COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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January 1, 2018

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: http://water.state.co.us/DWRDocs/Reports/Pages/SWSIReport.aspx. This report also contains updates about current regional conditions and water matters prepared by each DWR Division Office.

The SWSI calculation for the winter/spring season (January 1 to June 1) is based on reservoir storage at the end of last month, in this case December 31, plus the forecasted streamflow runoff volume for the runoff season (April through September in most basins). The following SWSI values were computed for each of the seven major basins for January 1, 2018. Water supply conditions are well below normal in all but the South Platte and Arkansas River basins. Storage remains strong statewide, but snowpack is low, resulting in streamflow forecasts that are below normal in every basin.

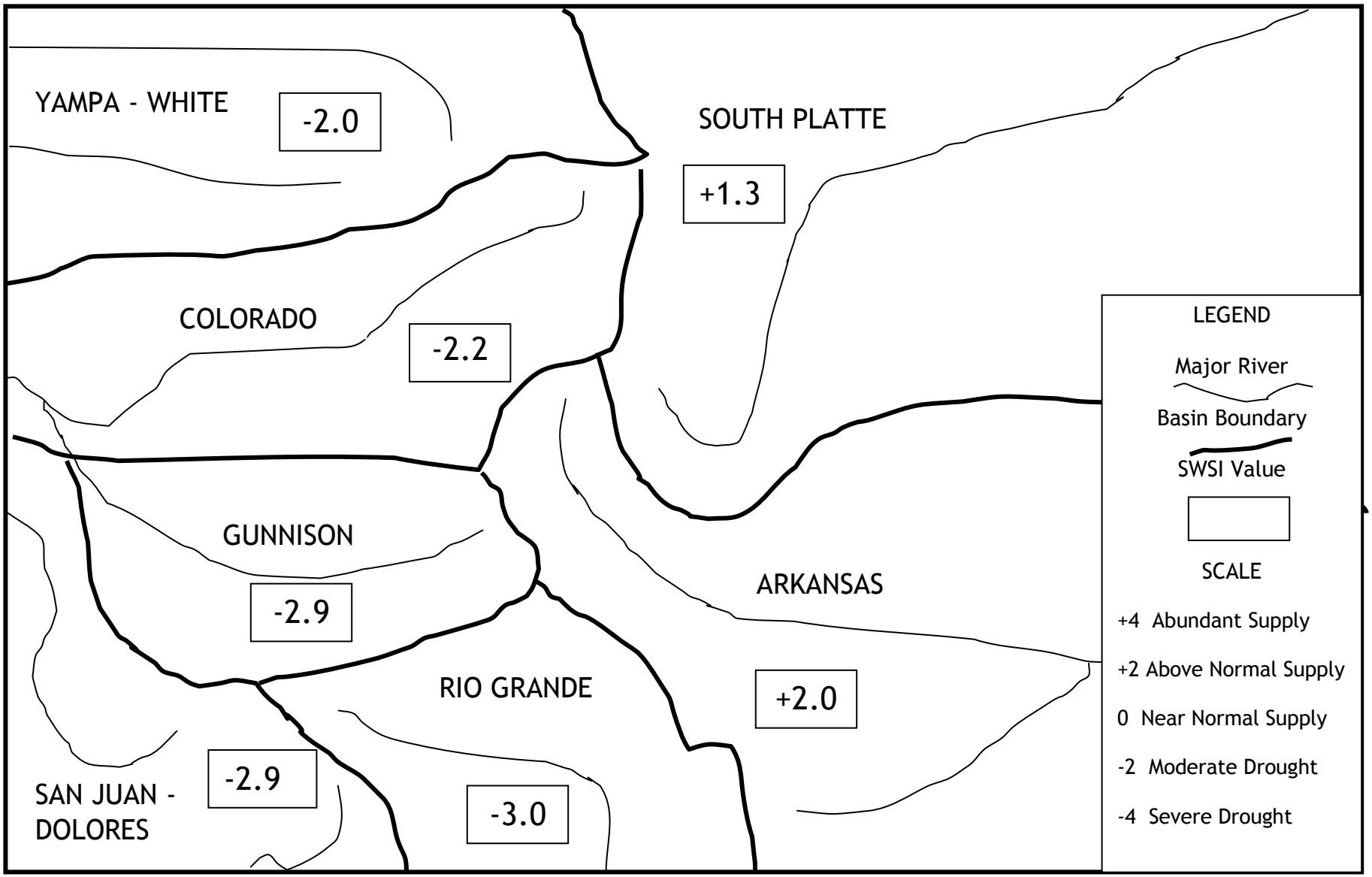
Basin	January 1 SWSI	Change from Previous Month*	Change from Previous Year
Arkansas	2.0	-0.9	-0.1
Colorado	-2.2	-2.4	-1.8
Gunnison	-2.9	-5.6	-4.6
Rio Grande	-3.0	-6.1	-4.2
San Juan-Dolores	-2.9	-4.5	-4.2
South Platte	1.3	-2.1	-0.2
Yampa-White	-2.0	-5.7	-1.0

*Last month's SWSI was based only on reservoir storage volumes, this month is based on forecasted streamflow plus reservoir storage volumes. Therefore, the change from previous month is not a comparison of two "like" indices.

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

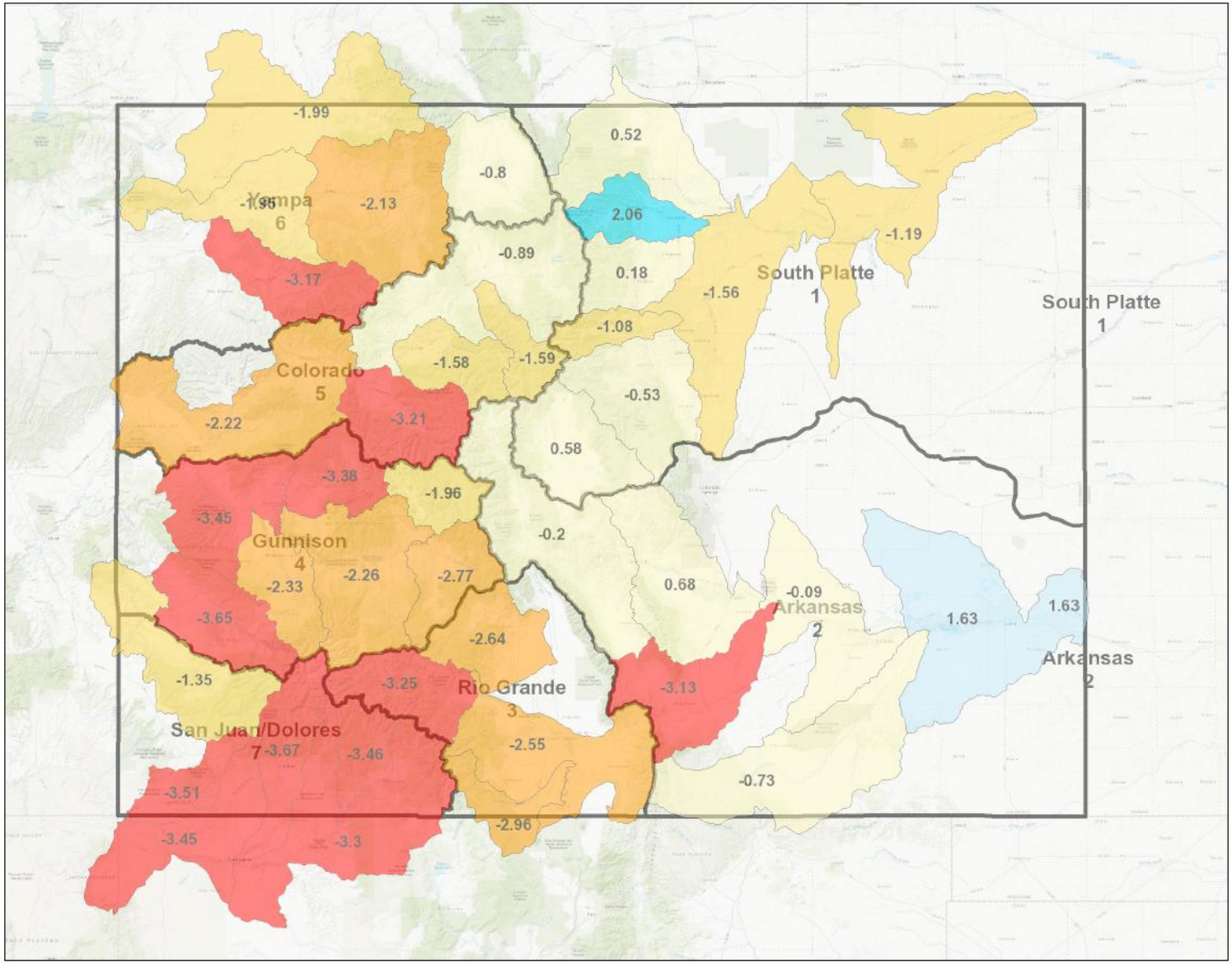


January 1, 2018

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC

CDSS
Colorado's Decision Support Systems

SWSI January 1, 2018



Legend

SWSI - Current Report

- SWSI Not Applicable (-99.99)
- Extremely Dry (-3.0 - -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)

Division

Citations

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: 1/13/2018 1:46:53 PM

January 1, 2018 SWSI Values by HUC and Non Exceedance Probabilities (NEP)

Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Forecast Flow NEP	Total Vol (AF)
Arkansas	11020001	Arkansas Headwaters	-0.2	65	33	383,840
	11020002	Upper Arkansas	0.7	77	37	500,600
	11020005	Upper Arkansas-Lake Meredith	-0.1	99	31	340,101
	11020006	Huerfano River	-3.1	16	20	12,000
	11020009	Upper Arkansas-John Martin Reservoir	1.6	85	26	626,578
	11020010	Purgatoire River	-0.7	86	16	56,320
Colorado	14010001	Colorado Headwaters	-0.9	80	33	1,321,040
	14010002	Blue River	-1.6	16	40	312,100
	14010003	Eagle River	-1.6	N/A	31	265,000
	14010004	Roaring Fork	-3.2	15	13	517,055
	14010005	Colorado Headwaters-Plateau	-2.2	46	23	1,739,647
Gunnison	14020001	East-Taylor	-2.0	85	22	282,169
	14020002	Upper Gunnison	-2.3	66	12	1,201,860
	14020003	Tomichi Creek	-2.8	81	16	35,647
	14020004	North Fork Gunnison	-3.4	40	9	137,053
	14020005	Lower Gunnison	-3.5	N/A	9	675,000
	14020006	Uncompahgre River	-2.3	47	6	117,300
	14030003	San Miguel	-3.7	N/A	6	64,000
Rio Grande	13010001	Rio Grande Headwaters	-3.3	92	10	310,450
	13010002	Alamosa-Trinchera	-2.6	97	12	71,125
	13010004	Saguache Creek	-2.6	N/A	18	20,000
	13010005	Conejos River	-3.0	65	11	127,308
San Juan-Dolores	14030002	Upper Dolores	-1.4	72	10	421,648
	14080101	Upper San Juan	-3.3	54	6	345,859
	14080102	Piedra River	-3.5	N/A	8	75,000
	14080104	Animas River	-3.7	42	6	243,694
	14080105	Middle San Juan	-3.5	50	7	9,879
	14080107	Mancos	-3.5	68	7	17,836
South Platte	10190001	South Platte Headwaters	0.6	82	34	199,400
	10190002	Upper South Platte	-0.5	90	21	439,485
	10190003	Middle South Platte-Cherry Creek	-1.6	98	31	770,900
	10190004	Clear Creek	-1.1	N/A	37	95,000
	10190005	St. Vrain River	0.2	99	38	233,151
	10190006	Big Thompson River	2.1	83	37	619,648
	10190007	Cache La Poudre	0.5	69	42	349,906
	10190012	Middle South Platte-Sterling	-1.2	96	31	861,600
Yampa-White	10180001	North Platte Headwaters	-0.8	N/A	40	190,000
	14050001	Upper Yampa	-2.1	99	24	500,475
	14050002	Lower Yampa	-2.0	N/A	27	595,000
	14050003	Little Snake	-2.0	N/A	26	215,000
	14050005	Upper White	-3.2	N/A	12	149,000

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 (Normal)	4.0 (Abundant Supply)

January 1, 2018 SWSI Component Information By HUC

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
11020001	Arkansas Headwaters	ARKANSAS RIVER AT SALIDA	200,000	33
		CLEAR CREEK RESERVOIR	7,119	59
		TURQUOISE LAKE	93,413	58
		TWIN LAKES RESERVOIR	42,214	52
		HOMESTAKE RESERVOIR	41,094	74
11020002	Upper Arkansas	PUEBLO RESERVOIR INFLOW	280,000	37
		PUEBLO RESERVOIR	220,600	77
11020005	Upper Arkansas-Lake Meredith	PUEBLO RESERVOIR INFLOW	280,000	37
		HUERFANO RIVER NEAR REDWING	6,700	25
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	5,300	21
		MEREDITH RESERVOIR	39,075	87
		LAKE HENRY	9,026	97
11020006	Huerfano River	HUERFANO RIVER NEAR REDWING	6,700	25
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	5,300	21
		CUCHARAS RESERVOIR*	0	16
11020009	Upper Arkansas-John Martin Reservoir	PUEBLO RESERVOIR INFLOW	280,000	37
		HUERFANO RIVER NEAR REDWING	6,700	25
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	5,300	21
		PURGATOIRE RIVER AT TRINIDAD	18,000	16
		ADOBE CREEK RESERVOIR	47,711	82
		JOHN MARTIN RESERVOIR	268,867	84
11020010	Purgatoire River	PURGATOIRE RIVER AT TRINIDAD	18,000	16
		TRINIDAD LAKE	38,320	86
14010001	Colorado Headwaters	COLORADO RIVER NEAR DOTSERO	1,200,000	33
		WILLIAMS FORK RESERVOIR	66,000	54
		WOLFORD MOUNTAIN RESERVOIR	55,040	99
14010002	Blue River	BLUE RIVER INFLOW TO GREEN MOUNTAIN RES	245,000	40
		GREEN MOUNTAIN RESERVOIR	67,100	16
14010003	Eagle River	EAGLE RIVER BELOW GYPSUM	265,000	31
14010004	Roaring Fork	ROARING FORK AT GLENWOOD SPRINGS	445,000	13
		RUEDI RESERVOIR	72,055	15
14010005	Colorado Headwaters-Plateau	COLORADO RIVER NEAR CAMEO	1,730,000	23
		VEGA RESERVOIR	9,647	46
14020001	East-Taylor	TAYLOR R INF TO TAYLOR PARK RESERVOIR	75,000	25
		EAST RIVER AT ALMONT	131,000	24
		TAYLOR PARK RESERVOIR	76,169	85
14020002	Upper Gunnison	LAKE FORK AT GATEVIEW, CO	71,000	8
		GUNNISON R INF TO BLUE MESA RESERVOIR	420,000	14
		BLUE MESA RESERVOIR	592,594	78
		MORROW POINT RESERVOIR	110,991	32
		FRUITLAND RESERVOIR	500	39
		CRAWFORD RESERVOIR	4,609	22
		SILVER JACK RESERVOIR	2,166	7
14020003	Tomichi Creek	TOMICHI CREEK AT GUNNISON, CO	35,000	16
		VOUGA RESERVOIR NEAR DOYLEVILLE	647	81

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
14020004	North Fork Gunnison	NORTH FORK GUNNISON R NR SOMERSET	135,000	9
		PAONIA RESERVOIR	2,053	40
14020005	Lower Gunnison	GUNNISON RIVER NR GRAND JUNCTION	675,000	9
14020006	Uncompahgre River	UNCOMPAHGRE RIVER AT COLONA	57,000	6
		RIDGEWAY RESERVOIR	60,300	47
14030003	San Miguel	SAN MIGUEL RIVER NEAR PLACERVILLE	64,000	6
13010001	Rio Grande Headwaters	RIO GRANDE NEAR DEL NORTE	255,000	10
		RIO GRANDE RESERVOIR	25,783	87
		SANTA MARIA RESERVOIR	18,859	90
		CONTINENTAL RESERVOIR	10,808	99
13010002	Alamosa-Trinchera	ALAMOSA CREEK ABOVE TERRACE RESERVOIR	34,000	14
		TRINCHERA CK	4,800	8
		SANGRE DE CRISTO	3,900	16
		UTE CREEK	5,300	18
		CULEBRA CREEK AT SAN LUIS	7,100	13
		TERRACE RESERVOIR	7,496	76
		MOUNTAIN HOME	8,529	99
13010004	Saguache Creek	SAGUACHE CREEK NEAR SAGUACHE, CO	20,000	18
13010005	Conejos River	CONEJOS RIVER NEAR MOGOTE	104,000	11
		PLATORO RESERVOIR	23,308	65
14030002	Upper Dolores	DOLORES RIVER BELOW MCPHEE RESERVOIR	124,000	10
		GROUNDHOG RESERVOIR	12,143	46
		MCPHEE RESERVOIR	285,505	73
14080101	Upper San Juan	SAN JUAN RIVER NEAR CARRACAS	187,000	15
		LOS PINOS RIVER NEAR BAYFIELD	94,000	6
		VALLECITO RESERVOIR	64,859	54
14080102	Piedra River	PIEDRA RIVER NEAR ARBOLES	75,000	8
14080104	Animas River	ANIMAS RIVER AT DURANGO	200,000	6
		FLORIDA RIVER INFLOW TO LEMON RESERVOIR	25,000	6
		LEMON RESERVOIR	18,694	42
14080105	Middle San Juan	LA PLATA RIVER AT HESPERUS	8,400	7
		LONG HOLLOW RESERVOIR	1,479	50
14080107	Mancos	MANCOS RIVER NEAR MANCOS	12,600	7
		JACKSON GULCH RESERVOIR	5,236	68
10190001	South Platte Headwaters	ELEVENMILE CANYON RESV INFLOW	43,000	34
		ANTERO RESERVOIR	20,100	91
		ELEVENMILE CANYON RESERVOIR	100,000	89
		SPINNEY MOUNTAIN RESERVOIR	36,300	83
10190002	Upper South Platte	SOUTH PLATTE RIVER AT SOUTH PLATTE	131,000	21
		CHEESMAN LAKE	72,185	76
		DILLON RESERVOIR	236,300	95

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
10190003	Middle South Platte-Cherry Creek	SOUTH PLATTE RIVER AT SOUTH PLATTE	131,000	21
		CLEAR CREEK AT GOLDEN	95,000	37
		SAINT VRAIN CREEK AT LYONS	77,000	42
		BOULDER CREEK NEAR ORODELL	51,000	42
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	35,000	34
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	77,000	37
		CACHE LA POUDRE R AT CANYON MOUTH	210,000	42
		BARR LAKE	26,900	96
		MILTON RESERVOIR	19,100	96
		STANDLEY RESERVOIR	41,200	99
		HORSECREEK RESERVOIR	7,700	24
10190004	Clear Creek	CLEAR CREEK AT GOLDEN	95,000	37
10190005	St. Vrain River	SAINT VRAIN CREEK AT LYONS	77,000	42
		BOULDER CREEK NEAR ORODELL	51,000	42
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	35,000	34
		GROSS RESERVOIR	30,582	99
		MARSHALL RESERVOIR	6,600	86
		BUTTONROCK (RALPH PRICE) RESERVOIR	16,100	99
		TERRY RESERVOIR	5,800	81
		UNION RESERVOIR	11,069	59
10190006	Big Thompson River	BIG THOMPSON R AT MOUTH, NR DRAKE, CO	77,000	37
		BOYD LAKE	33,000	57
		CARTER LAKE	49,253	16
		LAKE LOVELAND RESERVOIR	6,300	19
		LONE TREE RESERVOIR	6,900	63
		MARIANO RESERVOIR	4,000	63
		LAKE GRANBY	437,395	96
		WILLOW CREEK RESERVOIR	5,800	9
10190007	Cache La Poudre	CACHE LA POUDRE R AT CANYON MOUTH	210,000	42
		BLACK HOLLOW RESERVOIR	3,400	80
		CACHE LA POUDRE	8,900	98
		CHAMBERS LAKE	6,400	94
		COBB LAKE	19,200	78
		FOSSIL CREEK RESERVOIR	9,300	91
		HALLIGAN RESERVOIR	6,400	99
		HORSETOOTH RESERVOIR	76,506	45
		WINDSOR RESERVOIR	9,800	37

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
10190012	Middle South Platte-Sterling	SOUTH PLATTE RIVER AT SOUTH PLATTE	131,000	21
		CLEAR CREEK AT GOLDEN	95,000	37
		SAINT VRAIN CREEK AT LYONS	77,000	42
		BOULDER CREEK NEAR ORODELL	51,000	42
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	35,000	34
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	77,000	37
		CACHE LA POUDRE R AT CANYON MOUTH	210,000	42
		EMPIRE RESERVOIR	25,100	68
		JACKSON LAKE RESERVOIR	24,200	69
		JULESBURG RESERVOIR	16,500	31
		POINT OF ROCKS RESERVOIR	51,700	76
		PREWITT RESERVOIR	21,100	83
		RIVERSIDE RESERVOIR	47,000	96
10180001	North Platte Headwaters	NORTH PLATTE R NR NORTHGATE	190,000	40
14050001	Upper Yampa	YAMPA RIVER AT STEAMBOAT SPRINGS	175,000	25
		ELK RIVER NEAR MILNER, CO	245,000	25
		ELKHEAD CREEK ABOVE LONG GULCH	40,000	20
		STAGECOACH RESERVOIR NR OAK CREEK	33,400	99
		YAMCOLO RESERVOIR	7,075	67
14050002	Lower Yampa	YAMPA RIVER NEAR MAYBELL	595,000	27
14050003	Little Snake	LITTLE SNAKE RIVER NEAR LILY	215,000	26
14050005	Upper White	WHITE RIVER NEAR MEEKER	149,000	12

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

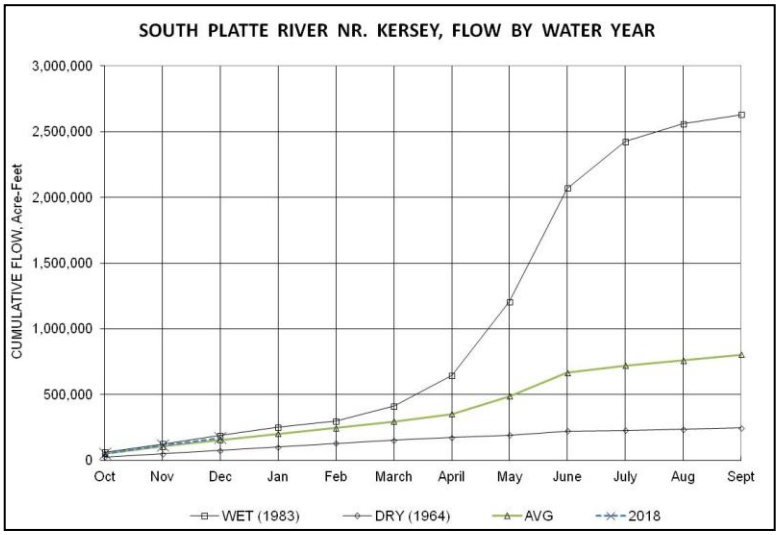
Water Volume NEP Color Scale: 0 (Well Below Normal) | 50 (Normal) | 100 (Well Above Normal)

Basinwide Conditions Assessment

The SWSI value for the month was +1.3. December finally brought what was generally the first measureable snowfall over the lower elevations of northeast Colorado since early October. However, even with that snowfall, precipitation was below normal for all but the highest elevations and a very small area in the extreme northeast corner of the state. However, even for the higher elevations, the picture is not all that rosy as the South Platte basin snowpack moved from 82% of normal on December 1 to 87% of normal on January 1. While this is the best in the state, it does not inspire a lot of confidence that 2018 will be a good water year.

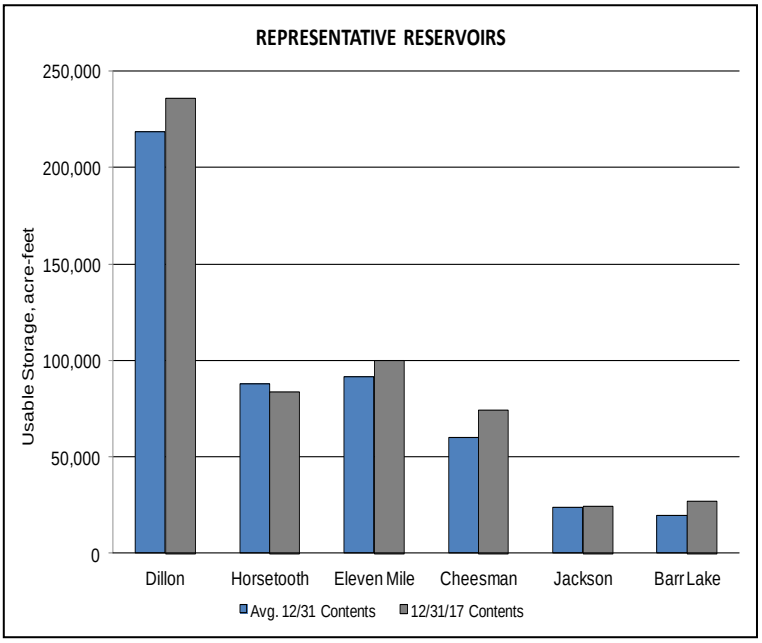
Temperatures also continued the above normal pattern seen throughout the autumn. Though the end of December did bring much cooler temperatures to northeast Colorado, the overall monthly average temperatures were still above or well above average for the entire area.

Even after the December snowfall, the warm and dry autumn/early winter finally caught up with northeastern Colorado. After literally no change in the USDA Drought Monitor rating during October and November, the relatively small area rated D0 "Abnormally Dry" along the Nebraska border exploded to cover almost all of the area by the end of December. The exceptions were the South Park area and the northern front range mountains.



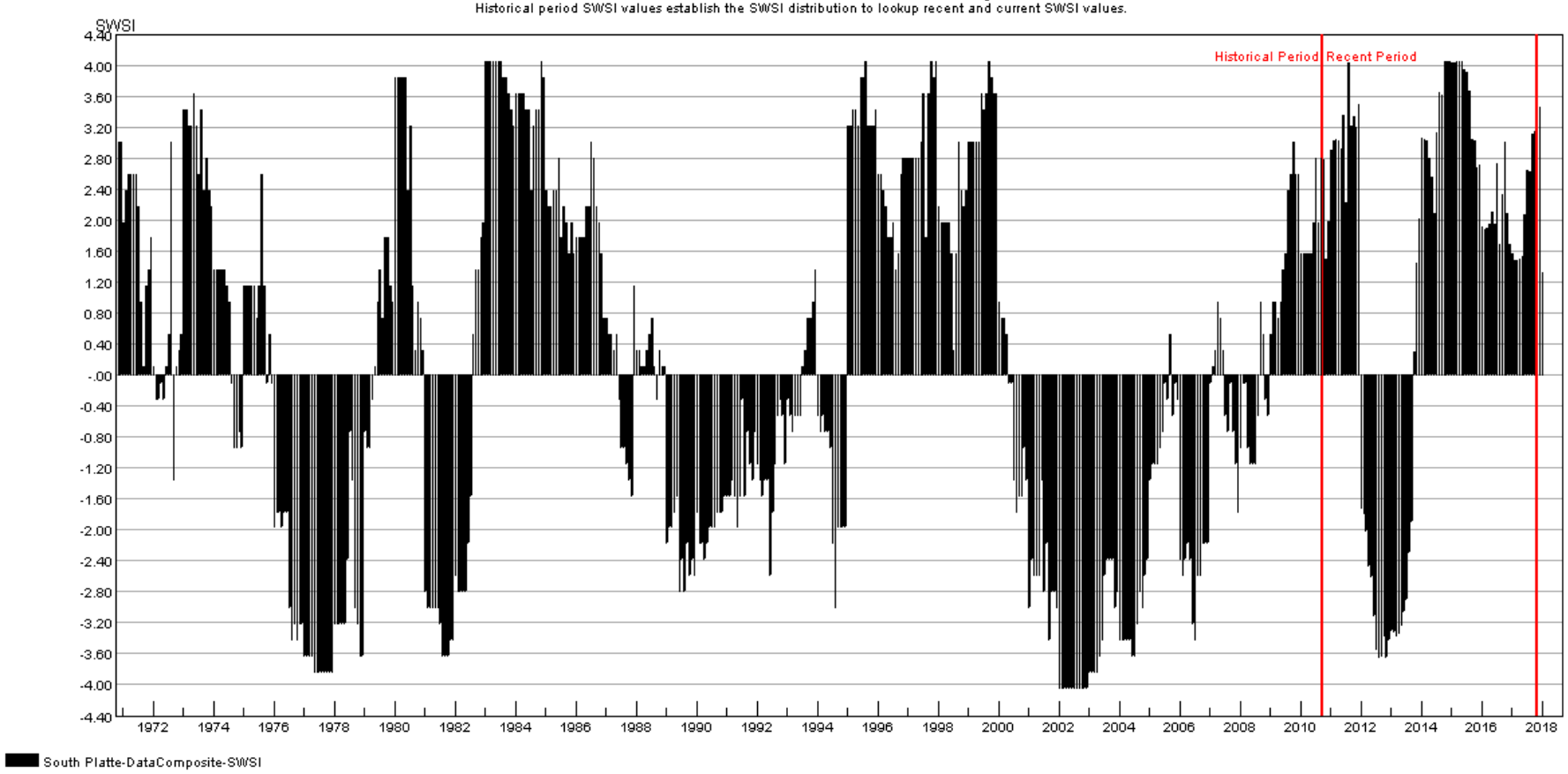
December began with calls below Metro Denver on the South Platte mainstem as more junior than normal before jumping to free river on December 15 and remaining there the rest of the month. In contrast, the call from metro Denver upstream was fairly normal and remained there all month. In general, there were fewer than normal calls on the major South Platte tributaries from metro Denver north, but the calls that were in place were pretty normal for December.

The positive side of the generally warm December weather is that many reservoirs have been able to divert water more easily because there have been few inflow ditch icing problems. This has allowed storage volumes to continue to increase and should help provide some "cushion" if the snowpack numbers don't improve. The overall end of December storage was about 75% of capacity. This compares to a long term average end of December storage of about 66% of capacity.



South Platte 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 +2.0.

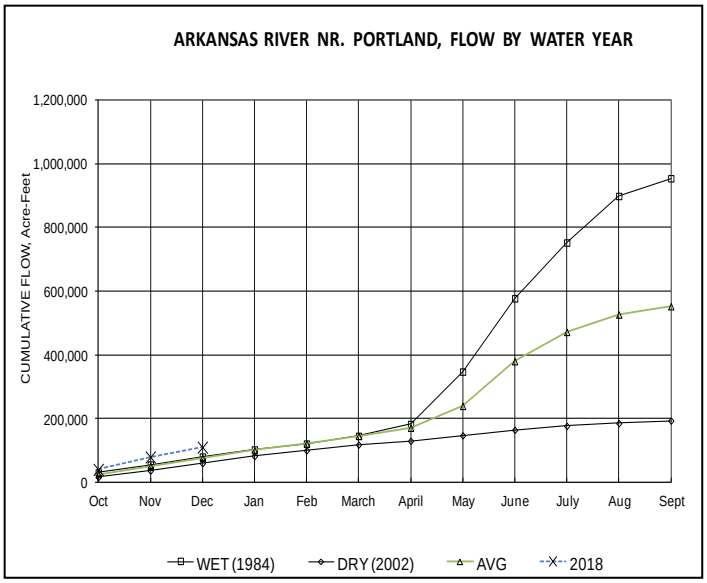
Outlook

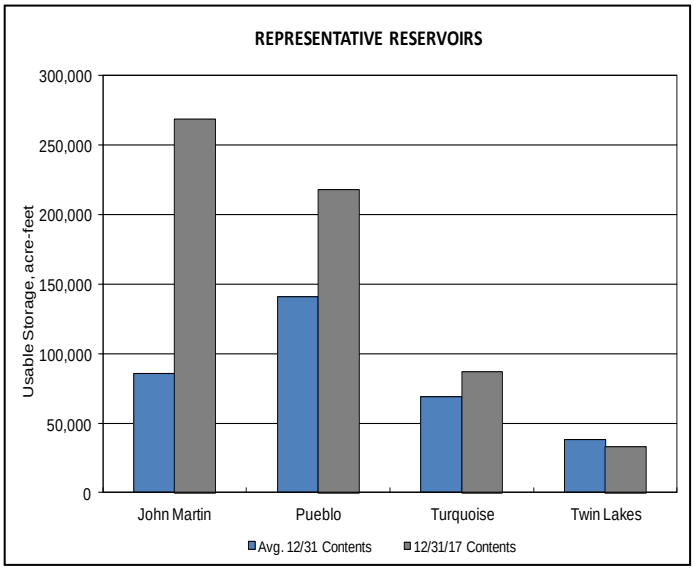
The Pueblo Winter Water system grand total was 74,132 acre-feet at the end of December representing an increase from last year's storage to date, which was 55,391 acre-feet. The previous five-year average for this period is 52,393 acre-feet and the average since 1995 for this period has been 57,563 acre-feet, indicating approximately average storage so far this year.

Conservation storage in John Martin Reservoir is about 155% of last year's storage at the end of December. Storage since November 1, 2017 has been 17,647 acre-feet while storage a year ago for the same period was 11,375 acre-feet.

Administrative/Management Concerns

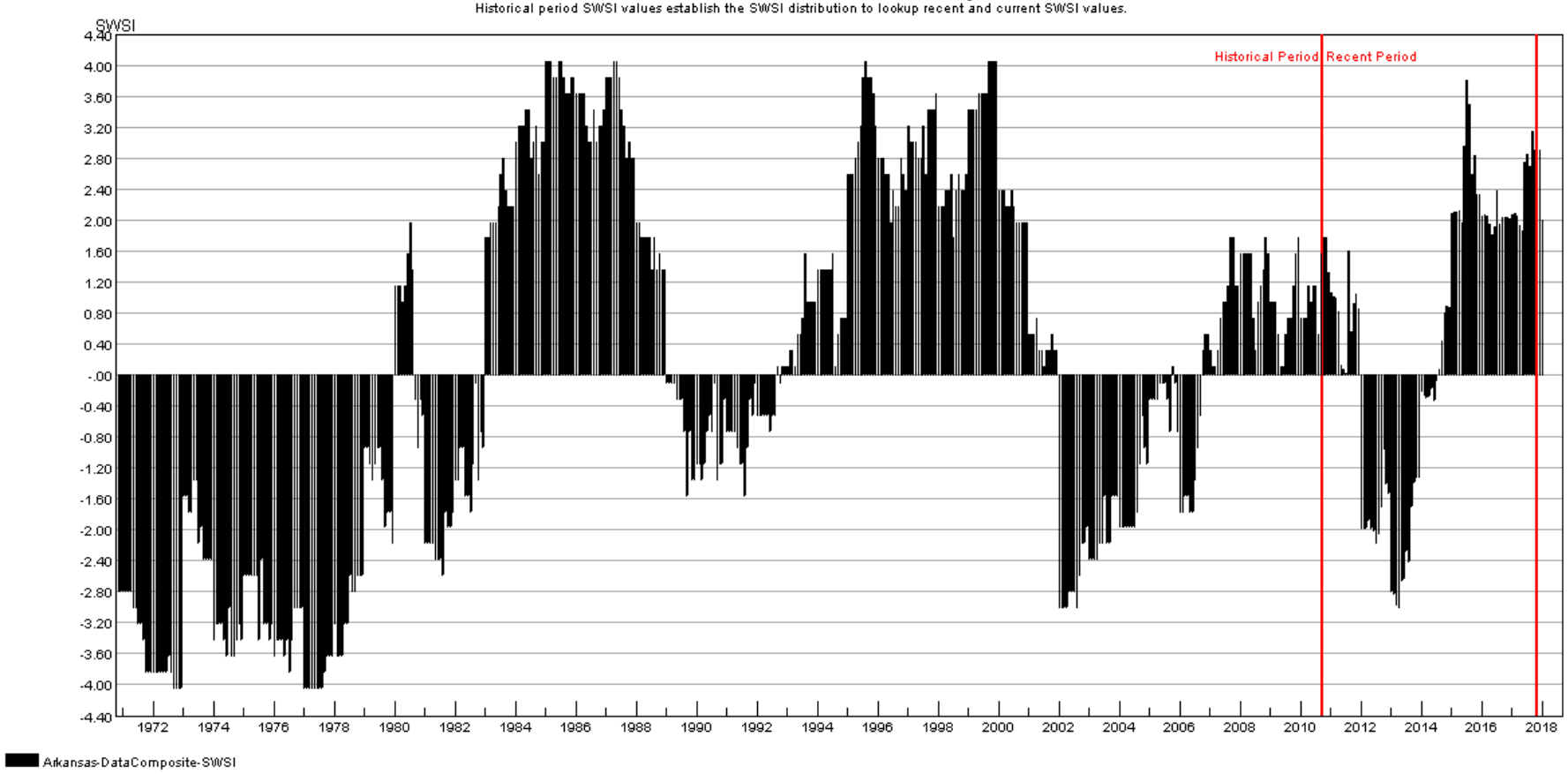
The Arkansas River Compact Administration meeting was held in Lamar, Colorado on December 6-7, 2017. Colorado and Kansas staff will continue to work to support the efforts of the Special Engineering Committee with meetings expected to occur in early 2018 to ensure the Highland Canal water right can be used for a second year as a source of water for the John Martin Permanent Pool.





Arkansas 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 -3.0. Flow at the gaging station Rio Grande near Del Norte averaged 184 cfs (95% of normal) during December. The Rio Grande 2017 annual volume was 112% of the long-term average. The Conejos River near Mogote had a mean flow of 88 cfs (170% of normal) during the month. The above average streamflow in the Conejos was the result of a release from Platoro Reservoir for Compact delivery needs. The Conejos annual was 135% of the long-term average, the first annual runoff above the average after seven consecutive years of below average runoff. The southern Sangre de Cristo creeks had surprisingly good runoffs during 2017. Saguache Creek experienced another good runoff – now the fourth in a row. The northern part of the San Luis Valley "greened" up in 2017 due to runoff, precipitation, and MJ operations. Decent 2017 runoff was a welcome relief to the Alamosa River and LaJara Creek drainages that had suffered through below normal runoffs since 2010.

Alamosa received 0.14 inches of precipitation during December, 0.21 inches below normal. Alamosa's total precipitation of 10.7 inches during 2017 was 3.4 inches above the annual average. For the year, the average temperature was 3.2 degrees above normal.

Outlook

Stream flow in the basin should be near average for the next few months. However, the current Natural Resources Conservation Service (NRCS) forecasts predict the 2018 runoff to be very poor and in the range of 23% (Sangre de Cristo Creek on the eastern side of the San Luis Valley) to 62% (Saguache Creek) of average for key streams in the Upper Rio Grande Basin.

Recent National Weather Service climate forecasts call for warmer and drier than normal conditions in the San Luis Valley for the remainder of the winter with a chance for a few March and April snowstorms.

Administrative/Management Concerns

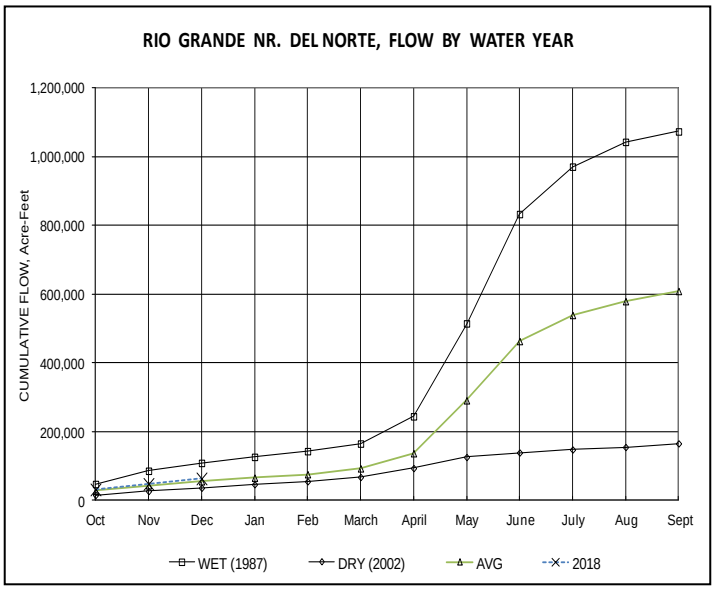
Colorado delivered approximately 405,000 acre-feet to New Mexico and Texas during 2017, which is very close to the delivery requirement pursuant to the provisions of the Rio Grande Compact.

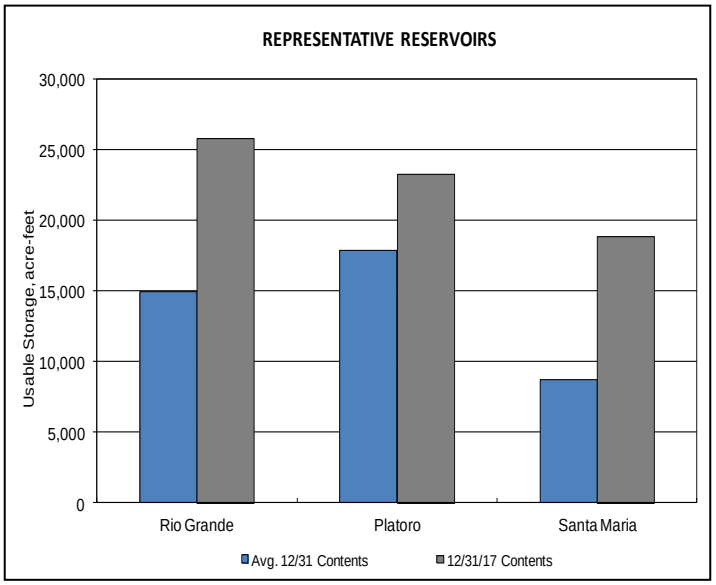
2017 saw very good snowpack accumulation in January, little gain in February, an erratic March and April and some help in May. Runoff timing and amount mimicked historic patterns very well in May and June. Rainfall in July and September helped flow in some creeks, but delayed and damaged local alfalfa harvest. The accumulation of snowpack 2017 – 2018 is off to a miserable start. Reservoir storage is very good, with a basinwide storage total of about 120% of average. Aquifer conditions generally improved during 2017.

Case No. 15CW3024, the Groundwater Use Rules for Water Division 3, goes to trial commencing January 29, 2018. A total of 30 statements of opposition were filed, but many of those were in support of rule promulgation. The State Engineer and his staff had productive meetings with the opposers during 2017 with several reaching stipulation. Groundwater Management Subdistrict No. 1 of the Rio Grande Water Conservation District continued well depletion replacement in 2017 with a mixture of reservoir releases, headgate bypasses, and Closed Basin Project production delivered to the Rio Grande. Formation of the other six or seven subdistricts is progressing very well.

Public Use Impacts

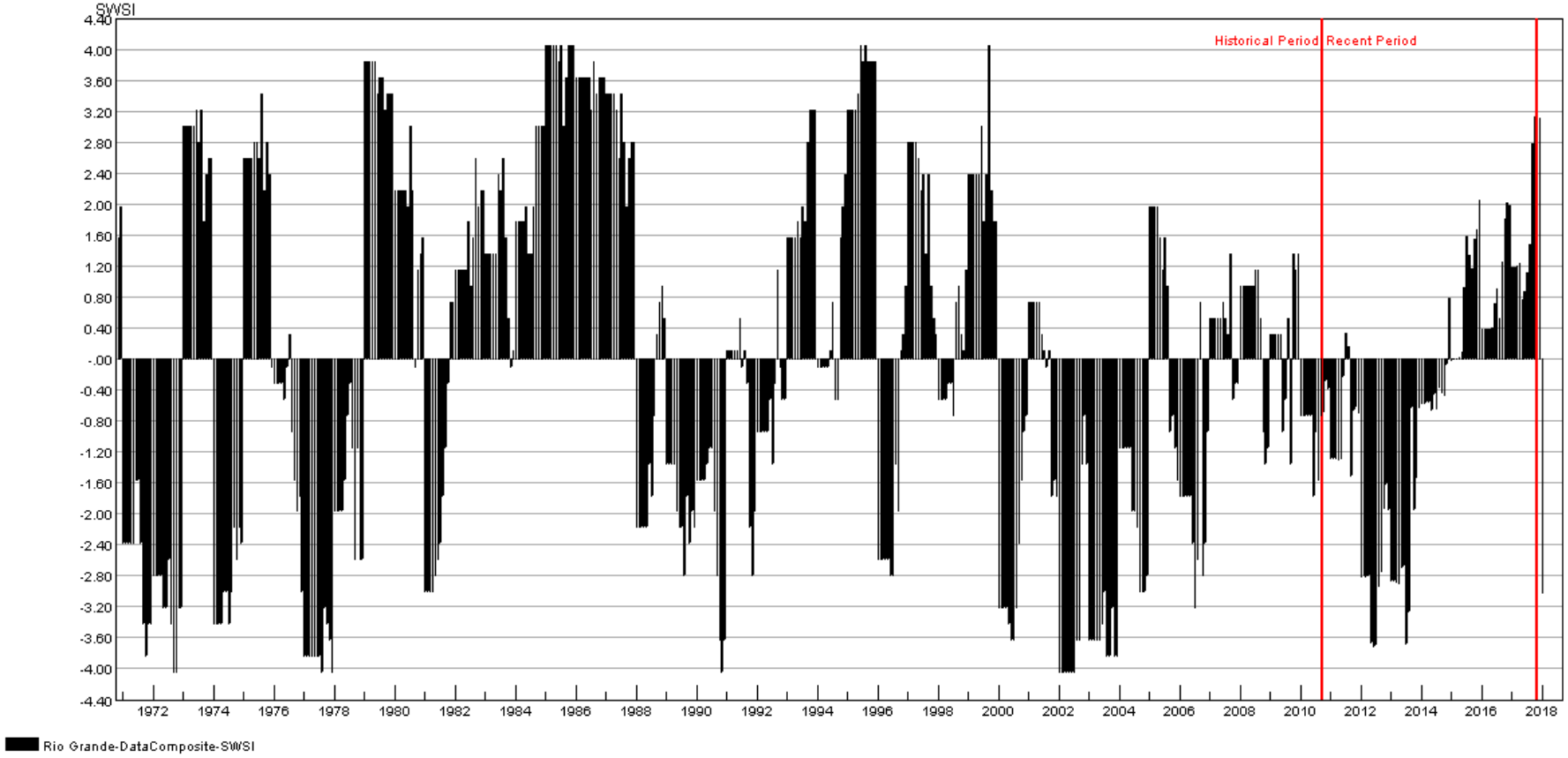
In summary, 2017 was a good to very good year for runoff depending on the drainage location. Precipitation during parts of the irrigation season eased the need for irrigation well pumping from the Valley's aquifers. These aquifers made modest recovery. Crop yields were good in areas with sufficient water supplies. Commodity prices were generally better than the previous year.





Rio Grande Basin SWSI History

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



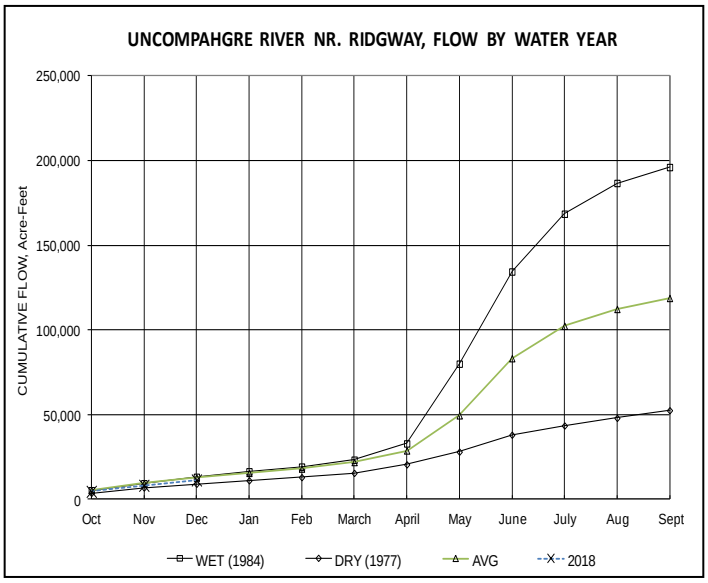
Basinwide Conditions Assessment

The SWSI value for the month was -2.9. For the third month in a row, areas of the Gunnison basin west of Blue Mesa Reservoir only received 0-30% of the 30 year average in December. Remaining areas didn't fare much better with 30-50% of the average. As a result of the unprecedented dryness, on January 1st, most Snotel sites are reporting the lowest level ever recorded and the Gunnison basin average snowpack calculated using those sites is only 37% of the median. In fact, a number of sites are well below their previous record lows. One such site is the Park Reservoir on the Grand Mesa, which has 6.5 inches less than in 2002 and 2.3 inches less water than the previous low in 2000. The good news is that there are still over three months of accumulation to go and some years, such as 2000, experienced significant recoveries from early lows. Bad news is that we need to receive over 150% of average snow accumulation to reach the median peak.

Outlook

Colorado Basin River Forecast Center released their first streamflow forecasts on January 1st and they reflect the low snowpack conditions. If average conditions are experienced for the remaining winter months they predict that streamflows in the Gunnison at Blue Mesa Reservoir, Taylor River at Taylor Park Reservoir, Surface Creek at Cedaredge, Lake Fork Gunnison River at Gateview and the Uncompahgre River at Ridgway Reservoir will be 64%, 76%, 42%, 64% and 60% respectively. Model runs since January 1st have declined further with Surface Creek streamflow modeled as low as 3,460 acre-feet, which is 21% of average and similar to the level experienced in 1977.

Unfortunately, the most recent NWS forecast for January to March moves much of the Gunnison basin into the area expected to receive lower than average precipitation and above average temperatures.

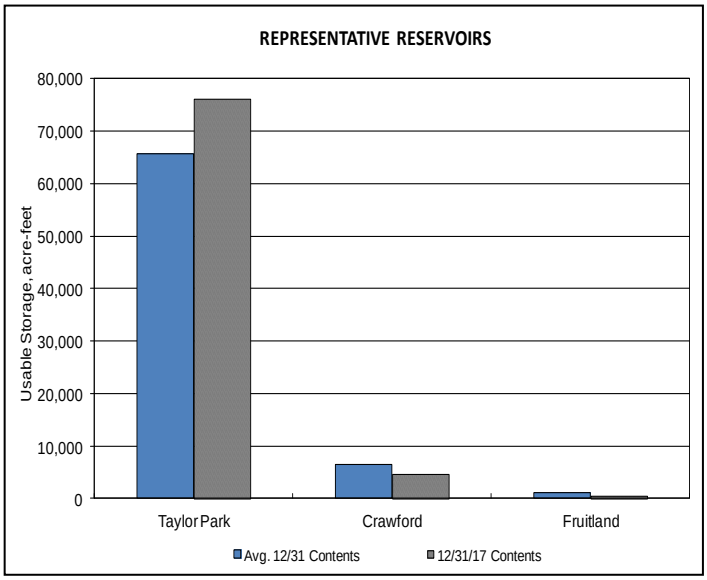


Administrative/Management Concerns

The Bureau of Reclamation announced that releases from the Aspinall Unit at Crystal Dam will be decreased from 1,600 cfs to 1,000 cfs on January 7th because they had reached the icing target elevation of 7490 feet and need to preserve remaining storage given the poor snowpack.

Given the extremely low forecast for streamflow, it is fortunate that many basin reservoirs contain adequate carryover storage. Unfortunately, however, carryover storage in the Grand Mesa Water Users Association system on November 1st was 29%, which is lower than the typical 35% due to increased use during the dry fall. As a result, some water providers and orchard owners in the North Fork Gunnison basin have inquired about the potential to lease water and operate under substitute water supply plans during the summer of 2018.

Water Commissioners in Water Division 4 are hoping for a wet spring, but preparing for a situation where many streams that haven't been on call since 2012, may be on call in 2018.

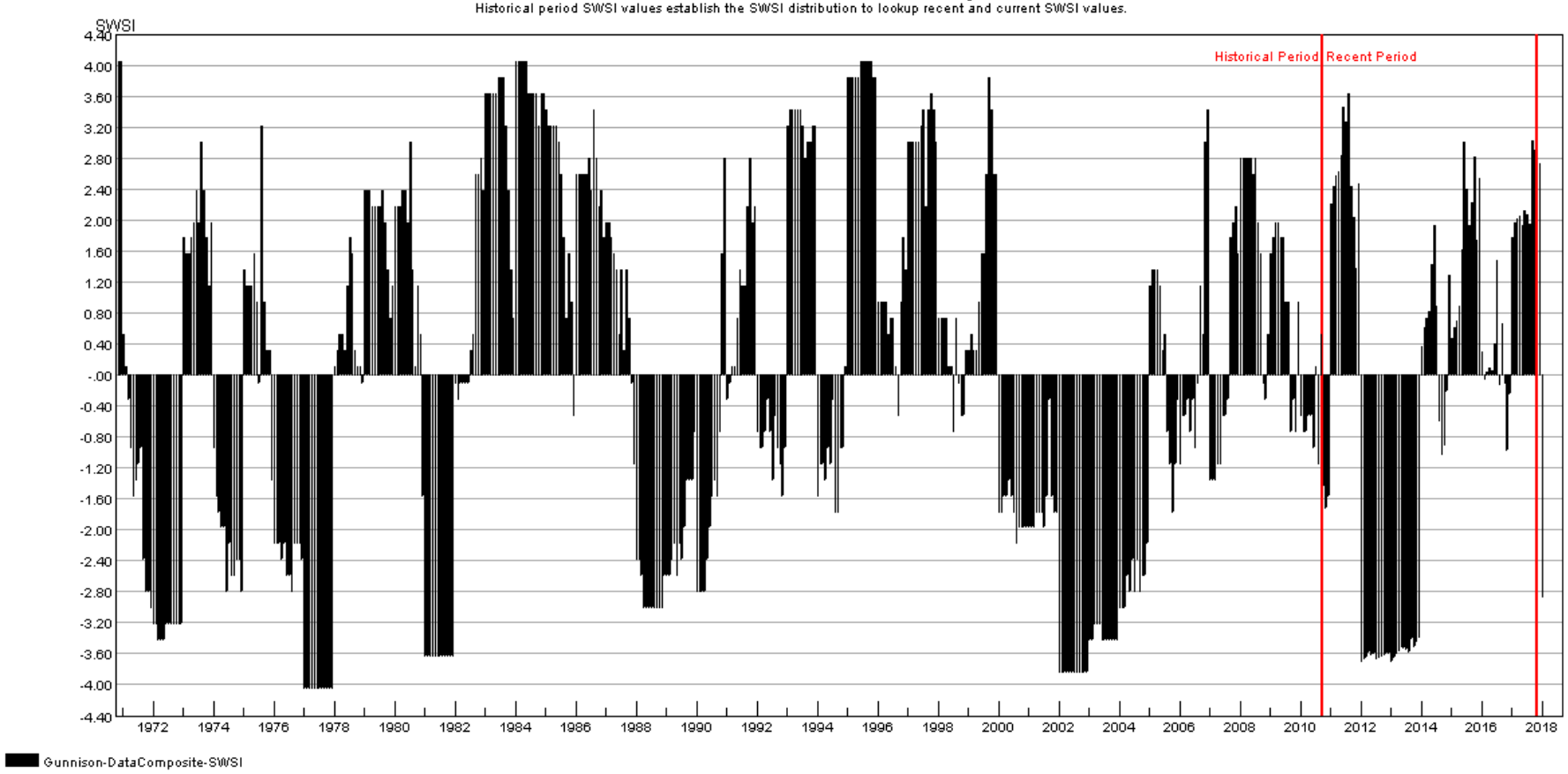


Public Use Impacts

Lack of snow definitely impacted basin ski resorts Telluride and Crested Butte during the busy Holiday season. Telluride reported a 24 inch base and that they had received only 19 inches of natural snowfall on January 4th. Thankfully, snow making operations at Telluride and Crested Butte allowed them to open 18% and 40% of trails, respectively, by January 4th.

Gunnison Basin SWSI History

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

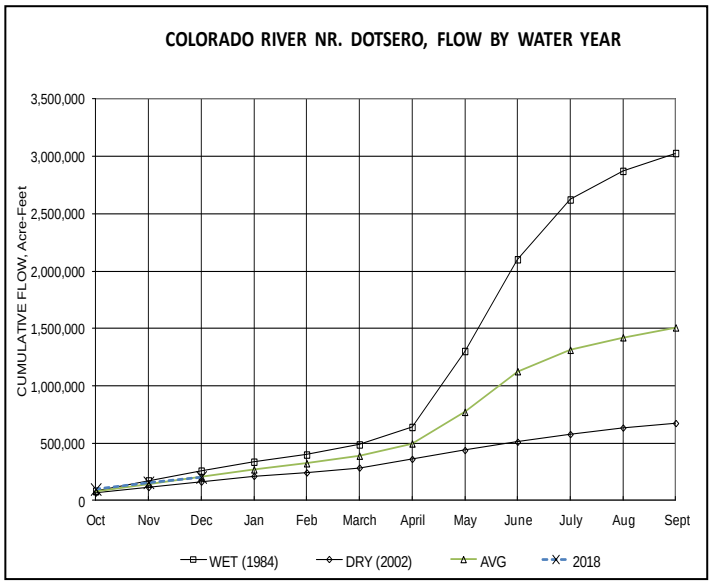


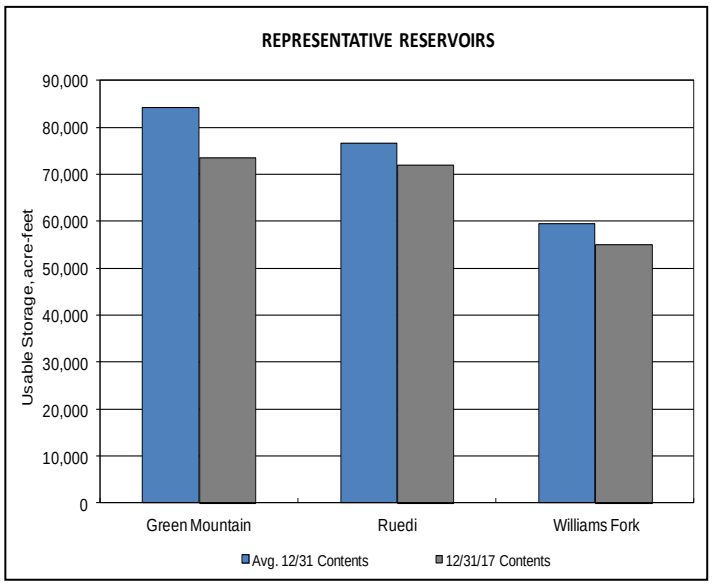
Basinwide Conditions Assessment
The SWSI value for the month was -2.2.

Outlook
Colorado River flows continue near to below average with tributary flows running slightly below average throughout January. As of January 12, the Upper Colorado River Basin snowpack was 64 percent of median snow water equivalent and 59 percent of average precipitation. Forecasts call for above average precipitation above average temperatures for western Colorado through January.

Administrative/Management Concerns
The call on the Colorado River main stem remains the Shoshone Hydro Power right for 1250cfs. Accordingly, Green Mountain Reservoir is releasing to pass inflows, provide contract and HUP obligations and make C-BT replacements.

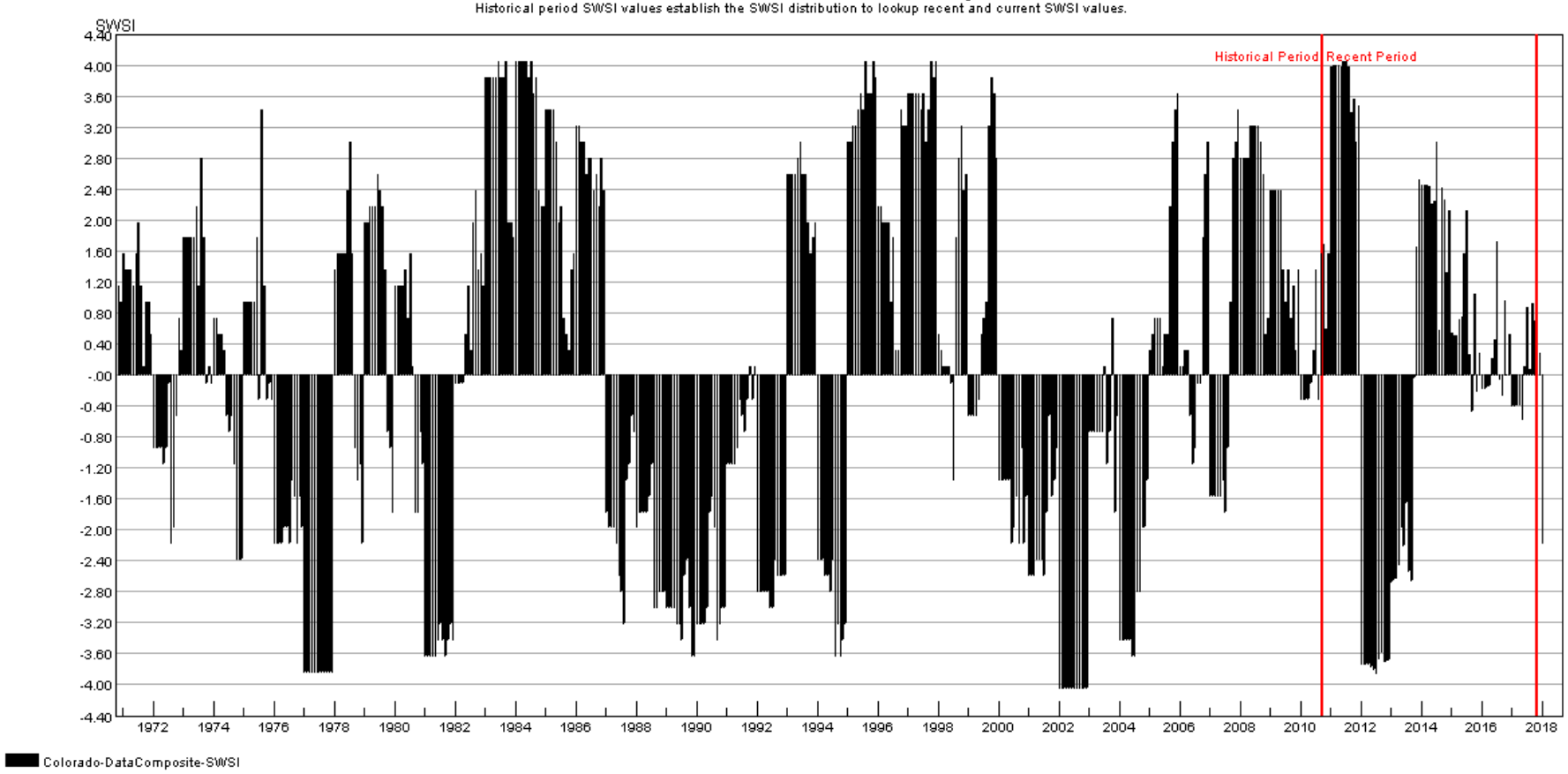
Public Use Impacts
For the 17th year, the ESPN Winter X-Games return to Aspen January 25-28. Buttermilk Ski Mountain, part of Aspen Snowmass, makes a significant amount of snow to accommodate the large jumps needed for the events and the super pipe. The games also have a massive economic impact in the Roaring Fork Valley and make it the highest occupancy weekend of the year in Aspen Snowmass.





Colorado Basin SWSI History

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



Basinwide Conditions Assessment

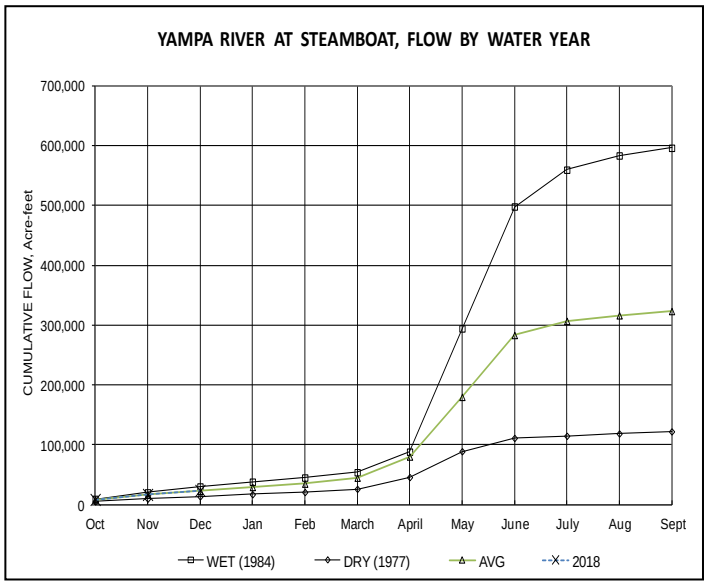
The SWSI value for the month was -2.0. December precipitation was well below average in the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by NRCS, was reported at 64% of average for the Yampa, White, and North Platte River basins. Total precipitation for the water year as a percent of average to date in the combined basins at the end of December was 76%.

Snowpack for the combined basins as of January 1st, 2018 was at 76% of average. The snow water equivalent (SWE) as of December 31, 2017 was 80% of average for the North Platte River basin and 76% of average for the Yampa River basin and White River basin.

NRCS predicts well below average spring and summer streamflows in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the April through July period are 83% of average for the North Platte River at Northgate, 64% of average for the Yampa River near Maybell, 62% of average for the Little Snake River near Lily, and 55% of average for the White River near Meeker.

Due to extremely cold temperatures all Division 6 stream gages were either closed for the winter season or ice/snow-affected at the end of December 2017.

Outlook



As of December 31st Fish Creek Reservoir was storing approximately 3,565 AF, 85% of capacity. The capacity of Fish Creek Reservoir is 4,167 AF. Yamcolo Reservoir was storing 7,100 AF at the end of December 2017. The capacity of Yamcolo Reservoir is 8,700 AF. The G3 web server is not functioning currently for Elkhead Creek Reservoir. The contact for the Colorado River District will let me know when the site is available. The capacity of Elkhead Creek Reservoir is 24,778 AF. On December 31, 2017, Stagecoach Reservoir was storing 33,400 AF, 90% of capacity.

Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Yamcolo Reservoir for irrigation purposes, and Elkhead Creek Reservoir for municipal, industrial, recreational, and fish recovery releases. Stagecoach Reservoir is primarily used for recreation though a significant amount of stored water is allocated for municipal, industrial, irrigation and augmentation uses.

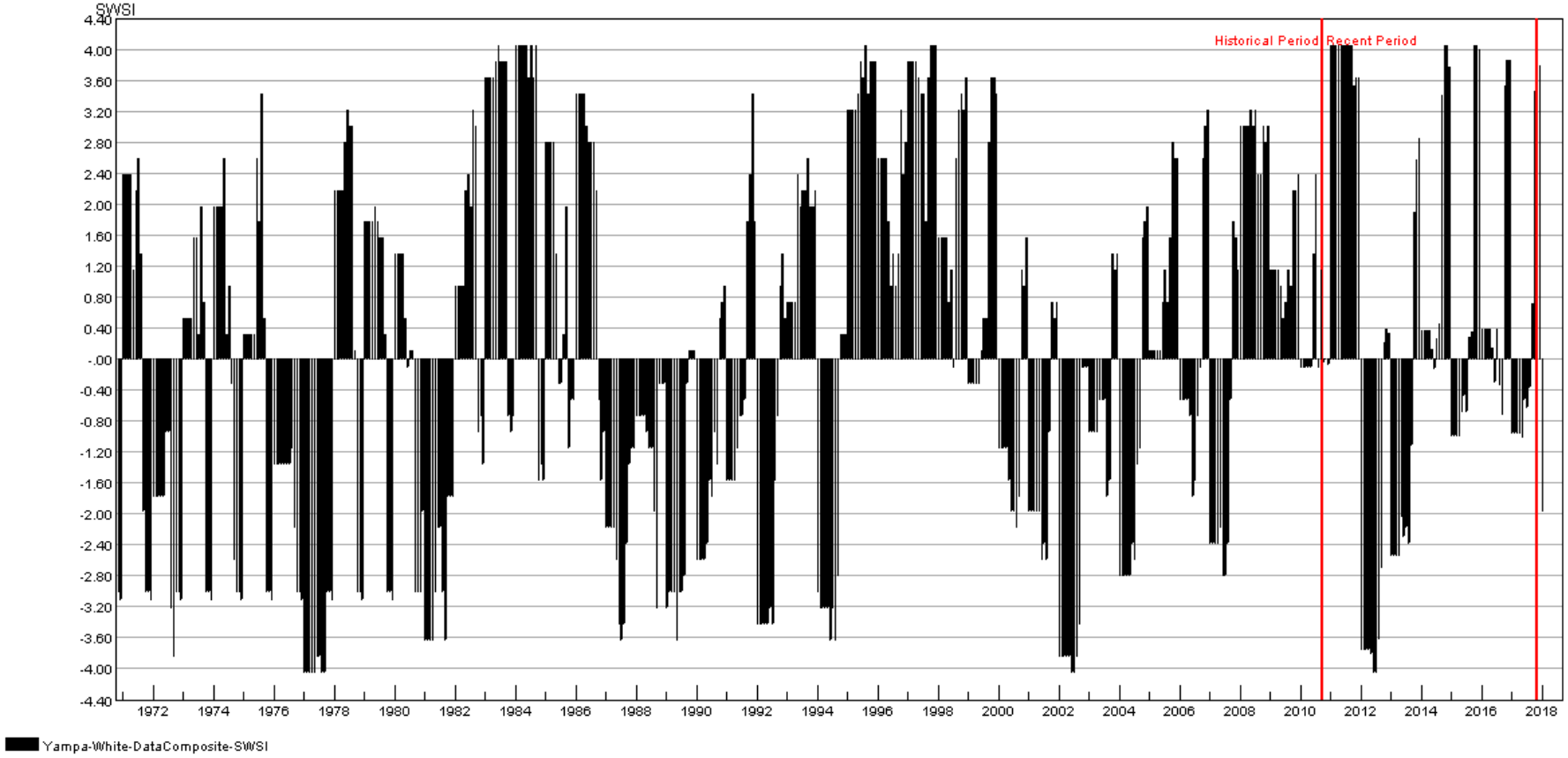
Public Use Impacts

Stagecoach Reservoir is completely iced over with 6 inch to 8 inch thickness at the inlet and coves and 3 inch to 4 inch across the reservoir. Anglers should use extreme caution when venturing onto the ice and snowmobiles are not recommended. Please refer to the Stagecoach Park website conditions page for a fishing report.

Steamboat Lake is reporting 6-8 inches of ice in the Marina. Fishing in the Marina area has been reported as great. No report available on the condition of the ice. Extreme caution is advised. Roads are all closed in the park except for the Marina access. Please refer to Steamboat Lake Park website conditions page for additional information. The snowmobile and snowshoe trails are not groomed as of 1/1/2018. Trails will be groomed as soon as there is enough snow.

Yampa-White Basin SWSI History

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

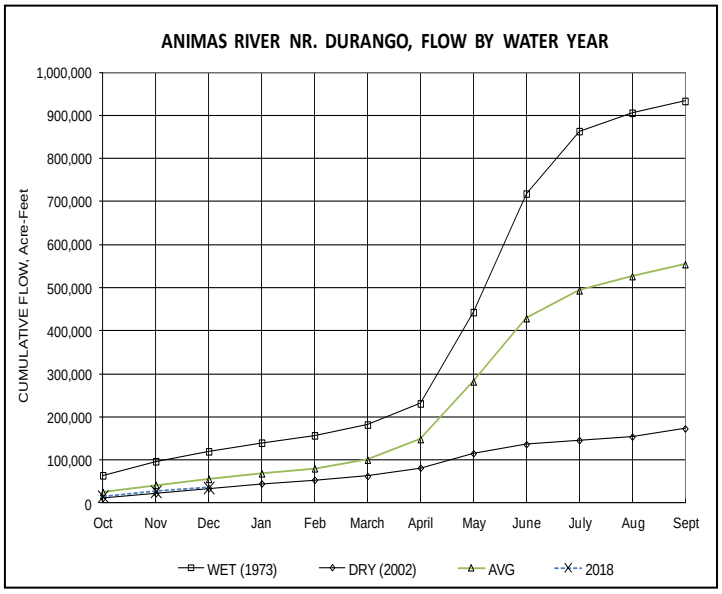


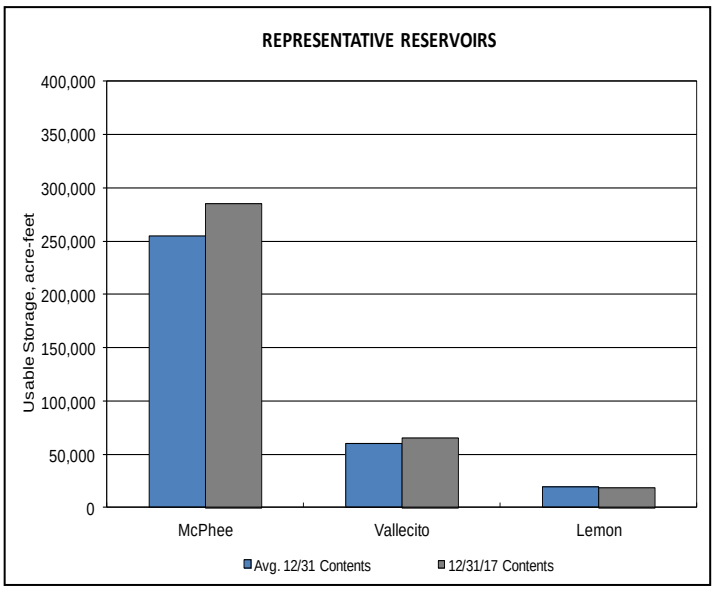
Basinwide Conditions Assessment

The SWSI value for the month was -2.9. Flow at the Animas River at Durango averaged 143 cfs (64% of average). The flow at the Dolores River at Dolores were estimated to average 33 cfs (58% of average). The La Plata River at Hesperus averaged 3.9 cfs (48% of average). Precipitation in Durango was 0.06 inches for the month, 3.6% of the 30-year average of 1.65 inches. Precipitation was the 116th highest amount recorded in December, in Durango, out of 123 years of record. Precipitation to date in Durango, for the water year, is 0.40 inches, 8% of the 30-year average of 5.08 inches. End of last month precipitation to date, for the water year was 10% of average. The average high and low temperatures for the month of December in Durango were 50o and 15o. In comparison, the 30-year average high and low for the month is 41o and 14o. At the end of the month Vallecito Reservoir contained 65,664 acre-feet compared to its average content of 55,279 acre-feet (119% of average). McPhee Reservoir was up to 285,579 acre-feet compared to its average content of 259,379 (110% of average), while Lemon Reservoir was up to 19,040 acre-feet as compared to its average content of 19,683 acre-feet (97% of average).

Outlook

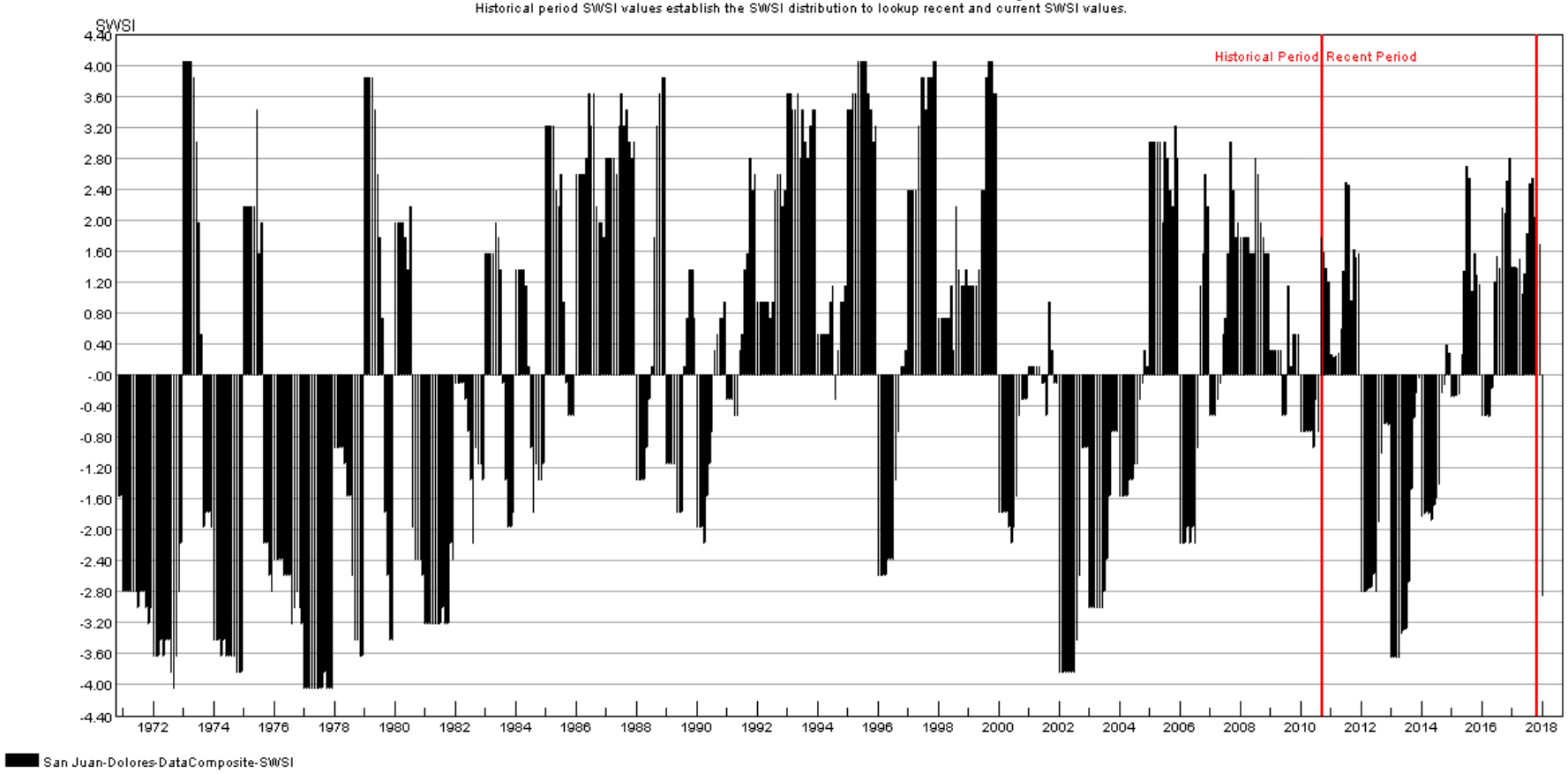
Precipitation (0.06 inches) was well below average for December in Durango. There were 116 years out of 123 years of record where there was more precipitation than this year. The flows in the rivers within the basin remained below average for this time of year. There was only 105 out of 107 years of record where the total flow past the Animas River at Durango stream gauge was more than this year. There were 62 out of 107 years of record where the total flow past the Dolores stream gauge was more than this year and 95 out of 101 years of record where the total flow past the La Plata River at Hesperus gauge was more than this year.





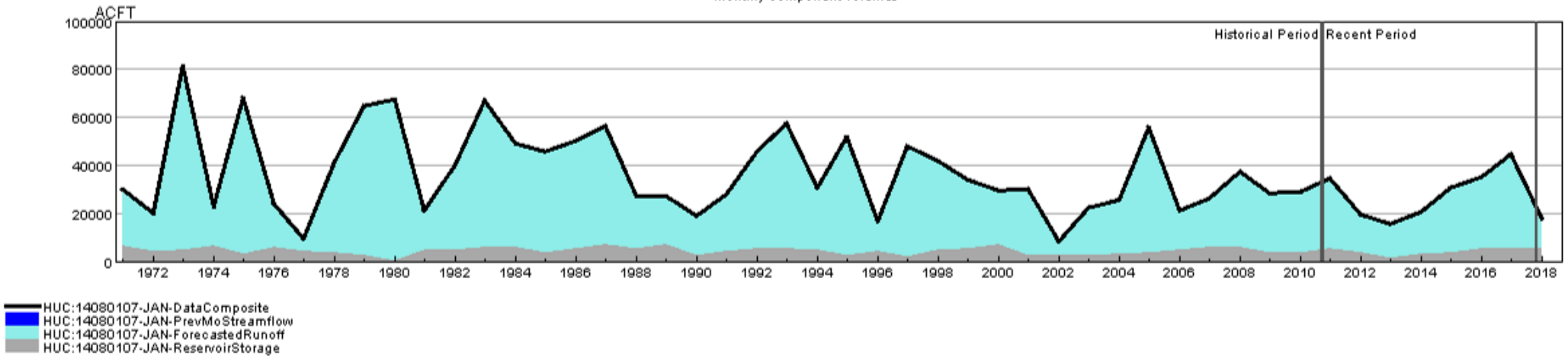
San Juan-Dolores Basin SWSI History

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



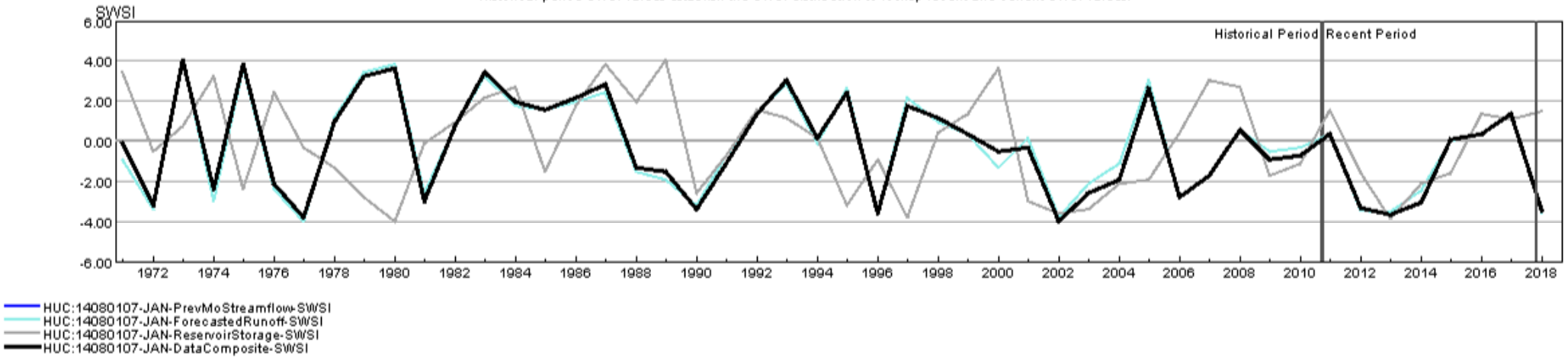
HUC 14080107 (Mancos) Surface Water Supply - JAN

Monthly component volumes



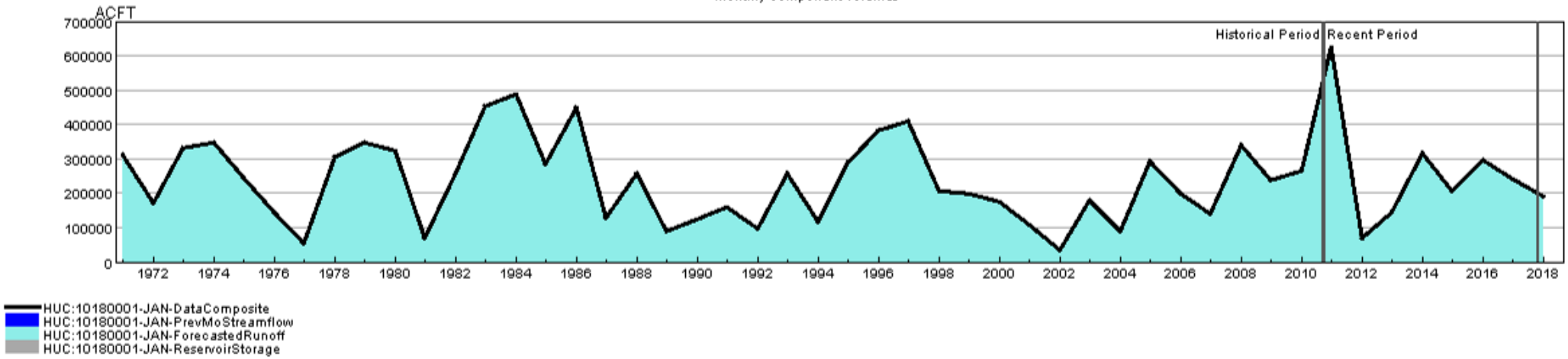
HUC 14080107 (Mancos) SWSI Values - JAN

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



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

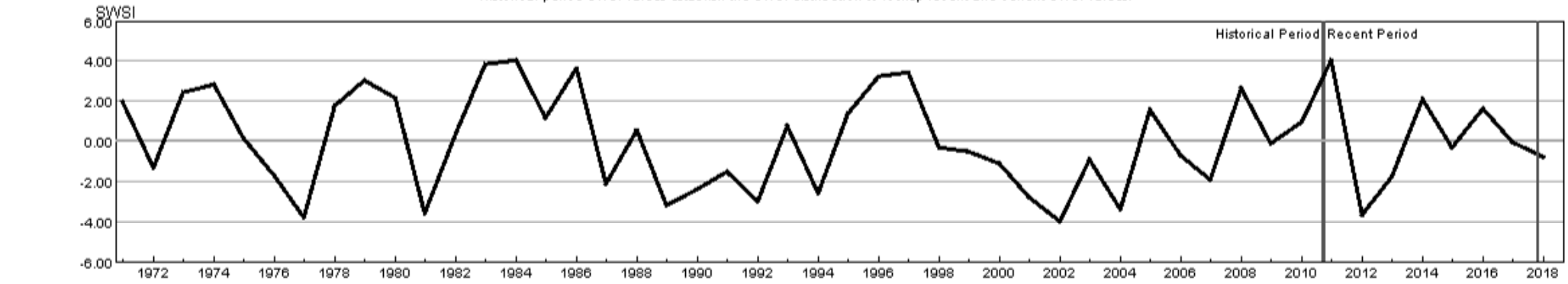
Monthly component volumes



HUC:10180001-JAN-DataComposite
HUC:10180001-JAN-PrevMoStreamflow
HUC:10180001-JAN-ForecastedRunoff
HUC:10180001-JAN-ReservoirStorage

HUC 10180001 (North Platte Headwaters) SWSI Values - JAN

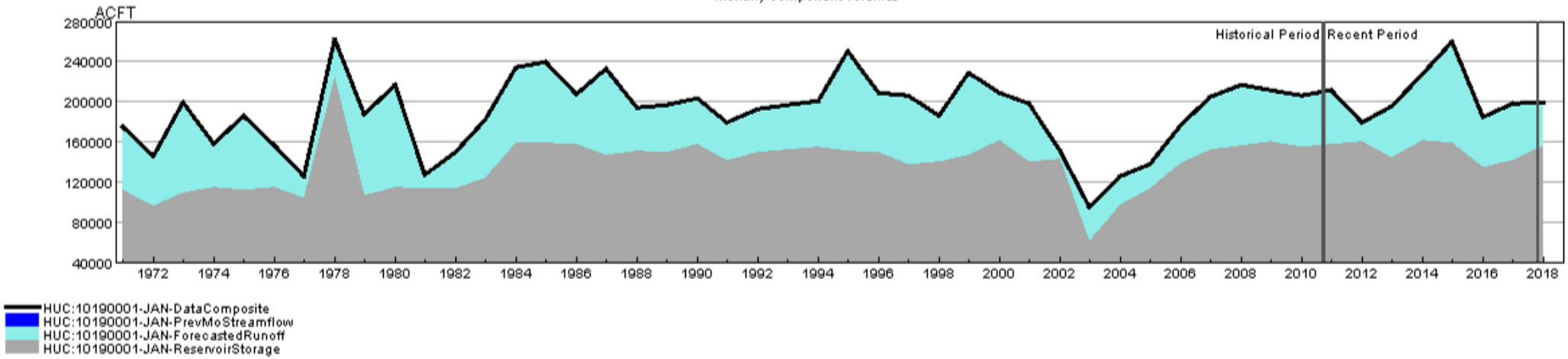
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



HUC:10180001-JAN-PrevMoStreamflow-SWSI
HUC:10180001-JAN-ForecastedRunoff-SWSI
HUC:10180001-JAN-ReservoirStorage-SWSI
HUC:10180001-JAN-DataComposite-SWSI

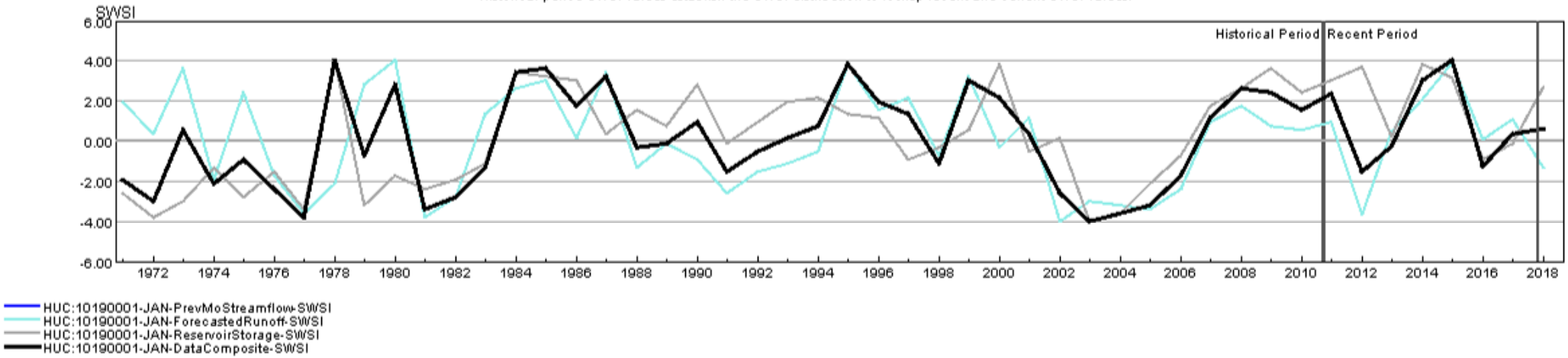
HUC 10190001 (South Platte Headwater) Surface Water Supply - JAN

Monthly component volumes



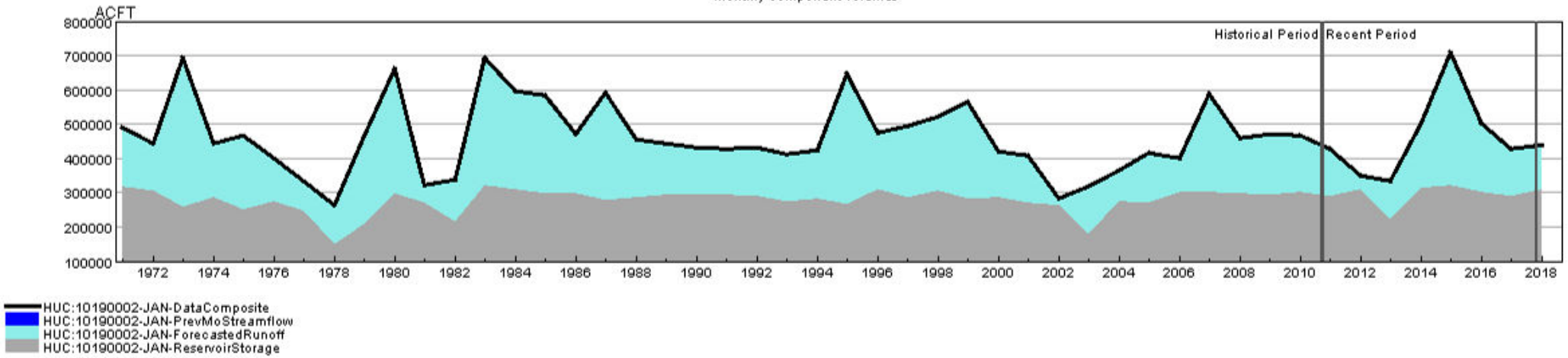
HUC 10190001 (South Platte Headwater) SWSI Values - JAN

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



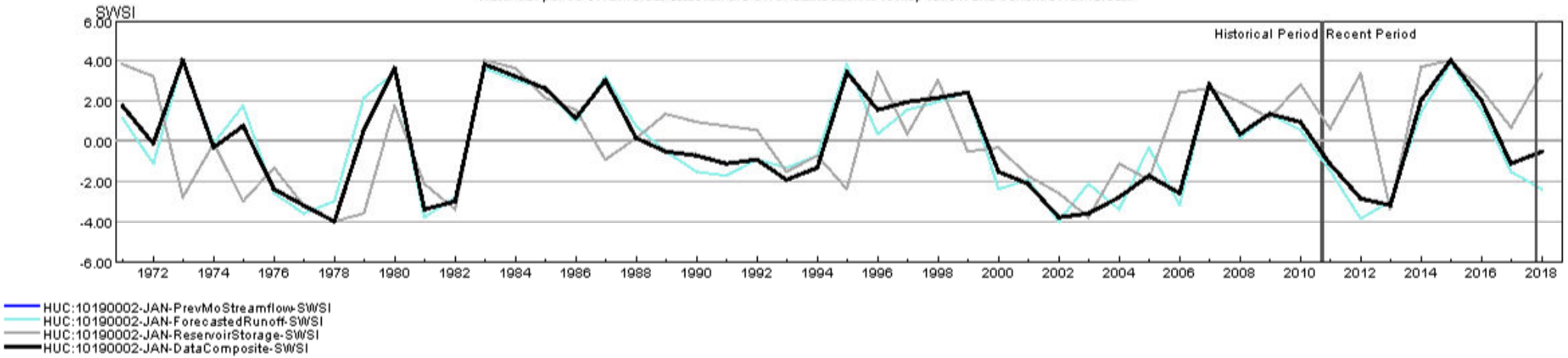
HUC 10190002 (Upper South Platte) Surface Water Supply - JAN

Monthly component volumes



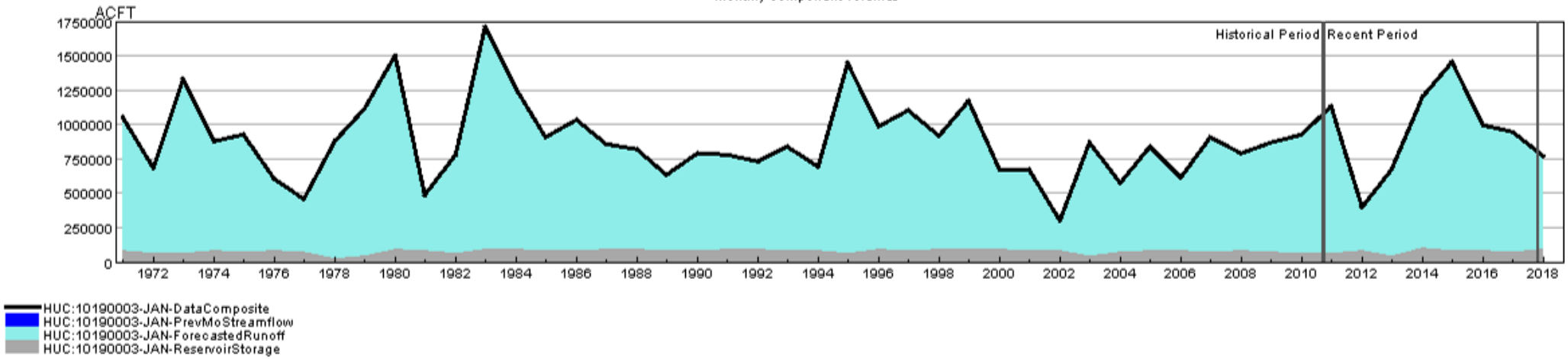
HUC 10190002 (Upper South Platte) SWSI Values - JAN

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



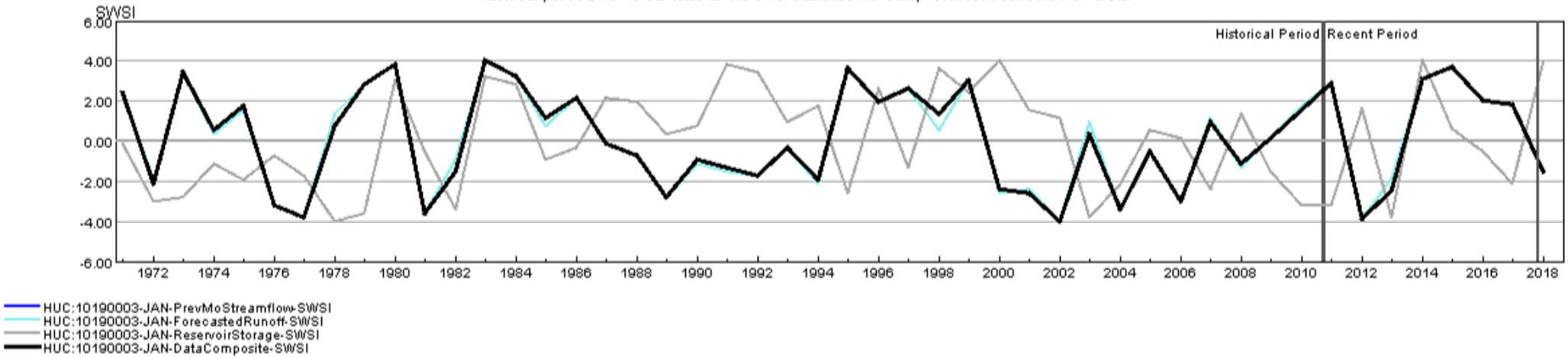
HUC 10190003 (Middle South Platte-Cherry Creek) Surface Water Supply - JAN

Monthly component volumes



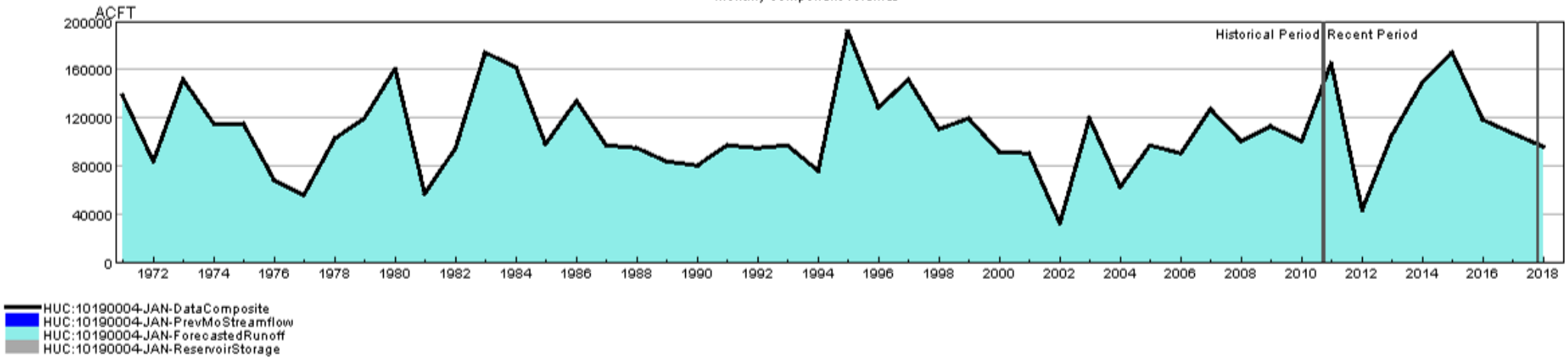
HUC 10190003 (Middle South Platte-Cherry Creek) SWSI Values - JAN

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



HUC 10190004 (Clear) Surface Water Supply - JAN

Monthly component volumes



HUC:10190004-JAN-DataComposite
HUC:10190004-JAN-PrevMoStreamflow
HUC:10190004-JAN-ForecastedRunoff
HUC:10190004-JAN-ReservoirStorage

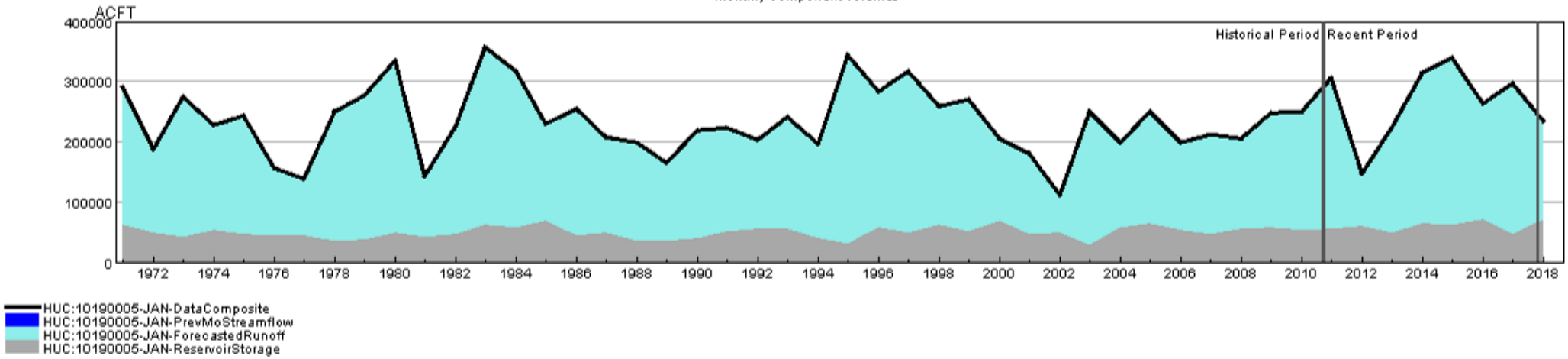
HUC 10190004 (Clear) SWSI Values - JAN

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

HUC:10190004-JAN-PrevMoStreamflow-SWSI
HUC:10190004-JAN-ForecastedRunoff-SWSI
HUC:10190004-JAN-ReservoirStorage-SWSI
HUC:10190004-JAN-DataComposite-SWSI

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

Monthly component volumes



HUC 10190005 (St. Vrain) SWSI Values - JAN

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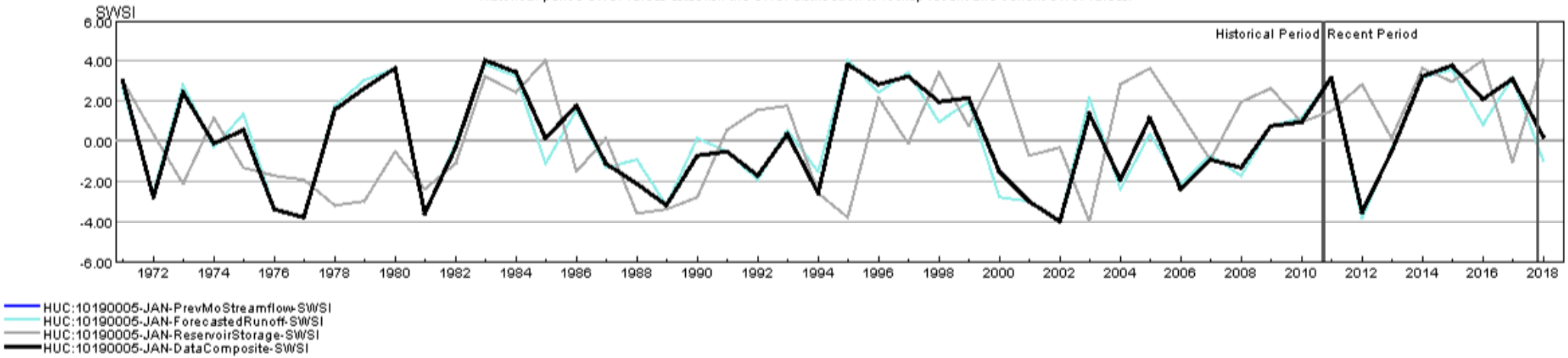
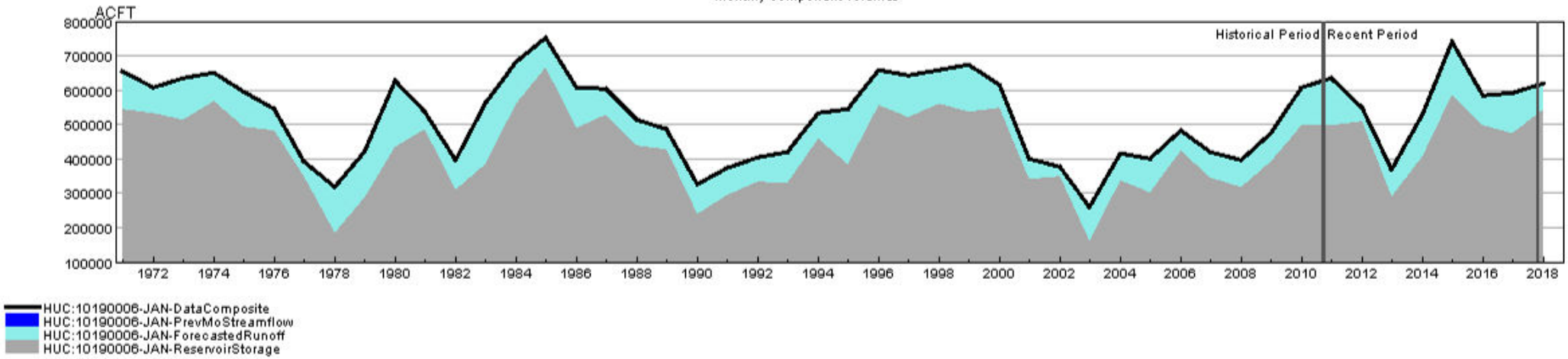


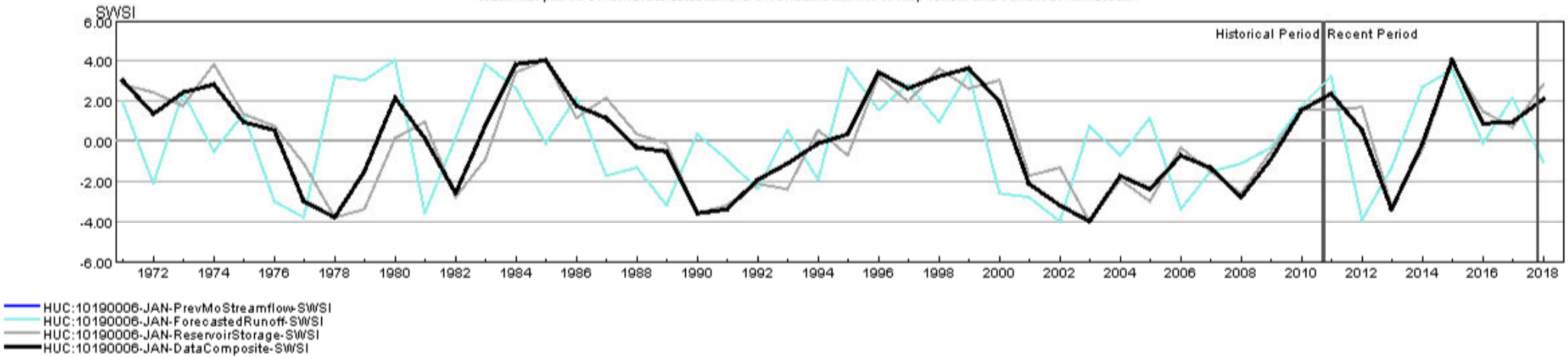
HUC 10190006 (Big Thompson) Surface Water Supply - JAN

Monthly component volumes



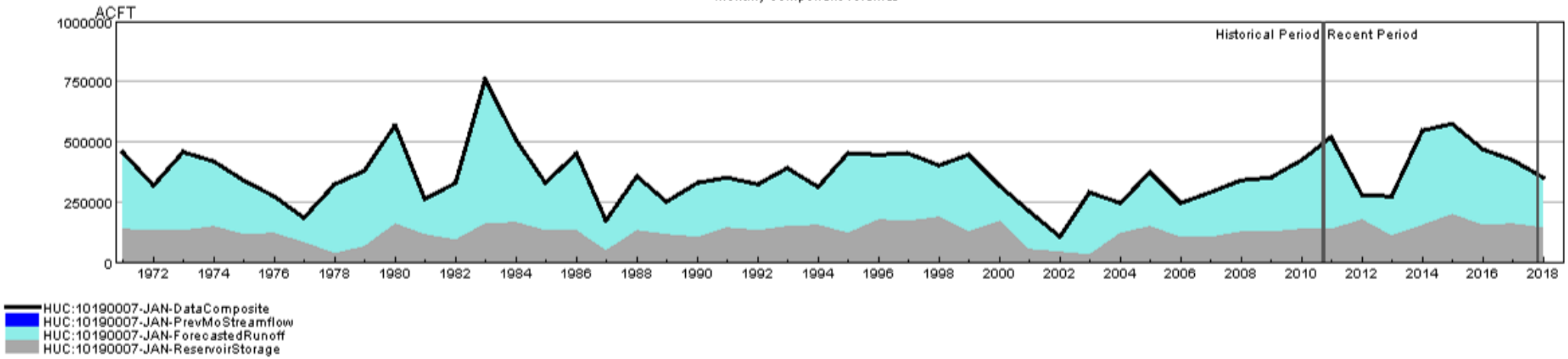
HUC 10190006 (Big Thompson) SWSI Values - JAN

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



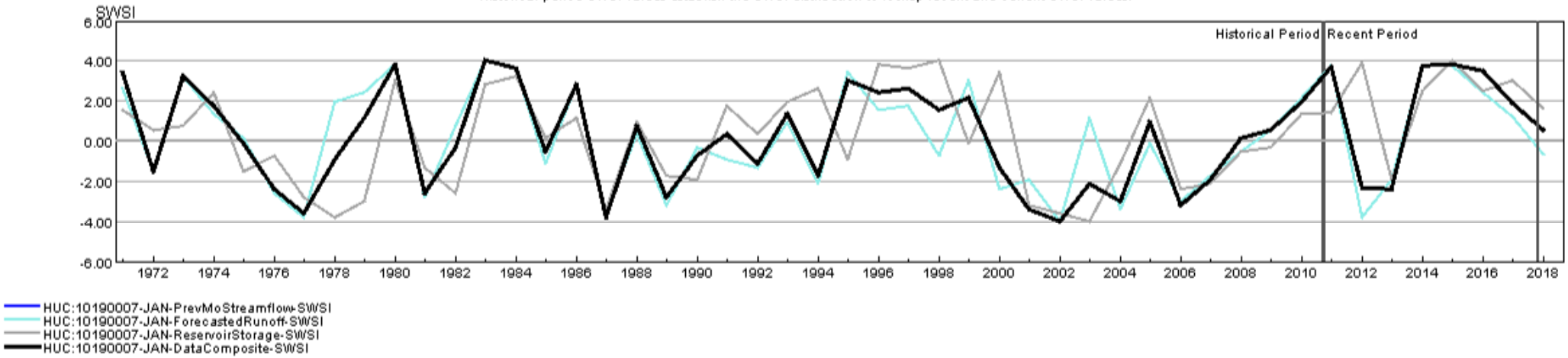
HUC 10190007 (Cache La Poudre) Surface Water Supply - JAN

Monthly component volumes



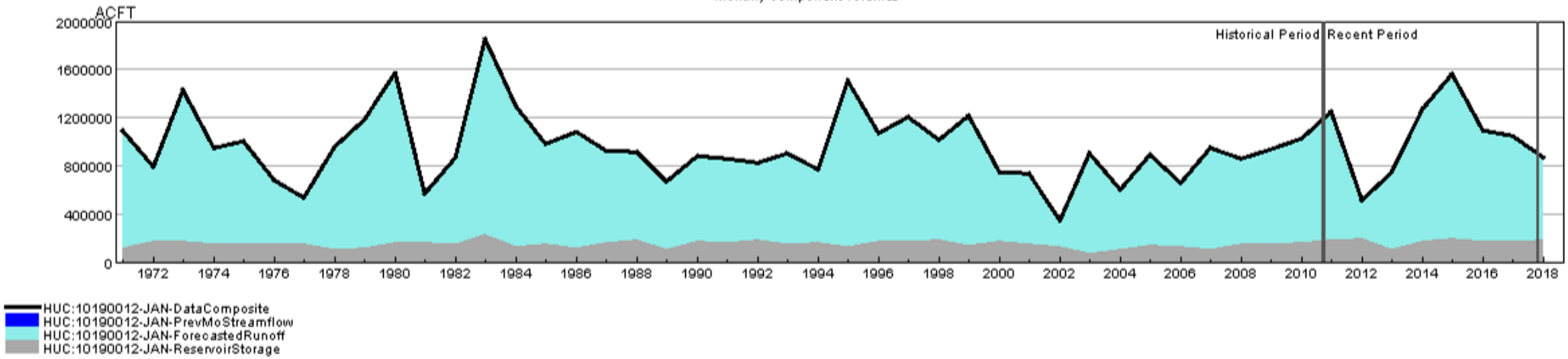
HUC 10190007 (Cache La Poudre) SWSI Values - JAN

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



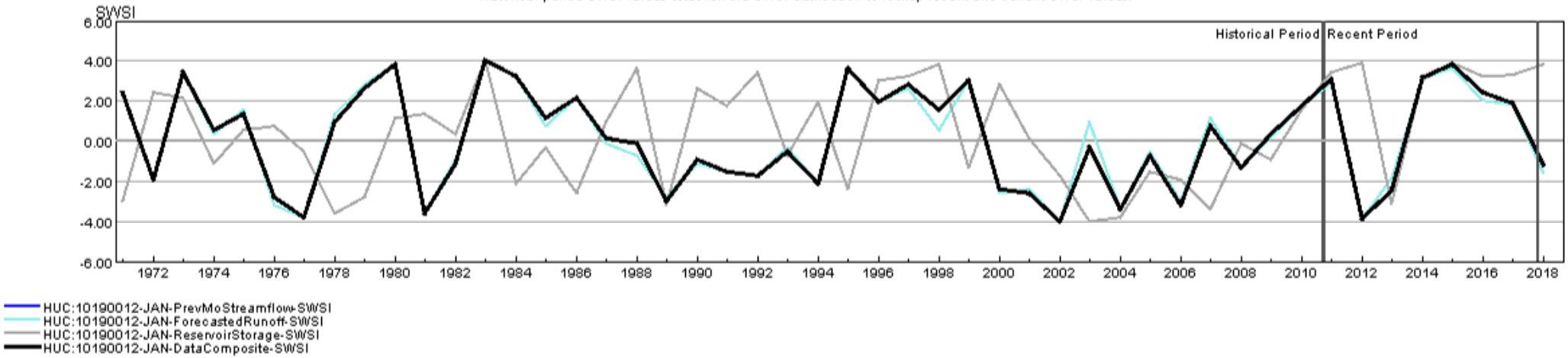
HUC 10190012 (Middle South Platte-Sterling) Surface Water Supply - JAN

Monthly component volumes



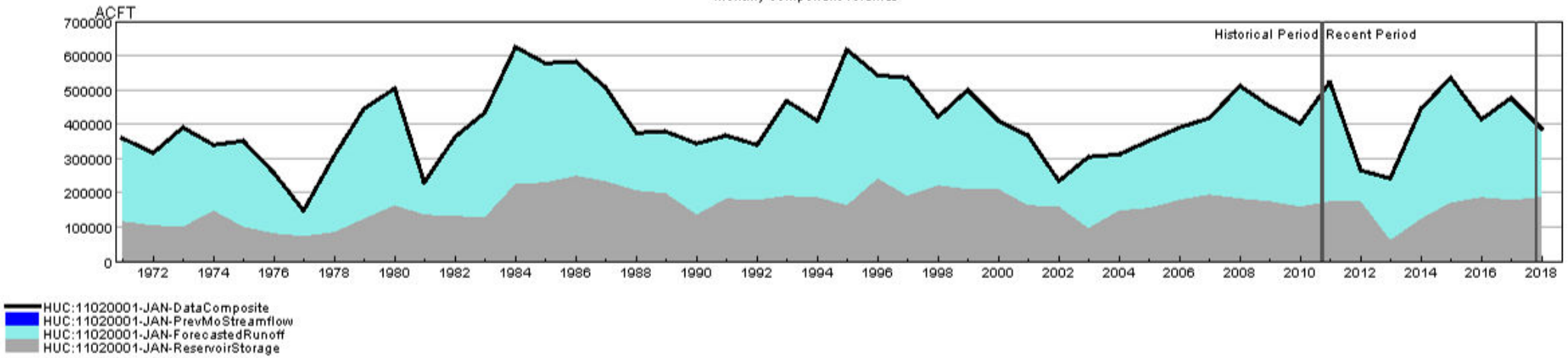
HUC 10190012 (Middle South Platte-Sterling) SWSI Values - JAN

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



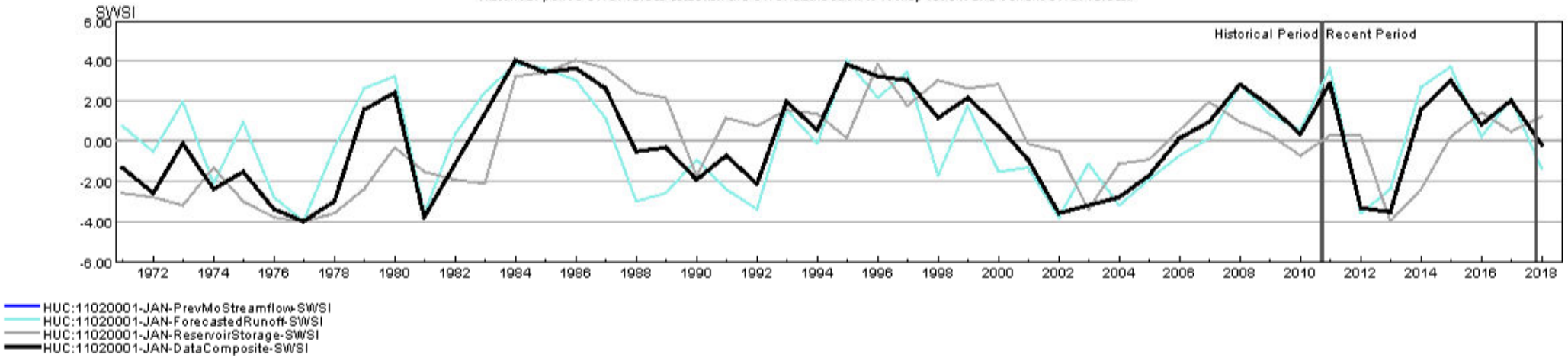
HUC 11020001 (Arkansas Headwaters) Surface Water Supply - JAN

Monthly component volumes



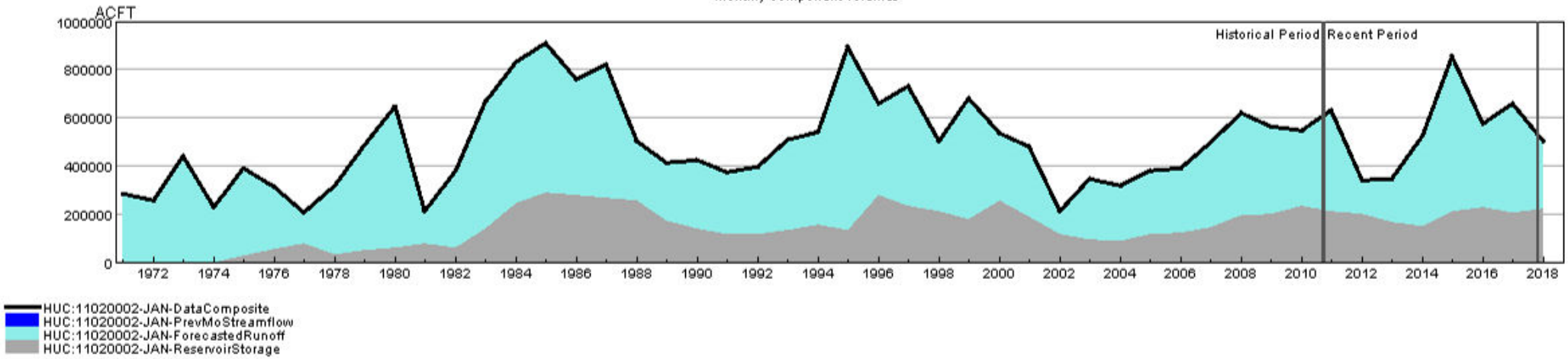
HUC 11020001 (Arkansas Headwaters) SWSI Values - JAN

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



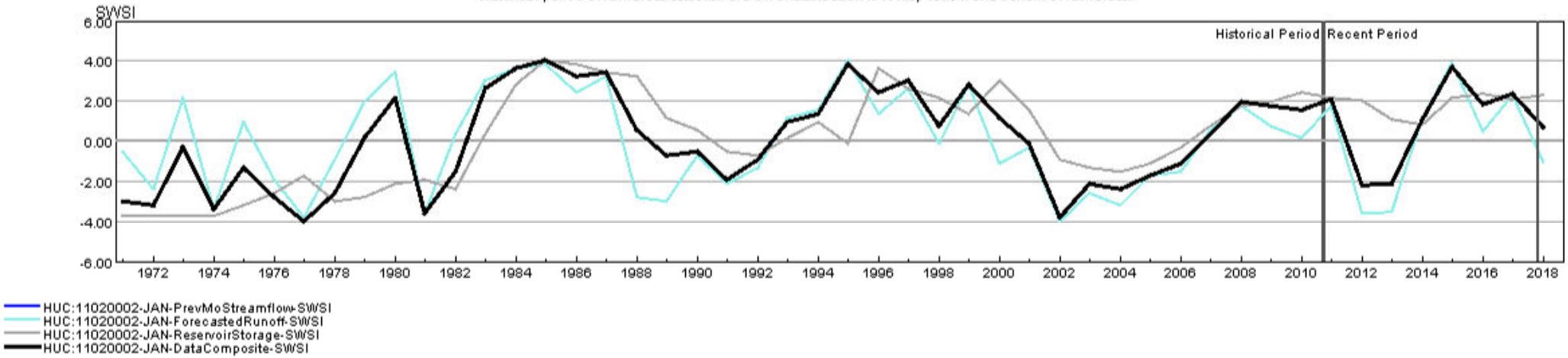
HUC 11020002 (Upper Arkansas) Surface Water Supply - JAN

Monthly component volumes



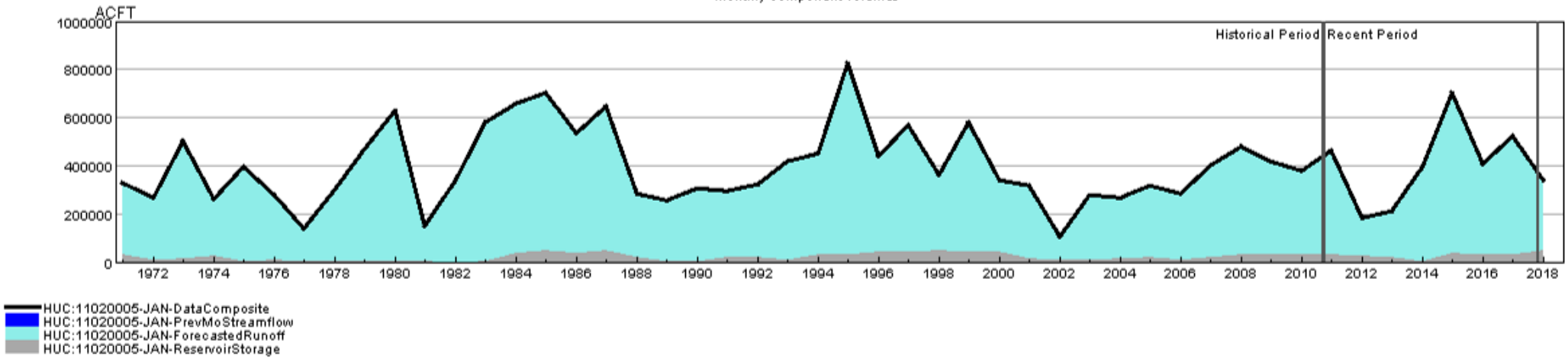
HUC 11020002 (Upper Arkansas) SWSI Values - JAN

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



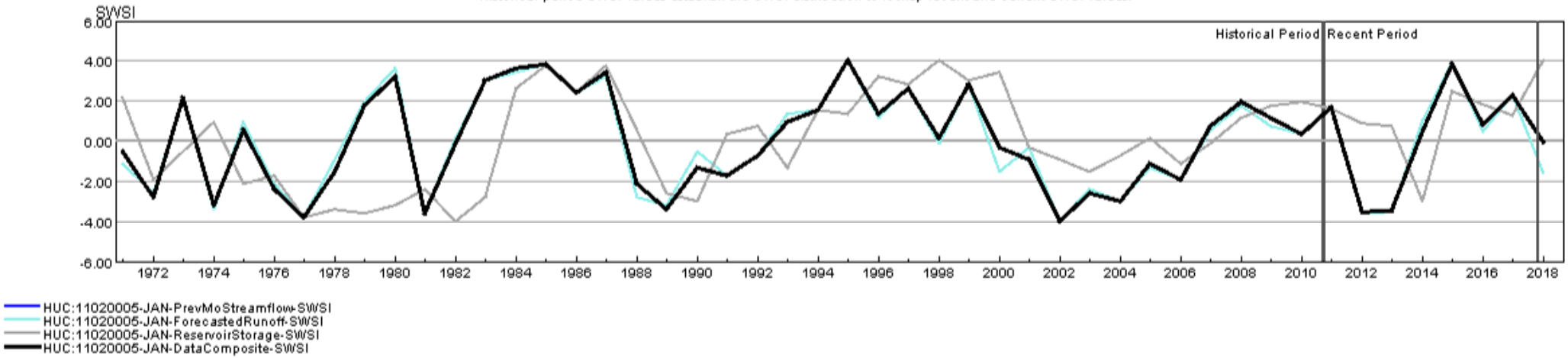
HUC 11020005 (Upper Arkansas-Lake Meredith) Surface Water Supply - JAN

Monthly component volumes



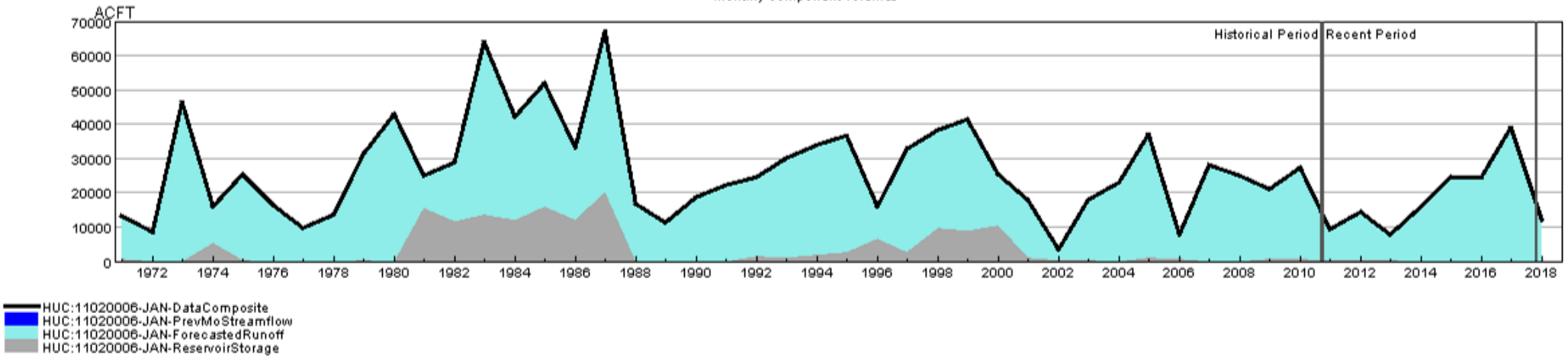
HUC 11020005 (Upper Arkansas-Lake Meredith) SWSI Values - JAN

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



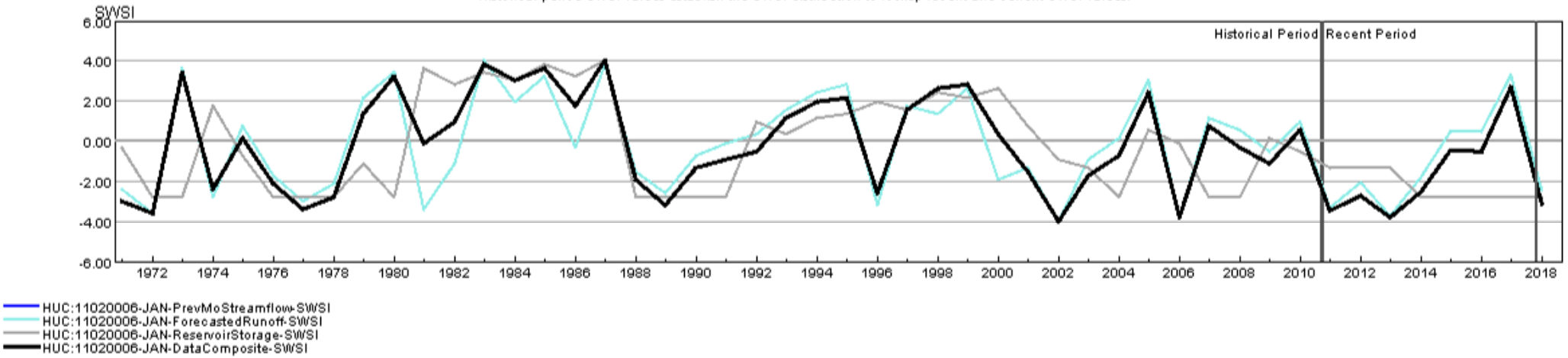
HUC 11020006 (Huerfano) Surface Water Supply - JAN

Monthly component volumes



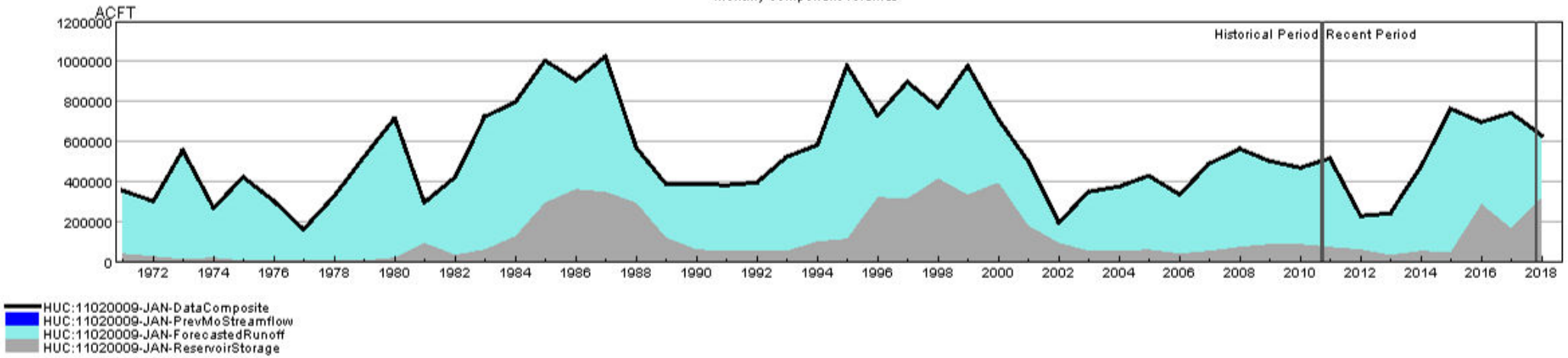
HUC 11020006 (Huerfano) SWSI Values - JAN

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



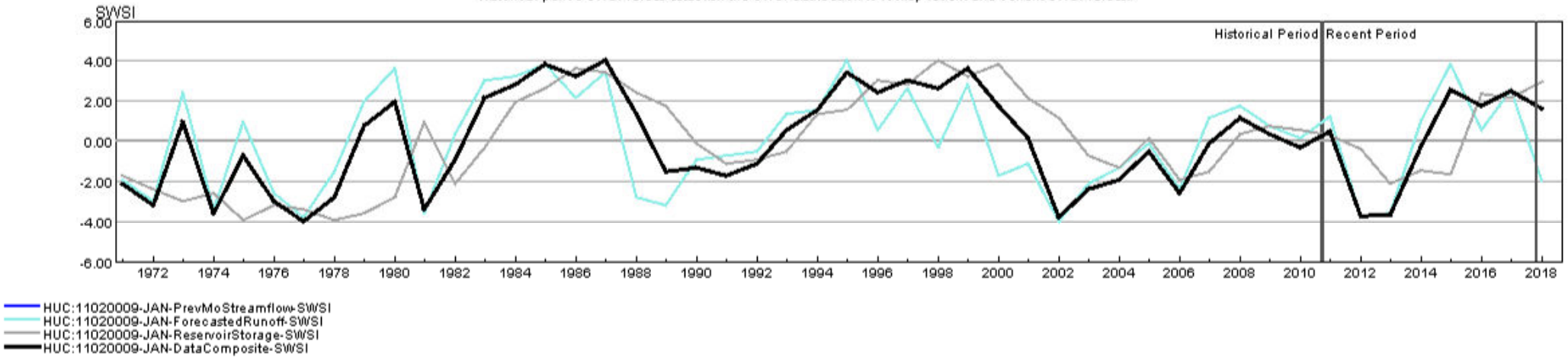
HUC 11020009 (Upper Arkansas-John Martin Reservoir) Surface Water Supply - JAN

Monthly component volumes



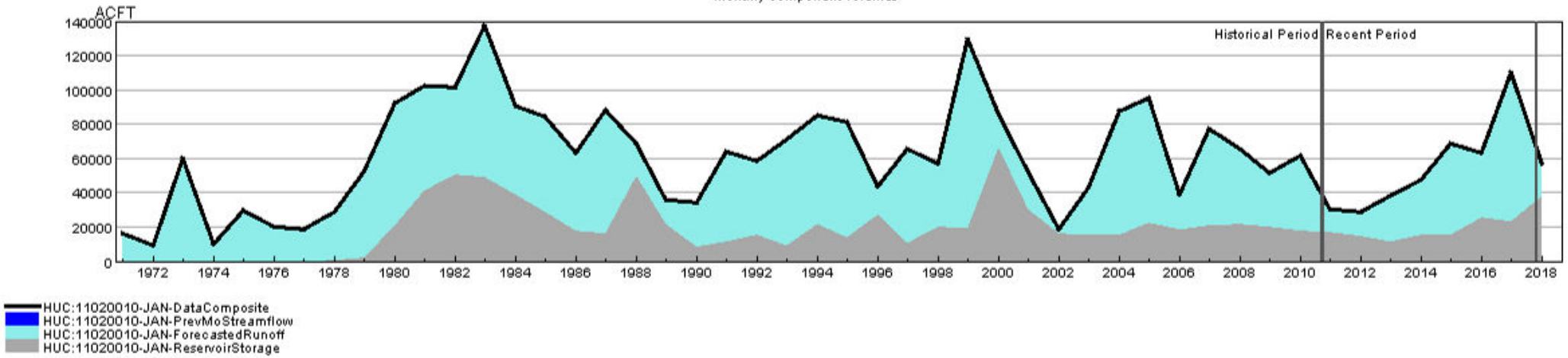
HUC 11020009 (Upper Arkansas-John Martin Reservoir) SWSI Values - JAN

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



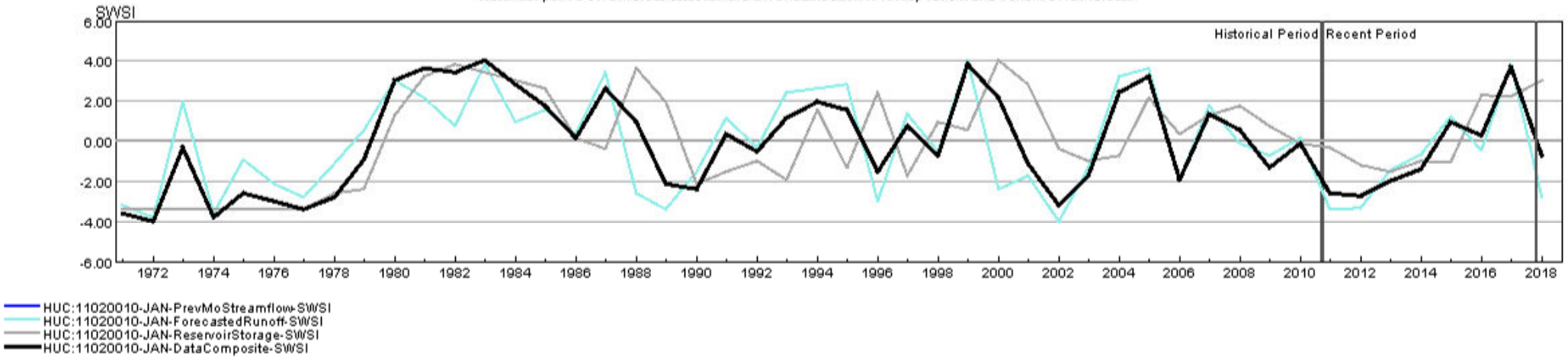
HUC 11020010 (Purgatoire) Surface Water Supply - JAN

Monthly component volumes



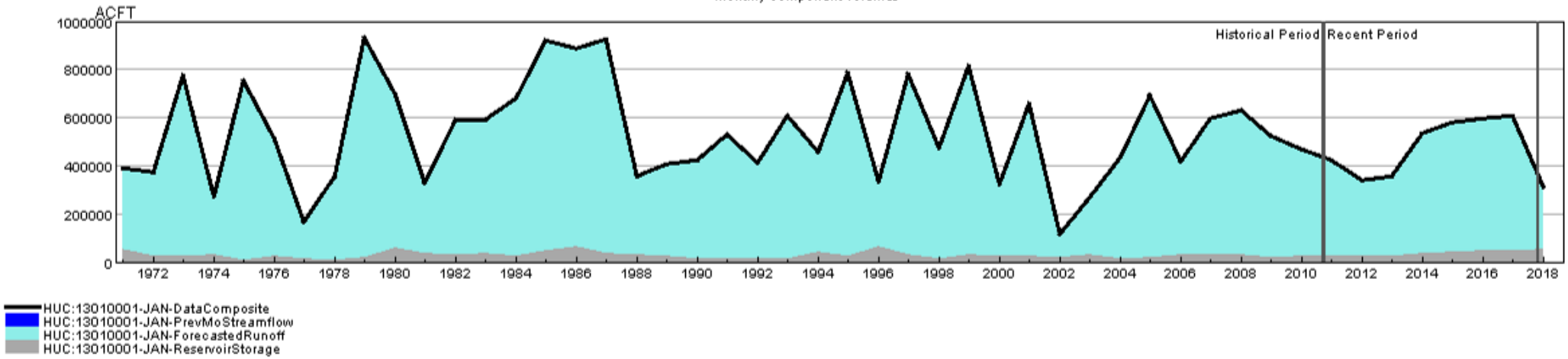
HUC 11020010 (Purgatoire) SWSI Values - JAN

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



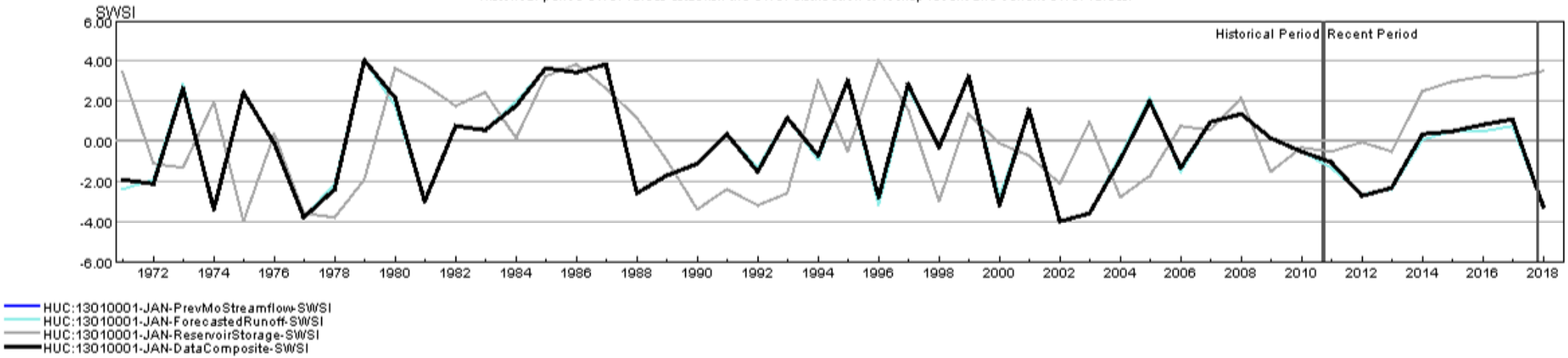
HUC 13010001 (Rio Grande Headwaters) Surface Water Supply - JAN

Monthly component volumes



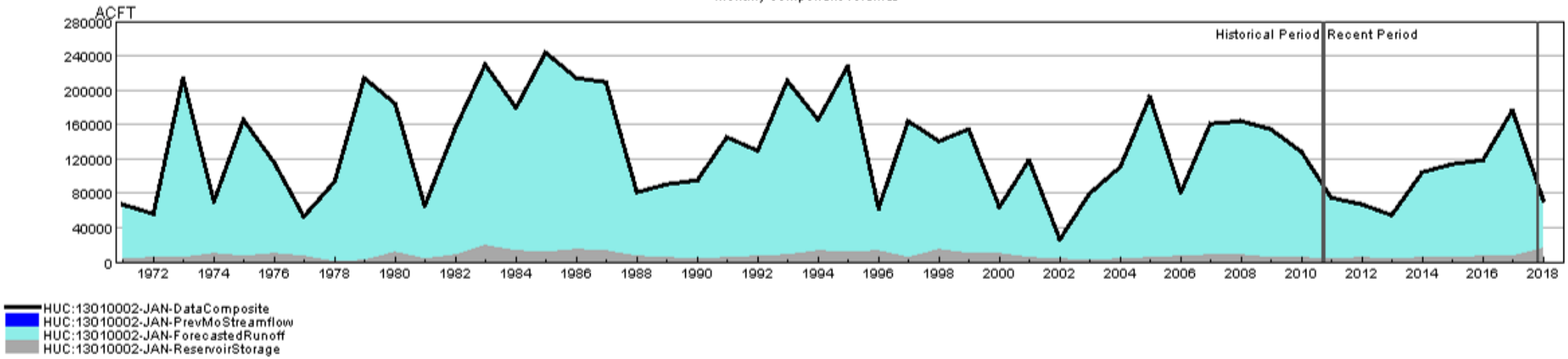
HUC 13010001 (Rio Grande Headwaters) SWSI Values - JAN

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



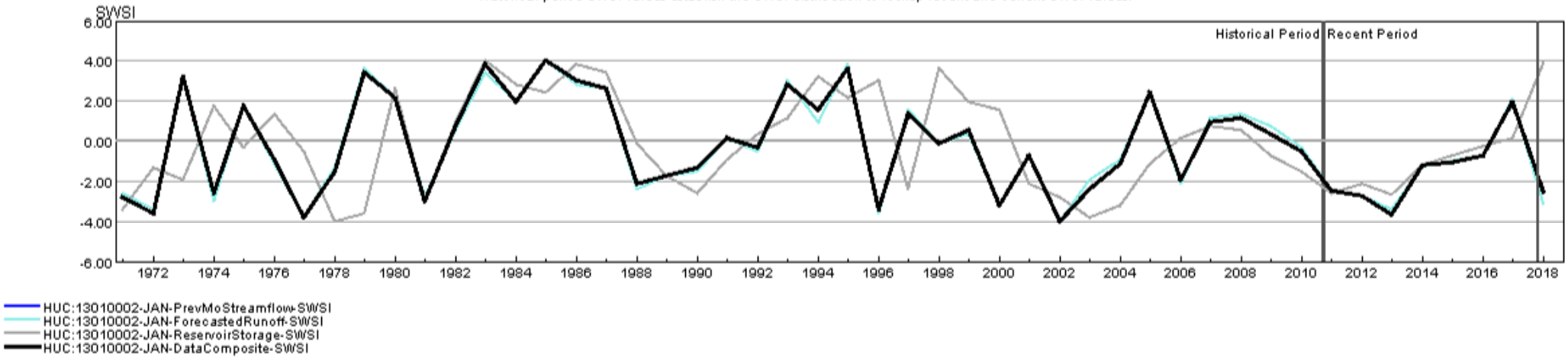
HUC 13010002 (Alamosa-Trinchera) Surface Water Supply - JAN

Monthly component volumes



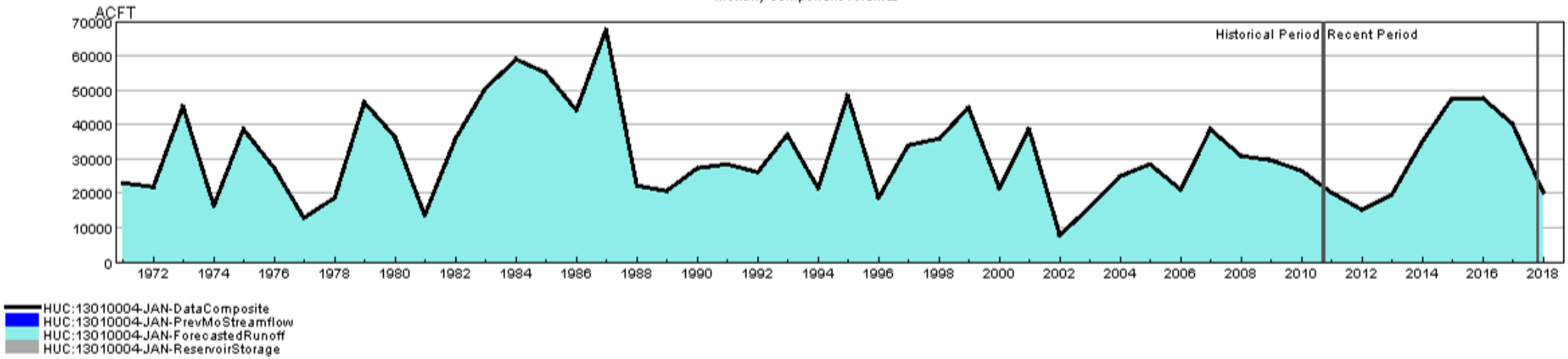
HUC 13010002 (Alamosa-Trinchera) SWSI Values - JAN

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



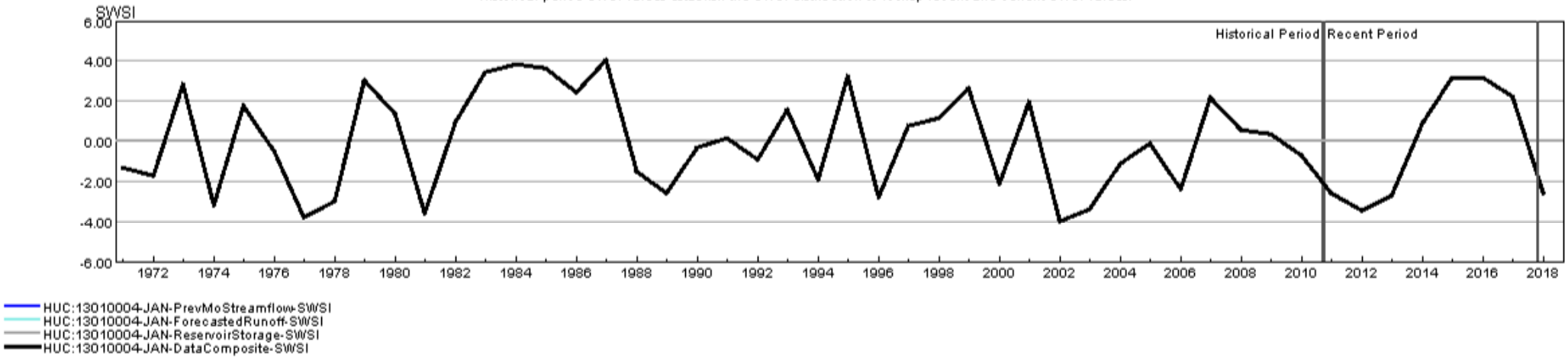
HUC 13010004 (Saguache) Surface Water Supply - JAN

Monthly component volumes



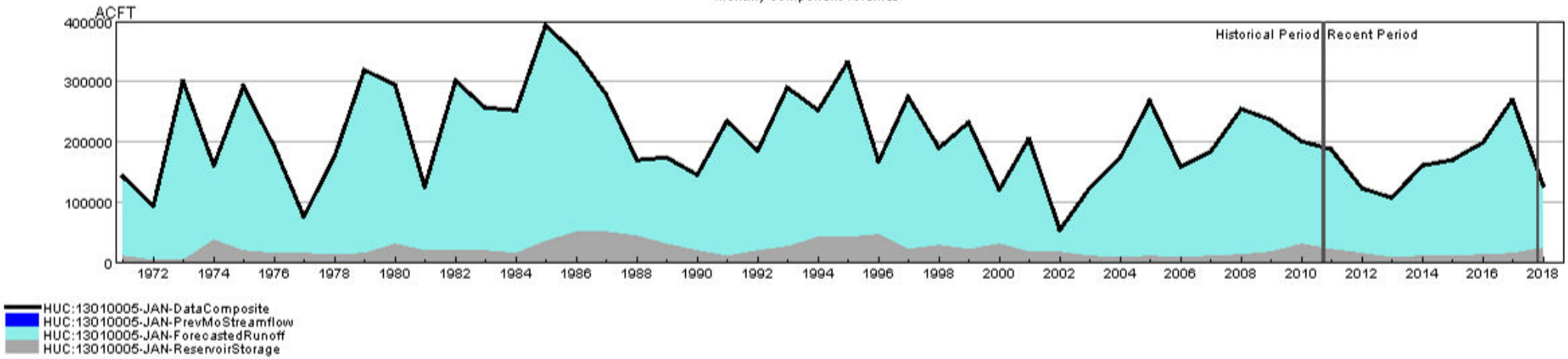
HUC 13010004 (Saguache) SWSI Values - JAN

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



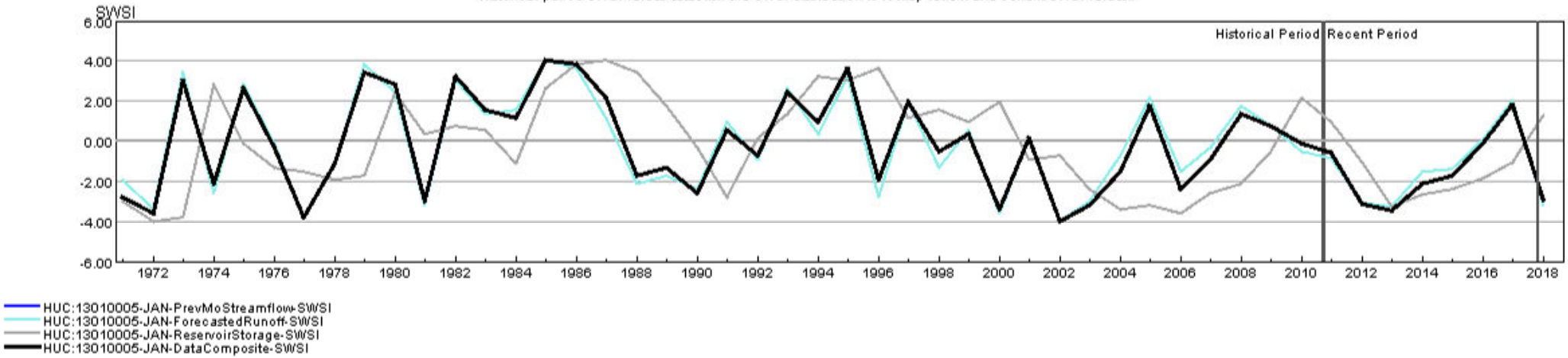
HUC 13010005 (Conejos) Surface Water Supply - JAN

Monthly component volumes



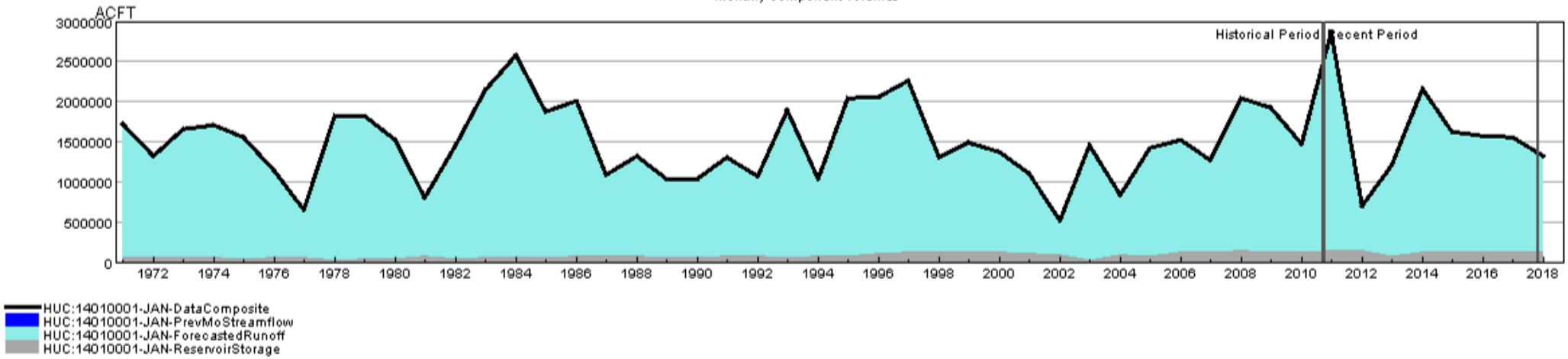
HUC 13010005 (Conejos) SWSI Values - JAN

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



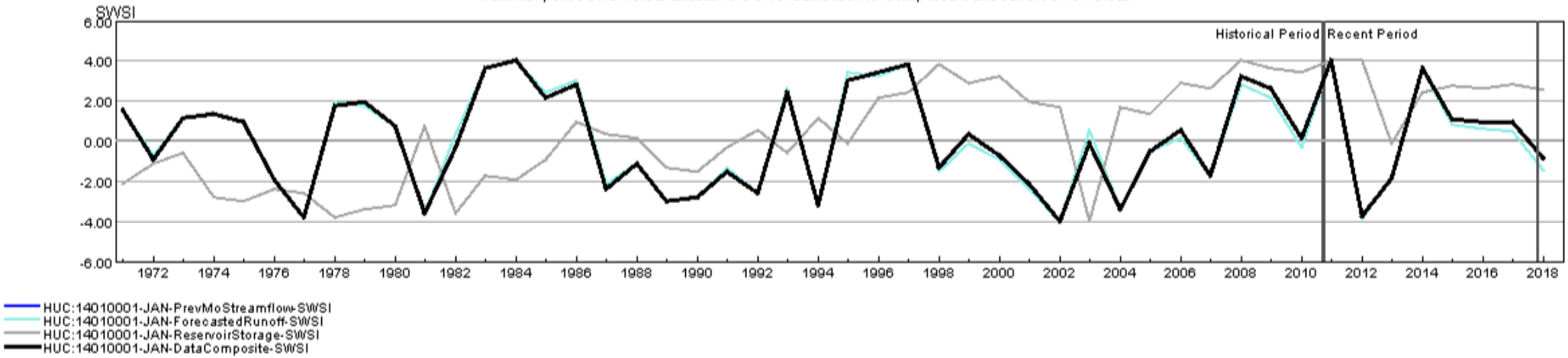
HUC 14010001 (Colorado Headwaters) Surface Water Supply - JAN

Monthly component volumes



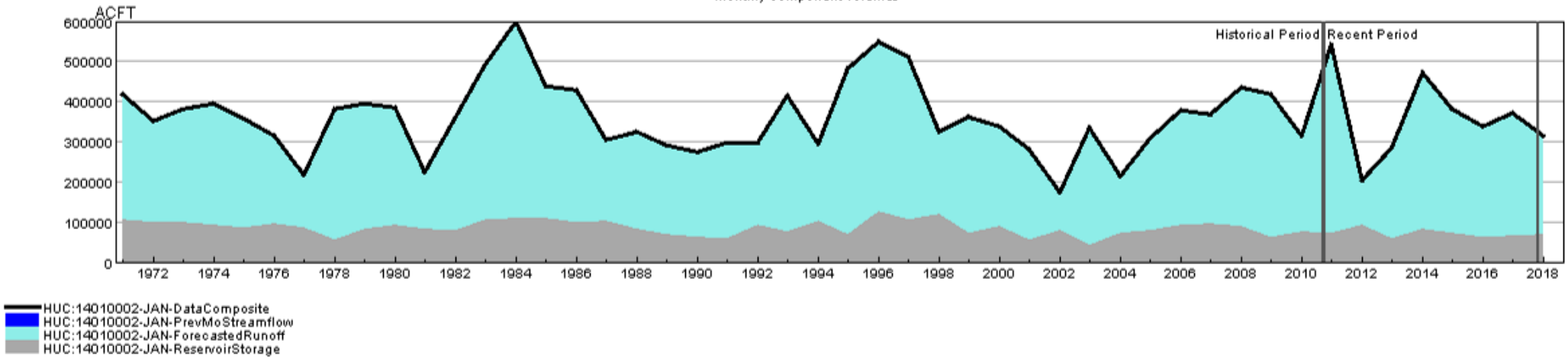
HUC 14010001 (Colorado Headwaters) SWSI Values - JAN

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



HUC 14010002 (Blue) Surface Water Supply - JAN

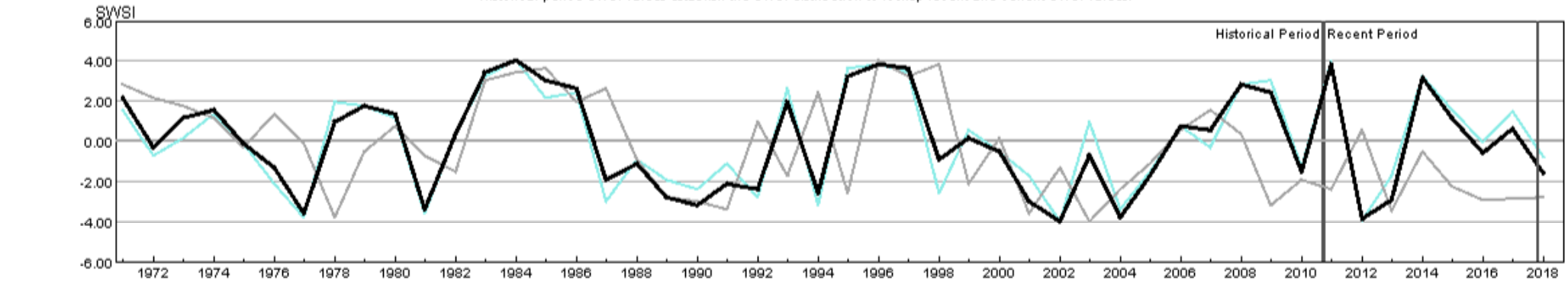
Monthly component volumes



HUC:14010002-JAN-DataComposite
HUC:14010002-JAN-PrevMoStreamflow
HUC:14010002-JAN-ForecastedRunoff
HUC:14010002-JAN-ReservoirStorage

HUC 14010002 (Blue) SWSI Values - JAN

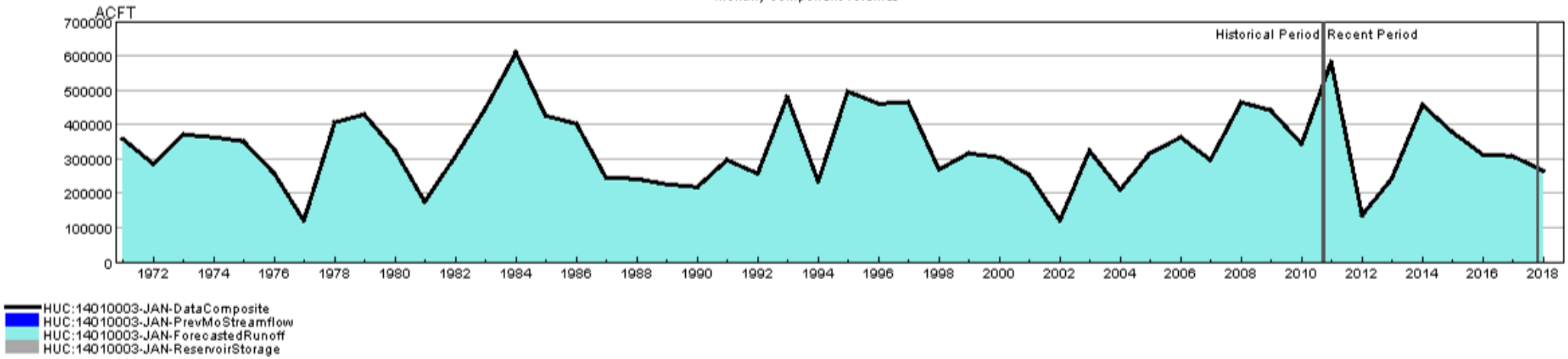
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



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

HUC 14010003 (Eagle) Surface Water Supply - JAN

Monthly component volumes



HUC:14010003-JAN-DataComposite
HUC:14010003-JAN-PrevMoStreamflow
HUC:14010003-JAN-ForecastedRunoff
HUC:14010003-JAN-ReservoirStorage

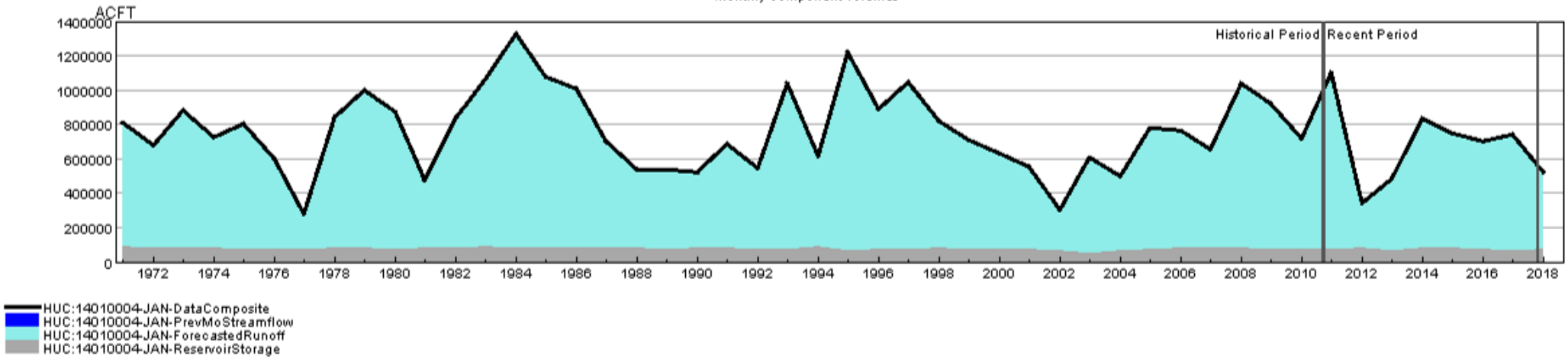
HUC 14010003 (Eagle) SWSI Values - JAN

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

HUC:14010003-JAN-PrevMoStreamflow-SWSI
HUC:14010003-JAN-ForecastedRunoff-SWSI
HUC:14010003-JAN-ReservoirStorage-SWSI
HUC:14010003-JAN-DataComposite-SWSI

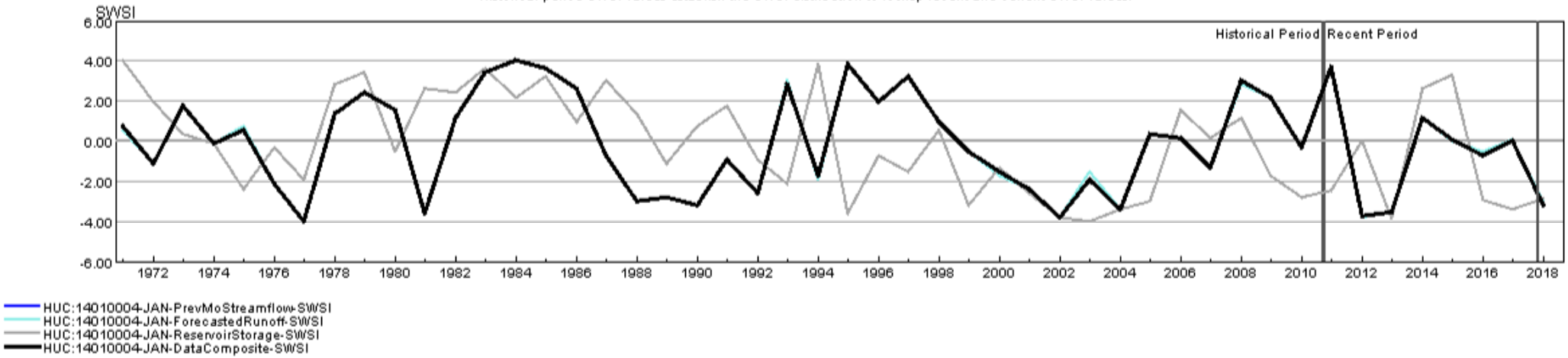
HUC 14010004 (Roaring Fork) Surface Water Supply - JAN

Monthly component volumes



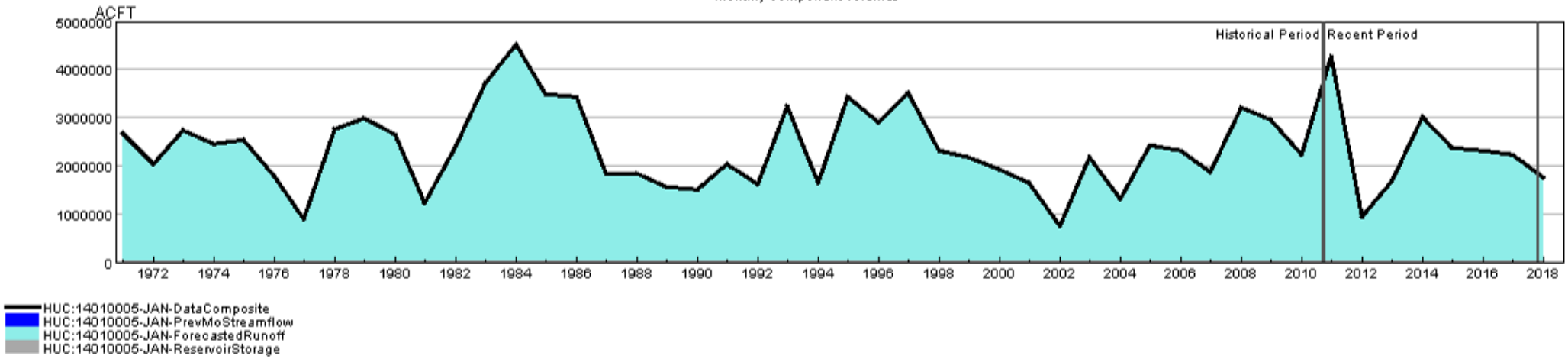
HUC 14010004 (Roaring Fork) SWSI Values - JAN

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



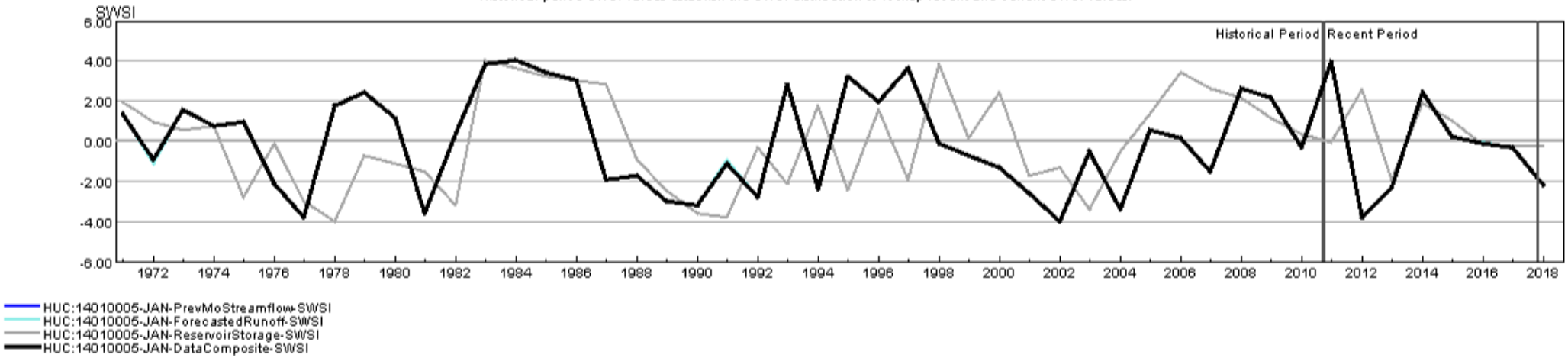
HUC 14010005 (Colorado Headwaters-Plateau) Surface Water Supply - JAN

Monthly component volumes



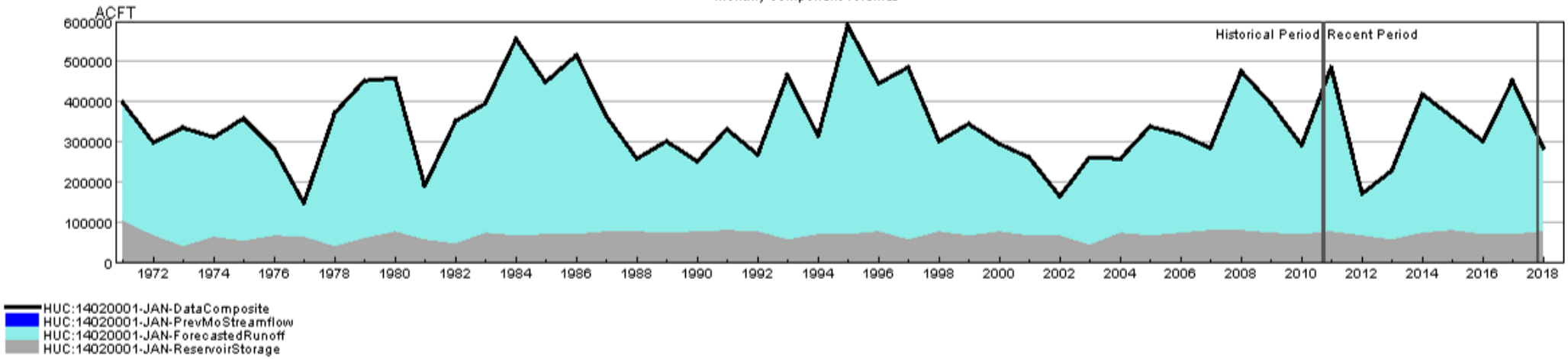
HUC 14010005 (Colorado Headwaters-Plateau) SWSI Values - JAN

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



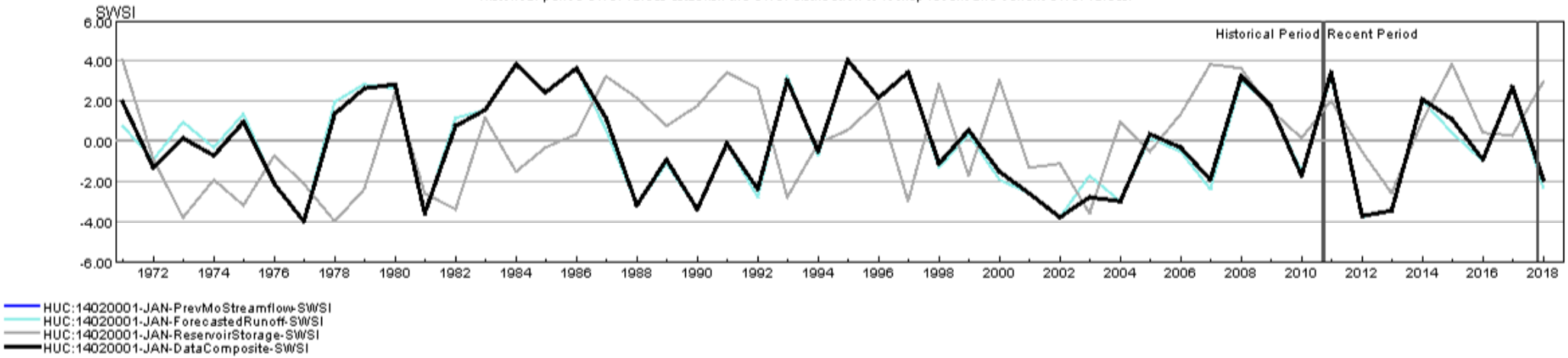
HUC 14020001 (East-Taylor) Surface Water Supply - JAN

Monthly component volumes



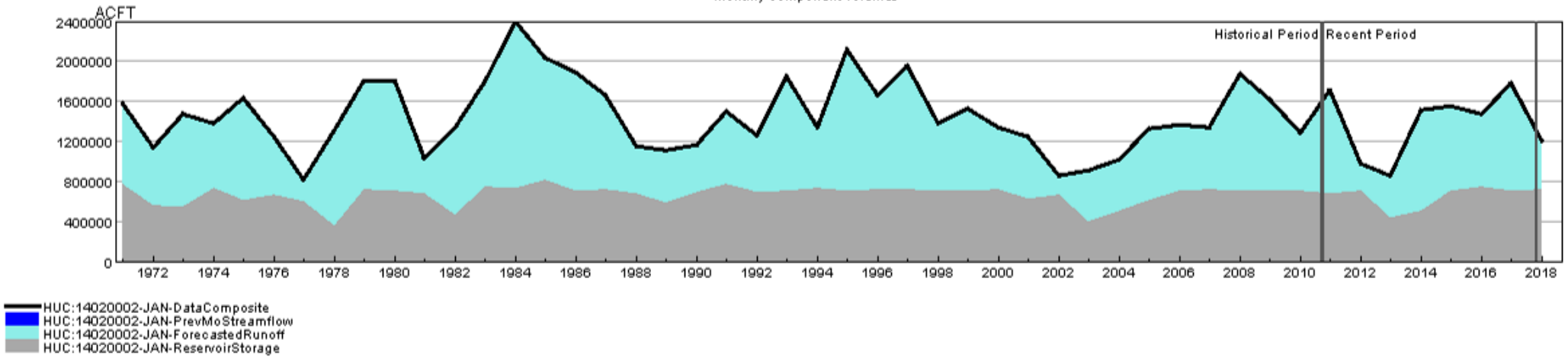
HUC 14020001 (East-Taylor) SWSI Values - JAN

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



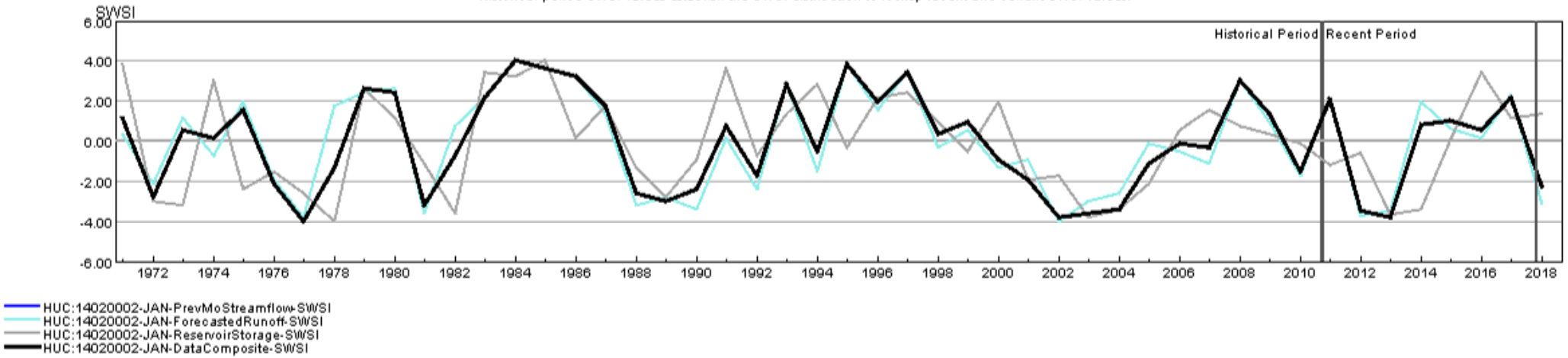
HUC 14020002 (Upper Gunnison) Surface Water Supply - JAN

Monthly component volumes



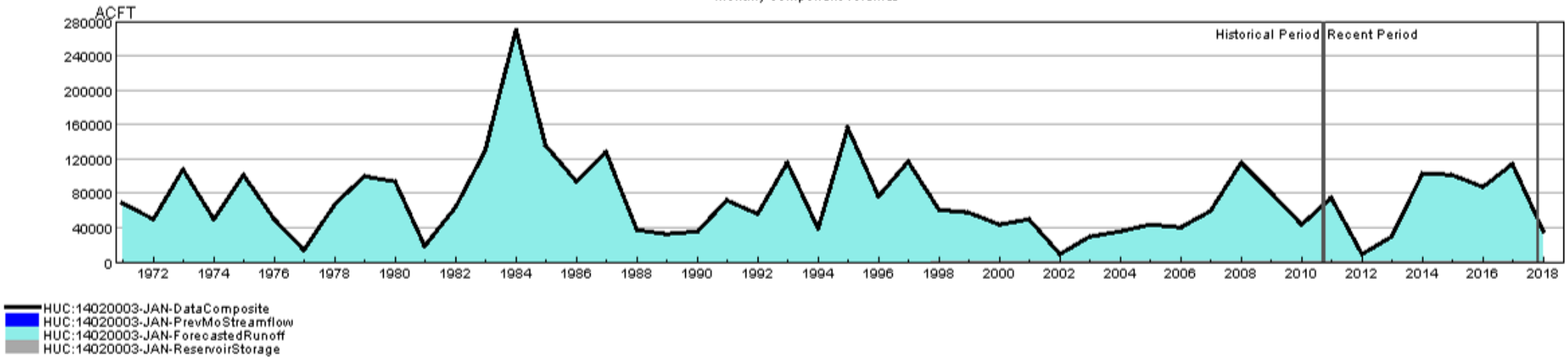
HUC 14020002 (Upper Gunnison) SWSI Values - JAN

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



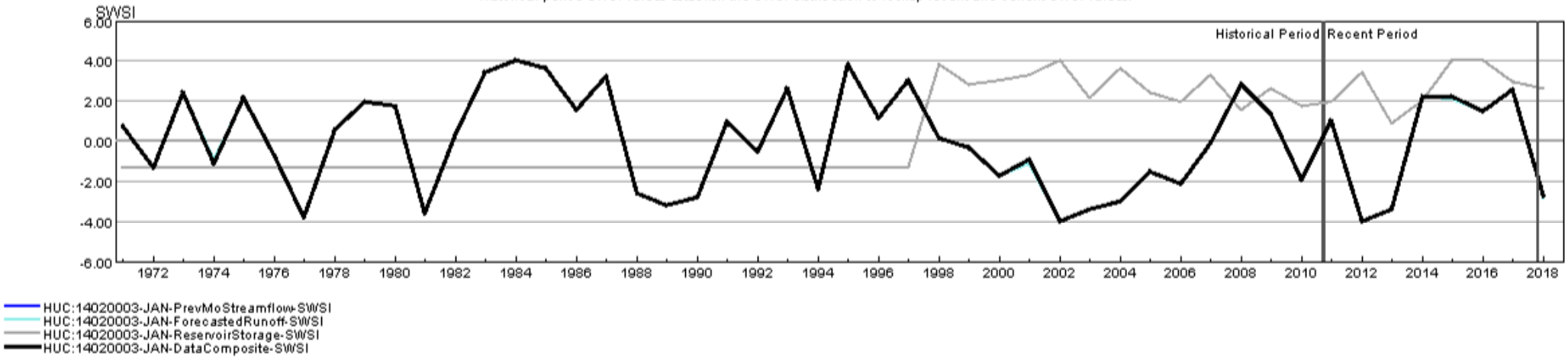
HUC 14020003 (Tomichi) Surface Water Supply - JAN

Monthly component volumes



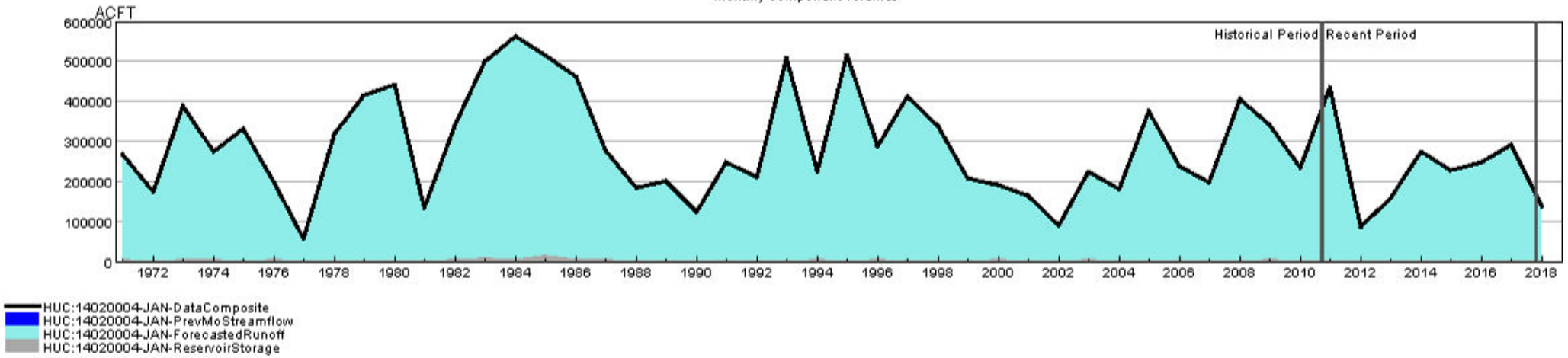
HUC 14020003 (Tomichi) SWSI Values - JAN

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



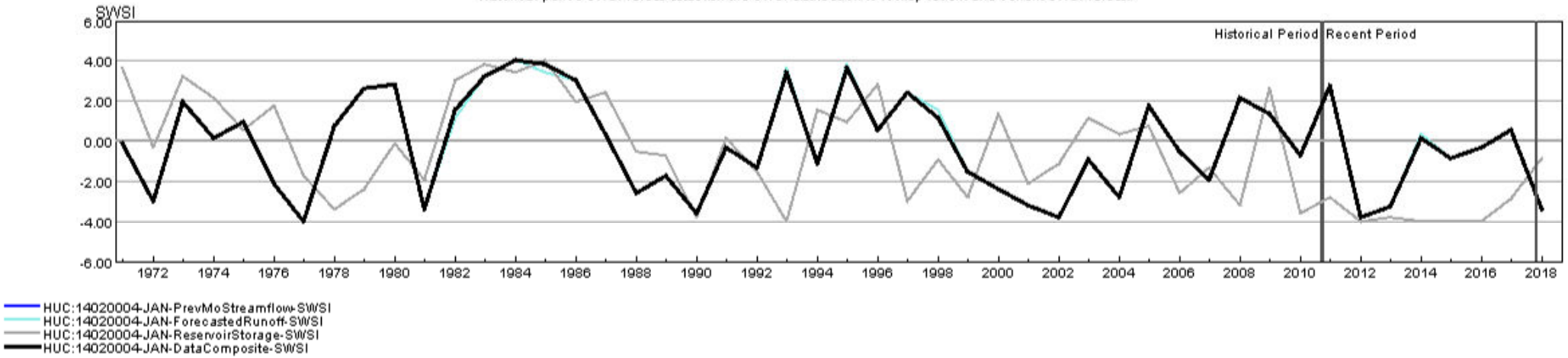
HUC 14020004 (North Fork Gunnison) Surface Water Supply - JAN

Monthly component volumes



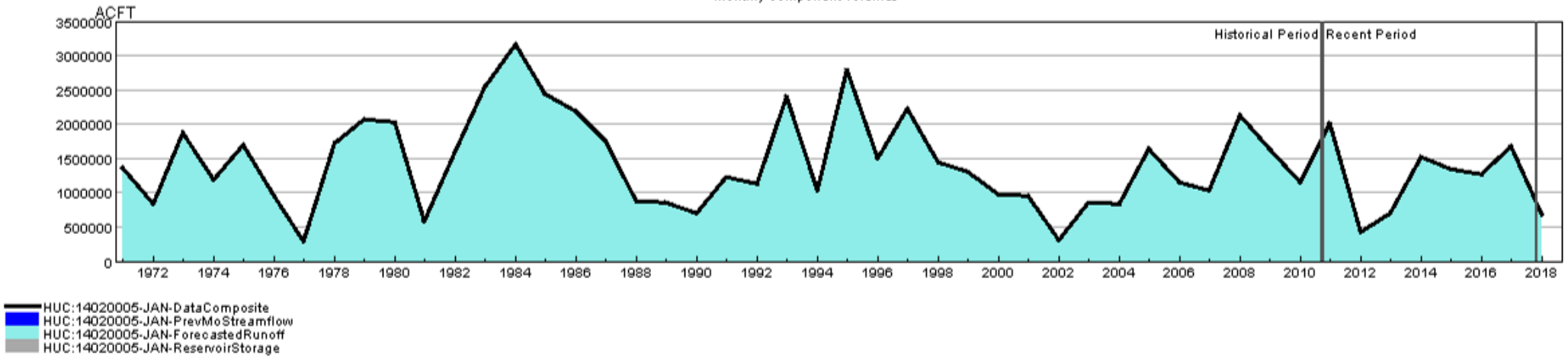
HUC 14020004 (North Fork Gunnison) SWSI Values - JAN

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



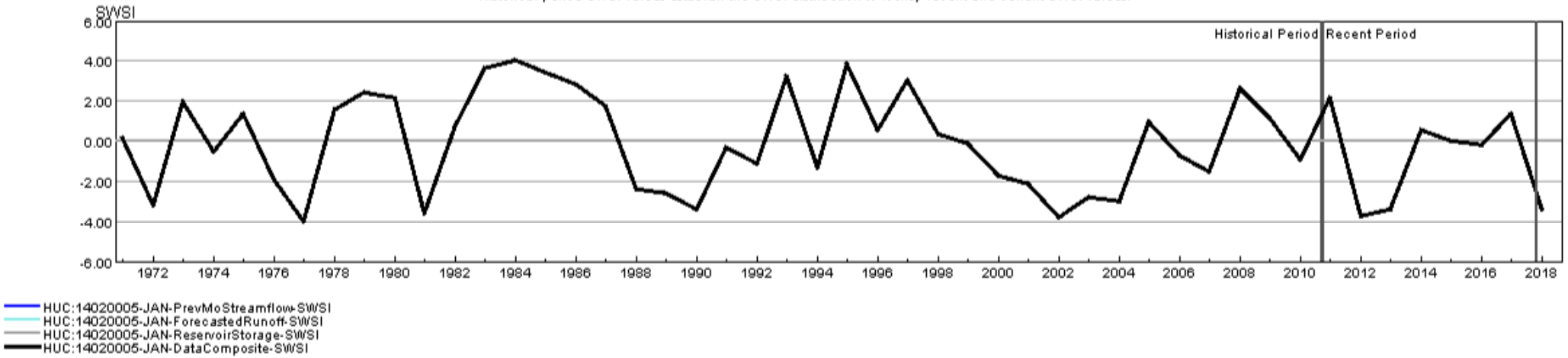
HUC 14020005 (Lower Gunnison) Surface Water Supply - JAN

Monthly component volumes



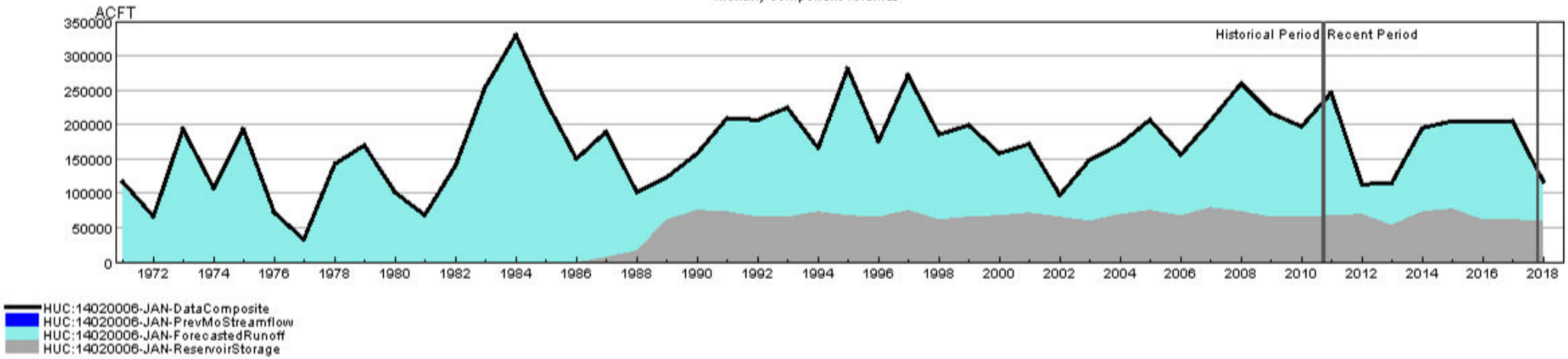
HUC 14020005 (Lower Gunnison) SWSI Values - JAN

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



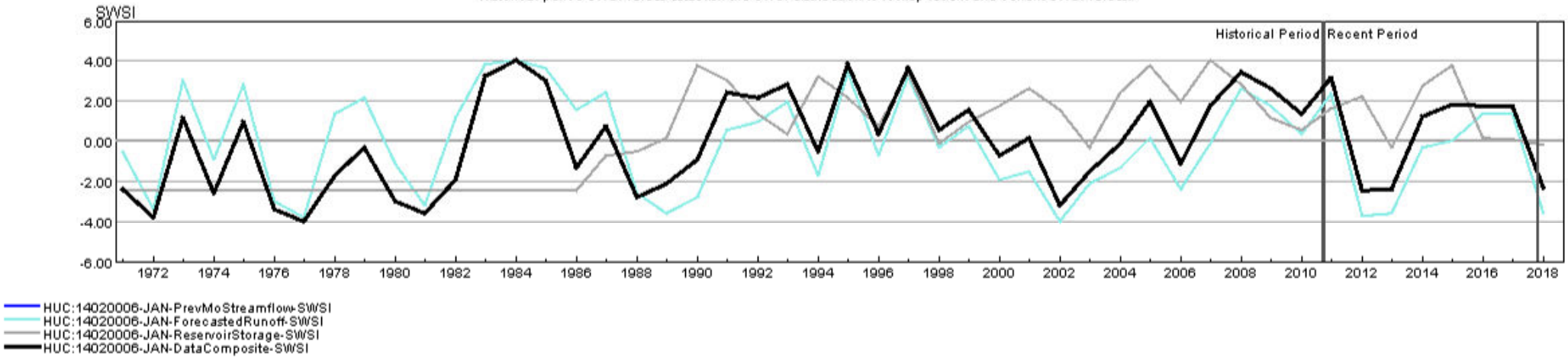
HUC 14020006 (Uncompahgre) Surface Water Supply - JAN

Monthly component volumes



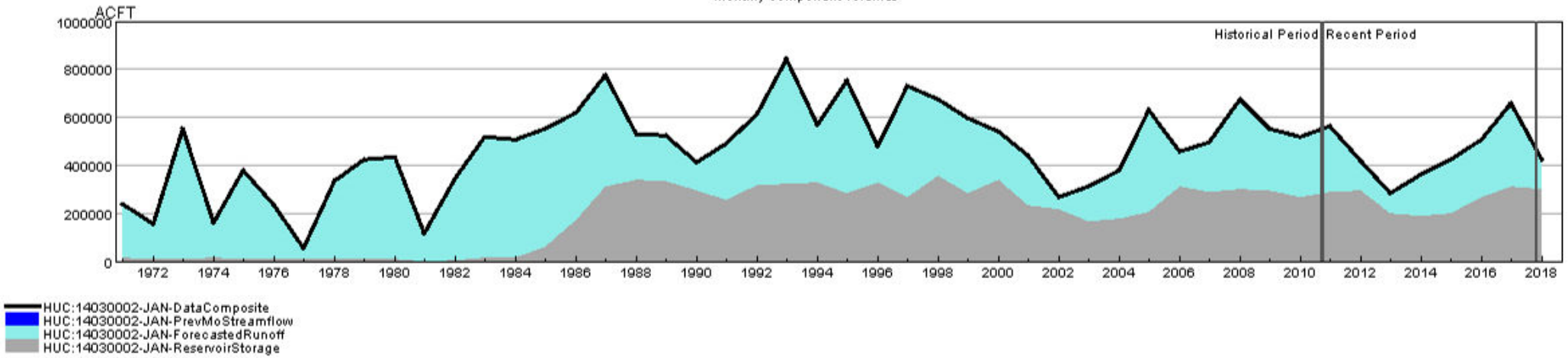
HUC 14020006 (Uncompahgre) SWSI Values - JAN

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



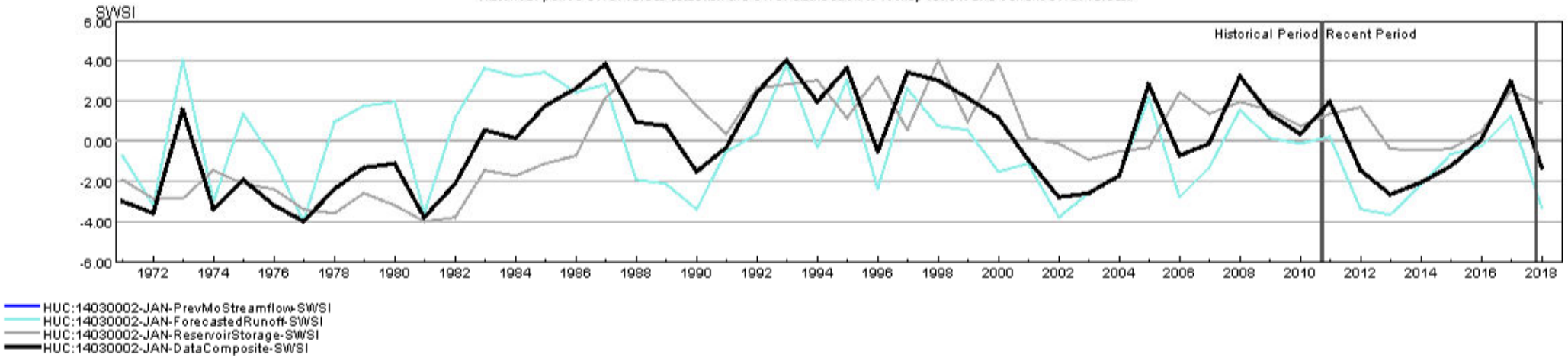
HUC 14030002 (Upper Dolores) Surface Water Supply - JAN

Monthly component volumes



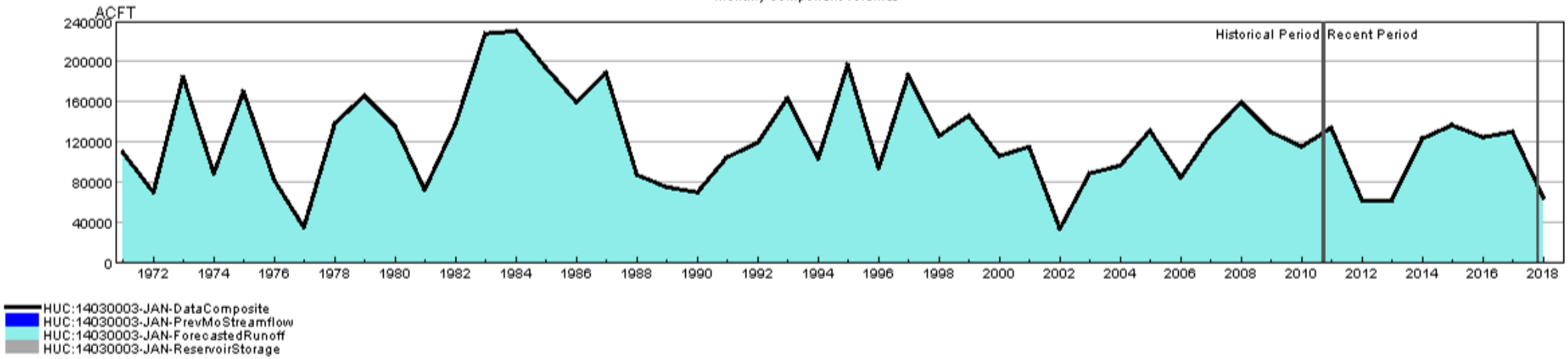
HUC 14030002 (Upper Dolores) SWSI Values - JAN

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



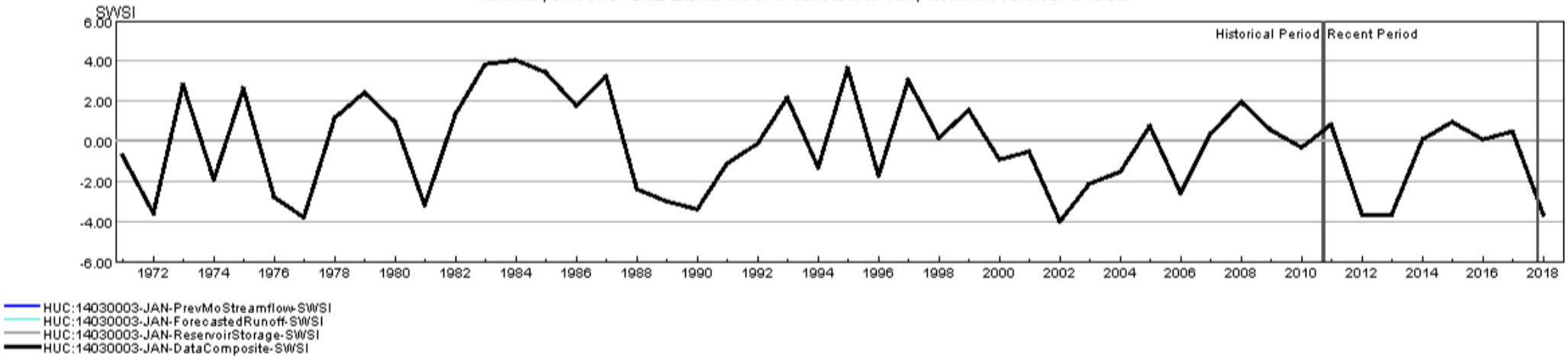
HUC 14030003 (San Miguel) Surface Water Supply - JAN

Monthly component volumes



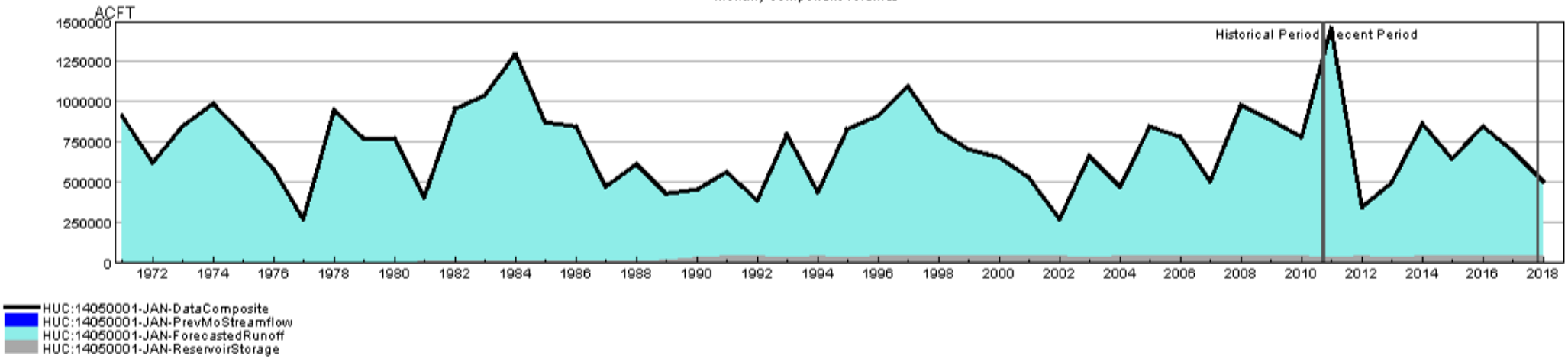
HUC 14030003 (San Miguel) SWSI Values - JAN

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



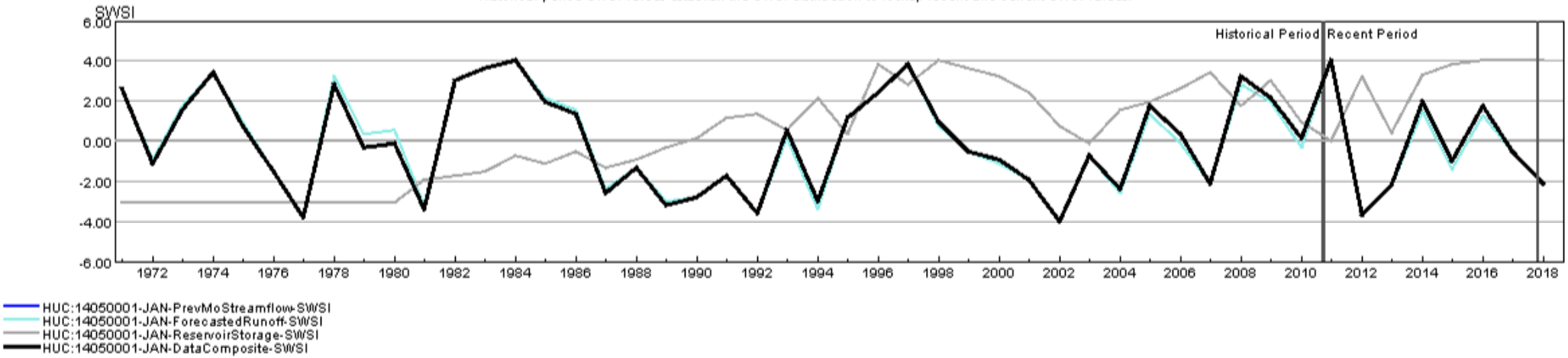
HUC 14050001 (Upper Yampa) Surface Water Supply - JAN

Monthly component volumes



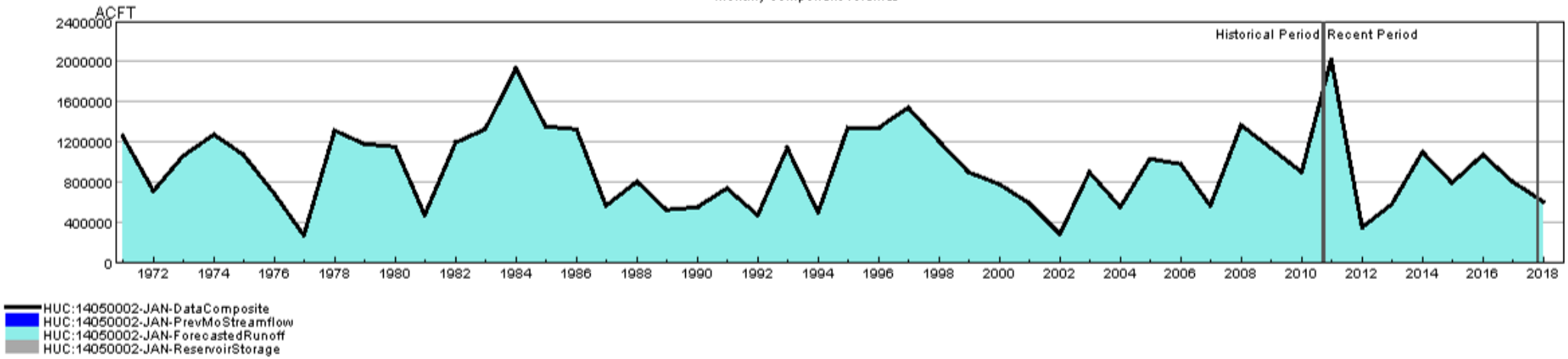
HUC 14050001 (Upper Yampa) SWSI Values - JAN

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



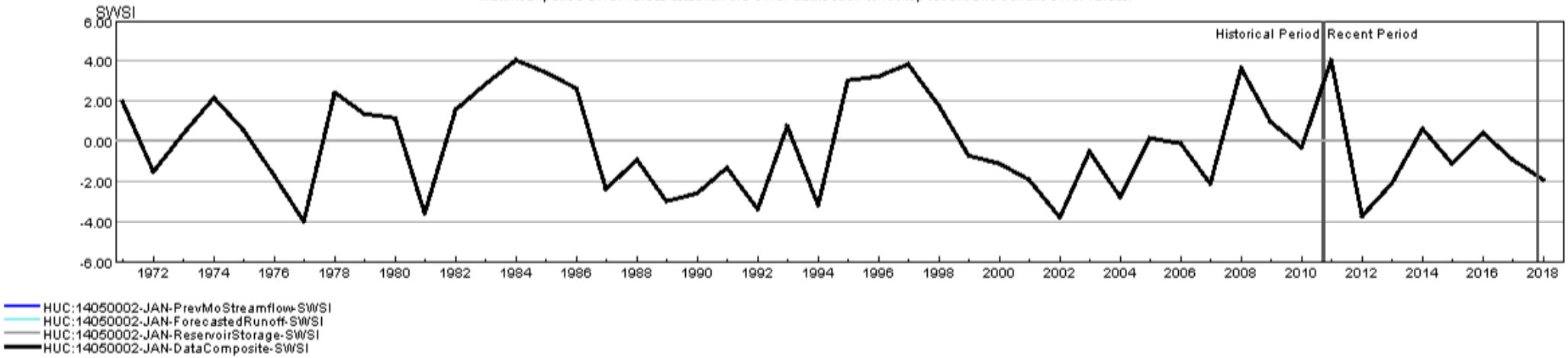
HUC 14050002 (Lower Yampa) Surface Water Supply - JAN

Monthly component volumes



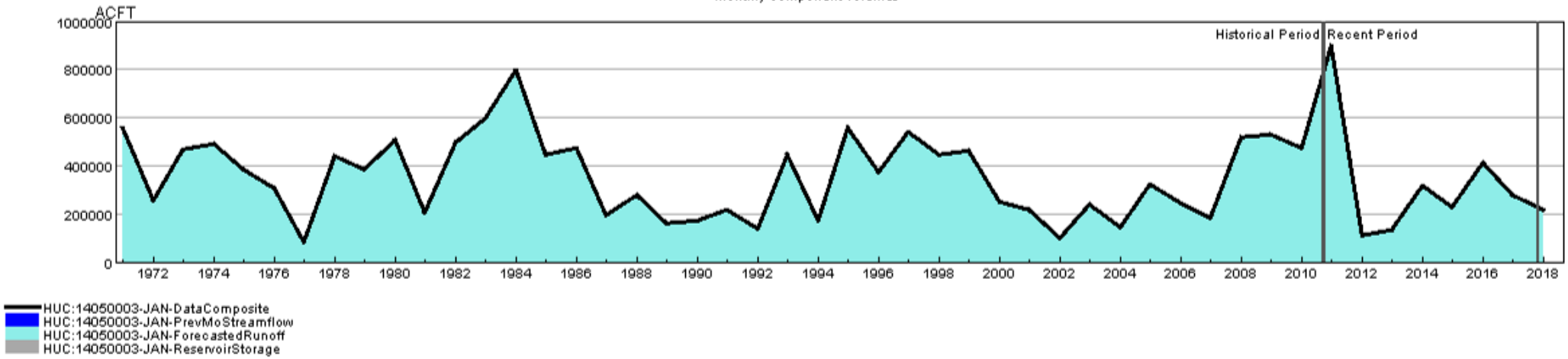
HUC 14050002 (Lower Yampa) SWSI Values - JAN

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



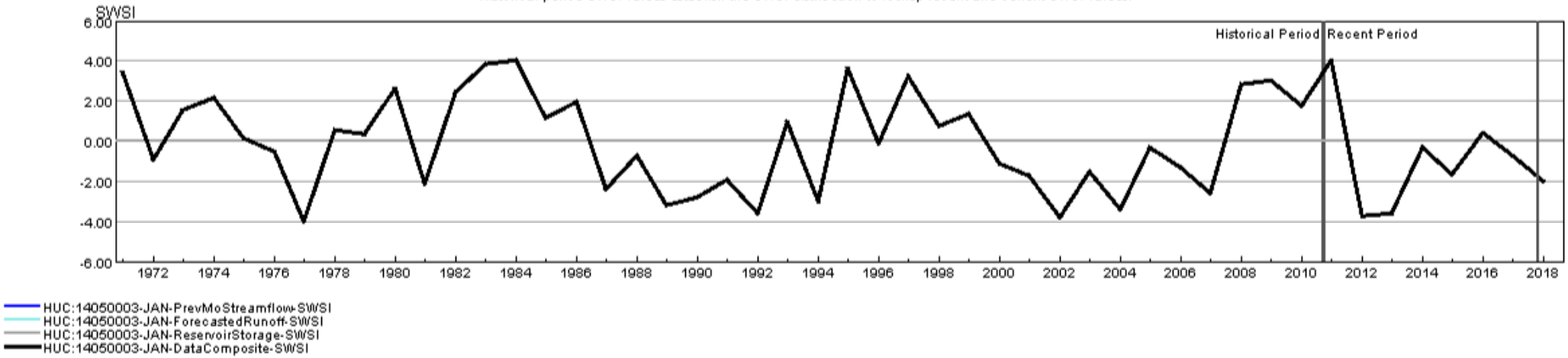
HUC 14050003 (Little Snake) Surface Water Supply - JAN

Monthly component volumes



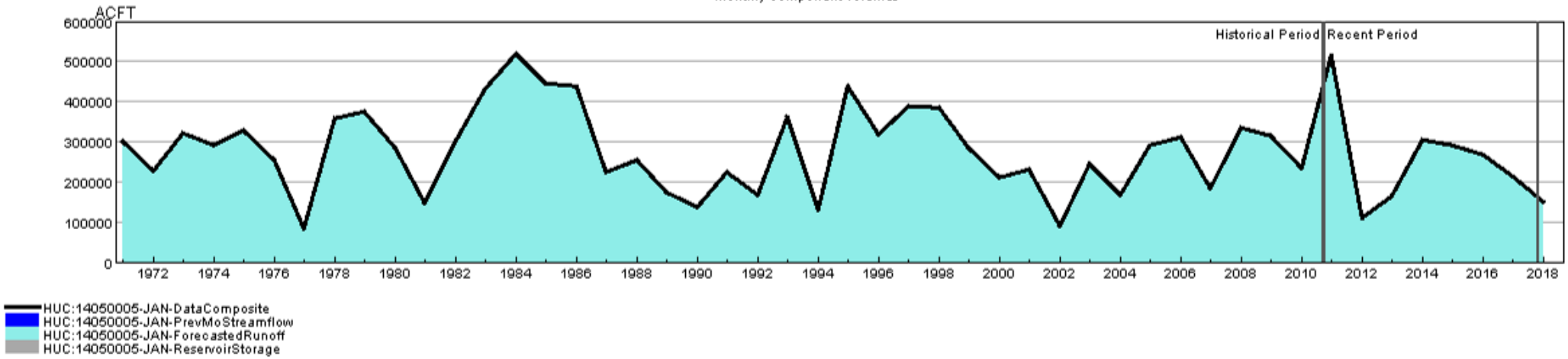
HUC 14050003 (Little Snake) SWSI Values - JAN

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



HUC 14050005 (Upper White) Surface Water Supply - JAN

Monthly component volumes



HUC:14050005-JAN-DataComposite
HUC:14050005-JAN-PrevMoStreamflow
HUC:14050005-JAN-ForecastedRunoff
HUC:14050005-JAN-ReservoirStorage

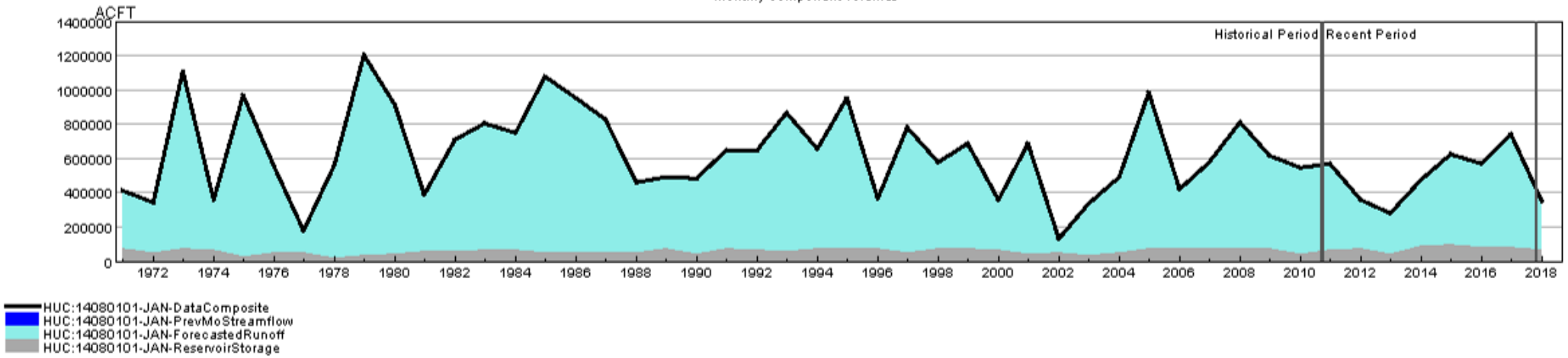
HUC 14050005 (Upper White) SWSI Values - JAN

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

HUC:14050005-JAN-PrevMoStreamflow-SWSI
HUC:14050005-JAN-ForecastedRunoff-SWSI
HUC:14050005-JAN-ReservoirStorage-SWSI
HUC:14050005-JAN-DataComposite-SWSI

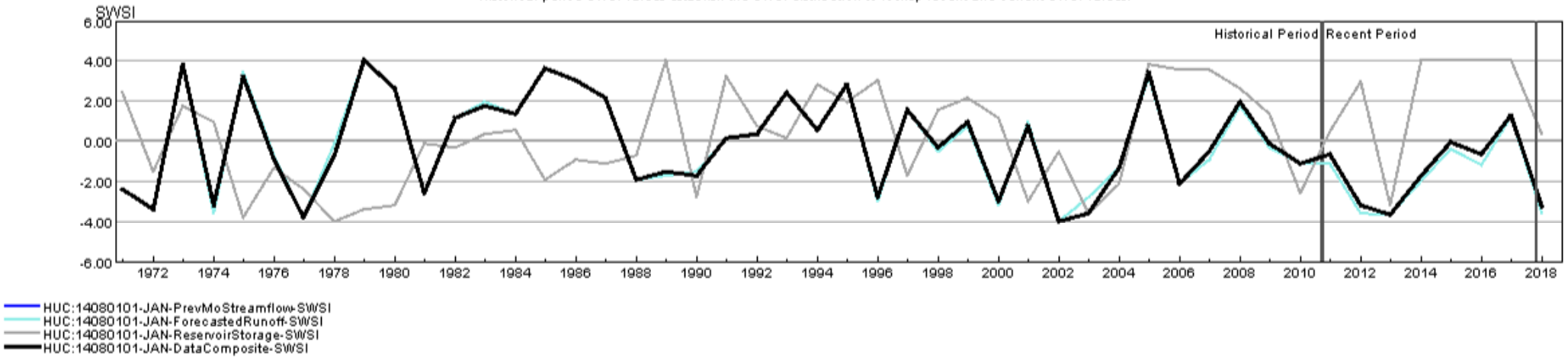
HUC 14080101 (Upper San Juan) Surface Water Supply - JAN

Monthly component volumes



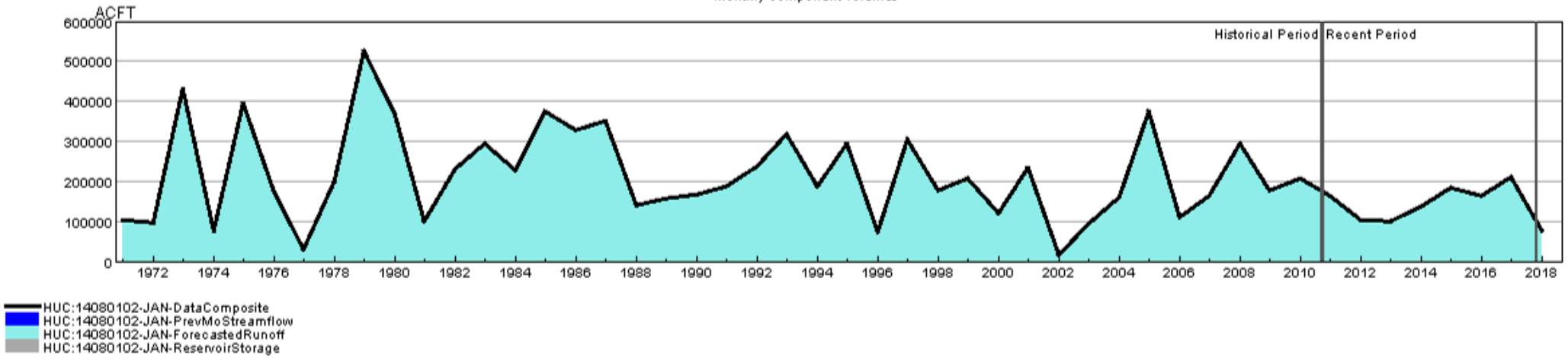
HUC 14080101 (Upper San Juan) SWSI Values - JAN

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



HUC 14080102 (Piedra) Surface Water Supply - JAN

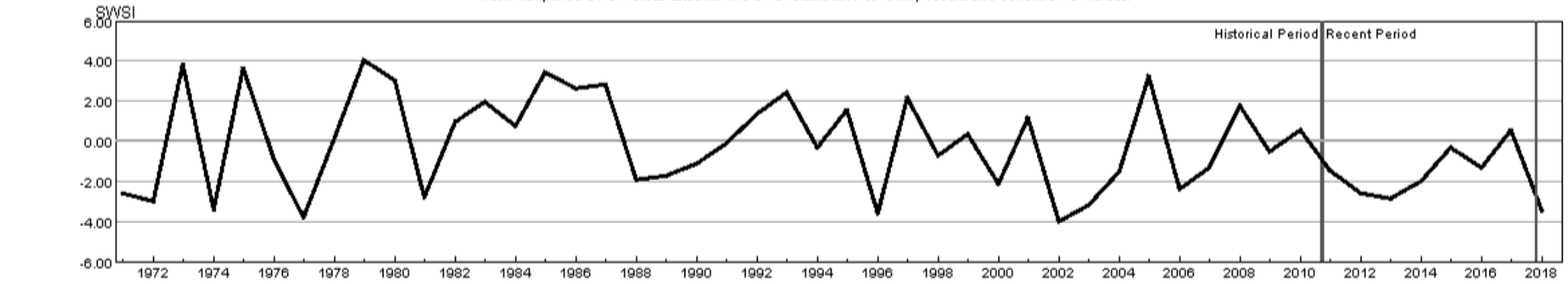
Monthly component volumes



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

HUC 14080102 (Piedra) SWSI Values - JAN

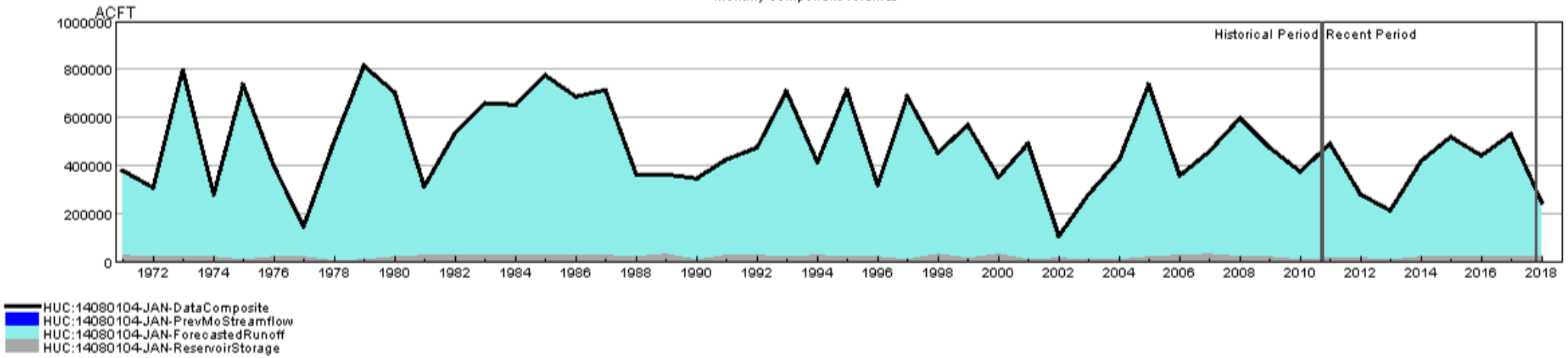
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



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

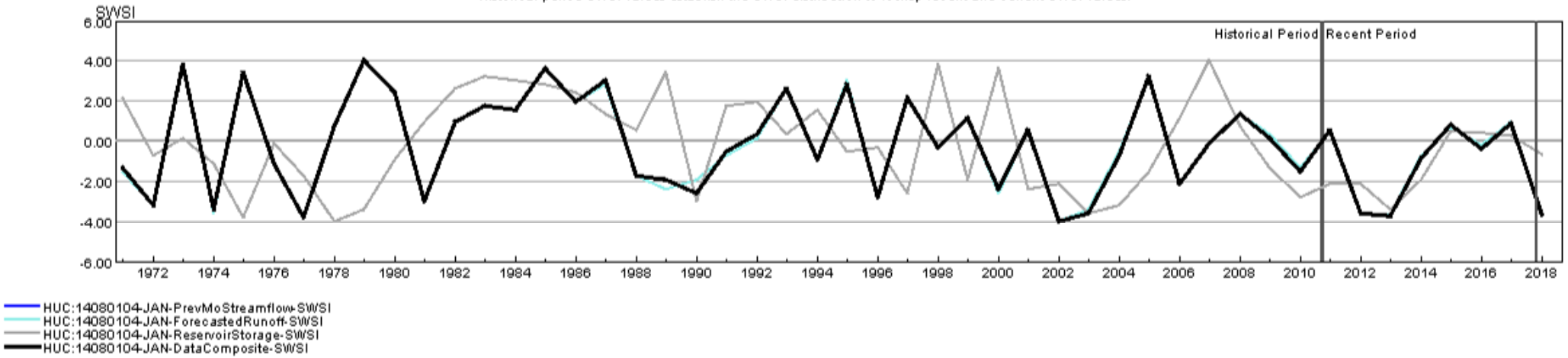
HUC 14080104 (Animas) Surface Water Supply - JAN

Monthly component volumes



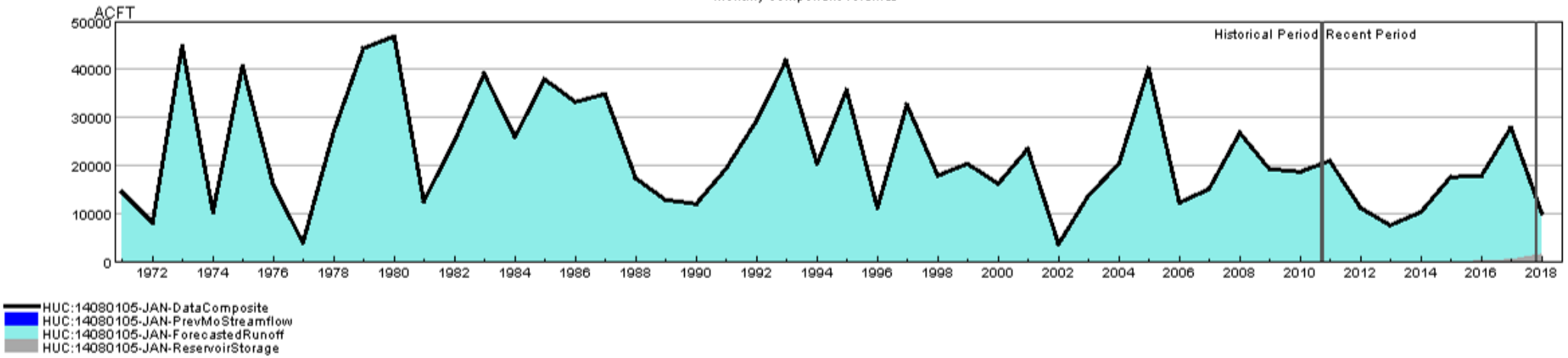
HUC 14080104 (Animas) SWSI Values - JAN

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



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

Monthly component volumes



HUC 14080105 (Middle San Juan) SWSI Values - JAN

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