COLORADO
WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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May 1, 2016

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 new SWSI analysis based on the components shown below, which vary depending on the time of year. The new 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. 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 new DNR SWSI was published. The results are summarized within this monthly report and additional information, maps & data are available at: http://water.state.co.us/DWRDocs/Reports/Pages/SWSIReport.aspx. This document also contains reports about regional conditions prepared by each DWR Division Office.

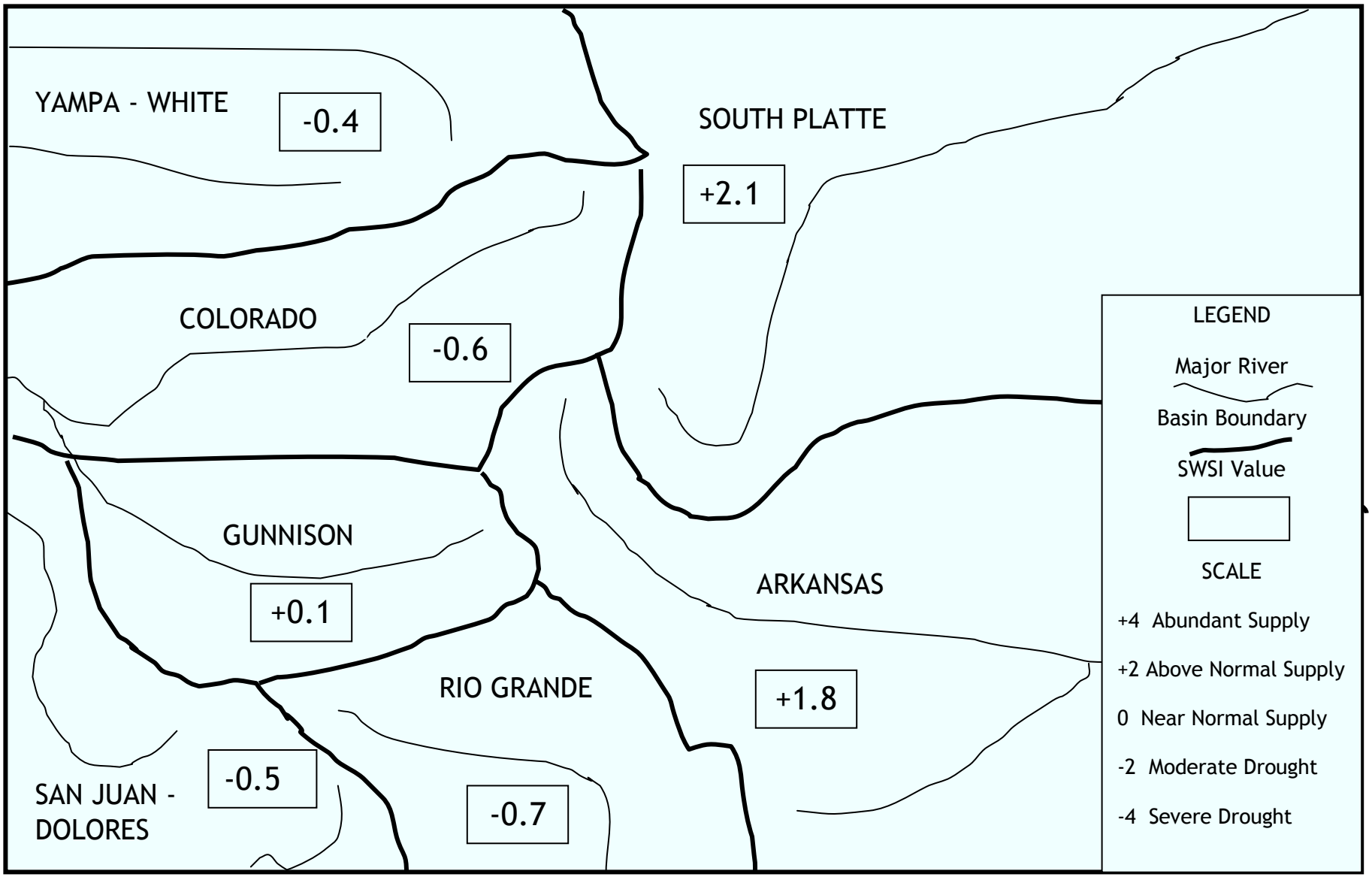
The SWSI calculation for the winter season is based on forecasted runoff as well as reservoir storage. The statewide SWSI values for April (May 1) range from a low of -0.7 in the Rio Grande Basin to a high of 2.1 in the South Platte Basin. Between April 1 and May 1 there was a slight to substantial improvement in water supply conditions due to spring storms. The following SWSI values were computed for each of the seven major basins for May 1, 2016. The results for each HUC are summarized on the following pages.

Basin	May 1 SWSI	Change from Previous Month	Change from Previous Year
Arkansas	1.8	0.1	-0.1
Colorado	-0.6	0.0	-1.4
Gunnison	0.1	0.2	-1.6
Rio Grande	-0.7	0.1	-0.8
San Juan-Dolores	-0.5	0.2	-0.8
South Platte	2.1	1.0	-2.0
Yampa-White	-0.4	0.3	0.3

SWSI Scale

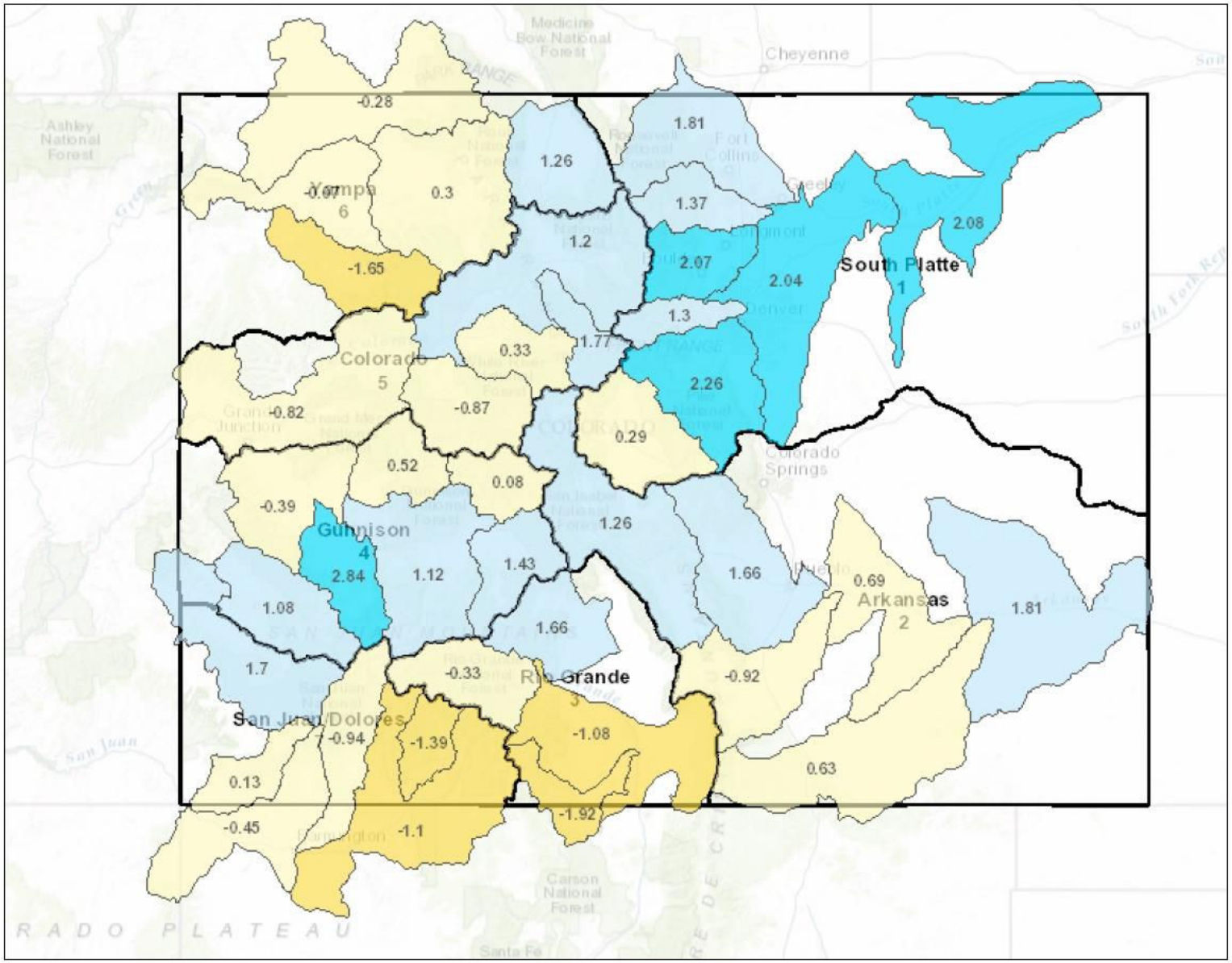
-4	-3	-2	-1	0	1	2	3	4
Severe Drought		Moderate Drought		Near Normal Supply		Above Normal Supply		Abundant Supply

SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN



May 1, 2016

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



Legend

SWSI - Current (May 2016)

- 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
- State Border
- 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: 5/16/2016 4:17:22 PM

May 1, 2016

May 1, 2016 SWSI Values by HUC and Non Exceedance Probabilities (NEP)

Basin	HUC ID	HUC Name	SWSI	Reservoir Storage NEP	Forecasted Runoff NEP	Total Vol (AF)
Arkansas	11020001	Arkansas Headwaters	1.3	73	60	384,100
	11020002	Upper Arkansas	1.7	78	56	555,228
	11020005	Upper Arkansas-Lake Meredith	0.7	83	55	385,700
	11020006	Huerfano	-0.9	13	48	19,400
	11020009	Upper Arkansas-John Martin Reservoir	1.8	78	56	669,400
	11020010	Purgatoire	0.6	69	49	69,100
Colorado	14010001	Colorado Headwaters	1.2	81	61	1,553,800
	14010002	Blue	1.8	58	63	339,200
	14010003	Eagle	0.3	N/A	54	305,000
	14010004	Roaring Fork	-0.9	87	36	620,013
	14010005	Colorado Headwaters-Plateau	-0.8	48	40	1,947,100
Gunnison	14020001	East-Taylor	0.1	77	48	305,000
	14020002	Upper Gunnison	1.1	89	51	1,360,100
	14020003	Tomichi	1.4	70	67	70,800
	14020004	North Fork Gunnison	0.5	36	57	233,200
	14020005	Lower Gunnison	-0.4	N/A	45	1,040,000
	14020006	Uncompahgre	2.8	70	67	198,000
	14030003	San Miguel	1.1	N/A	63	122,000
Rio Grande	13010001	Rio Grande Headwaters	-0.3	88	44	445,554
	13010002	Alamosa-Trinchera	-1.1	43	37	106,525
	13010004	Saguache	1.7	N/A	70	34,000
	13010005	Conejos	-1.9	29	32	148,089
San Juan-Dolores	14030002	Upper Dolores	1.7	54	55	538,600
	14080101	Upper San Juan	-1.1	99	31	453,900
	14080102	Piedra	-1.4	N/A	33	120,000
	14080104	Animas	-0.9	71	37	361,900
	14080105	Middle San Juan	-0.5	50	40	14,861
	14080107	Mancos	0.1	77	50	29,700
South Platte	10190001	South Platte Headwaters	0.3	43	71	186,200
	10190002	Upper South Platte	2.3	86	74	534,100
	10190003	Middle South Platte-Cherry Creek	2.0	87	74	961,283
	10190004	Clear Creek	1.3	N/A	66	110,000
	10190005	St. Vrain	2.1	78	70	244,188
	10190006	Big Thompson	1.4	69	59	565,100
	10190007	Cache La Poudre	1.8	91	65	443,800
	10190012	Middle South Platte-Sterling	2.1	79	74	1,087,323
Yampa-White	10180001	North Platte Headwaters	1.3	N/A	65	235,000
	14050001	Upper Yampa	0.3	99	49	684,078
	14050002	Lower Yampa	-0.1	N/A	49	780,000
	14050003	Little Snake	-0.3	N/A	47	275,000
	14050005	Upper White	-1.7	N/A	30	195,000

NEP is non exceedance percentage for total reservoir storage in HUC and total streamflow forecast volume in HUC (if there is more than one of each type of component, their volumes are added together). Total Vol is the volume of reservoir storage plus streamflow forecast volume in HUC combined. NEP is calculated compared to the volume of actual natural flow and active storage historically occurring this month during the period 1970-2010.

May 1, 2016 SWSI Component Information By HUC

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
11020001	Arkansas Headwaters	CLEAR CREEK RESERVOIR	8,300	68
		TWIN LAKES RESERVOIR	39,200	41
		HOMESTAKE RESERVOIR	41,300	98
		TURQUOISE LAKE	60,300	50
		ARKANSAS RIVER AT SALIDA	235,000	60
11020002	Upper Arkansas	PUEBLO RESERVOIR	235,228	78
		PUEBLO RESERVOIR INFLOW	320,000	56
11020005	Upper Arkansas-Lake Meredith	LAKE HENRY	8,500	91
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	9,400	52
		HUERFANO RIVER NEAR REDWING	10,000	43
		MEREDITH RESERVOIR	37,800	82
		PUEBLO RESERVOIR INFLOW	320,000	56
11020006	Huerfano	CUCHARAS RESERVOIR	0	13
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	9,400	52
		HUERFANO RIVER NEAR REDWING	10,000	43
11020009	Upper Arkansas-John Martin Reservoir	CUCHARAS RIVER AT BOYD RANCH NR LA VETA	9,400	52
		HUERFANO RIVER NEAR REDWING	10,000	43
		PURGATOIRE RIVER AT TRINIDAD	39,000	49
		ADOBE CREEK RESERVOIR	66,500	93
		JOHN MARTIN RESERVOIR	224,500	78
		PUEBLO RESERVOIR INFLOW	320,000	56
11020010	Purgatoire	TRINIDAD LAKE	30,100	69
		PURGATOIRE RIVER AT TRINIDAD	39,000	49
14010001	Colorado Headwaters	WOLFORD MOUNTAIN RESERVOIR	47,100	79
		WILLIAMS FORK RESERVOIR	76,700	90
		COLORADO RIVER NEAR DOTSERO	1,430,000	61
14010002	Blue River	GREEN MOUNTAIN RESERVOIR	59,200	58
		BLUE RIVER INFLOW TO GREEN MOUNTAIN RES	280,000	63
14010003	Eagle River	EAGLE RIVER BELOW GYPSUM	305,000	54
14010004	Roaring Fork	RUEDI RESERVOIR	70,013	87
		ROARING FORK AT GLENWOOD SPRINGS	550,000	36
14010005	Colorado Headwaters-Plateau	VEGA RESERVOIR	17,100	48
		COLORADO RIVER NEAR CAMEO	1,930,000	40
14020001	East-Taylor	TAYLOR PARK RESERVOIR	71,000	77
		TAYLOR R INF TO TAYLOR PARK RESERVOIR	86,000	53
		EAST RIVER AT ALMONT	148,000	46
14020002	Upper Gunnison	SILVER JACK RESERVOIR	7,100	40
		FRUITLAND RESERVOIR	7,500	82
		CRAWFORD RESERVOIR	13,700	58
		MORROW POINT RESERVOIR	111,100	29
		LAKE FORK AT GATEVIEW, CO	120,000	56
		GUNNISON R INF TO BLUE MESA RESERVOIR	530,000	51
		BLUE MESA RESERVOIR	570,700	87
14020003	Tomichi	VOUGA RESERVOIR NEAR DOYLEVILLE	800	70
		TOMICHI CREEK AT GUNNISON, CO	70,000	67

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
14020004	North Fork Gunnison	PAONIA RESERVOIR	3,200	36
		NORTH FORK GUNNISON R NR SOMERSET	230,000	57
14020005	Lower Gunnison	GUNNISON RIVER NR GRAND JUNCTION	1,040,000	45
14020006	Uncompahgre	RIDGEWAY RESERVOIR	68,000	70
		UNCOMPAHGRE RIVER AT COLONA	130,000	67
14030003	San Miguel	SAN MIGUEL RIVER NEAR PLACERVILLE	122,000	63
13010001	Rio Grande Headwaters	CONTINENTAL RESERVOIR	7,200	71
		SANTA MARIA RESERVOIR	18,654	88
		RIO GRANDE RESERVOIR	34,700	88
		RIO GRANDE NEAR DEL NORTE	385,000	44
13010002	Alamosa-Trinchera	MOUNTAIN HOME	3,625	49
		TERRACE RESERVOIR	7,600	39
		TRINCHERA CK	10,300	49
		SANGRE DE CRISTO	10,700	51
		UTE CREEK	11,100	55
		CULEBRA CREEK AT SAN LUIS	17,200	48
		ALAMOSA CREEK ABOVE TERRACE RESERVOIR	46,000	33
13010004	Saguache	SAGUACHE CREEK NEAR SAGUACHE, CO	34,000	70
13010005	Conejos	PLATORO RESERVOIR	14,089	29
		CONEJOS RIVER NEAR MOGOTE	134,000	32
14030002	Upper Dolores	GROUNDHOG RESERVOIR	24,400	99
		DOLORES RIVER BELOW MCPHEE RESERVOIR	215,000	55
		MCPHEE RESERVOIR	299,200	53
14080101	Upper San Juan	VALLECITO RESERVOIR	104,900	99
		LOS PINOS RIVER NEAR BAYFIELD	129,000	33
		SAN JUAN RIVER NEAR CARRACAS	220,000	33
14080102	Piedra	PIEDRA RIVER NEAR ARBOLES	120,000	33
14080104	Animas	LEMON RESERVOIR	27,900	71
		FLORIDA RIVER INFLOW TO LEMON RESERVOIR	44,000	54
		ANIMAS RIVER AT DURANGO	290,000	36
14080105	Middle San Juan	LONG HOLLOW RESERVOIR	761	50
		LA PLATA RIVER AT HESPERUS	14,100	40
14080107	Mancos	JACKSON GULCH RESERVOIR	8,700	77
		MANCOS RIVER NEAR MANCOS	21,000	50
10190001	South Platte Headwaters	ANTERO RESERVOIR	2,100	12
		SPINNEY MOUNTAIN RESERVOIR	29,700	66
		ELEVENMILE CANYON RESV INFLOW	55,000	71
		ELEVENMILE CANYON RESERVOIR	99,400	61
10190002	Upper South Platte	BEAR CREEK ABV EVERGREEN	16,300	69
		CHEESMAN LAKE	78,400	81
		SOUTH PLATTE RIVER AT SOUTH PLATTE	205,000	74
		DILLON RESERVOIR	234,400	76

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
10190003	Middle South Platte-Cherry Creek	HORSECREEK RESERVOIR	11,800	7
		BEAR CREEK ABV EVERGREEN	16,300	69
		MILTON RESERVOIR	22,651	98
		BARR LAKE	29,332	58
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	39,000	67
		STANDLEY RESERVOIR	41,200	86
		BOULDER CREEK NEAR ORODELL	62,000	84
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	89,000	59
		SAINT VRAIN CREEK AT LYONS	90,000	67
		CLEAR CREEK AT GOLDEN	110,000	66
		SOUTH PLATTE RIVER AT SOUTH PLATTE	205,000	74
		CACHE LA POUDRE R AT CANYON MOUTH	245,000	65
10190004	Clear Creek	CLEAR CREEK AT GOLDEN	110,000	66
10190005	St. Vrain River	TERRY RESERVOIR	5,800	76
		MARSHALL RESERVOIR	9,600	78
		GROSS RESERVOIR	11,700	76
		UNION RESERVOIR	12,200	54
		BUTTONROCK (RALPH PRICE) RESERVOIR	13,888	85
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	39,000	67
		BOULDER CREEK NEAR ORODELL	62,000	84
		SAINT VRAIN CREEK AT LYONS	90,000	67
10190006	Big Thompson	MARIANO RESERVOIR	4,800	55
		WILLOW CREEK RESERVOIR	6,100	27
		LAKE LOVELAND RESERVOIR	8,400	48
		LONE TREE RESERVOIR	8,500	90
		BOYD LAKE	35,600	55
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	89,000	59
		CARTER LAKE	106,800	73
		LAKE GRANBY	305,900	66
10190007	Cache La Poudre	BLACK HOLLOW RESERVOIR	3,000	41
		CHAMBERS LAKE	3,700	50
		HALLIGAN RESERVOIR	6,400	81
		FOSSIL CREEK RESERVOIR	9,700	69
		CACHE LA POUDRE	10,000	94
		WINDSOR RESERVOIR	11,300	46
		COBB LAKE	18,600	76
		HORSETOOTH RESERVOIR	136,100	85
		CACHE LA POUDRE R AT CANYON MOUTH	245,000	65

HUC ID	HUC Name	Component Name	Component Volume (AF)	Component NEP for Month
10190012	Middle South Platte-Sterling	BEAR CREEK ABV EVERGREEN	16,300	69
		JULESBURG RESERVOIR	20,577	62
		PREWITT RESERVOIR	24,600	91
		JACKSON LAKE RESERVOIR	26,056	45
		EMPIRE RESERVOIR	36,314	98
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	39,000	67
		RIVERSIDE RESERVOIR	54,476	66
		BOULDER CREEK NEAR ORODELL	62,000	84
		POINT OF ROCKS RESERVOIR	69,000	78
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	89,000	59
		SAINT VRAIN CREEK AT LYONS	90,000	67
		CLEAR CREEK AT GOLDEN	110,000	66
		SOUTH PLATTE RIVER AT SOUTH PLATTE	205,000	74
		CACHE LA POUDRE R AT CANYON MOUTH	245,000	65
10180001	North Platte Headwaters	NORTH PLATTE R NR NORTHGATE	235,000	65
14050001	Upper Yampa	YAMCOLO RESERVOIR	7,600	70
		STAGECOACH RESERVOIR NR OAK CREEK	35,478	99
		ELKHEAD CREEK ABOVE LONG GULCH	71,000	78
		YAMPA RIVER AT STEAMBOAT SPRINGS	220,000	50
		ELK RIVER NEAR MILNER, CO	350,000	62
14050002	Lower Yampa	YAMPA RIVER NEAR MAYBELL	780,000	49
14050003	Little Snake	LITTLE SNAKE RIVER NEAR LILY	275,000	47
14050005	Upper White	WHITE RIVER NEAR MEEKER	195,000	30

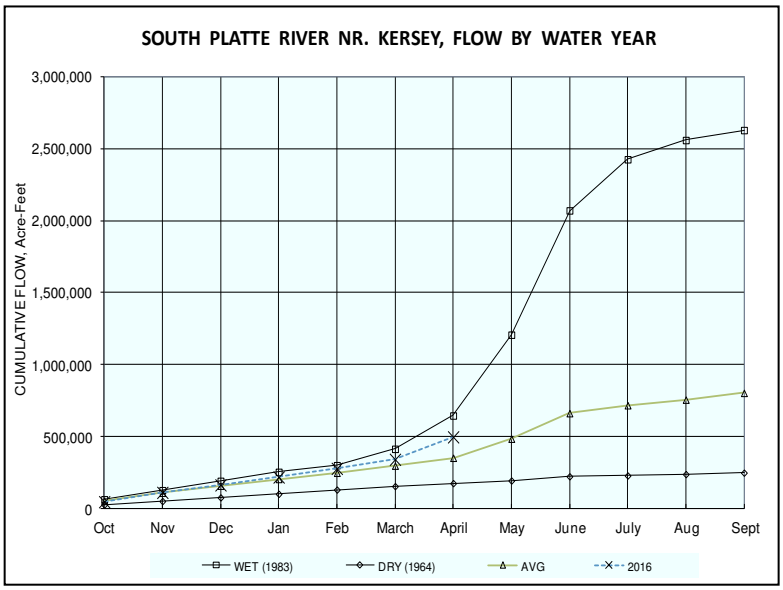
NEP is non exceedance percentage (percentile) for volume of the component compared to this month during the historical period 1970-2010.

Basinwide Conditions Assessment

The SWSI value for the month was 2.1. Most folks will probably remember April 2016 as a wet and cool month in northeast Colorado. Precipitation over most of the area, especially the far eastern portion of the area, was significantly above normal. Temperatures seemed to be much cooler than normal, but probably because the cool precipitation events were interspersed with warm dry events, in actuality the temperatures for the whole area over the whole month were very near normal.

The above normal precipitation was not limited to the eastern plains as the overall South Platte basin snowpack numbers increased more than normal in April 2016. The Snowtel snow water equivalent normally peaks on April 26th in the South Platte basin, but this year it has continued to increase through early May. The April 1 Snotel snow water equivalent was 107% of normal, while the May 1st Snotel snow water equivalent was 113% of normal.

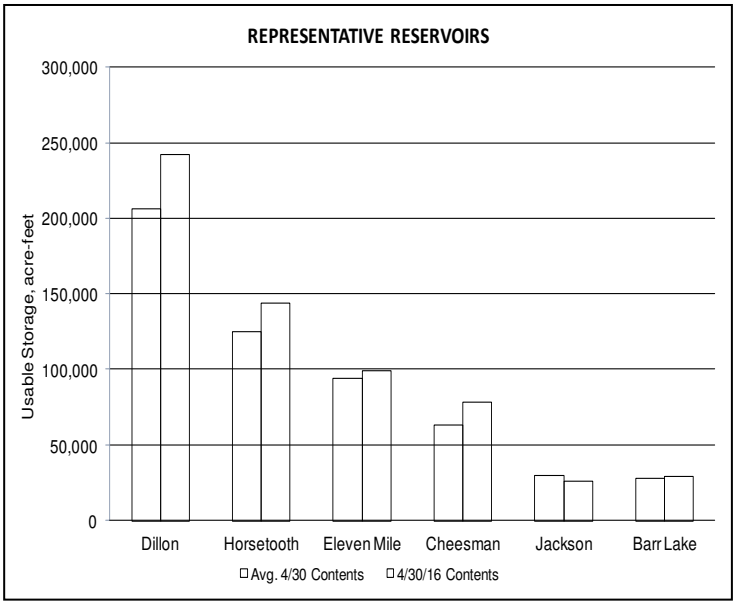
Flows in the South Platte River at both the Kersey and Julesburg index gages remained well above normal, as they have for most of Irrigation year 2016. It will be interesting to see if this trend continues will the expected direct slide from an El Nino to a La Nina (virtually no neutral phase) weather pattern in the next 6 months. The overall April mean flow at the Kersey gage was 2625 cfs or approximately 312 % of the long term mean flow of 842 cfs. The overall April mean flow at the Julesburg gage was 1787 cfs or approximately 348 % of the long term mean flow of 514 cfs.



The above normal precipitation allowed a continuation of the pattern that has been in place since the beginning of Irrigation Year 2016, fewer and more junior than normal calls.

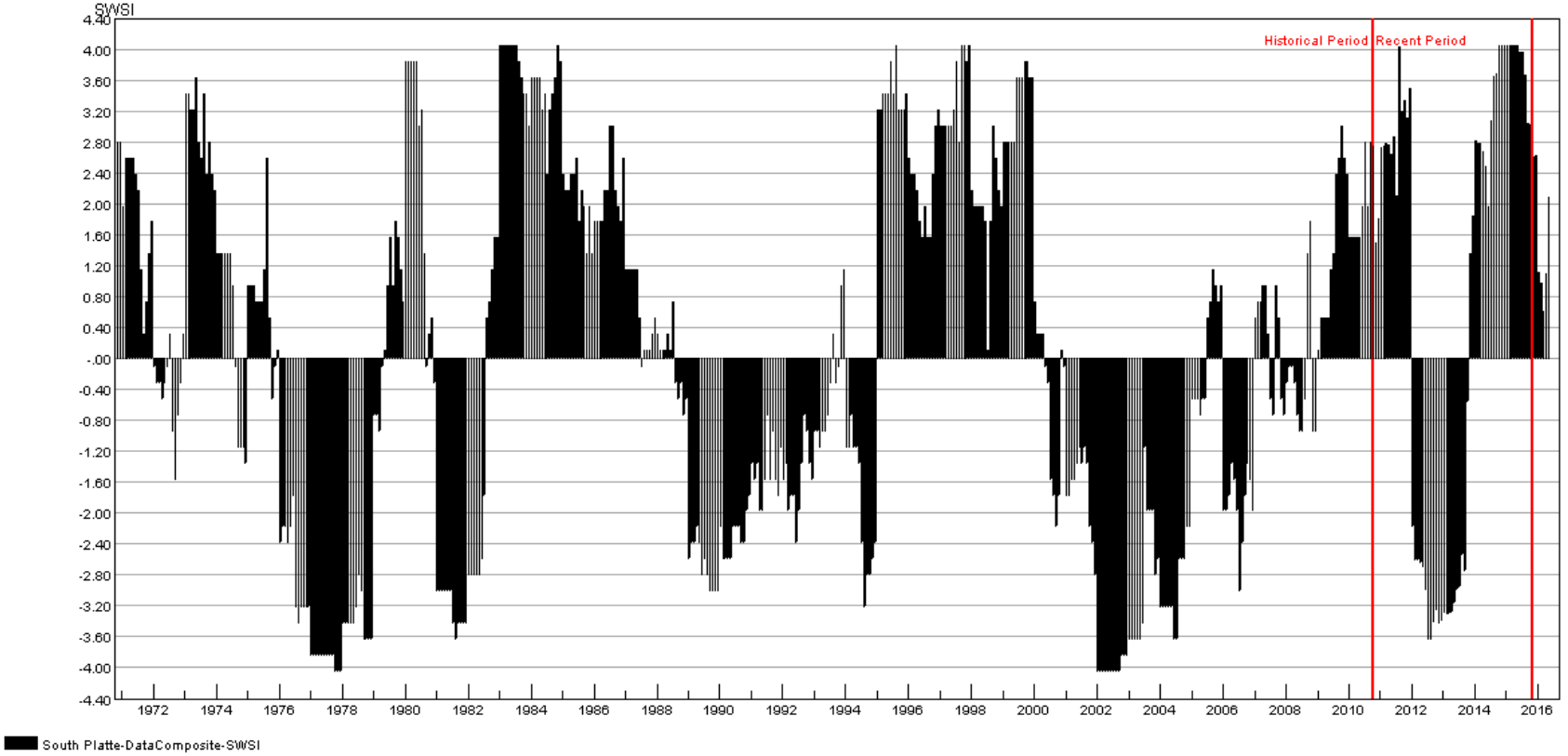
For the seventh month in a row (since October 2015) the South Platte mainstem was under free river conditions for the entire month. Water right calls were being recognized on the Big Thompson River, Boulder Creek, South Boulder Creek, Ralston Creek, and Clear Creek for some portion of April, 2016. However, by the end of April only the Big Thompson River and South Boulder Creek remained under call.

For the 31st month in a row, overall reservoir storage in the South Platte basin by the end of April was above average. The average end of April storage is about 81% of reservoir capacity. The end of April 2016 storage was at about 88% 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 1.8.

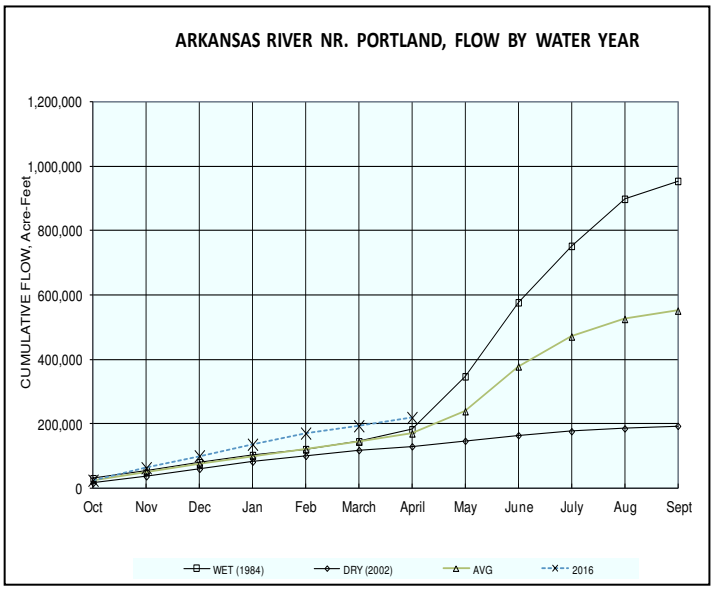
Outlook

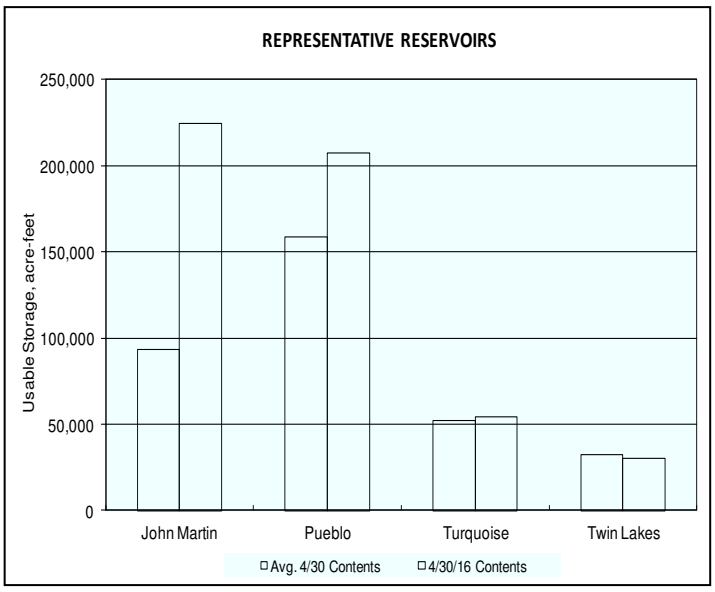
Several Water District 67 ditches called for water from John Martin Reservoir on April 1st; consequently the distribution of conservation storage into accounts per the 1980 Operating Agreement for John Martin Reservoir began on April 1, 2016. Total conservation storage from November 1, 2015 through April 21, 2016 inflowed into accounts in John Martin Reservoir was approximately a net of 42,818 acre-feet, double the amount stored during the same period in the winter of 2014-15.

The mainstem river call at the beginning of the month was the Fort Lyon Canal 3-1-1887 water right from Pueblo Reservoir down to John Martin Reservoir. The call went slightly more junior (6/9/1890 Colorado Canal) as some runoff occurred from low elevation snow mixed with rain.

Administrative/Management Concerns

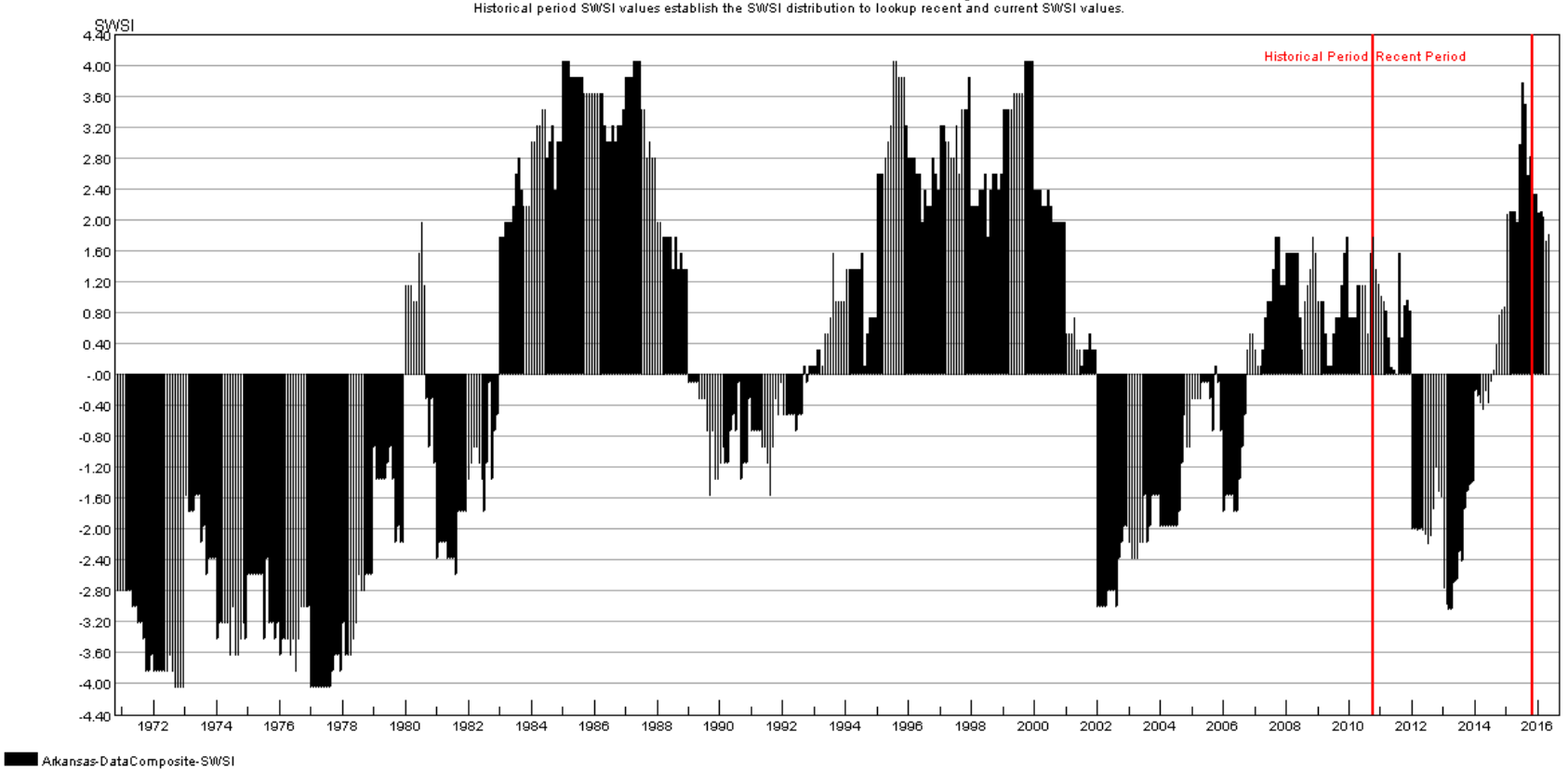
Very similar to 2015, April began with concerns about falling or stagnant snowpack levels, however snow events during the month pushed the snowpack up to normal.





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 -0.7. Flow at the gaging station Rio Grande near Del Norte averaged 1030 cfs (144% of average). The Conejos River near Mogote had a mean flow of 252 cfs (89% of average). Flow to the state line was 69% of normal as upstream diversions for irrigation needs started up.

Warm temperatures in the first half of April produced an early melt in parts of the upper Rio Grande basin. Fortunately, temperatures cooled and a substantial amount of snow fell on the Valley floor during two storms in April. The snowfall didn't coat the mountain areas as extensively. However, there was enough snowfall to bring the basinwide snowpack back to average by the end of the month, a very welcome outcome.

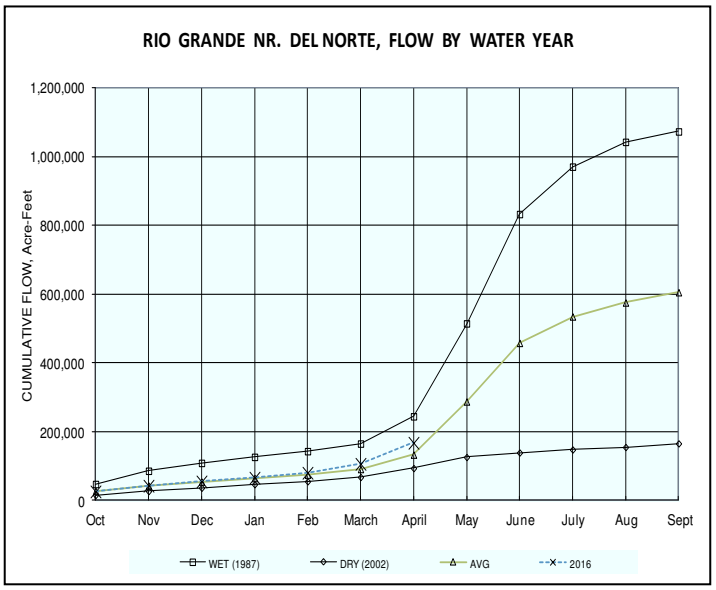
Alamosa received precipitation totaling 1.75 inches during April, 1.16 inches above normal.

Outlook

NRCS forecasts are now predicting April through September runoff to be 86% of average on the Rio Grande near Del Norte and 77% for the Conejos near Mogote. Other drainages of particular concern are the Alamosa River (75%), Saguache Creek (106%), and the eastern side of the basin where runoff from Sangre de Cristo Range Creeks is expected to be in range of 77 to 92% of the long-term average.

Based on these forecasts, with the exception of the northern part of the San Luis Valley, water users in the basin who are reliant on stream flow for irrigation and stock watering needs should expect limited availability.

The National Weather Service is still predicting a good chance for better than average precipitation the next three months but then a turn to very dry conditions.

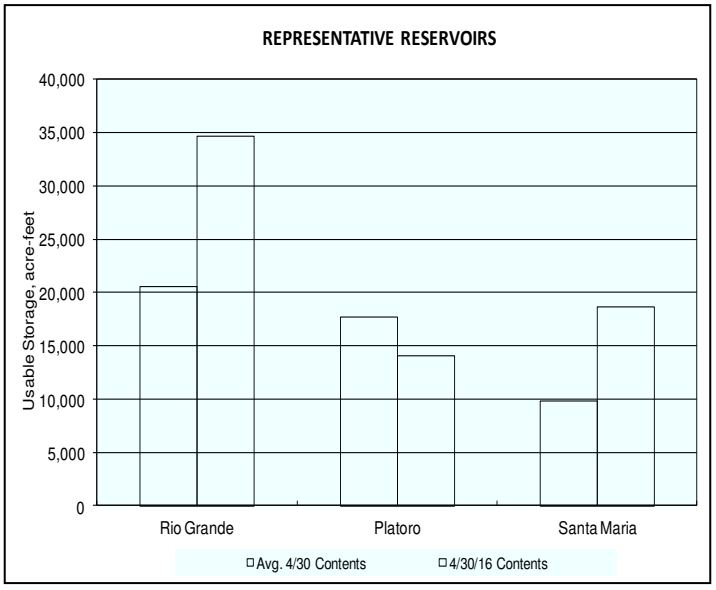


Administrative/Management Concerns

The 2016 irrigation season is underway in Water division 3. Water rights were curtailed slightly during April on the Rio Grande and the Conejos to assist in Rio Grande Compact delivery requirements.

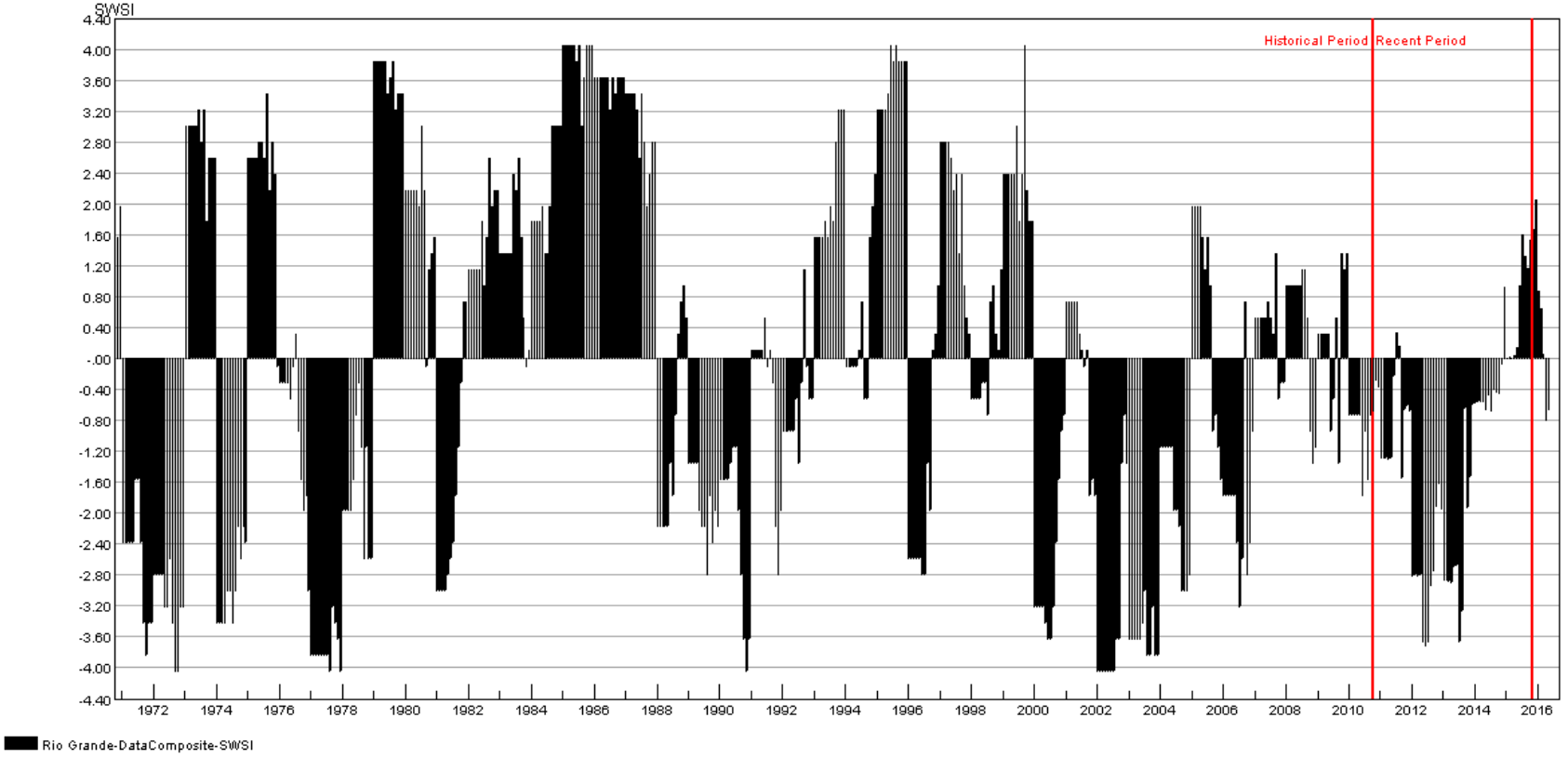
Public Use Impact

The short term runoff should be near average levels, but the anticipated low late summer stream flow will adversely affect the farming, ranching, and recreational industries in the basin. Reservoir storage is generally low in this basin and will be depleted even further if hot and dry summer conditions occur.



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 0.1. The weather pattern shifted in mid April and brought the Gunnison basin some much needed precipitation. In fact, the last two weeks of April were wet enough to bring most of the basin to between 110-130% of average precipitation for the month. Areas in the lower Uncompahgre River basin received less moisture and areas in the Taylor River and Tomichi drainages received considerably more at close to 200% of the average. In last month's report it was stated that snow water equivalent (SWE) peaked around the average time between April 8th – 16th. Storms during the latter part of April, however, resulted in a later peak that equaled or exceeded the previous peak at some Snotel sites in early May. In fact, the Park Reservoir site actually didn't peak until May 10th and ended up at 106% of the 30 year median.

Outlook

Again, the National Weather Service 90-day climate forecast, which includes May through July, places the Gunnison basin within an area expected to receive above average precipitation. The outlook for temperatures, however, has shifted to equal chances of above or below average during the same time period. Colorado Basin River Forecast Center (CBRFC) April to July runoff forecasts predict greater than 80% of the median runoff for almost all Gunnison basin streams. Surface Creek contains the highest forecasted runoff, as a percent of the median, with 114% of the median forecast.

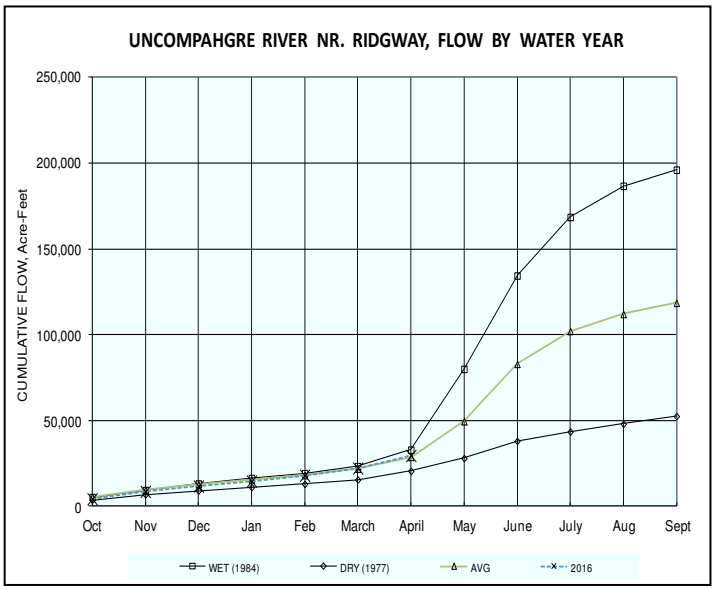
Administrative/Management Concerns

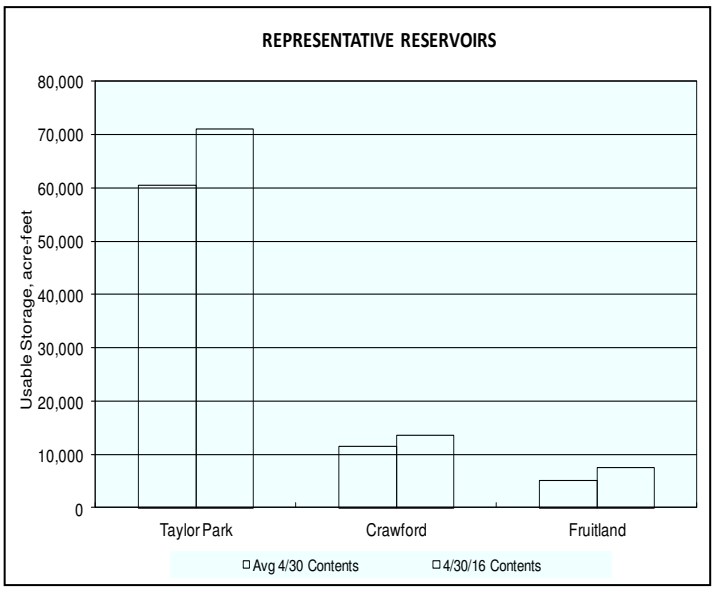
Taylor Park continues to accrue second fill water and contains nearly 35,000 acre-feet on April 1st. Given the decent snowpack conditions and cooler weather, which delayed the runoff and reduced early irrigation demand, most reservoirs in the Gunnison basin, including Taylor Park, should fill this spring.

May 1st forecasted inflows to Blue Mesa landed at 525,000 acre-feet. This is important because the May 1st forecast determines both the Black Canyon Reserve water right peak flow target and Aspinall Unit ROD flow targets. As such, the Black Canyon NP reserve water right one-day peak flow target is 3,349 cfs. This inflow amount corresponds to an average dry year type in the Aspinall Unit ROD, and sets the Whitewater flow target at 8,070 cfs for 10-days. In an attempt to meet these targets the USBR will be ramping up releases from Crystal Dam starting May 11th, with the peak release from Crystal Dam planned for 10 days starting May 17th at around 6,000 cfs. Accomplishing this release rate requires a spill at Crystal Dam, but not at Morrow Point or Blue Mesa. Also, accomplishing this release rate for up to 10-days will likely prevent Blue Mesa Reservoir from filling during 2016.

Public Use Impacts

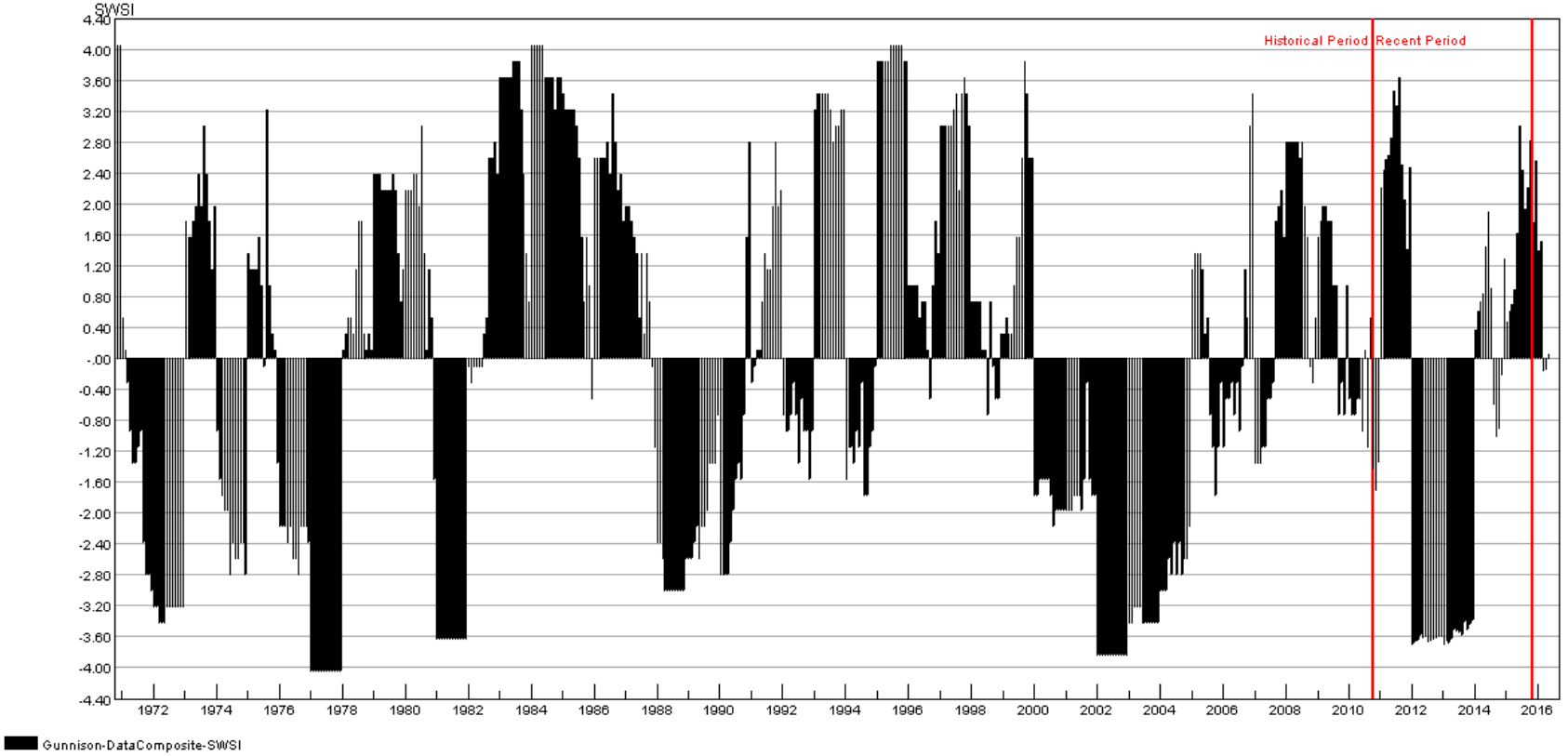
The road to the East Portal of the Gunnison Tunnel, which is the only access to the blue ribbon trout fishing in the Gunnison River between Crystal Dam and the Black Canyon National Park, opened for the season in mid-April to much excitement. It appears that the USBR will attempt to meet peak flow targets in on May 17th this year, which will result in lower flows during the stone fly hatch in early June. This is the most popular time for guided fly-fishing tours of the Gunnison Gorge so naturally the boating and guiding industry are anticipating a great year in 2016.





Gunnison Basin SWSI History

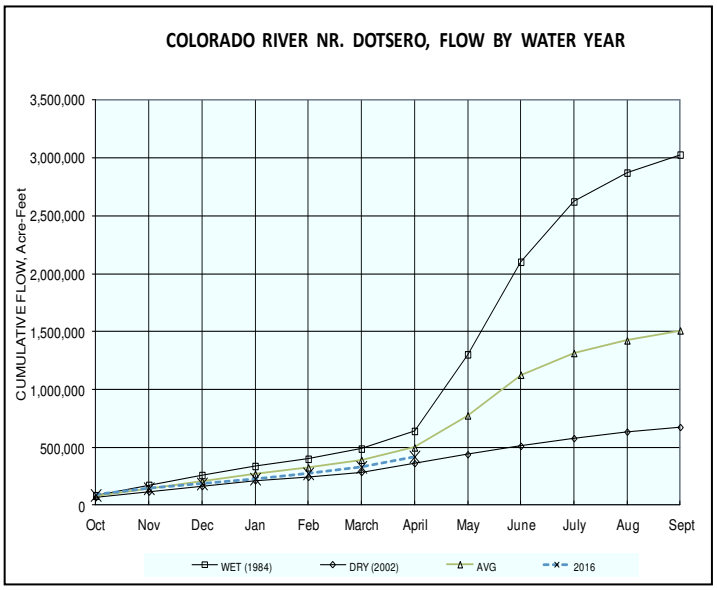
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.



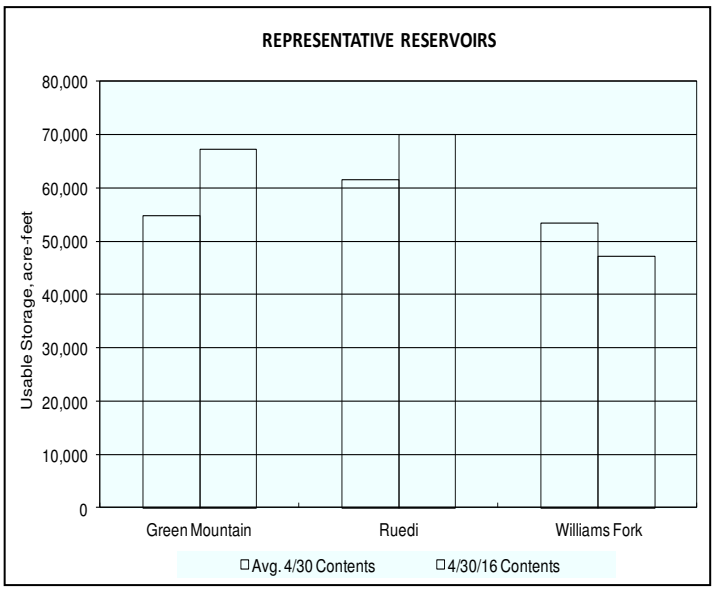
Basinwide Conditions Assessment
The SWSI value for the month was -0.6.

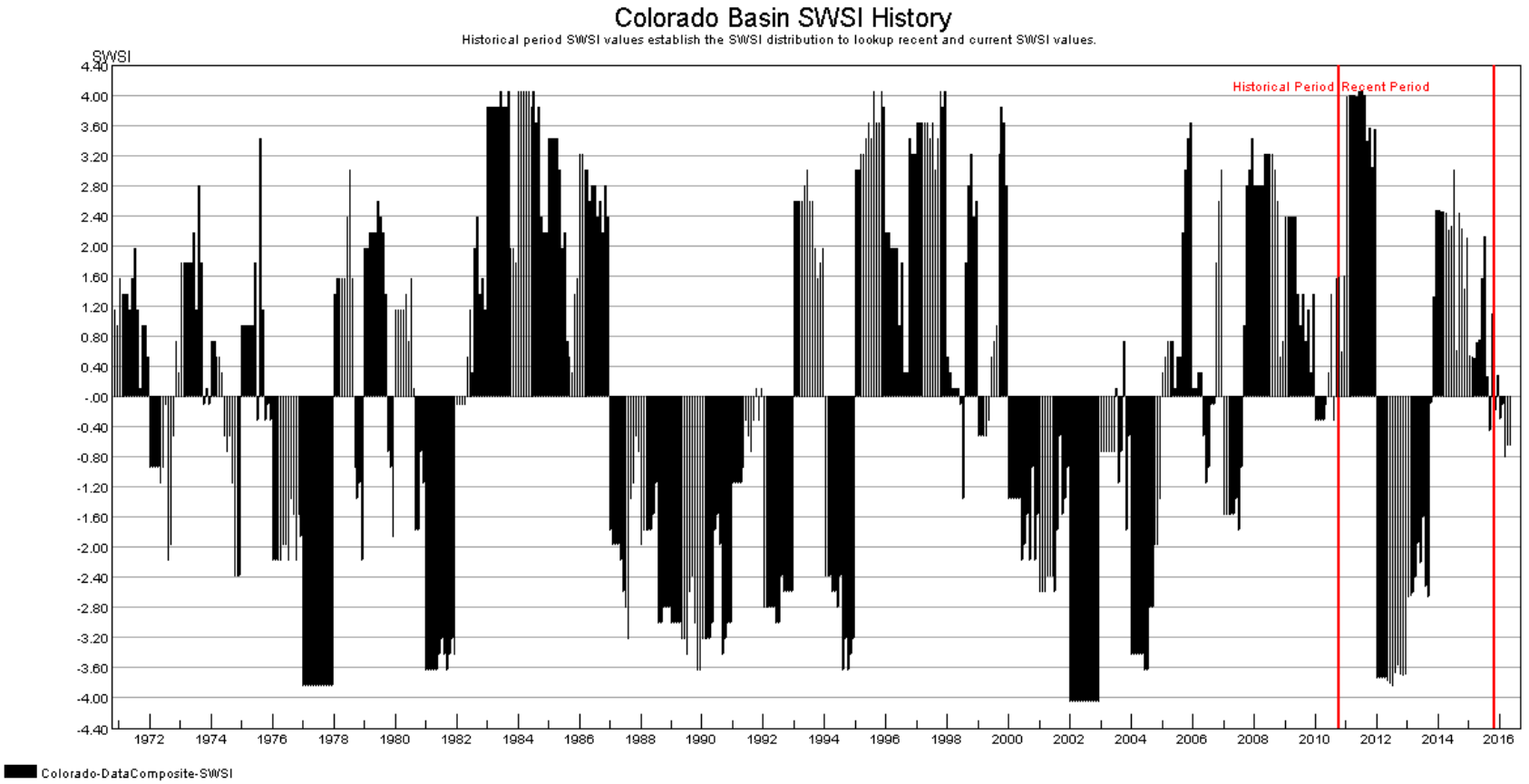
Outlook
Colorado River flows are running about average. Roaring Fork and Eagle River flows likely to remain consistent at below average to average throughout May. As of May 1st, Upper Colorado River Basin snowpack was up to 115 percent from 109 percent of median snow water equivalent last month and 102 percent from 102 percent of average precipitation. The Roaring Fork River Basin was up to 107 percent from 96 percent of median snow water equivalent last month and 91 from 89 percent of average precipitation. Below average temperatures and above normal precipitation are forecast for May.

Administrative/Management Concerns
There is currently no call on the Colorado River. Green Mountain Reservoir releases are increasing as inflows are increasing, matching releases from Dillon Reservoir. Wolford Mountain is releasing to meet the CWCB minimum flow below Wolford Reservoir, as they do when a fill is likely. Ruedi Reservoir is also increasing outflows. Grand Valley Irrigation diversions (Government Highline/Orchard Mesa Irrigation, Grand Valley Irrigation canals) are running at or near full capacity.



Public Use Impacts
The city of Aspen is considering an agreement with the Colorado Water Trust to forego some diversions from the Roaring Fork River into the Wheeler Ditch for up to 5 out of the next 10 years to boost low flows in the river. This would add water to a critical reach of the river downstream of the Salvation Ditch headgate to the confluence of Castle Creek with the Roaring Fork.




Colorado Basin SWSI History
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.
SWSI
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
Historical Period
Recent Period
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Colorado-DataComposite-SWSI

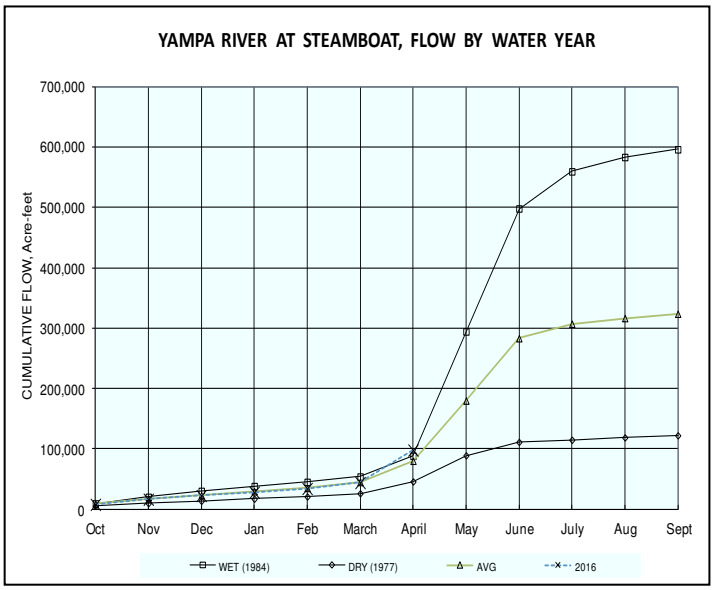
Basinwide Conditions Assessment

The SWSI value for the month was -0.4. April precipitation was 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 127% of average for the combined 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 April was 104%.

Snowpack for the combined basins stands at 114%. The snow water equivalent (SWE) as of April 30, 2016 was 120% of average for the North Platte River basin and 120% of average for the Yampa River basin and White River basin.

NRCS predicts above average to below average spring and summer streamflows in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the May through July period are 126% of average for the North Platte River near Northgate, 101% of average for the Yampa River near Maybell, 95% of average for the Little Snake River near Lily, and 80% of average for the White River near Meeker

All gages in Division 6 are currently open.



Outlook

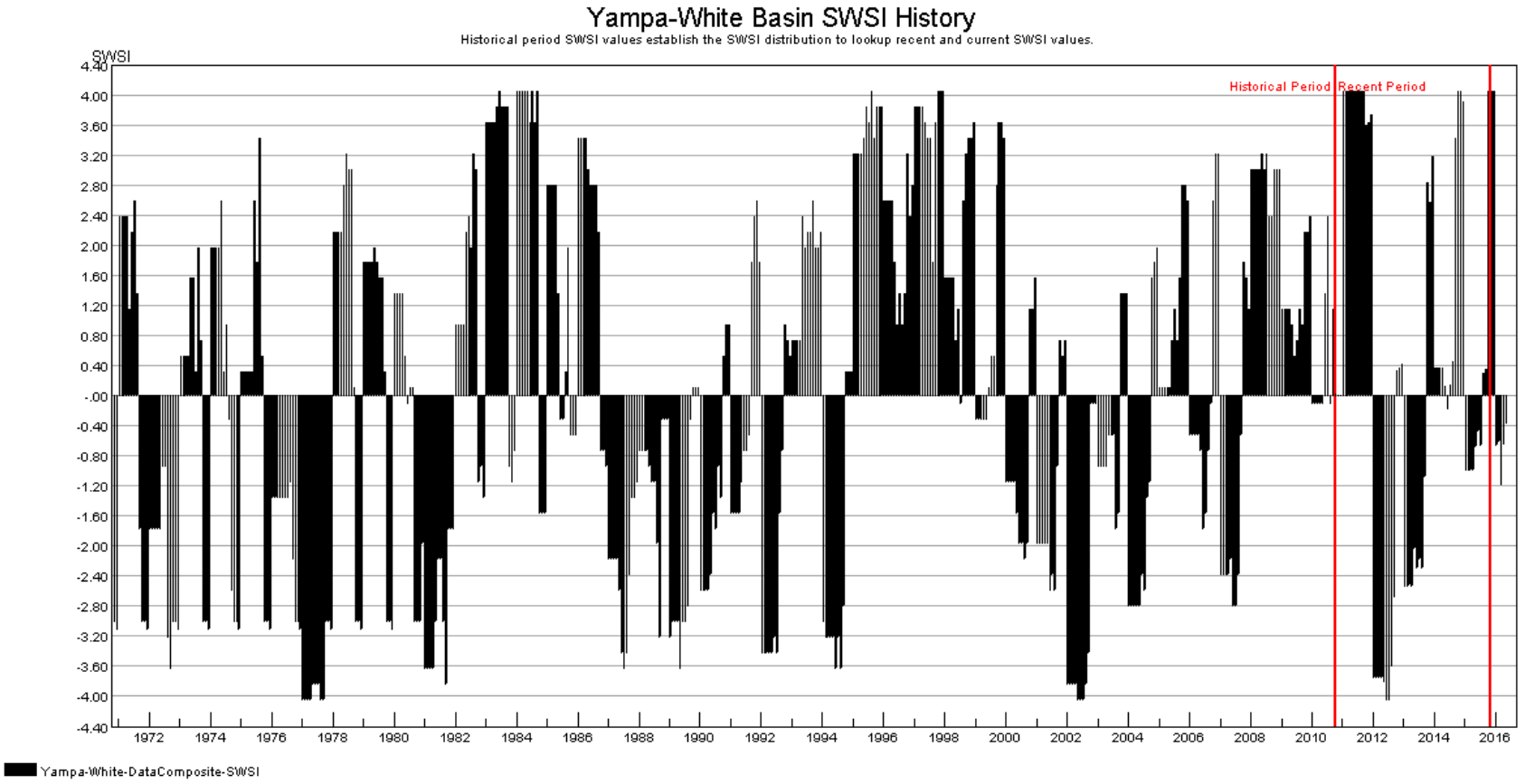
As of April 30th Fish Creek Reservoir was storing approximately 2,943 AF, 71% of capacity. The capacity of Fish Creek Reservoir is 4,167 AF. Yamcolo Reservoir was storing 7,600 AF at the end of April 2016. The capacity of Yamcolo Reservoir is 8,700 AF. On April 30th, 2016, Stagecoach Reservoir was storing 35,500 AF which is 97% of capacity. On April 30th, Elkhead Creek Reservoir was 71% full and storing 17,585AF.

Water stored in Fish Creek Reservoir is used primarily for municipal purposes, Water stored in Yamcolo Reservoir is used for irrigation purposes. Elkhead Creek Reservoir is used 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

At Steamboat Lake State all snowmobile and cross country trail poles have been pulled and grooming is done for the year. Ice on the lake is starting to grey up along the edges. Willow Creek and Dutch Hill inlet have opened and fishermen are doing OK at those locations. June 1st is the target date for opening the beach.

At Stagecoach Reservoir State Park the North/Marin boat ramp opened May 1st and is now open to boating as all ice has melted. Campgrounds will open May 15th. Shore fishing is reported as “good as ever”. The swimbeach is scheduled to open May 27th.

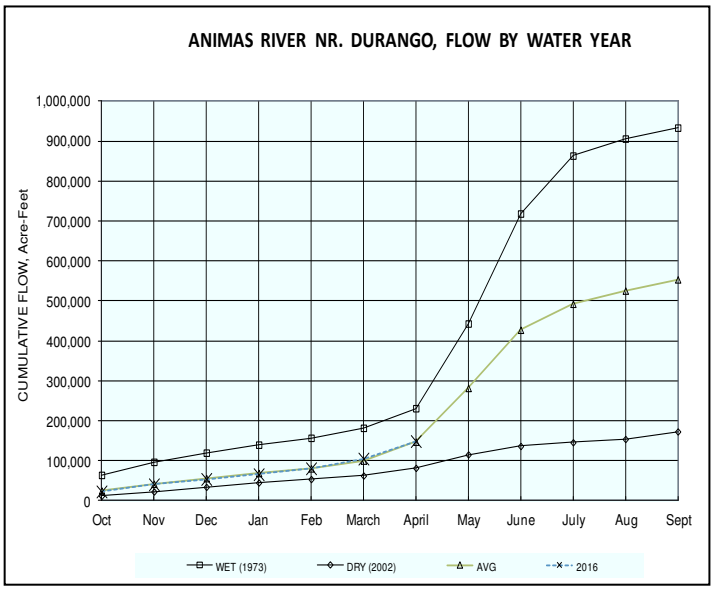

Yampa-White Basin SWSI History
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.
SWSI
Historical Period
Recent Period
4.40
4.00
3.60
3.20
2.80
2.40
2.00
1.60
1.20
0.80
0.40
-.00
-0.40
-0.80
-1.20
-1.60
-2.00
-2.40
-2.80
-3.20
-3.60
-4.00
-4.40
1972
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

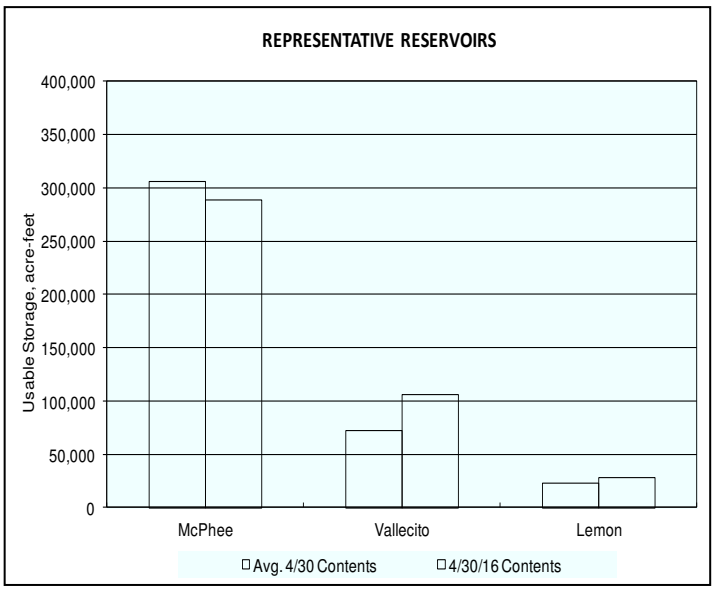
Basinwide Conditions Assessment

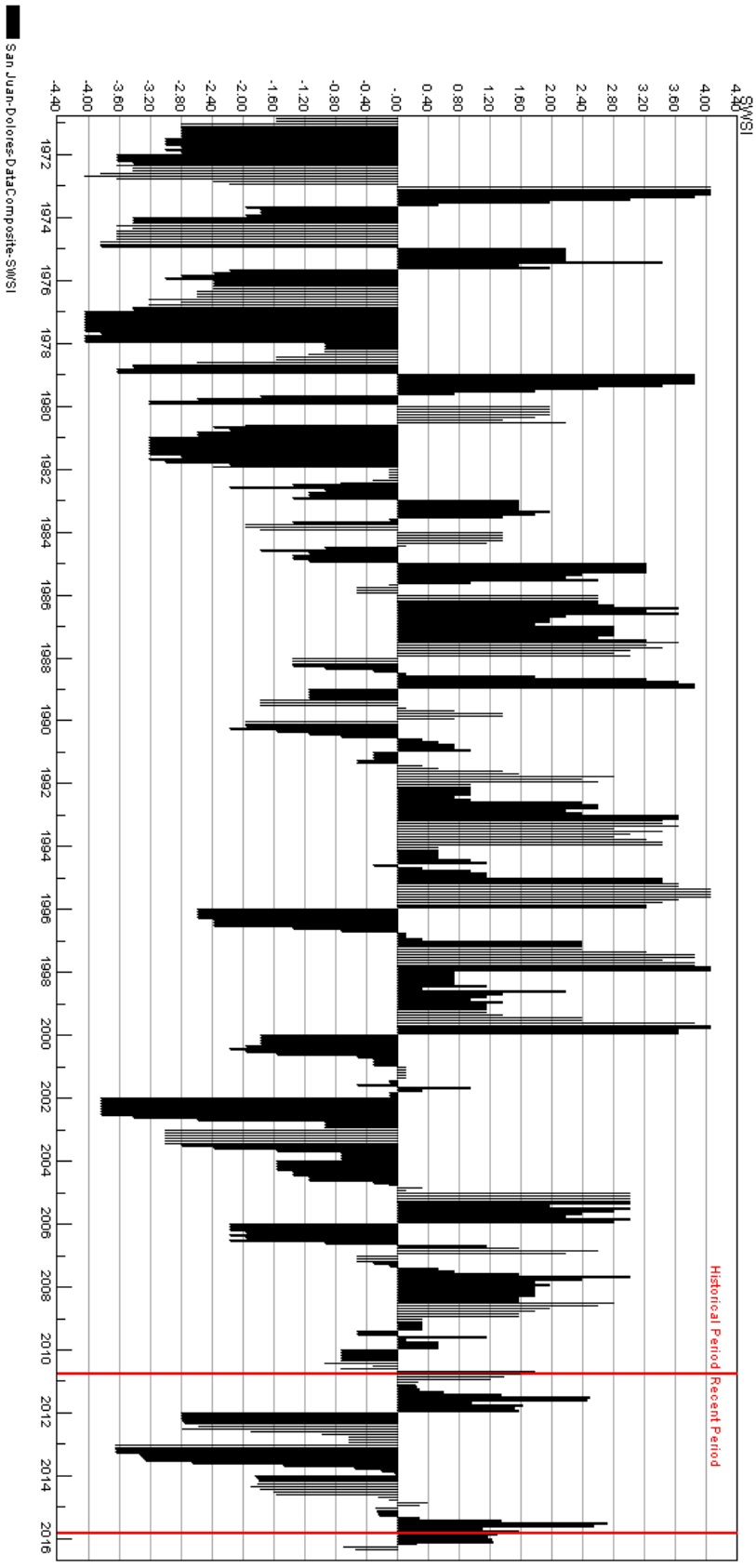
The SWSI value for the month was -0.5. Flow at the Animas River at Durango averaged 737 cfs (88% of average). The flow at the Dolores River at Dolores averaged 617 cfs (84% of average). The La Plata River at Hesperus averaged 47.5 cfs (60% of average). Precipitation in Durango was 1.40 inches for the month, 100% of the 30-year average of 1.41 inches. Precipitation was the 42nd highest amount recorded in April, in Durango, out of 122 years of record. Precipitation to date in Durango, for the water year, is 11.98 inches, 106% of the 30-year average of 11.26 inches. End of last month precipitation to date, for the water year was 107% of average. The average high and low temperatures for the month of April in Durango were 62o and 31o. In comparison, the 30-year average high and low for the month is 63o and 31o. At the end of the month Vallecito Reservoir contained 105,685 acre-feet compared to its average content of 66,322 acre-feet (159% of average). McPhee Reservoir was up to 288,701 acre-feet compared to its average content of 307,246 (94% of average), while Lemon Reservoir was up to 27,880 acre-feet as compared to its average content of 23,040 acre-feet (121% of average).

Outlook

Precipitation (1.40 inches) was average for April in Durango. There were 42 years out of 122 years of record where there was more precipitation than this year. Rivers within the basin were flowing below average for the month. There were only 58 out of 105 years of record where the total flow past the Animas River at Durango stream gauge was more than this year. There were 59 out of 105 years of record where the total flow past the Dolores stream gauge was more than this year and 77 out of 99 years of record where the total flow past the La Plata River at Hesperus gauge was more than this year. On April 30, the NRCS SNOTEL sites reported an average snow-water equivalent within the basin at 87%. End of last month the snow-water-equivalent was 80%.

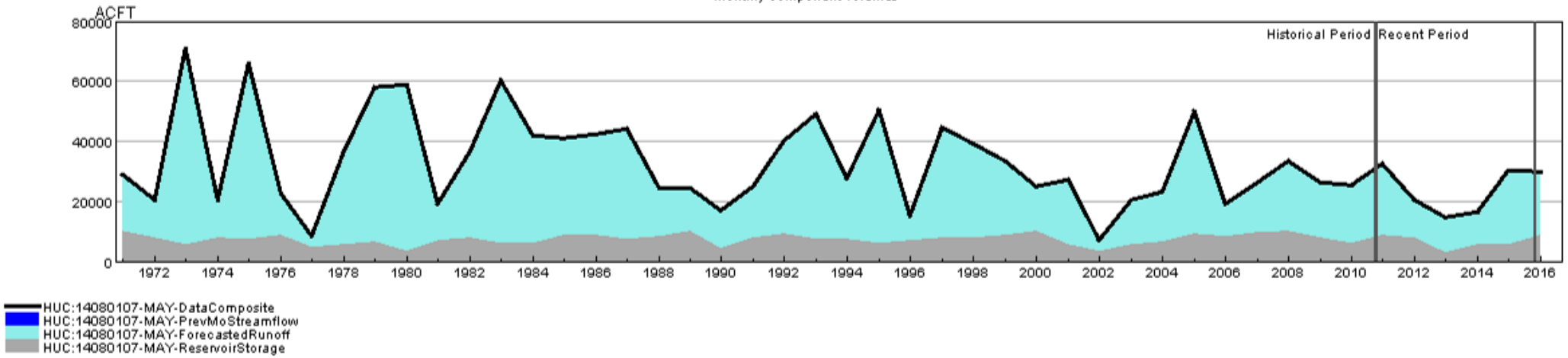





San Juan-Dolores Basin SWSI History
Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.
SWSI
4.40
4.00
3.60
3.20
2.80
2.40
2.00
1.60
1.20
0.80
0.40
.00
-0.40
-0.80
-1.20
-1.60
-2.00
-2.40
-2.80
-3.20
-3.60
-4.00
-4.40
1972
1974
1976
1978
1980
1982
1984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

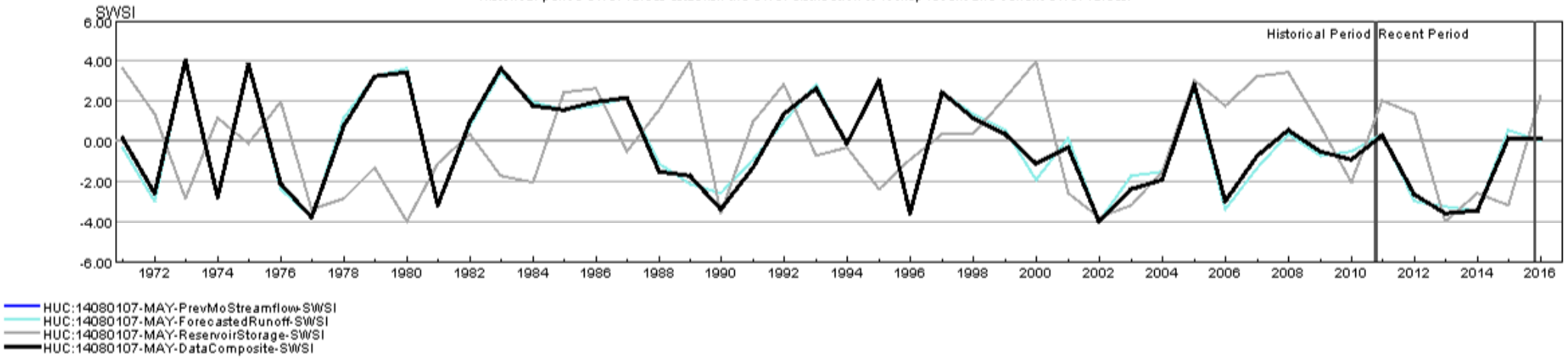
HUC 14080107 (Mancos) Surface Water Supply - MAY

Monthly component volumes



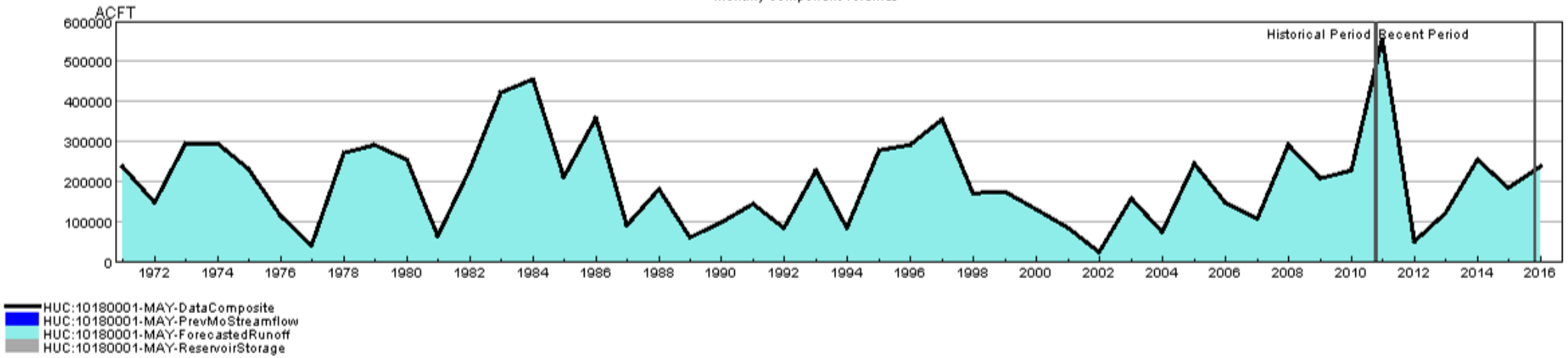
HUC 14080107 (Mancos) SWSI Values - MAY

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



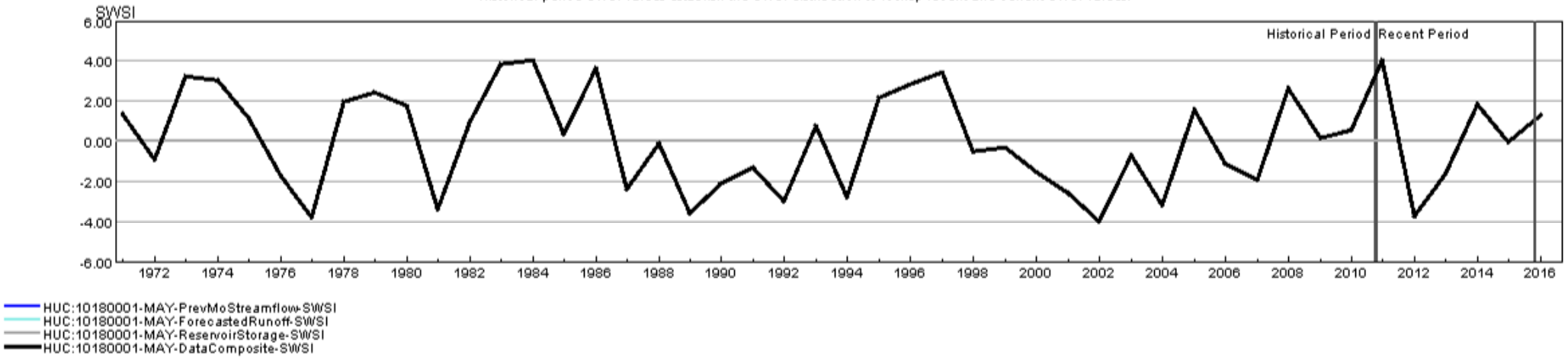
HUC 10180001 (North Platte Headwaters) Surface Water Supply - MAY

Monthly component volumes



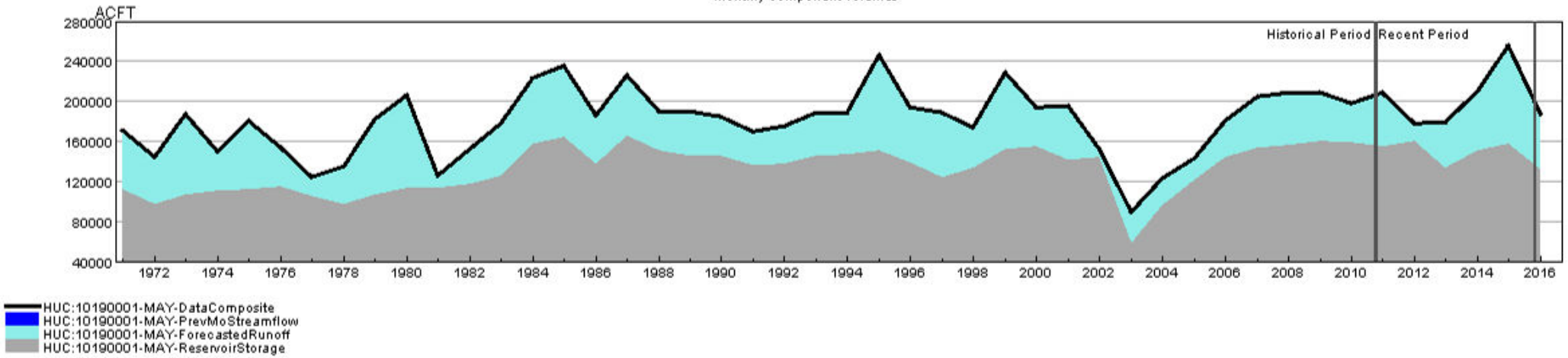
HUC 10180001 (North Platte Headwaters) SWSI Values - MAY

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



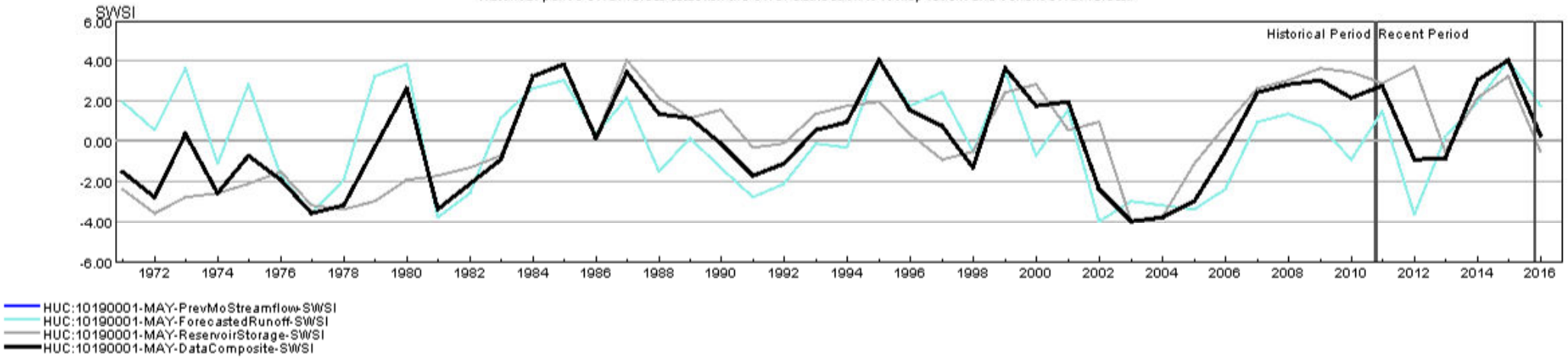
HUC 10190001 (South Platte Headwater) Surface Water Supply - MAY

Monthly component volumes



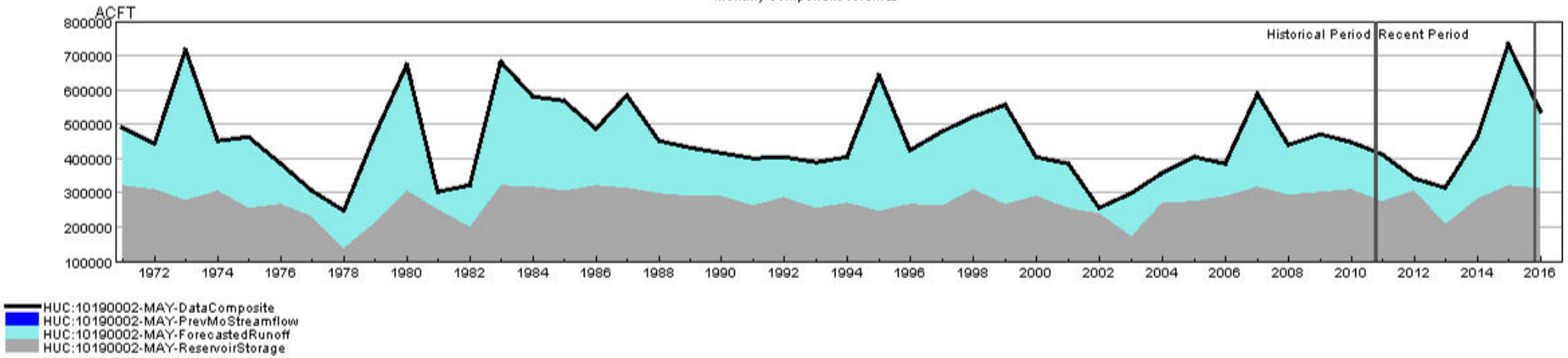
HUC 10190001 (South Platte Headwater) SWSI Values - MAY

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



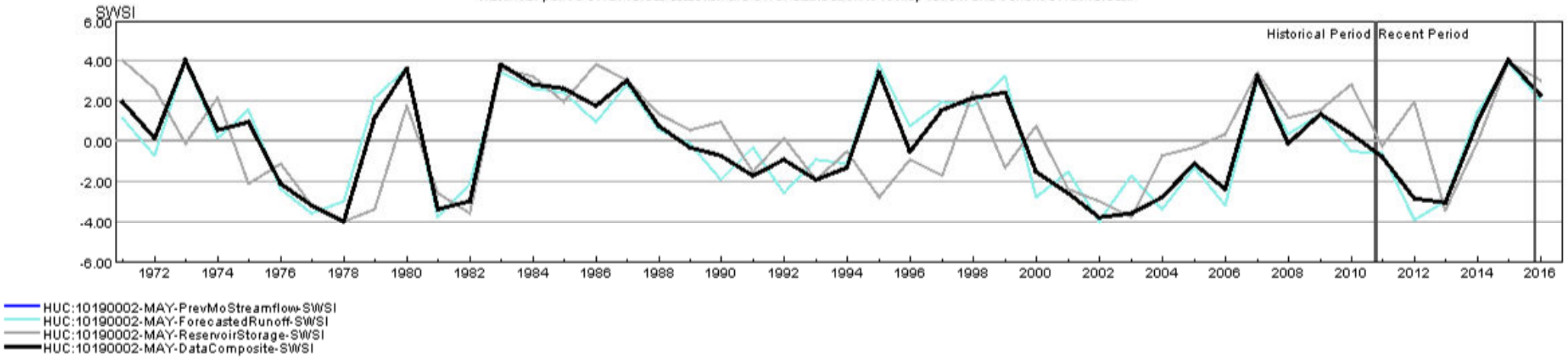
HUC 10190002 (Upper South Platte) Surface Water Supply - MAY

Monthly component volumes



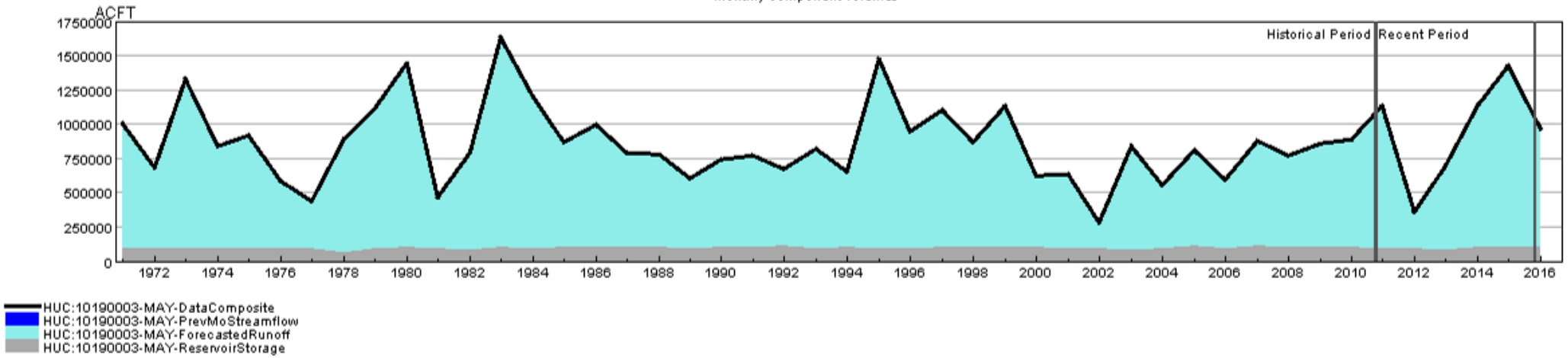
HUC 10190002 (Upper South Platte) SWSI Values - MAY

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



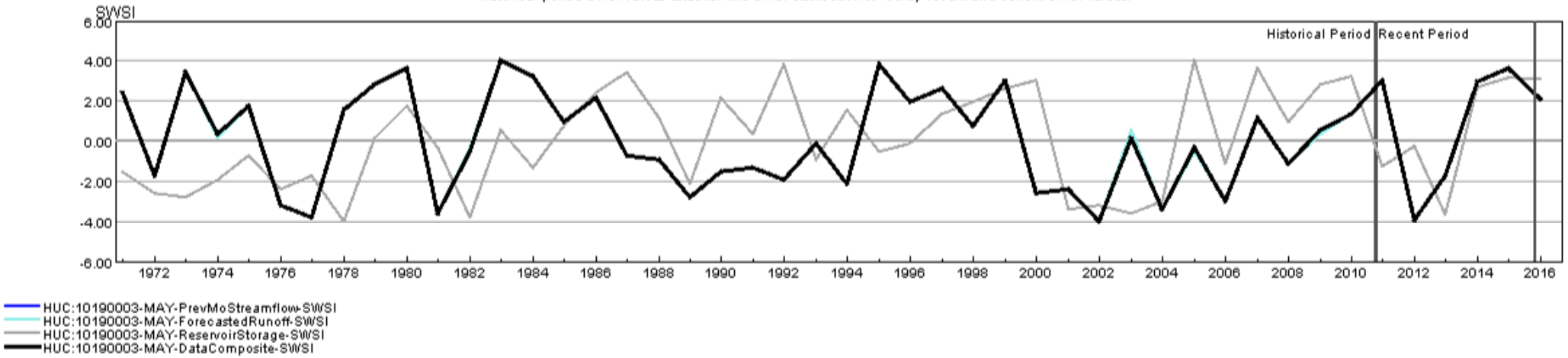
HUC 10190003 (Middle South Platte-Cherry Creek) Surface Water Supply - MAY

Monthly component volumes



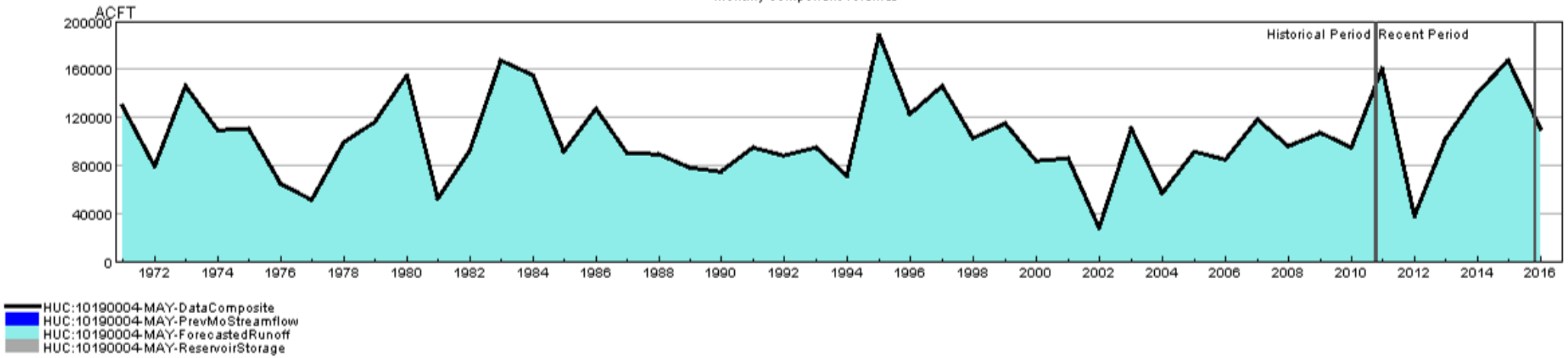
HUC 10190003 (Middle South Platte-Cherry Creek) SWSI Values - MAY

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



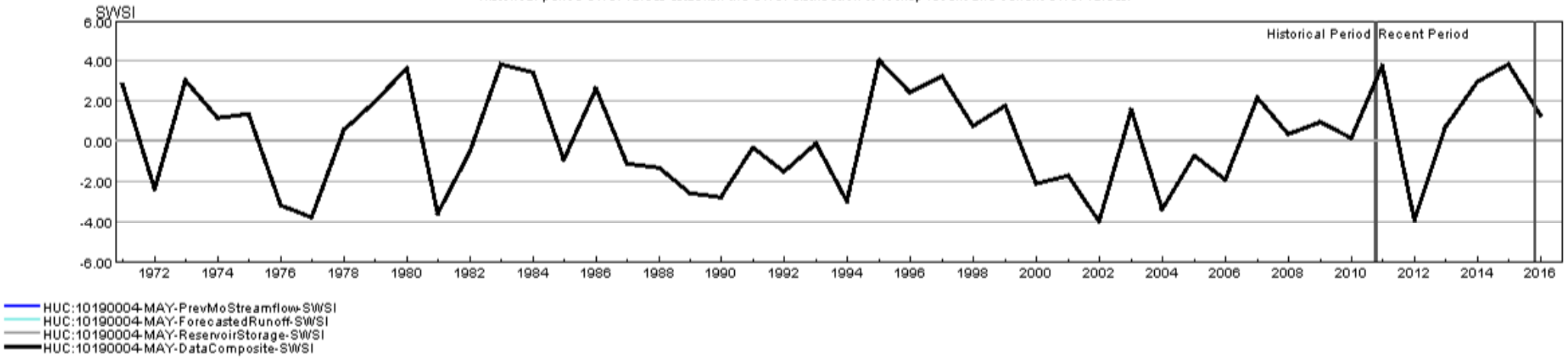
HUC 10190004 (Clear) Surface Water Supply - MAY

Monthly component volumes



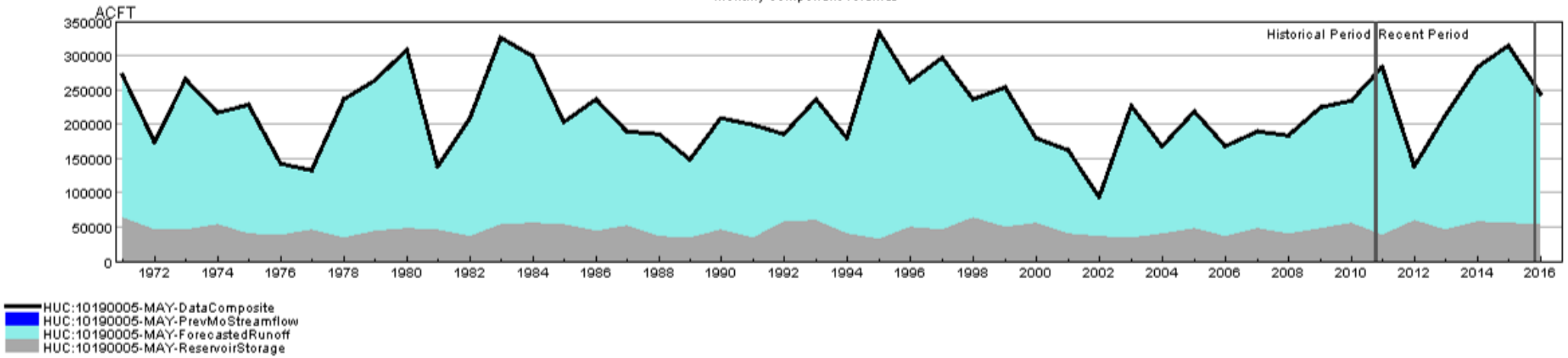
HUC 10190004 (Clear) SWSI Values - MAY

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



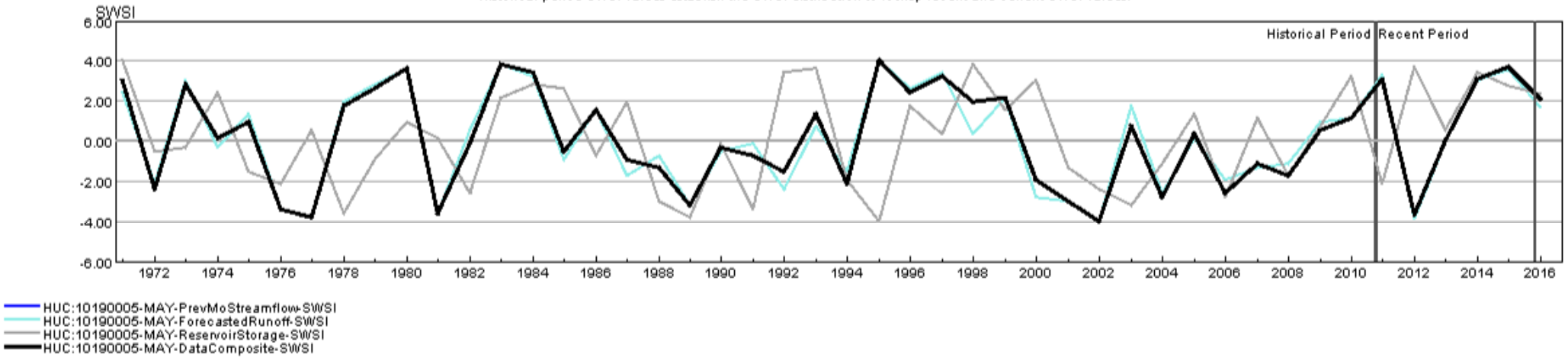
HUC 10190005 (St. Vrain) Surface Water Supply - MAY

Monthly component volumes



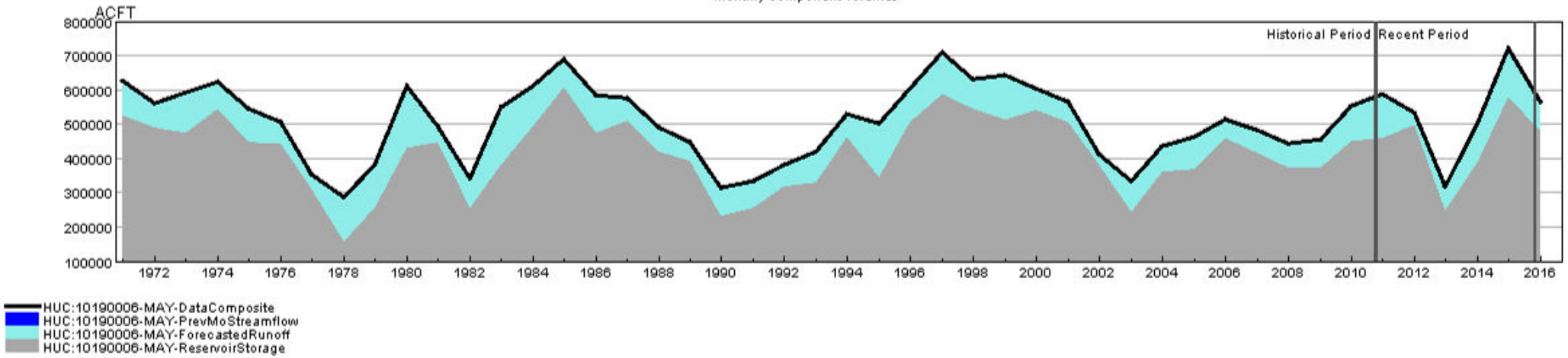
HUC 10190005 (St. Vrain) SWSI Values - MAY

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



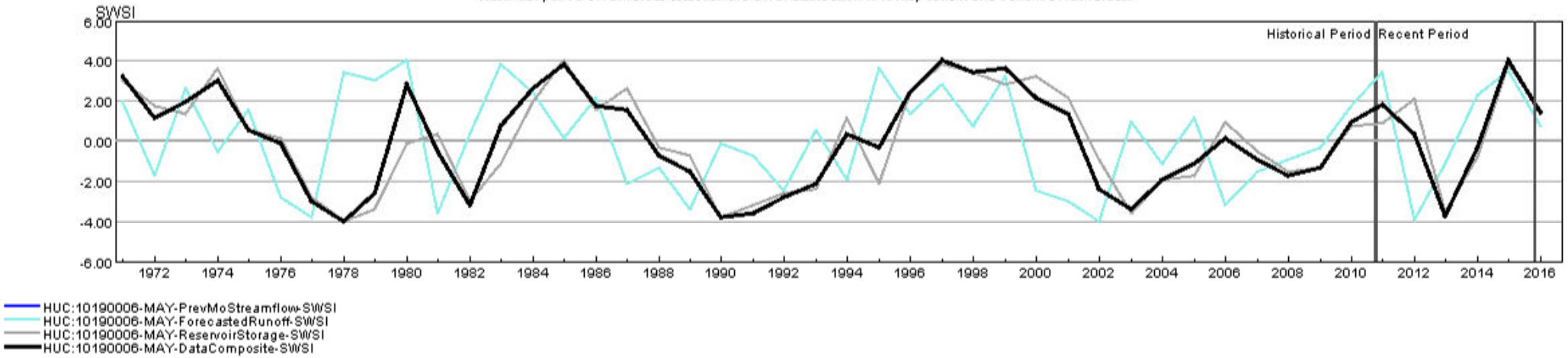
HUC 10190006 (Big Thompson) Surface Water Supply - MAY

Monthly component volumes



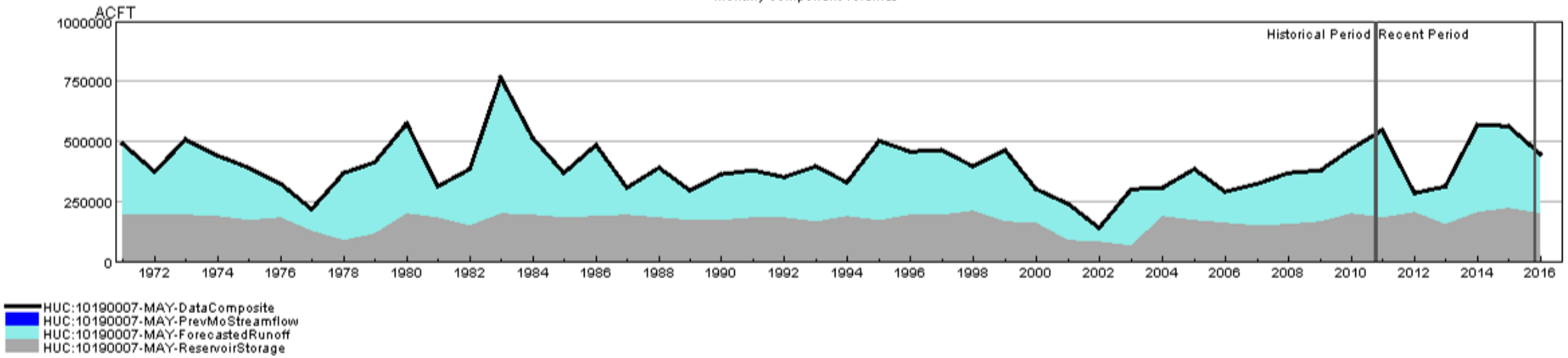
HUC 10190006 (Big Thompson) SWSI Values - MAY

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



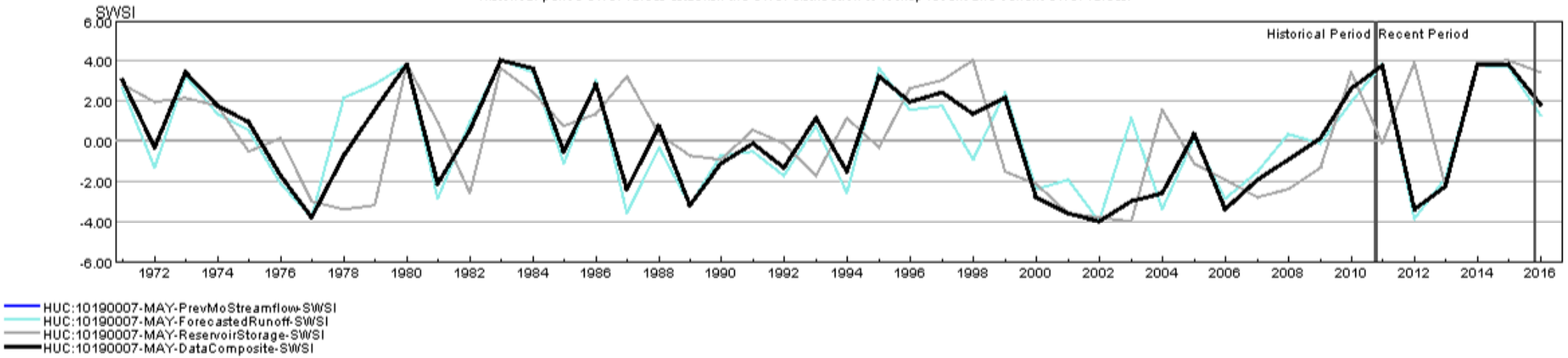
HUC 10190007 (Cache La Poudre) Surface Water Supply - MAY

Monthly component volumes



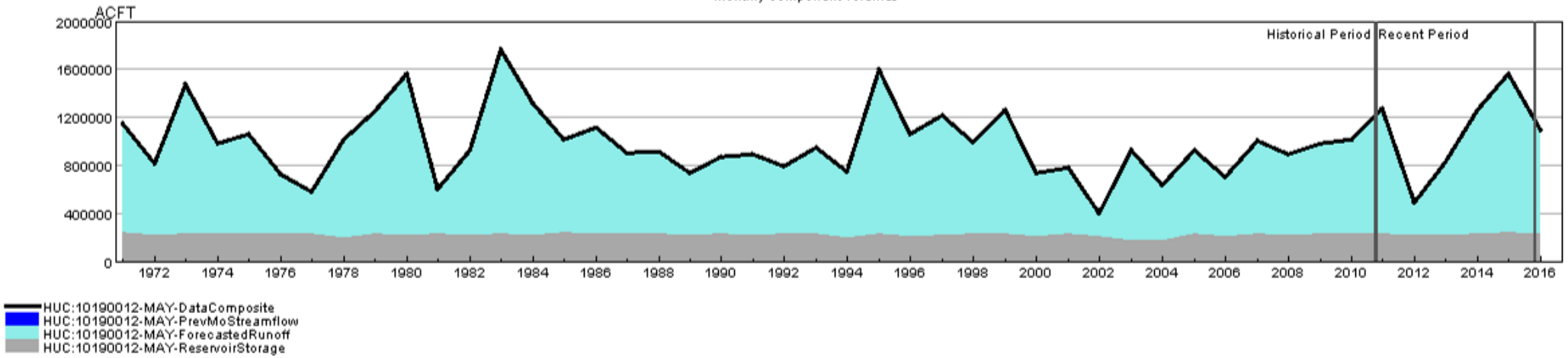
HUC 10190007 (Cache La Poudre) SWSI Values - MAY

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



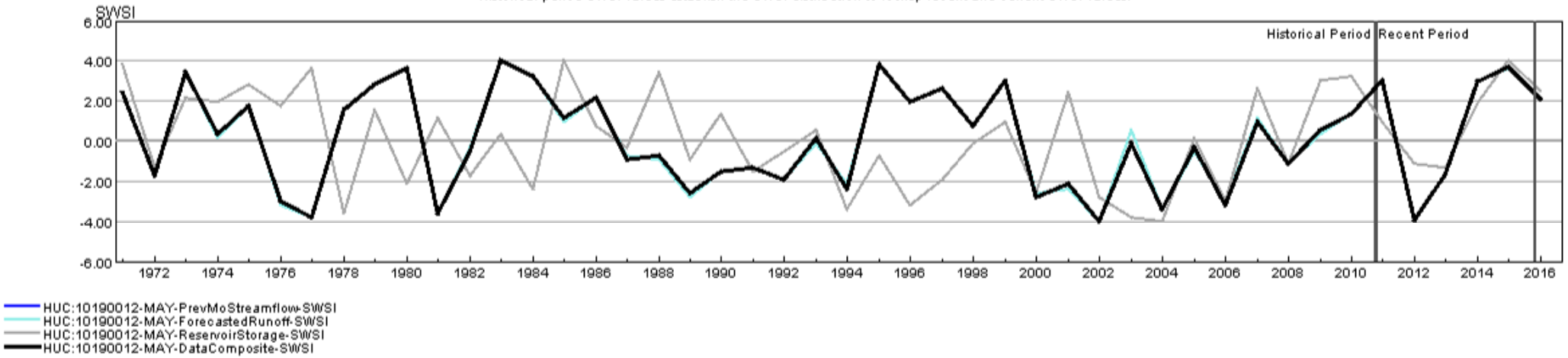
HUC 10190012 (Middle South Platte-Sterling) Surface Water Supply - MAY

Monthly component volumes



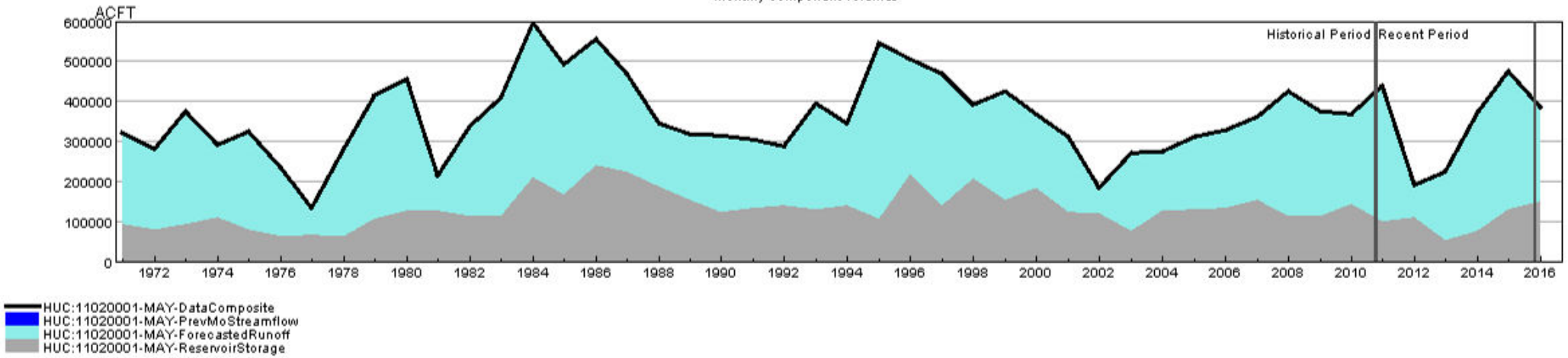
HUC 10190012 (Middle South Platte-Sterling) SWSI Values - MAY

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



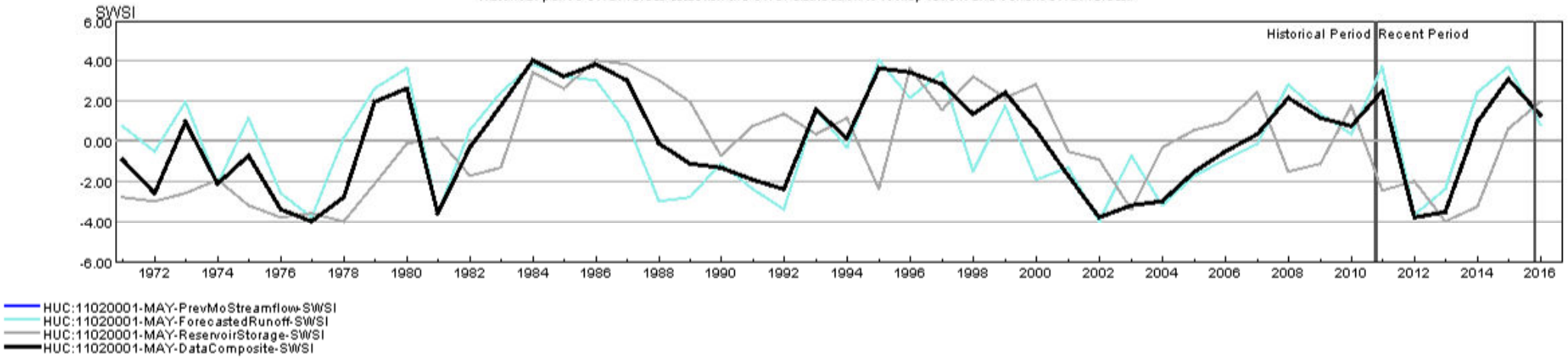
HUC 11020001 (Arkansas Headwaters) Surface Water Supply - MAY

Monthly component volumes



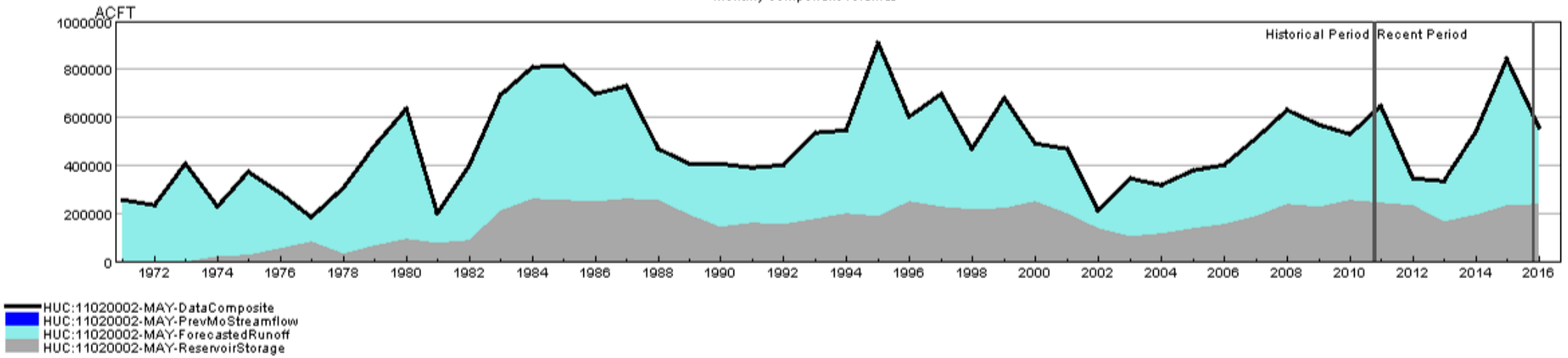
HUC 11020001 (Arkansas Headwaters) SWSI Values - MAY

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



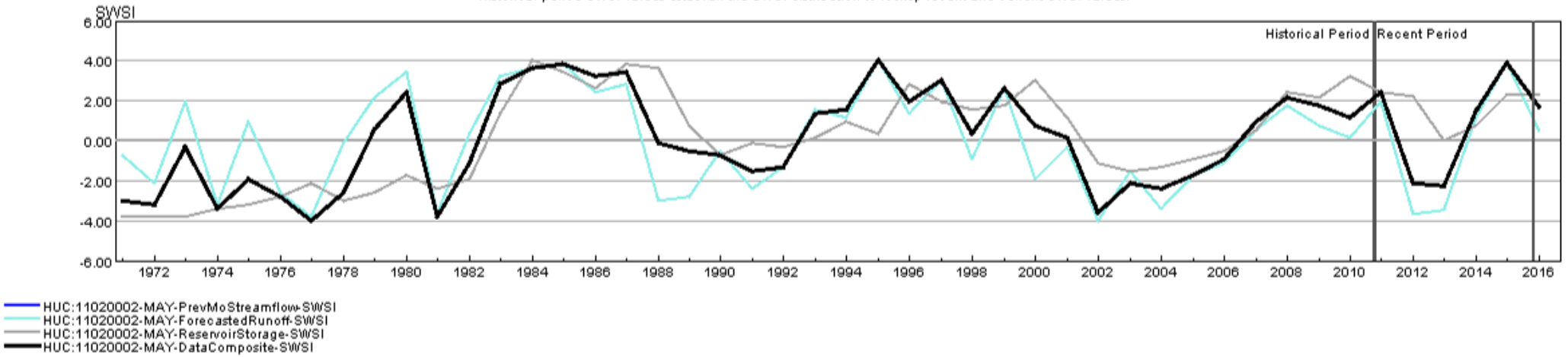
HUC 11020002 (Upper Arkansas) Surface Water Supply - MAY

Monthly component volumes



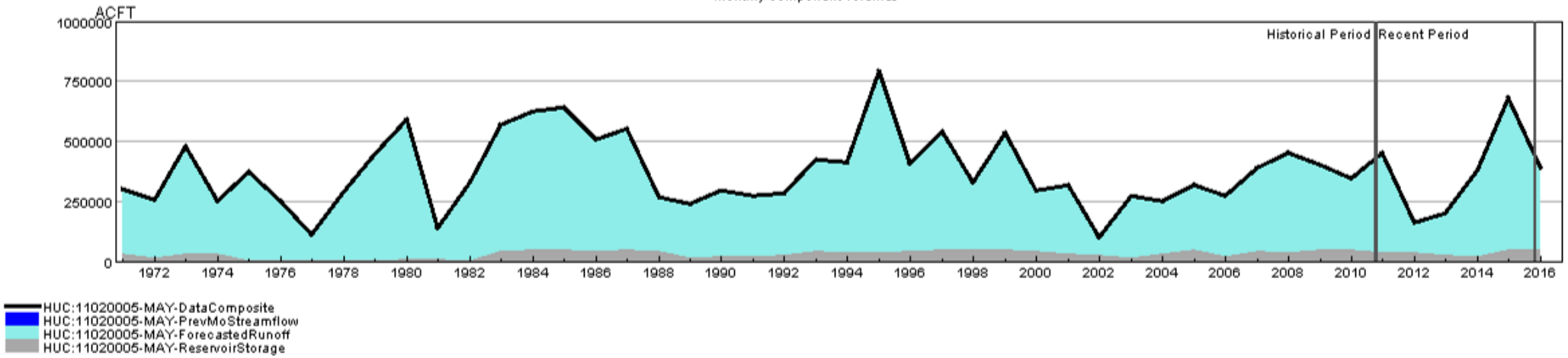
HUC 11020002 (Upper Arkansas) SWSI Values - MAY

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



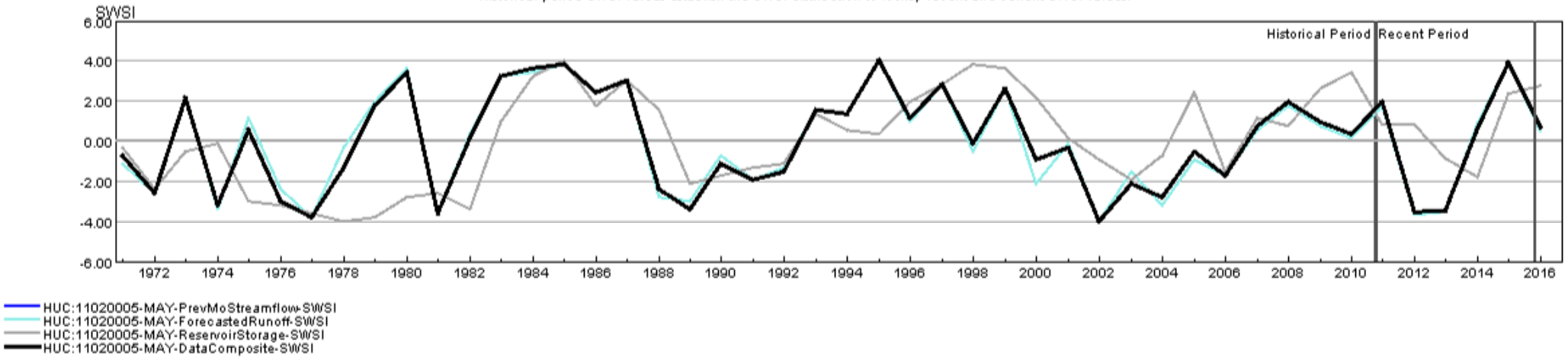
HUC 11020005 (Upper Arkansas-Lake Meredith) Surface Water Supply - MAY

Monthly component volumes



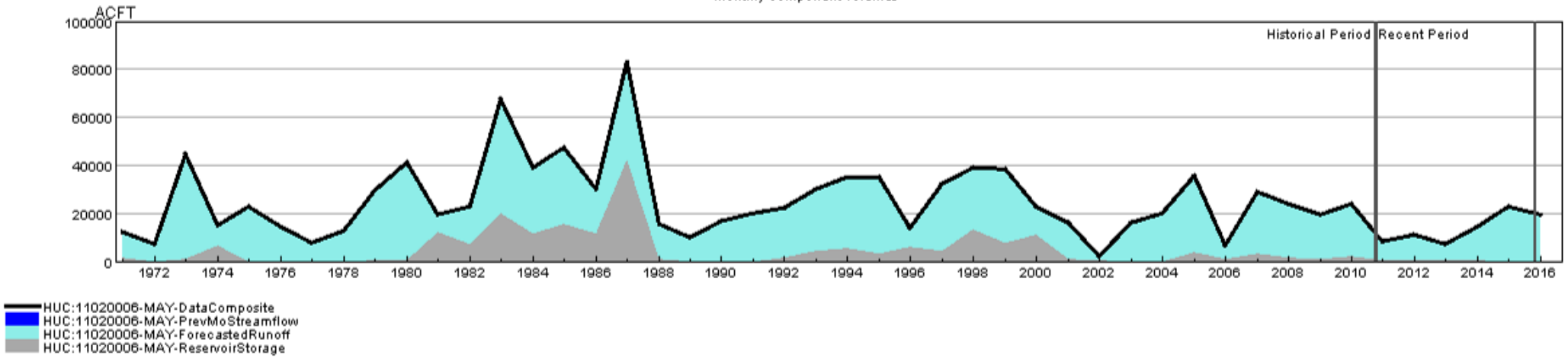
HUC 11020005 (Upper Arkansas-Lake Meredith) SWSI Values - MAY

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



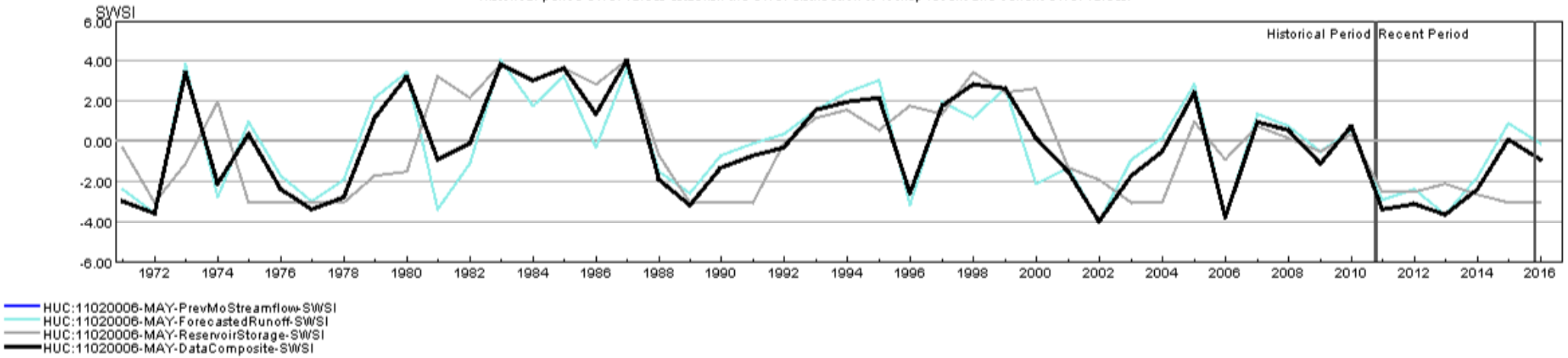
HUC 11020006 (Huerfano) Surface Water Supply - MAY

Monthly component volumes



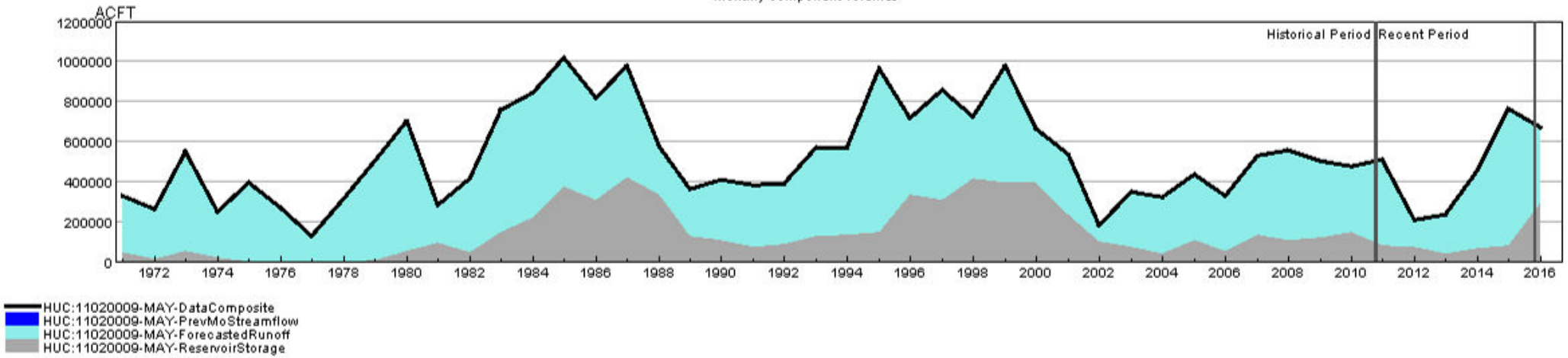
HUC 11020006 (Huerfano) SWSI Values - MAY

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



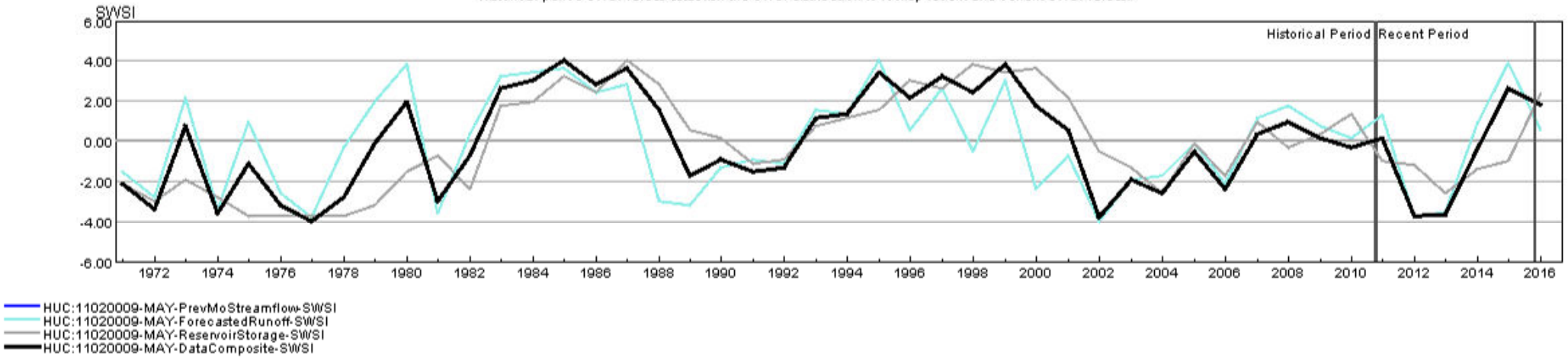
HUC 11020009 (Upper Arkansas-John Martin Reservoir) Surface Water Supply - MAY

Monthly component volumes



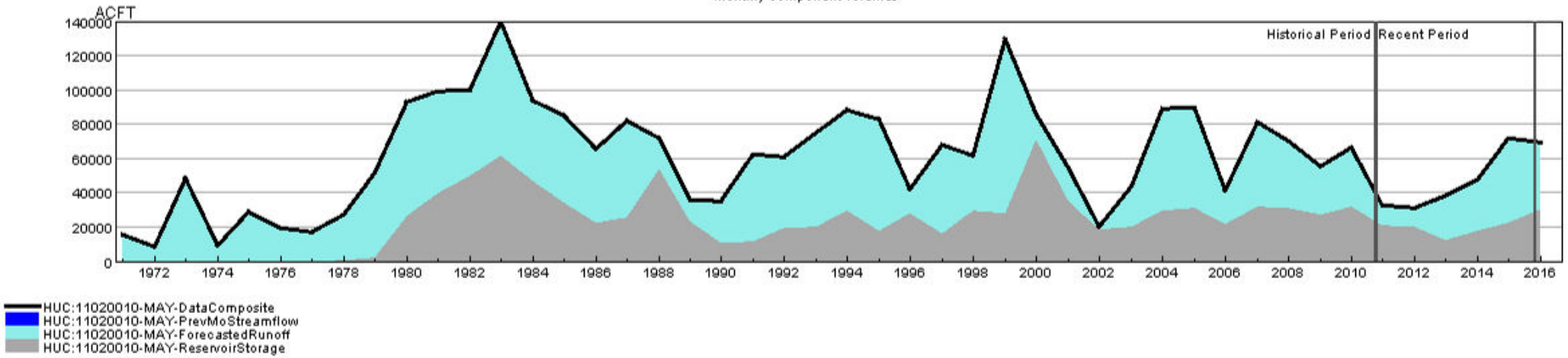
HUC 11020009 (Upper Arkansas-John Martin Reservoir) SWSI Values - MAY

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



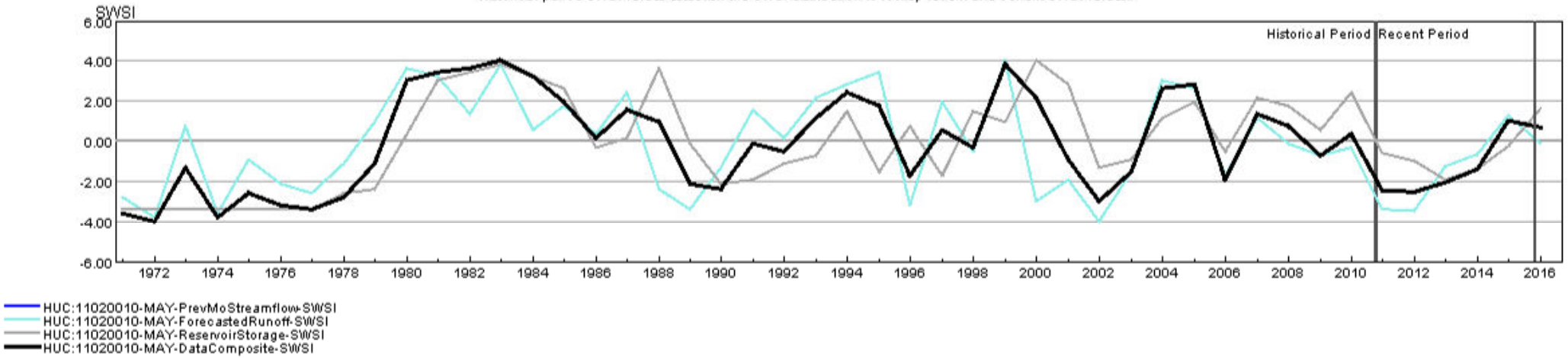
HUC 11020010 (Purgatoire) Surface Water Supply - MAY

Monthly component volumes



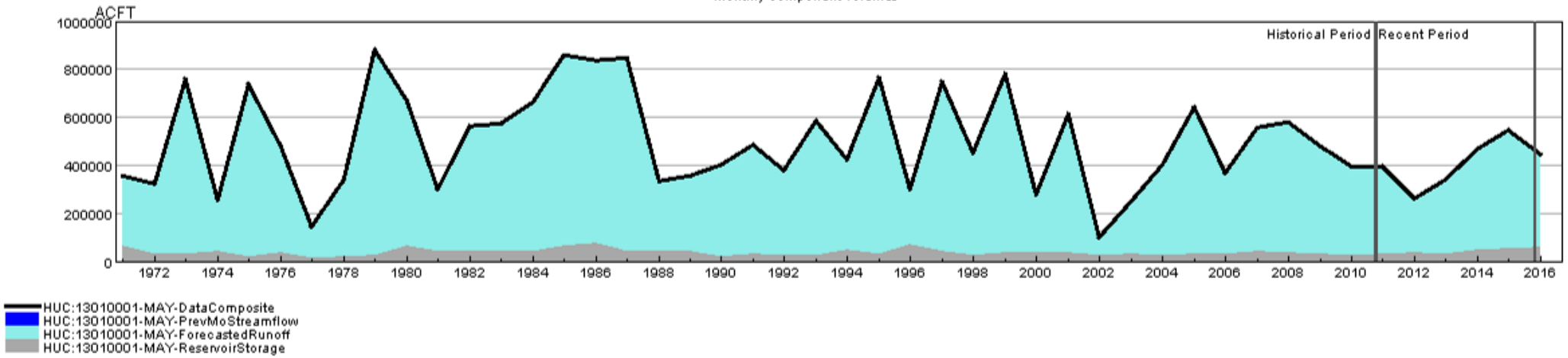
HUC 11020010 (Purgatoire) SWSI Values - MAY

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



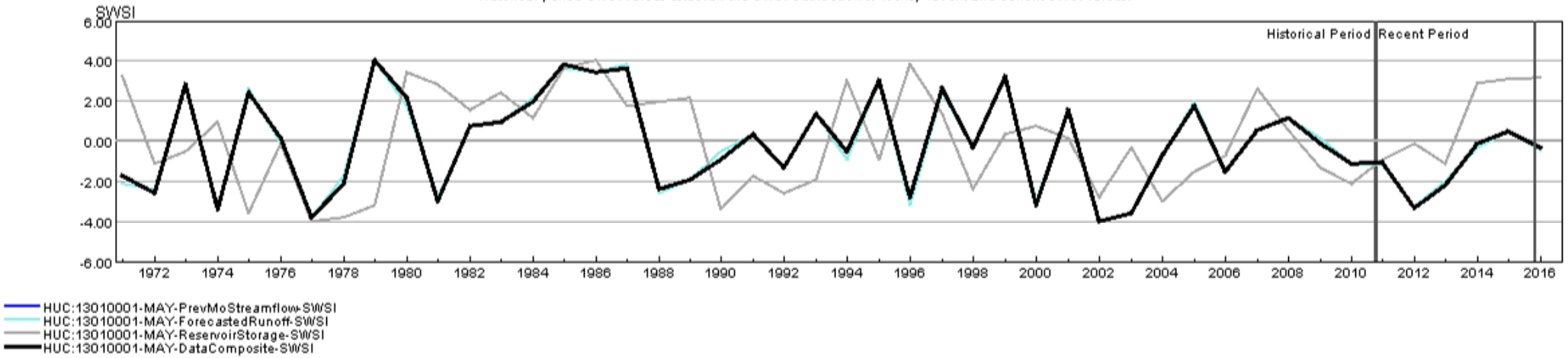
HUC 13010001 (Rio Grande Headwaters) Surface Water Supply - MAY

Monthly component volumes



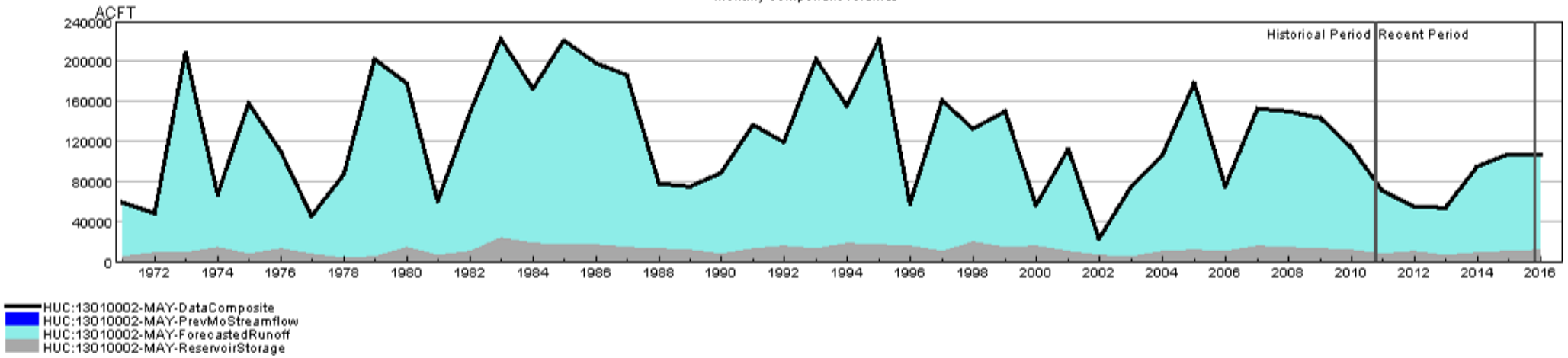
HUC 13010001 (Rio Grande Headwaters) SWSI Values - MAY

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



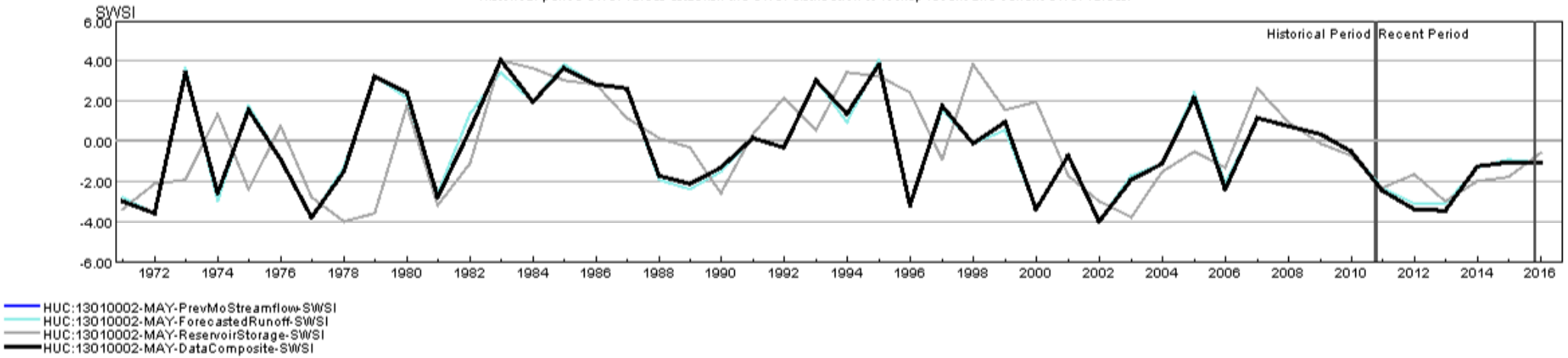
HUC 13010002 (Alamosa-Trinchera) Surface Water Supply - MAY

Monthly component volumes



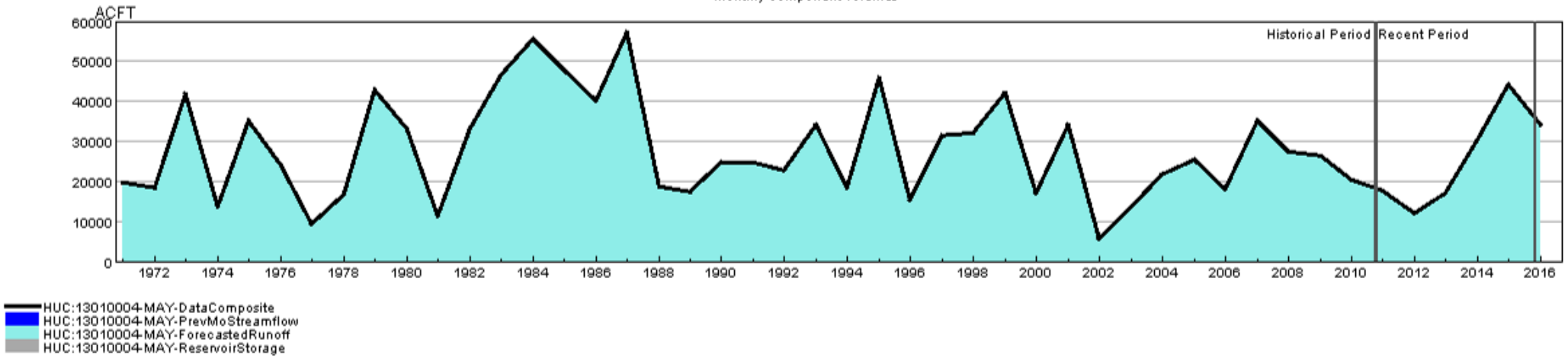
HUC 13010002 (Alamosa-Trinchera) SWSI Values - MAY

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



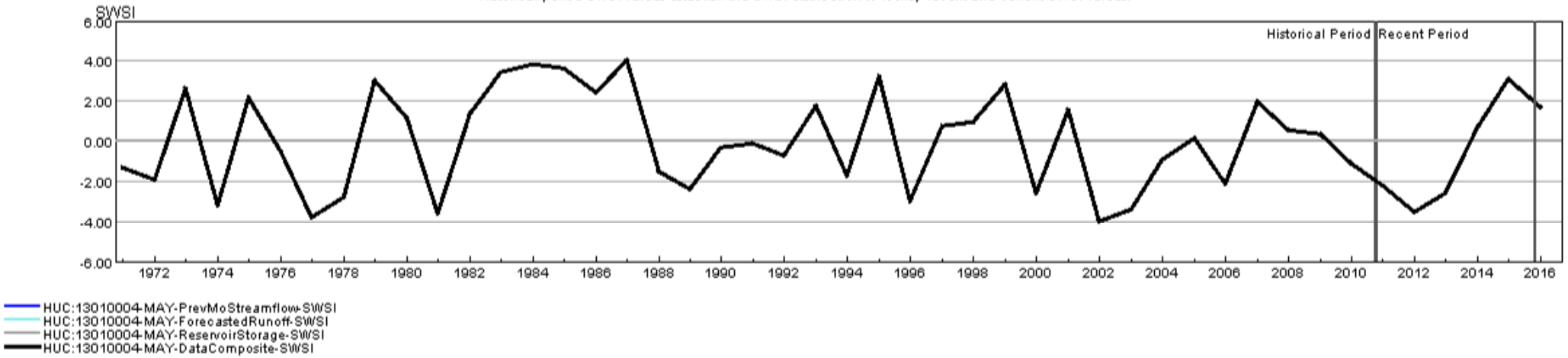
HUC 13010004 (Saguache) Surface Water Supply - MAY

Monthly component volumes



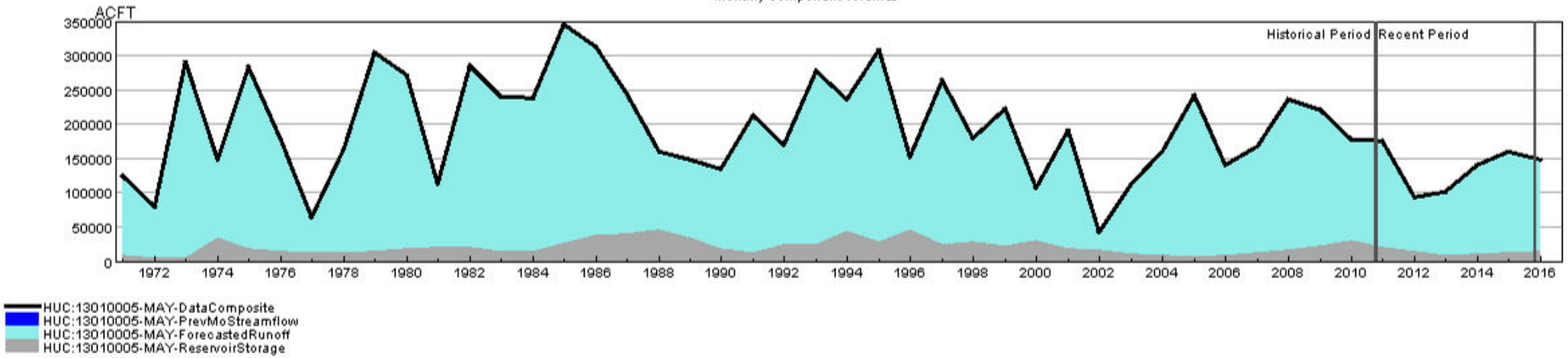
HUC 13010004 (Saguache) SWSI Values - MAY

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



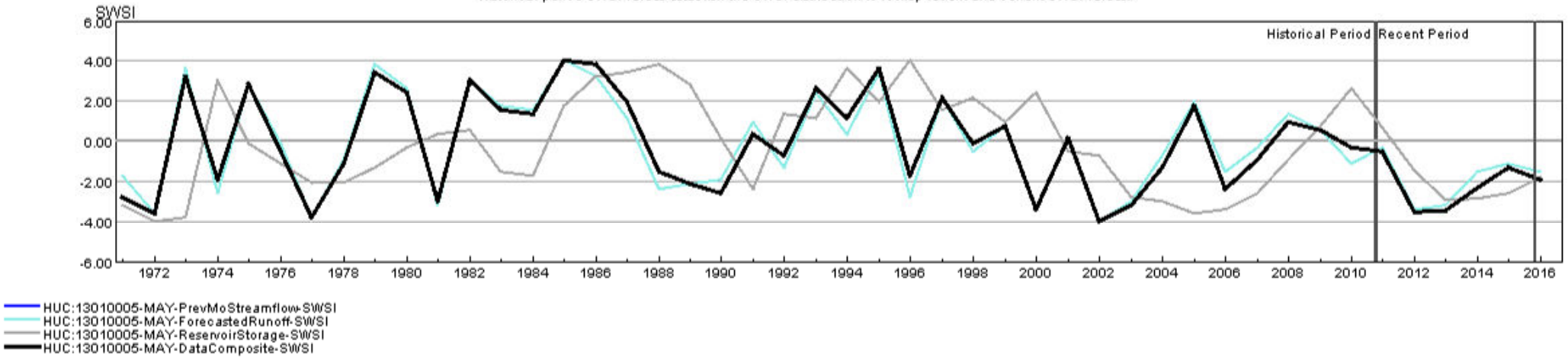
HUC 13010005 (Conejos) Surface Water Supply - MAY

Monthly component volumes



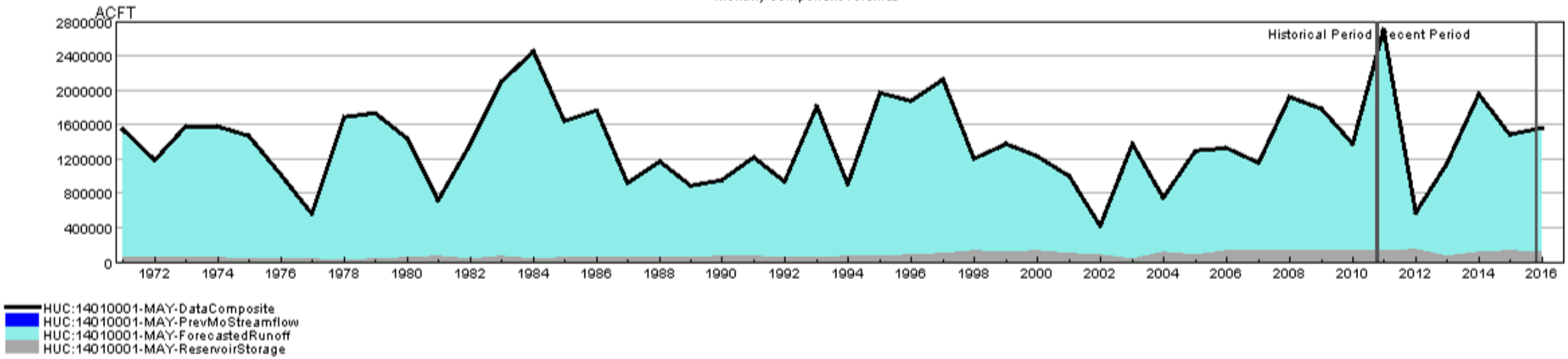
HUC 13010005 (Conejos) SWSI Values - MAY

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



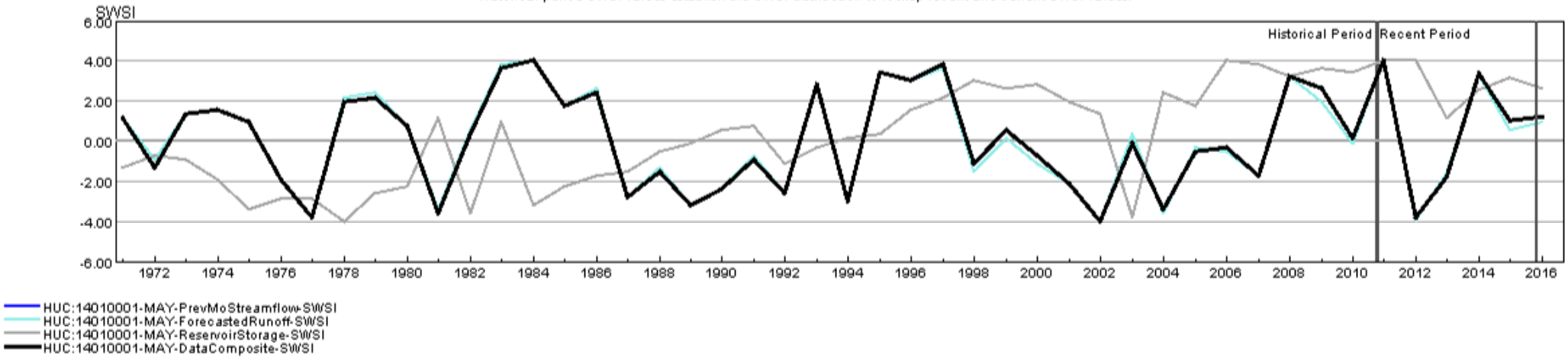
HUC 14010001 (Colorado Headwaters) Surface Water Supply - MAY

Monthly component volumes



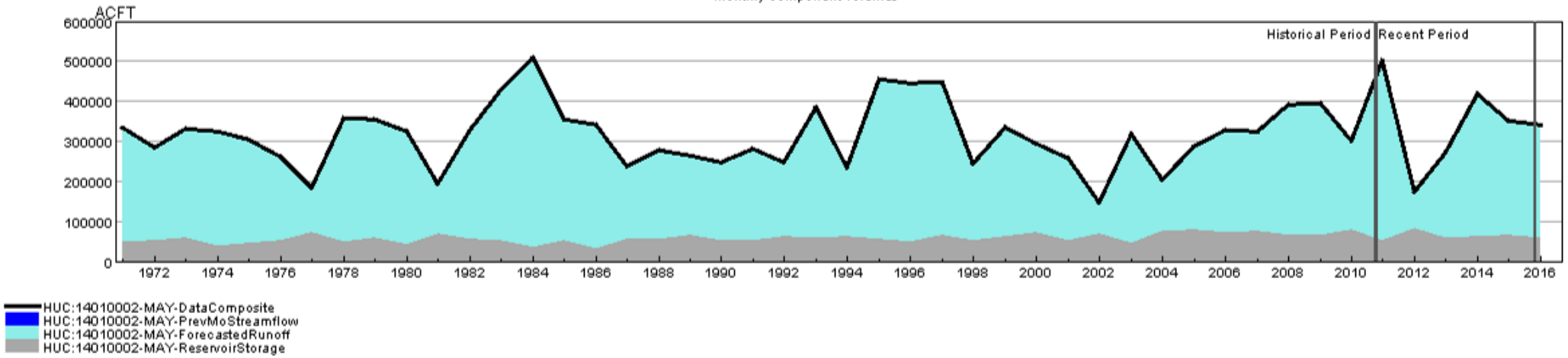
HUC 14010001 (Colorado Headwaters) SWSI Values - MAY

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



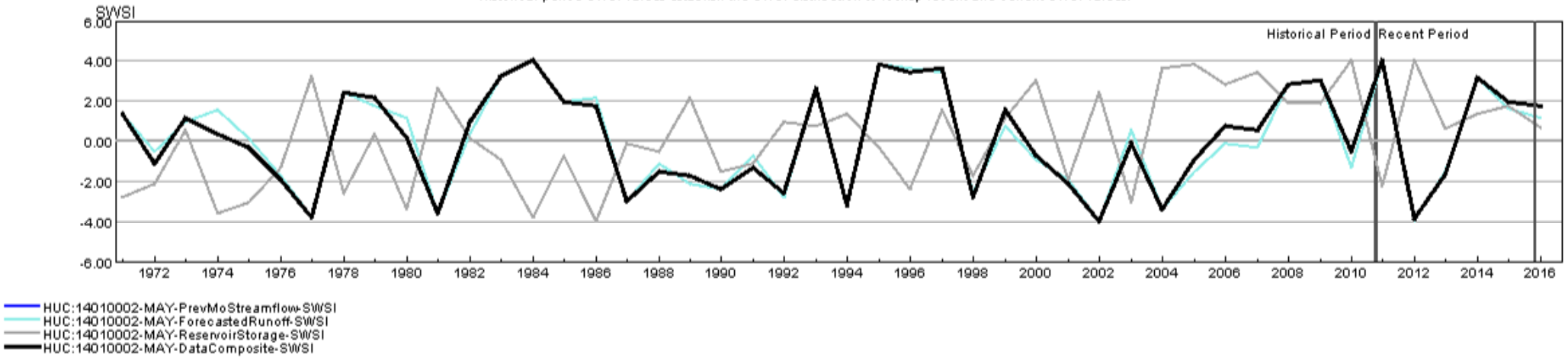
HUC 14010002 (Blue) Surface Water Supply - MAY

Monthly component volumes



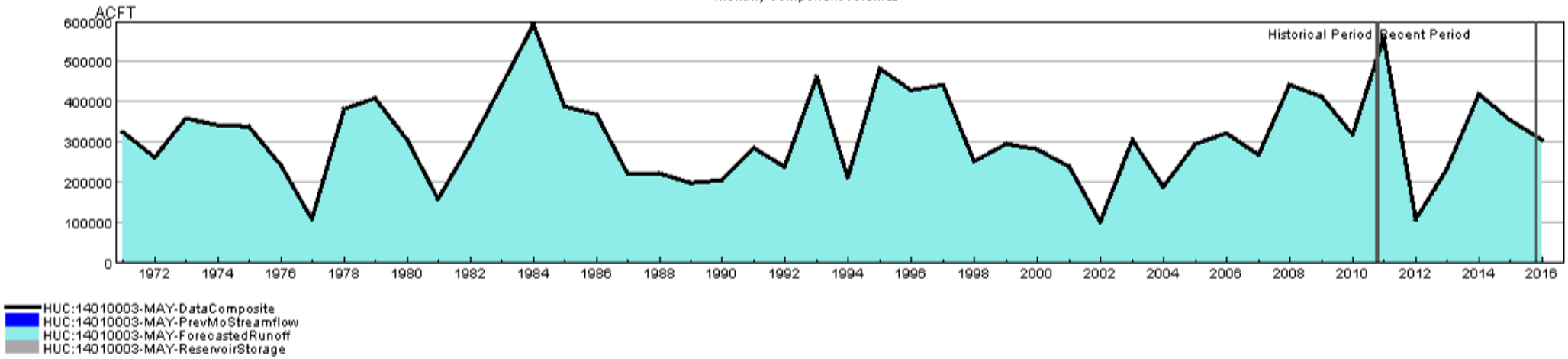
HUC 14010002 (Blue) SWSI Values - MAY

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



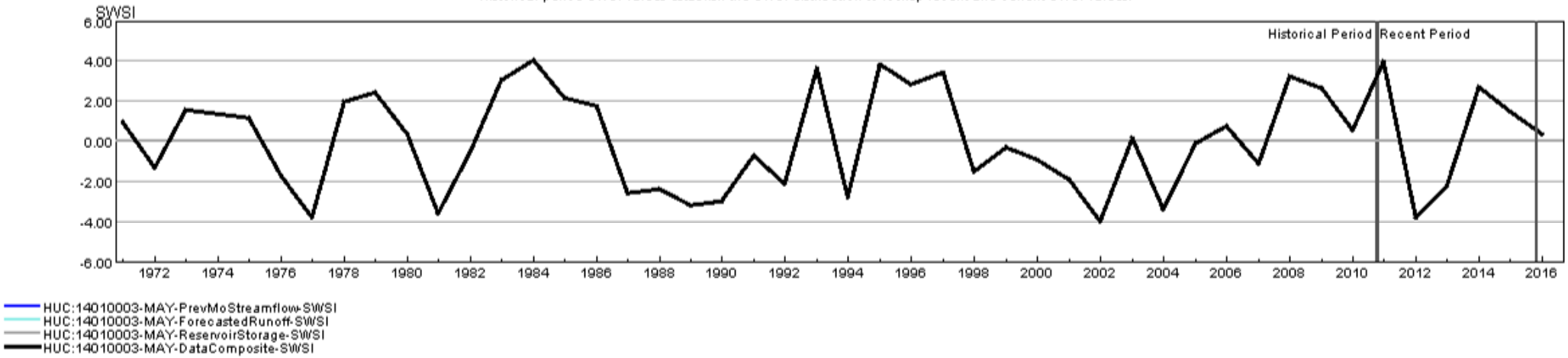
HUC 14010003 (Eagle) Surface Water Supply - MAY

Monthly component volumes



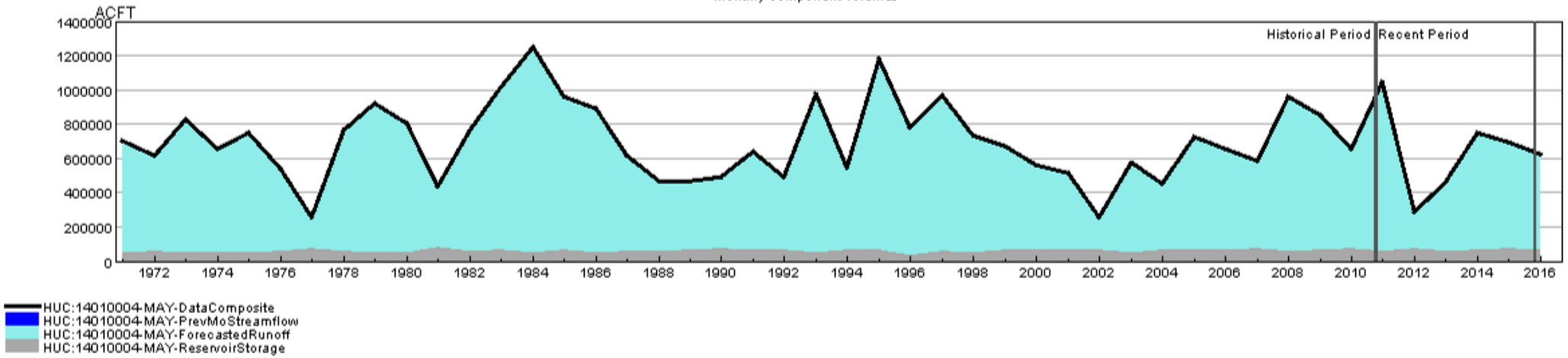
HUC 14010003 (Eagle) SWSI Values - MAY

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



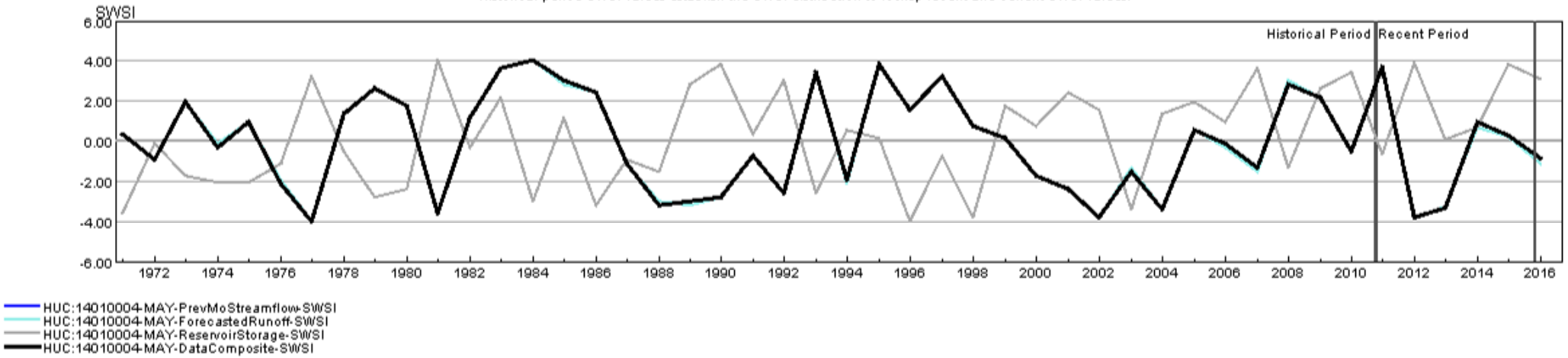
HUC 14010004 (Roaring Fork) Surface Water Supply - MAY

Monthly component volumes



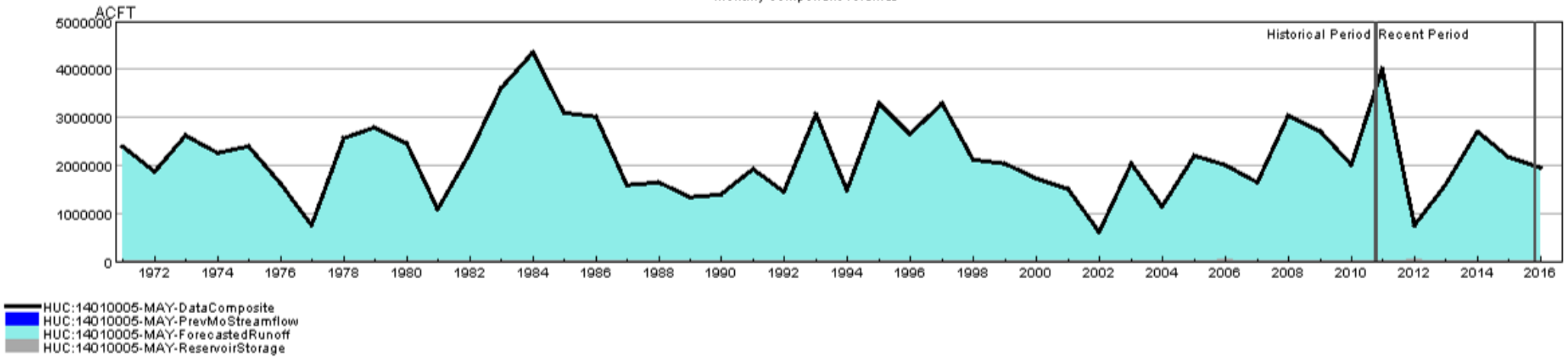
HUC 14010004 (Roaring Fork) SWSI Values - MAY

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



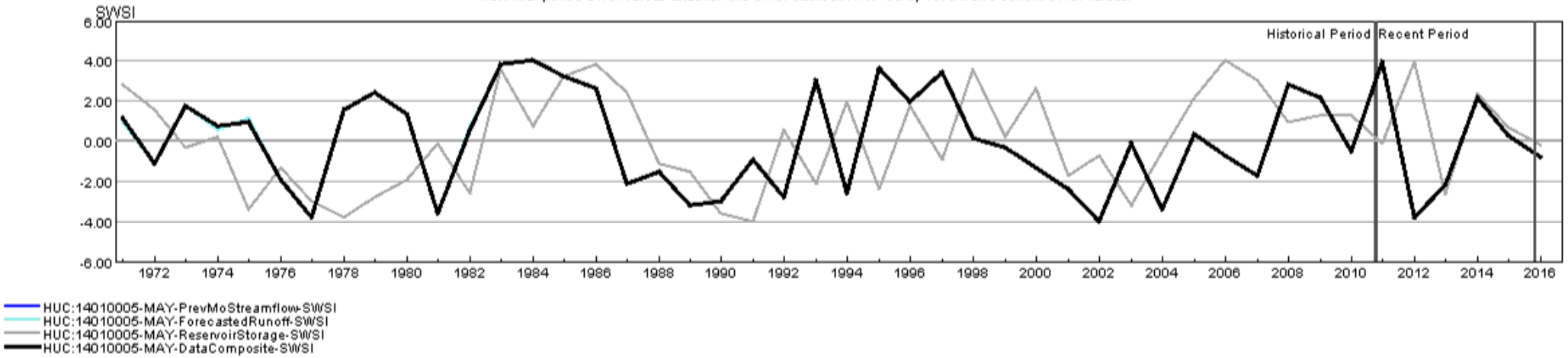
HUC 14010005 (Colorado Headwaters-Plateau) Surface Water Supply - MAY

Monthly component volumes



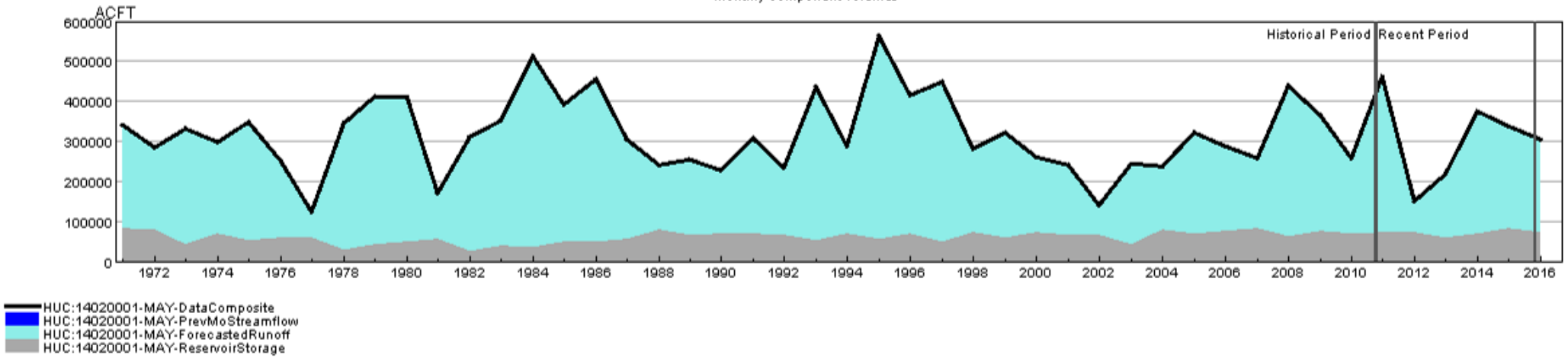
HUC 14010005 (Colorado Headwaters-Plateau) SWSI Values - MAY

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



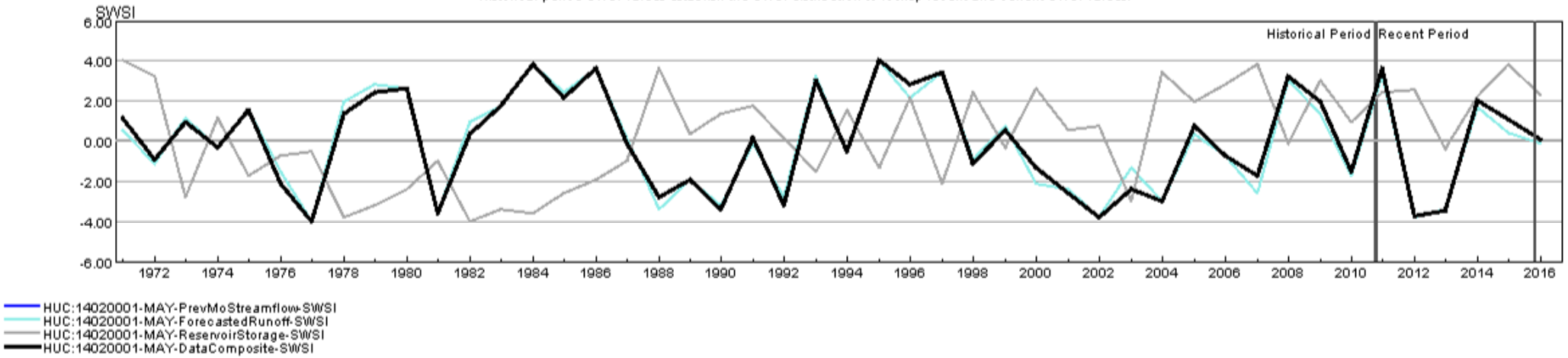
HUC 14020001 (East-Taylor) Surface Water Supply - MAY

Monthly component volumes



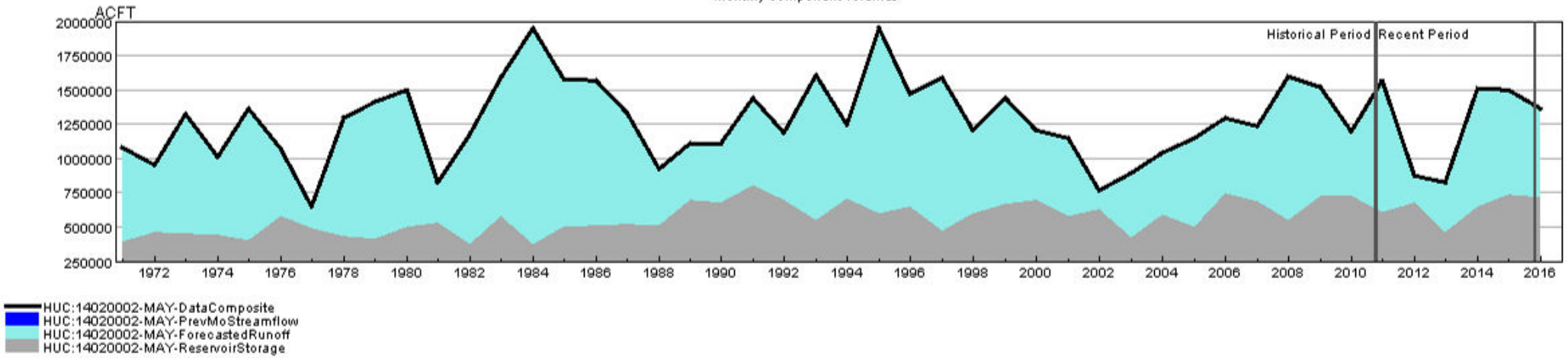
HUC 14020001 (East-Taylor) SWSI Values - MAY

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



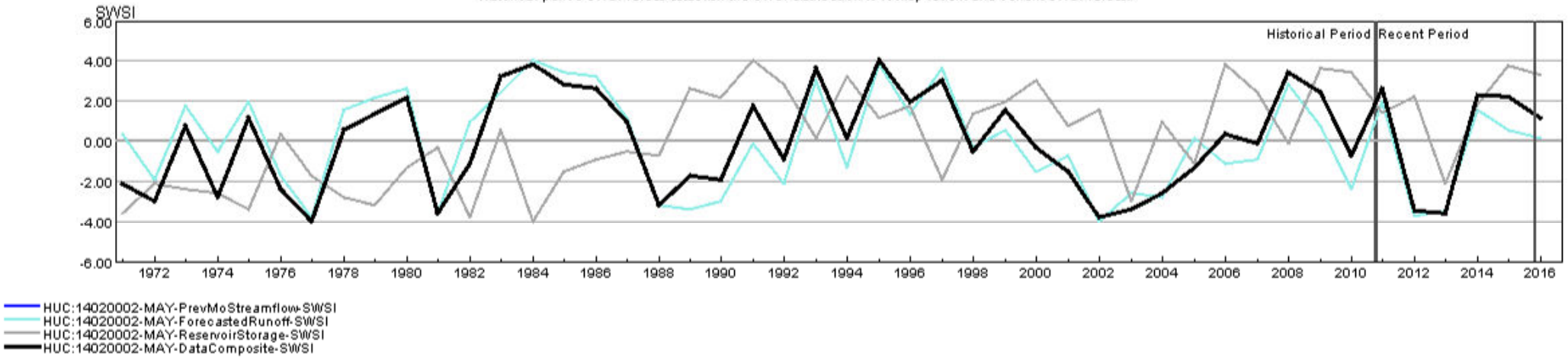
HUC 14020002 (Upper Gunnison) Surface Water Supply - MAY

Monthly component volumes



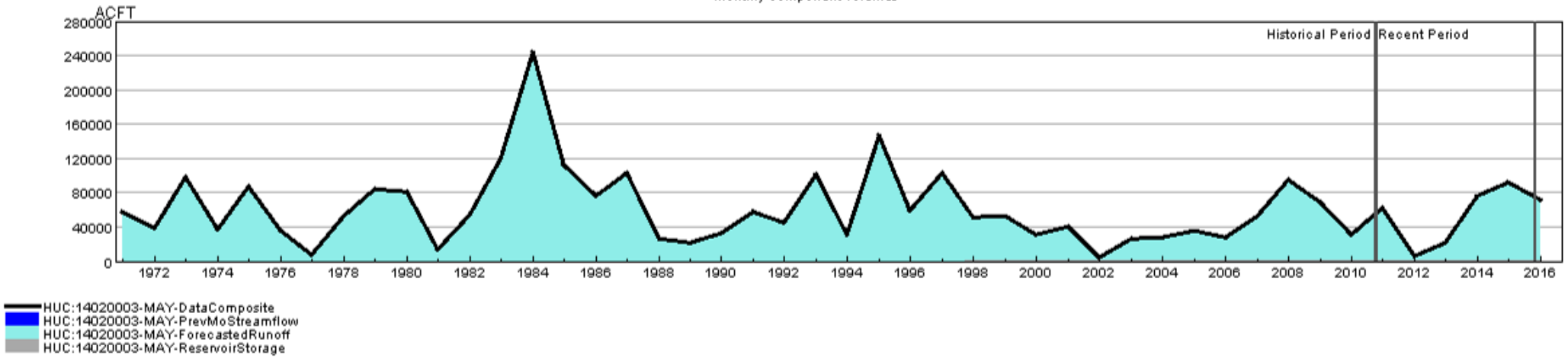
HUC 14020002 (Upper Gunnison) SWSI Values - MAY

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



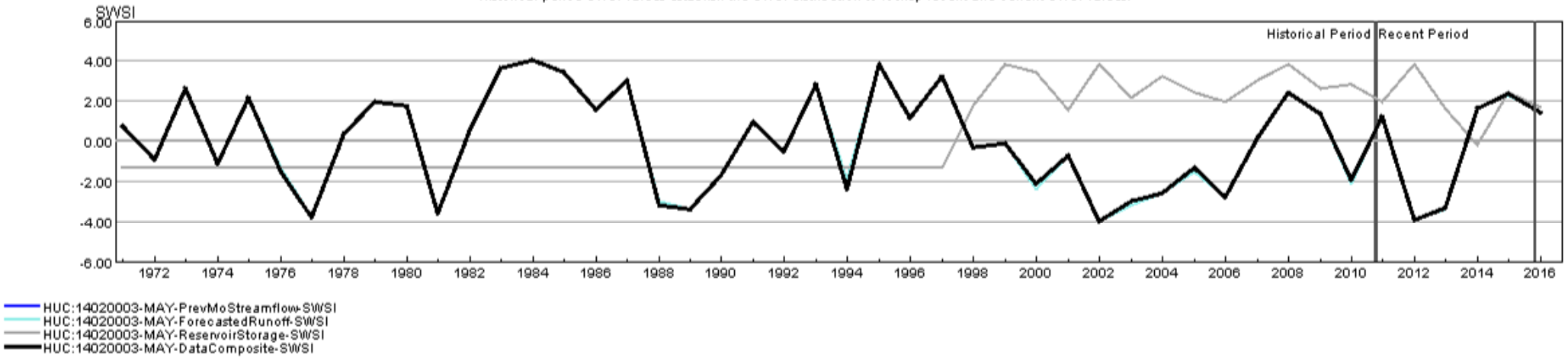
HUC 14020003 (Tomichi) Surface Water Supply - MAY

Monthly component volumes



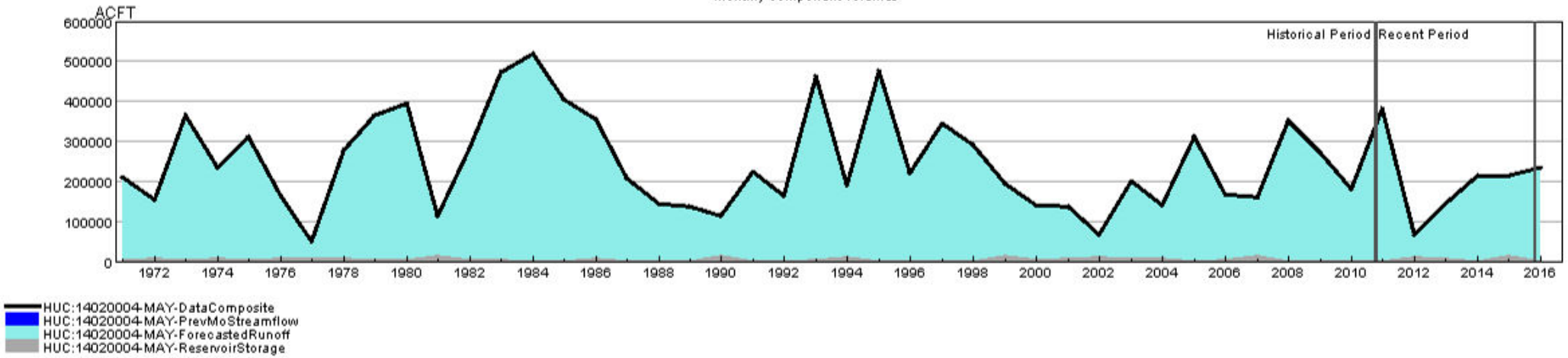
HUC 14020003 (Tomichi) SWSI Values - MAY

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



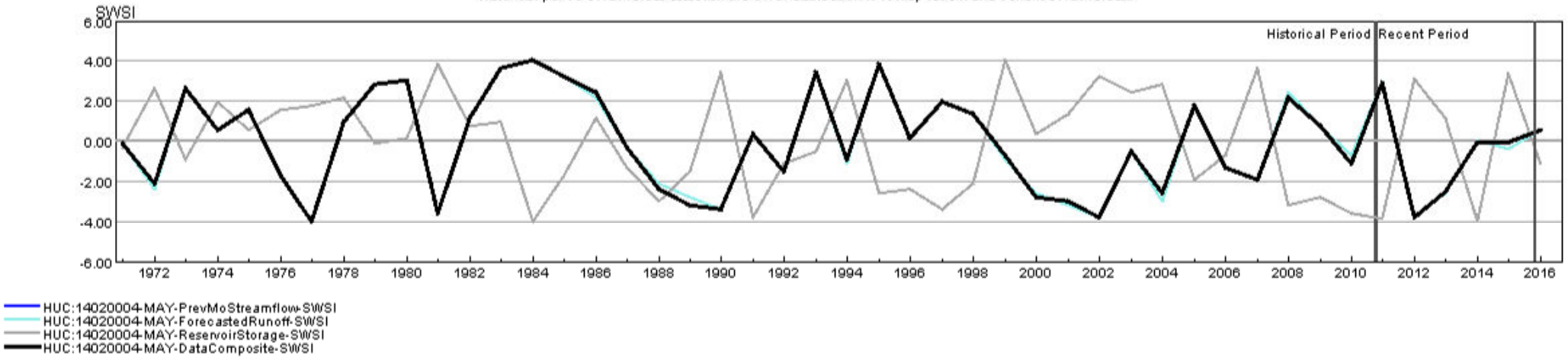
HUC 14020004 (North Fork Gunnison) Surface Water Supply - MAY

Monthly component volumes



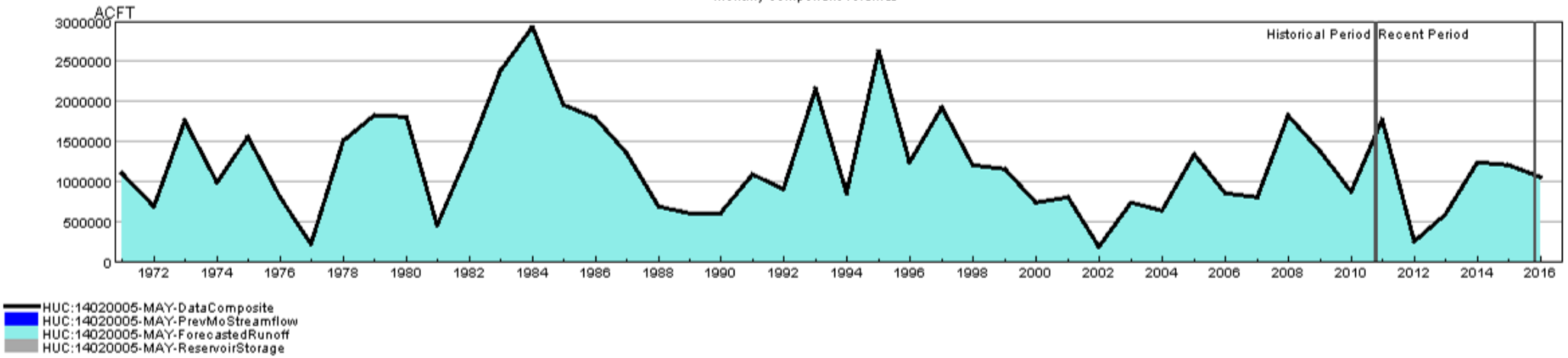
HUC 14020004 (North Fork Gunnison) SWSI Values - MAY

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



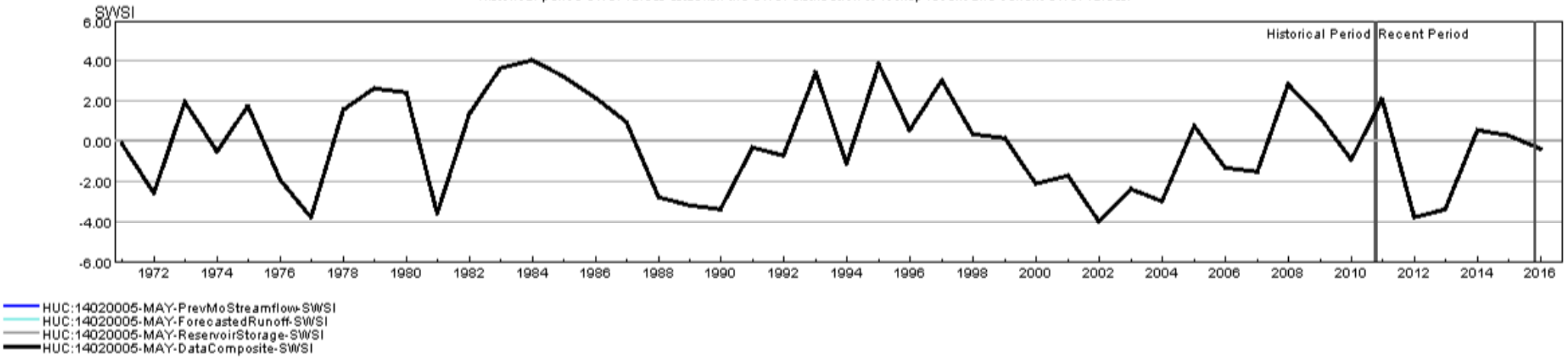
HUC 14020005 (Lower Gunnison) Surface Water Supply - MAY

Monthly component volumes



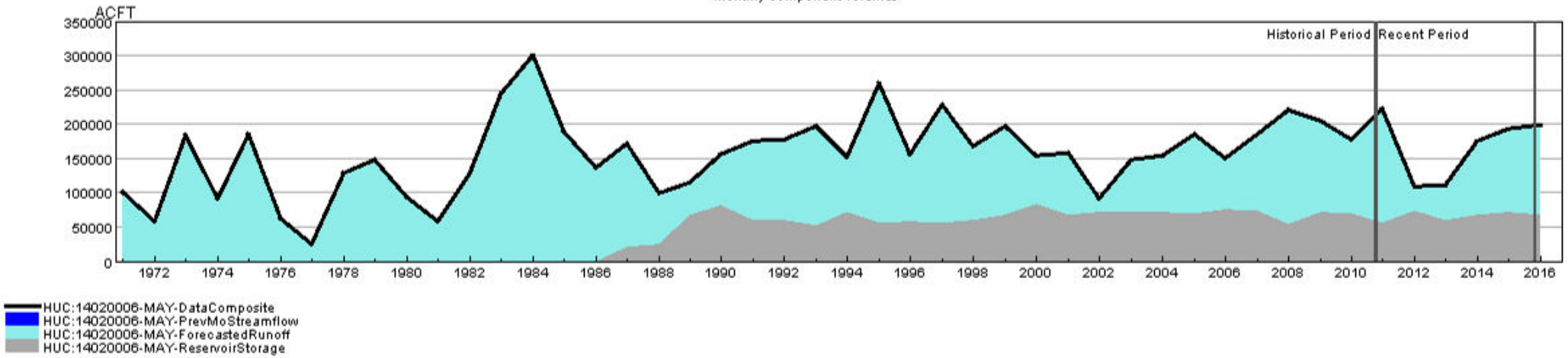
HUC 14020005 (Lower Gunnison) SWSI Values - MAY

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



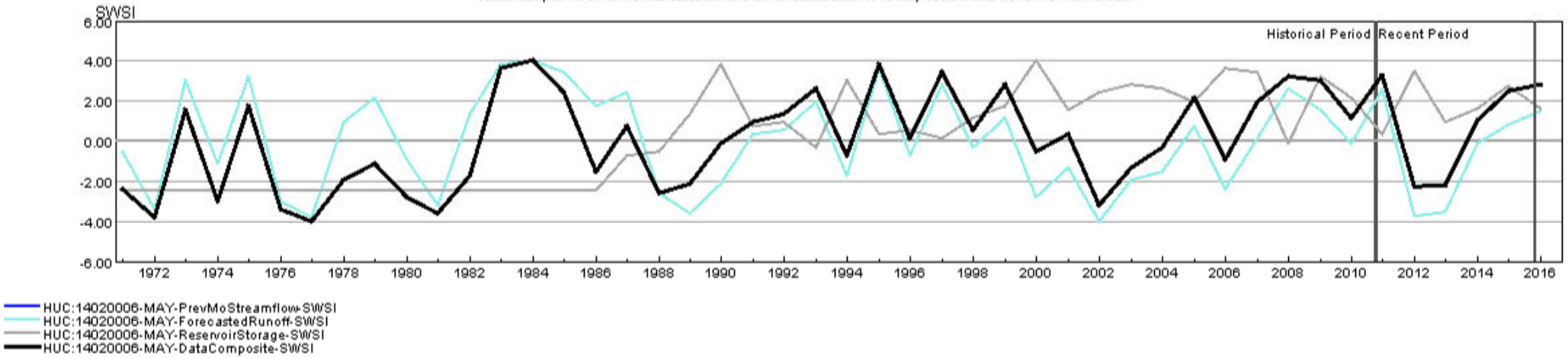
HUC 14020006 (Uncompahgre) Surface Water Supply - MAY

Monthly component volumes



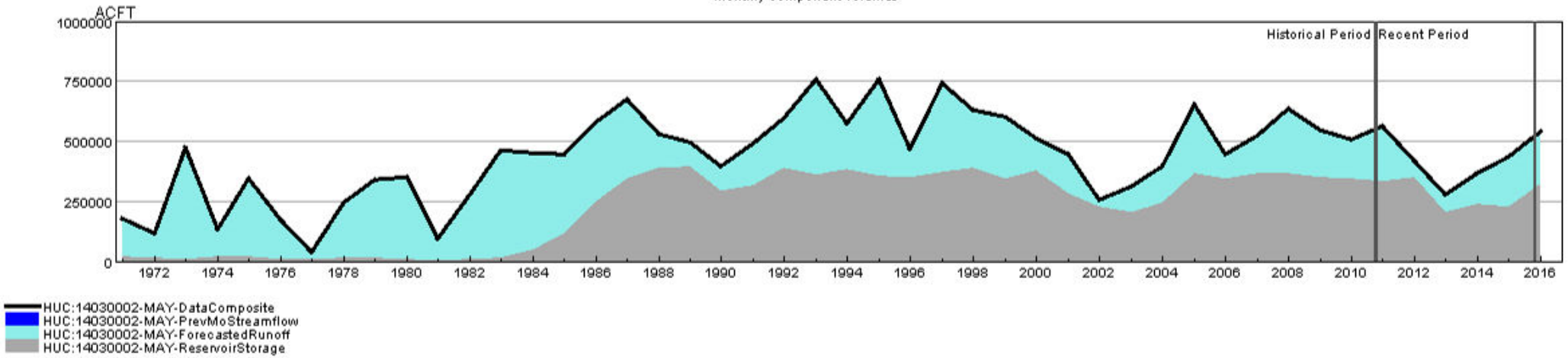
HUC 14020006 (Uncompahgre) SWSI Values - MAY

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



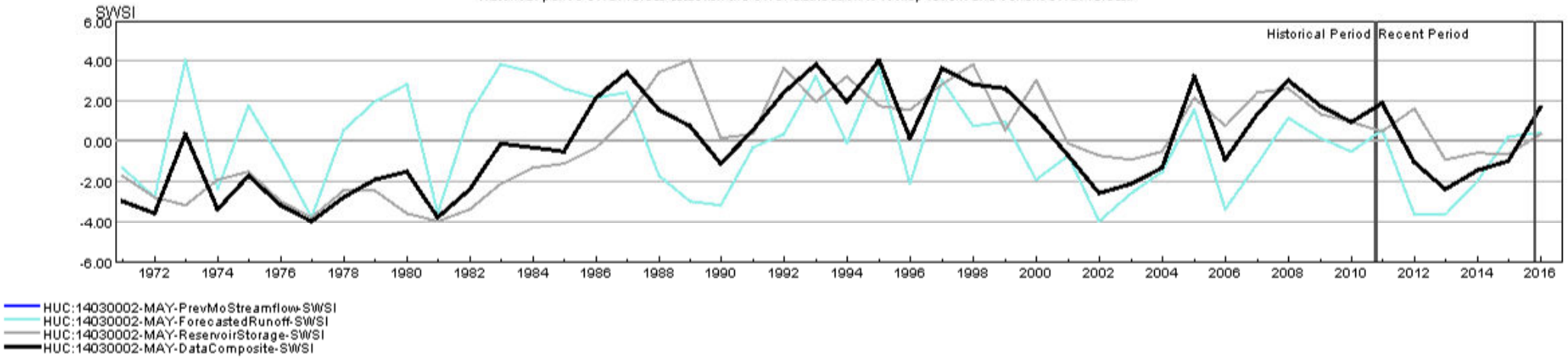
HUC 14030002 (Upper Dolores) Surface Water Supply - MAY

Monthly component volumes



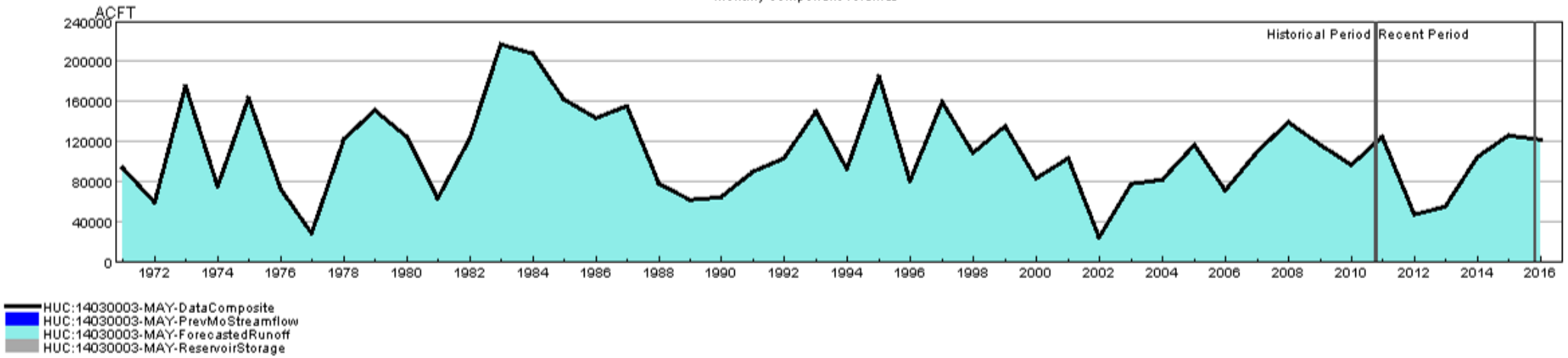
HUC 14030002 (Upper Dolores) SWSI Values - MAY

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



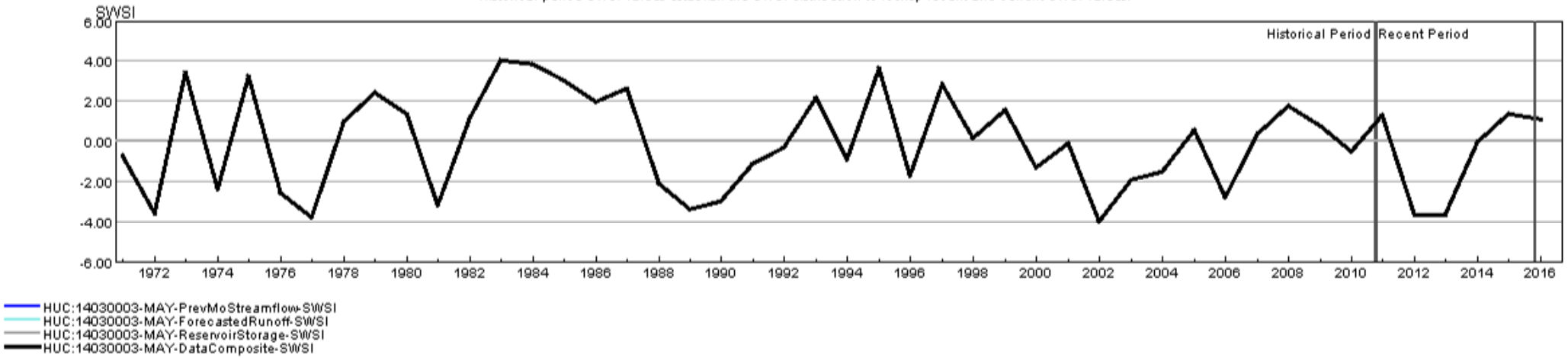
HUC 14030003 (San Miguel) Surface Water Supply - MAY

Monthly component volumes



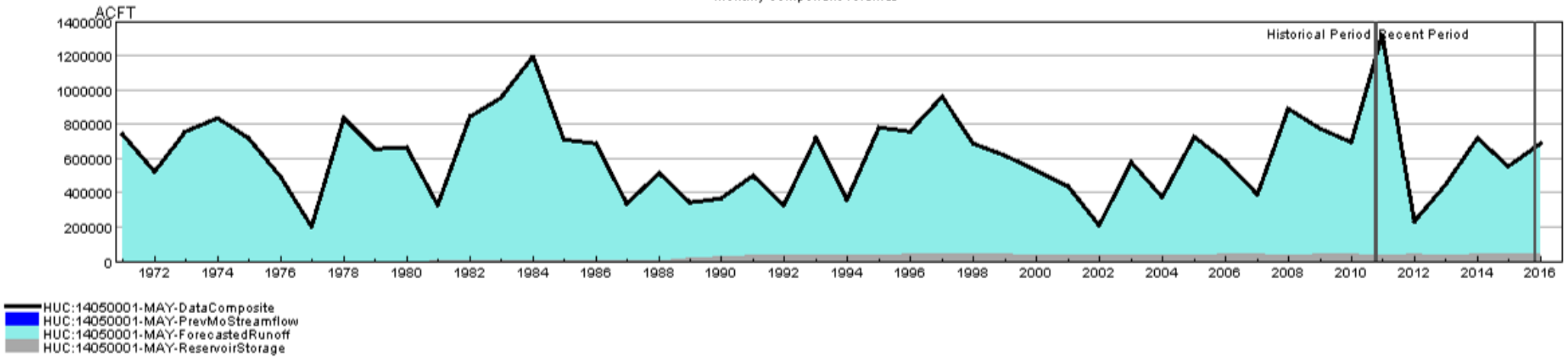
HUC 14030003 (San Miguel) SWSI Values - MAY

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



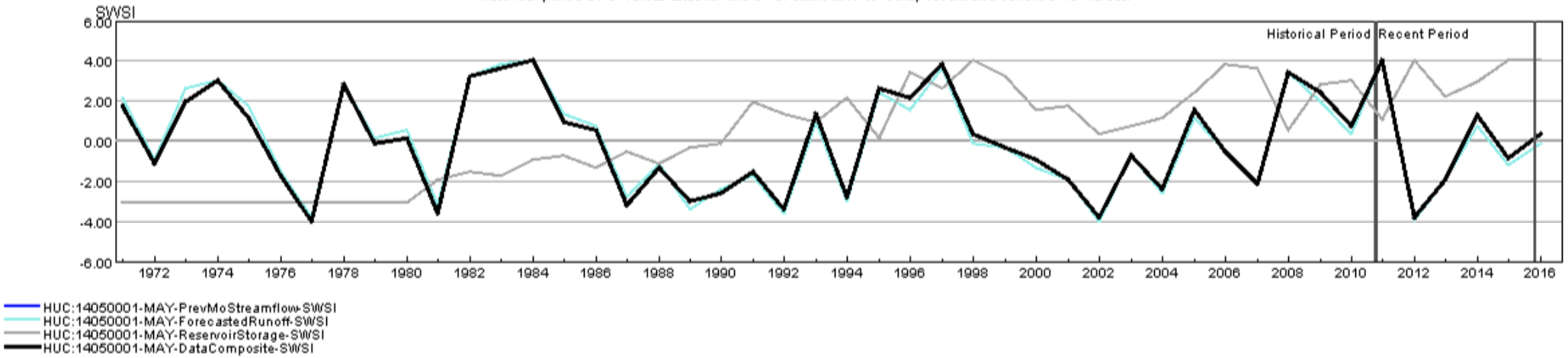
HUC 14050001 (Upper Yampa) Surface Water Supply - MAY

Monthly component volumes



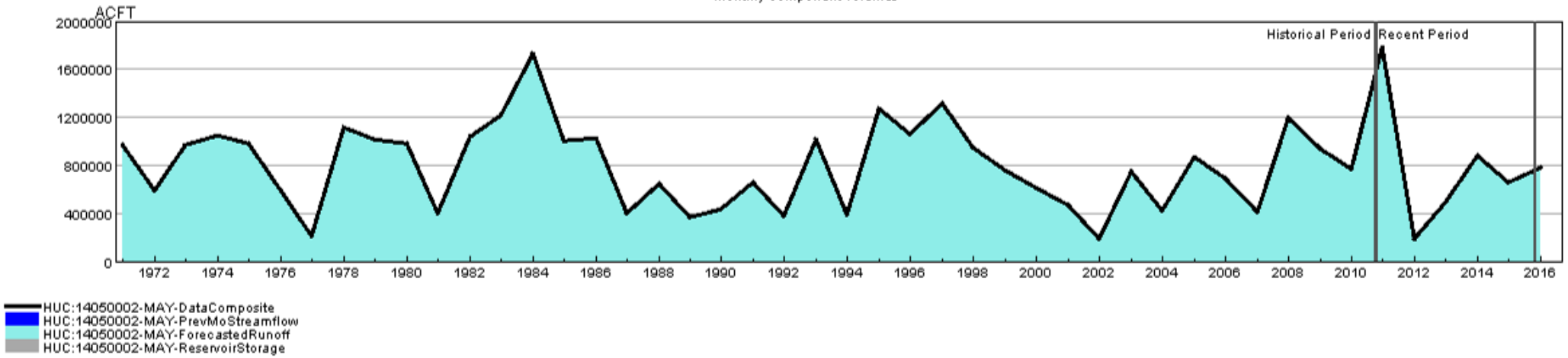
HUC 14050001 (Upper Yampa) SWSI Values - MAY

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



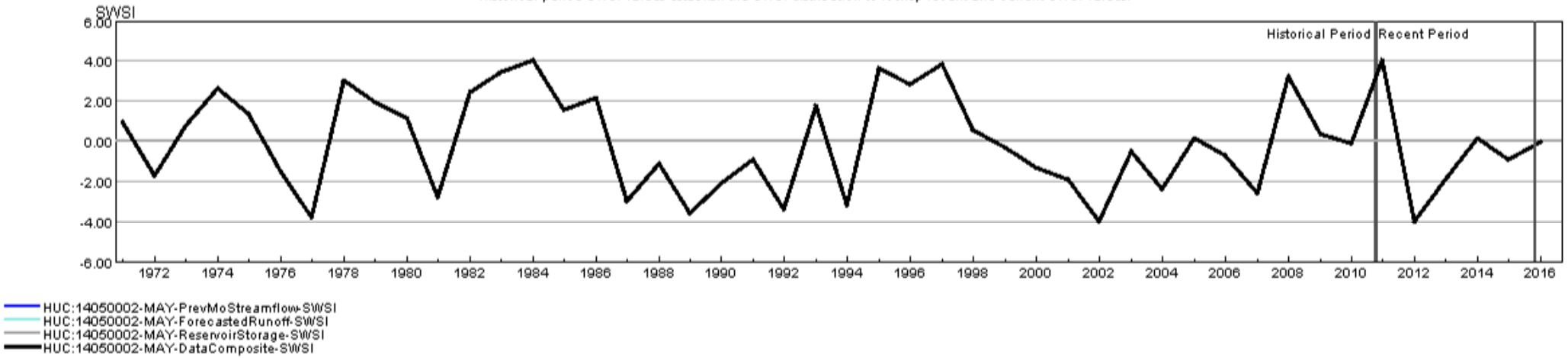
HUC 14050002 (Lower Yampa) Surface Water Supply - MAY

Monthly component volumes



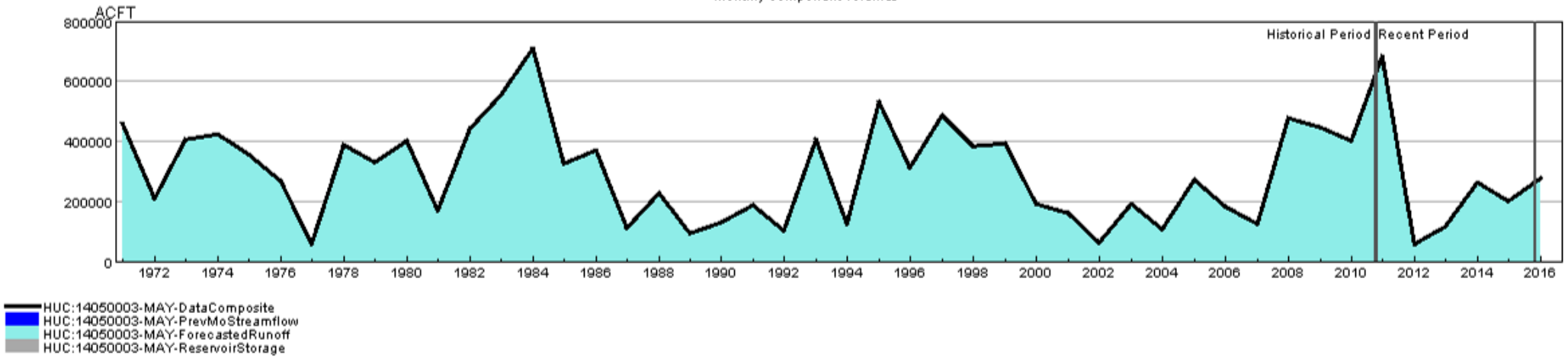
HUC 14050002 (Lower Yampa) SWSI Values - MAY

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



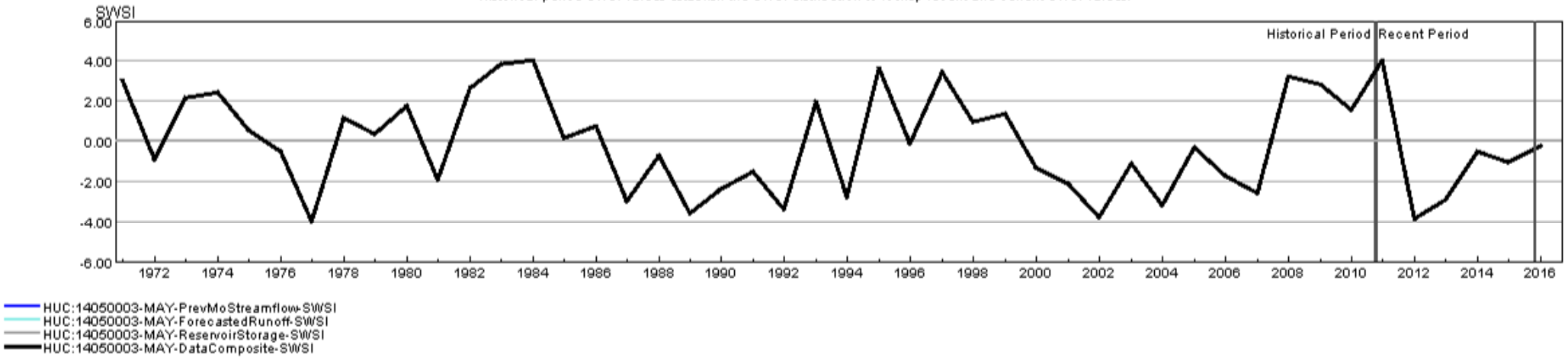
HUC 14050003 (Little Snake) Surface Water Supply - MAY

Monthly component volumes



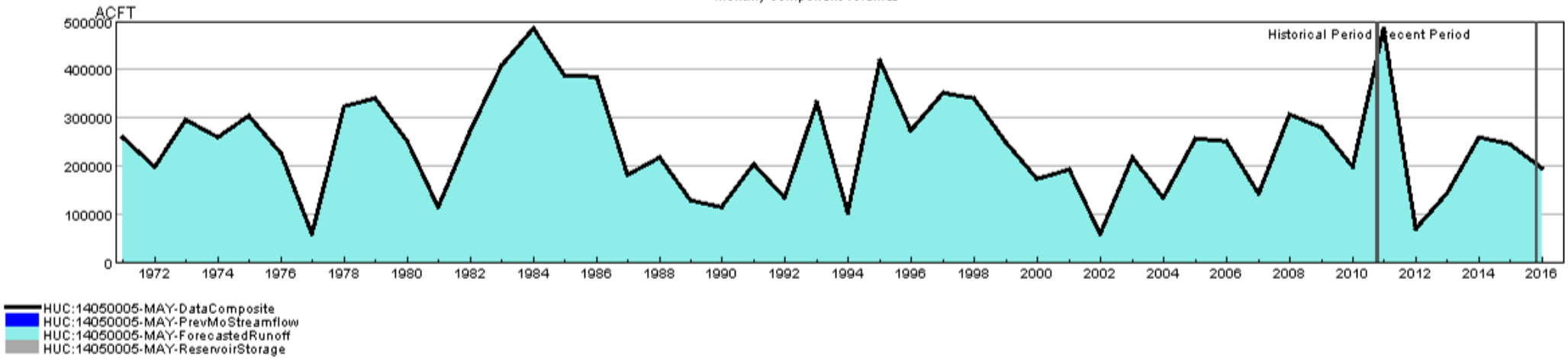
HUC 14050003 (Little Snake) SWSI Values - MAY

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



HUC 14050005 (Upper White) Surface Water Supply - MAY

Monthly component volumes



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

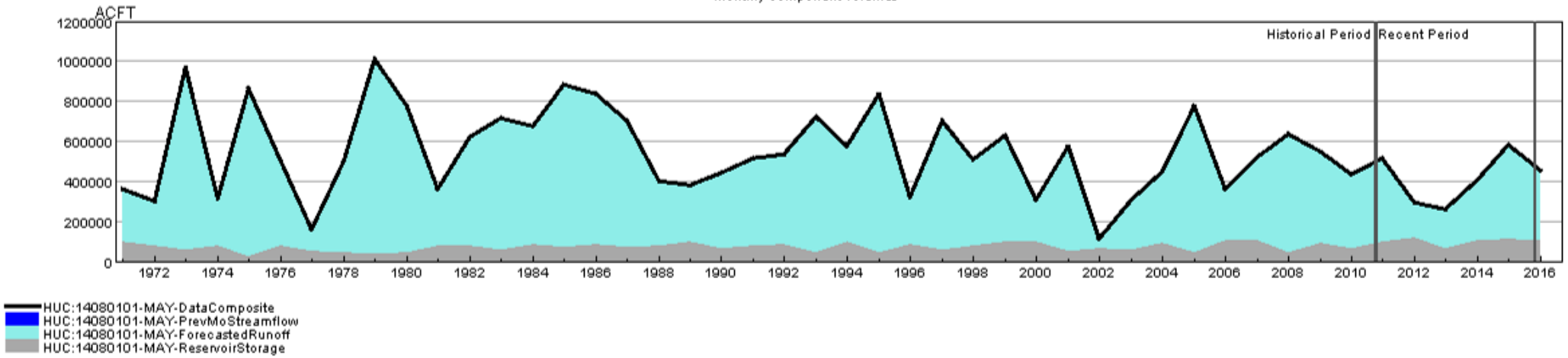
HUC 14050005 (Upper White) SWSI Values - MAY

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

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

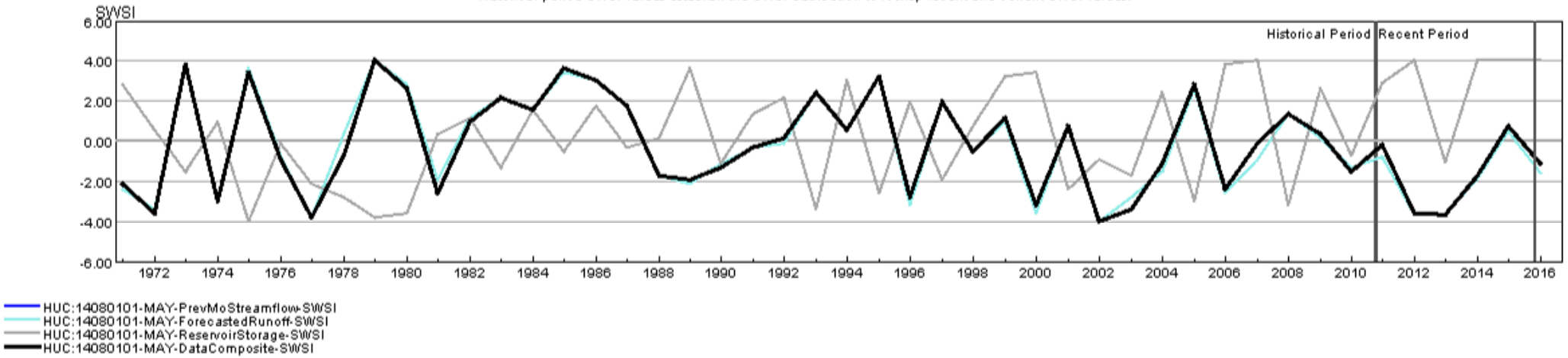
HUC 14080101 (Upper San Juan) Surface Water Supply - MAY

Monthly component volumes



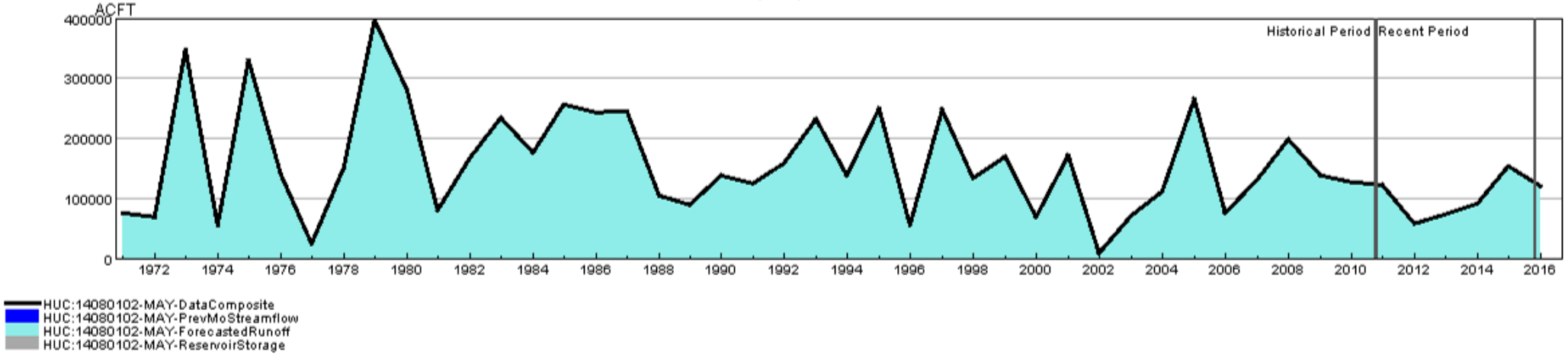
HUC 14080101 (Upper San Juan) SWSI Values - MAY

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



HUC 14080102 (Piedra) Surface Water Supply - MAY

Monthly component volumes



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

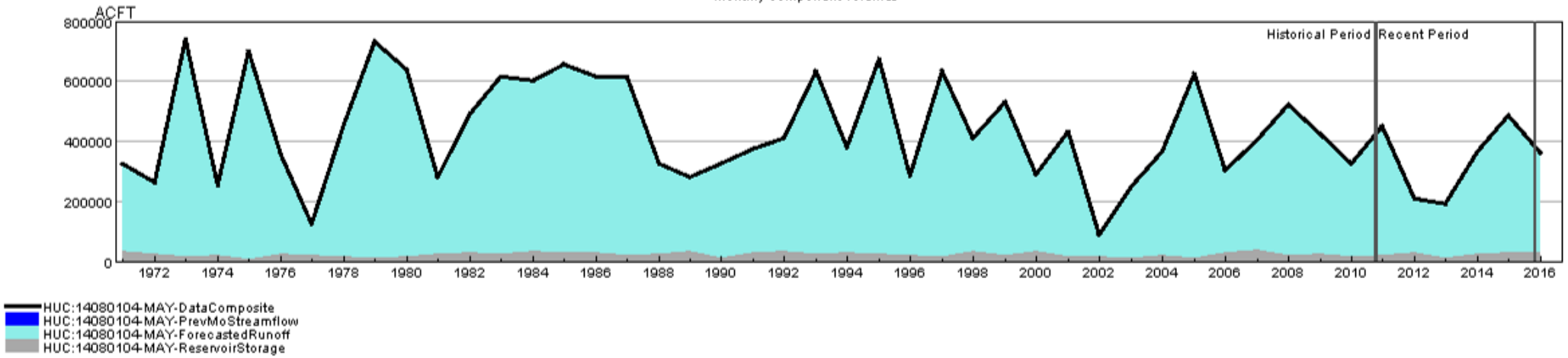
HUC 14080102 (Piedra) SWSI Values - MAY

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

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

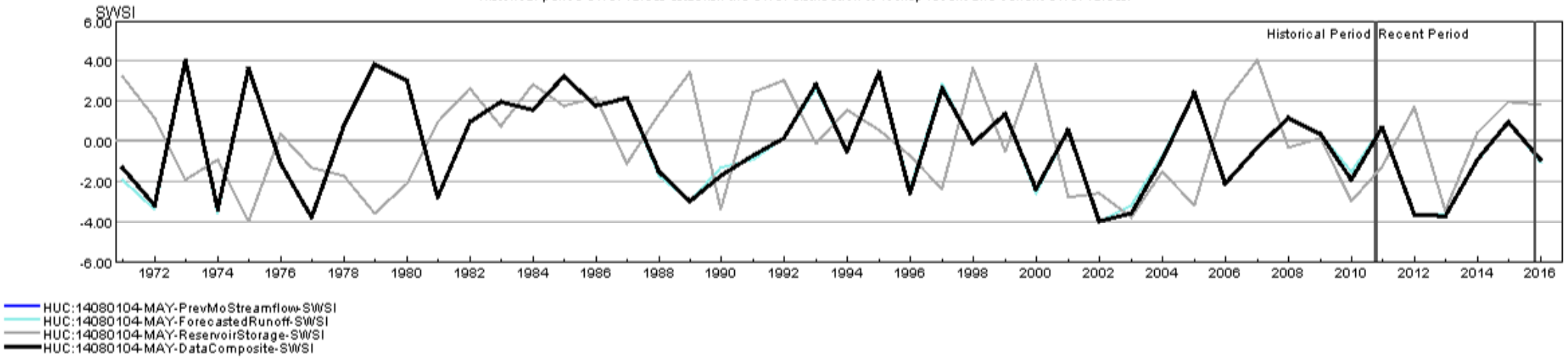
HUC 14080104 (Animas) Surface Water Supply - MAY

Monthly component volumes



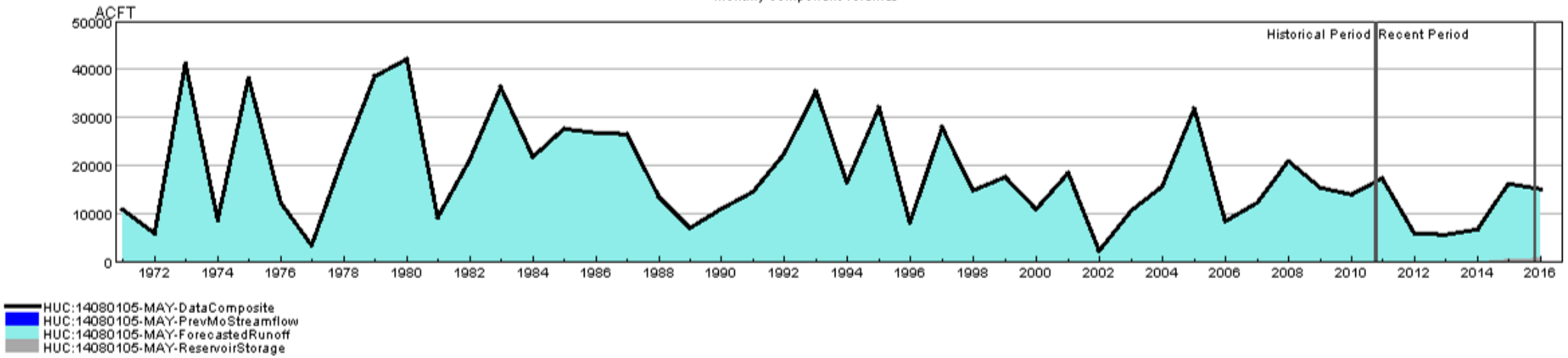
HUC 14080104 (Animas) SWSI Values - MAY

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



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

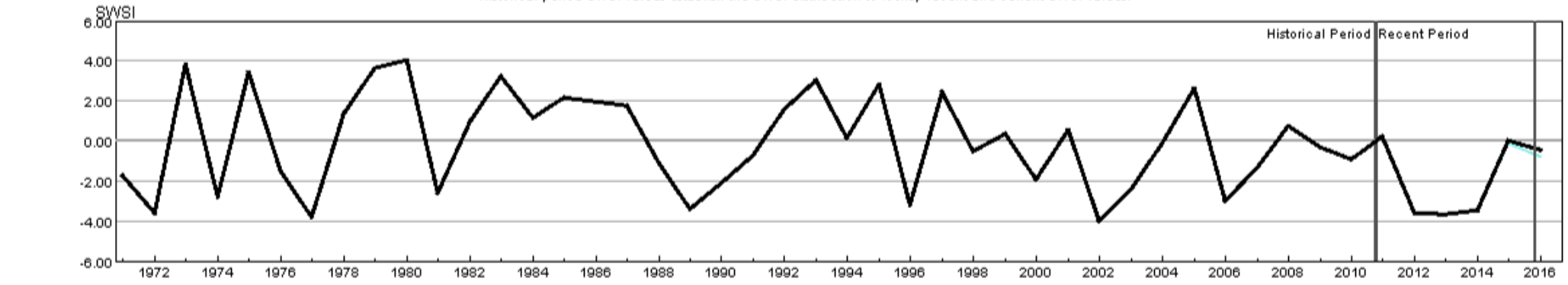
Monthly component volumes



HUC:14080105-MAY-DataComposite
HUC:14080105-MAY-PrevMoStreamflow
HUC:14080105-MAY-ForecastedRunoff
HUC:14080105-MAY-ReservoirStorage

HUC 14080105 (Middle San Juan) SWSI Values - MAY

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



HUC:14080105-MAY-PrevMoStreamflow-SWSI
HUC:14080105-MAY-ForecastedRunoff-SWSI
HUC:14080105-MAY-ReservoirStorage-SWSI
HUC:14080105-MAY-DataComposite-SWSI