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; <u>www.water.state.co.us</u>

January 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

Recently, 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: <u>http://water.state.co.us/DWRDocs/Reports/Pages/SWSIReport.aspx</u>. 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 December (January 1) range from a low of -0.7 in the Yamp-White River Basin to a high of 2.1 in the South Platte River Basin. Generally, water supply conditions are considered near normal. The following SWSI values were computed for each of the seven major basins for January 1, 2016.

Basin	January 1 SWSI	Change from Previous Month*	Change from Previous Year
Arkansas	2.1	-0.2	0.0
Colorado	-0.3	-0.6	-0.9
Gunnison	1.4	-1.2	0.9
Rio Grande	0.9	-1.2	0.9
San Juan-Dolores	1.2	0.1	1.5
South Platte	1.1	-1.1	-2.9
Yampa-White	-0.7	-4.7	0.3

*SWSI for December is based only on reservoir storage. January SWSI is based on streamflow forecast and reservoir storage. The change from the previous month does not reflect a major change in conditions, but rather, a change to SWSI calculations including streamflow forecast.

				SWSI Scale				
-4	-3	-2	-1	0	1	2	3	4
Severe		Moderate		Near Normal	l l	Above Normal	Ab	oundant
Drought		Drought		Supply		Supply		Supply



SURFACE WATER SUPPLY INDEX FOR COLORADO BY MAJOR RIVER BASIN

January 1, 2016

SURFACE WATER SUPPLY INDEX FOR COLORADO BY HUC



January 1, 2016

Basin	HUC ID	HUC Name	swsi	Reservoir Storage NFP	Forecasted Runoff NFP	Total Vol (AF)
	11020001	Arkansas Headwaters	1.3	55	61	436.200
results and the second		Upper Arkansas	1.9	78	63	599,700
		Upper Arkansas-Lake Meredith	1.3	71	65	433,600
		Huerfano	0.5	16	62	27,000
Ā	11020009	Upper Arkansas-John Martin Reservoir	2.4	79	65	736,800
	11020010	Purgatoire	1.3	78	56	75,200
	14010001	Colorado Headwaters	0.1	82	49	1,472,900
우	14010002	Blue	-0.4	14	51	343,600
ora	14010003	Eagle	-0.2	None	48	315,000
Col	14010004	Roaring Fork	-0.2	15	49	721,800
	14010005	Colorado Headwaters-Plateau	-0.3	48	47	2,240,400
	14020001	East-Taylor	0.2	55	50	335,800
	14020002	Upper Gunnison	1.0	91	53	1,532,900
uo	14020003	Tomichi	1.4	99	67	85,900
siuc	14020004	North Fork Gunnison	0.4	85	54	281,200
Gur	14020005	Lower Gunnison	0.5	None	56	1,500,000
	14020006	Uncompahgre	2.6	52	72	217,600
	14030003	San Miguel	1.5	None	68	145,000
	13010001	Rio Grande Headwaters	1.4	89	62	630,100
Rio Grande	13010002	Alamosa-Trinchera	0.9	47	64	159,500
	13010004	Saguache	1.6	None	69	37,000
Ŭ	13010005	Conejos	0.3	29	58	228,600
	14030002	Upper Dolores	2.3	55	64	602,700
έø	14080101	Upper San Juan	1.2	99	61	725,900
Juai	14080102	Piedra	1.4	None	66	240,000
, ur Dolo	14080104	Animas	0.9	55	62	535,800
S.	14080105	Middle San Juan	1.0	50	62	26,219
	14080107	Mancos	0.7	64	59	40,100
	10190001	South Platte Headwater	-0.5	41	59	187,100
	10190002	Upper South Platte	1.6	70	66	500,200
tte	10190003	Middle South Platte-Cherry Creek	-0.2	40	48	869,600
Pla	10190004	Clear	1.1	None	63	114,000
rth	10190005	St. Vrain	0.2	59	56	247,600
Sol	10190006	Big Thompson	0.7	63	51	583,300
	10190007	Cache La Poudre		80	42	360,700
	10190012	Middle South Platte-Sterling		89	48	964,900
	10180001	North Platte Headwaters	-0.2	None	48	225,000
e -	14050001	Upper Yampa	-0.9	99	36	651,300
hit	14050002	Lower Yampa	-0.9	None	40	830,000
× ≺	14050003	Little Snake	-0.7	None	42	285,000
	14050005	Upper White	-0.4	None	45	270,000

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

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 actual natural flow and active storage data for the period 1970-2010.

January 1, 2016 SWSI Component Information By HUC

			Component	Component
постр	HUC Name	Component Name	Volume (AF)	NEP for Month
11020001		TWIN LAKES RESERVOIR	48,700	48
		TURQUOISE LAKE	88,900	54
	Arkansas	ARKANSAS RIVER AT SALIDA	250,000	61
	neauwalers	CLEAR CREEK RESERVOIR	7,300	64
		HOMESTAKE RESERVOIR	41,300	75
		CUCHARAS RESERVOIR ¹	0	16
11020006	Huerfano	HUERFANO RIVER NEAR REDWING	13,800	69
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	13,200	69
11020010	Dungotoino	PURGATOIRE RIVER AT TRINIDAD	50,000	56
11020010	Purgatoire	TRINIDAD LAKE	25,200	78
11020002		PUEBLO RESERVOIR INFLOW	375,000	63
11020002	Opper Arkansas	PUEBLO RESERVOIR	224,700	78
		PURGATOIRE RIVER AT TRINIDAD	50,000	56
		PUEBLO RESERVOIR INFLOW	375,000	63
11020000	Upper Arkansas-	HUERFANO RIVER NEAR REDWING	13,800	69
11020009	John Martin	CUCHARAS RIVER AT BOYD RANCH NR LA VETA	13,200	69
	Reservoir	JOHN MARTIN RESERVOIR	224,100	78
		ADOBE CREEK RESERVOIR	60,700	96
	Upper Arkansas- Lake Meredith	PUEBLO RESERVOIR INFLOW	375,000	63
		MEREDITH RESERVOIR	24,900	65
11020005		HUERFANO RIVER NEAR REDWING	13,800	69
		CUCHARAS RIVER AT BOYD RANCH NR LA VETA	13,200	69
		LAKE HENRY	6,700	92
14010002	Plue	GREEN MOUNTAIN RESERVOIR	63,600	14
14010002	Diue	BLUE RIVER INFLOW TO GREEN MOUNTAIN RES	280,000	51
	Colorado	COLORADO RIVER NEAR DOTSERO	1,350,000	49
14010001	Colorado	WOLFORD MOUNTAIN RESERVOIR	43,600	75
	neauwalers	WILLIAMS FORK RESERVOIR	79,300	86
	Colorado	COLORADO RIVER NEAR CAMEO	2,230,000	47
14010005	Headwaters-			
	Plateau	VEGA RESERVOIR	10,400	48
14010003	Eagle	EAGLE RIVER BELOW GYPSUM	315,000	48
14010004	Roaring Fork	RUEDI RESERVOIR	71,800	15
14010004	Routing Fork	ROARING FORK AT GLENWOOD SPRINGS	650,000	49
		EAST RIVER AT ALMONT	172,000	50
14020001	East-Taylor	TAYLOR PARK RESERVOIR	69,800	55
		TAYLOR R INF TO TAYLOR PARK RESERVOIR	94,000	55
14020005	Lower Gunnison	GUNNISON RIVER NR GRAND JUNCTION	1,500,000	56
1/02000/	North Fork	NORTH FORK GUNNISON R NR SOMERSET	275,000	54
14020004	Gunnison	PAONIA RESERVOIR	6,200	85
14030003	San Miguel	SAN MIGUEL RIVER NEAR PLACERVILLE	145,000	68
14020003	Tomichi	TOMICHI CREEK AT GUNNISON, CO	85,000	67
14020003		VOUGA RESERVOIR NEAR DOYLEVILLE	900	99
14020006	Uncompahare	RIDGEWAY RESERVOIR	62,600	52
14020006	Uncompangre	UNCOMPAHGRE RIVER AT COLONA	155,000	72

¹ Cucharas Reservoir is empty due to a filling restriction.

			Component	Component
постр	noc Name	Component Name	Volume (AF)	NEP for Month
		SILVER JACK RESERVOIR	4,100	35
		CRAWFORD RESERVOIR	6,000	38
		FRUITLAND RESERVOIR	500	40
14020002	Upper Gunnison	MORROW POINT RESERVOIR	112,800	49
		GUNNISON R INF TO BLUE MESA RESERVOIR	650,000	53
		LAKE FORK AT GATEVIEW, CO	135,000	62
		BLUE MESA RESERVOIR	624,500	92
		TERRACE RESERVOIR	3,900	30
		MOUNTAIN HOME	2,800	57
		ALAMOSA CREEK ABOVE TERRACE RESERVOIR	76,000	57
12010002	Alamosa-Trinchera	SANGRE DE CRISTO	19,500	62
13010002		TRINCHERA CK	14,500	69
		CULEBRA CREEK AT SAN LUIS	27,000	71
		UTE CREEK	15,800	72
12010005	Consist	PLATORO RESERVOIR	13,600	29
13010005	Conejos	CONEJOS RIVER NEAR MOGOTE	215,000	58
		CONTINENTAL RESERVOIR	2,600	40
12010001	Rio Grande	RIO GRANDE NEAR DEL NORTE	580,000	62
13010001	Headwaters	RIO GRANDE RESERVOIR	28,100	90
		SANTA MARIA RESERVOIR	19,400	90
13010004	Saguache	SAGUACHE CREEK NEAR SAGUACHE, CO	37,000	69
	Animas	LEMON RESERVOIR	20,800	55
14080104		ANIMAS RIVER AT DURANGO	455,000	62
		FLORIDA RIVER INFLOW TO LEMON RESERVOIR	60,000	62
1 40004 07	Mancos	MANCOS RIVER NEAR MANCOS	35,000	59
14080107		JACKSON GULCH RESERVOIR	5,100	64
1 40004.05		LONG HOLLOW RESERVOIR	219	50
14080105	Middle San Juan	LA PLATA RIVER AT HESPERUS	26,000	62
14080102	Piedra	PIEDRA RIVER NEAR ARBOLES	240,000	66
		MCPHEE RESERVOIR	243,800	54
14030002	Upper Dolores	DOLORES RIVER BELOW MCPHEE RESERVOIR	340,000	64
		GROUNDHOG RESERVOIR	18,900	99
		LOS PINOS RIVER NEAR BAYFIELD	210,000	60
14080101	Upper San Juan	SAN JUAN RIVER NEAR CARRACAS	430,000	63
		VALLECITO RESERVOIR	85,900	99
		LAKE LOVELAND RESERVOIR	1,700	7
		MARIANO RESERVOIR	1,100	14
		CARTER LAKE	52,900	18
40400000		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	87,000	51
10190006	Big Thompson	WILLOW CREEK RESERVOIR	6,400	51
		LONE TREE RESERVOIR	6,000	53
		BOYD LAKE	33,100	57
		LAKE GRANBY	395,100	72

HUC ID	HUC Name	Component Name	Component	Component
			210 000	
			210,000	42
			3,000	49 61
			93,700	69
10190007	Cache La Poudre	CHAMBEDS LAKE	3,400	72
			4,200	73
			19 700	73
			10,700 E 200	70
			3,300 8 500	03
10100004	Cloar		114 000	67
10190004	Clear		114,000	10
			10,800	10
			3,000	19
			210,000	42
			88,000	49
	Middle South	BIG THOMPSON RAT MOUTH, NR DRAKE, CO	87,000	51
10190003	Platte-Cherry Creek		57,000	57
		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	40,000	63
			114,000	63
			17,200	63
			177,000	65
			38,800	82
			18,800	96
			16,500	31
			210,000	42
	Middle South Platte-Sterling		18,600	4/
		SAINT VRAIN CREEK AT LYONS	88,000	49
		BIG THOMPSON R AT MOUTH, NR DRAKE, CO	87,000	51
		BOULDER CREEK NEAR ORODELL	57,000	57
10190012		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	40,000	63
		CLEAR CREEK AT GOLDEN	114,000	63
		BEAR CREEK ABV EVERGREEN	17,200	63
		SOUTH PLATTE RIVER AT SOUTH PLATTE	177,000	65
		JACKSON LAKE RESERVOIR	24,000	67
		PREWITT RESERVOIR	19,100	71
		POINT OF ROCKS RESERVOIR	53,000	77
		RIVERSIDE RESERVOIR	43,500	85
		ANTERO RESERVOIR ²	0	3
10190001	South Platte	ELEVENMILE CANYON RESV INFLOW	52,000	59
10130001	Headwaters	ELEVENMILE CANYON RESERVOIR	99,400	65
		SPINNEY MOUNTAIN RESERVOIR	35,700	80

² Empty for repair

HUCID	HUC Name		Component	Component
noeib		Component Name	Volume (AF)	NEP for Month
		BUTTONROCK (RALPH PRICE) RESERVOIR	6,400	4
		SAINT VRAIN CREEK AT LYONS	88,000	49
		BOULDER CREEK NEAR ORODELL	57,000	57
10100005		SOUTH BOULDER CK NR ELDORADO SPRINGS, CO	40,000	63
10190005	St. Vrain	UNION RESERVOIR	11,900	74
		TERRY RESERVOIR	5,700	78
		GROSS RESERVOIR	32,500	78
		MARSHALL RESERVOIR	6,100	79
	Upper South Platte	DILLON RESERVOIR	236,500	60
10100000		BEAR CREEK ABV EVERGREEN	17,200	63
10190002		SOUTH PLATTE RIVER AT SOUTH PLATTE	177,000	65
		CHEESMAN LAKE	69,500	74
14050003	Little Snake	LITTLE SNAKE RIVER NEAR LILY	285,000	42
14050002	Lower Yampa	YAMPA RIVER NEAR MAYBELL	830,000	40
10190001	North Platte			
10180001	Headwaters	NORTH PLATTE R NR NORTHGATE	225,000	48
14050005	Upper White	WHITE RIVER NEAR MEEKER	270,000	45
		ELK RIVER NEAR MILNER, CO	300,000	31
		YAMPA RIVER AT STEAMBOAT SPRINGS	240,000	39
14050001	Upper Yampa	ELKHEAD CREEK ABOVE LONG GULCH	70,000	47
		YAMCOLO RESERVOIR	6,600	83
		STAGECOACH RESERVOIR NR OAK CREEK	34,700	99

Basinwide Conditions Assessment

The SWSI value for the month was 1.1. December 2015 was a slightly above average month in Northeast Colorado. Temperatures were near average over most of the area. The exceptions were the extreme southeast and southwest corners - the southeast corner was warmer than normal and the southwest corner was colder than normal. Precipitation was near to above normal over most of the area. The biggest exceptions were the southeast corner (below normal) and the north-central portion of northeast Colorado, which received well above normal precipitation.

In keeping with the near, but above, normal theme, snowpack in the South Platte Basin was near normal by the end of December. The January 1, 2016 water equivalent was 116% of normal.

The exception to the near, but above normal, theme of December 2015 was the river flow at the Kersey and Julesburg index gages. Flow at both gages was well above normal. The overall flow at the Julesburg gage was 199 % of the long term December mean flow. The December 2015 mean flow was 799 cfs while the long term December mean flow is 401 cfs. The overall flow at the Kersey gage was 128 % of the long term December mean flow. The December at the Kersey gage was 128 % of the long term December mean flow is 685 cfs.





South Platte-DataComposite-SWSI

The SWSI value for the month was 2.1.

<u>Outlook</u>

The Pueblo Winter Water system grand total was 67,061 acre-feet at the end of December representing an increase from last year's storage to date, which was 53,744 acre-feet. The previous five-year average for this period is 44,878 acre-feet and the average since 1995 for this period has been 57,197 acre-feet.

Conservation storage in John Martin Reservoir is about 250% above last year. Storage since November 1st has been 16,619 acre-feet while storage a year ago for the same time period was 6,478 acre-feet.

Administrative/Management Concerns

The Arkansas River Compact Administration meeting was held in Garden City, Kansas on December 9th and 10th.

Reservoir storage in the Arkansas Basin is rapidly filling up. If snowpack conditions continue to hold above average, storage space will be at a premium at the end of the winter

storage season, and those with accounts that are first to spill will be scrambling to find solutions to potential reservoir spills.

ARKANSAS RIVER NR. PORTLAND, FLOW BY WATER YEAR 1,200,000 1,000,000 800,000 AC CUMULATIVE FLOW 600,000 400,000 200.000 0 Oct Nov Feb March Мау Sept Dec Jan April June Julv Aug -× 2016 - DRY (2002) AVG





Arkansas-DataComposite-SWSI

Basinwide Conditions Assessment

The SWSI value for the month was 0.9. Flow at the gaging station Rio Grande near Del Norte averaged 200 cfs (104% of normal) during December. The Conejos River near Mogote had a mean flow of 62 cfs (119% of normal) during the month. The above average streamflow in the Conejos was the result of a release from Platoro Reservoir for Compact delivery needs.

Alamosa received 0.25 inches of precipitation during December, 0.10 inches below normal. Alamosa's total precipitation of 9.42 inches during 2015 was 2.11 inches above the annual average. For the year, the average temperature was 3.1 degrees above normal due mild temperatures in the winter months.

<u>Outlook</u>

Stream flow in the basin should be near average for the next few months. Currently, the Natural Resources Conservation Service (NRCS) forecasts the 2016 runoff to be in the range of 108% (the Rio San Antonio in the far southern end of the San Luis Valley) to 123% (Ute Creek near Fort Garland) of average for key streams in the Upper Rio Grande Basin. A fantastic way to start off the 2016 forecasting season!

Recent National Weather Service climate forecasts call for cooler and wetter than normal conditions in the San Luis Valley for the remainder of the winter with a very probable chance for heavy April and May snowstorms.

Administrative/Management Concerns

Pursuant to the provisions of the Rio Grande Compact, Colorado delivered approximately 250,000 acre-feet to New Mexico and Texas and easily met the delivery requirement for 2015. A small delivery credit will be available for the 2016 delivery requirement. Closed Basin Project delivery to the Rio Grande totaled 8,100 acre-feet.

2015 saw marginal snowpack accumulation in January and February, a snowy early March, and a dry April that forced well below average runoff during April and May. But heavy early and mid-May snowstorms blanketed the basin and changed the runoff dramatically. The snowfall favored the northern and western parts of the basin. Rain in June and July kept the Valley wet. There was very little monsoonal activity during August and September. This dropped streamflow levels to below average levels for the Autumn. Mid-November snowstorms blanketed the San Juan and Sangre de Cristo mountains, jump-starting the winter snowpack. In the end, the Rio Grande near Del Norte had annual flows of 108% of average. The Conejos near Mogote annual volume was 82% of normal. The southern drainages in the basin were heavily affected by the poor snowpack and lack of rainfall and recorded annual runoff at 50 to 80% of normal. Reservoir storage is generally fair, with a basinwide storage total of about 90% of average.

The State Engineer filed the long-awaited Groundwater Use Rules for Water Division 3 in September. A total of 30 statements of opposition were filed, but many of those were in support of rule promulgation. Groundwater Management Subdistrict No. 1 continued well depletion replacement in 2015 with a mixture of reservoir releases, headgate bypasses, and Closed Basin Project production delivered to the Rio Grande. Filing of the Rules will most likely result in the formation of another six or seven subdistricts in the near future.

Public Use Impact

In summary, 2015 was a fair to good year for runoff depending on the drainage location. Precipitation during the early irrigation season eased the need for irrigation well pumping from the Valley's aquifers. These aquifers made modest recovery during 2015, a welcome trend. Crop yields were good in areas with sufficient water supplies. Commodity prices were down from previous years.









Rio Grande Basin SWSI History Historical period SWSI values establish the SWSI distribution to lookup recent and current SWSI values.

GUNNISON BASIN

Basinwide Conditions Assessment

The SWSI value for the month was 1.4. Although December precipitation varied greatly around the Gunnison basin, it was all above the average. West areas, such as the Uncompanyre Plateau and Uncompanyre basin received between 150-200% of the 30-year average, while areas east and north, such as the East and Taylor Rivers received 110 to 130% of average. Snow water equivalent (SWE) values for the basin, calculated from an average of Gunnison basin Snotel sites rose to 119% of the 30 year median on January 1st. Leading the way are the southwestern areas, with the Columbine Pass (Uncompanyre Plateau) and Idarado at 184% and 136% of the median on January 1st, while the Schofield Pass contained only 97% of the median.

<u>Outlook</u>

The January, February and March outlook from the National Weather Service places the Gunnison basin within an area expected to have above average precipitation and average temperatures. The initial snowpack forecast was released by the NRCS on January 7th and predicts that with average snow the rest of the season we would end up at 105% of the median peak SWE, but could range between 86% and 126% of the median with snow accumulation the remaining season that is 90% and 10% likely to be exceeded respectively. The first streamflow forecasts were released by the Colorado Basin River Forecast Center (CBRFC) and they predict streamflows above the median for all streams in the Gunnison basin. With a significant portion of the accumulation season to go there remains much uncertainty as to exactly where we will end up, but the start of the season is certainly promising!

Administrative/Management Concerns

DWR staff assisted the Colorado River District (CRWCD) and the Uncompany Valley Water Users Association

(UVWUA) on a grant application that would provide funding for adding satellite telemetry to gages on six of the UVWUA's main delivery canals. Having remote monitoring on their main canals will allow the UVWUA to more efficiently manage their system and improve the information available to the public regarding water management in the Uncompany Valley. DWR expects to install these systems prior to the irrigation season if the grant is received in the next couple of months. Taylor Park continues to accrue second fill water and contains 10,682 acre-feet on January 1st, which is slightly less than the 13,000 acre-feet it contained on the same date in 2015. Crystal Dam releases have been set near 1,100 cfs during the past month in an effort to reduce Blue Mesa Reservoir to 7490.00 ft, which is the target to reduce the likelihood of icing issues upstream of Blue Mesa. As of January 1st, Blue Mesa sits at over 7495 feet, meaning that releases will continue into January.

Public Use Impacts

Snow conditions at area resorts were average for Thanksgiving and have declined since that time due to lack of snowfall. Crested Butte has made significant amounts of snow with their water rights, which has helped them to open areas.

Unseasonably cold weather since mid December in the upper Gunnison has caused significant ice accumulation on both the Taylor and Gunnison Rivers near the City of Gunnison. Significant ice jams have already caused significant flow events on December 27th, January 1st and January 12th, mostly affecting the area near Almont on the Taylor River. Emergency managers have utilized the reverse 911 system to notify those on the River of potentially damaging flows when those jams have broken free. A video of the January 12th event taken at the Three Rivers Resort can be found at https://www.facebook.com/55020876237/videos/10153373726716238/. Although impressive, Three Rivers Resort reports that these flows have not damaged resort property.









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 -0.3.

<u>Outlook</u>

Colorado River flows continue near average or slightly below average with tributary flows running slightly below average throughout December with the exception of the Blue River, which is running above average. As of January 13, the Upper Colorado River Basin snowpack was 101 percent of median snow water equivalent and 95 percent of average precipitation. Forecasts call for above average precipitation with normal temperatures for western Colorado through December.

Administrative/Management Concerns

The call on the Colorado River main stem remains the Shoshone Hydro Power right for 1250 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.

Public Use Impacts

For the 15th year, the ESPN Winter X-Games return to Aspen January 28-31. Buttermilk Ski Mountain, part of Aspen Snowmass makes a significant amount of snow to accommodate the large jumps needed for the events and the super pipe. The games also have a massive economic impact in the Roaring Fork Valley and make it the highest occupancy weekend of the year in Aspen Snowmass.







Colorado-DataComposite-SWSI

Basinwide Conditions Assessment

The SWSI value for the month was -0.7. December precipitation was slightly 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 118% 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 December was 94%.

Snowpack for the combined basins stands at 104%. The snow water equivalent (SWE) as of December 31, 2015 was 101% of average for the North Platte River basin and 103% of average for the Yampa River basin and White River basin.

NRCS predicts slightly below average spring and summer streamflows in the Yampa, White, and North Platte River basins. The latest runoff forecasts from the NRCS for the April through July period are 100% of average for the North Platte River near Northgate, 89% of average for the Yampa River near Maybell, 83% of average for the Little Snake River near Lily, and 96% of average for the White River near Meeker

Due to cold temperatures and snow depth on ice, all Division 6 stream gages except the Yampa River and White River gages are either closed for the winter season or currently ice/snow-affected.

<u>Outlook</u>

As of December 31st Fish Creek Reservoir was storing approximately 2,790 AF, 67% of capacity. The capacity of Fish Creek Reservoir is 4,167 AF. Yamcolo Reservoir was storing 6,600 AF at the end of December 2015. The capacity of Yamcolo Reservoir is 8,700 AF. On December 31tst, 2015, Stagecoach Reservoir was storing 34,700 AF which is 104% of capacity. On December 1st, Elkhead Creek Reservoir was 62% full and storing 15,339 AF.

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

Steamboat Ski Resort has recorded 182 inches of snow as of January 12, 2016.

At Stagecoach State Park the reservoir is completely iced over with approximately 8 - 12 inches of cover.

Steamboat Lake State Park has 6.5 to 8 inches of ice covering the lake as of 1/7/2016. Ice fishing is available during winter months. Ice conditions can vary so please use caution.





SAN JUAN-DOLORES BASIN

Basinwide Conditions Assessment

The SWSI value for the month was 1.2. Flow at the Animas River at Durango was estimated to average 218 cfs (98% of average). The flow at the Dolores River at was estimated to average 58 cfs (98% of average). The La Plata River at Hesperus was estimated to average 9.8 cfs (120% of average). Precipitation in Durango was 2.49 inches for the month, 155% of the 30-year average of 1.60 inches. Precipitation was the 28 highest amount recorded in December, in Durango, out of 121 years of record. Precipitation to date in Durango, for the water year, is 8.02 inches, 159% of the 30-year average of 6.75 inches. End of last month precipitation to date, for the water year was 166% of average. The average high and low temperatures for the month of December in Durango were 400 and 150. In comparison, the 30-year average high and low for the month is 41° and 14°. At the end of the month Vallecito Reservoir contained 83,740 acre-feet compared to its average content of 258,773 (94% of average), while Lemon Reservoir was up to 21,180 acre-feet as compared to its average content of 19,635 acre-feet (108% of average).

Outlook

Precipitation (2.49 inches) was above average for December in Durango. There were 28 years out of 121 years of record where there was more precipitation than this year. Flows in the rivers within the basin remained near average for the month. There were 48 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 46 out of 106 years of record where the total flow past the Dolores stream gauge was more than this year and 27 out of 99 years of record where the total flow past the La Plata River at Hesperus gauge was more than this year. On December 31, the NRCS SNOTEL sites reported an average snow-water equivalent within the basin at 128%. End of last month the snow-water-equivalent was 100%.





San Juan-Dolores-DataComposite-SWSI

































































































