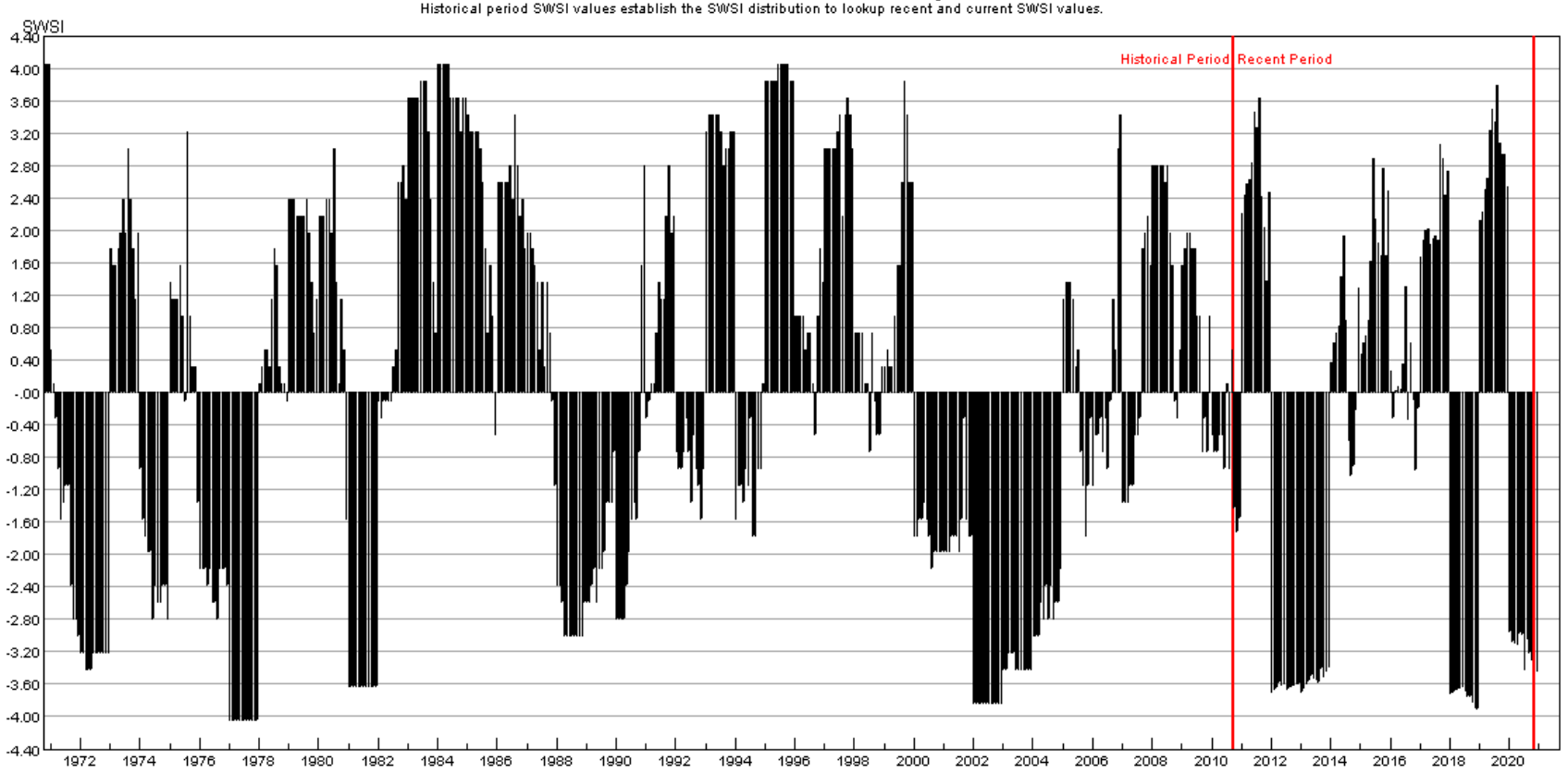


Public Use Impacts

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.



Basinwide Conditions Assessment

The SWSI value for the month was 0.0.

Outlook

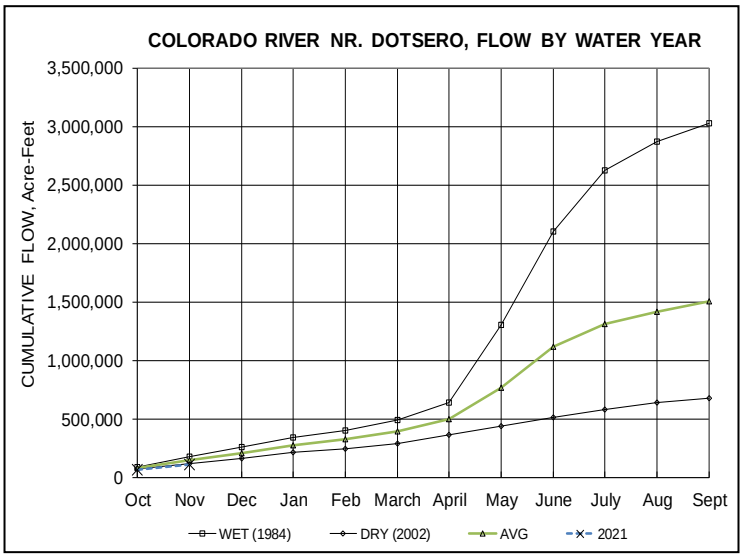
Colorado River flows are running below average with tributary flows also running below average throughout December. As of December 21, the Upper Colorado River Basin snowpack was 71 percent of median snow water equivalent and 64 percent of average precipitation. Forecasts call for above average to neutral precipitation with above and below normal temperatures for western Colorado through December.

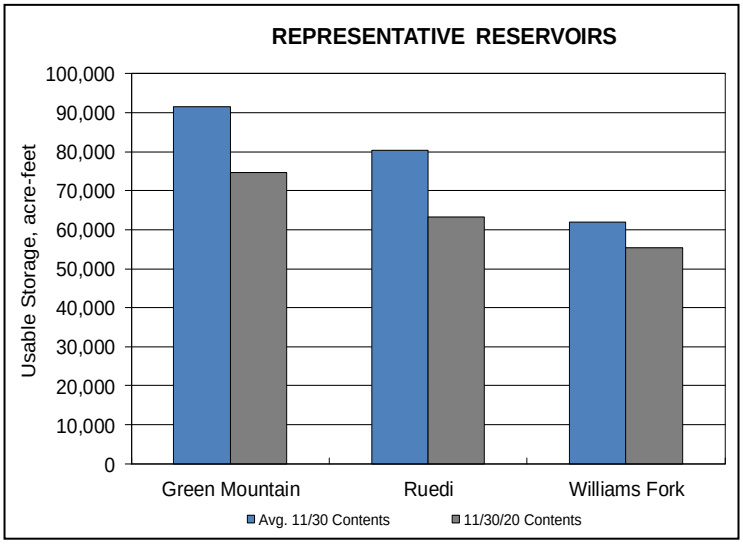
Administrative/Management Concerns

The call on the Colorado River mainstem is the Senior Shoshone (1250cfs) water right. Green Mountain is releasing to pass inflows, release contract water, CB-T replacement water and HUP water. Government Highline and Orchard Mesa Irrigation Ditches are running for power.

Public Use Impacts

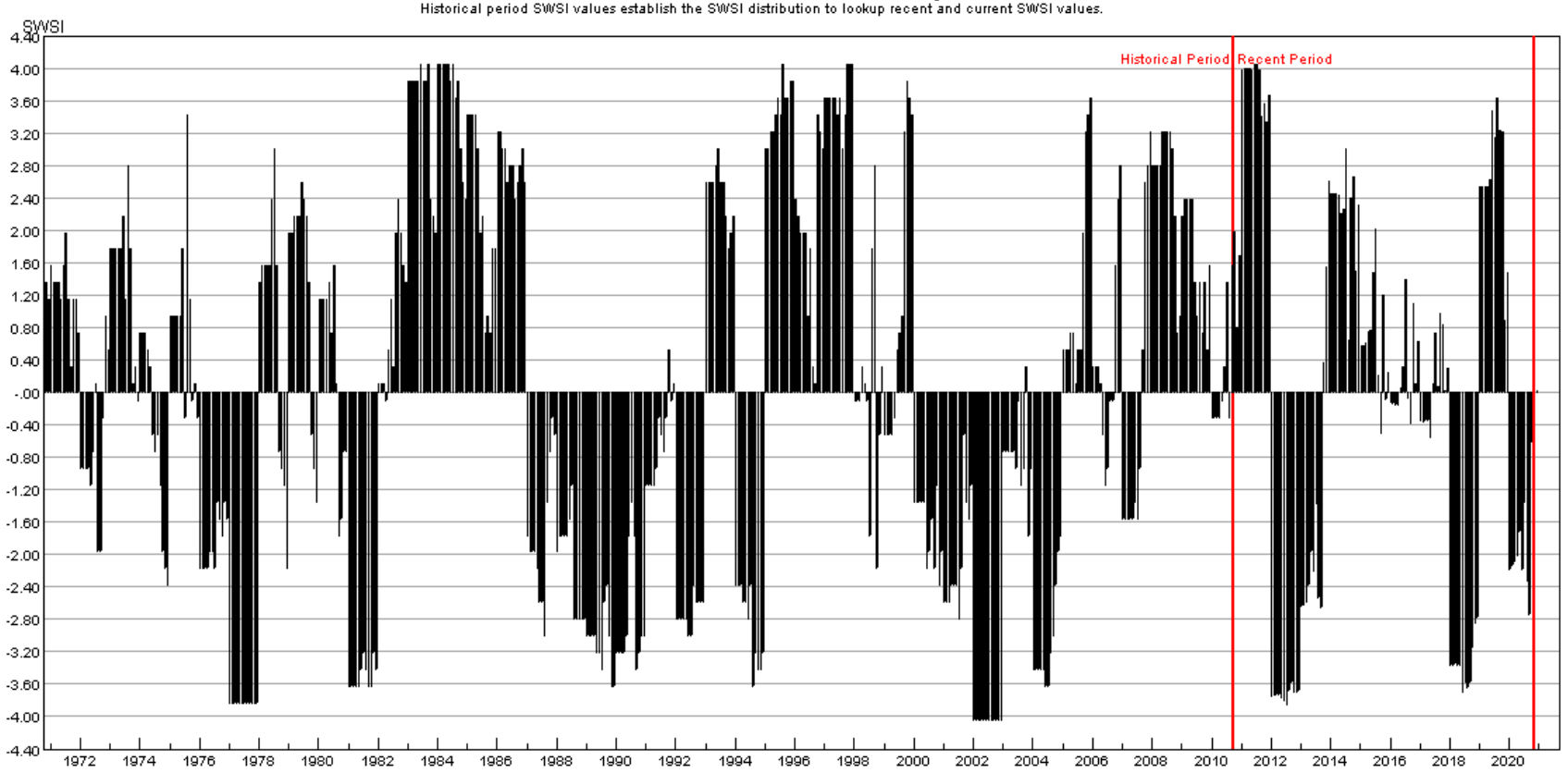
Short and Long term forecasts indicate above average temperatures with below average precipitation. There are below average soil moisture conditions due to the lack of precipitation from April to present. The river forecasters are pessimistic at this time about any chances of drought recovery in the early part of 2021.





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.

Snowpack *(25 sites)* – Yampa and White River basins were **63%** of the monthly median for SWE. This is down from last year's SWE median of 107%. The North Platte River basin was **72%** of the monthly median for SWE and is down from last year's SWE median of 112%. For the entire Yampa, White and North Platte River basins the lowest percent of median was at the Battle Mountain SNOTEL site at 0%. The highest percent of median was at the Bear River SNOTEL station at 139%.
**Averages are from 1981-2010 records*

Precipitation (24 sites) – Yampa and White River basins were **61%** of the monthly average, putting the basin at 49% of average for the water year to date. This is up from last year's monthly average of 54%, and down for last year's water year to date of 77%. North Platte River basin was **76%** of the monthly average, putting the basin at 58% for the water year to date. This is up from last year's monthly average of 67%, and down for last year's water year to date of 92%. For the entire Yampa, White and North Platte River basins the lowest percent of average, at 20%, was the Sandstone RS SNOTEL station. The highest, at 112%, was the Arapaho Ridge SNOTEL station, with 3.4 inches.
**Averages are from 1981-2010 records*

Temperatures – The average temperature for NOAA Colorado Climate Division 2: Colorado River Drainage was **34.8° F.** This is +4.2°F from the average of 30.6°F. This temperature ranks 111th for lowest of the previous 126 years of data. For the NOAA Colorado Climate Division 4: Platte Drainage, the average temperature was **38.4°F**, +5.0°F from the average of 33.4F, ranking 117th.
**Averages are from 1901-2000 records*

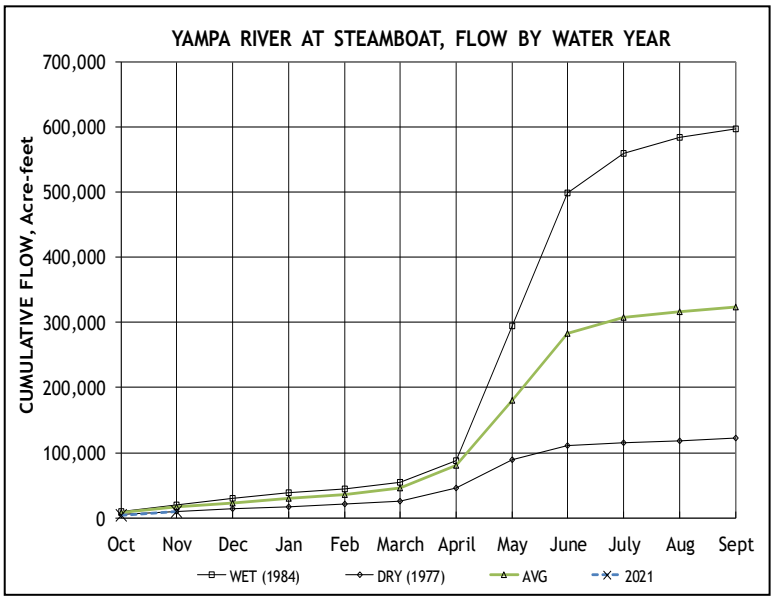
Reservoir Outlook

Elkhead Reservoir – November 30th, 2020 capacity level was 15,892 AF of 25,550 AF – 62.2% capacity.

Fish Creek Reservoir – November 30th, 2020 elevation was 9864' at 1,703 AF of 4,160 AF – 40.9% capacity.

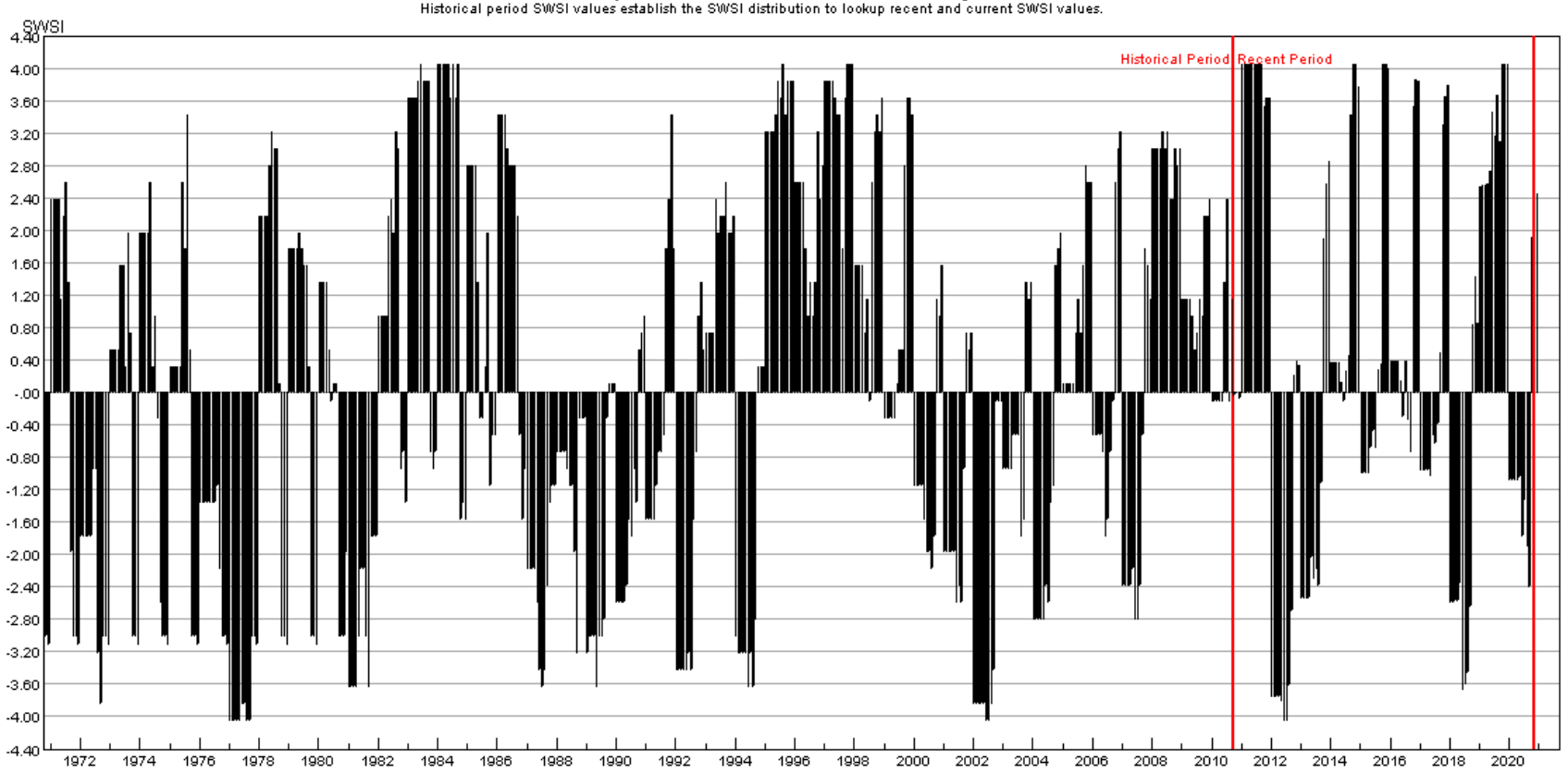
Stagecoach Reservoir – November 30th, 2020 elevation was 7198.8' at 32,400 AF of 36,500 AF – 89% of capacity, 106% of average, 91% of last year.

Yamcolo Reservoir – November 30th, 2020 capacity level was at 3812 AF of 8,700 AF – 44% of capacity, 79% of average, 47% of last year.
**Averages are from 1901-2000 records*



Yampa-White Basin SWSI History

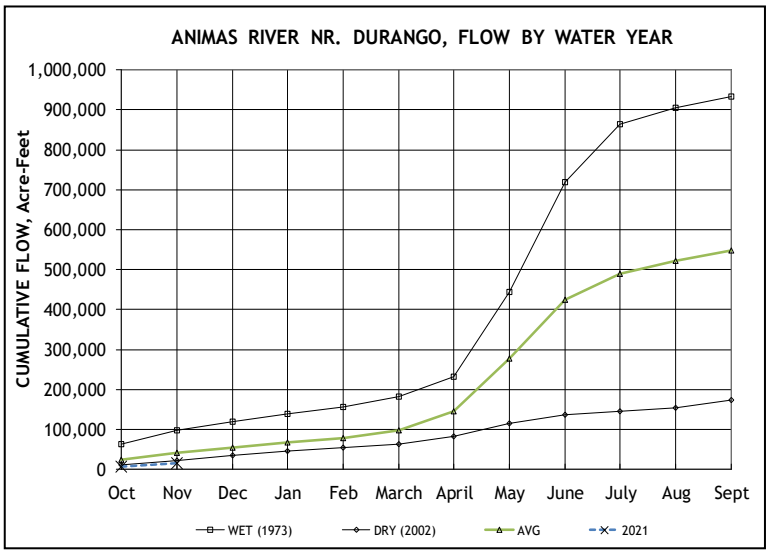
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



Basinwide Conditions Assessment

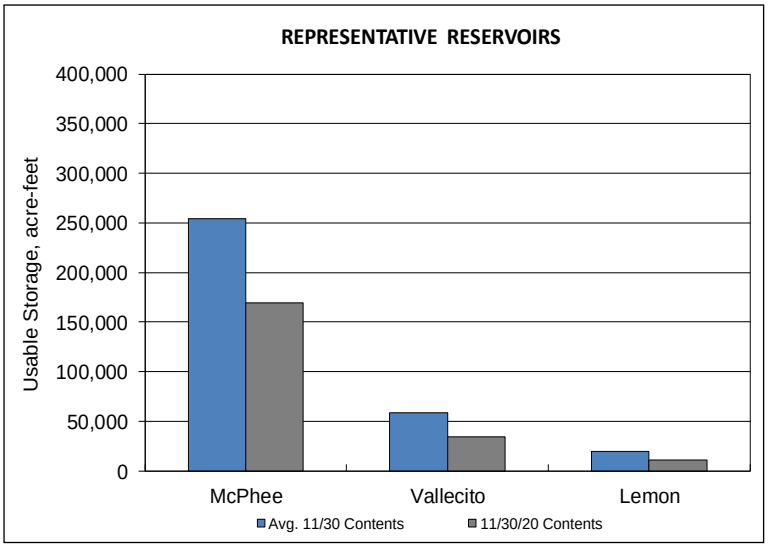
The SWSI value for the month was -0.8.

Flow at the Animas River at Durango averaged 140 cfs (49% of average). The flow at the Dolores River at Dolores was estimated to average 36 cfs (44% of average). The La Plata River at Hesperus averaged 4.2 cfs (40% of average). Precipitation in Durango was 0.76 inches for the month, 49% of the 30-year average of 1.57 inches. Precipitation to date in Durango, for the water year is 0.82 inches, 25% of the 30-year average of 3.46 inches. The average high and low temperatures for the month of November in Durango were 57º and 25º. In comparison, the 30-year average high and low for the month is 52º and 24º. At the end of the month Vallecito Reservoir contained 34,338 acre-feet compared to its average content of 54,428 acre-feet (63% of average). McPhee Reservoir was up to 169,411 acre-feet compared to its average content of 258,529 (66% of average), while Lemon Reservoir was up to 10,810 acre-feet as compared to its average content of 19,259 acre-feet (56% of average).



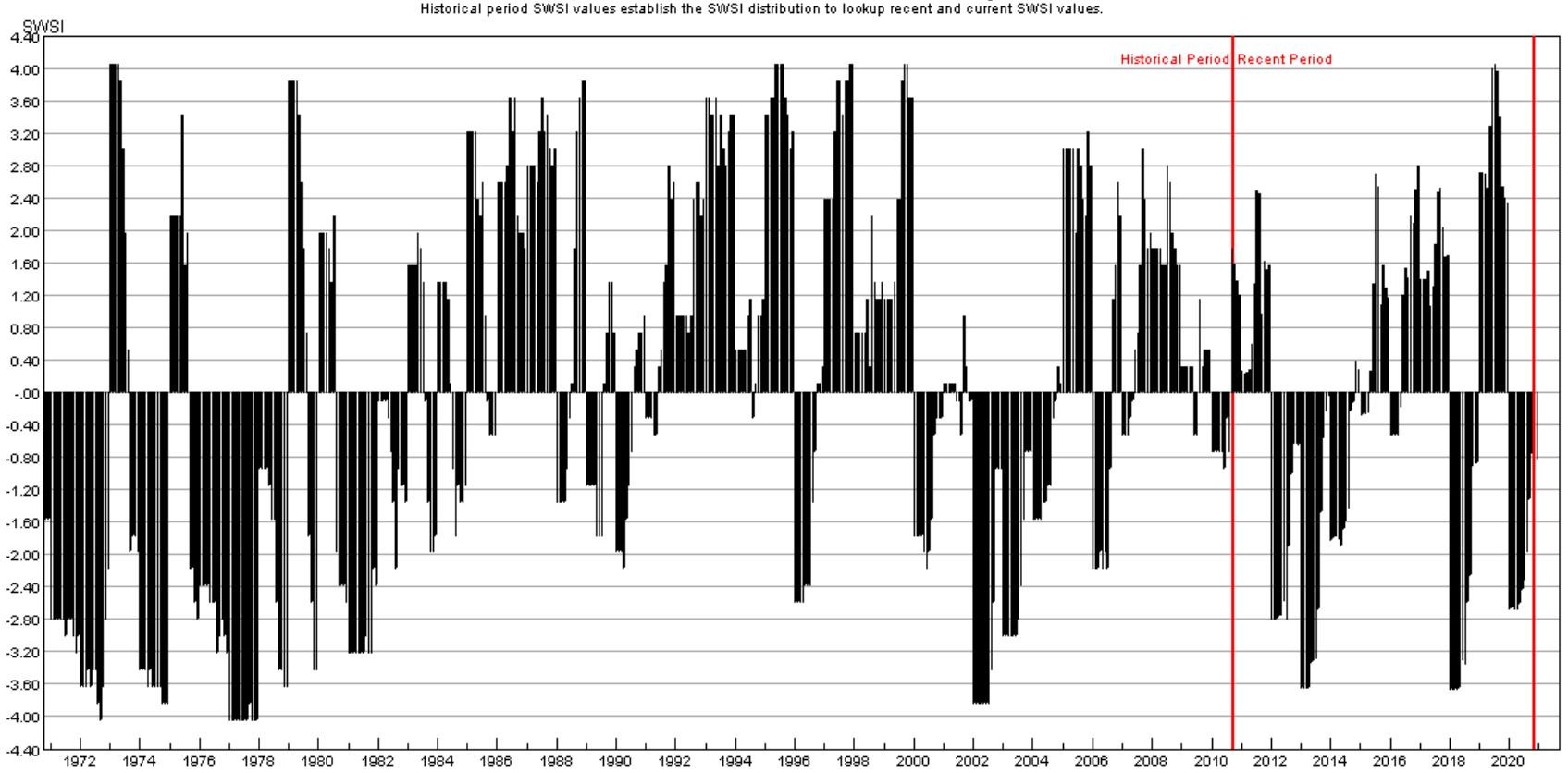
Outlook

Precipitation (0.76 inches) was well below average for November in Durango. There were 87 years out of 126 years of record where there was more precipitation than this year. With the lack of moisture in the area, 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 104 out of 111 years of record where the total flow past the Dolores stream gauge was more than this year. There were 99 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 well below average for this time of year.



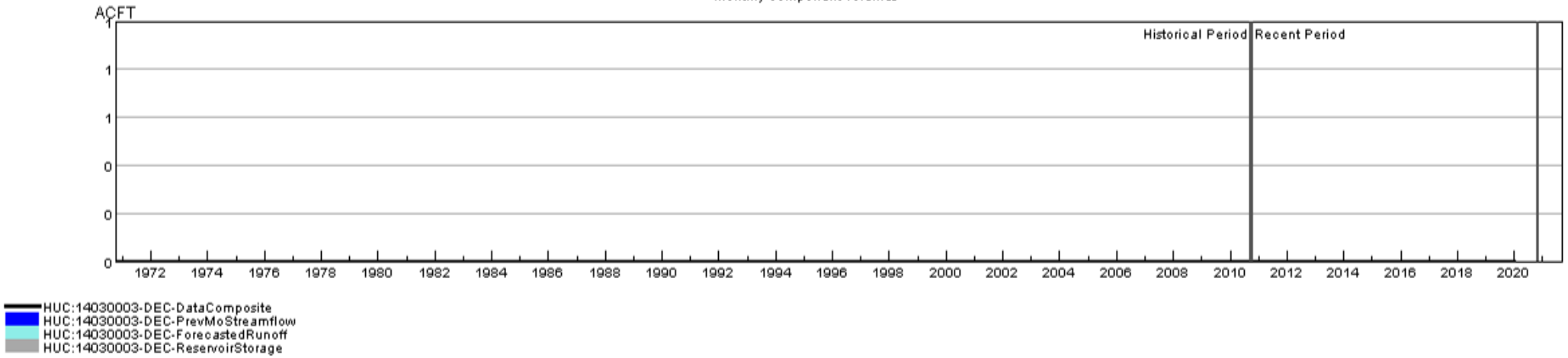
San Juan-Dolores Basin SWSI History

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



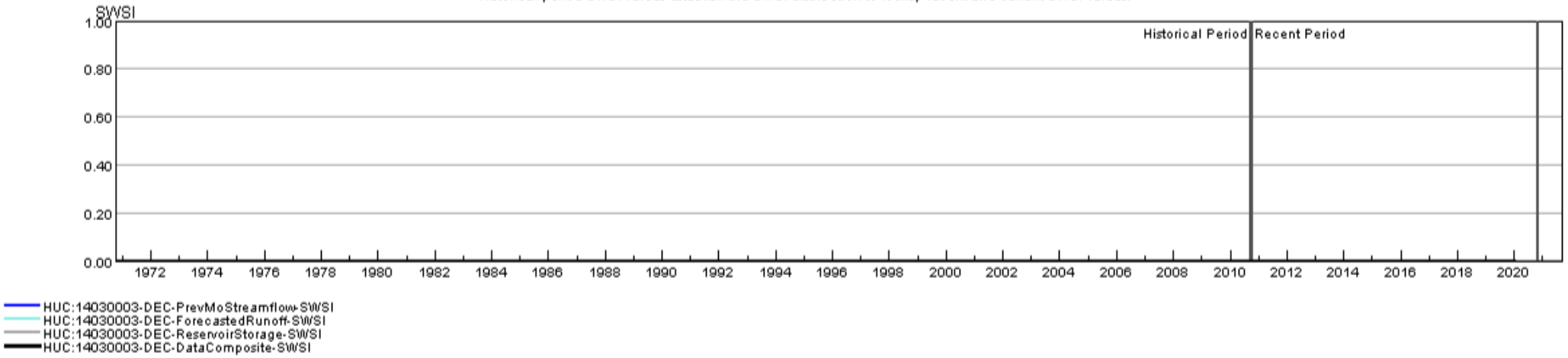
HUC 14030003 (San Miguel) Surface Water Supply - DEC

Monthly component volumes



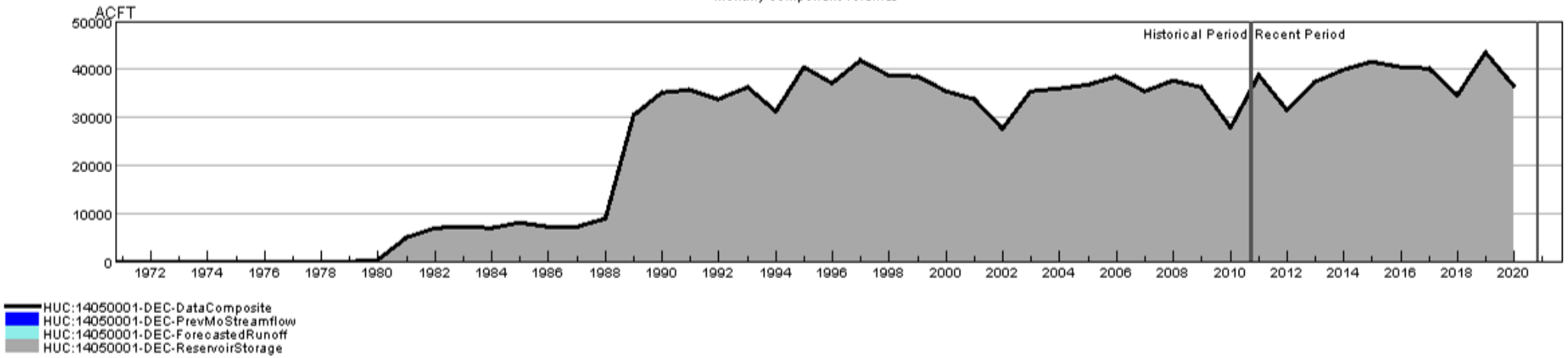
HUC 14030003 (San Miguel) SWSI Values - DEC

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



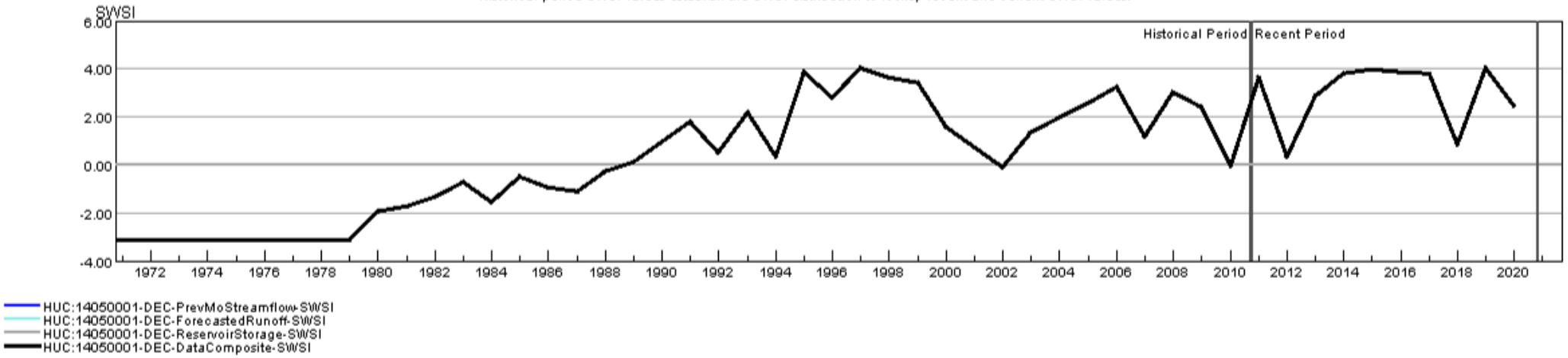
HUC 14050001 (Upper Yampa) Surface Water Supply - DEC

Monthly component volumes



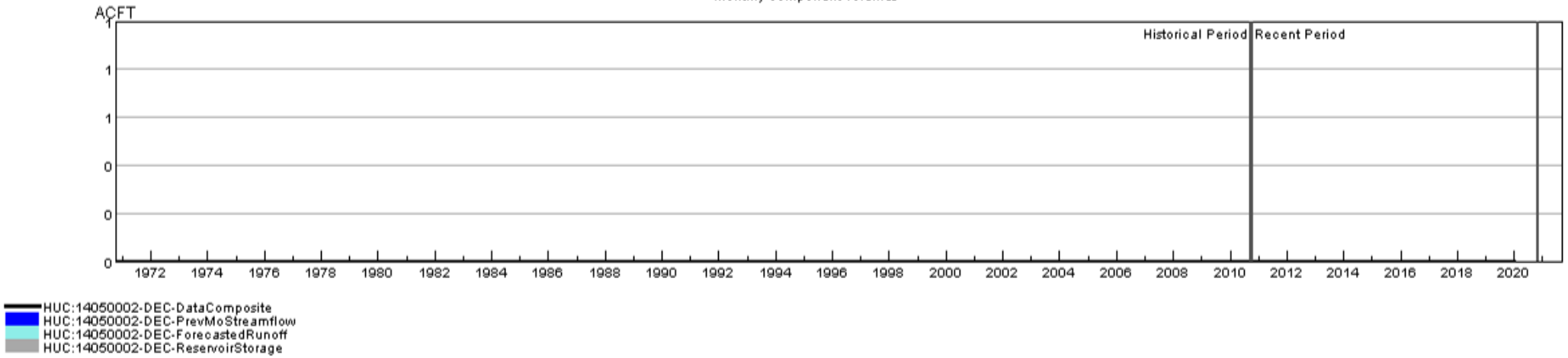
HUC 14050001 (Upper Yampa) SWSI Values - DEC

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



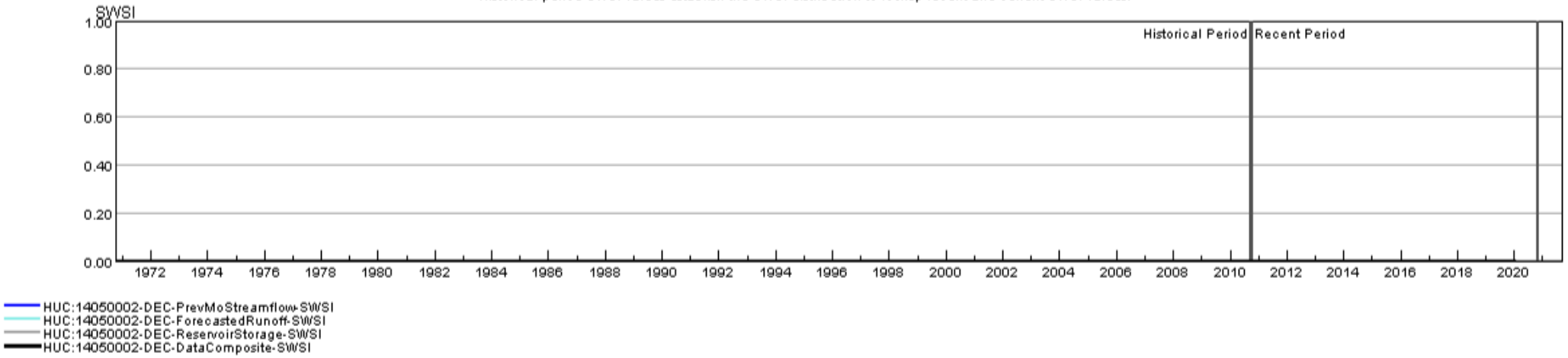
HUC 14050002 (Lower Yampa) Surface Water Supply - DEC

Monthly component volumes



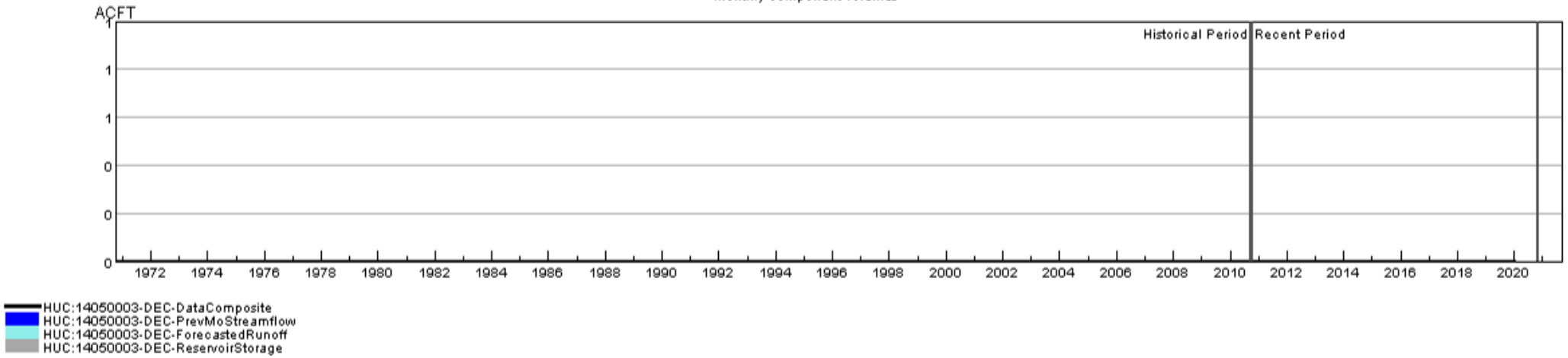
HUC 14050002 (Lower Yampa) SWSI Values - DEC

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



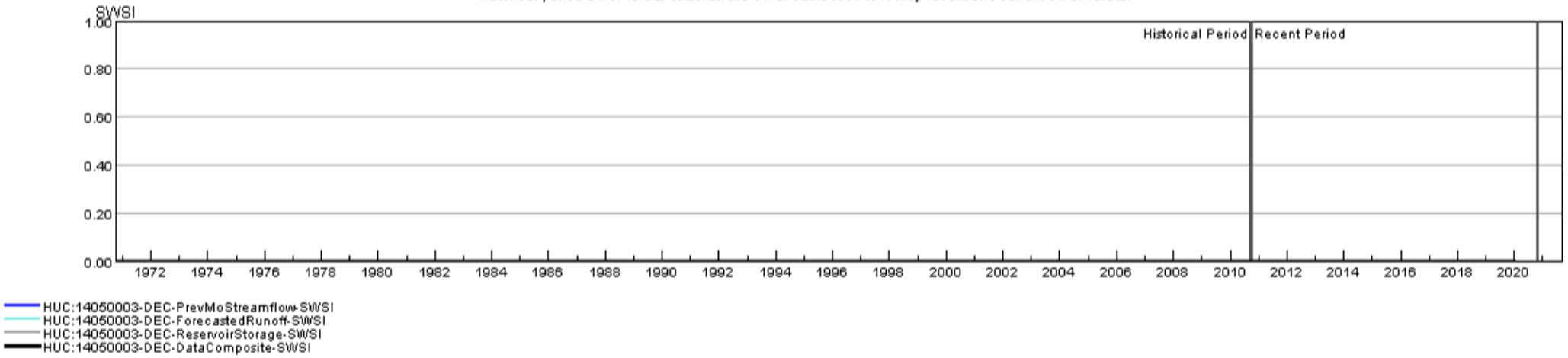
HUC 14050003 (Little Snake) Surface Water Supply - DEC

Monthly component volumes



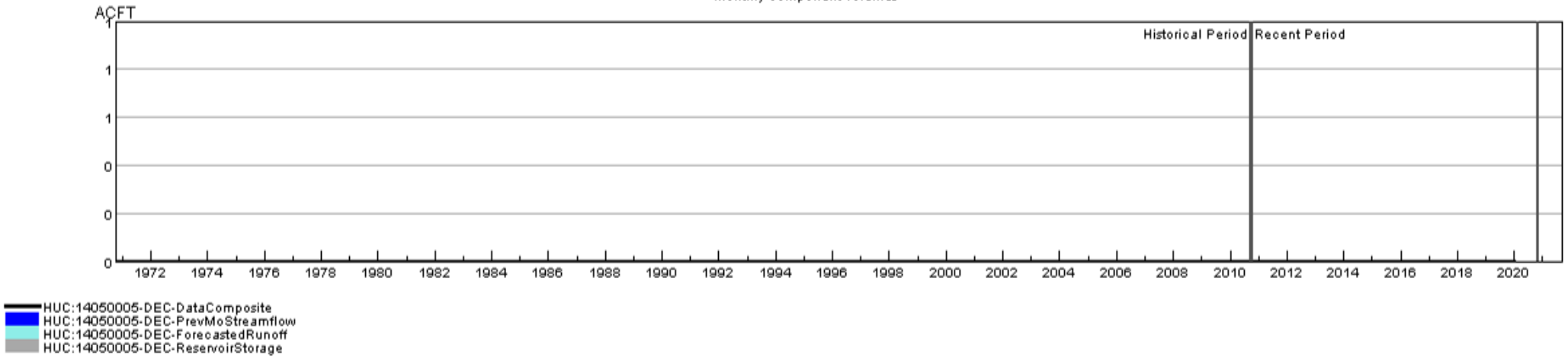
HUC 14050003 (Little Snake) SWSI Values - DEC

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



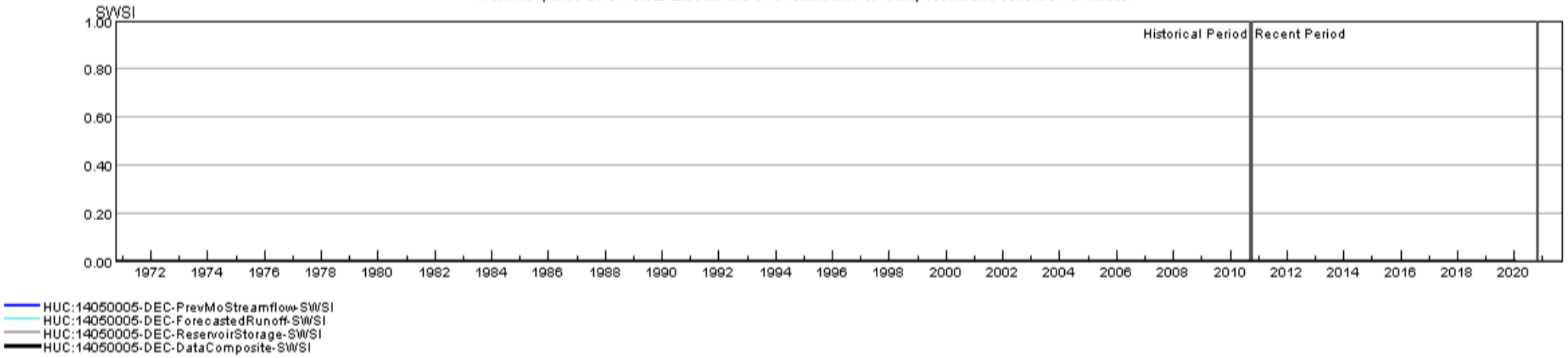
HUC 14050005 (Upper White) Surface Water Supply - DEC

Monthly component volumes



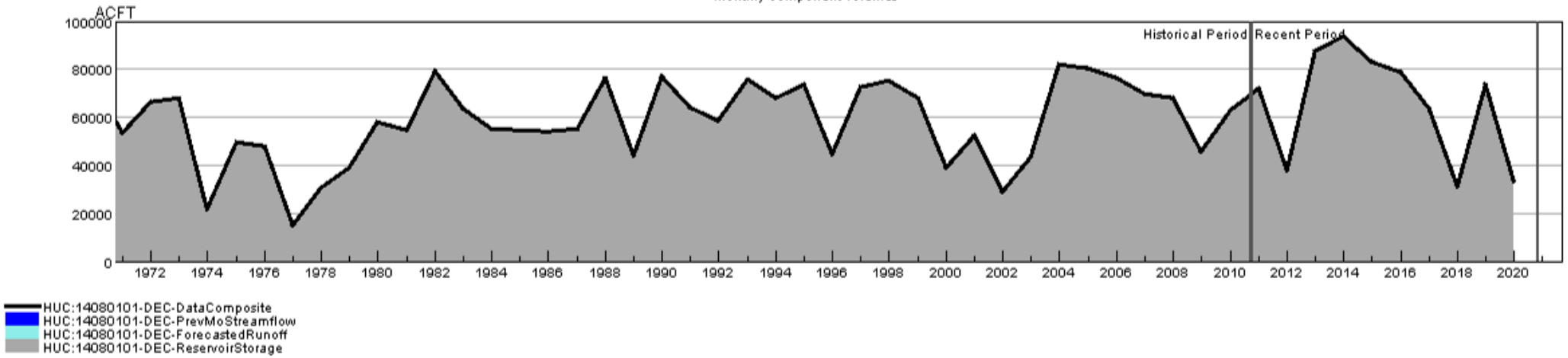
HUC 14050005 (Upper White) SWSI Values - DEC

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



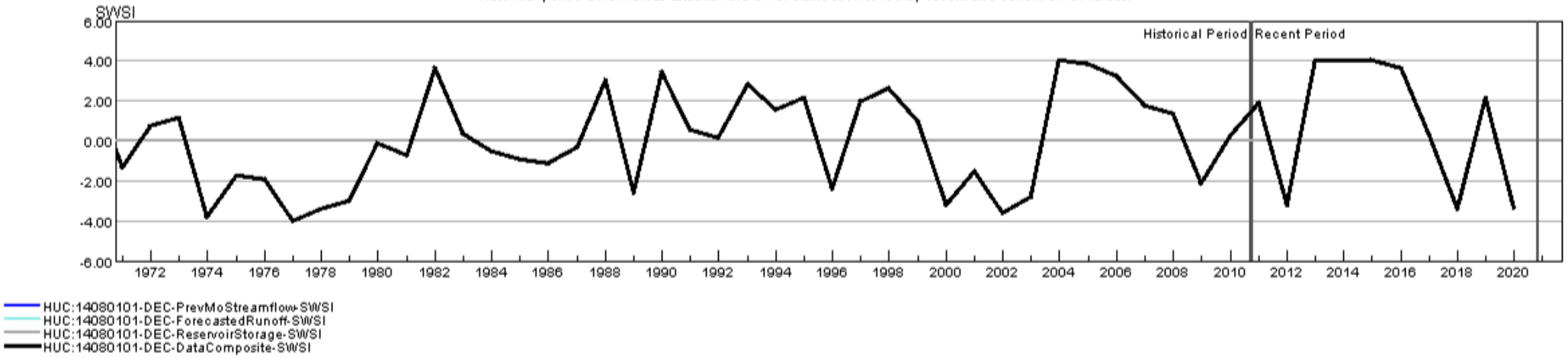
HUC 14080101 (Upper San Juan) Surface Water Supply - DEC

Monthly component volumes



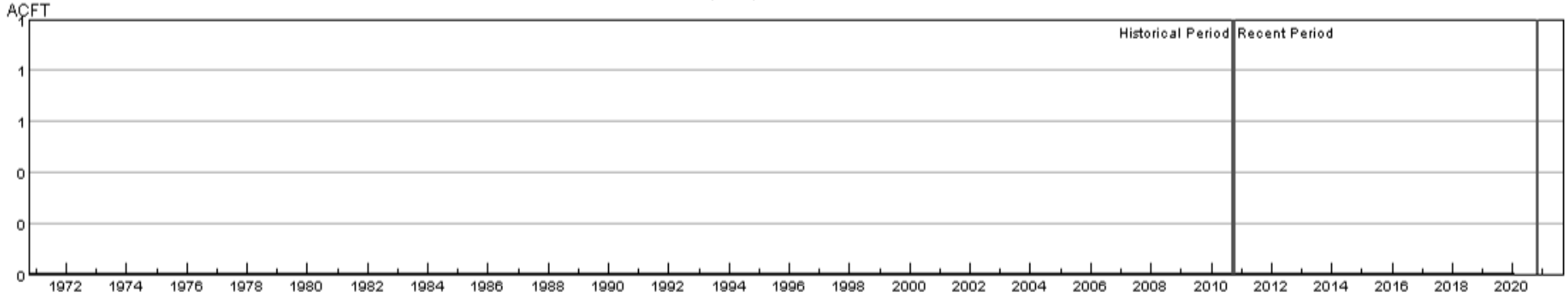
HUC 14080101 (Upper San Juan) SWSI Values - DEC

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



HUC 14080102 (Piedra) Surface Water Supply - DEC

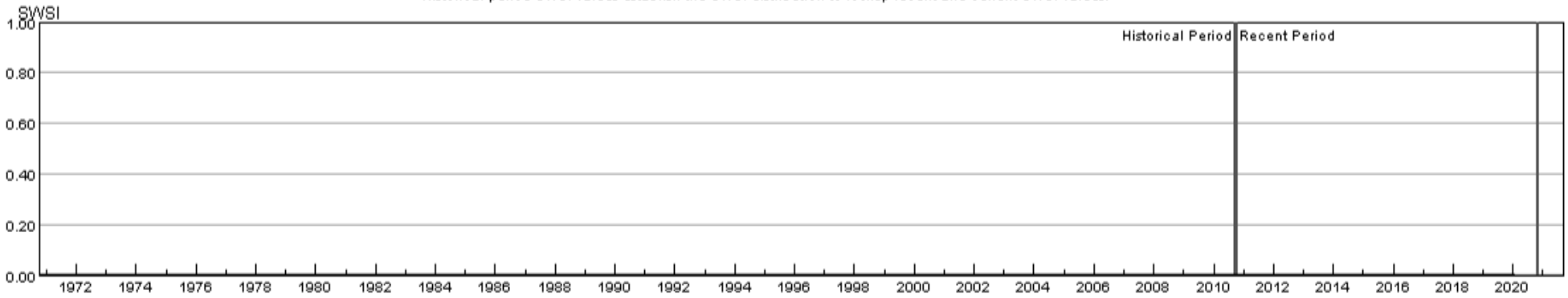
Monthly component volumes



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

HUC 14080102 (Piedra) SWSI Values - DEC

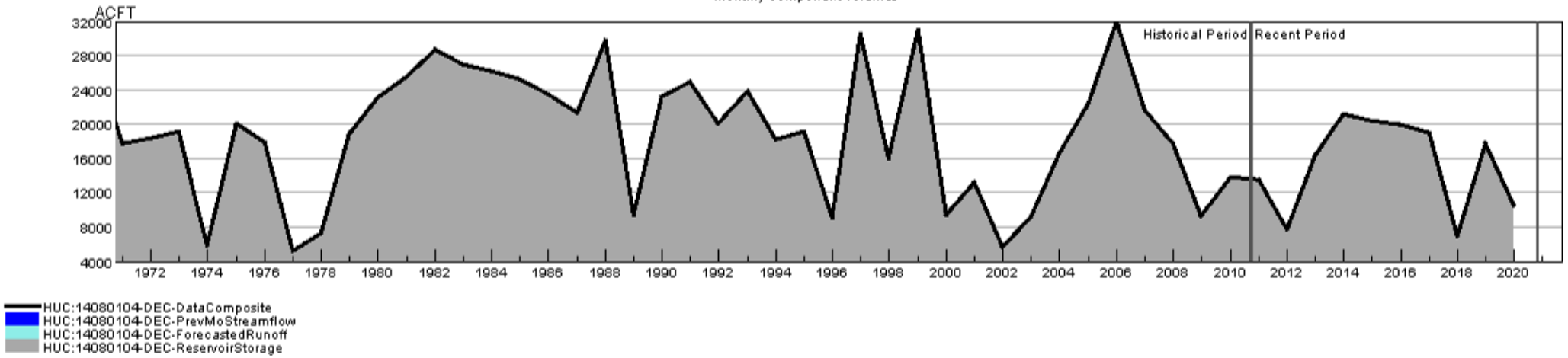
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



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

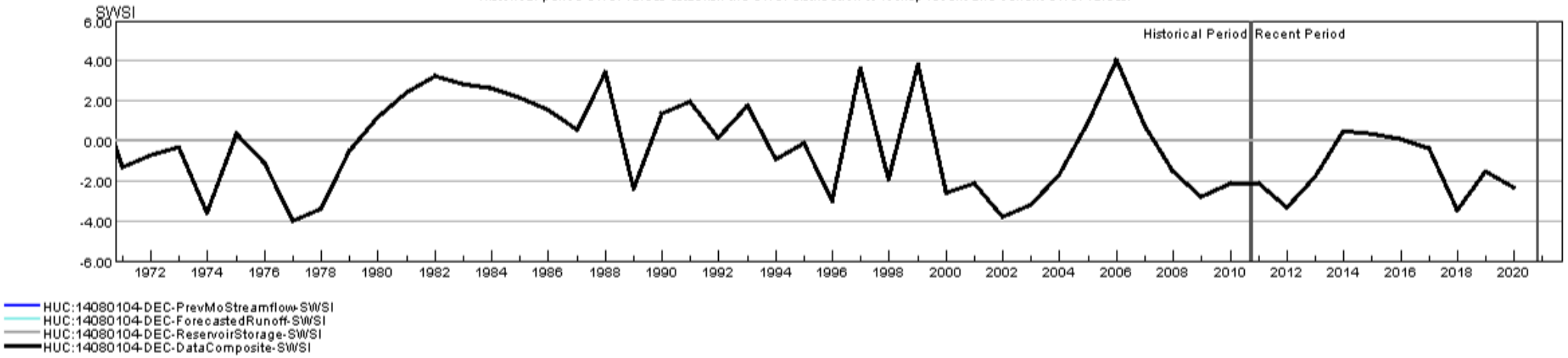
HUC 14080104 (Animas) Surface Water Supply - DEC

Monthly component volumes



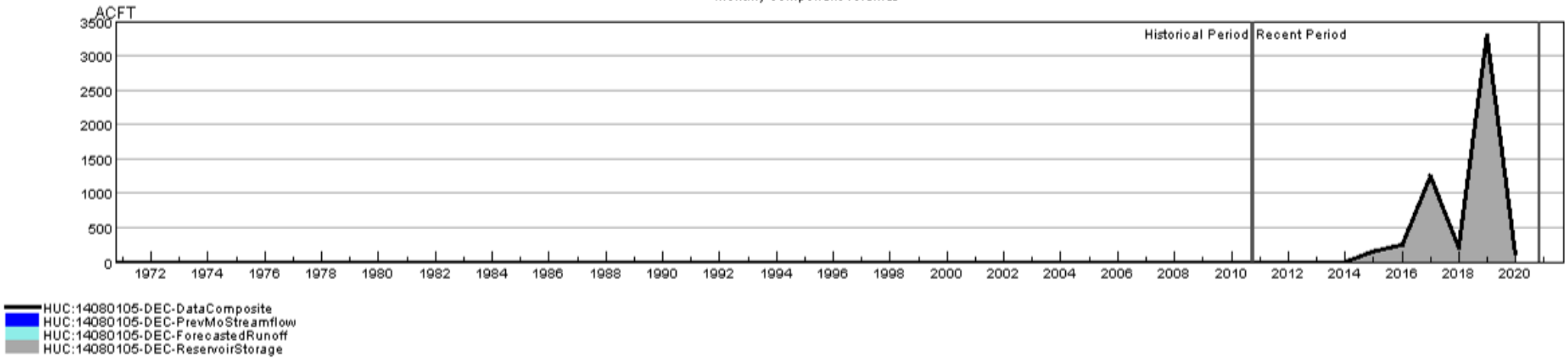
HUC 14080104 (Animas) SWSI Values - DEC

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



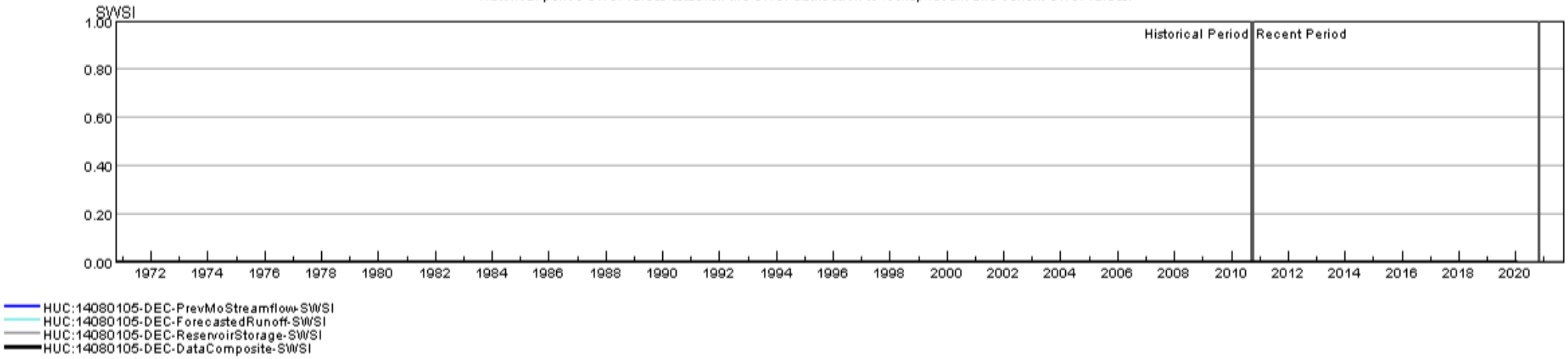
HUC 14080105 (Middle San Juan) Surface Water Supply - DEC

Monthly component volumes



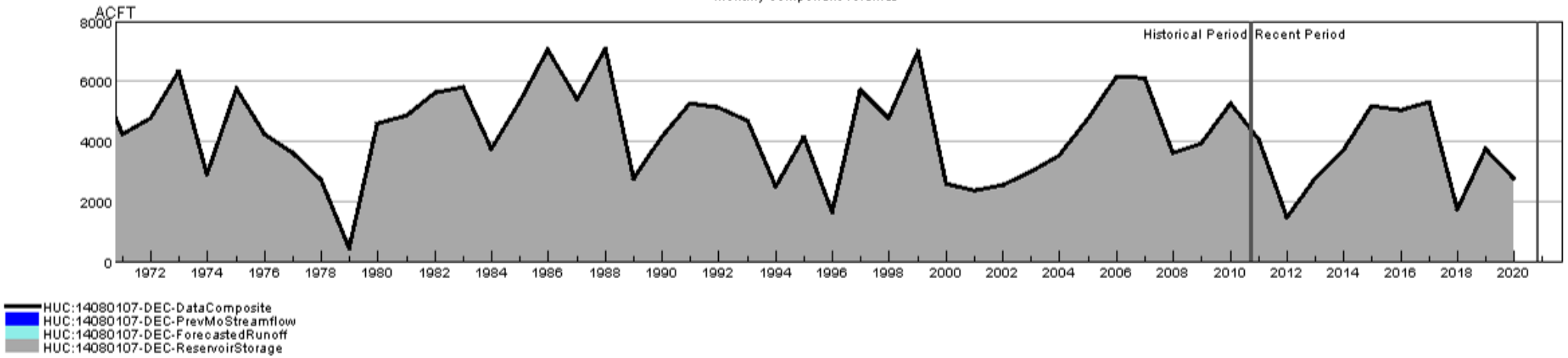
HUC 14080105 (Middle San Juan) SWSI Values - DEC

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



HUC 14080107 (Mancos) Surface Water Supply - DEC

Monthly component volumes



HUC:14080107-DEC-DataComposite
HUC:14080107-DEC-PrevMoStreamflow
HUC:14080107-DEC-ForecastedRunoff
HUC:14080107-DEC-ReservoirStorage

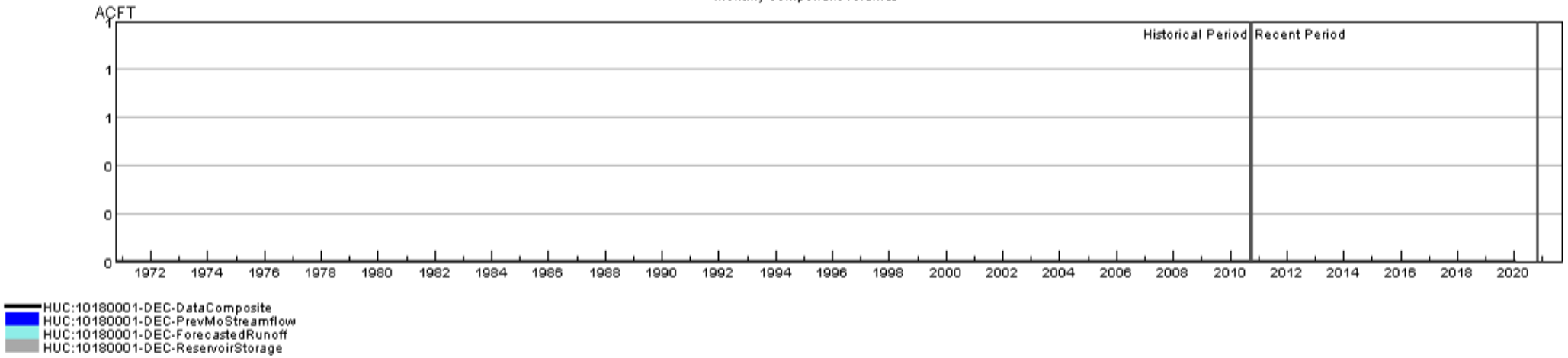
HUC 14080107 (Mancos) SWSI Values - DEC

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

HUC:14080107-DEC-PrevMoStreamflow-SWSI
HUC:14080107-DEC-ForecastedRunoff-SWSI
HUC:14080107-DEC-ReservoirStorage-SWSI
HUC:14080107-DEC-DataComposite-SWSI

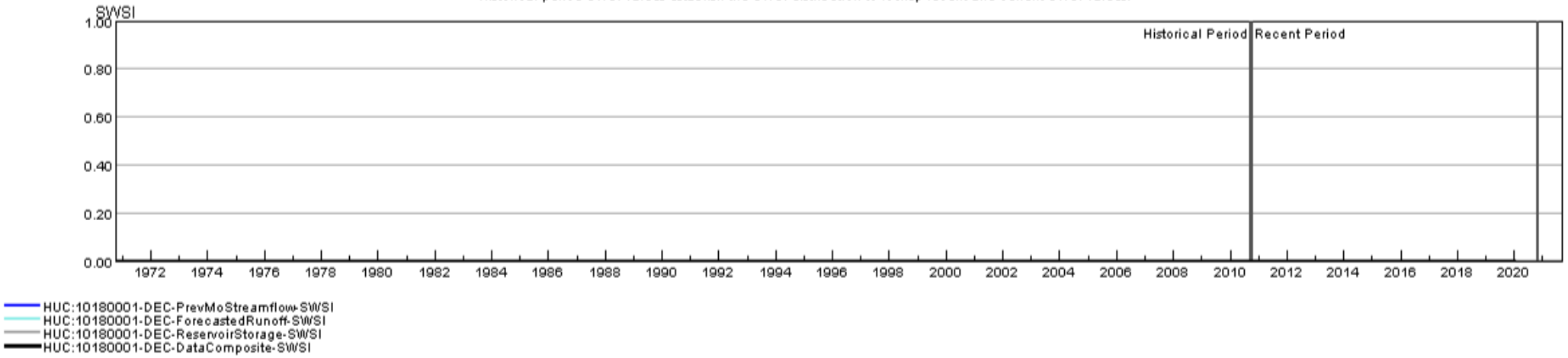
HUC 10180001 (North Platte Headwaters) Surface Water Supply - DEC

Monthly component volumes



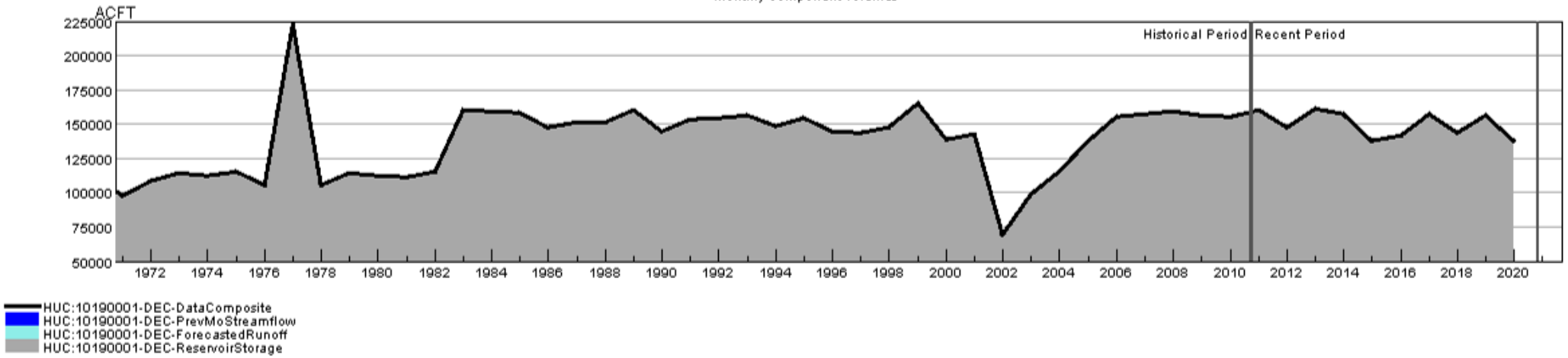
HUC 10180001 (North Platte Headwaters) SWSI Values - DEC

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



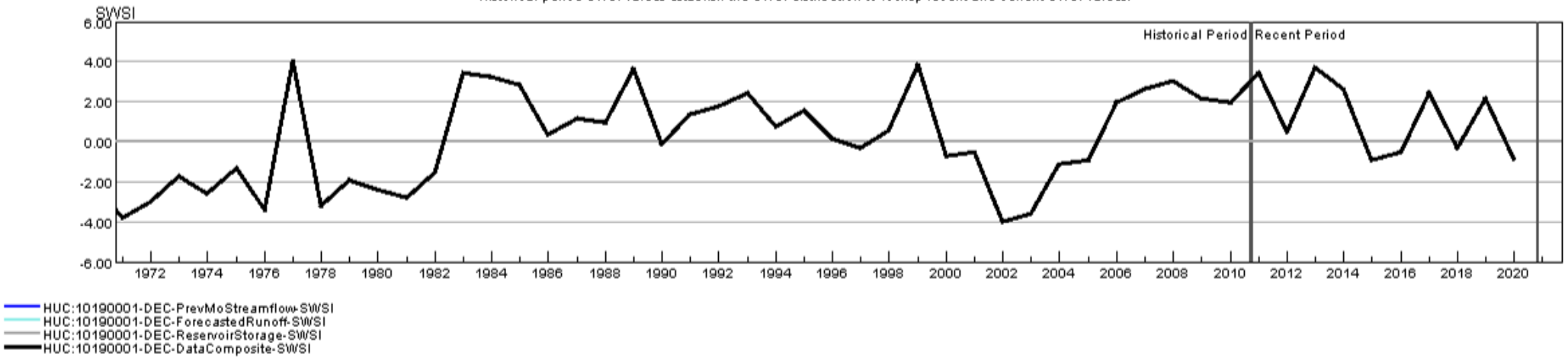
HUC 10190001 (South Platte Headwater) Surface Water Supply - DEC

Monthly component volumes



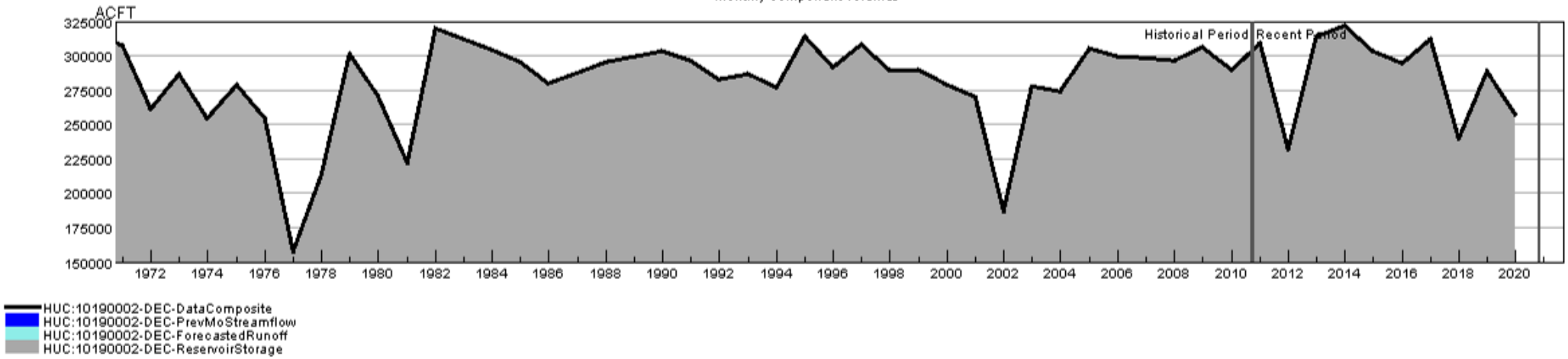
HUC 10190001 (South Platte Headwater) SWSI Values - DEC

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



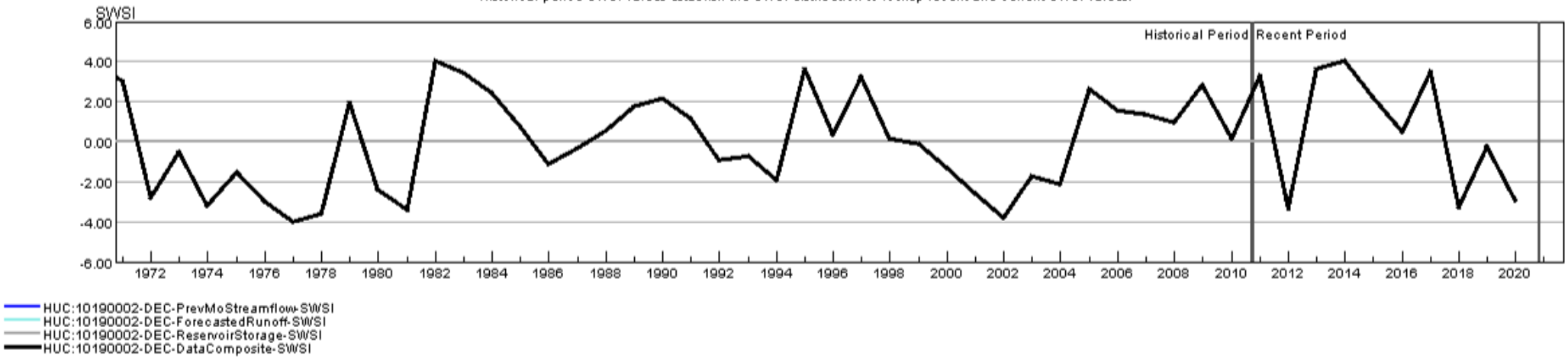
HUC 10190002 (Upper South Platte) Surface Water Supply - DEC

Monthly component volumes



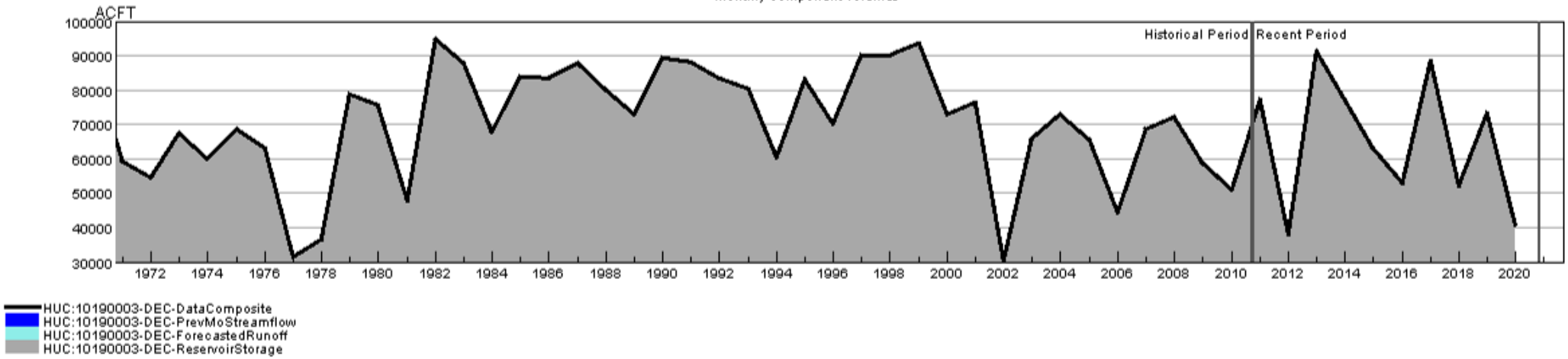
HUC 10190002 (Upper South Platte) SWSI Values - DEC

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



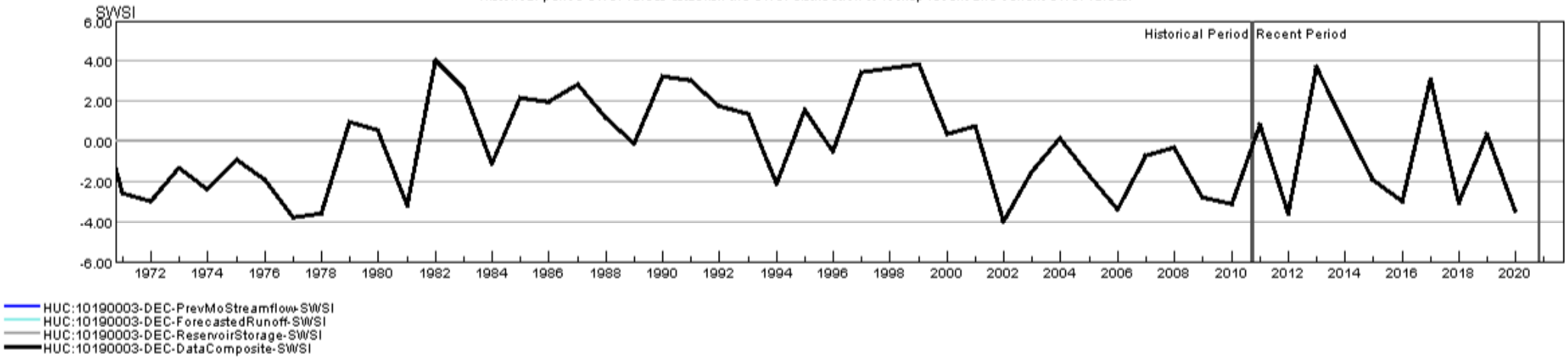
HUC 10190003 (Middle South Platte-Cherry Creek) Surface Water Supply - DEC

Monthly component volumes



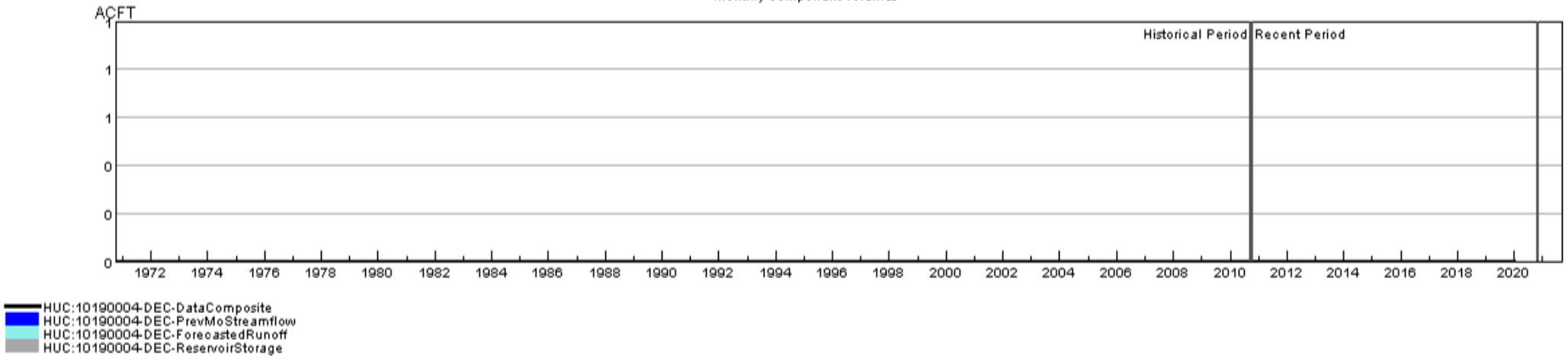
HUC 10190003 (Middle South Platte-Cherry Creek) SWSI Values - DEC

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



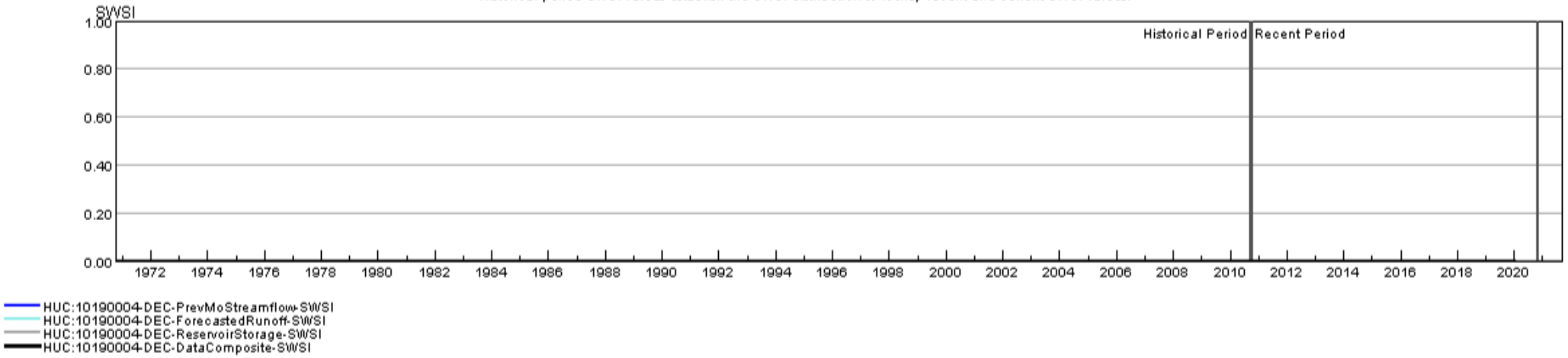
HUC 10190004 (Clear) Surface Water Supply - DEC

Monthly component volumes



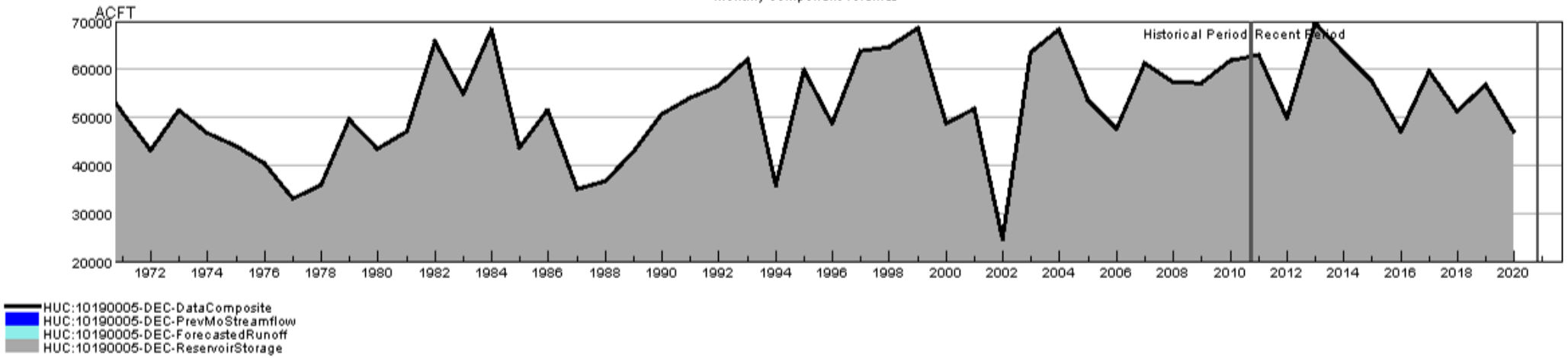
HUC 10190004 (Clear) SWSI Values - DEC

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



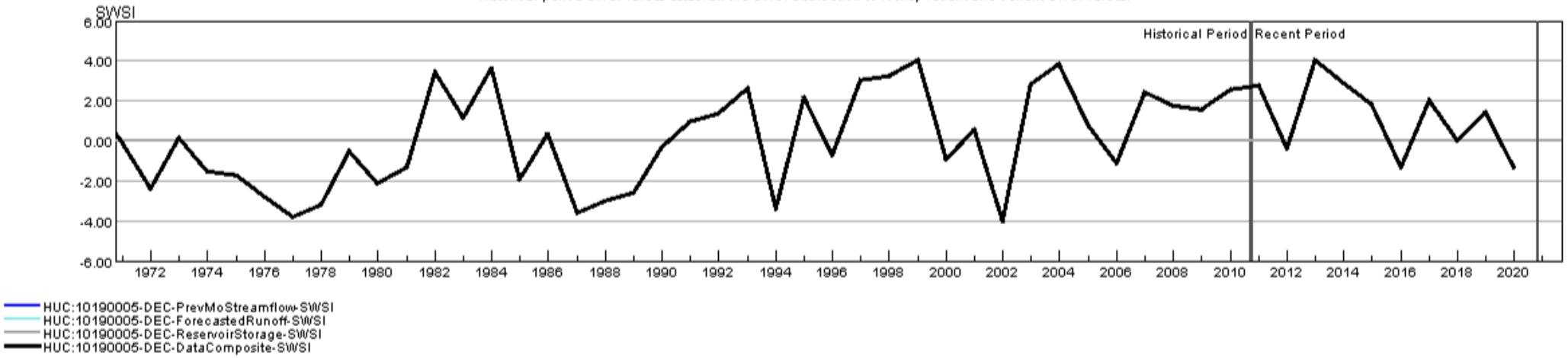
HUC 10190005 (St. Vrain) Surface Water Supply - DEC

Monthly component volumes



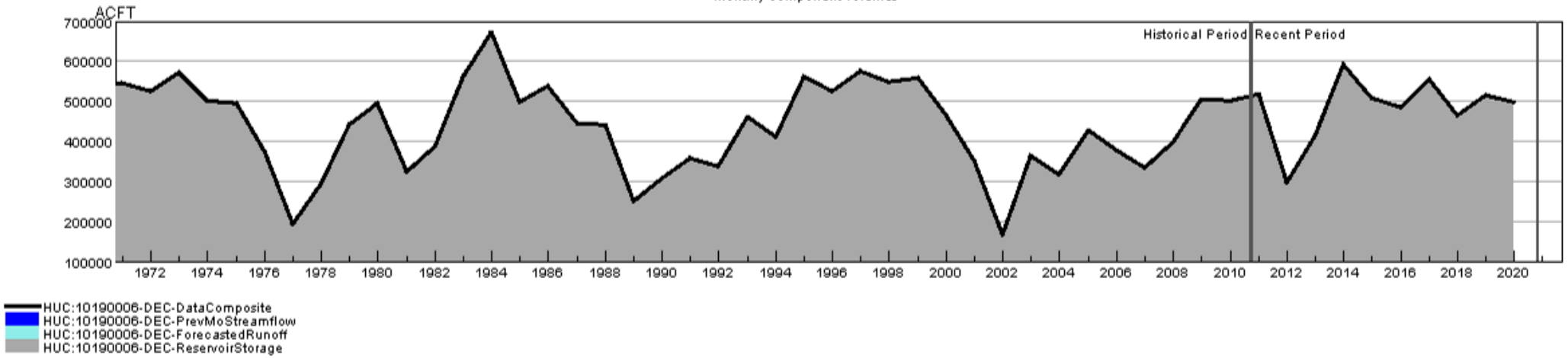
HUC 10190005 (St. Vrain) SWSI Values - DEC

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



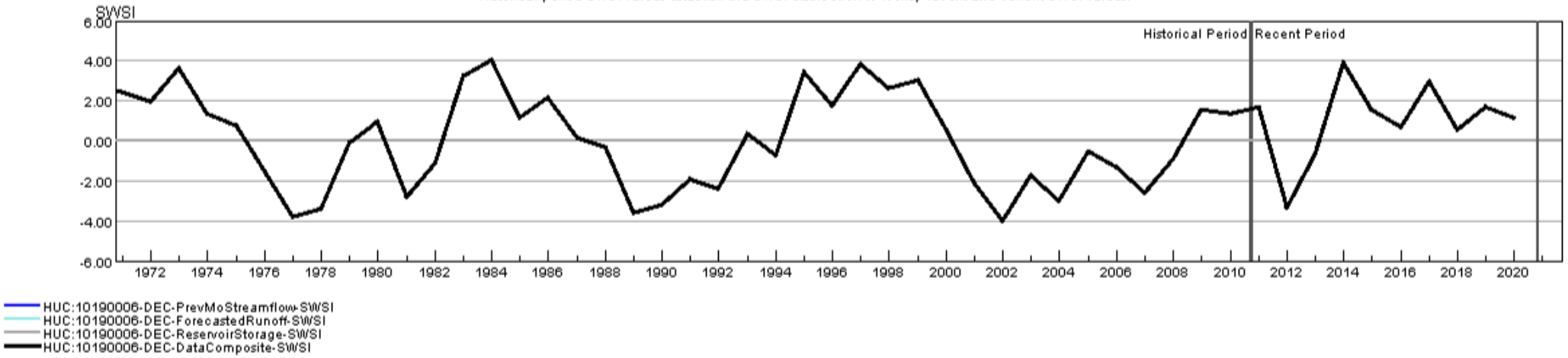
HUC 10190006 (Big Thompson) Surface Water Supply - DEC

Monthly component volumes



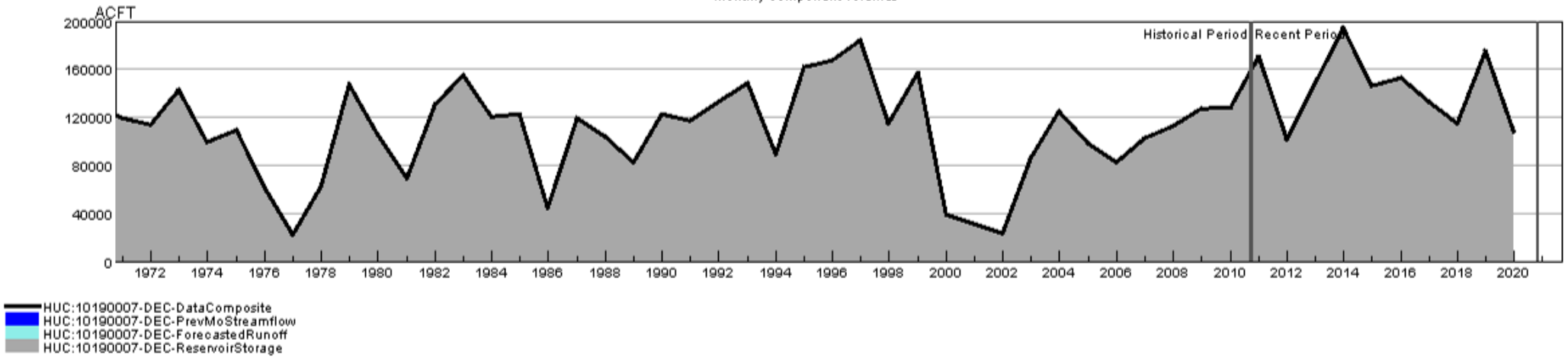
HUC 10190006 (Big Thompson) SWSI Values - DEC

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



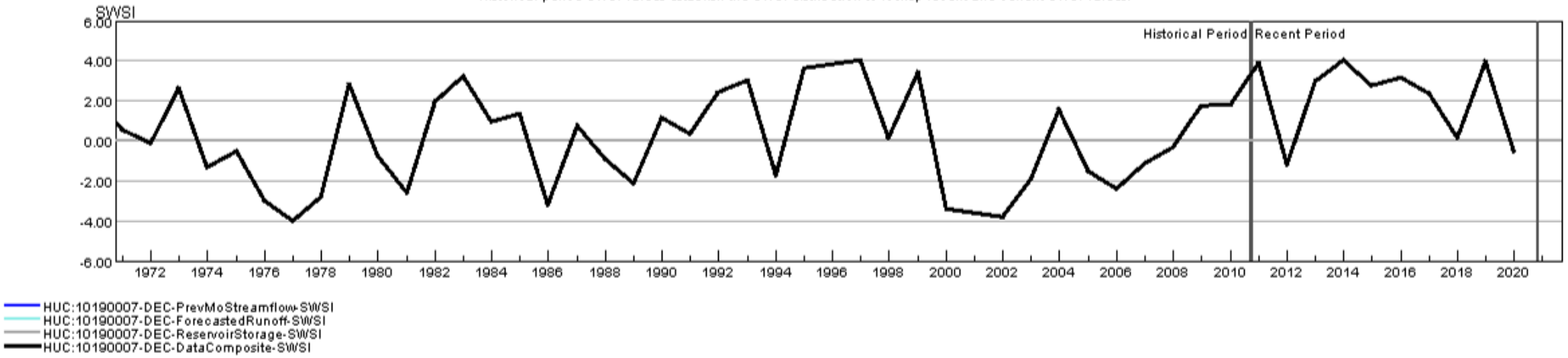
HUC 10190007 (Cache La Poudre) Surface Water Supply - DEC

Monthly component volumes



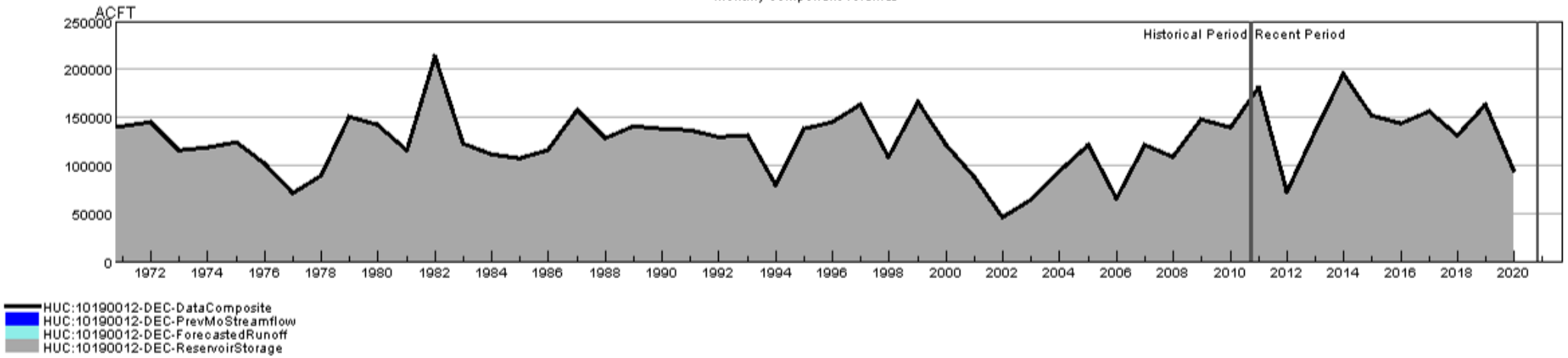
HUC 10190007 (Cache La Poudre) SWSI Values - DEC

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



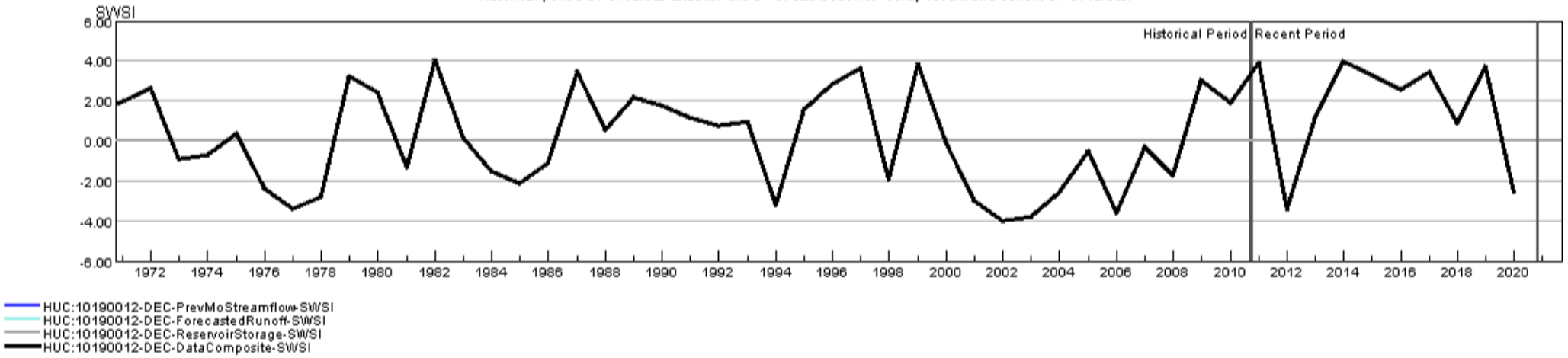
HUC 10190012 (Middle South Platte-Sterling) Surface Water Supply - DEC

Monthly component volumes



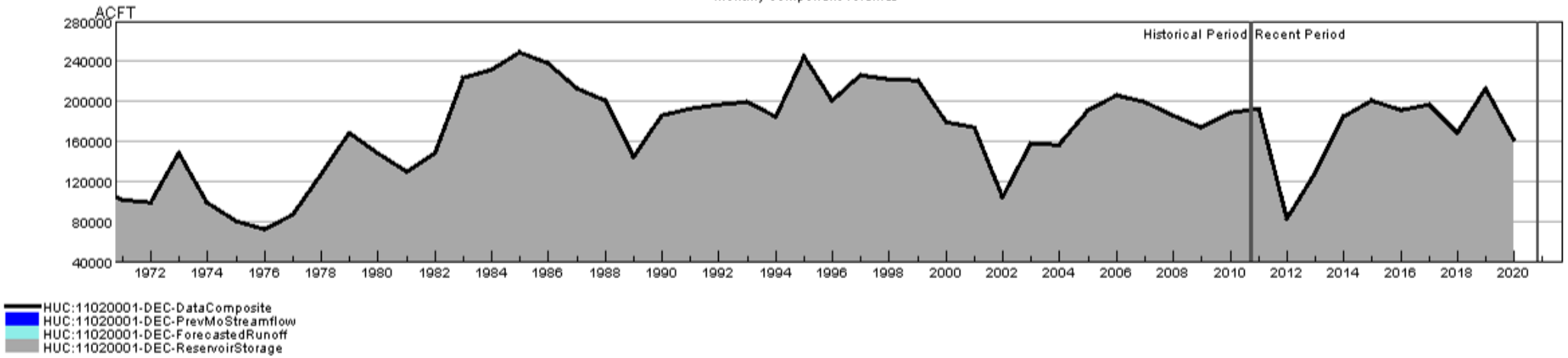
HUC 10190012 (Middle South Platte-Sterling) SWSI Values - DEC

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



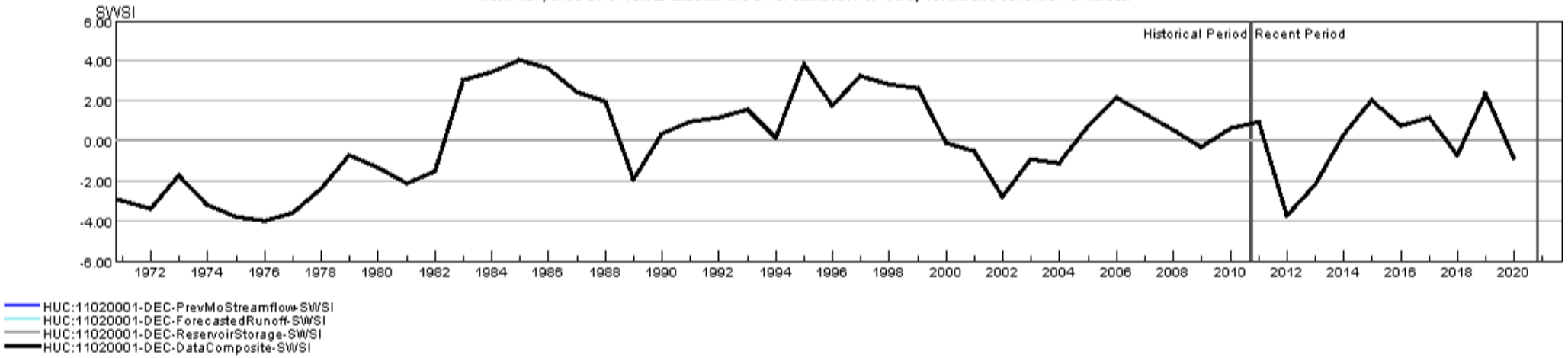
HUC 11020001 (Arkansas Headwaters) Surface Water Supply - DEC

Monthly component volumes



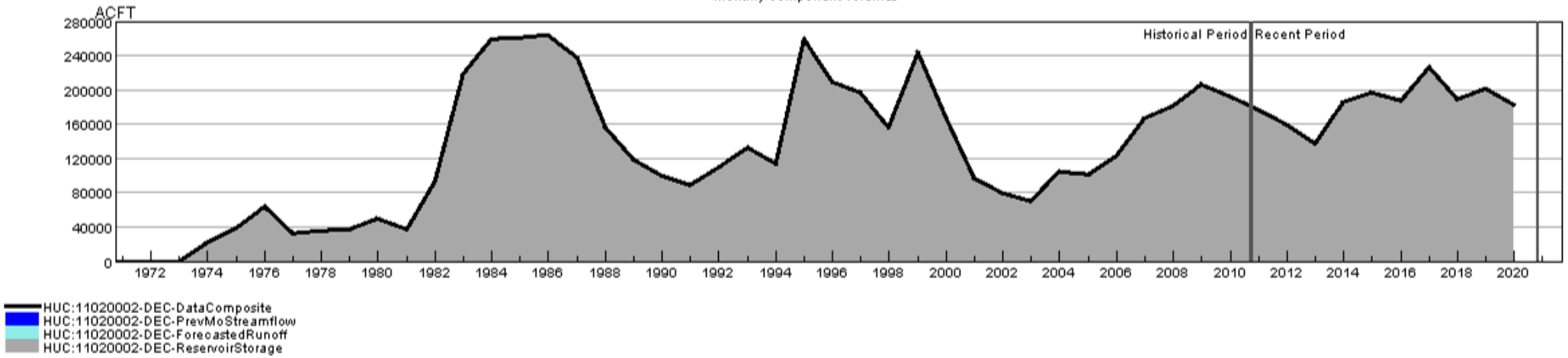
HUC 11020001 (Arkansas Headwaters) SWSI Values - DEC

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



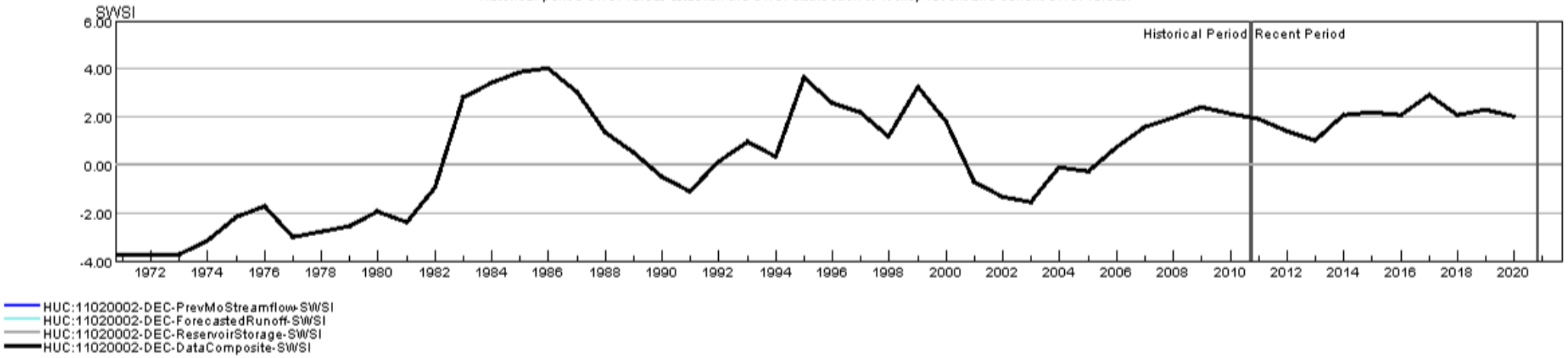
HUC 11020002 (Upper Arkansas) Surface Water Supply - DEC

Monthly component volumes



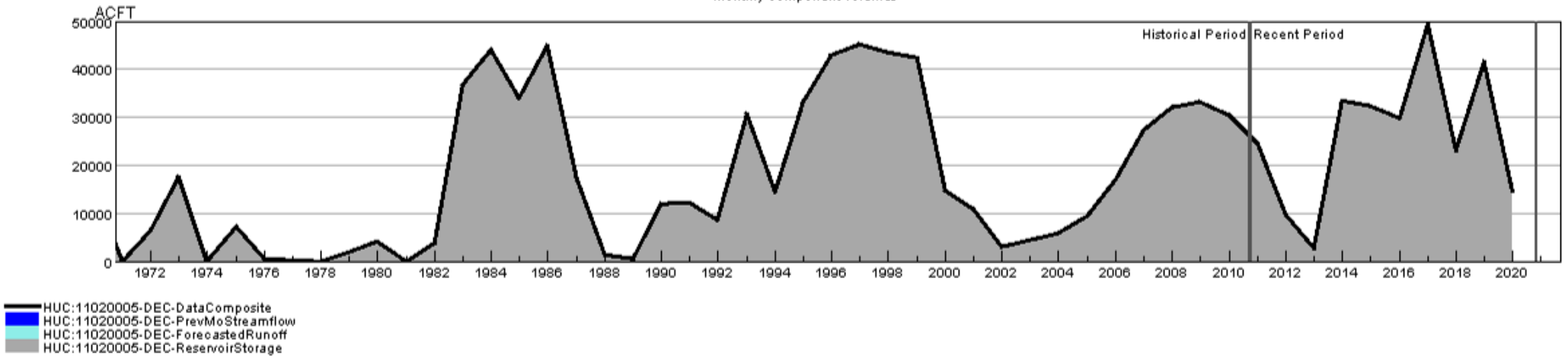
HUC 11020002 (Upper Arkansas) SWSI Values - DEC

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



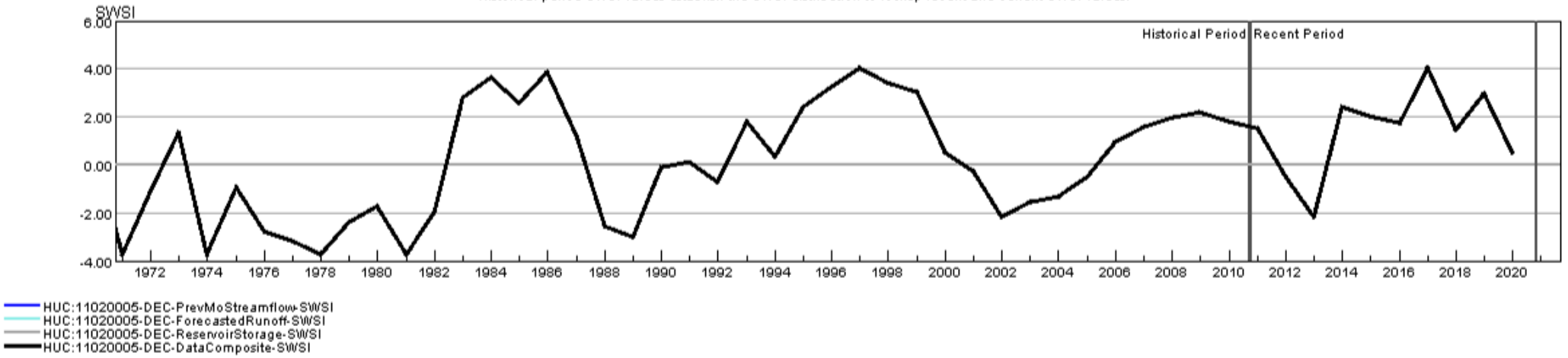
HUC 11020005 (Upper Arkansas-Lake Meredith) Surface Water Supply - DEC

Monthly component volumes



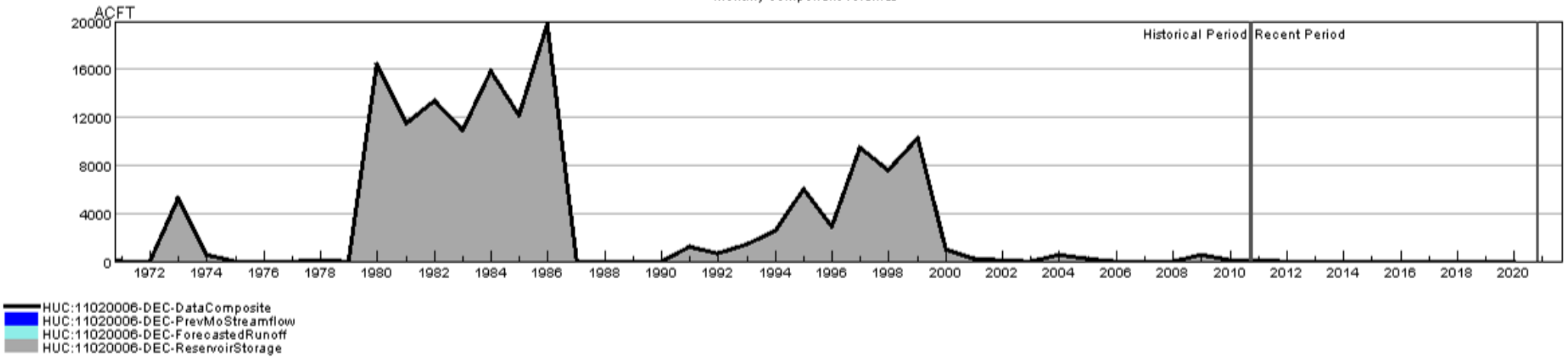
HUC 11020005 (Upper Arkansas-Lake Meredith) SWSI Values - DEC

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



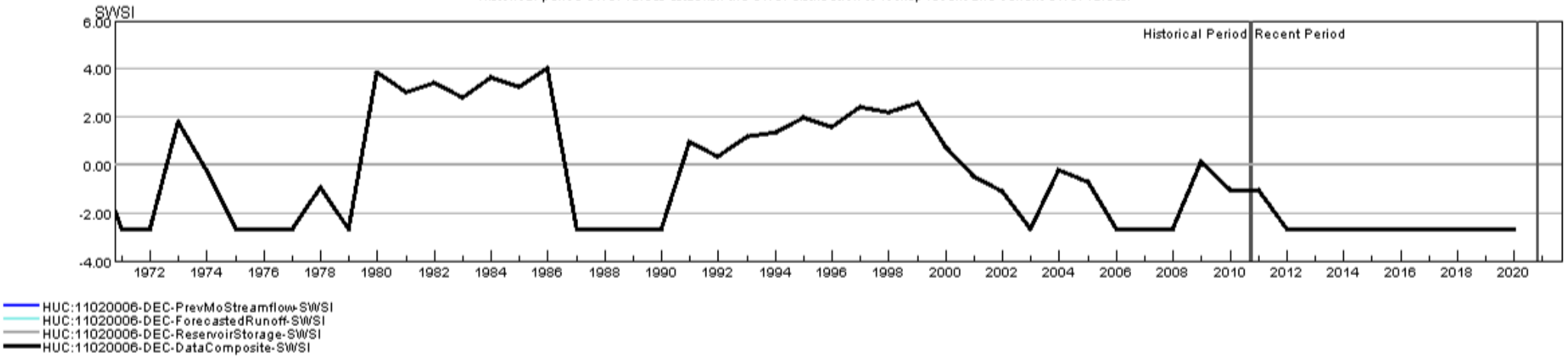
HUC 11020006 (Huerfano) Surface Water Supply - DEC

Monthly component volumes



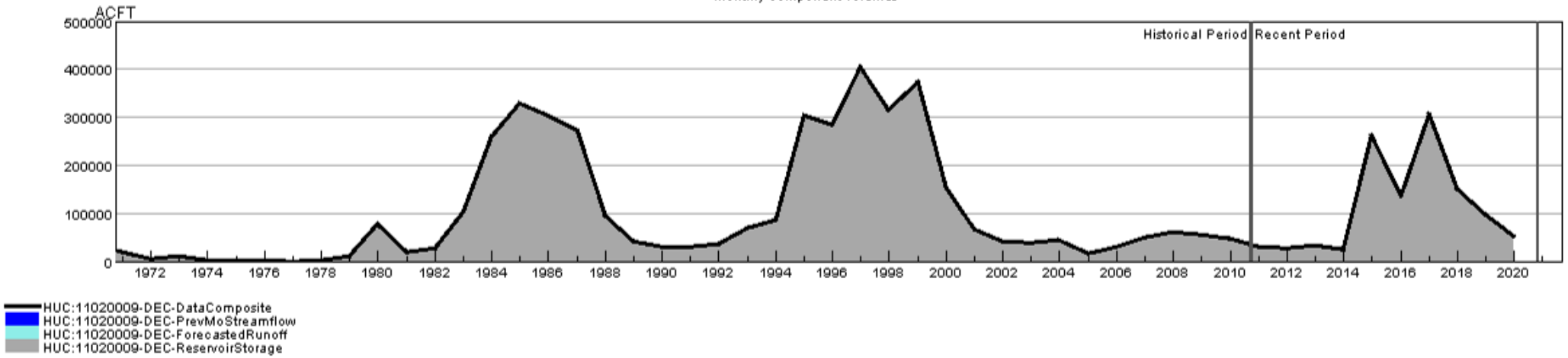
HUC 11020006 (Huerfano) SWSI Values - DEC

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



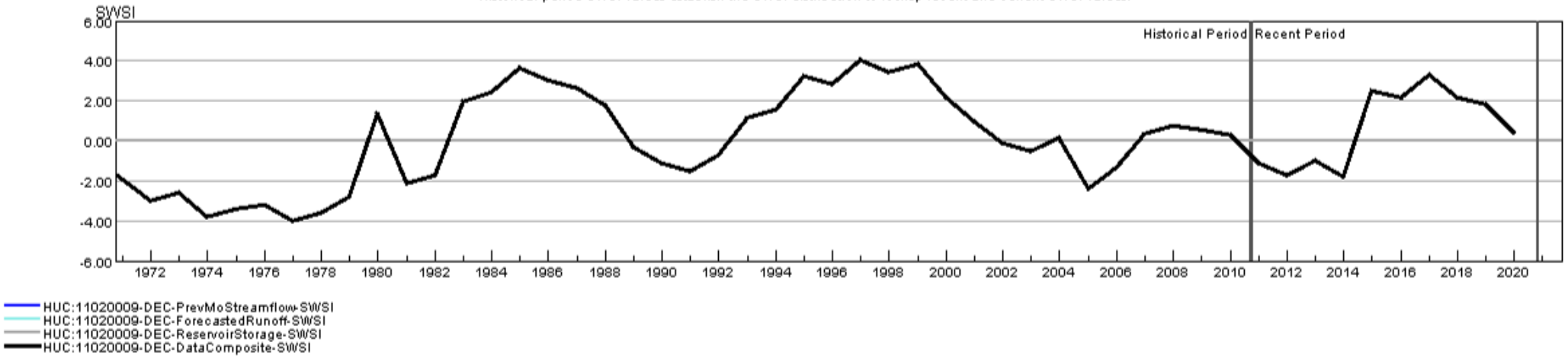
HUC 11020009 (Upper Arkansas-John Martin Reservoir) Surface Water Supply - DEC

Monthly component volumes



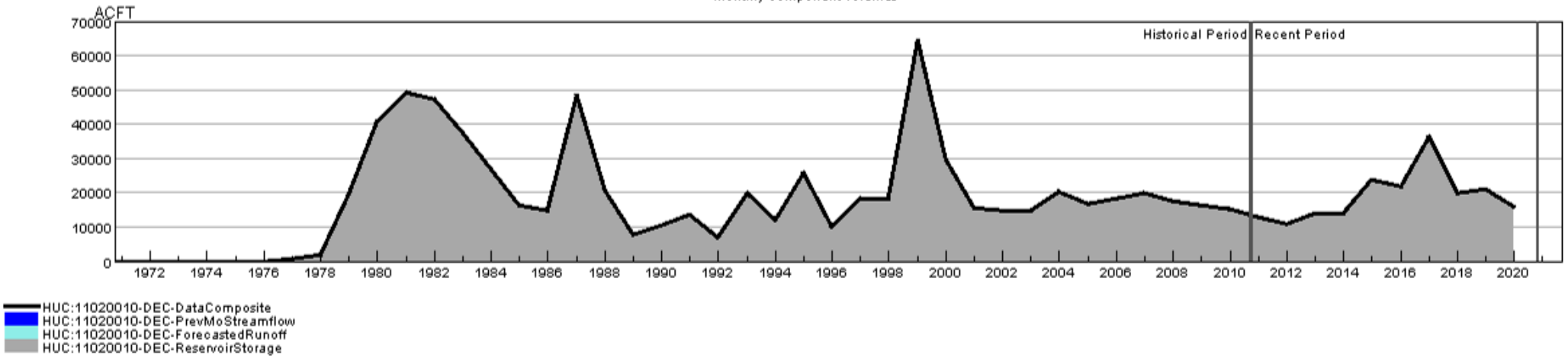
HUC 11020009 (Upper Arkansas-John Martin Reservoir) SWSI Values - DEC

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



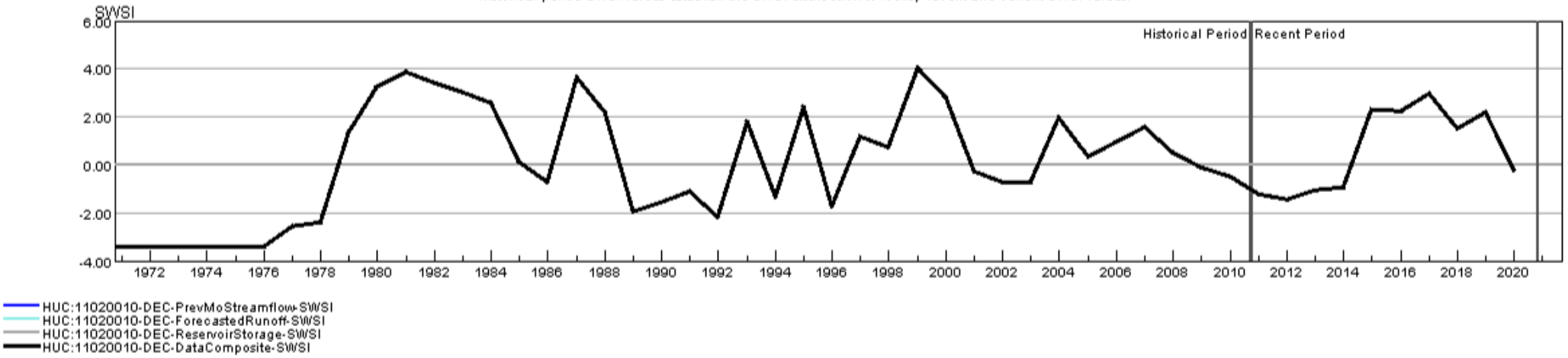
HUC 11020010 (Purgatoire) Surface Water Supply - DEC

Monthly component volumes



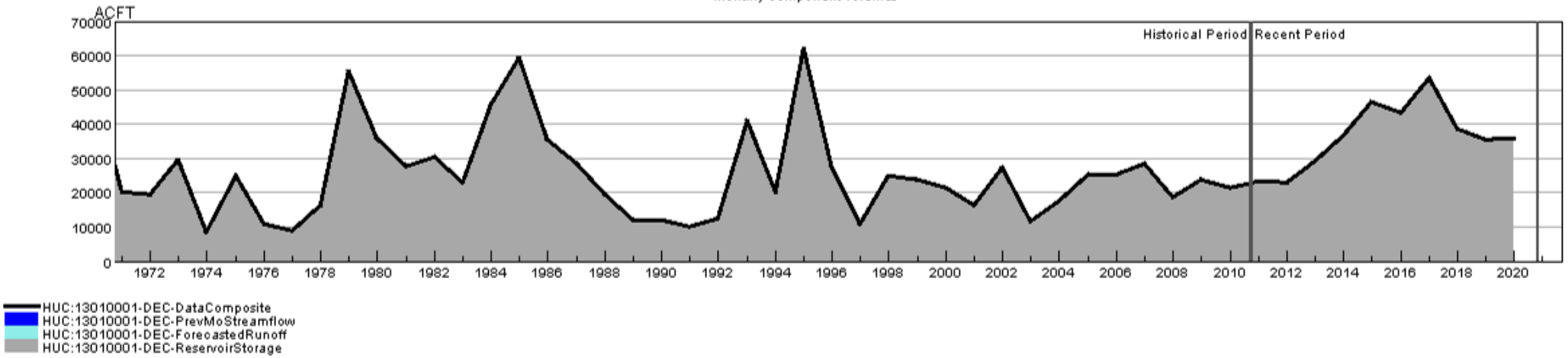
HUC 11020010 (Purgatoire) SWSI Values - DEC

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



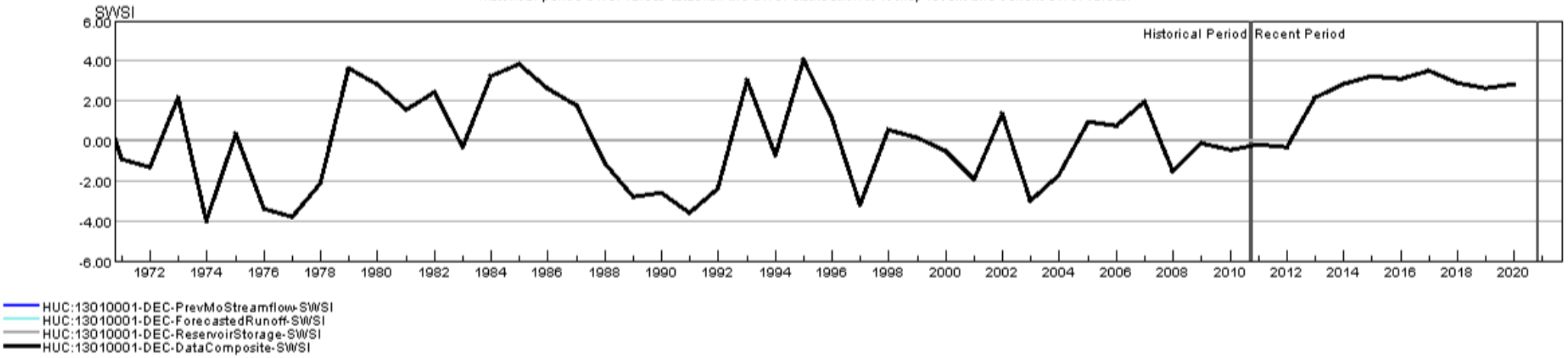
HUC 13010001 (Rio Grande Headwaters) Surface Water Supply - DEC

Monthly component volumes



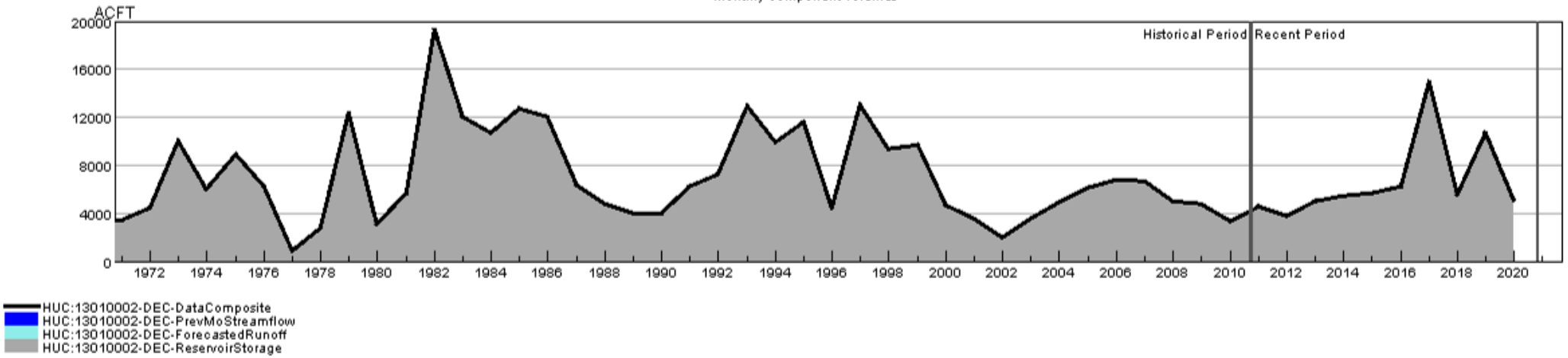
HUC 13010001 (Rio Grande Headwaters) SWSI Values - DEC

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



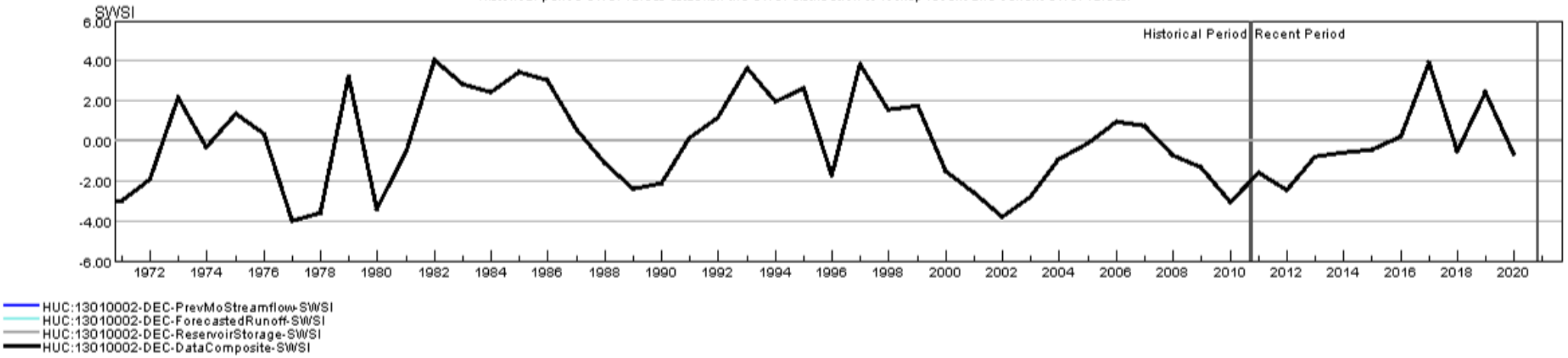
HUC 13010002 (Alamosa-Trinchera) Surface Water Supply - DEC

Monthly component volumes



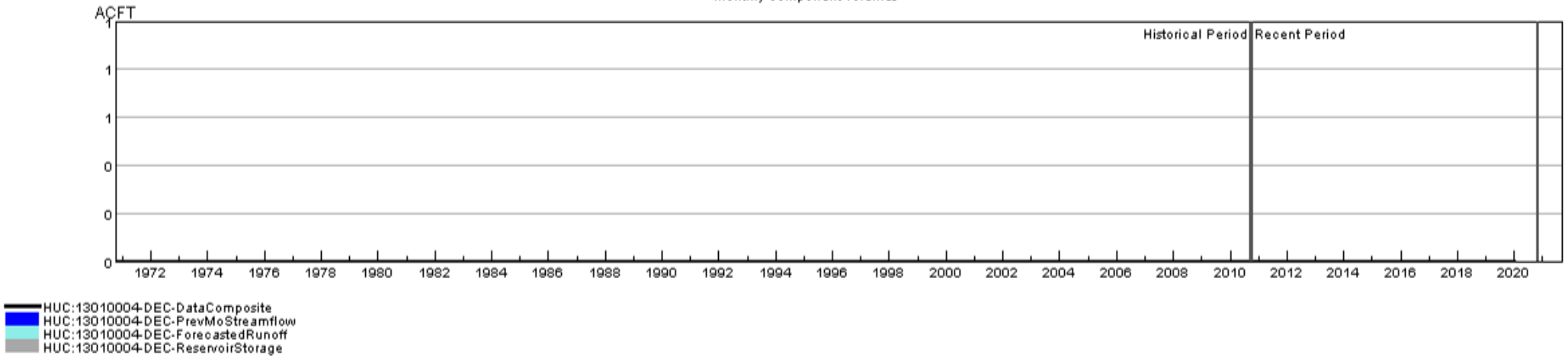
HUC 13010002 (Alamosa-Trinchera) SWSI Values - DEC

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



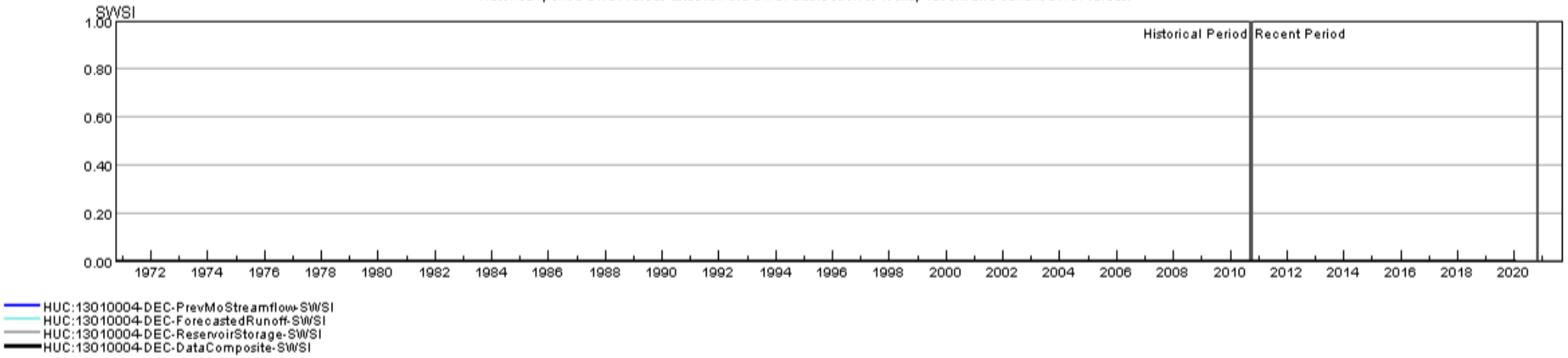
HUC 13010004 (Saguache) Surface Water Supply - DEC

Monthly component volumes



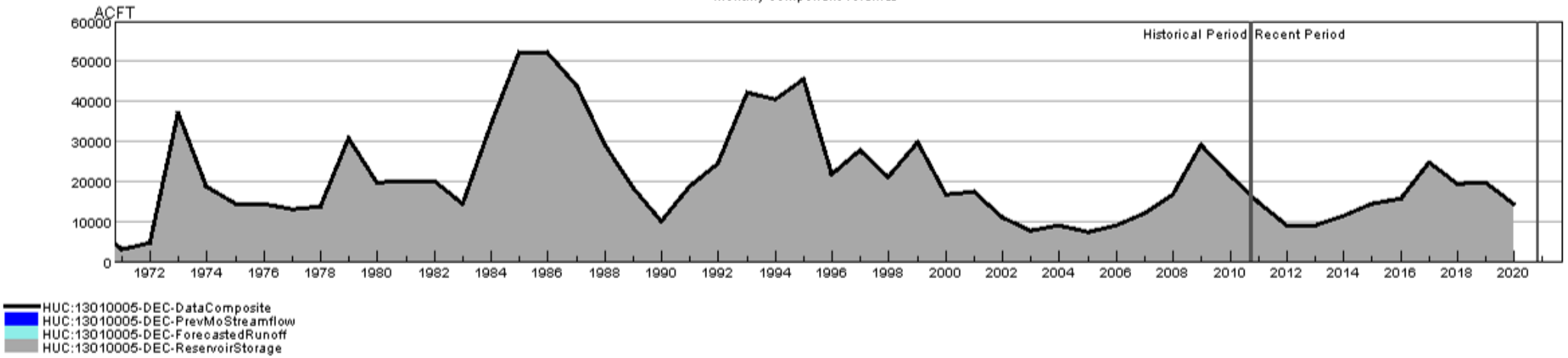
HUC 13010004 (Saguache) SWSI Values - DEC

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



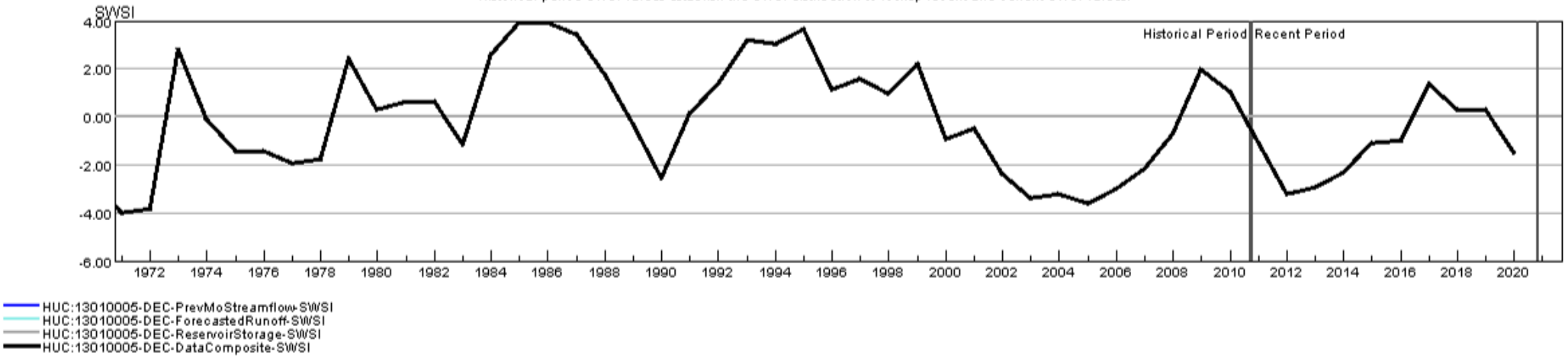
HUC 13010005 (Conejos) Surface Water Supply - DEC

Monthly component volumes



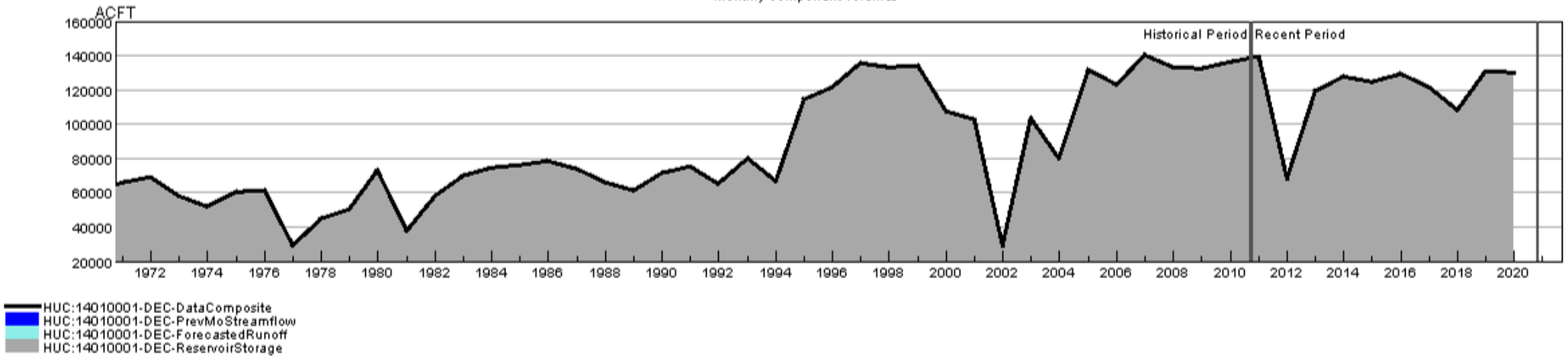
HUC 13010005 (Conejos) SWSI Values - DEC

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



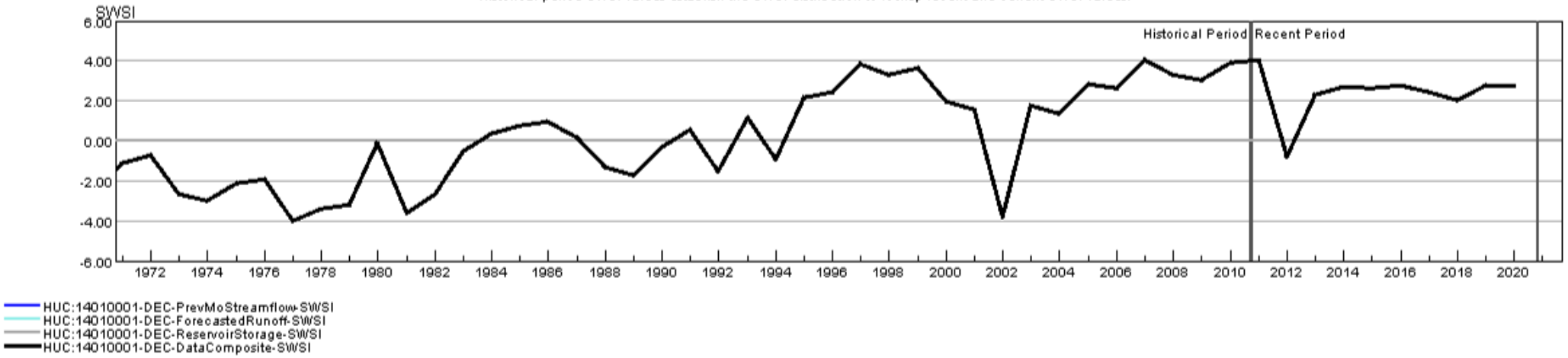
HUC 14010001 (Colorado Headwaters) Surface Water Supply - DEC

Monthly component volumes



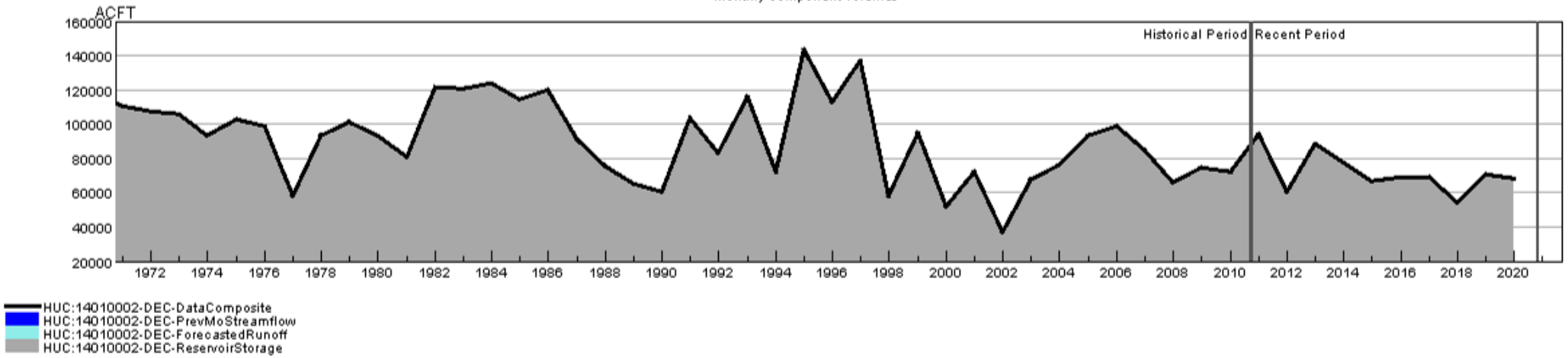
HUC 14010001 (Colorado Headwaters) SWSI Values - DEC

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



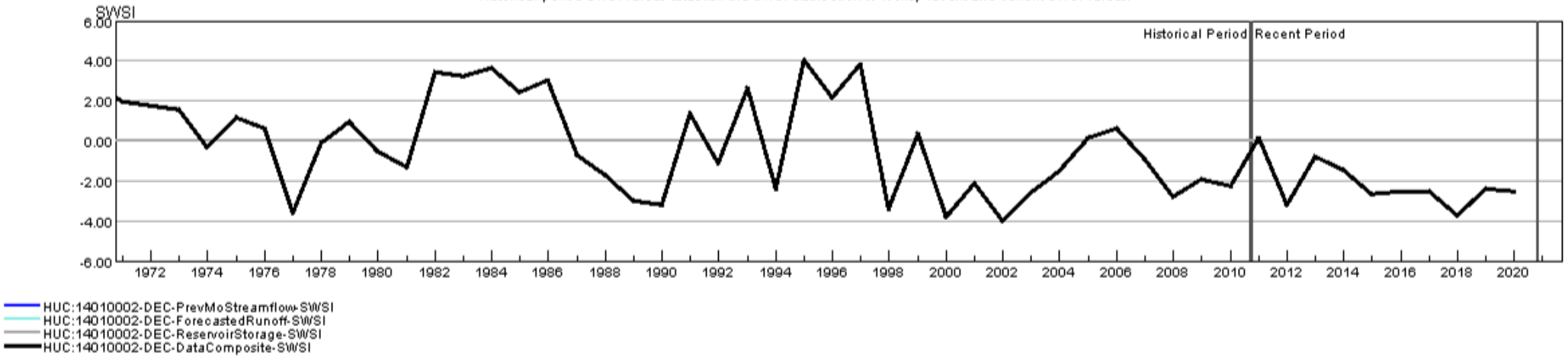
HUC 14010002 (Blue) Surface Water Supply - DEC

Monthly component volumes



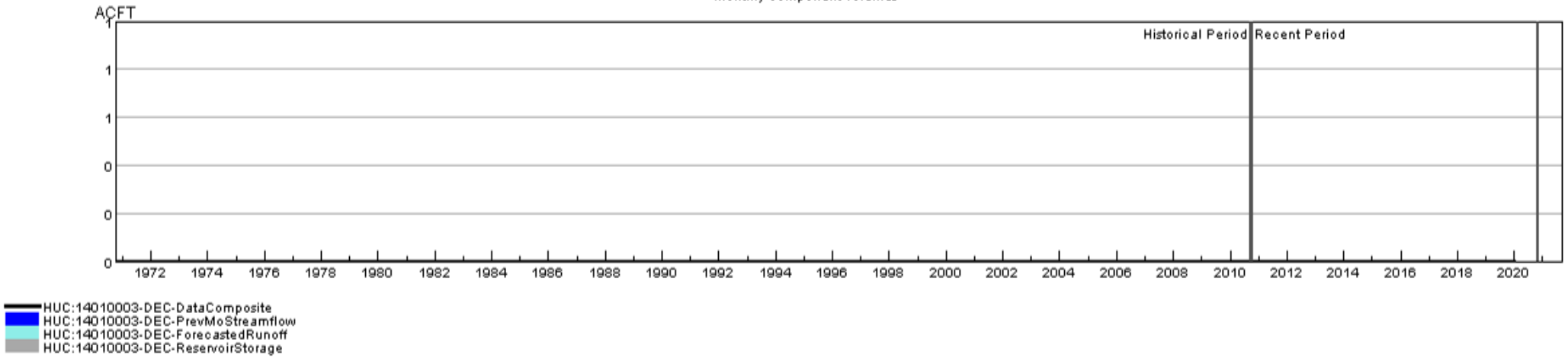
HUC 14010002 (Blue) SWSI Values - DEC

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



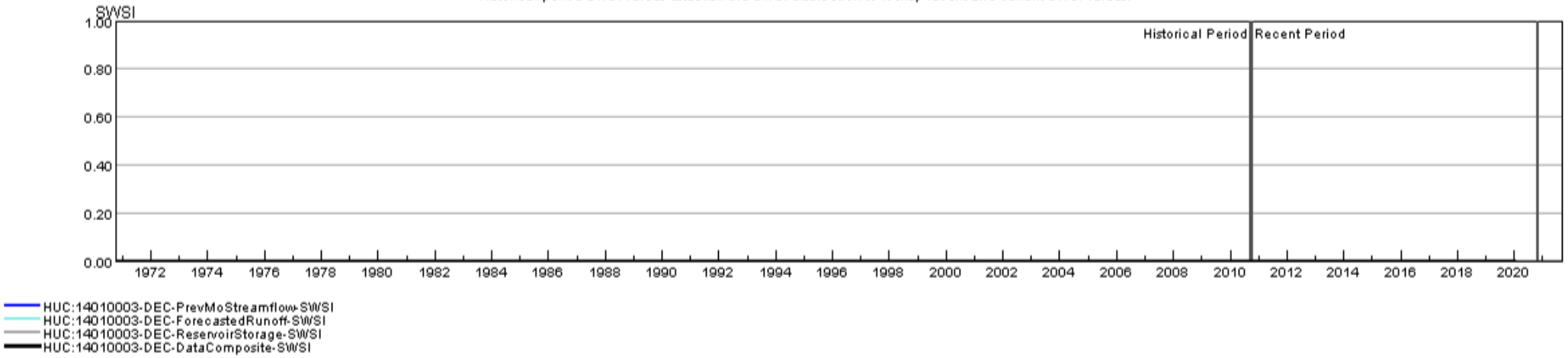
HUC 14010003 (Eagle) Surface Water Supply - DEC

Monthly component volumes



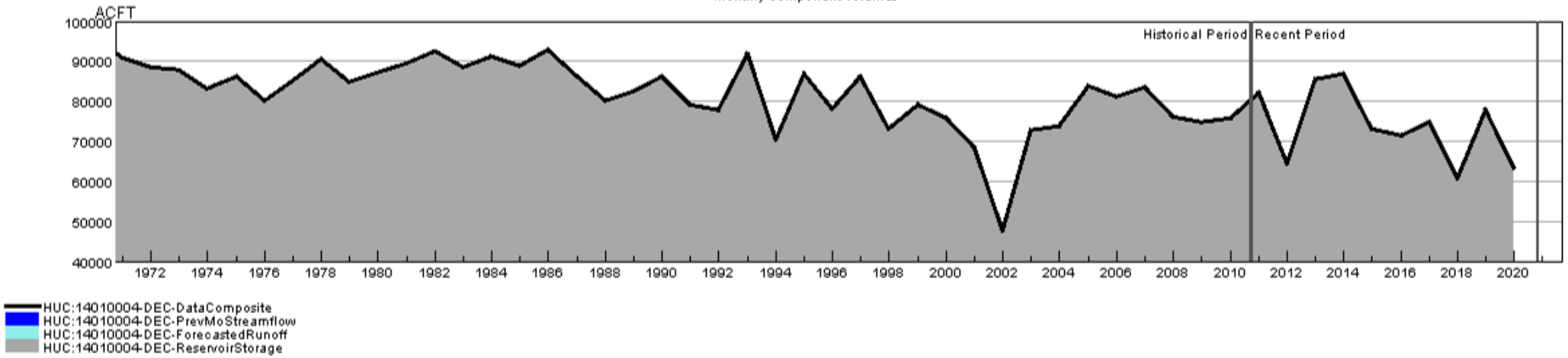
HUC 14010003 (Eagle) SWSI Values - DEC

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



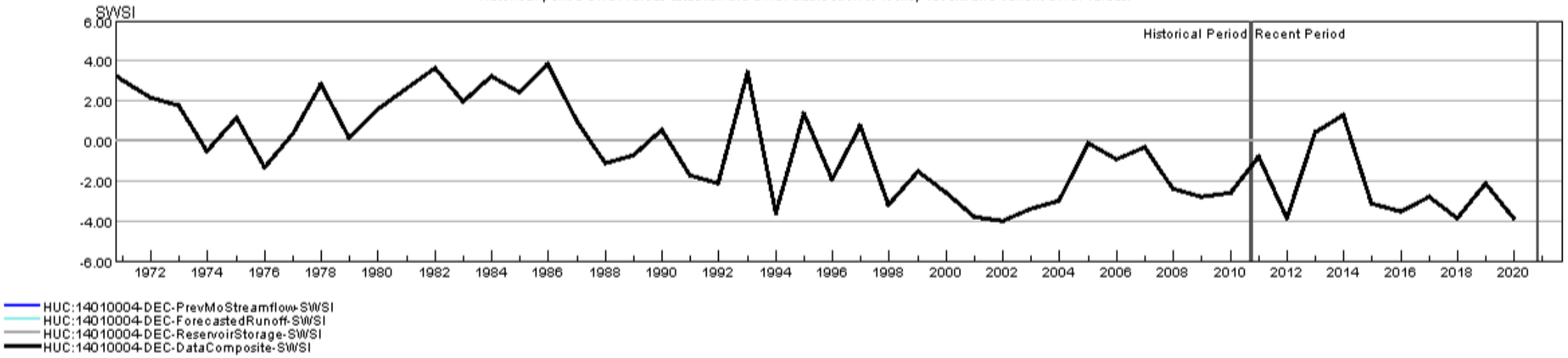
HUC 14010004 (Roaring Fork) Surface Water Supply - DEC

Monthly component volumes



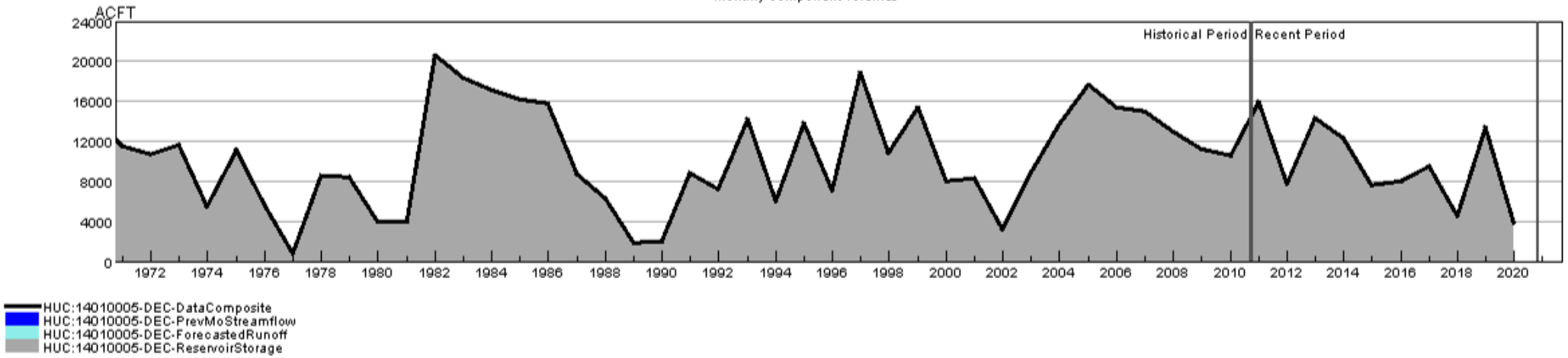
HUC 14010004 (Roaring Fork) SWSI Values - DEC

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



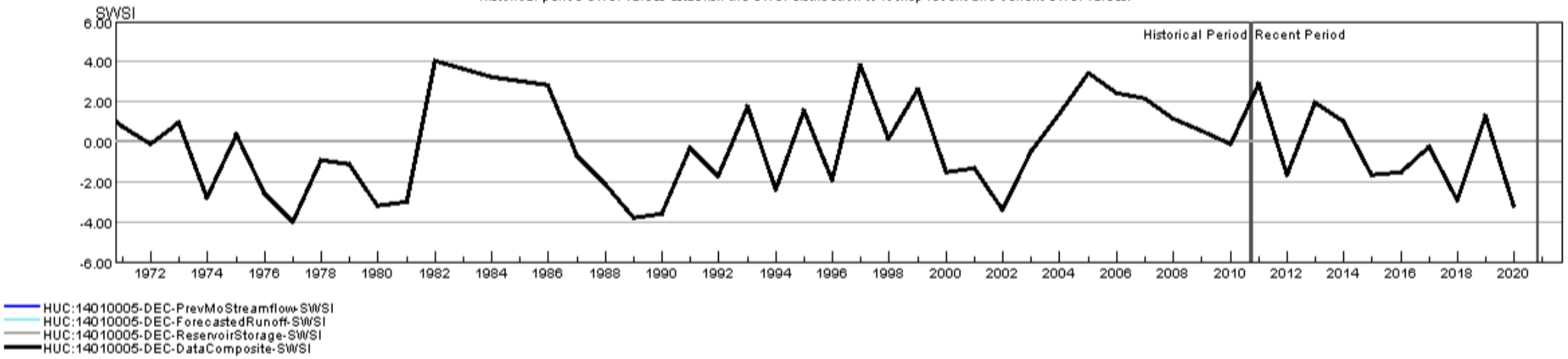
HUC 14010005 (Colorado Headwaters-Plateau) Surface Water Supply - DEC

Monthly component volumes



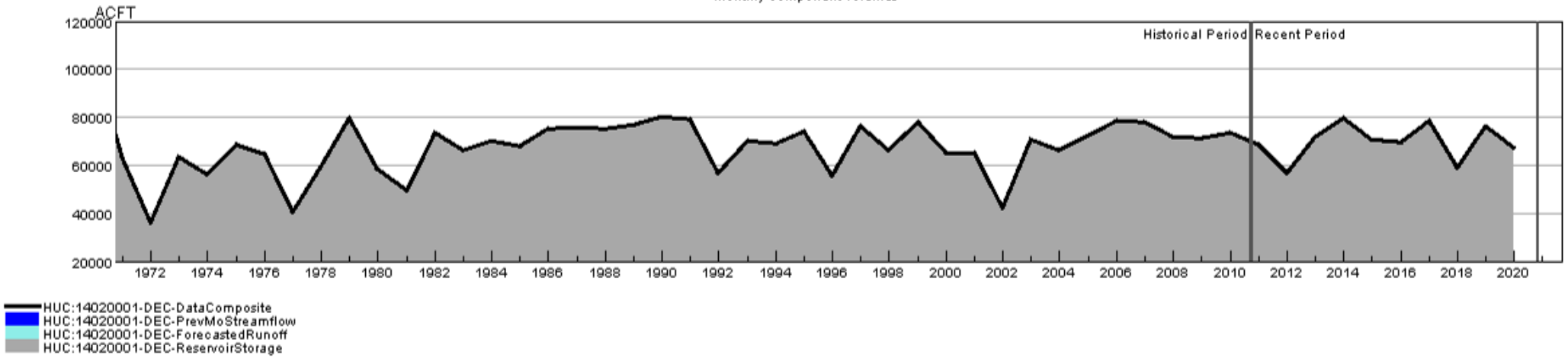
HUC 14010005 (Colorado Headwaters-Plateau) SWSI Values - DEC

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



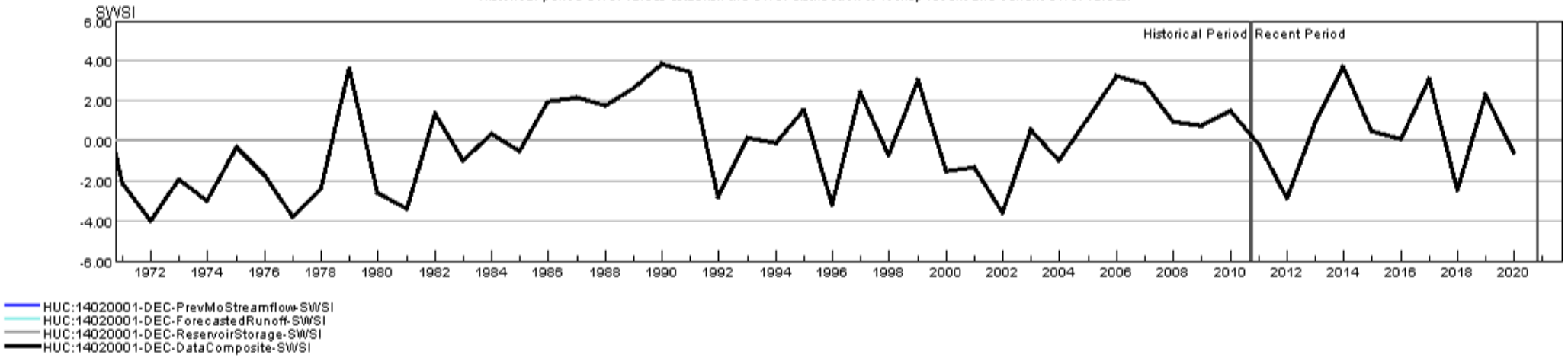
HUC 14020001 (East-Taylor) Surface Water Supply - DEC

Monthly component volumes



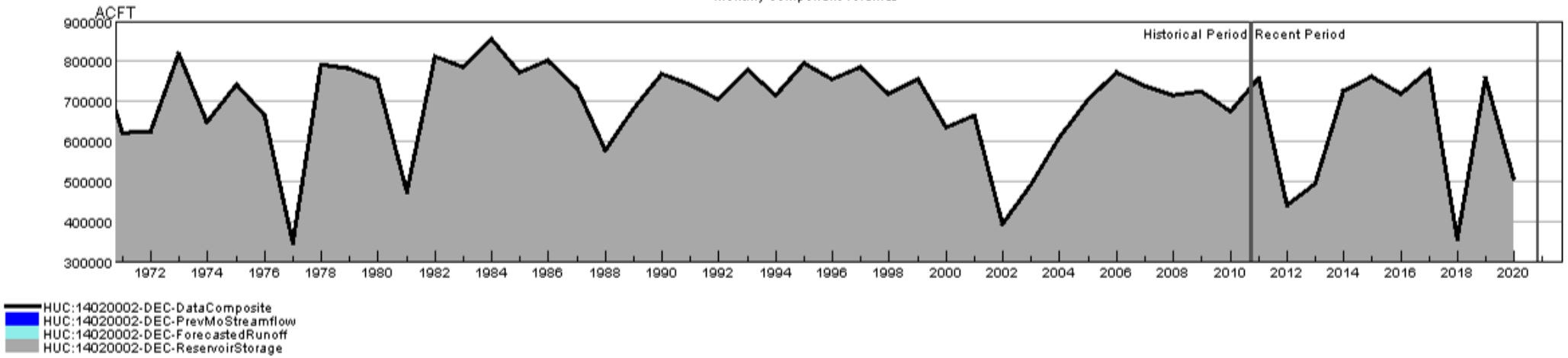
HUC 14020001 (East-Taylor) SWSI Values - DEC

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



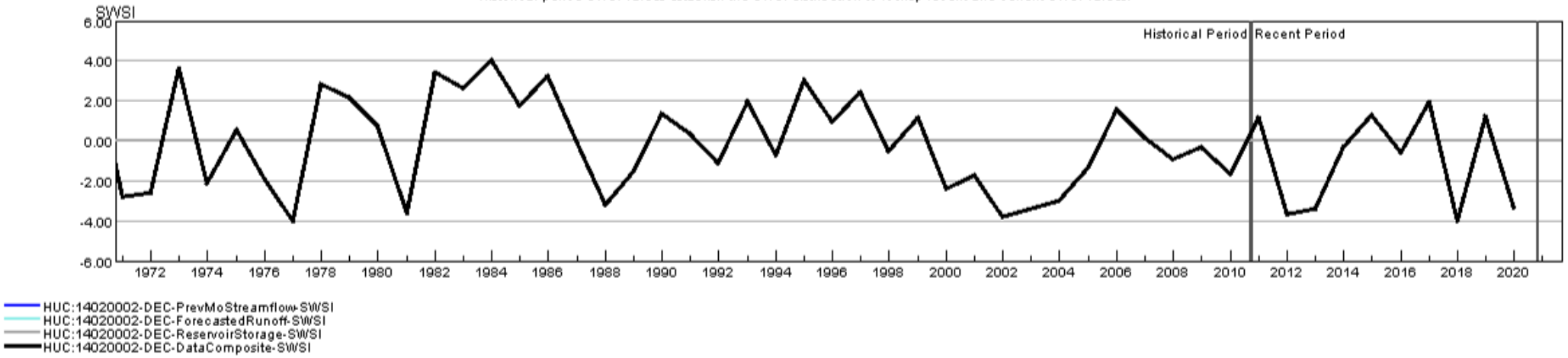
HUC 14020002 (Upper Gunnison) Surface Water Supply - DEC

Monthly component volumes



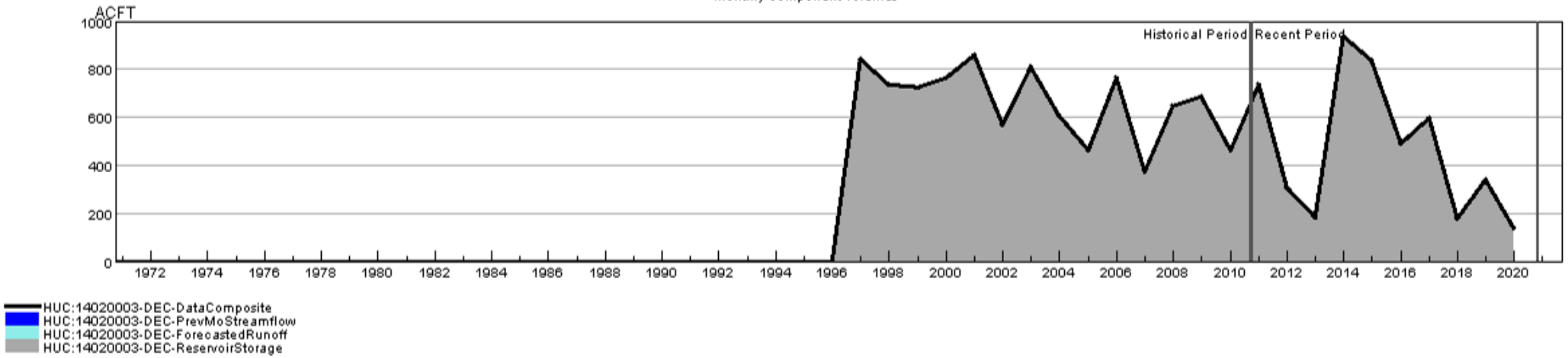
HUC 14020002 (Upper Gunnison) SWSI Values - DEC

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



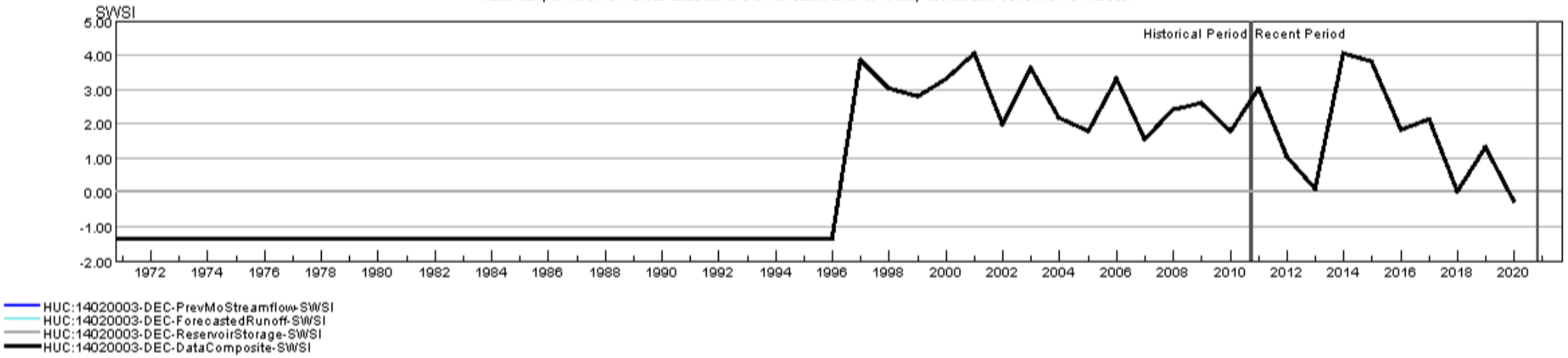
HUC 14020003 (Tomichi) Surface Water Supply - DEC

Monthly component volumes



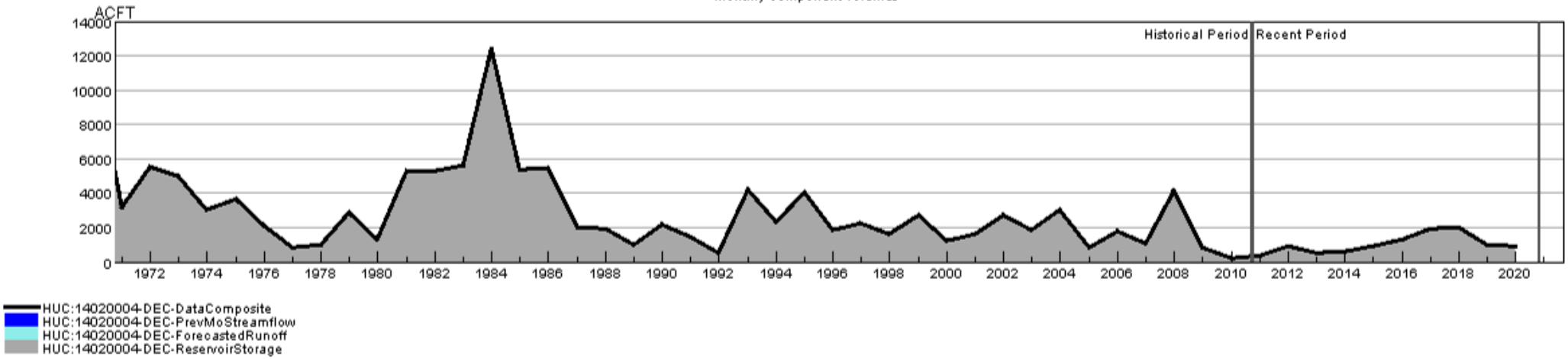
HUC 14020003 (Tomichi) SWSI Values - DEC

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



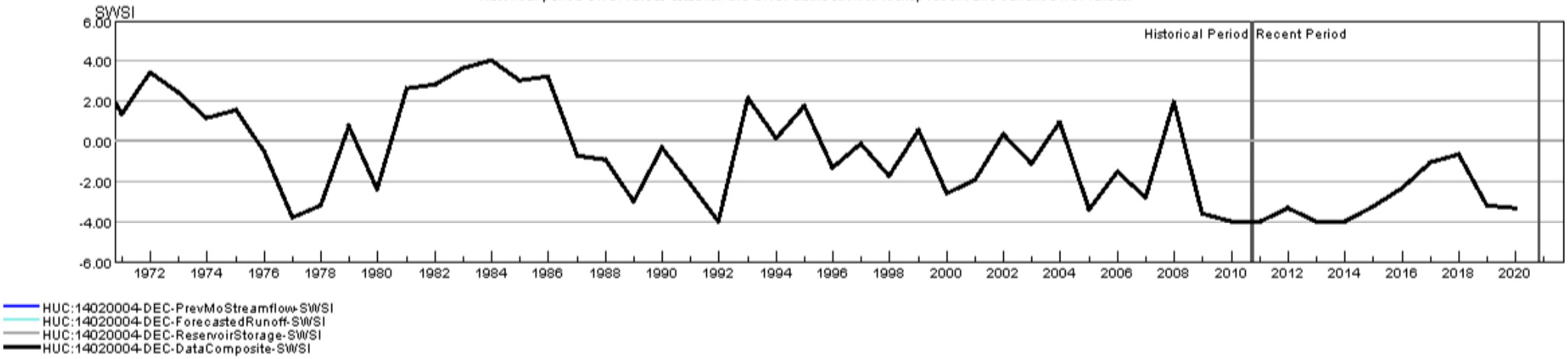
HUC 14020004 (North Fork Gunnison) Surface Water Supply - DEC

Monthly component volumes



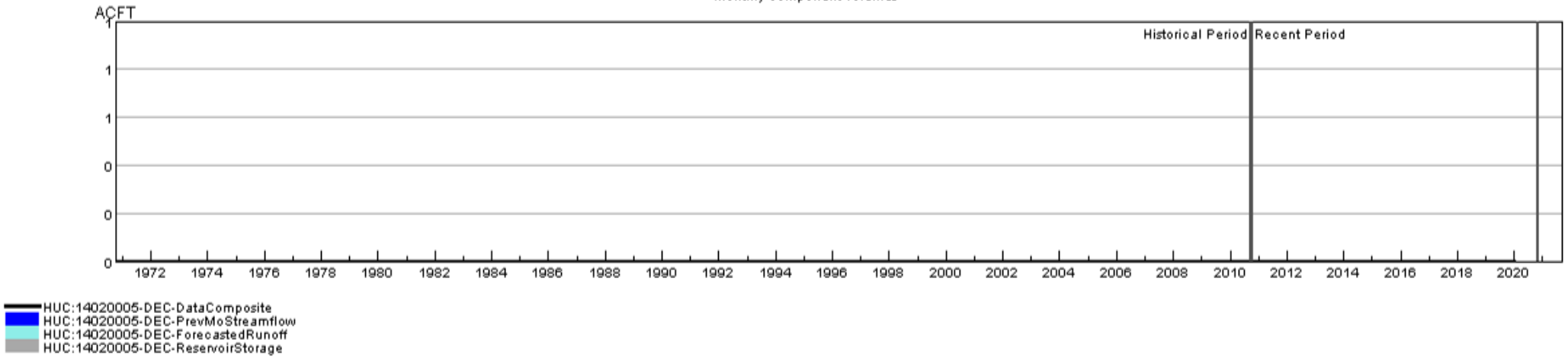
HUC 14020004 (North Fork Gunnison) SWSI Values - DEC

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



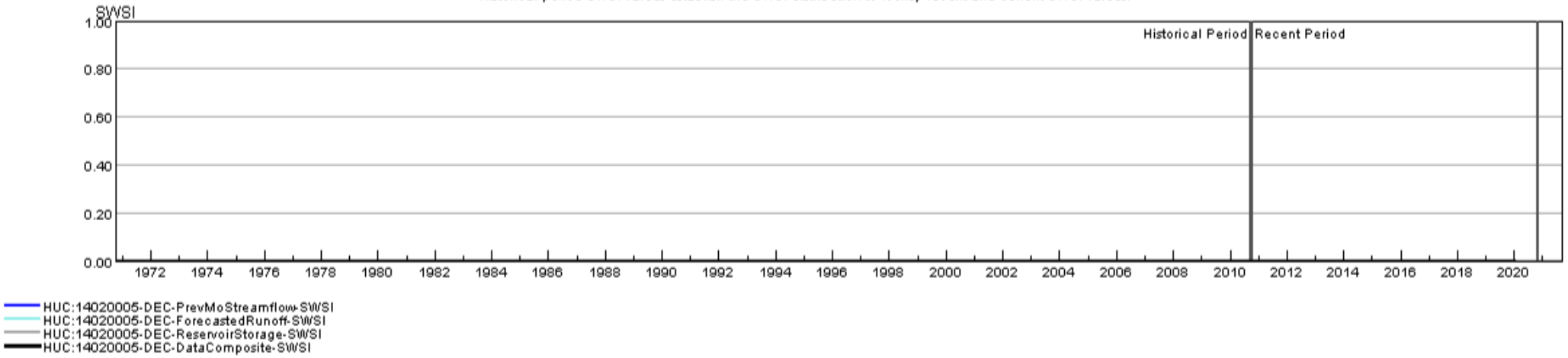
HUC 14020005 (Lower Gunnison) Surface Water Supply - DEC

Monthly component volumes



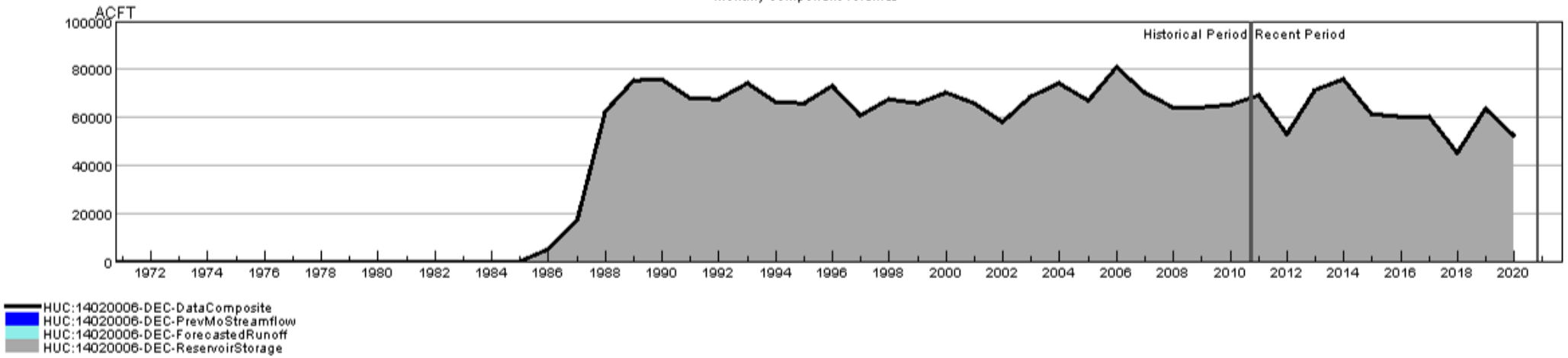
HUC 14020005 (Lower Gunnison) SWSI Values - DEC

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



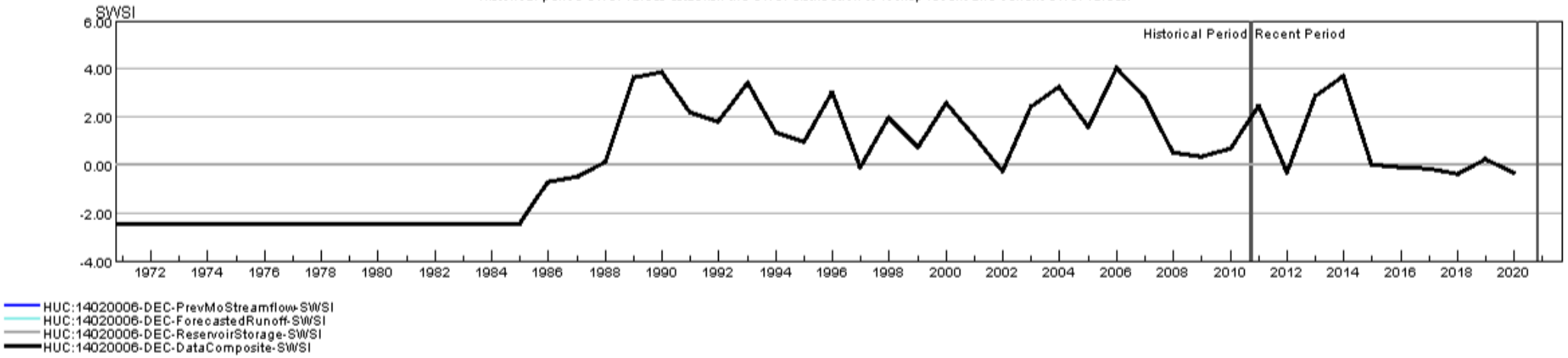
HUC 14020006 (Uncompahgre) Surface Water Supply - DEC

Monthly component volumes



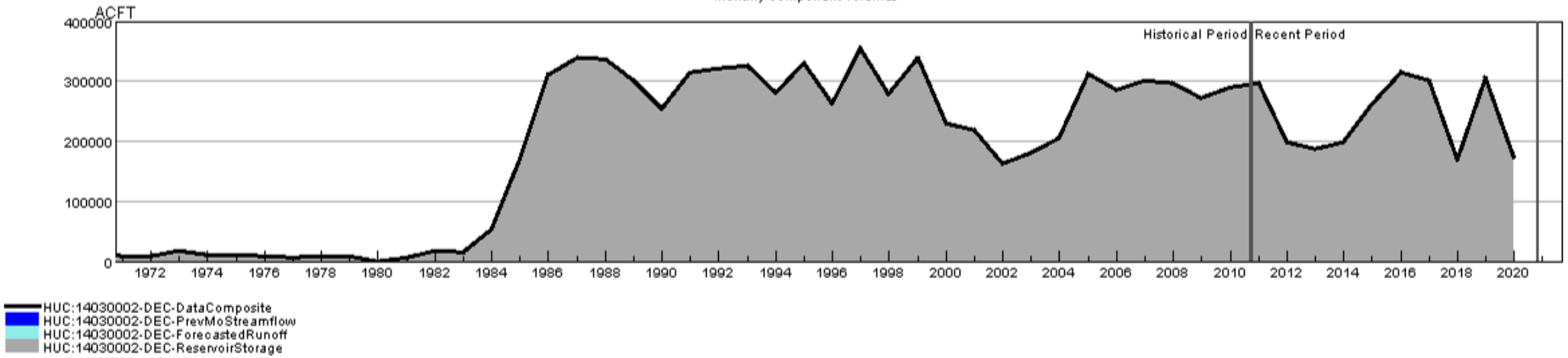
HUC 14020006 (Uncompahgre) SWSI Values - DEC

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



HUC 14030002 (Upper Dolores) Surface Water Supply - DEC

Monthly component volumes



HUC 14030002 (Upper Dolores) SWSI Values - DEC

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