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

February 1, 2017

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.

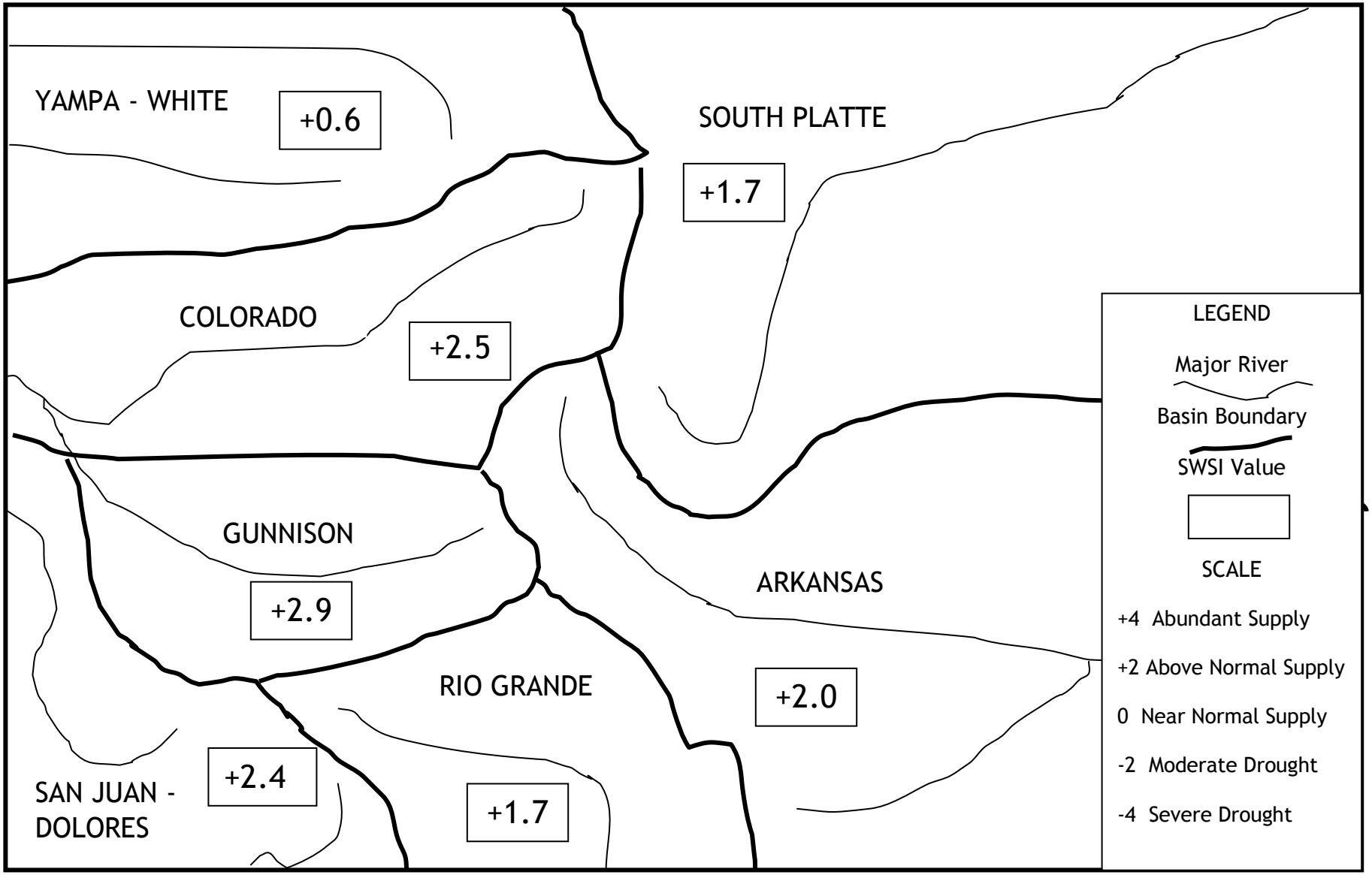
The SWSI calculation for the winter season (January 1 to June 1) is based on forecasted runoff (total volume for runoff season) combined with reservoir storage at the end of last month, in this case January 31. The statewide SWSI values for February 1 are all above normal with most basins showing abundant supply. The SWSI values range from a low of +0.6 in the Yampa-White Basin a high of +2.9 in the Gunnison Basin. The following SWSI values were computed for each of the seven major basins for February 1, 2017. The results for each HUC are summarized on the following pages.

Basin	February 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	2.0	0.4	0.0
Colorado	2.5	2.5	2.7
Gunnison	2.9	2.4	3.0
Rio Grande	1.7	1.8	1.3
San Juan-Dolores	2.4	1.7	2.9
South Platte	1.7	0.8	-0.1
Yampa-White	0.6	1.2	0.3

SWSI Scale

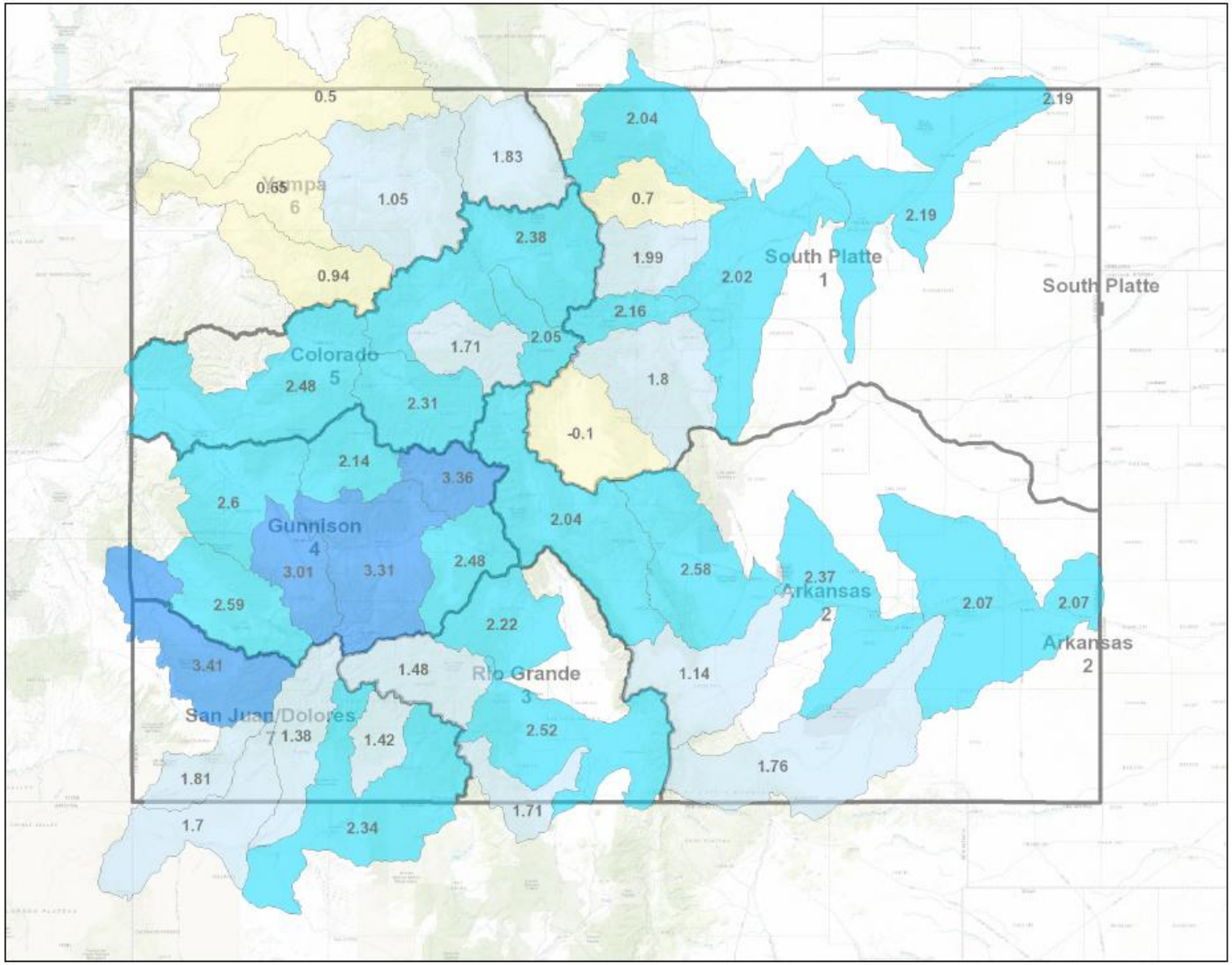
-4	-3	-2	-1	0	1	2	3	4
Severe Drought		Moderate Drought		Near Normal Supply		Above Normal Supply		Abundant Supply

SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN



February 1, 2017

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



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

113.39 0 56.7 113.39 Miles

1: 3,592,220

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: 2/14/2017 2:16:17 PM

February 1, 2017

February 1, 2017 SWSI Values by HUC and Non Exceedance Probabilities (NEP)

Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Streamflow Forecast NEP	Total Vol (AF)
Arkansas	11020001	Arkansas Headwaters	2.0	52	80	471,200
	11020002	Upper Arkansas	2.6	75	78	691,900
	11020005	Upper Arkansas-Lake Meredith	2.4	84	78	536,100
	11020006	Huerfano River	1.1	13	74	30,400
	11020009	Upper Arkansas-John Martin Reservoir	2.1	75	79	734,700
	11020010	Purgatoire River	1.8	76	78	85,400
Colorado	14010001	Colorado Headwaters	2.4	83	71	1,895,200
	14010002	Blue River	2.1	14	83	405,400
	14010003	Eagle River	1.7	NA	71	395,000
	14010004	Roaring Fork	2.3	15	78	967,800
	14010005	Colorado Headwaters-Plateau	2.5	48	80	3,081,100
Gunnison	14020001	East-Taylor	3.4	57	89	479,500
	14020002	Upper Gunnison	3.3	95	86	1,866,700
	14020003	Tomichi Creek	2.5	99	80	110,900
	14020004	North Fork Gunnison	2.1	10	76	401,500
	14020005	Lower Gunnison	2.6	NA	81	2,120,000
	14020006	Uncompahgre River	3.0	54	76	233,700
	14030003	San Miguel	2.6	NA	81	170,000
Rio Grande	13010001	Rio Grande Headwaters	1.5	88	67	650,400
	13010002	Alamosa-Trinchera	2.5	51	82	204,411
	13010004	Saguache Creek	2.2	NA	77	40,000
	13010005	Conejos River	1.7	37	73	265,600
San Juan-Dolores	14030002	Upper Dolores	3.4	80	73	732,600
	14080101	Upper San Juan	2.3	99	76	859,200
	14080102	Piedra River	1.4	NA	67	255,000
	14080104	Animas River	1.4	51	67	605,600
	14080105	Middle San Juan	1.7	50	70	31,728
	14080107	Mancos River	1.8	64	71	48,100
South Platte	10190001	South Platte Headwaters	-0.1	51	59	193,500
	10190002	Upper South Platte	1.8	66	68	504,600
	10190003	Middle South Platte-Cherry Creek	2.0	37	75	1,011,350
	10190004	Clear Creek	2.2	NA	76	126,000
	10190005	St. Vrain River	2.0	32	71	258,500
	10190006	Big Thompson River	0.7	53	71	573,700
	10190007	Cache La Poudre	2.0	92	65	436,000
	10190012	Middle South Platte-Sterling	2.2	68	75	1,108,901
Yampa-White	10180001	North Platte Headwaters	1.8	NA	72	305,000
	14050001	Upper Yampa	1.1	99	59	822,200
	14050002	Lower Yampa	0.7	NA	58	1,110,000
	14050003	Little Snake	0.5	NA	56	435,000
	14050005	Upper White	0.9	NA	61	310,000

NEP is non exceedance percentage for total reservoir storage and streamflow forecast in each HUC. NEP is calculated compared to either the actual volumes in storage historically occurring this month or streamflow during the runoff period for the years 1970-2010. Some HUCs do not have any reservoirs considered in the SWSI. Total Vol is the volume of reservoir storage and streamflow forecast in the HUC. The following table lists each component considered in each HUC.

SWSI Color Scale:	-4.0 (Severe Drought)	0 (Normal)	4.0 (Abundant Supply)

February 1, 2017 SWSI Component Information By HUC

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
11020001	Arkansas Headwaters	CLEAR CREEK RESERVOIR	7,600	57
		HOMESTAKE RESERVOIR	42,100	85
		TWIN LAKES RESERVOIR	45,200	48
		TURQUOISE LAKE	66,300	27
		ARKANSAS RIVER AT SALIDA	310,000	80
11020002	Upper Arkansas	PUEBLO RESERVOIR	226,900	75
		PUEBLO RESERVOIR INFLOW	465,000	78
11020005	Upper Arkansas-Lake Meredith	LAKE HENRY	6,900	94
		HUERFANO RIVER NEAR REDWING	14,900	74
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	15,500	77
		MEREDITH RESERVOIR	33,800	79
		PUEBLO RESERVOIR INFLOW	465,000	78
11020006	Huerfano River	CUCHARAS RESERVOIR*	0	13
		HUERFANO RIVER NEAR REDWING	14,900	74
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	15,500	77
11020009	Upper Arkansas-John Martin Reservoir	HUERFANO RIVER NEAR REDWING	14,900	74
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	15,500	77
		ADOBE CREEK RESERVOIR	58,000	80
		PURGATOIRE RIVER AT TRINIDAD	61,000	78
		JOHN MARTIN RESERVOIR	120,300	74
		PUEBLO RESERVOIR INFLOW	465,000	78
11020010	Purgatoire River	TRINIDAD LAKE	24,400	76
		PURGATOIRE RIVER AT TRINIDAD	61,000	78
14010001	Colorado Headwaters	WOLFORD MOUNTAIN RESERVOIR	50,800	88
		WILLIAMS FORK RESERVOIR	74,400	82
		COLORADO RIVER NEAR DOTSERO	1,770,000	71
14010002	Blue River	GREEN MOUNTAIN RESERVOIR	60,400	14
		BLUE RIVER INFLOW TO GREEN MOUNTAIN RES	345,000	83
14010003	Eagle River	EAGLE RIVER BELOW GYPSUM	395,000	71
14010004	Roaring Fork	RUEDI RESERVOIR	67,800	15
		ROARING FORK AT GLENWOOD SPRINGS	900,000	78
14010005	Colorado Headwaters-Plateau	VEGA RESERVOIR	11,100	48
		COLORADO RIVER NEAR CAMEO	3,070,000	80
14020001	East-Taylor	TAYLOR PARK RESERVOIR	69,500	57
		TAYLOR R INF TO TAYLOR PARK RESERVOIR	140,000	90
		EAST RIVER AT ALMONT	270,000	88
14020002	Upper Gunnison	FRUITLAND RESERVOIR	700	28
		SILVER JACK RESERVOIR	2,200	15
		CRAWFORD RESERVOIR	5,900	32
		MORROW POINT RESERVOIR	111,400	34
		LAKE FORK AT GATEVIEW, CO	160,000	86
		BLUE MESA RESERVOIR	586,500	96
		GUNNISON R INF TO BLUE MESA RESERVOIR	1,000,000	86
14020003	Tomichi Creek	VOUGA RESERVOIR NEAR DOYLEVILLE	900	99
		TOMICHI CREEK AT GUNNISON, CO	110,000	80

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
14020004	North Fork Gunnison	PAONIA RESERVOIR	1,500	10
		NORTH FORK GUNNISON R NR SOMERSET	400,000	76
14020005	Lower Gunnison	GUNNISON RIVER NR GRAND JUNCTION	2,120,000	81
14020006	Uncompahgre River	RIDGEWAY RESERVOIR	63,700	54
		UNCOMPAHGRE RIVER AT COLONA	170,000	76
14030003	San Miguel	SAN MIGUEL RIVER NEAR PLACERVILLE	170,000	81
13010001	Rio Grande Headwaters	CONTINENTAL RESERVOIR	9,000	92
		SANTA MARIA RESERVOIR	16,500	89
		RIO GRANDE RESERVOIR	24,900	78
		RIO GRANDE NEAR DEL NORTE	600,000	67
13010002	Alamosa-Trinchera	MOUNTAIN HOME	3,511	70
		TERRACE RESERVOIR	4,900	33
		TRINCHERA CK	22,000	89
		UTE CREEK	22,000	94
		SANGRE DE CRISTO	30,000	92
		CULEBRA CREEK AT SAN LUIS	41,000	94
		ALAMOSA CREEK ABOVE TERRACE RESERVOIR	81,000	64
13010004	Saguache Creek	SAGUACHE CREEK NEAR SAGUACHE, CO	40,000	77
13010005	Conejos River	PLATORO RESERVOIR	15,600	37
		CONEJOS RIVER NEAR MOGOTE	250,000	73
14030002	Upper Dolores	GROUNDHOG RESERVOIR	18,100	99
		MCPHEE RESERVOIR	294,500	79
		DOLORES RIVER BELOW MCPHEE RESERVOIR	420,000	73
14080101	Upper San Juan	VALLECITO RESERVOIR	84,200	99
		LOS PINOS RIVER NEAR BAYFIELD	225,000	61
		SAN JUAN RIVER NEAR CARRACAS	550,000	79
14080102	Piedra River	PIEDRA RIVER NEAR ARBOLES	255,000	67
14080104	Animas River	LEMON RESERVOIR	20,600	51
		FLORIDA RIVER INFLOW TO LEMON RESERVOIR	65,000	67
		ANIMAS RIVER AT DURANGO	520,000	67
14080105	Middle San Juan	LONG HOLLOW RESERVOIR	728	50
		LA PLATA RIVER AT HESPERUS	31,000	70
14080107	Mancos River	JACKSON GULCH RESERVOIR	5,100	64
		MANCOS RIVER NEAR MANCOS	43,000	71
10190001	South Platte Headwaters	ANTERO RESERVOIR	14,500	17
		SPINNEY MOUNTAIN RESERVOIR	27,600	54
		ELEVENMILE CANYON RESV INFLOW	52,000	59
		ELEVENMILE CANYON RESERVOIR	99,400	70
10190002	Upper South Platte	BEAR CREEK ABV EVERGREEN	17,400	66
		CHEESMAN LAKE	70,200	74
		SOUTH PLATTE RIVER AT SOUTH PLATTE	198,000	68
		DILLON RESERVOIR	219,000	45

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
10190003	Middle South Platte-Cherry Creek	HORSECREEK RESERVOIR	7,450	14
		BEAR CREEK ABV EVERGREEN	17,400	66
		MILTON RESERVOIR	19,400	96
		BARR LAKE	24,000	41
		STANDLEY RESERVOIR	32,100	33
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	44,000	71
		BOULDER CREEK NEAR ORODELL	62,000	70
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	107,000	71
		SAINT VRAIN CREEK AT LYONS	109,000	76
		CLEAR CREEK AT GOLDEN	126,000	76
		SOUTH PLATTE RIVER AT SOUTH PLATTE	198,000	68
		CACHE LA POUDRE R AT CANYON MOUTH	265,000	65
10190004	Clear Creek	CLEAR CREEK AT GOLDEN	126,000	76
10190005	St. Vrain River	TERRY RESERVOIR	4,800	34
		MARSHALL RESERVOIR	5,900	59
		UNION RESERVOIR	9,300	29
		BUTTONROCK (RALPH PRICE) RESERVOIR	11,400	10
		GROSS RESERVOIR	12,100	44
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	44,000	71
		BOULDER CREEK NEAR ORODELL	62,000	70
		SAINT VRAIN CREEK AT LYONS	109,000	76
10190006	Big Thompson River	MARIANO RESERVOIR	1,000	11
		LAKE LOVELAND RESERVOIR	3,900	8
		LONE TREE RESERVOIR	5,200	26
		WILLOW CREEK RESERVOIR	6,700	51
		BOYD LAKE	27,600	39
		CARTER LAKE	71,200	23
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	107,000	71
		LAKE GRANBY	351,100	64
10190007	Cache La Poudre	CHAMBERS LAKE	2,600	46
		BLACK HOLLOW RESERVOIR	3,300	72
		HALLIGAN RESERVOIR	6,400	96
		CACHE LA POUDRE	6,800	49
		FOSSIL CREEK RESERVOIR	9,300	90
		WINDSOR RESERVOIR	11,200	92
		COBB LAKE	17,000	68
		HORSETOOTH RESERVOIR	114,400	81
		CACHE LA POUDRE R AT CANYON MOUTH	265,000	65

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
10190012	Middle South Platte-Sterling	JULESBURG RESERVOIR	12,700	1
		BEAR CREEK ABV EVERGREEN	17,400	66
		EMPIRE RESERVOIR	23,700	52
		JACKSON LAKE RESERVOIR	24,000	50
		PREWITT RESERVOIR	24,101	98
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	44,000	71
		RIVERSIDE RESERVOIR	45,100	81
		POINT OF ROCKS RESERVOIR	50,900	40
		BOULDER CREEK NEAR ORODELL	62,000	70
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	107,000	71
		SAINT VRAIN CREEK AT LYONS	109,000	76
		CLEAR CREEK AT GOLDEN	126,000	76
		SOUTH PLATTE RIVER AT SOUTH PLATTE	198,000	68
		CACHE LA POUDRE R AT CANYON MOUTH	265,000	65
10180001	North Platte Headwaters	NORTH PLATTE R NR NORTHGATE	305,000	72
14050001	Upper Yampa	YAMCOLO RESERVOIR	6,700	76
		STAGECOACH RESERVOIR NR OAK CREEK	34,500	99
		ELKHEAD CREEK ABOVE LONG GULCH	86,000	63
		YAMPA RIVER AT STEAMBOAT SPRINGS	310,000	69
		ELK RIVER NEAR MILNER, CO	385,000	55
14050002	Lower Yampa	YAMPA RIVER NEAR MAYBELL	1,110,000	58
14050003	Little Snake	LITTLE SNAKE RIVER NEAR LILY	435,000	56
14050005	Upper White	WHITE RIVER NEAR MEEKER	310,000	61

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

*Empty, filling restriction

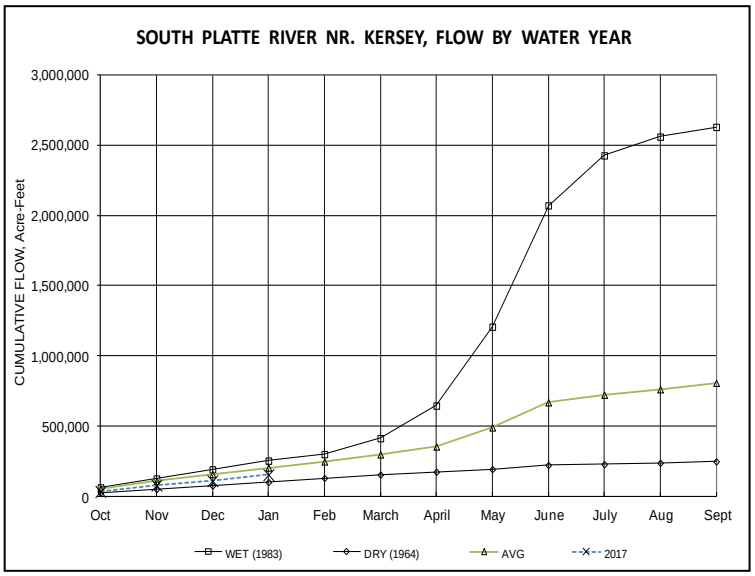
Water Volume NEP Color Scale:	0 (Well Below Normal)	50 (Normal)	100 (Well Above Normal)

Basinwide Conditions Assessment

The SWSI value for the month was +1.7. All in all, January 2017 was a fairly "typical" January over the lower elevations of northeast Colorado. Temperatures over the area were almost universally a bit colder than the monthly average, due in large part to an extended "cold snap" during the middle of the month. There was a marked precipitation "divide" within northeast Colorado in January. Precipitation at the lower elevations was near normal while at the higher elevations it was way above normal, especially in the first ½ of the month. The snow water equivalent (SWE) at the higher elevations increased from 105% of normal on January to 140% of normal on February 1. In fact, the February 1 SWE is high enough that only about 50% of normal snowfall is need for the rest of the season to reach the average season SWE of about 15 inches.

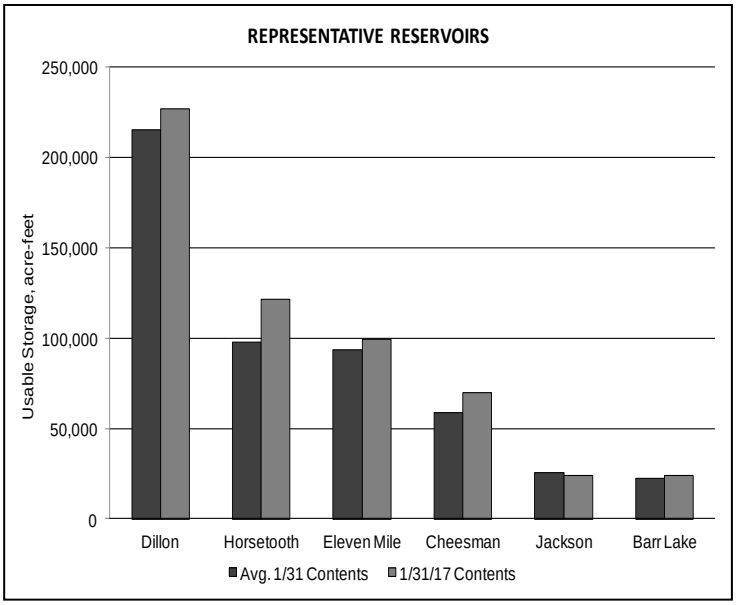
Similar to December, despite the much more normal precipitation and the increase in snowpack, the USDA Drought Monitor indicated only a slight improvement in drought conditions in northeast Colorado. The slight improvement is represented by the late January removal of the area of "Severe Drought (D2)" rating that persisted for almost 2 months over much of Larimer County. In an indication of the status quo, the areas in the D1 "Moderate Drought" and the D0 "Abnormally Dry" categories remained pretty much unchanged from the end of December to the end of January.

January flows in the South Platte River at the Julesburg and Kersey index gages were above the long term average. The overall January mean flow at the Julesburg gage was about 994 cfs or approximately 194% of the period of record mean flow of 512 cfs. The overall December mean flow at the Kersey gage was approximately 703 cfs. This represents a flow of approximately 108% of the period of record mean flow of 652cfs.



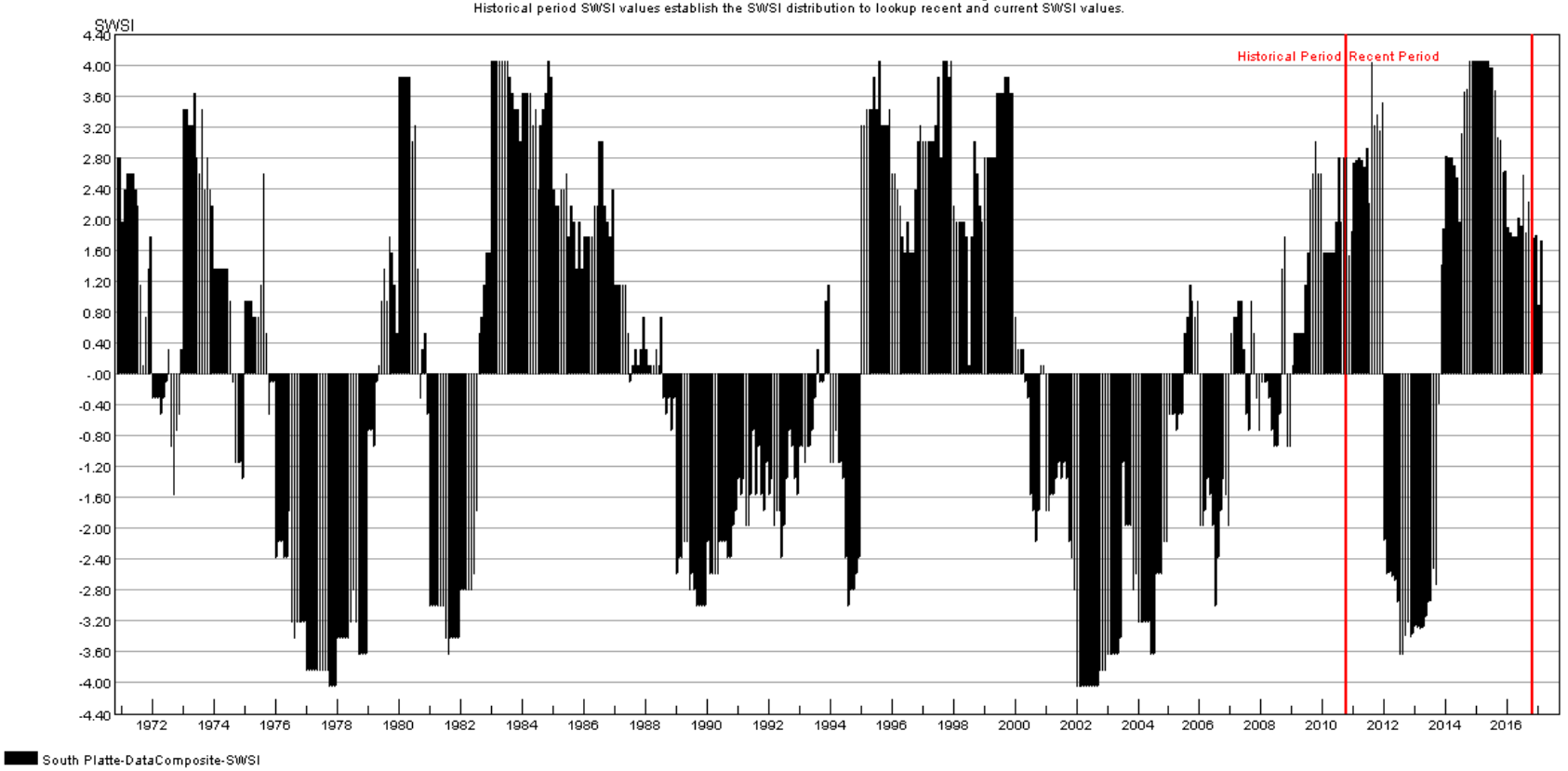
The calls on the South Platte mainstem were generally typical for January. There were free river conditions on the mainstem below the Denver metro area for most of the month. The major South Platte tributaries were internally controlled for the month with calls also generally typical for January.

Overall storage in the South Platte remained good in January. The end of January 2017 storage was at 74% of capacity, as compared to the long term average end of January storage of 70% 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.

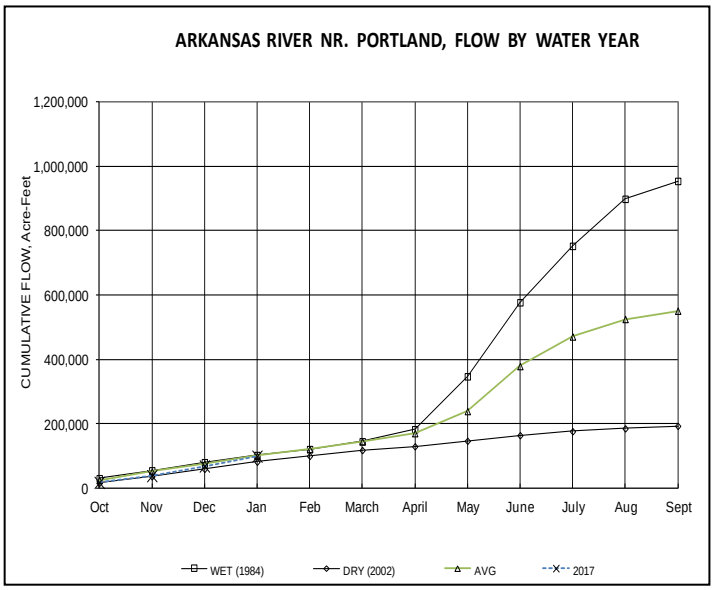
Outlook

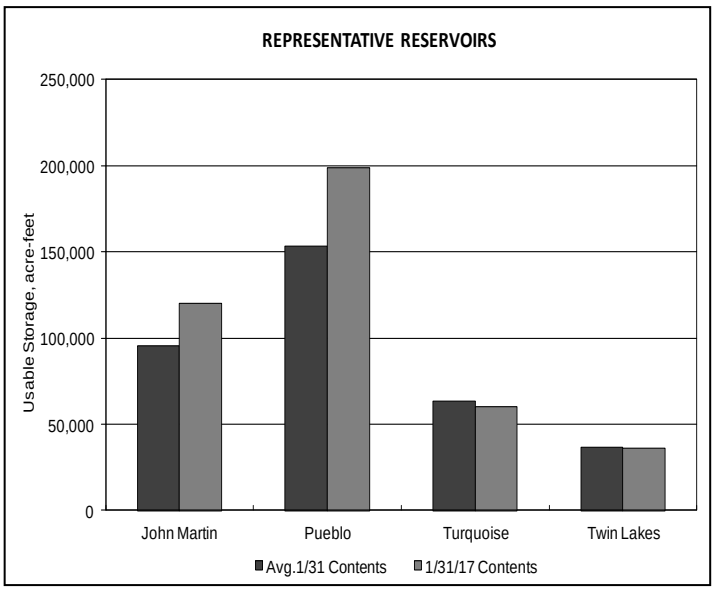
Reservoir storage in the Pueblo Winter Water Program totaled 92,058 acre-feet as of the end of January. This storage amount is less than last year's storage to date of 105,593 acre-feet, but represents 103% of the last twenty year average.

Conservation storage in John Martin Reservoir has accumulated 17,530 acre-feet versus 22,655 acre-feet as of the end of January last year.

Administrative/Management Concerns

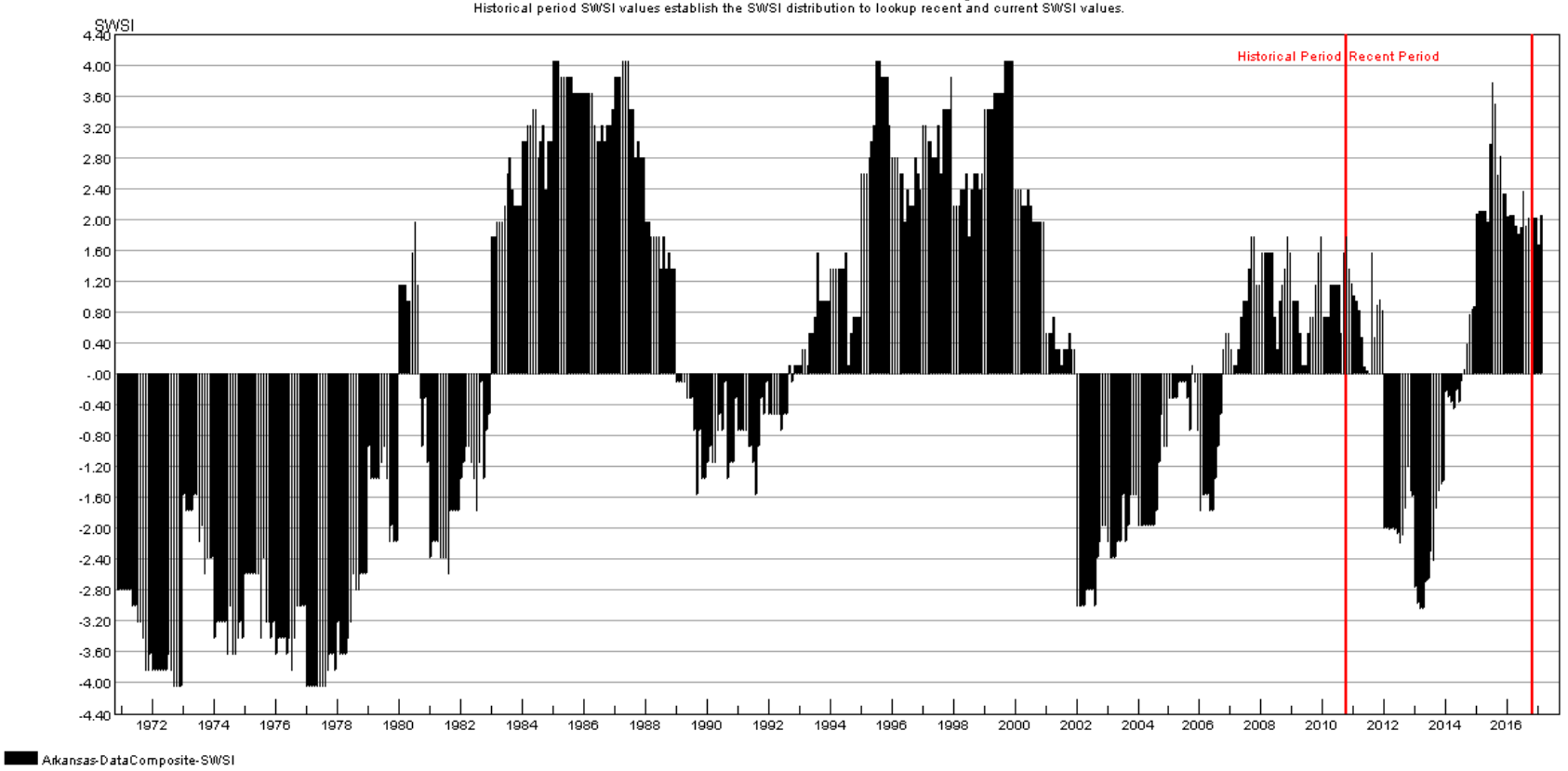
Although not as strong a threat as in 2015, due to a good winter storage period and a vastly improved snowpack level in both the Arkansas River Basin and the portion of the Colorado River Basin associated with the Fryingpan-Arkansas Project, there is some concern about a spill of account water from Pueblo Reservoir. The Southeastern Colorado Water Conservancy District and Bureau of Reclamation have been evaluating changing conditions to figure out how best to manage upper reservoir and Pueblo Reservoir storage to maximize storage of project water. To make room for 2017 west slope imports, water will continue to be moved downstream from Turquoise and Twin Lakes Reservoirs to Pueblo Reservoir. That additional storage may place temporary storage accounts owned by some municipal interests, well associations and the Upper Arkansas Water Conservancy District and Lower Arkansas Valley Water Conservancy District, at some risk of spill again by April 2017.





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 +1.7. Flow at the gaging station Rio Grande near Del Norte averaged 194 cfs (112% of normal). The Conejos River near Mogote had a mean flow of 64 cfs (129% of normal). Inflow to the basin's reservoirs is above normal this winter.

There was abundant snowfall in the San Juans and Sangre de Cristos during late December and all of January. This was a remarkable recovery from a poor start in November.

January was a month of extremes in the San Luis Valley! The minimum temperature dropped to -36 on the 7th but warmed to the mid 40's just two days later. Deep snow fell over the Valley during the month. An all-time record January snowfall for Alamosa and a top ten snowiest month in recorded history. Very much unexpected for a typically dry month. A deep layer of snow on the ground usually produces extreme cold, but snow fronts pushing through the region kept warm air ahead of each storm.

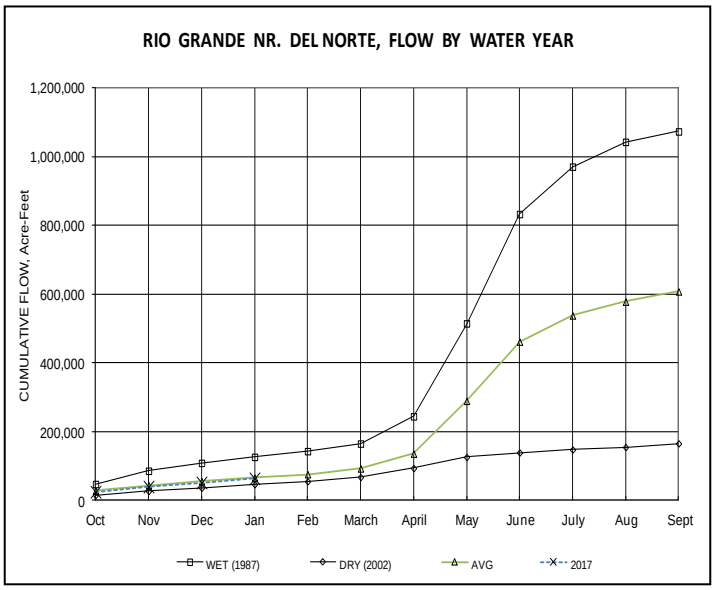
Outlook

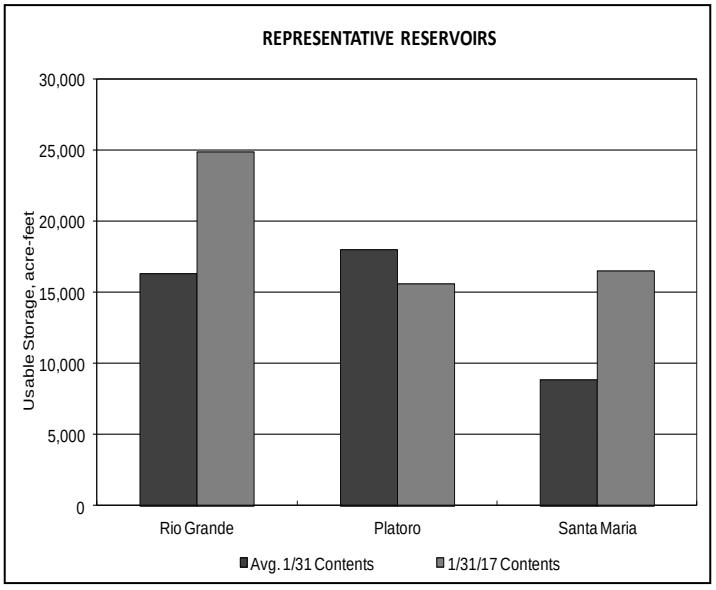
The Natural Resources Conservation Service stream flow forecasts are predicting runoff in area streams to be in the range of 112% (the Rio Grande at Wagon Wheel Gap) to 184% (Sangre de Cristo Creek) of average during the 2017 irrigation season. It appears the Sangre de Cristo Mountains on the eastern side of the San Luis Valley and the south San Juan Mountains west of Antonito are in great snowpack condition. This is rare. The last time these areas had such an extraordinary start to the snowpack was 2008 – a year that, unfortunately, disappointed in March and April. Not all the good news is confined to those areas, all sub-basins in the upper Rio Grande region are expected to produce above average runoff in 2017. Average snowfall from now until May should result in the best overall runoff in the upper Rio Grande basin since 1995.

Current National Weather Service forecasts for February through April, 2017 are calling for above normal temperatures and near normal precipitation in this area of the state.

Administrative/Management Concerns

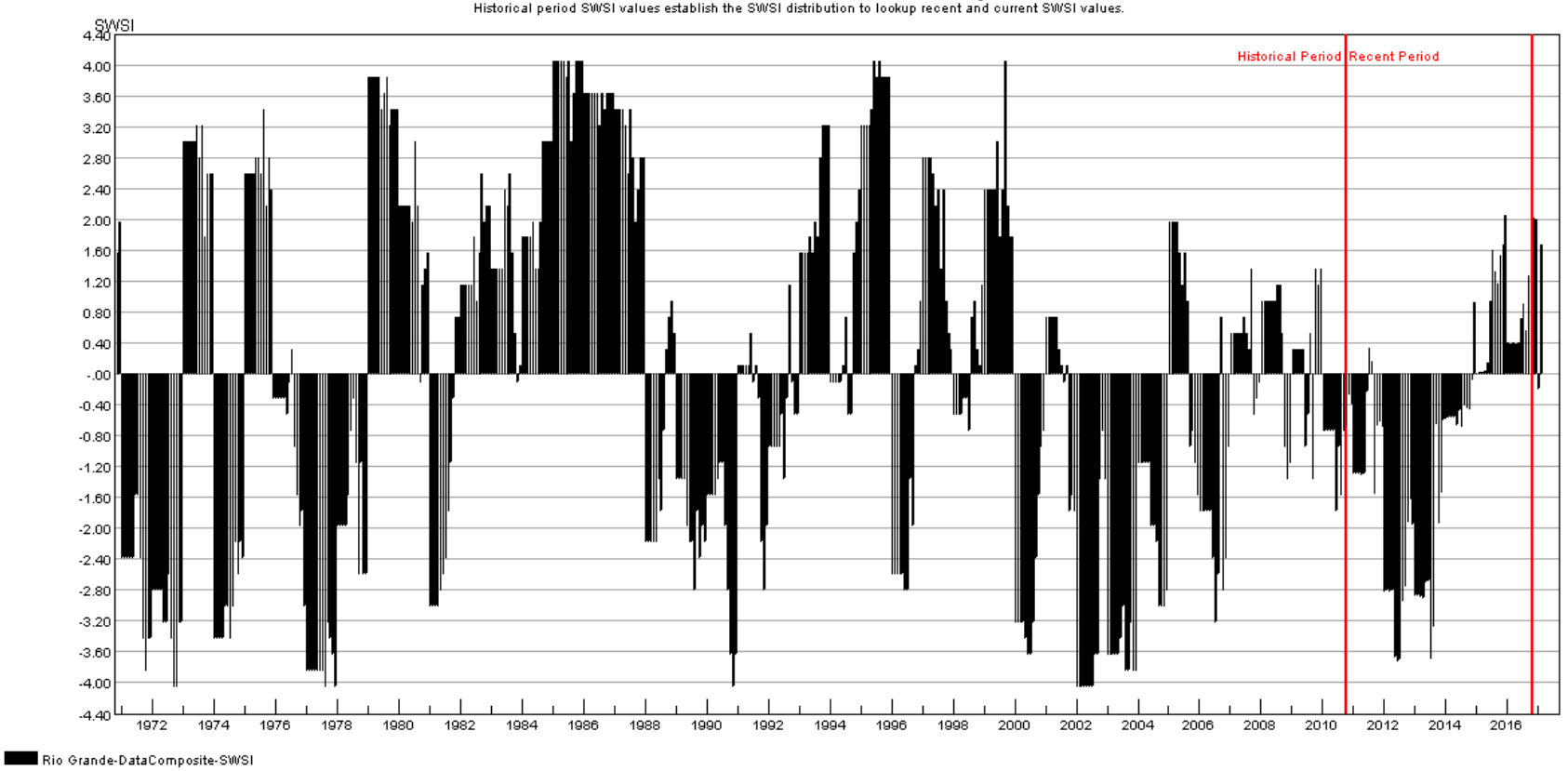
Much effort was spent during January finalizing streamflow and diversion records. The annual meetings of local districts and ditch boards are held this time of year to reflect back on the 2016 season and plan for the upcoming irrigation season.





Rio Grande Basin SWSI History

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



Basinwide Conditions Assessment

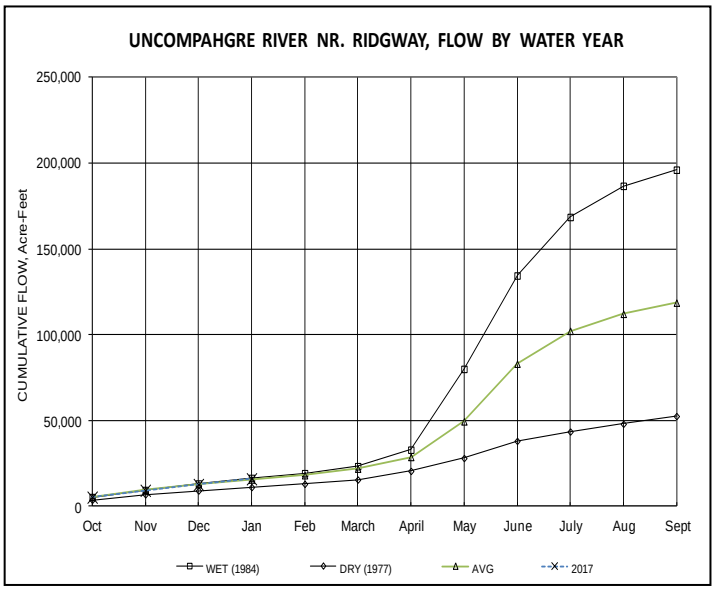
The SWSI value for the month was +2.9. Following a tremendous December, January precipitation was even more impressive as a series of Pacific storms continued to deliver high levels of moisture into the Colorado Rockies. Based on precipitation tracking by the Colorado Basin River Forecast Center, the Gunnison River Basin received between 200 to 300 percent of the 30-year average precipitation. The upper East River basin and Taylor River basins received approximately 300% of the average precipitation for the month. Temperatures across the basin during January were right around average for the month. The storm activity in January increased the Gunnison Basin snowpack from 118% to 178% of the 30 year median snowpack for this time of the year. As an illustration of the how much impact the January storms have made to the water supply forecast, the Snotel station on Schofield Pass added a whopping 18 inches of snow water equivalent (SWE) during the month. That is an all time record for January as far as records have been maintained.

Outlook

The NWS precipitation forecast for February through April remains uncertain with equal chances of below or above average precipitation forecast. This is due to the weak La Nina that has developed and its lack of a definitive effect on Gunnison basin precipitation in the past. Above average temperatures are expected for that same period.

Administrative/Management Concerns

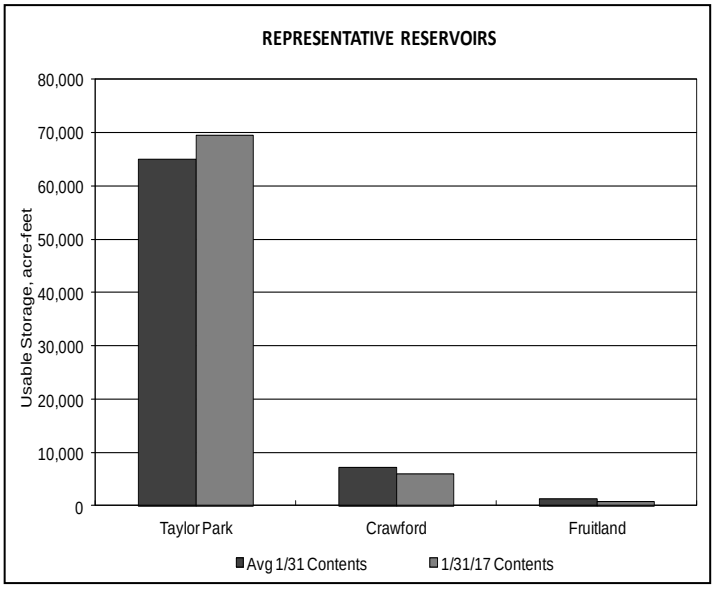
The latest forecast for runoff into Blue Mesa Reservoir this spring is currently predicted to be 925,000 acre-feet, which is classified as a moderately wet year for Aspinall Unit spring storage management operations. If the forecast holds for the remainder of the winter and early spring, there will be a release of water from the Apsinall Unit to create a flow regime in the lower Gunnison River of 40 days at 8,070 cfs and 10 days at 14,350 cfs as measured at the stream flow gauge in the lower Gunnison River at Whitewater. This spring time runoff flow regime is part of the Upper Colorado Endangered Fish Recovery Program designed to assist in the recovery of four endangered native species in the upper Colorado River system.



As of January 31st, Taylor Park Reservoir contained 69,511 acre-feet in storage, of which, 54,647 acre-feet is stored under it's first fill right and 14,875 acre-feet is stored under it's second fill right. The remainder of the 106,230 acre-feet in the Taylor Park Reservoir first fill account has been moved to storage in the Aspinall Unit pursuant to a 1975 exchange agreement and the decree in 86CW0203. Releases from the Apsinall Unit have been increased from 600 cfs to 1,200 cfs to make room for the spring runoff season. These releases are also used for hydroelectric power generation to meet peak power demands on the electrical grid in the western United States.

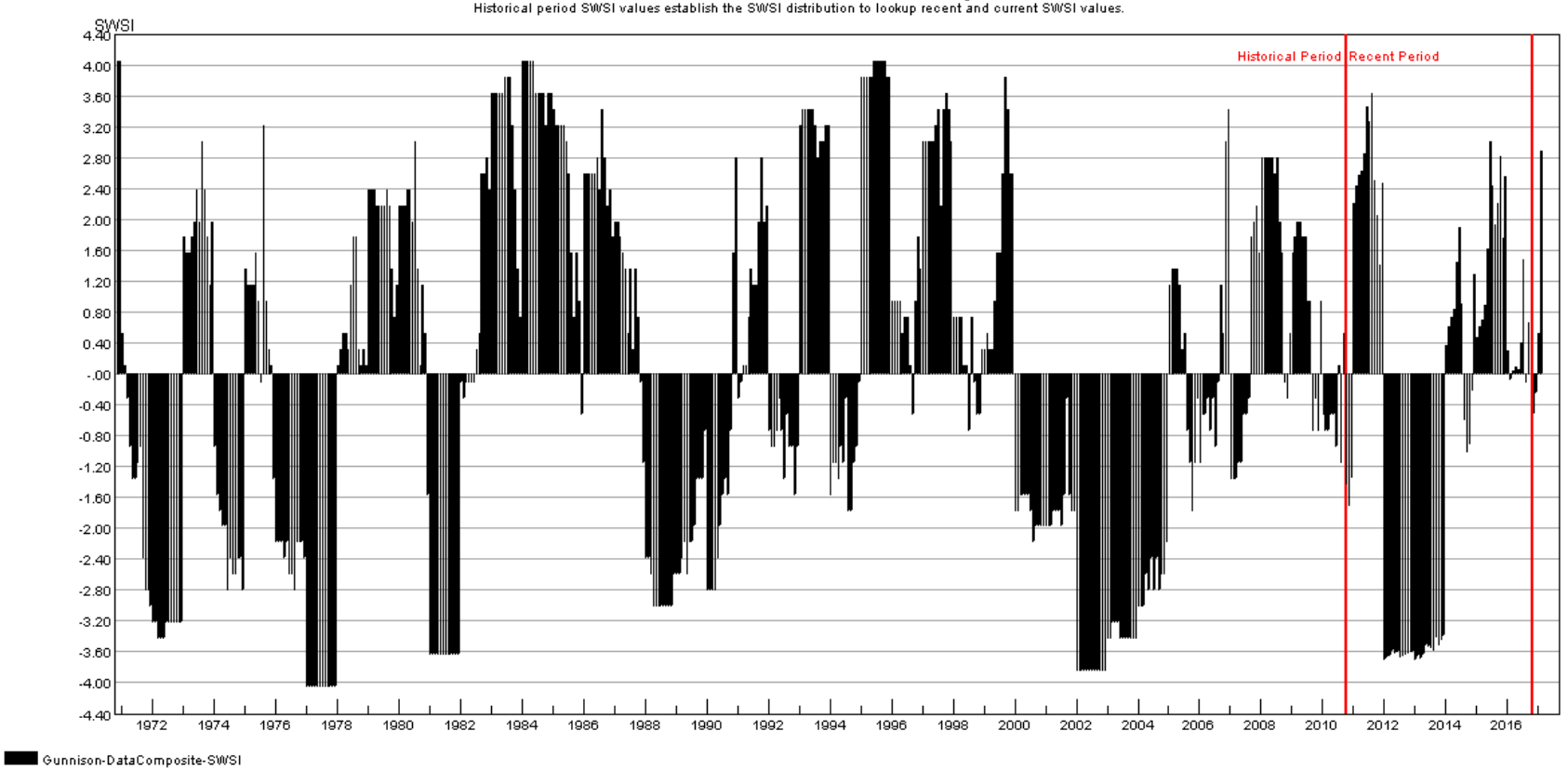
Public Use Impacts

Skiing conditions continue to improve at Crested Butte as well as Telluride with 279-inches of snow received at Crested Butte this season and 217-inches total at Telluride, with all lifts open.



Gunnison Basin SWSI History

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

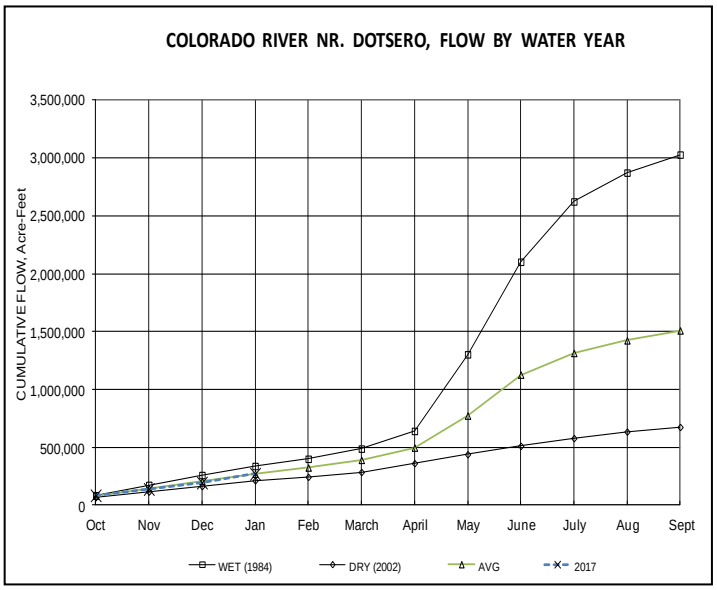


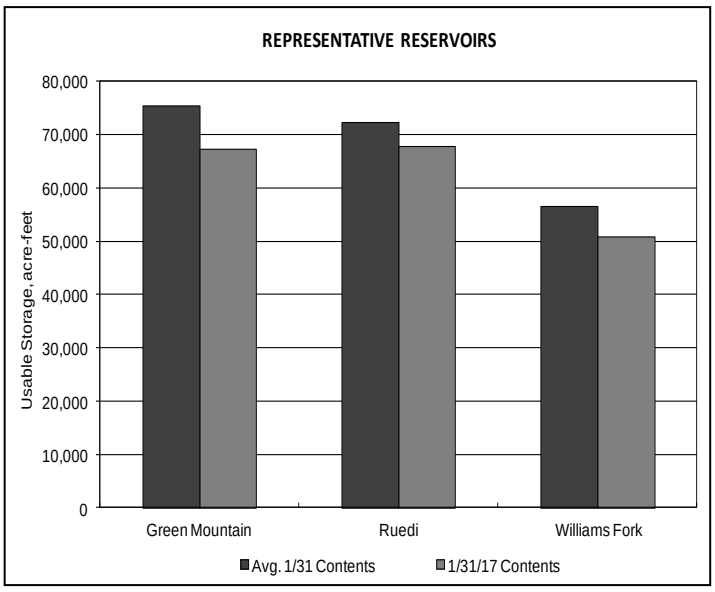
Basinwide Conditions Assessment
The SWSI value for the month was +2.5.

Outlook
Colorado River flows are running above average with tributary flows running slightly above average throughout February. As of February 13, the Upper Colorado River Basin snowpack was 144 percent of median snow water equivalent and 133 percent of average precipitation. Forecasts call for above average precipitation and average to above average temperatures for western Colorado through February.

Administrative/Management Concerns
The call on the Colorado River main stem remains the Shoshone Hydro Power right for 1,250 cfs. Accordingly, Green Mountain Reservoir is releasing to pass inflows, provide contract and HUP obligations and make C-BT replacements. Wolford Reservoir is bypassing inflows and releasing for contracts. Inflows and therefore outflows have generally been increasing in most reservoirs with the increased precipitation.

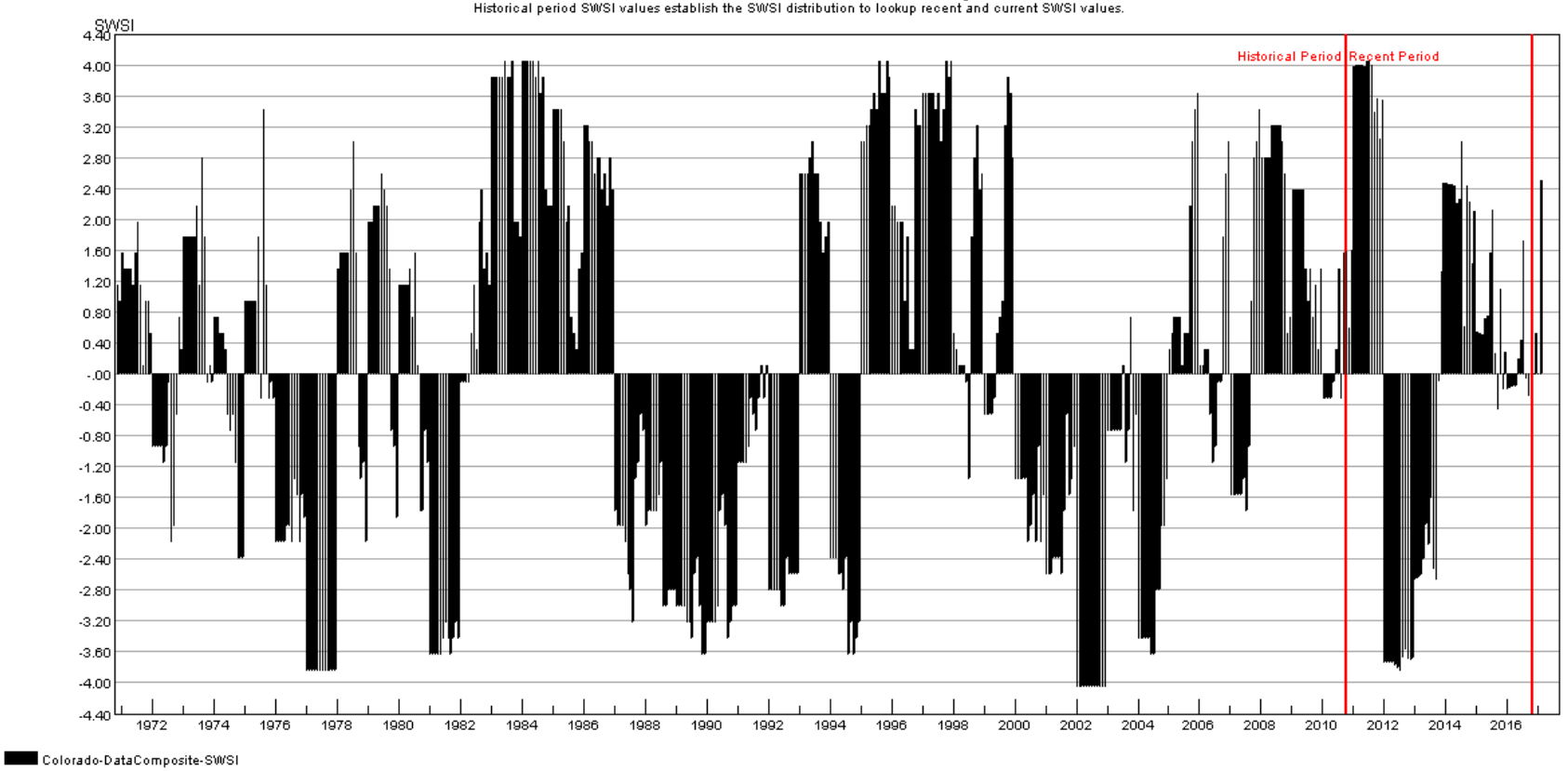
Public Use Impacts
NASA measures 'dust on snow' to help manage Colorado River basin water supplies. Trillions of gallons of water is stored in the form of snow on the mountains of Colorado and Utah that deliver water to 33 million people in seven western states. The Colorado Basin River Forecast Center is collaborating with NASA to help improve streamflow forecasts by observing the snow and 'dust on snow' from space. Fresh white snow can reflect up to 90 percent of sunlight, but with the dust on the snow, the snowpack melts at a much higher rate. Therefore, monitoring the dust can help forecast the water flow in the Colorado River Basin.





Colorado Basin SWSI History

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



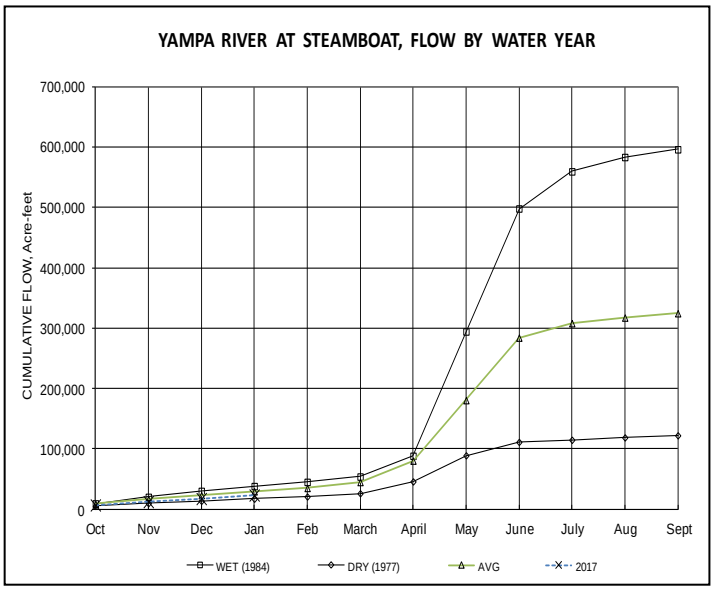
Basinwide Conditions Assessment

The SWSI value for the month was +0.6. January precipitation was well above 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 189% 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 January was 125%.

Snowpack for the combined basins as of February 1st, 2017 was at 135% of average. The snow water equivalent (SWE) as of January 31, 2017 was 137% of average for the North Platte River basin and 128% of average for the Yampa River basin and White River basin.

NRCS predicts above 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 136% of average for the North Platte River at Northgate, 119% of average for the Yampa River near Maybell, 126% of average for the Little Snake River near Lily, and 111% of average for the White River near Meeker.

Due to low temperatures and consistent snowfall, all Division 6 stream gages were either closed for the winter season or ice/snow-affected as of February 13th, 2017.



Outlook

As of January 31st Fish Creek Reservoir was storing approximately 3,198 AF, 77% of capacity. The capacity of Fish Creek Reservoir is 4,167 AF. Yamcolo Reservoir was storing 6,700 AF at the end of January 2017. The capacity of Yamcolo Reservoir is 8,700 AF. On January 31st Elkhead Creek Reservoir was storing 23,347 AF. The capacity of Elkhead Creek Reservoir is 24,778 AF. On January 31, 2017, Stagecoach Reservoir was storing 34,500 AF, 95% of capacity.

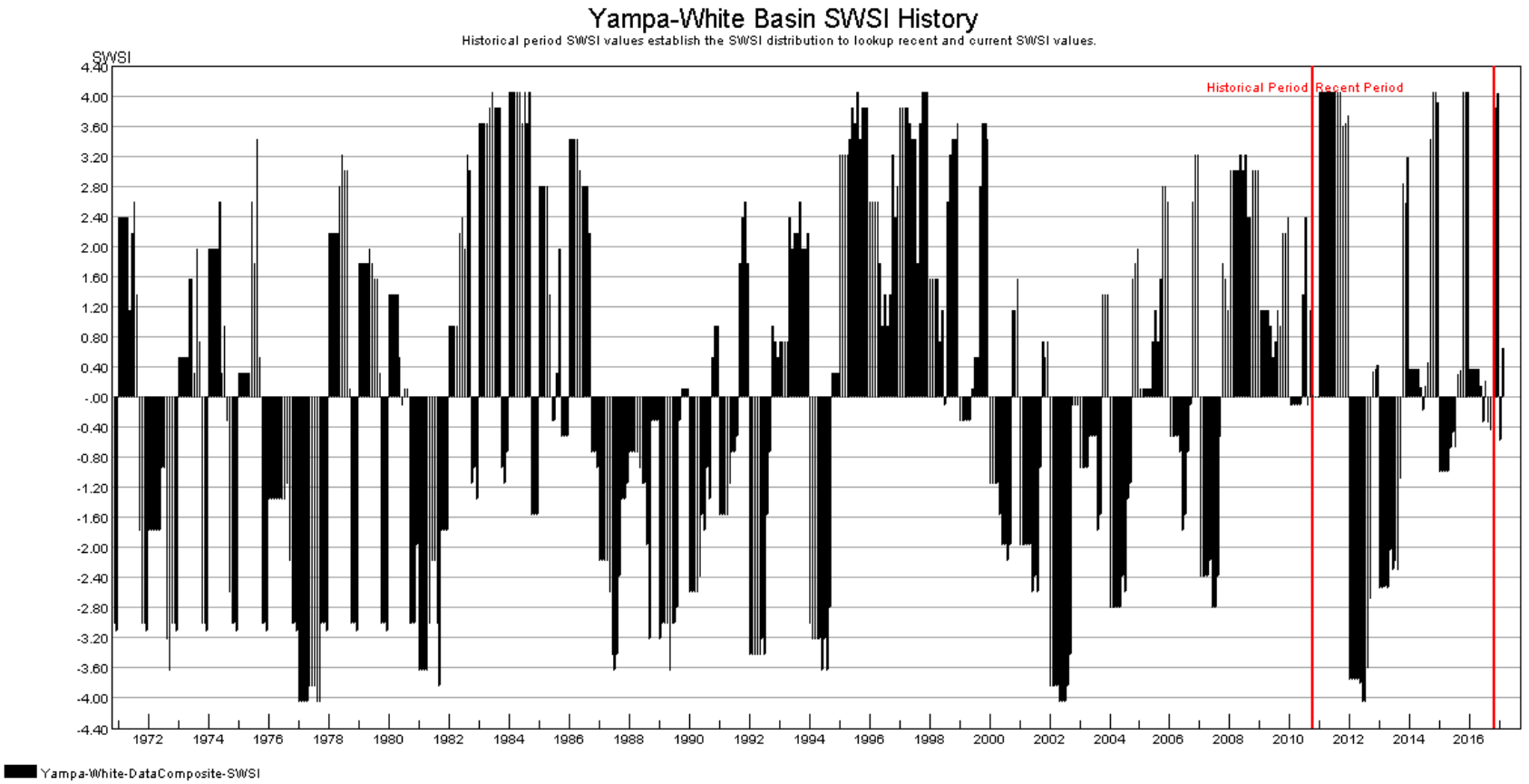
Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Yamcolo Reservoir for irrigation purposes, and Elkhead Creek Reservoir for municipal, industrial, recreational, and fish recovery releases. Stagecoach Reservoir is primarily used for recreation though a significant amount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

Public Use Impacts

January snowfall helped Steamboat Ski Resort to have very good conditions with a 64 inch base and 238 inches of snowfall since early November.

Stagecoach Reservoir is completely iced over. Ice thickness as measured by park staff varied from a low of 6 inches to 12 inches plus. Please check website for the fishing report. The park has approximately 8 miles of groomed cross country and snowshoe trails available.

Steamboat Lake has not updated lake ice conditions since last month. Please call the park for updated ice conditions on the reservoir. Fishermen around the marina are reporting bigger fish being caught (18-20 inches). Caution is advised. Roads are all closed in the park except for the Marina access.

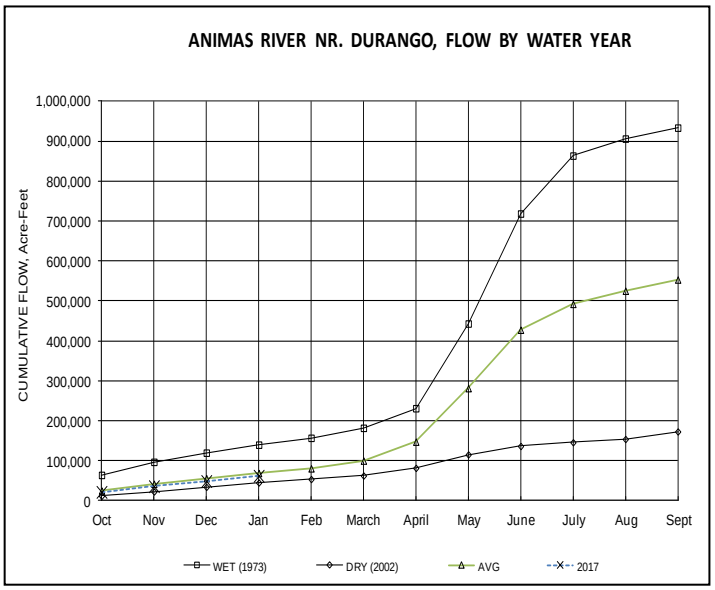

Yampa-White Basin SWSI History
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.
SWSI
Historical Period
Recent Period
4.40
4.00
3.60
3.20
2.80
2.40
2.00
1.60
1.20
0.80
0.40
-.00
-0.40
-0.80
-1.20
-1.60
-2.00
-2.40
-2.80
-3.20
-3.60
-4.00
-4.40
1972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

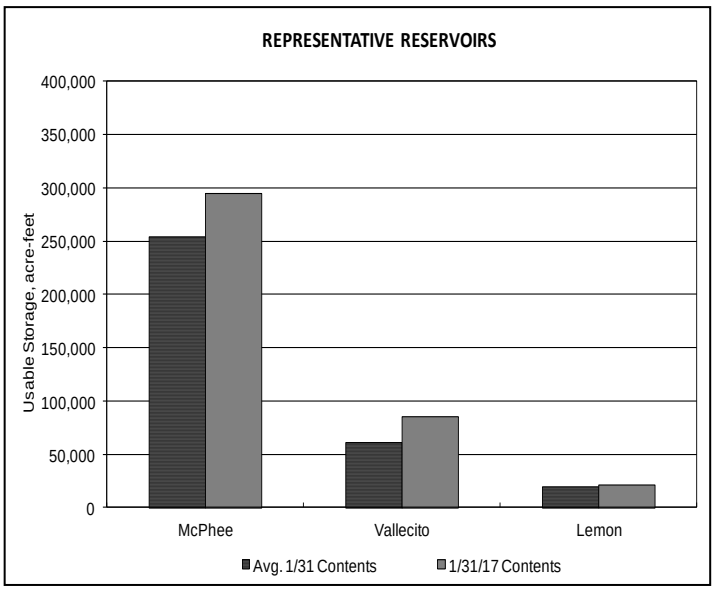
Basinwide Conditions Assessment

The SWSI value for the month was +2.4. Flow at the Animas River at Durango was estimated to average 214 cfs (105% of average). The flow at the Dolores River at Dolores was estimated to average 56 cfs (109% of average). The La Plata River at Hesperus averaged 8.0 cfs (115% of average). Precipitation in Durango was 3.86 inches for the month, 193% of the 30-year average of 2.00 inches. Precipitation was the 13th highest amount recorded in January, in Durango, out of 123 years of record. Precipitation to date in Durango, for the water year, is 10.84 inches, 160% of the 30-year average of 6.77 inches. End of last month precipitation to date, for the water year was 138% of average. The average high and low temperatures for the month of January in Durango were 39° and 21°. In comparison, the 30-year average high and low for the month is 40° and 14°. At the end of the month Vallecito Reservoir contained 85,218 acre-feet compared to its average content of 56,145 acre-feet (152% of average). McPhee Reservoir was up to 294,514 acre-feet compared to its average content of 258,953 (114% of average), while Lemon Reservoir was up to 20,960 acre-feet as compared to its average content of 19,791 acre-feet (106% of average).

Outlook

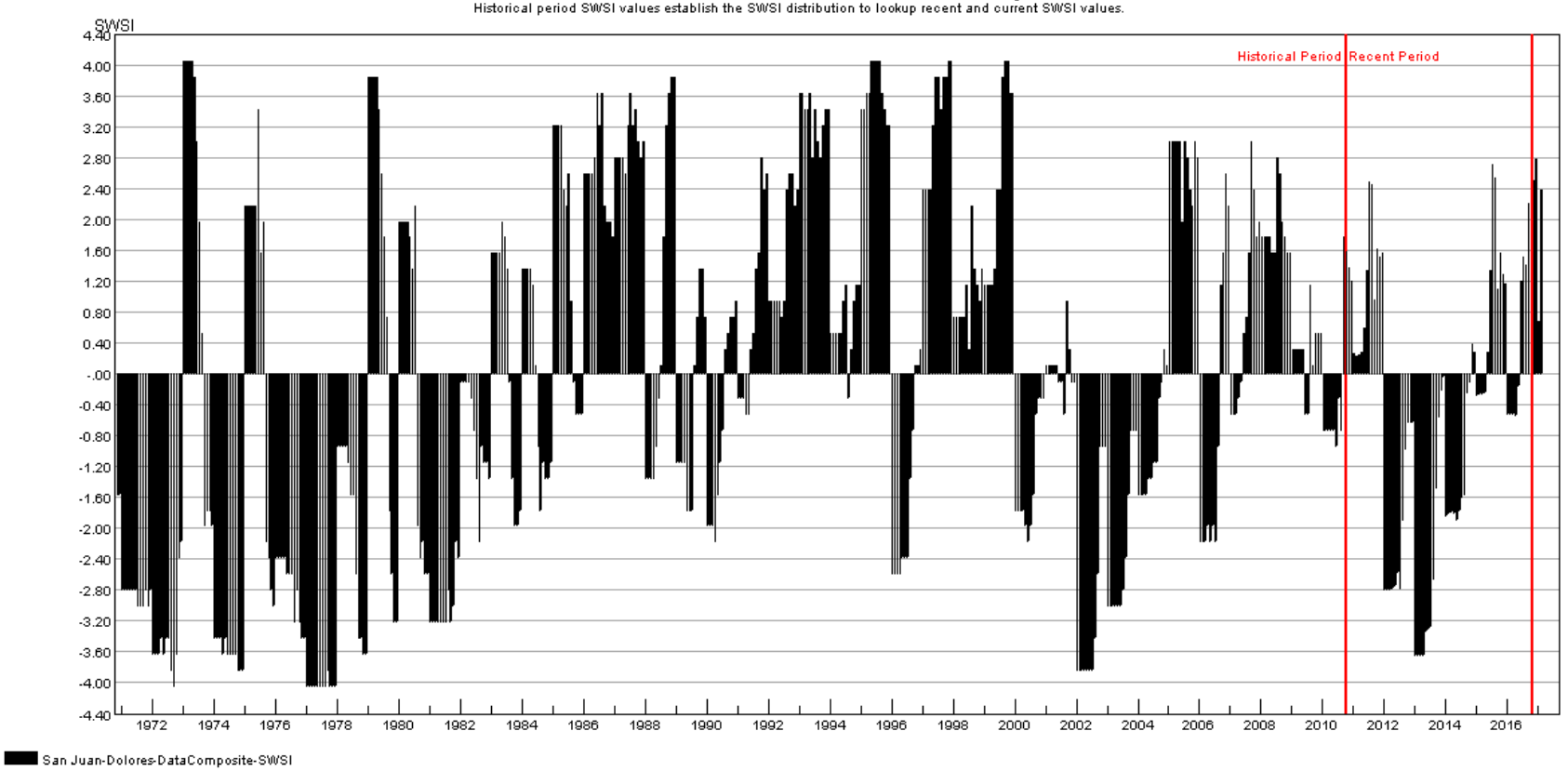
Precipitation (3.86 inches) was well above average for January in Durango. There were only 13 years out of 123 years of record where there was more precipitation than this year. Flows in the rivers within the basin climbed to near average. There were 34 out of 107 years of record where the total flow past the Animas River at Durango stream gauge was more than this year. There were 35 out of 106 years of record where the total flow past the Dolores stream gauge was more than this year and 29 out of 100 years of record where the total flow past the La Plata River at Hesperus gauge was more than this year.





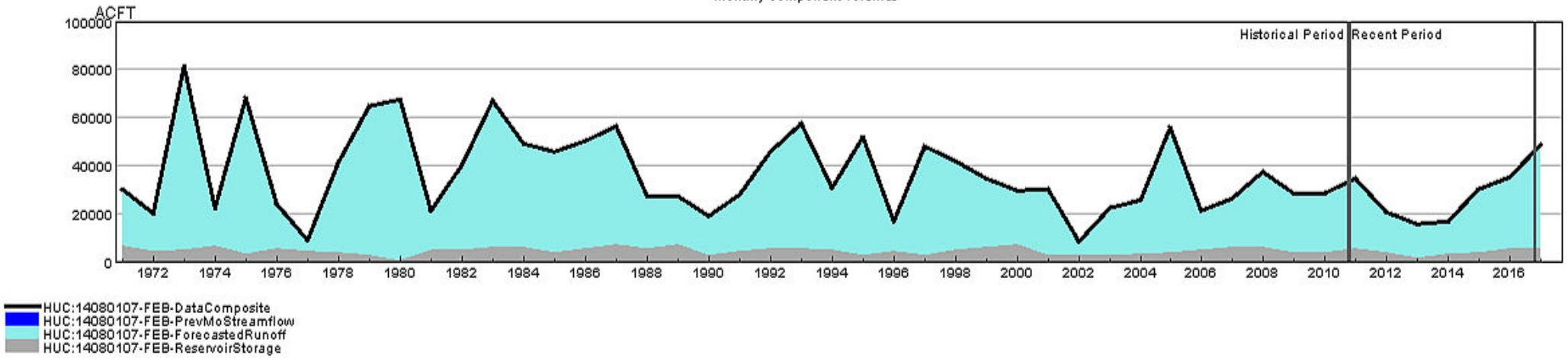
San Juan-Dolores Basin SWSI History

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



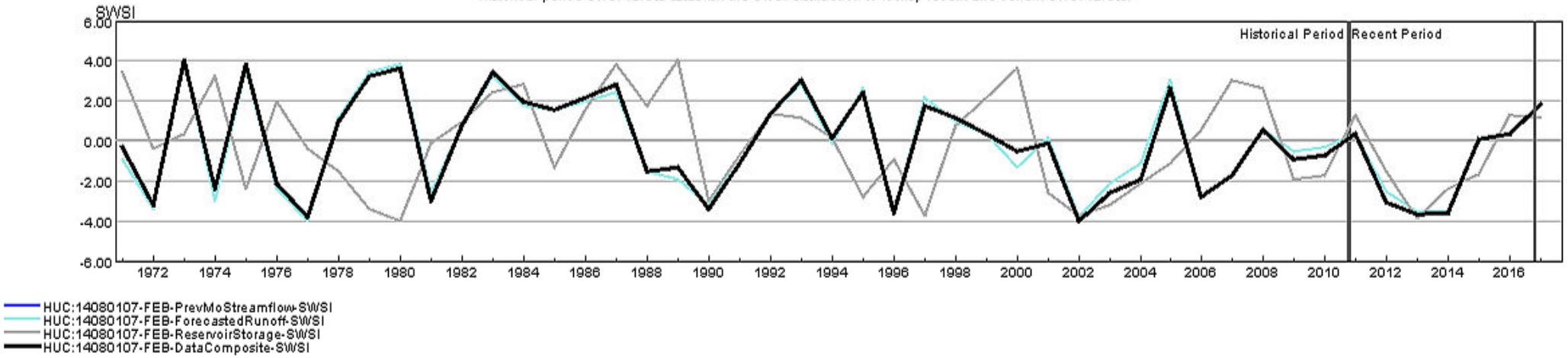
HUC 14080107 (Mancos) Surface Water Supply - FEB

Monthly component volumes



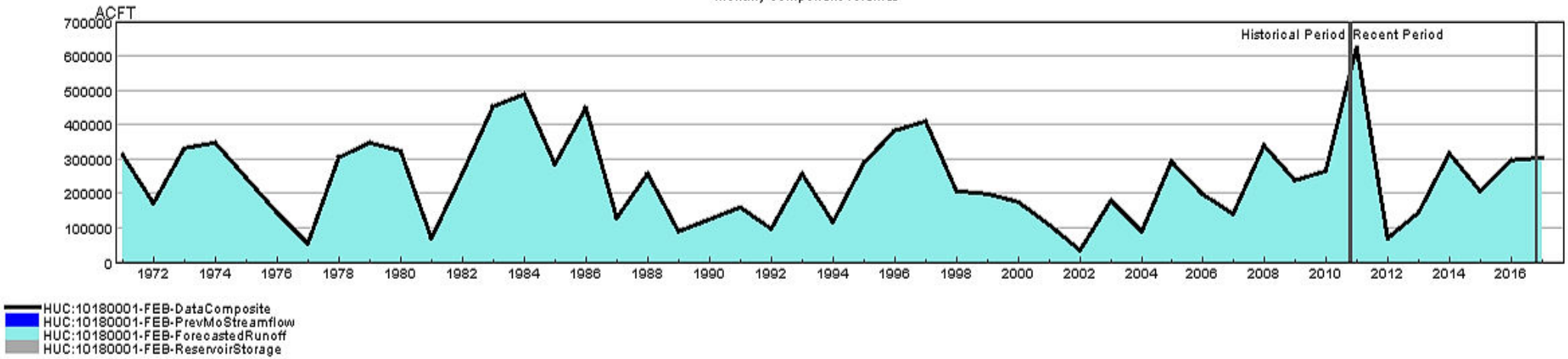
HUC 14080107 (Mancos) SWSI Values - FEB

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



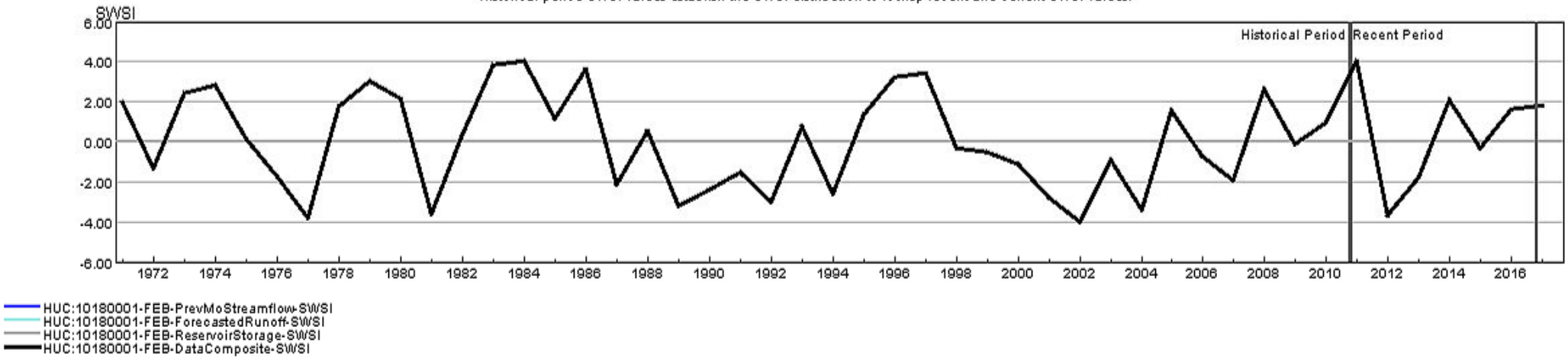
HUC 10180001 (North Platte Headwaters) Surface Water Supply - FEB

Monthly component volumes



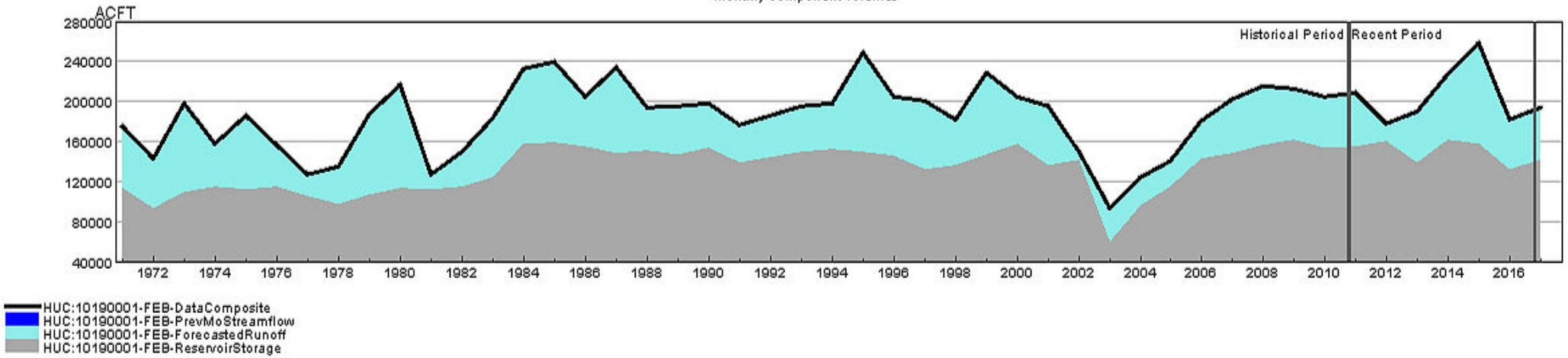
HUC 10180001 (North Platte Headwaters) SWSI Values - FEB

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



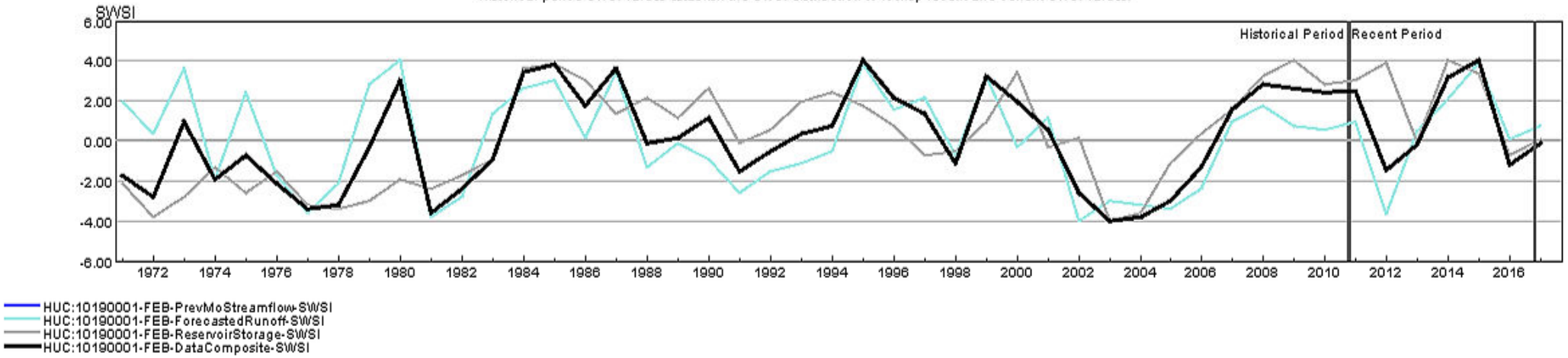
HUC 10190001 (South Platte Headwater) Surface Water Supply - FEB

Monthly component volumes



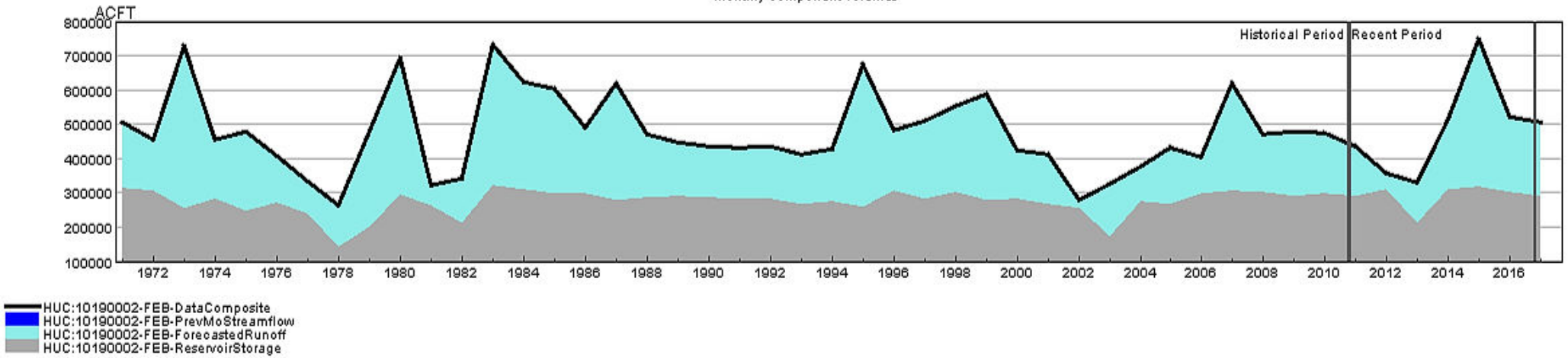
HUC 10190001 (South Platte Headwater) SWSI Values - FEB

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



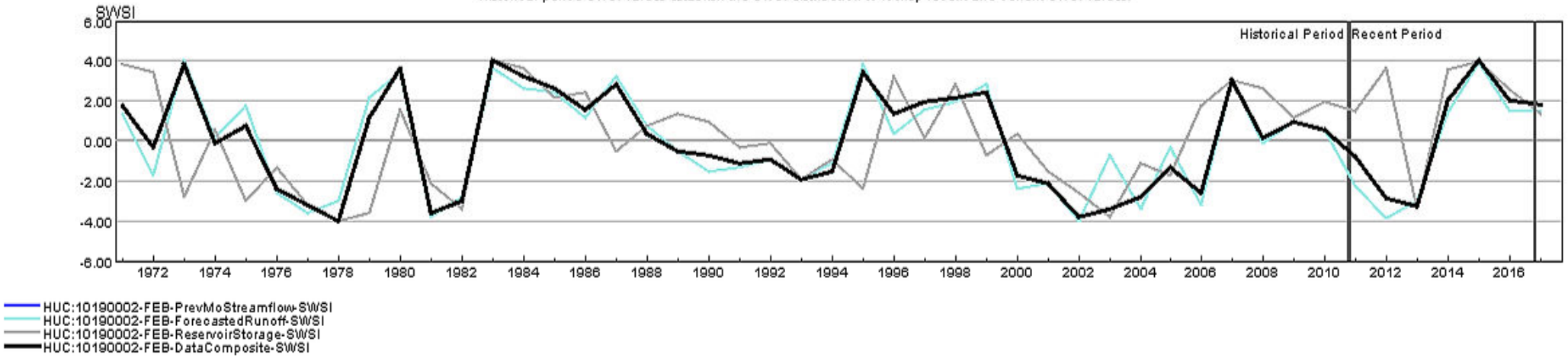
HUC 10190002 (Upper South Platte) Surface Water Supply - FEB

Monthly component volumes



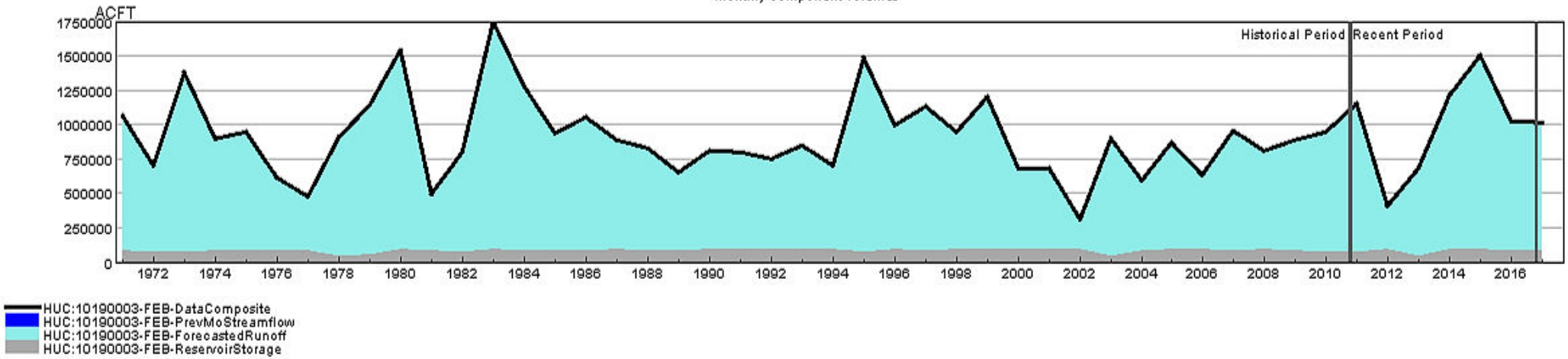
HUC 10190002 (Upper South Platte) SWSI Values - FEB

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



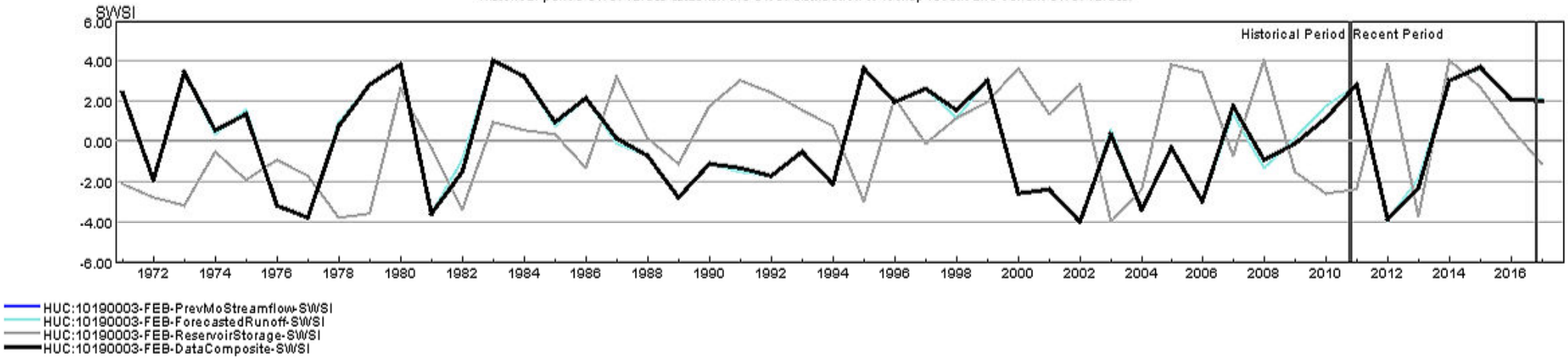
HUC 10190003 (Middle South Platte-Cherry Creek) Surface Water Supply - FEB

Monthly component volumes



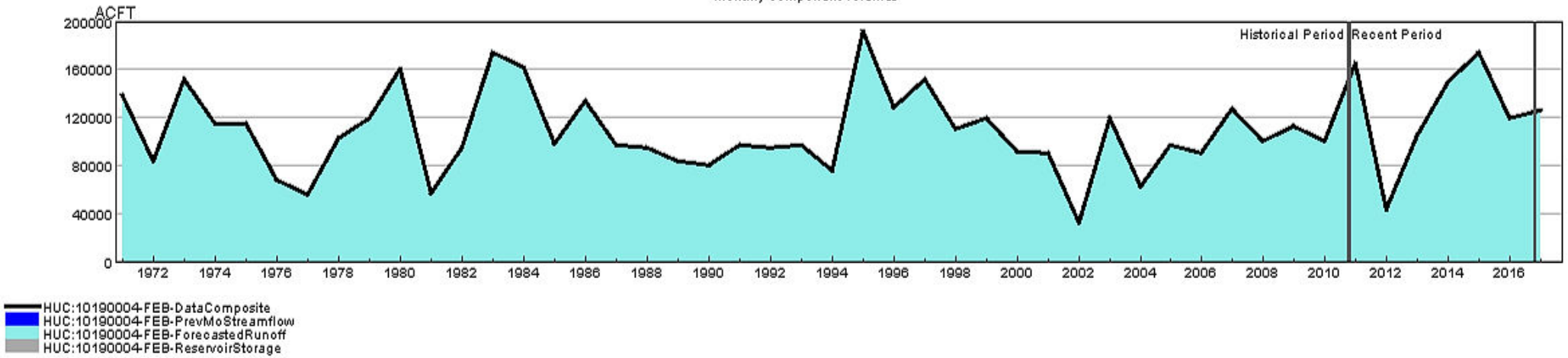
HUC 10190003 (Middle South Platte-Cherry Creek) SWSI Values - FEB

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



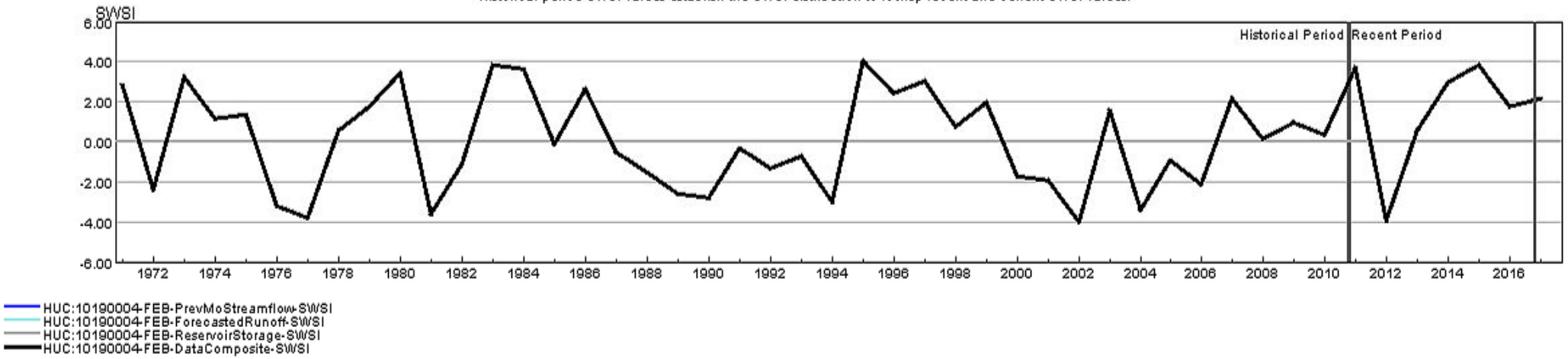
HUC 10190004 (Clear) Surface Water Supply - FEB

Monthly component volumes



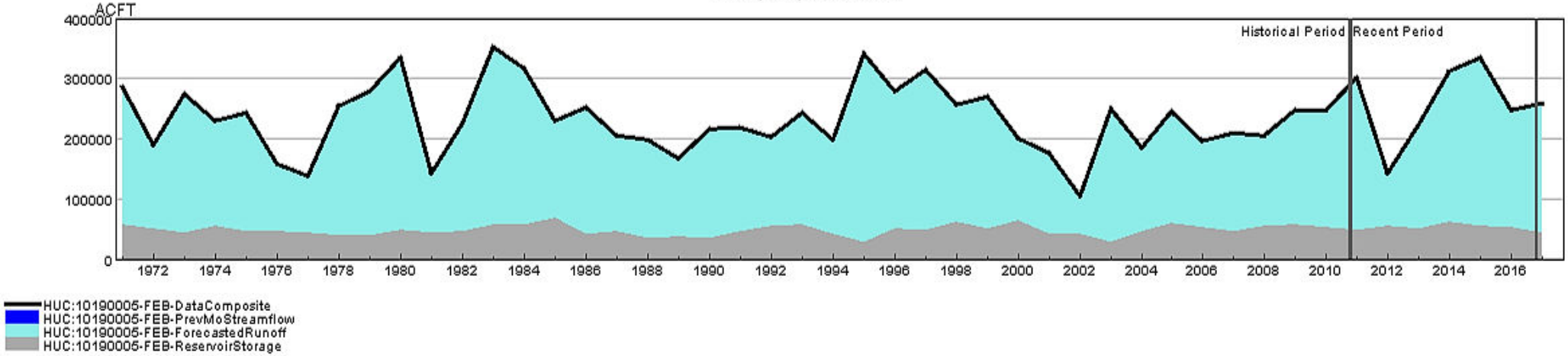
HUC 10190004 (Clear) SWSI Values - FEB

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



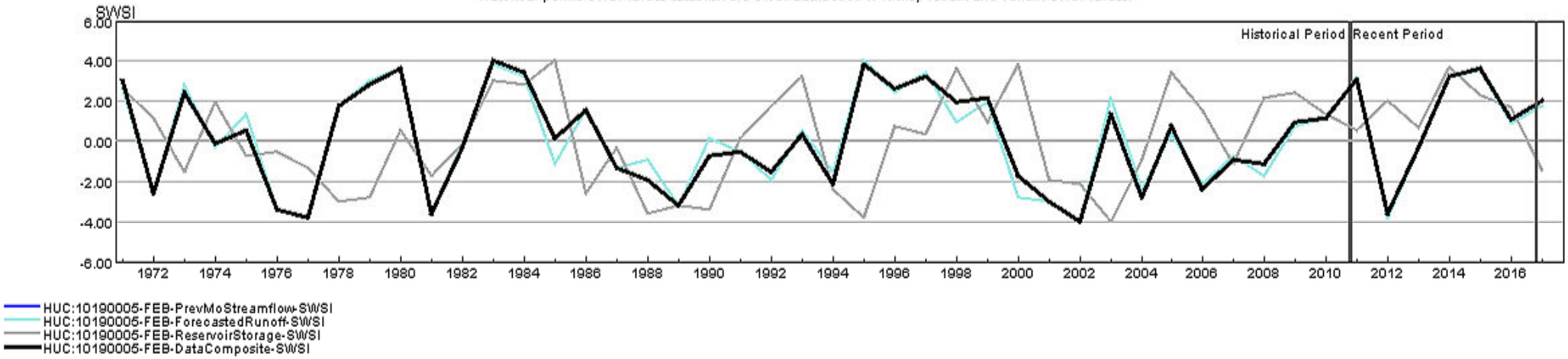
HUC 10190005 (St. Vrain) Surface Water Supply - FEB

Monthly component volumes



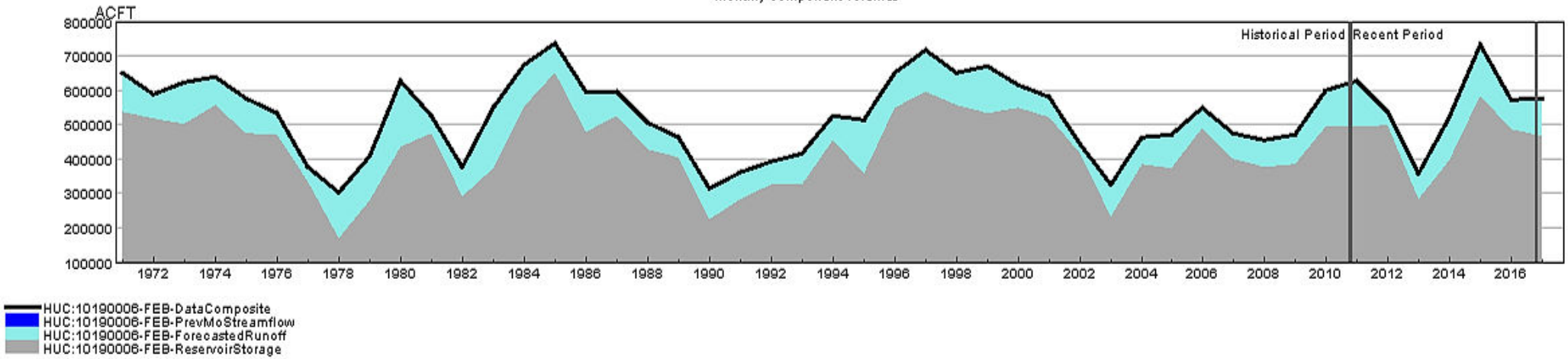
HUC 10190005 (St. Vrain) SWSI Values - FEB

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



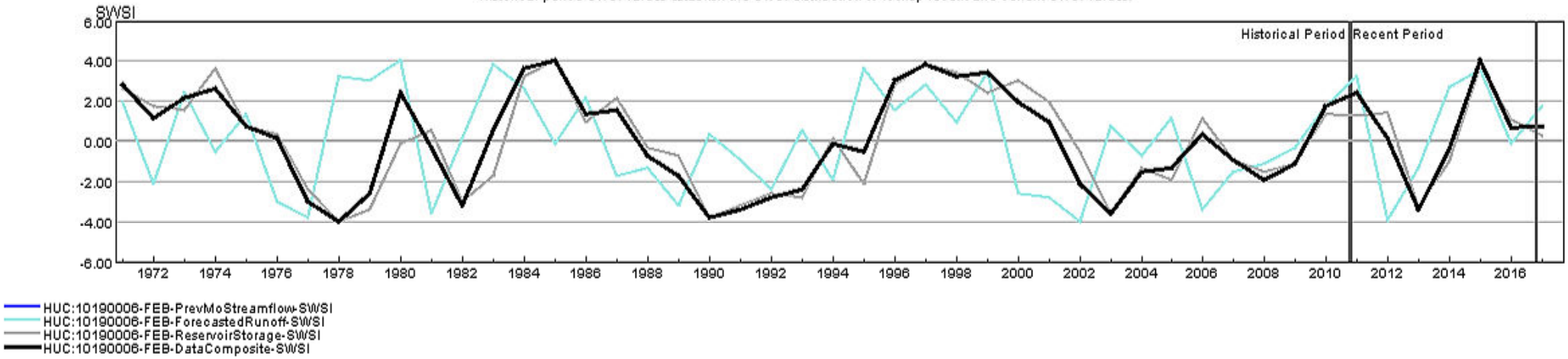
HUC 10190006 (Big Thompson) Surface Water Supply - FEB

Monthly component volumes



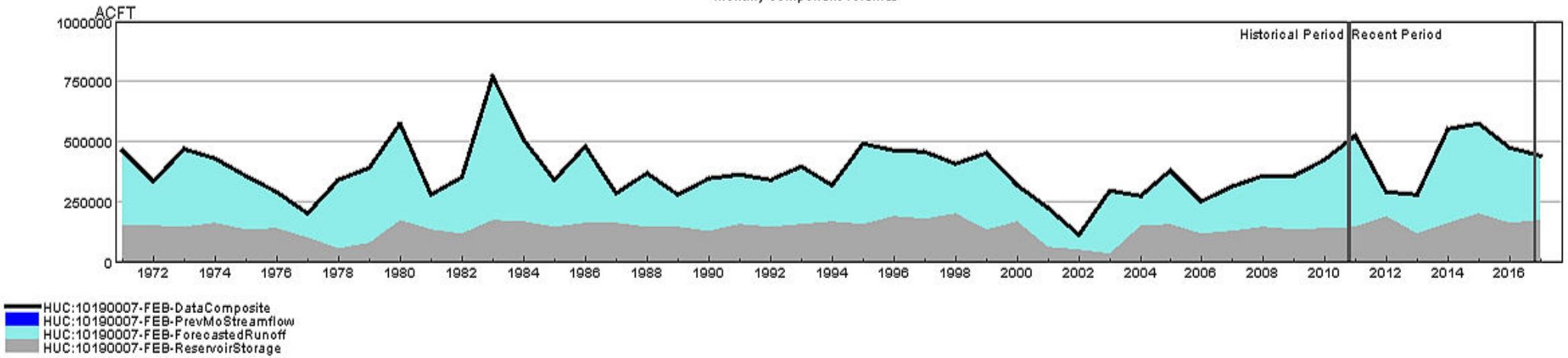
HUC 10190006 (Big Thompson) SWSI Values - FEB

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



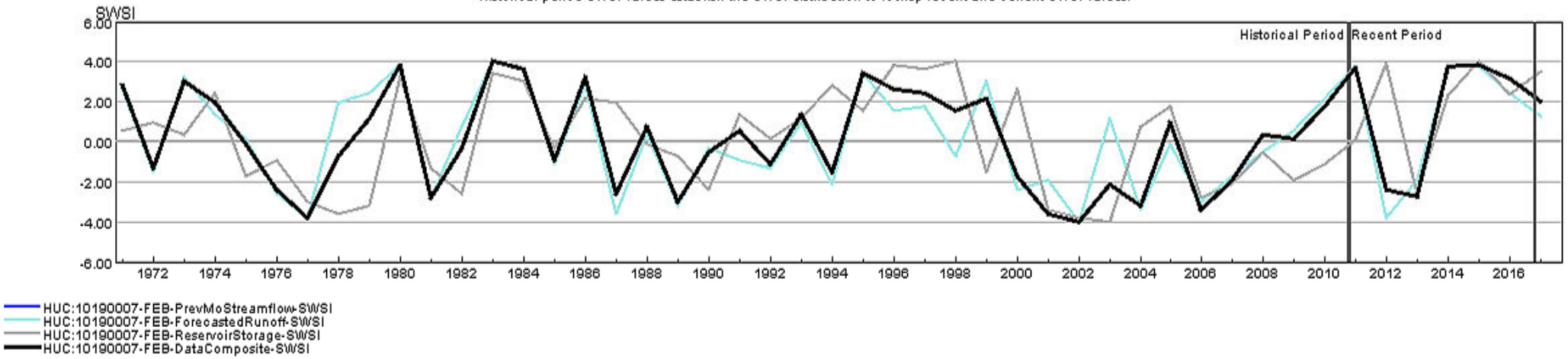
HUC 10190007 (Cache La Poudre) Surface Water Supply - FEB

Monthly component volumes



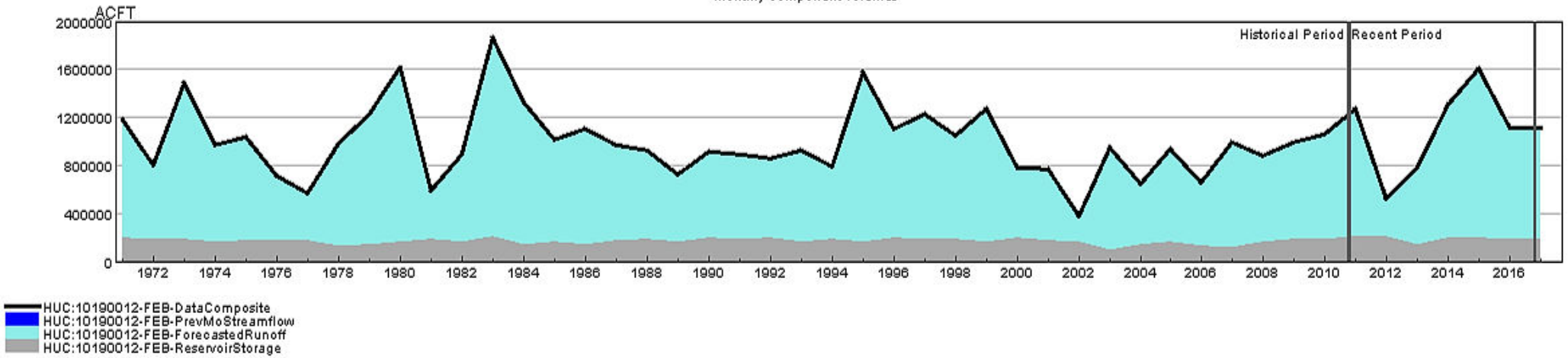
HUC 10190007 (Cache La Poudre) SWSI Values - FEB

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



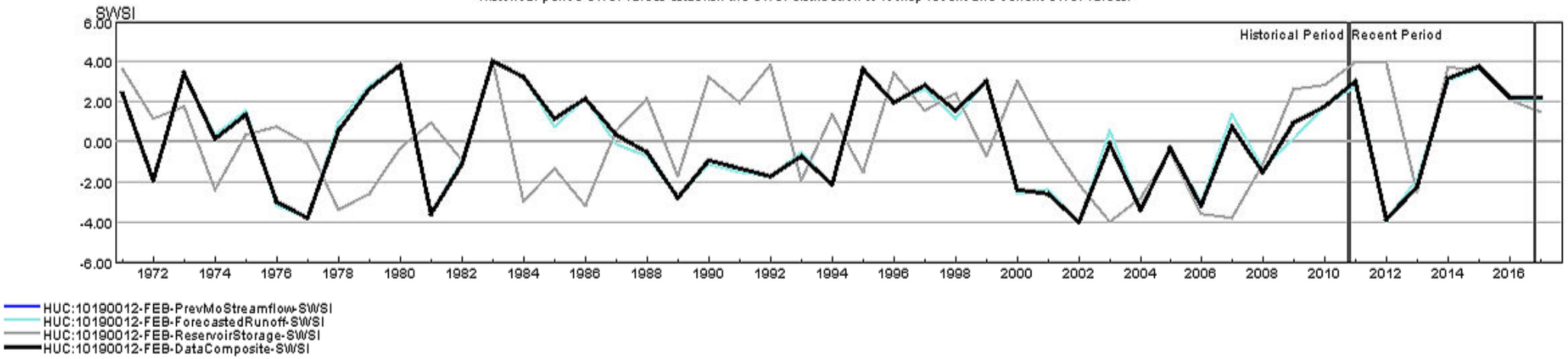
HUC 10190012 (Middle South Platte-Sterling) Surface Water Supply - FEB

Monthly component volumes



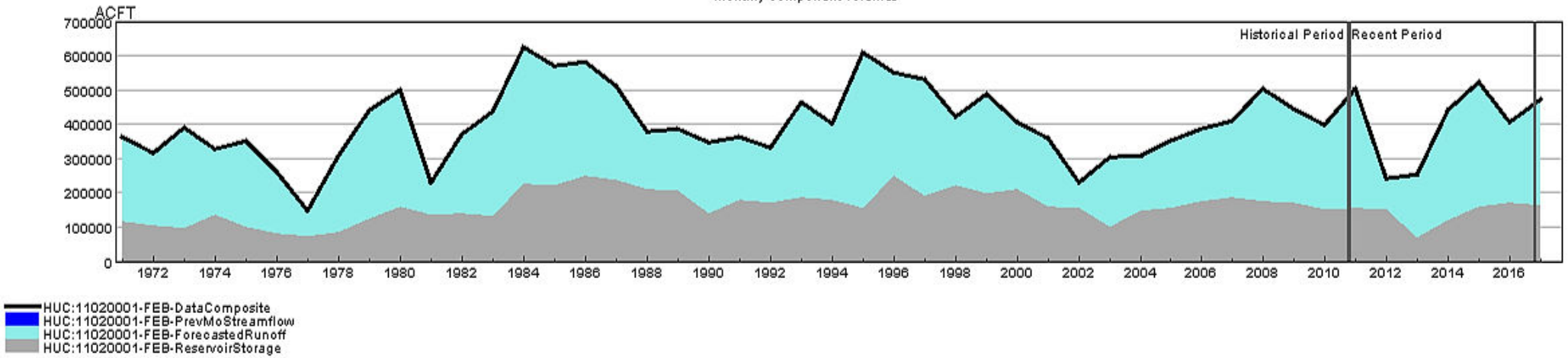
HUC 10190012 (Middle South Platte-Sterling) SWSI Values - FEB

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



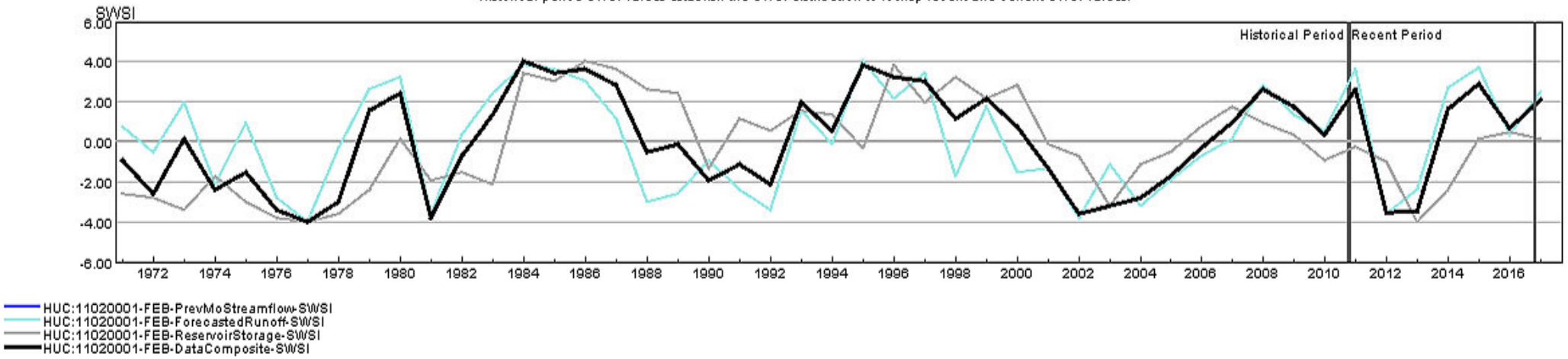
HUC 11020001 (Arkansas Headwaters) Surface Water Supply - FEB

Monthly component volumes



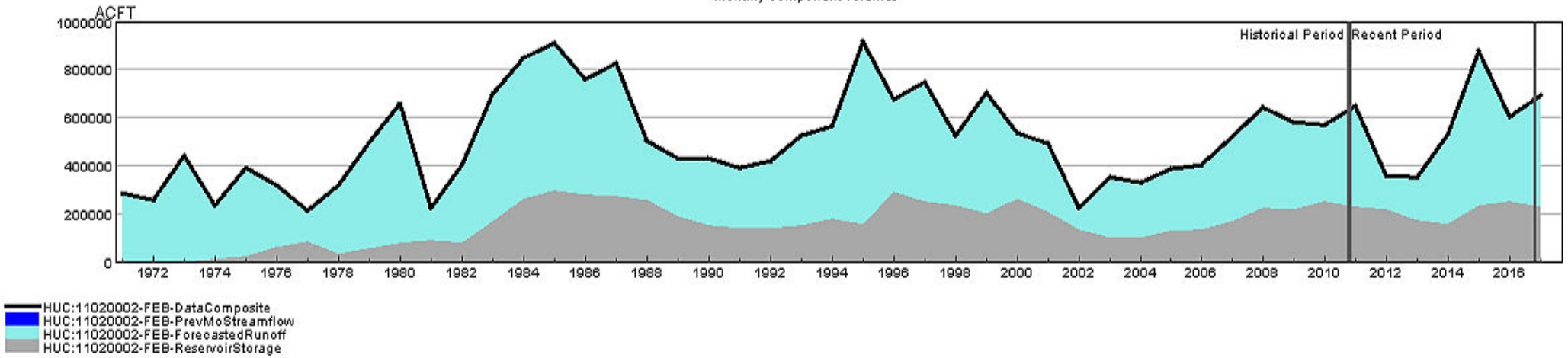
HUC 11020001 (Arkansas Headwaters) SWSI Values - FEB

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



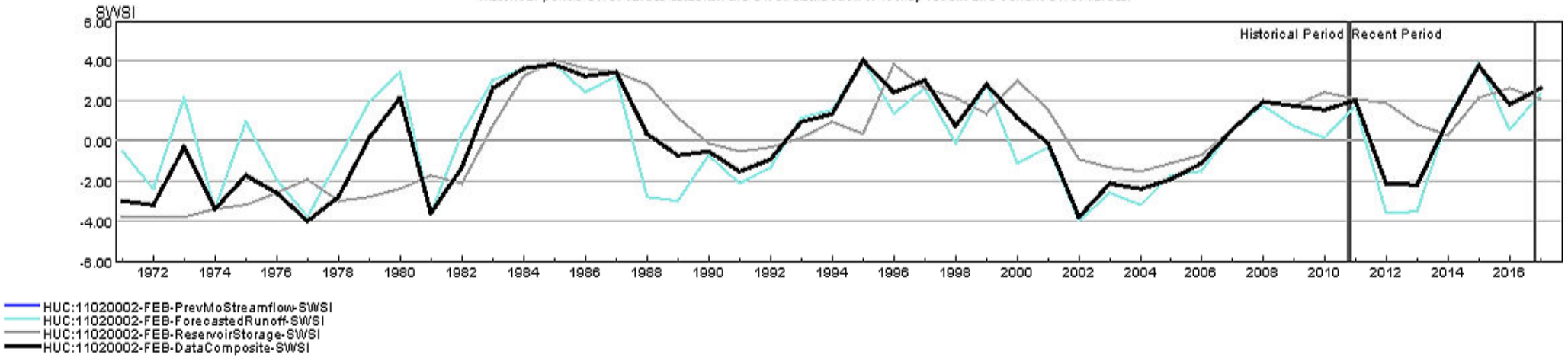
HUC 11020002 (Upper Arkansas) Surface Water Supply - FEB

Monthly component volumes



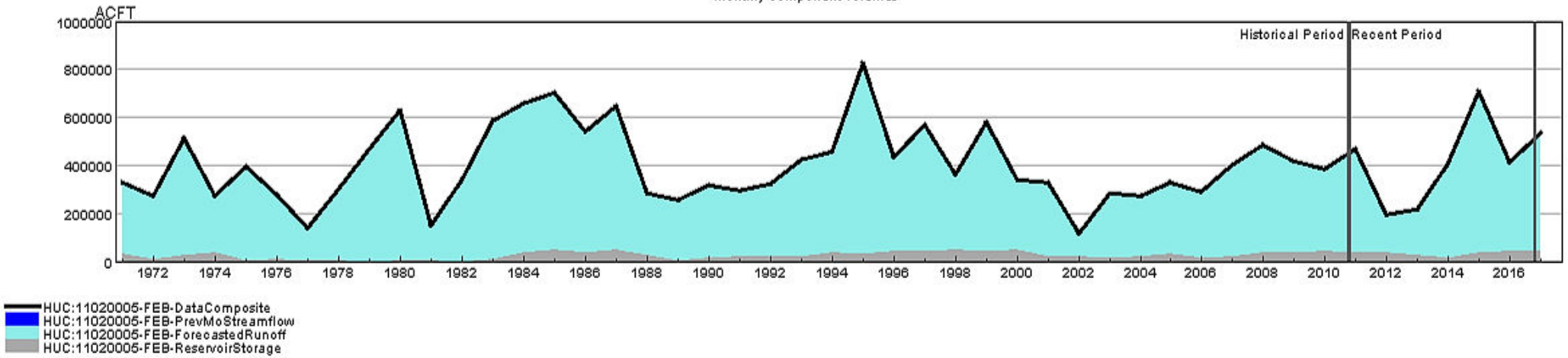
HUC 11020002 (Upper Arkansas) SWSI Values - FEB

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



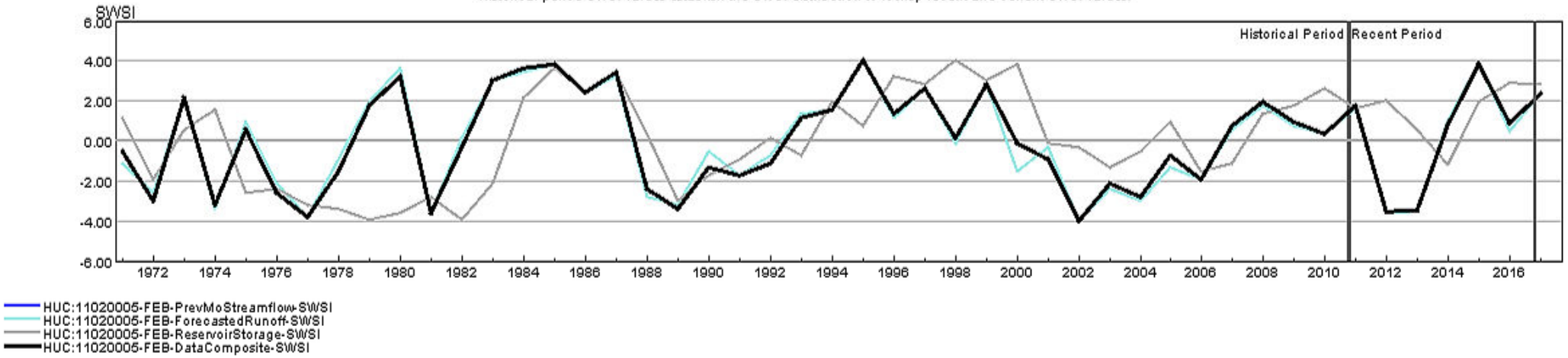
HUC 11020005 (Upper Arkansas-Lake Meredith) Surface Water Supply - FEB

Monthly component volumes



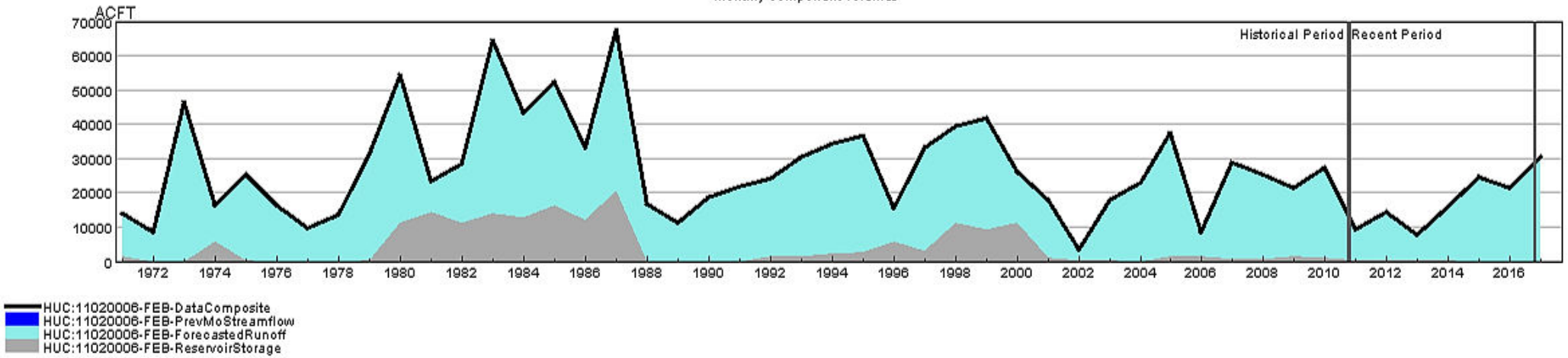
HUC 11020005 (Upper Arkansas-Lake Meredith) SWSI Values - FEB

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



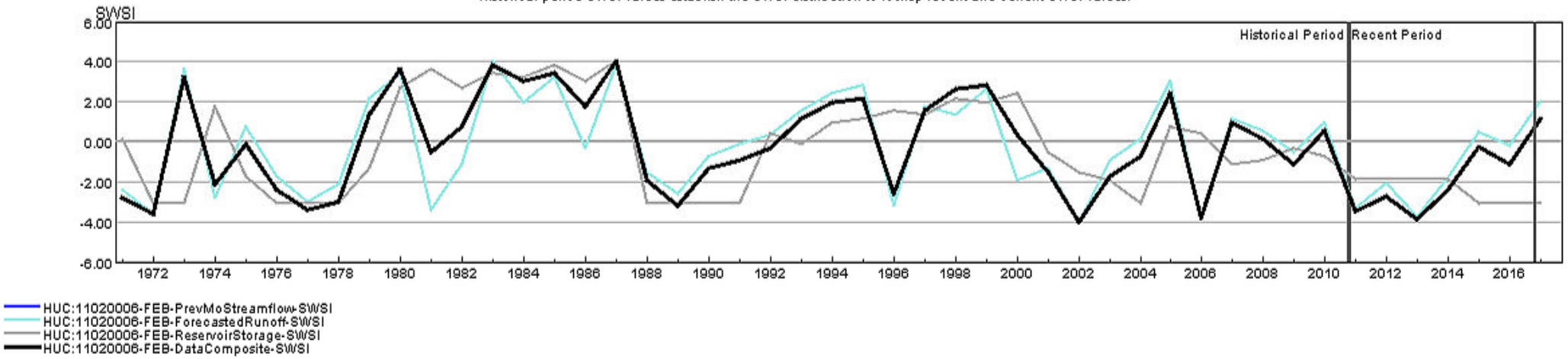
HUC 11020006 (Huerfano) Surface Water Supply - FEB

Monthly component volumes



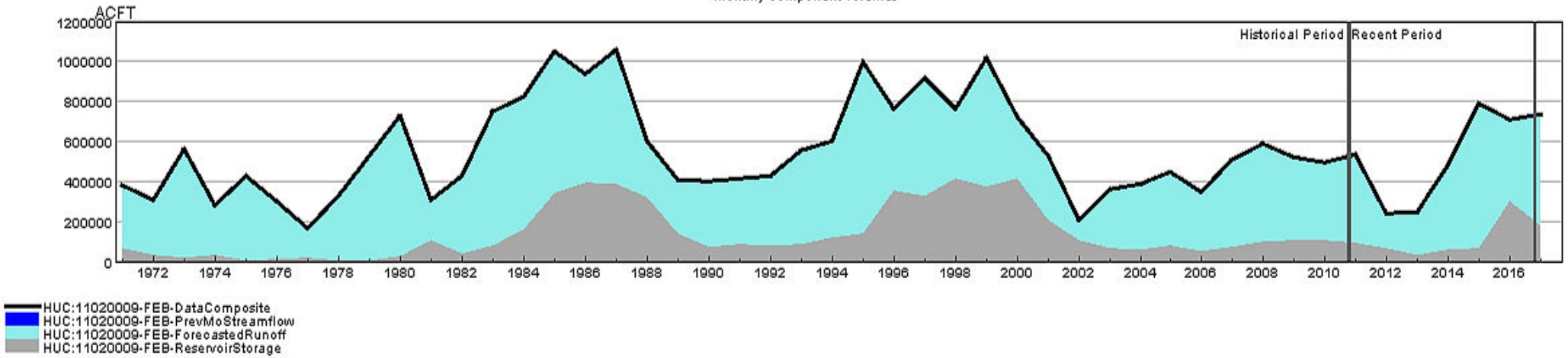
HUC 11020006 (Huerfano) SWSI Values - FEB

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



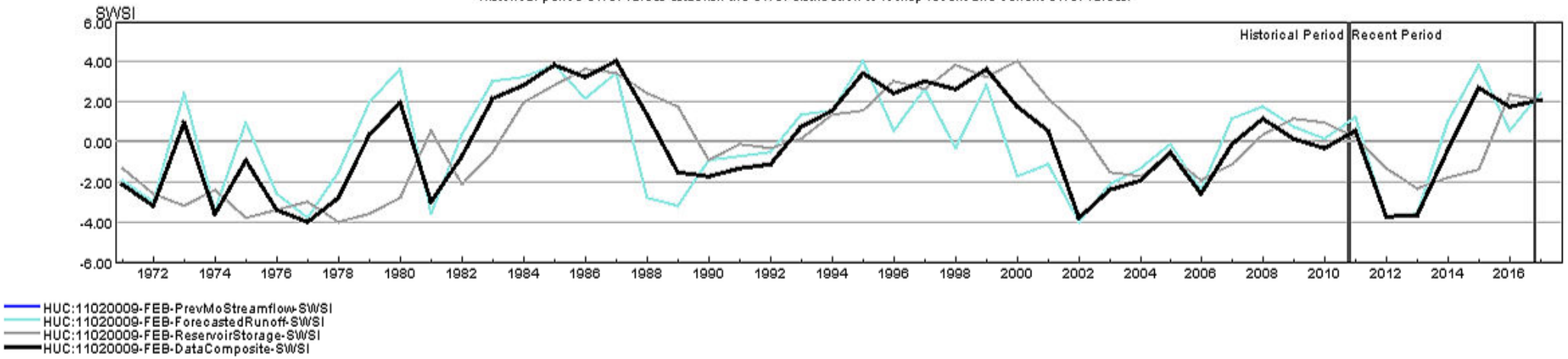
HUC 11020009 (Upper Arkansas-John Martin Reservoir) Surface Water Supply - FEB

Monthly component volumes



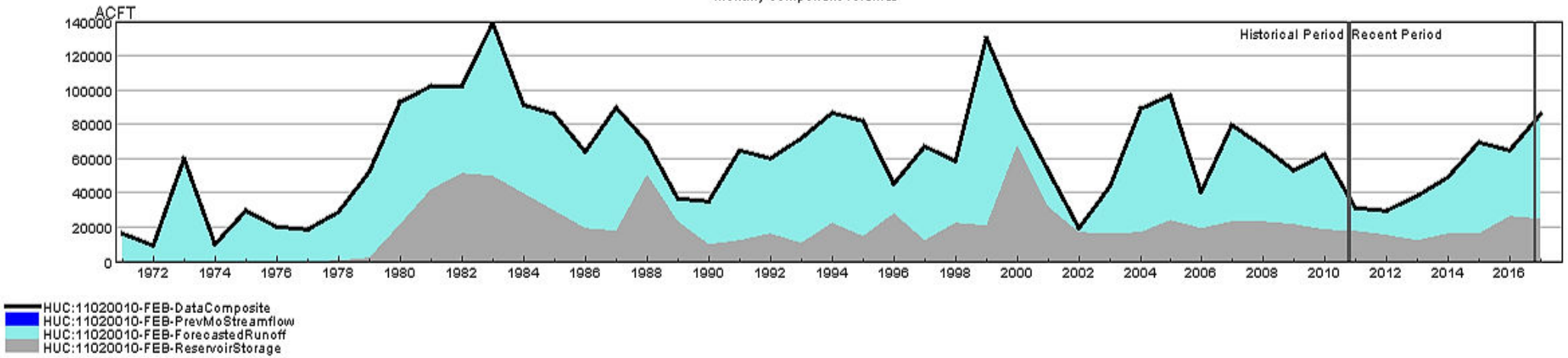
HUC 11020009 (Upper Arkansas-John Martin Reservoir) SWSI Values - FEB

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



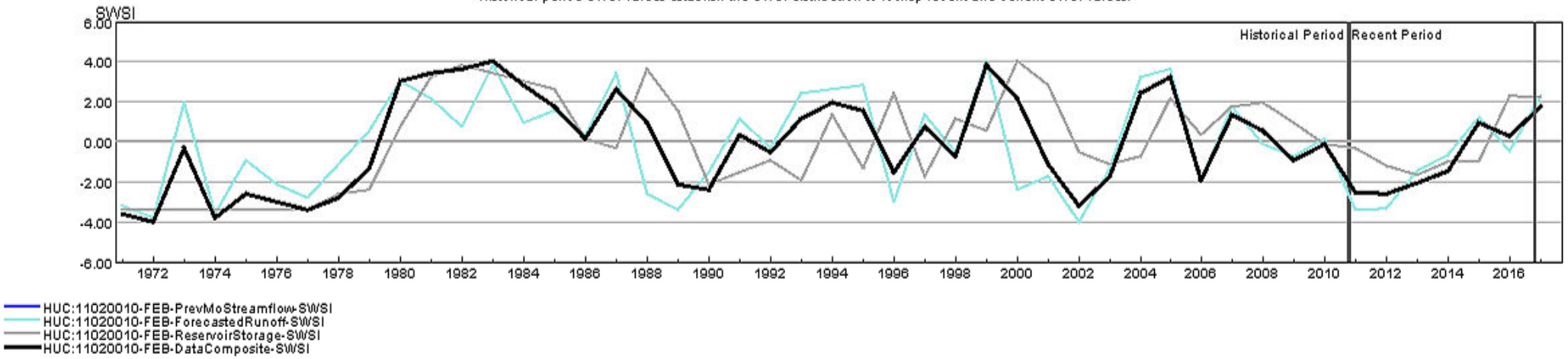
HUC 11020010 (Purgatoire) Surface Water Supply - FEB

Monthly component volumes



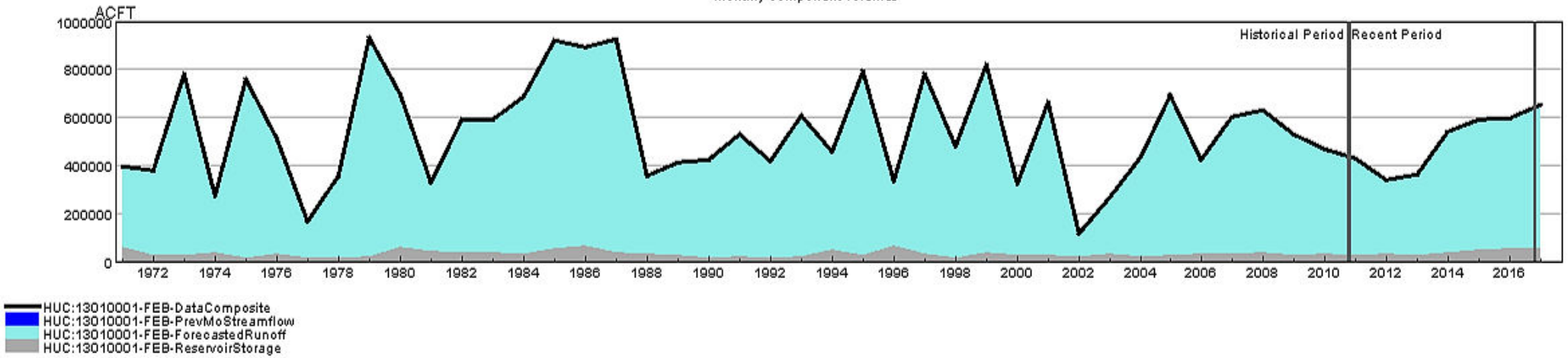
HUC 11020010 (Purgatoire) SWSI Values - FEB

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



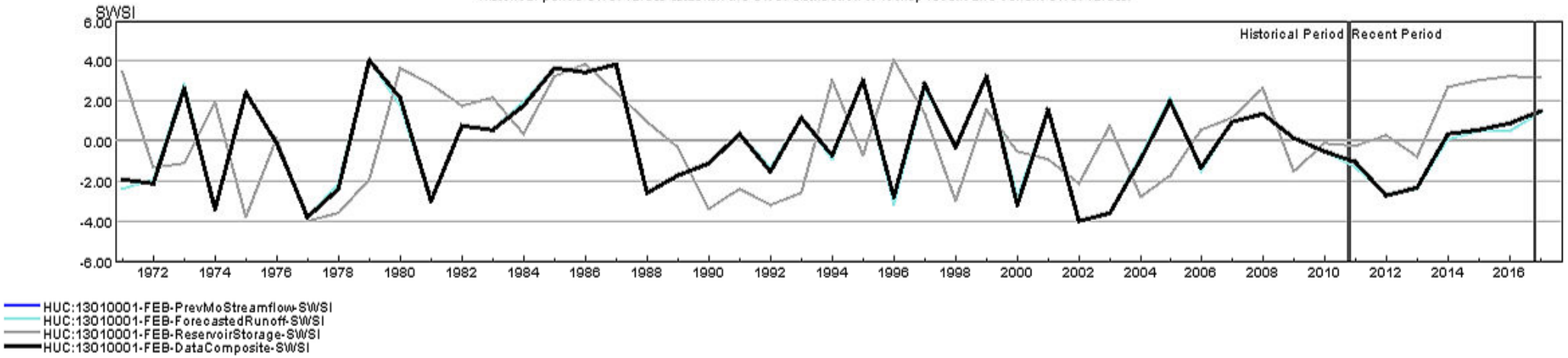
HUC 13010001 (Rio Grande Headwaters) Surface Water Supply - FEB

Monthly component volumes



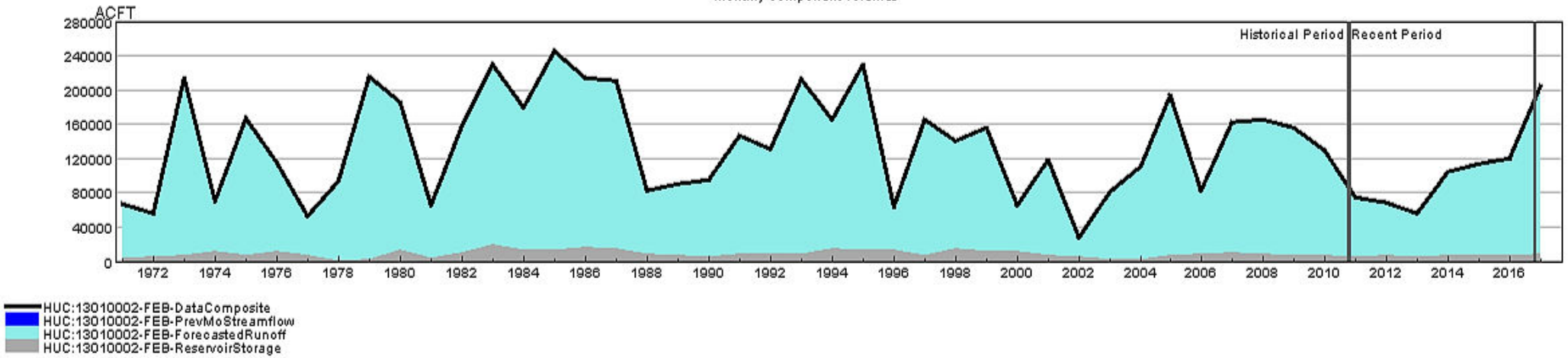
HUC 13010001 (Rio Grande Headwaters) SWSI Values - FEB

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



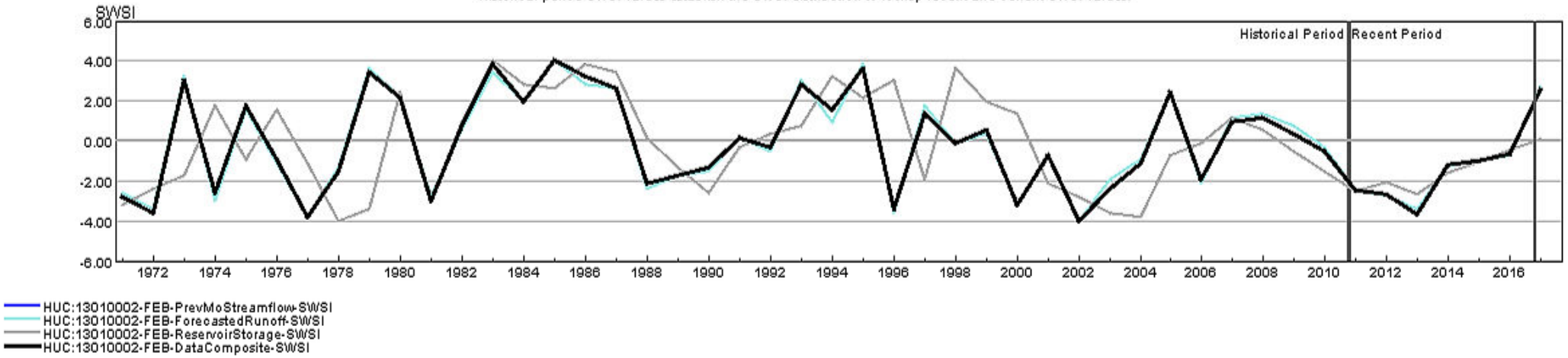
HUC 13010002 (Alamosa-Trinchera) Surface Water Supply - FEB

Monthly component volumes



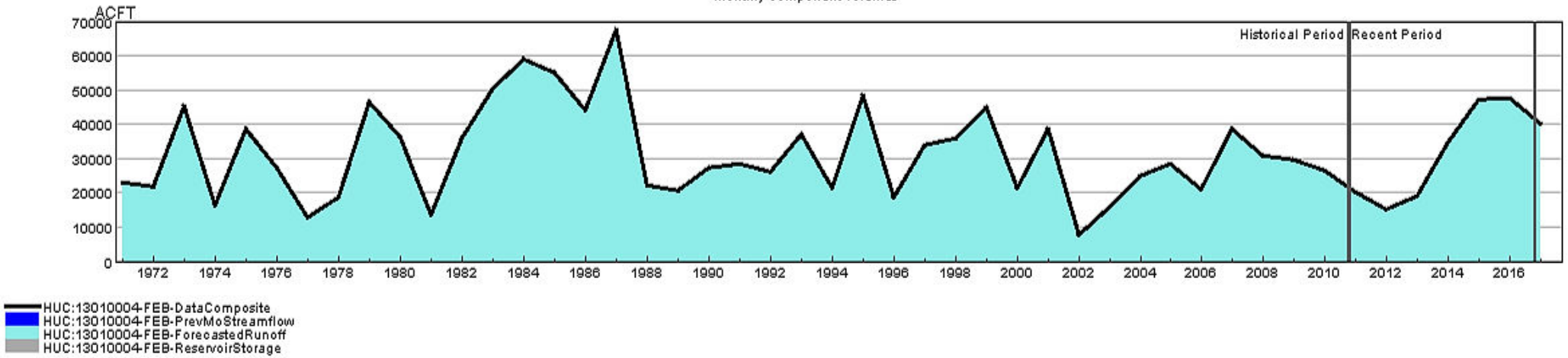
HUC 13010002 (Alamosa-Trinchera) SWSI Values - FEB

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



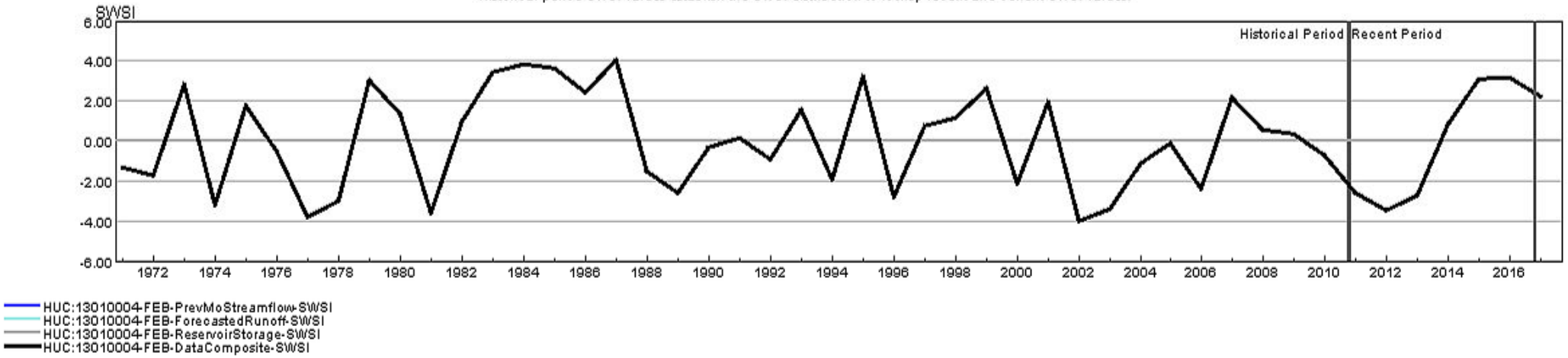
HUC 13010004 (Saguache) Surface Water Supply - FEB

Monthly component volumes



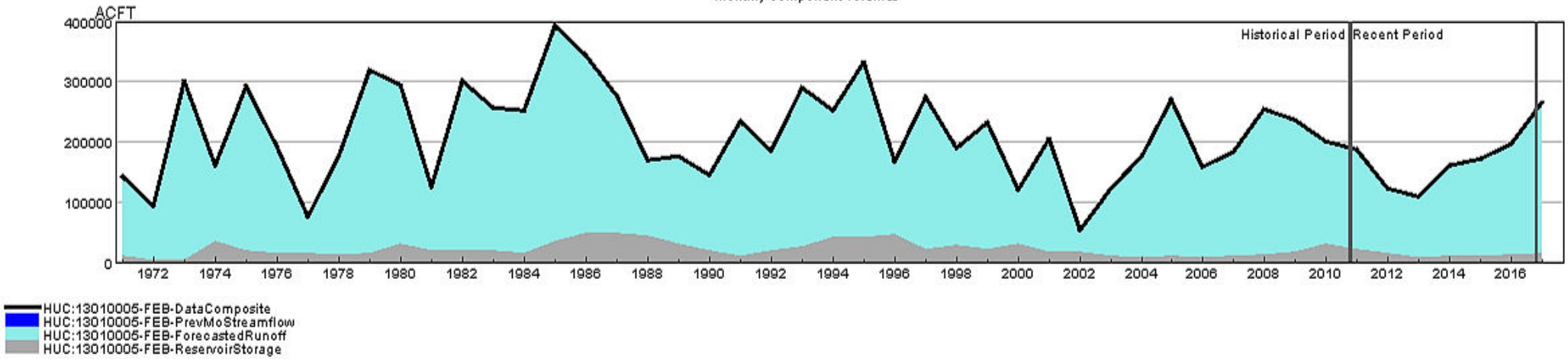
HUC 13010004 (Saguache) SWSI Values - FEB

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



HUC 13010005 (Conejos) Surface Water Supply - FEB

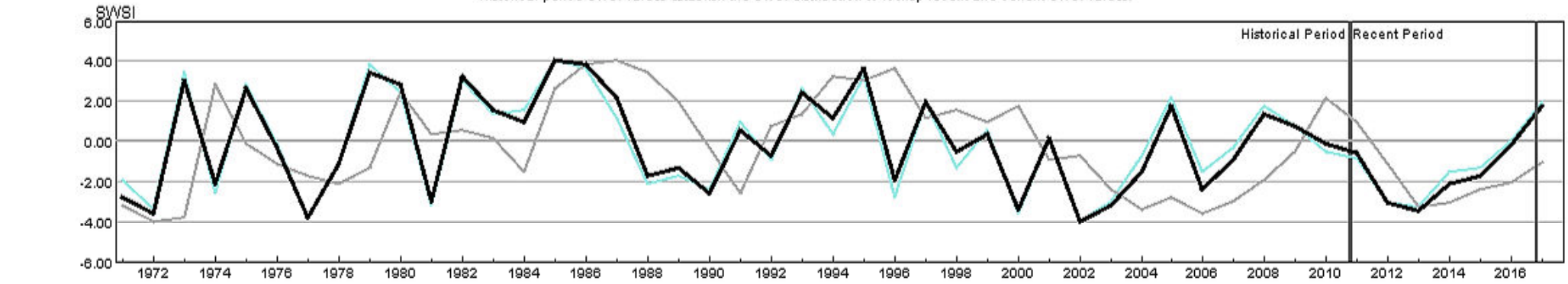
Monthly component volumes



HUC:13010005-FEB-DataComposite
HUC:13010005-FEB-PrevMoStreamflow
HUC:13010005-FEB-ForecastedRunoff
HUC:13010005-FEB-ReservoirStorage

HUC 13010005 (Conejos) SWSI Values - FEB

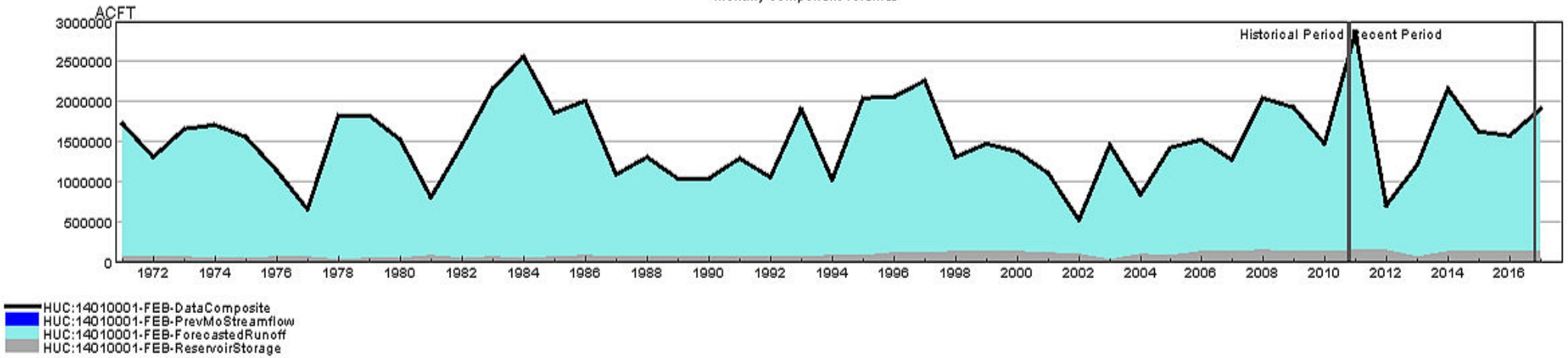
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



HUC:13010005-FEB-PrevMoStreamflow-SWSI
HUC:13010005-FEB-ForecastedRunoff-SWSI
HUC:13010005-FEB-ReservoirStorage-SWSI
HUC:13010005-FEB-DataComposite-SWSI

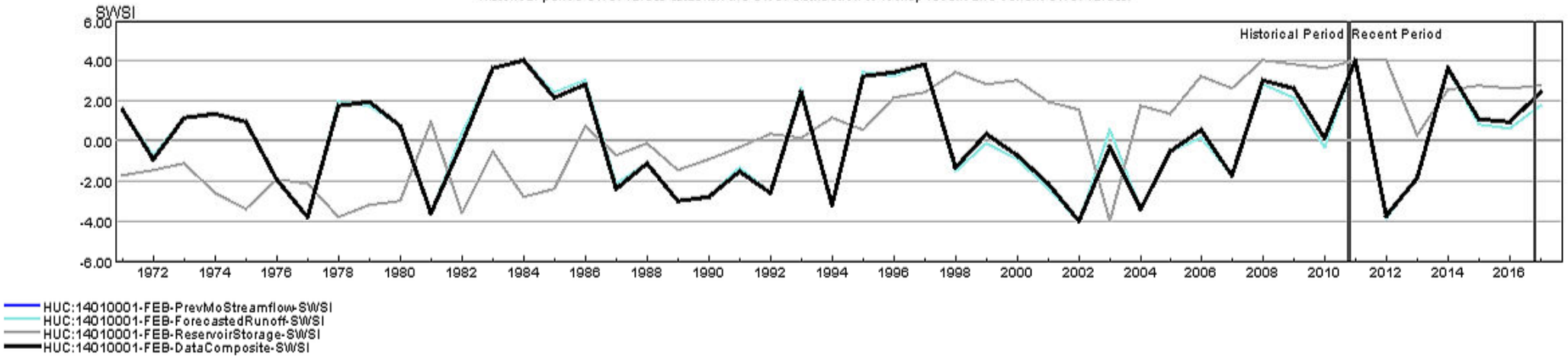
HUC 14010001 (Colorado Headwaters) Surface Water Supply - FEB

Monthly component volumes



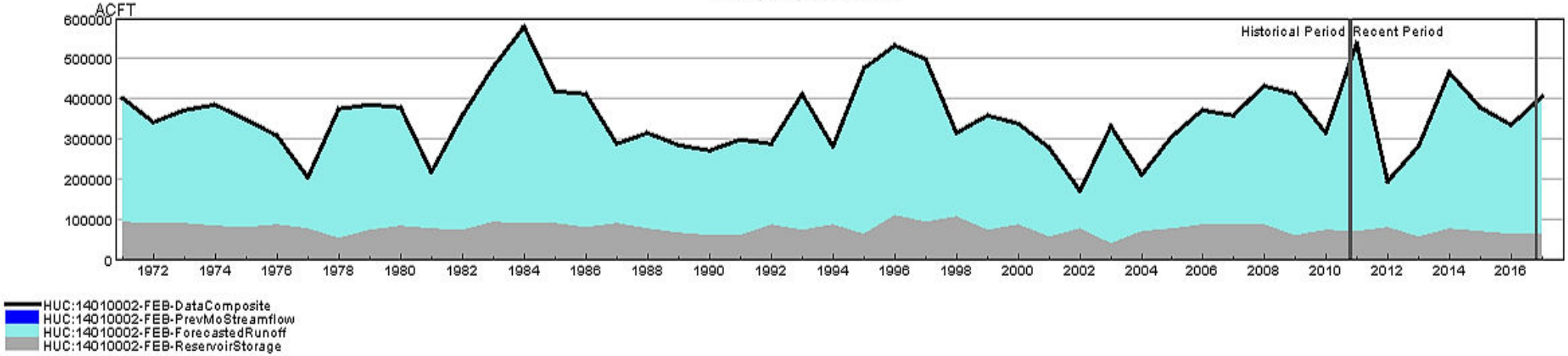
HUC 14010001 (Colorado Headwaters) SWSI Values - FEB

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



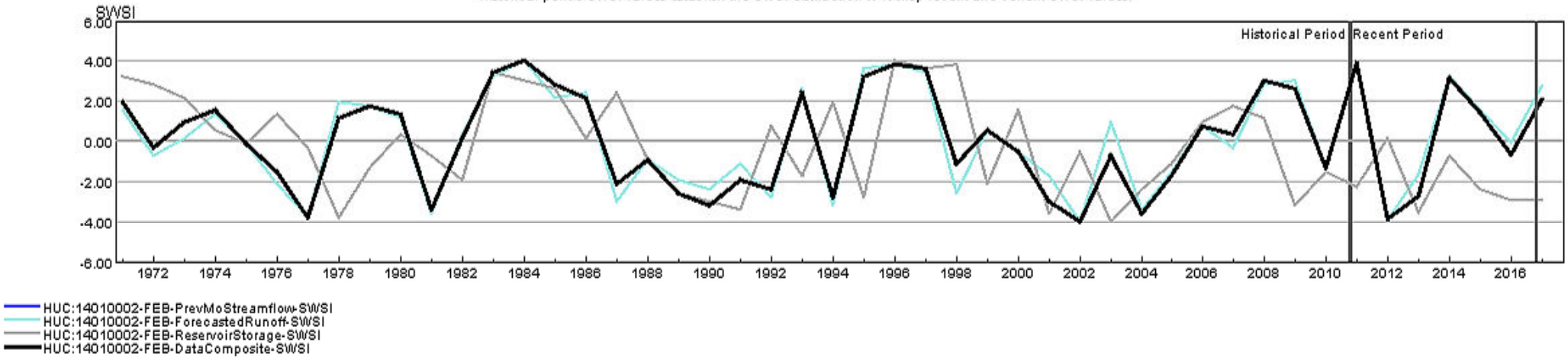
HUC 14010002 (Blue) Surface Water Supply - FEB

Monthly component volumes



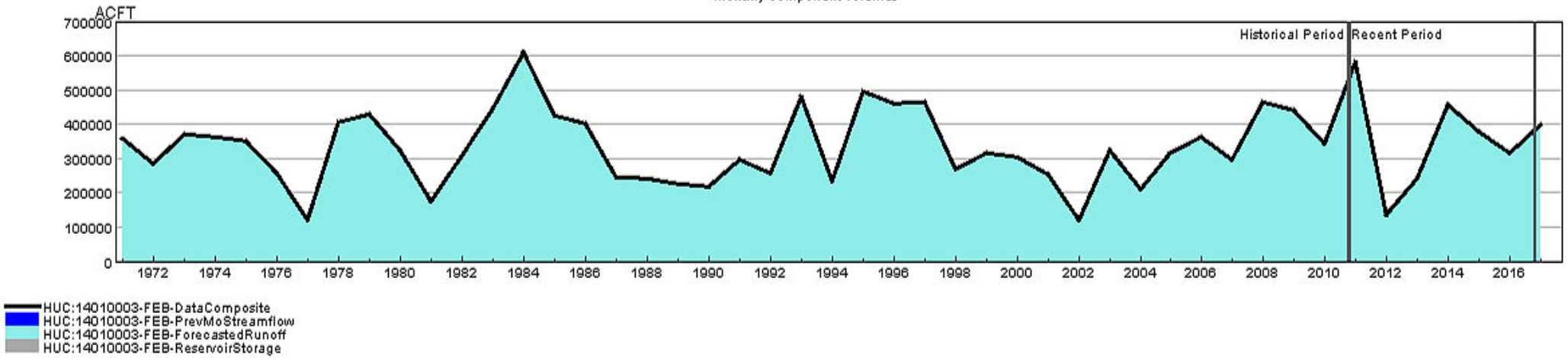
HUC 14010002 (Blue) SWSI Values - FEB

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



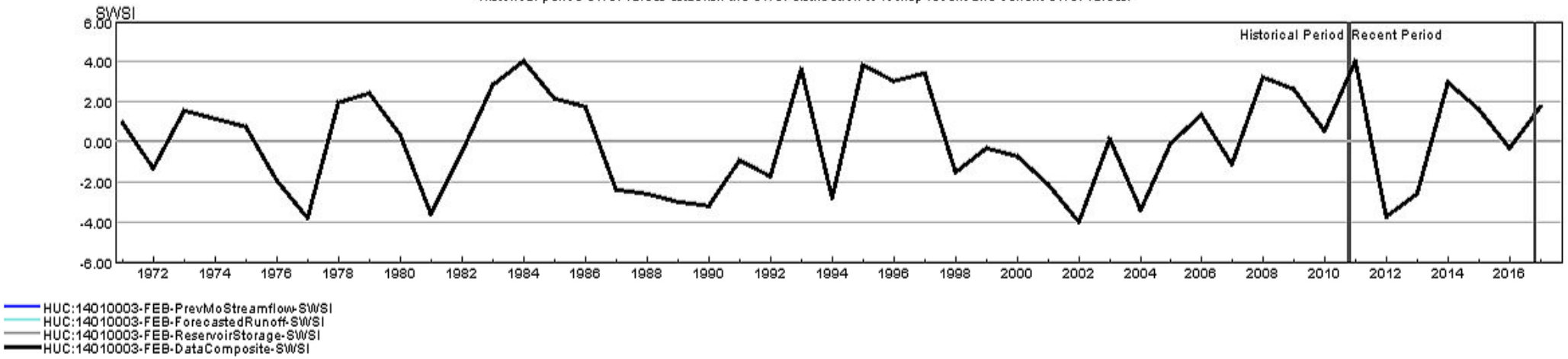
HUC 14010003 (Eagle) Surface Water Supply - FEB

Monthly component volumes



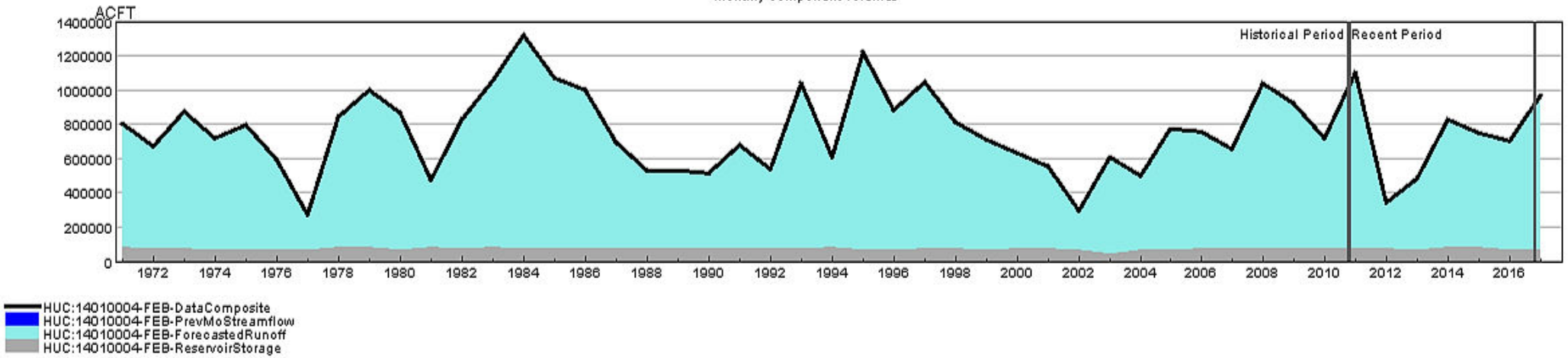
HUC 14010003 (Eagle) SWSI Values - FEB

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



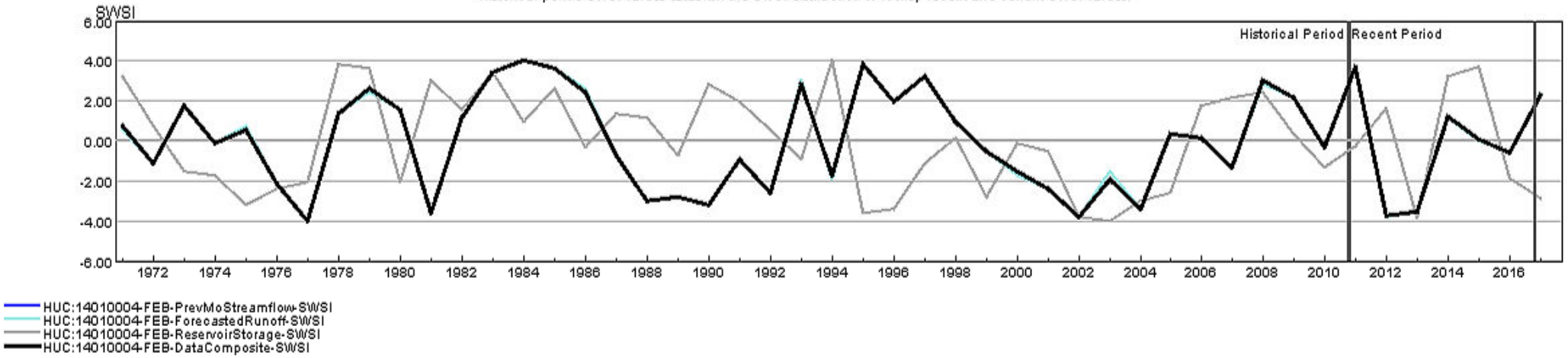
HUC 14010004 (Roaring Fork) Surface Water Supply - FEB

Monthly component volumes



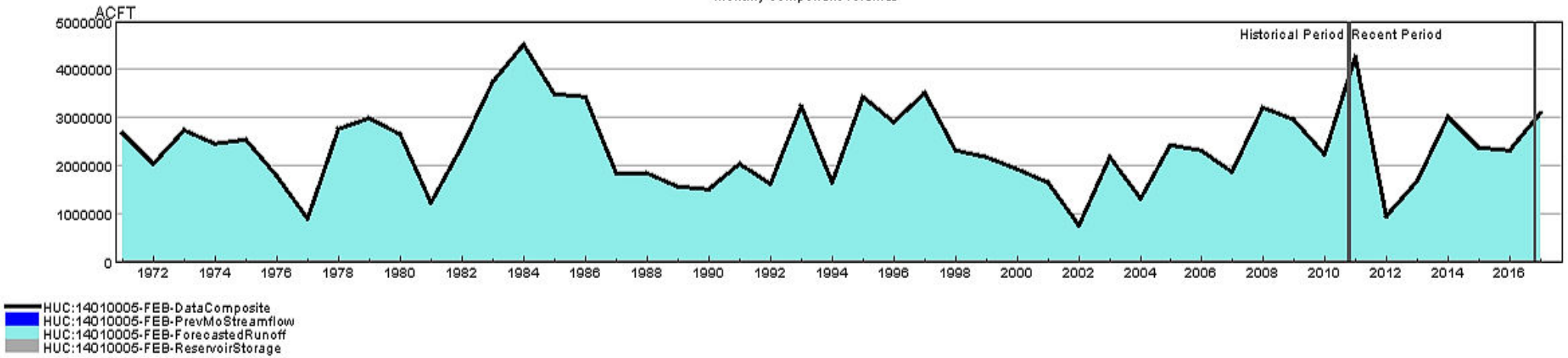
HUC 14010004 (Roaring Fork) SWSI Values - FEB

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



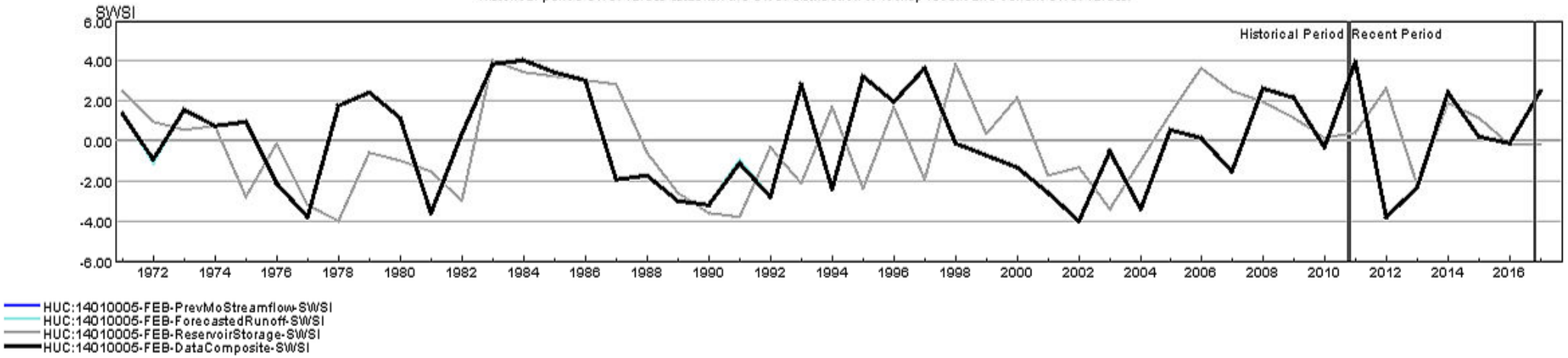
HUC 14010005 (Colorado Headwaters-Plateau) Surface Water Supply - FEB

Monthly component volumes



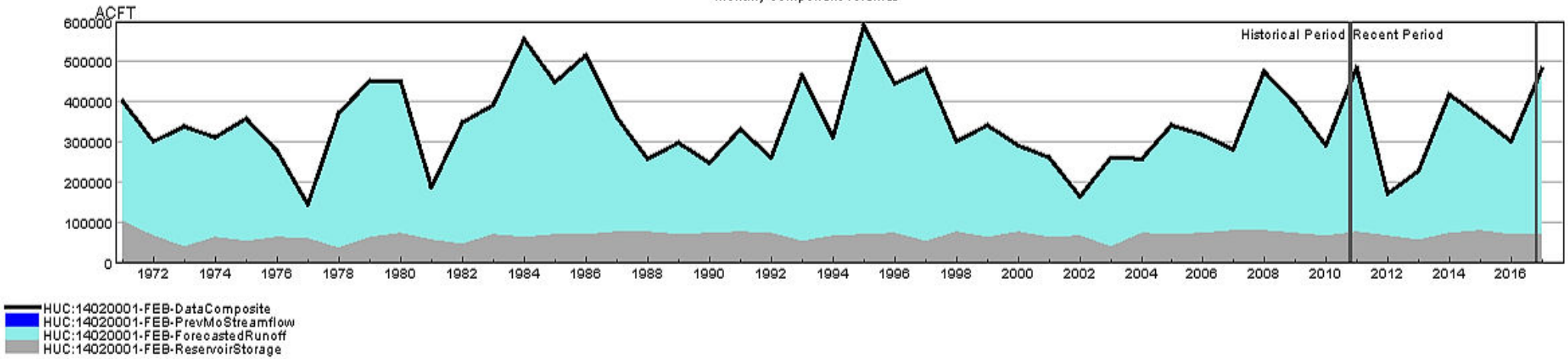
HUC 14010005 (Colorado Headwaters-Plateau) SWSI Values - FEB

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



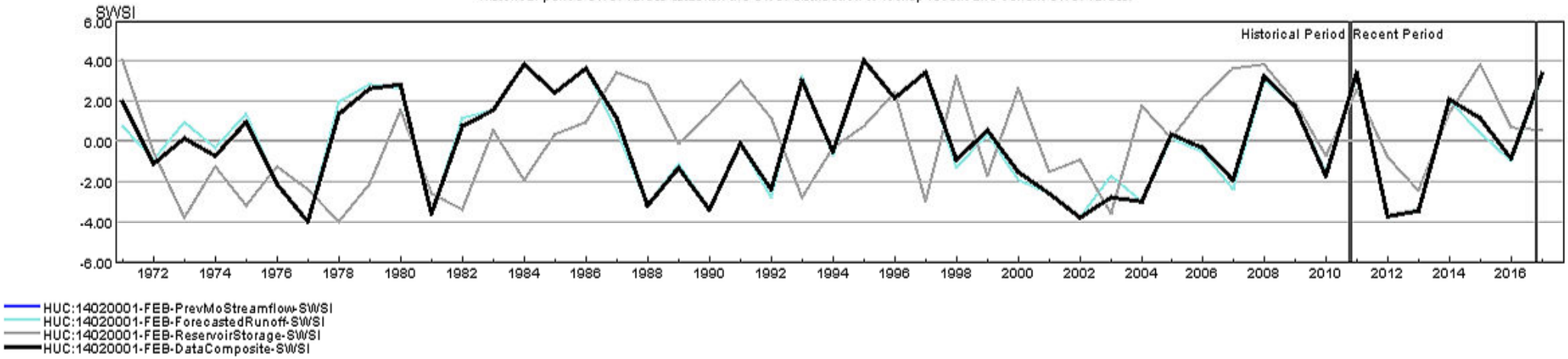
HUC 14020001 (East-Taylor) Surface Water Supply - FEB

Monthly component volumes



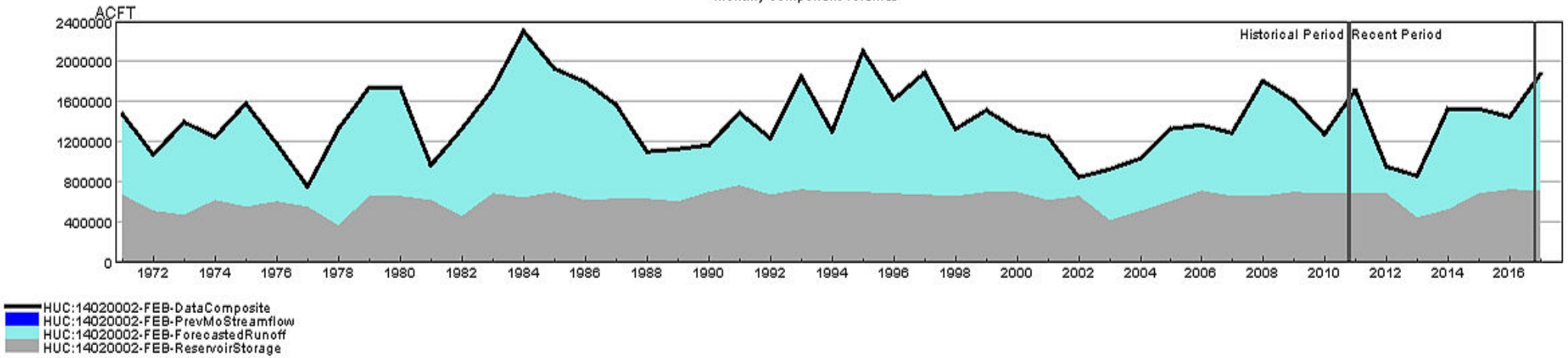
HUC 14020001 (East-Taylor) SWSI Values - FEB

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



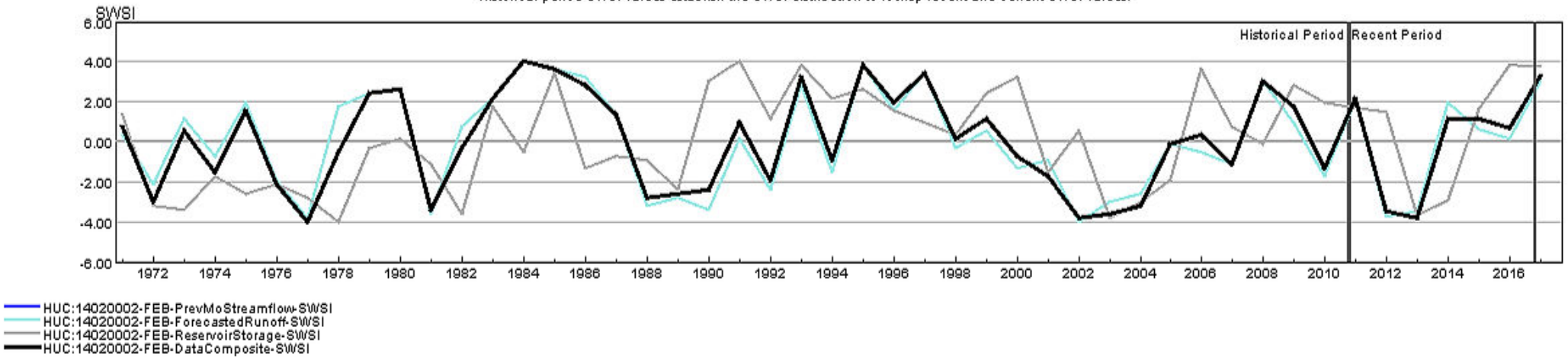
HUC 14020002 (Upper Gunnison) Surface Water Supply - FEB

Monthly component volumes



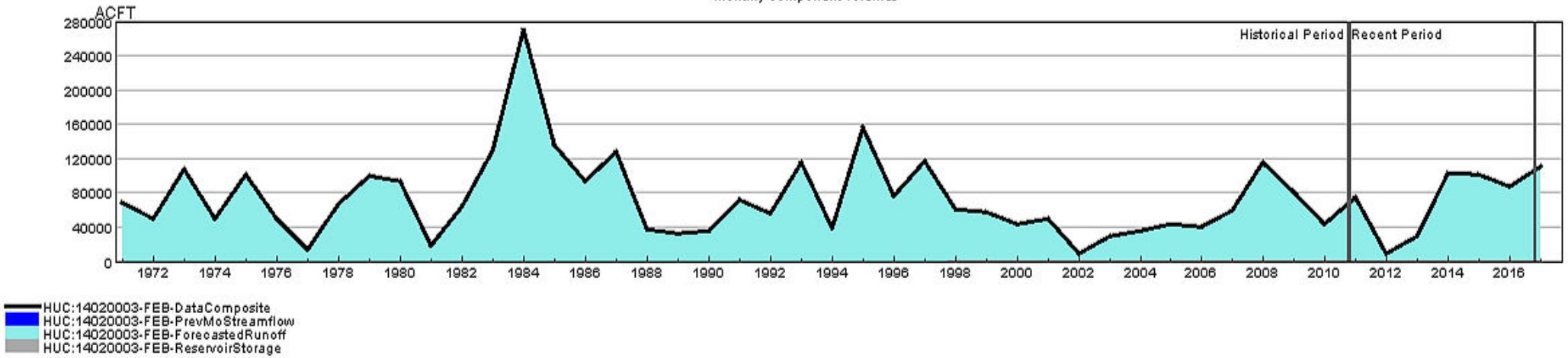
HUC 14020002 (Upper Gunnison) SWSI Values - FEB

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



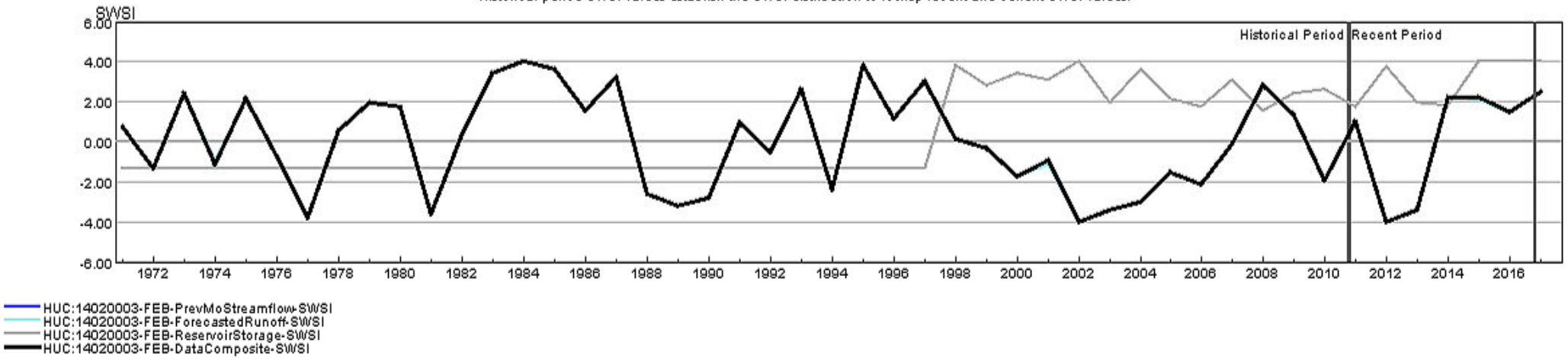
HUC 14020003 (Tomichi) Surface Water Supply - FEB

Monthly component volumes



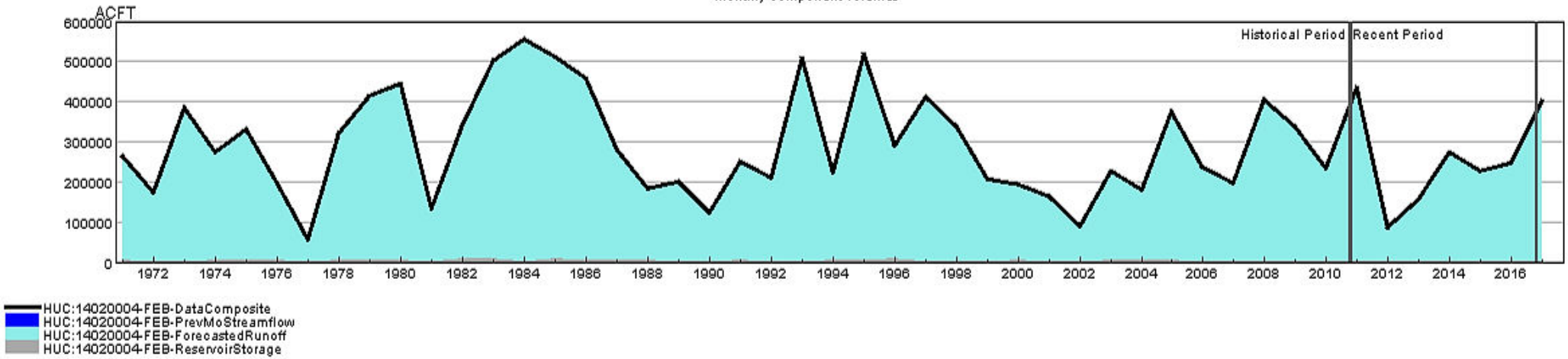
HUC 14020003 (Tomichi) SWSI Values - FEB

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



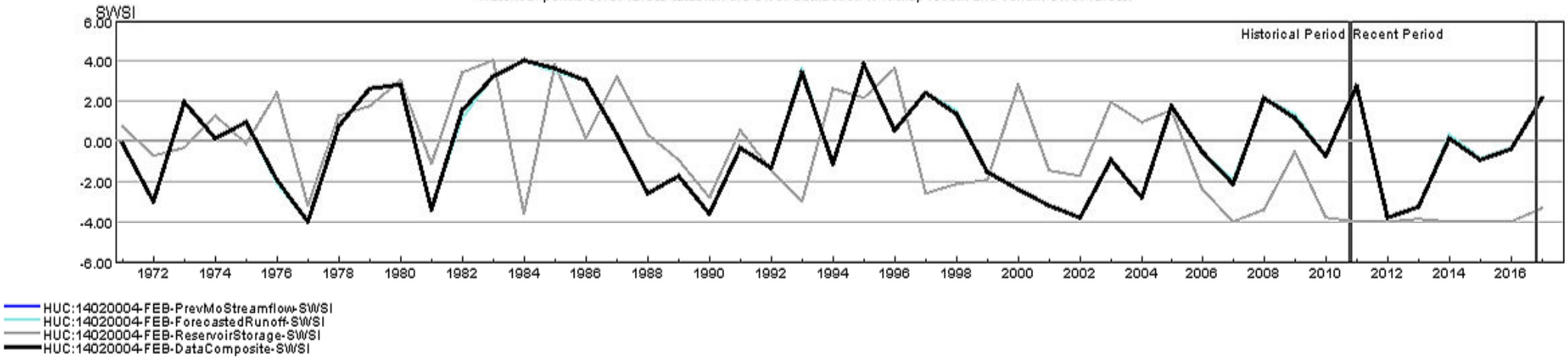
HUC 14020004 (North Fork Gunnison) Surface Water Supply - FEB

Monthly component volumes



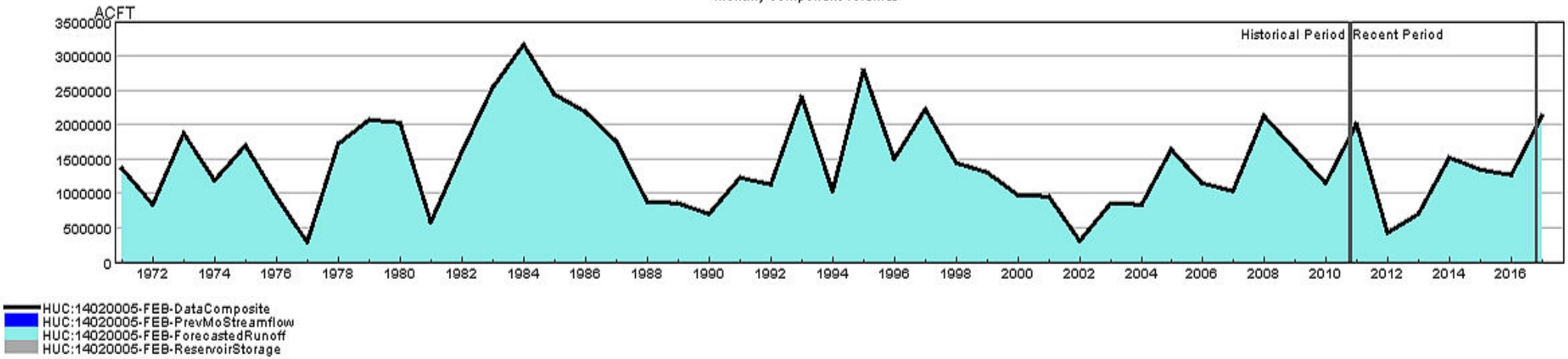
HUC 14020004 (North Fork Gunnison) SWSI Values - FEB

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



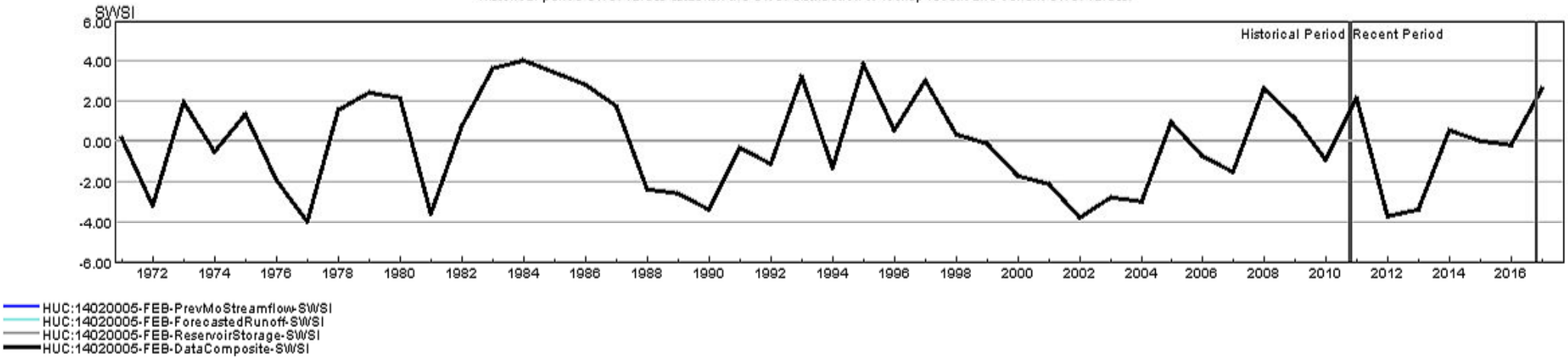
HUC 14020005 (Lower Gunnison) Surface Water Supply - FEB

Monthly component volumes



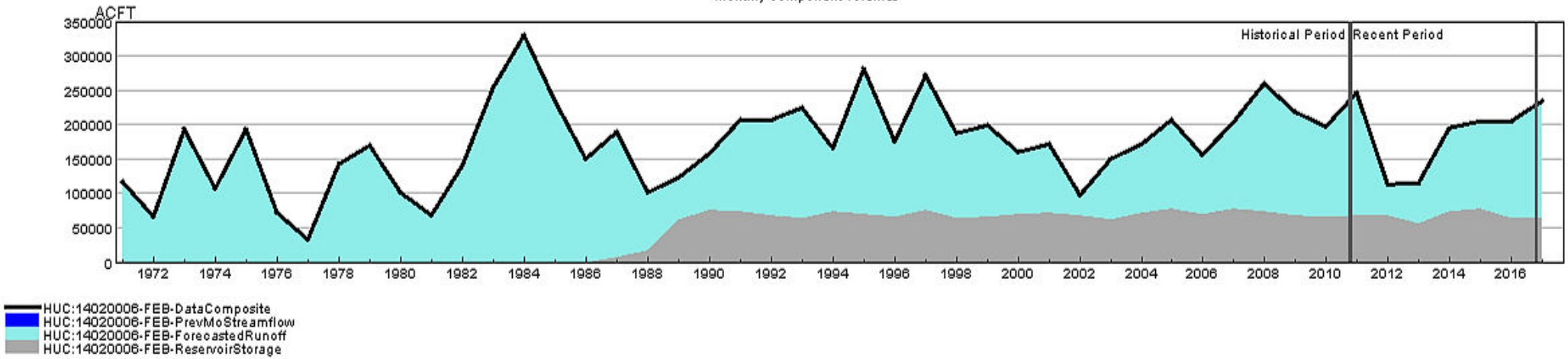
HUC 14020005 (Lower Gunnison) SWSI Values - FEB

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



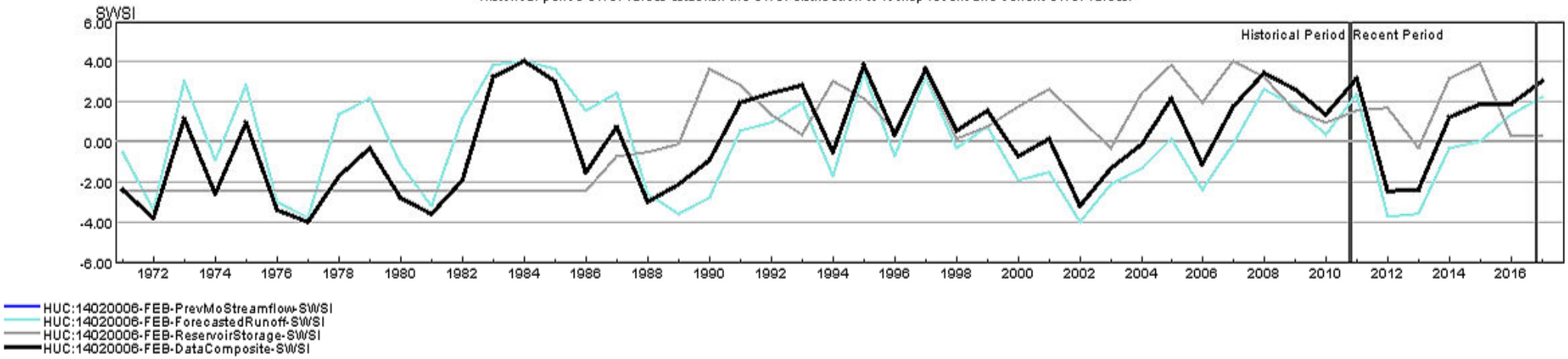
HUC 14020006 (Uncompahgre) Surface Water Supply - FEB

Monthly component volumes



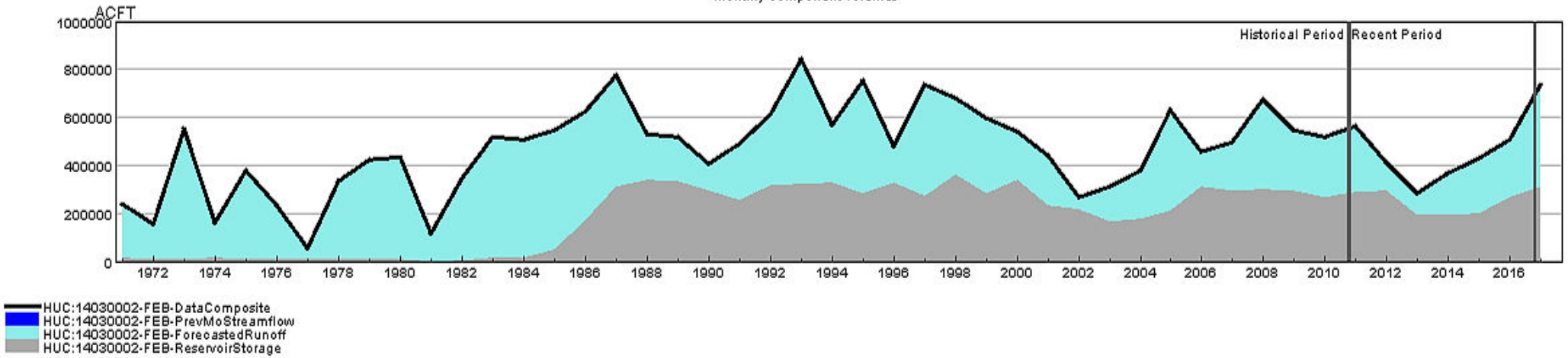
HUC 14020006 (Uncompahgre) SWSI Values - FEB

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



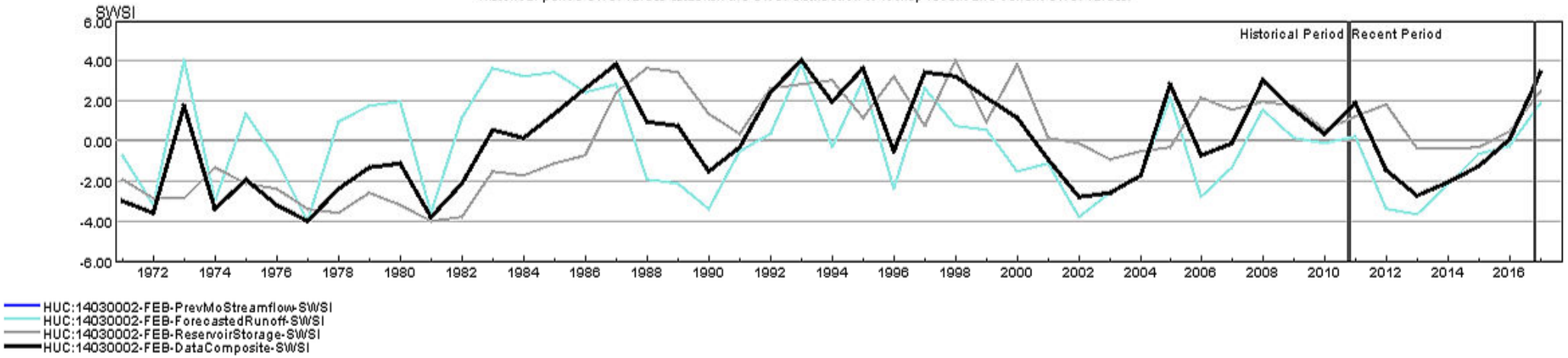
HUC 14030002 (Upper Dolores) Surface Water Supply - FEB

Monthly component volumes



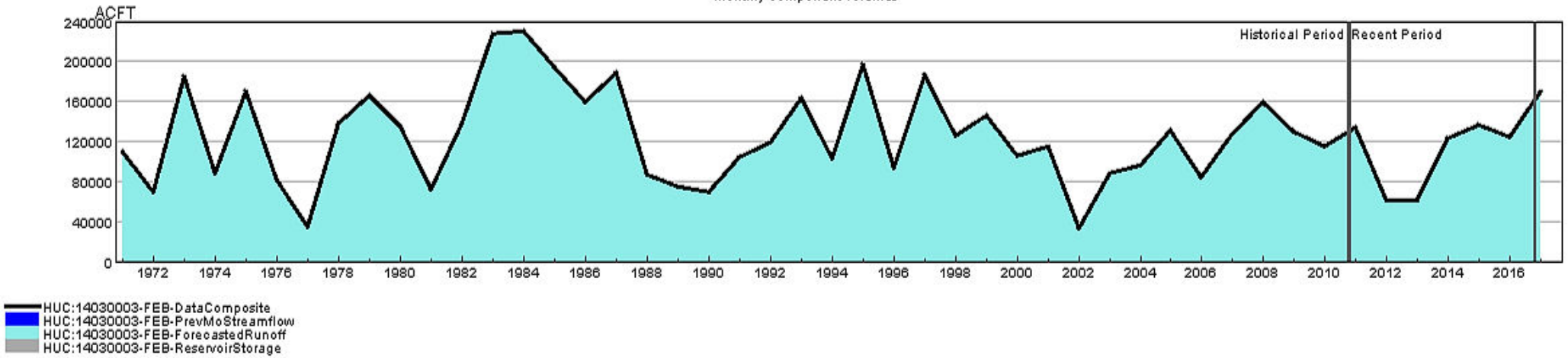
HUC 14030002 (Upper Dolores) SWSI Values - FEB

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



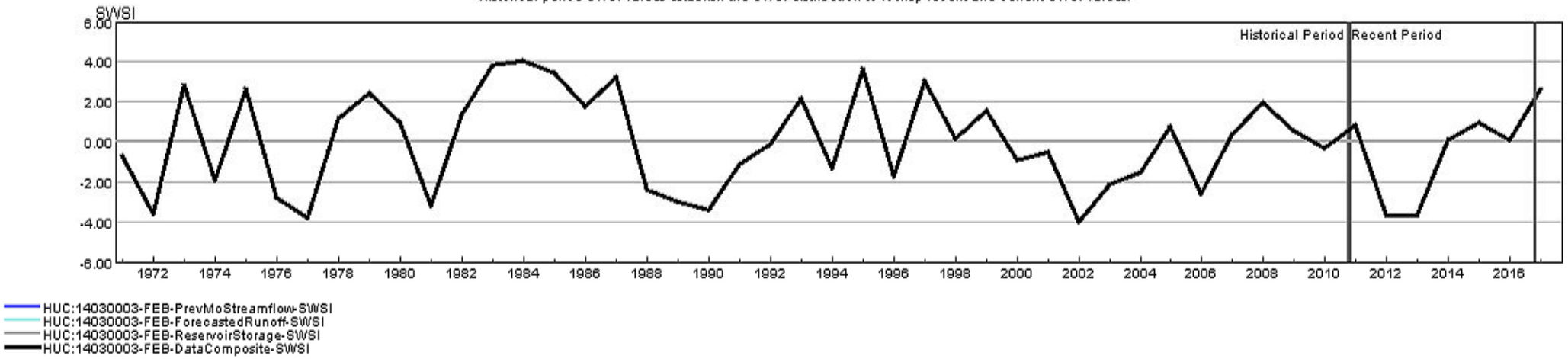
HUC 14030003 (San Miguel) Surface Water Supply - FEB

Monthly component volumes



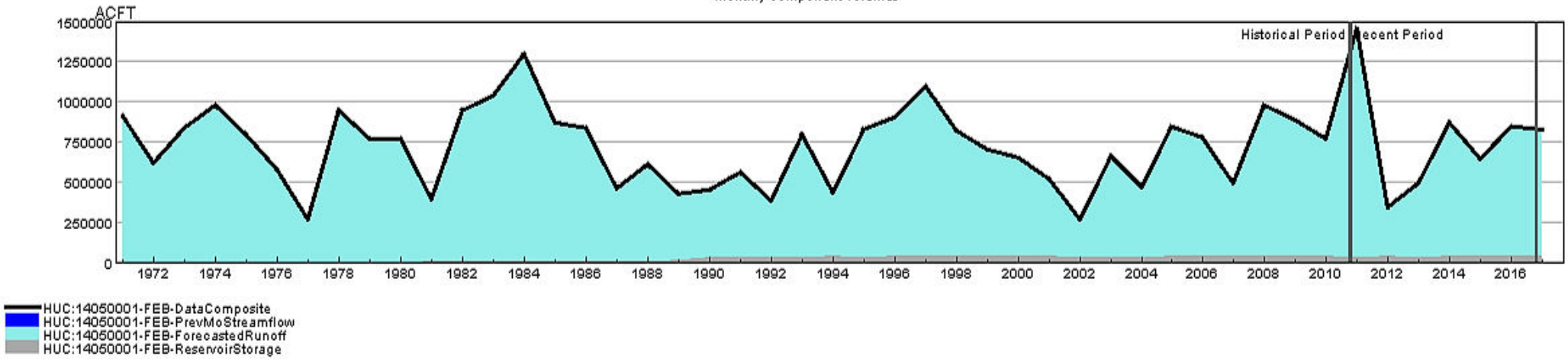
HUC 14030003 (San Miguel) SWSI Values - FEB

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



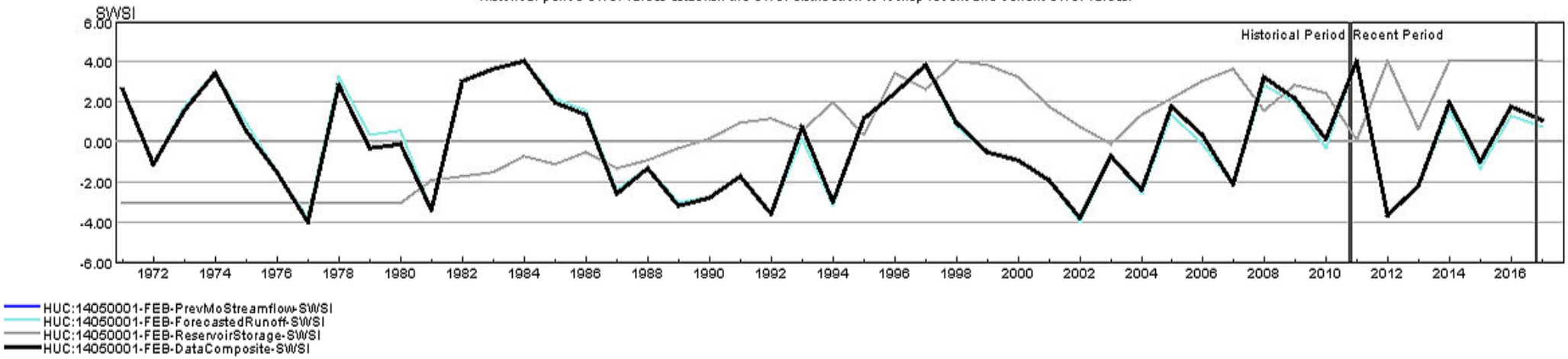
HUC 14050001 (Upper Yampa) Surface Water Supply - FEB

Monthly component volumes



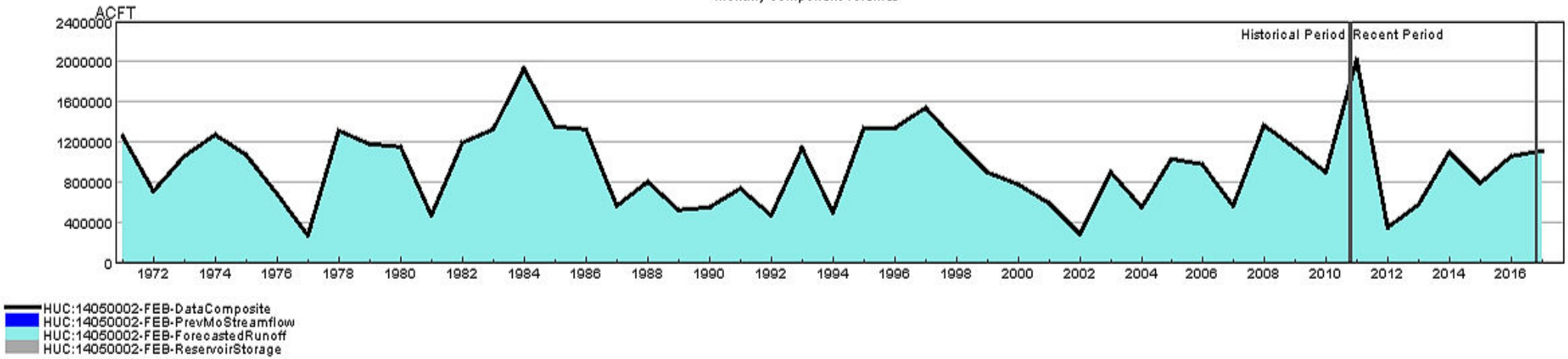
HUC 14050001 (Upper Yampa) SWSI Values - FEB

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



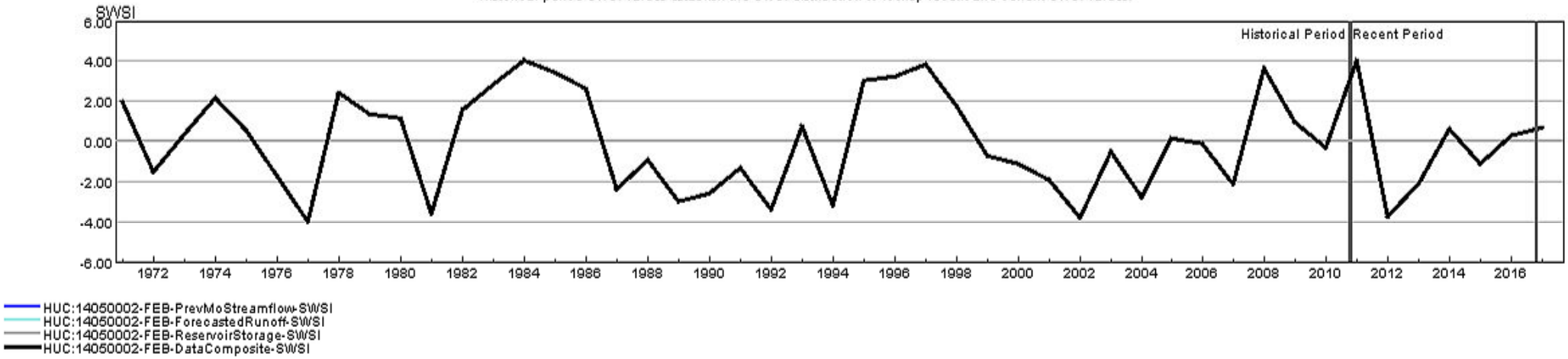
HUC 14050002 (Lower Yampa) Surface Water Supply - FEB

Monthly component volumes



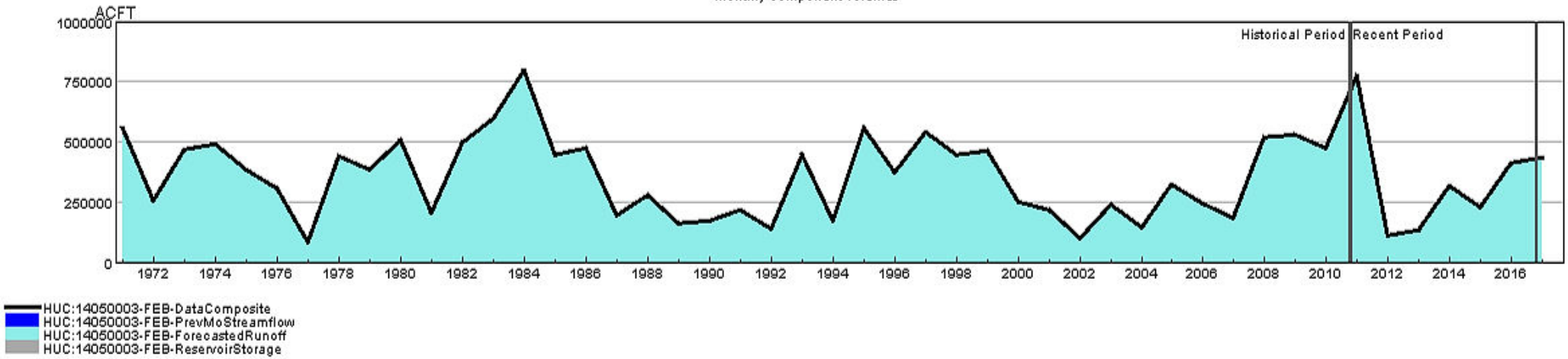
HUC 14050002 (Lower Yampa) SWSI Values - FEB

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



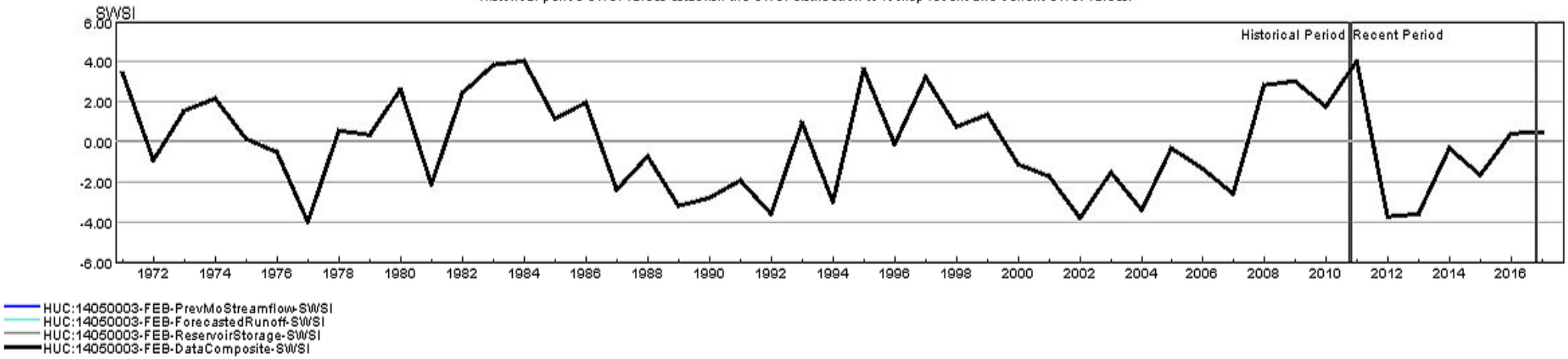
HUC 14050003 (Little Snake) Surface Water Supply - FEB

Monthly component volumes



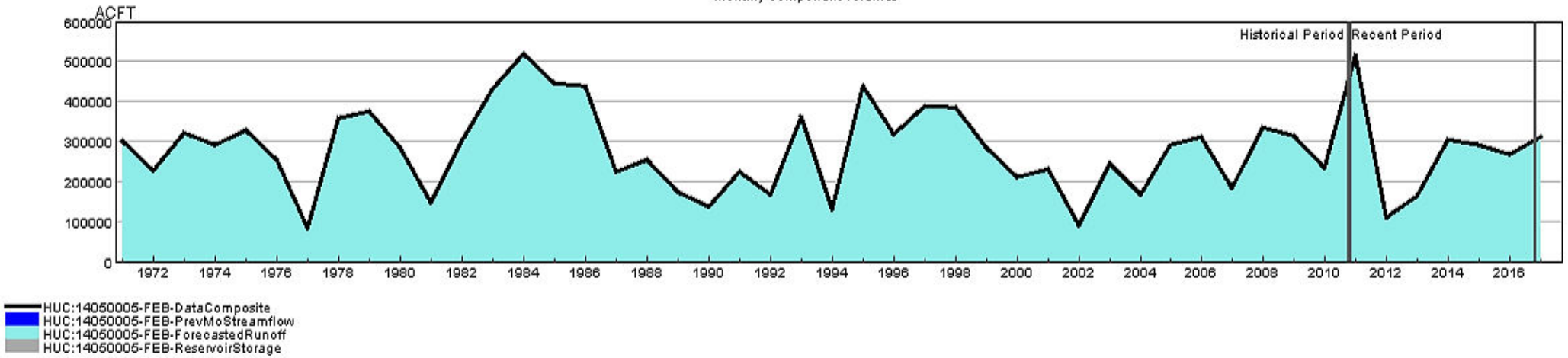
HUC 14050003 (Little Snake) SWSI Values - FEB

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



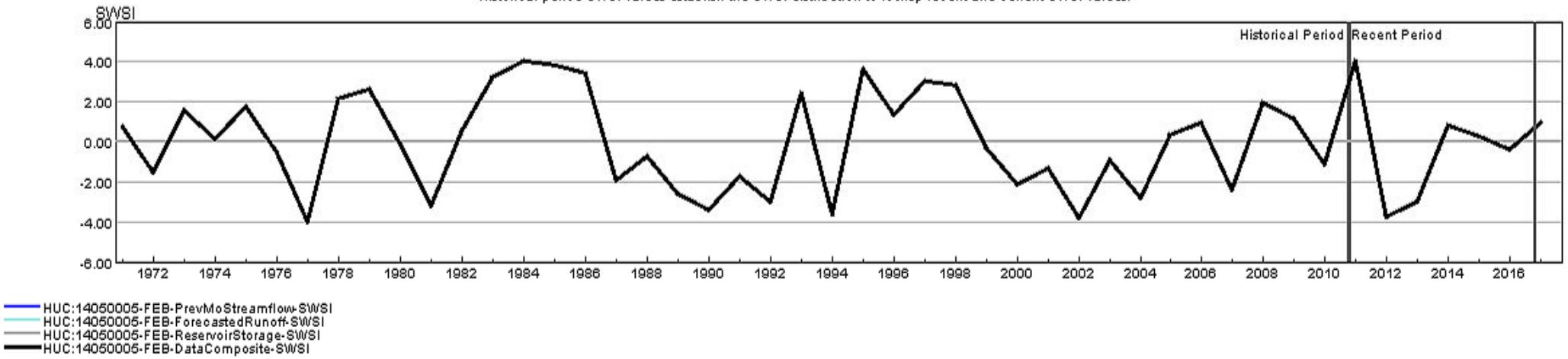
HUC 14050005 (Upper White) Surface Water Supply - FEB

Monthly component volumes



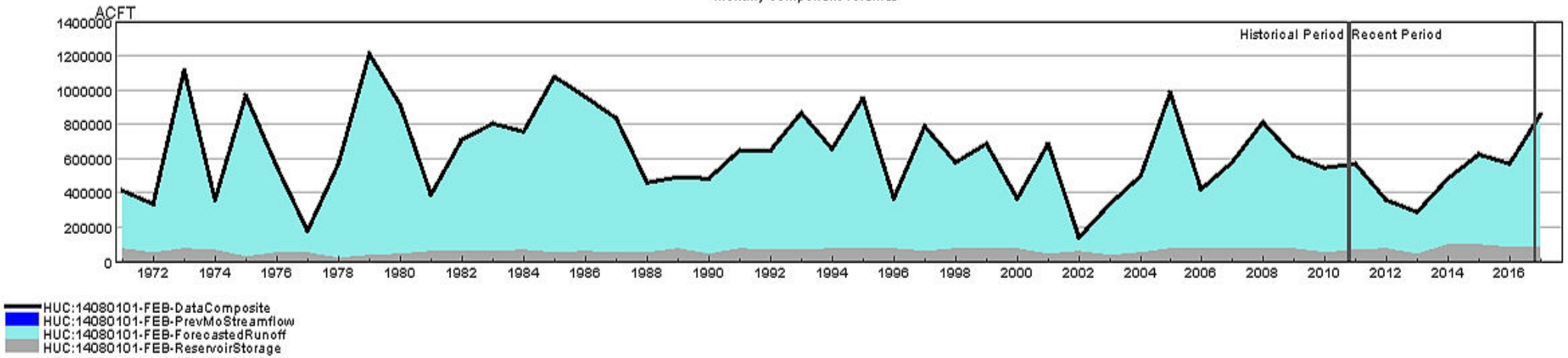
HUC 14050005 (Upper White) SWSI Values - FEB

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



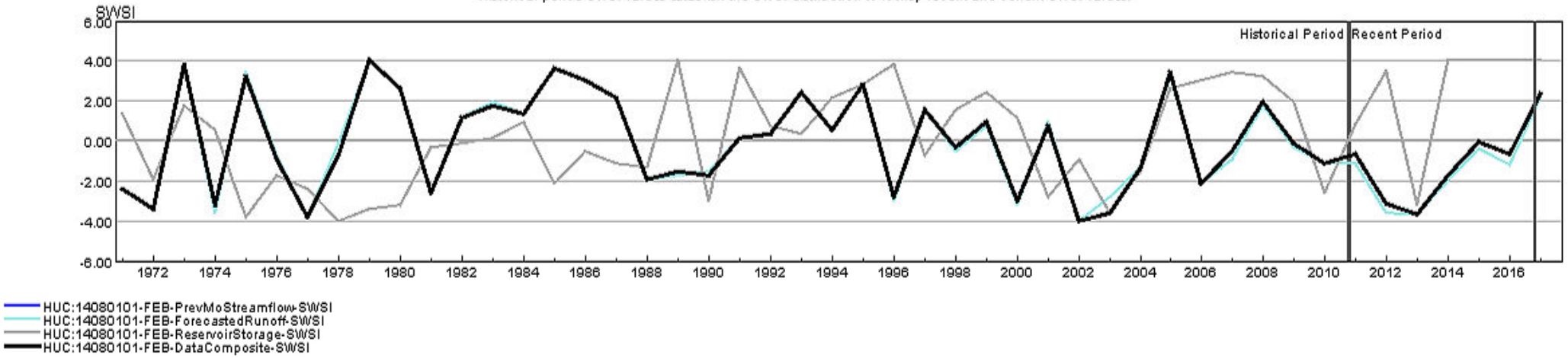
HUC 14080101 (Upper San Juan) Surface Water Supply - FEB

Monthly component volumes



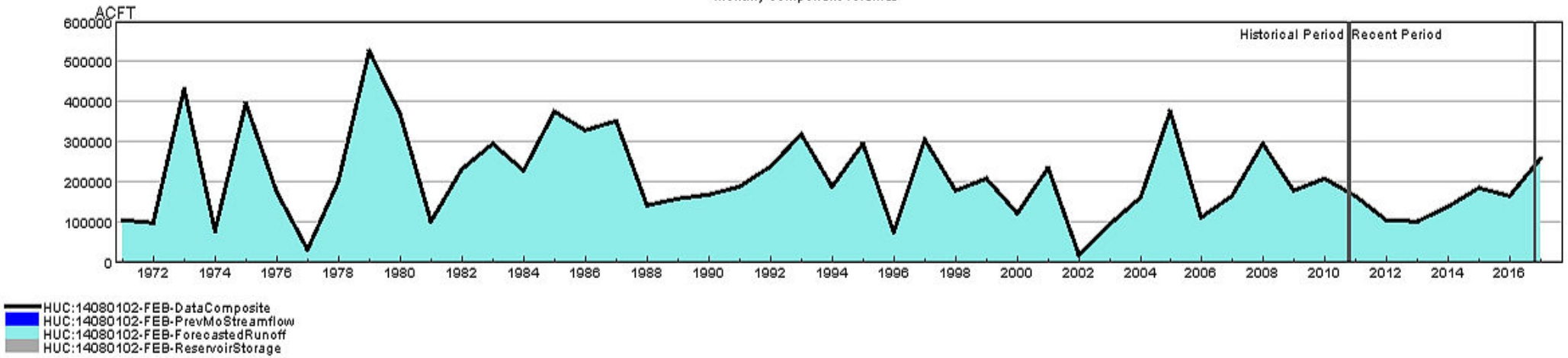
HUC 14080101 (Upper San Juan) SWSI Values - FEB

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



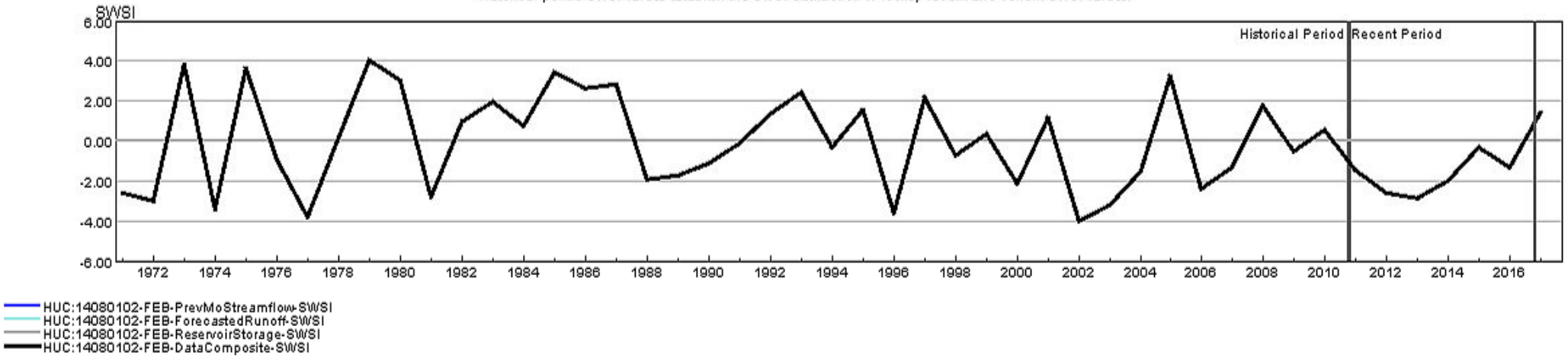
HUC 14080102 (Piedra) Surface Water Supply - FEB

Monthly component volumes



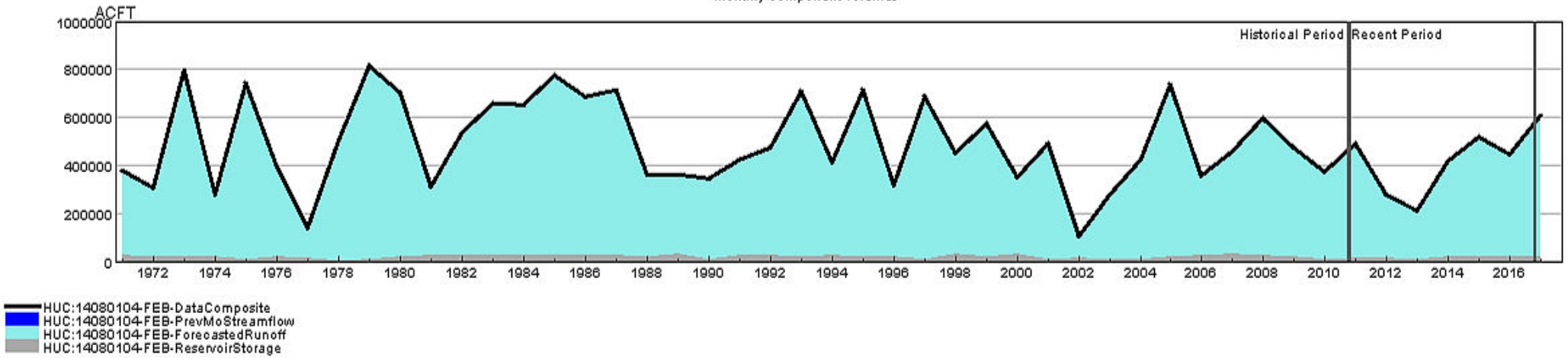
HUC 14080102 (Piedra) SWSI Values - FEB

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



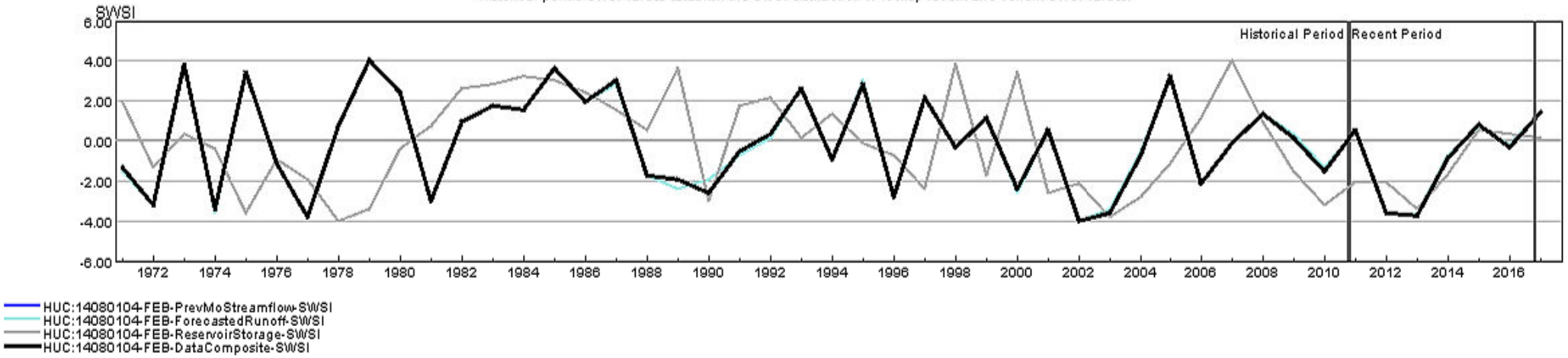
HUC 14080104 (Animas) Surface Water Supply - FEB

Monthly component volumes



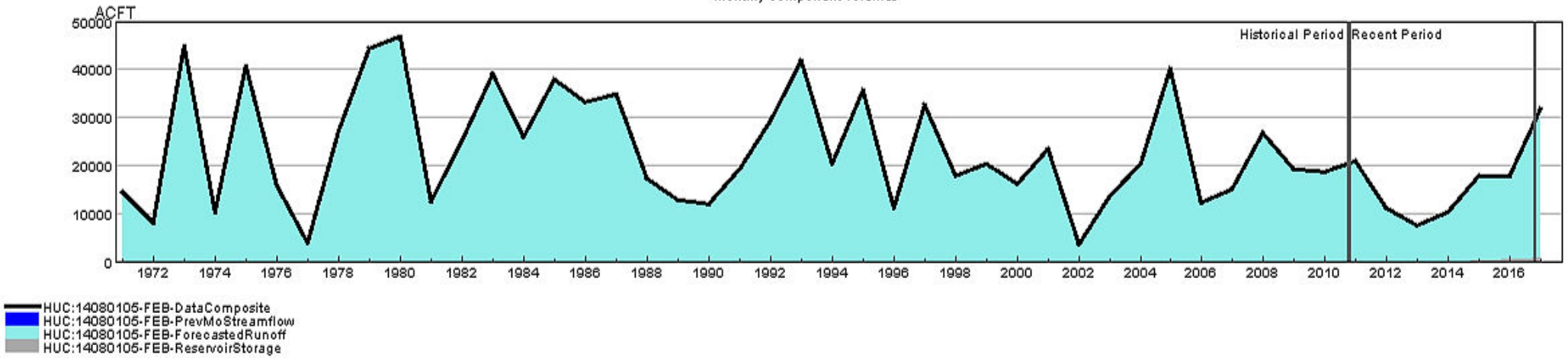
HUC 14080104 (Animas) SWSI Values - FEB

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



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

Monthly component volumes



HUC 14080105 (Middle San Juan) SWSI Values - FEB

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