
COLORADO

WATER SUPPLY CONDITIONS UPDATE

FROM THE OFFICE OF THE STATE ENGINEER: COLORADO DIVISION OF WATER RESOURCES
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November 2012

The Surface Water Supply Index (SWSI) developed by this office and the U.S.D.A. Natural Resources Conservation Service is used as an indicator of mountain-based water supply conditions in the major river basins of the state. It is based on stream flow, reservoir storage, and precipitation for the summer period of May through October (June 1 through November 1). During the summer period, stream flow is the primary component in all basins except the South Platte basin where reservoir storage is given the most weight.

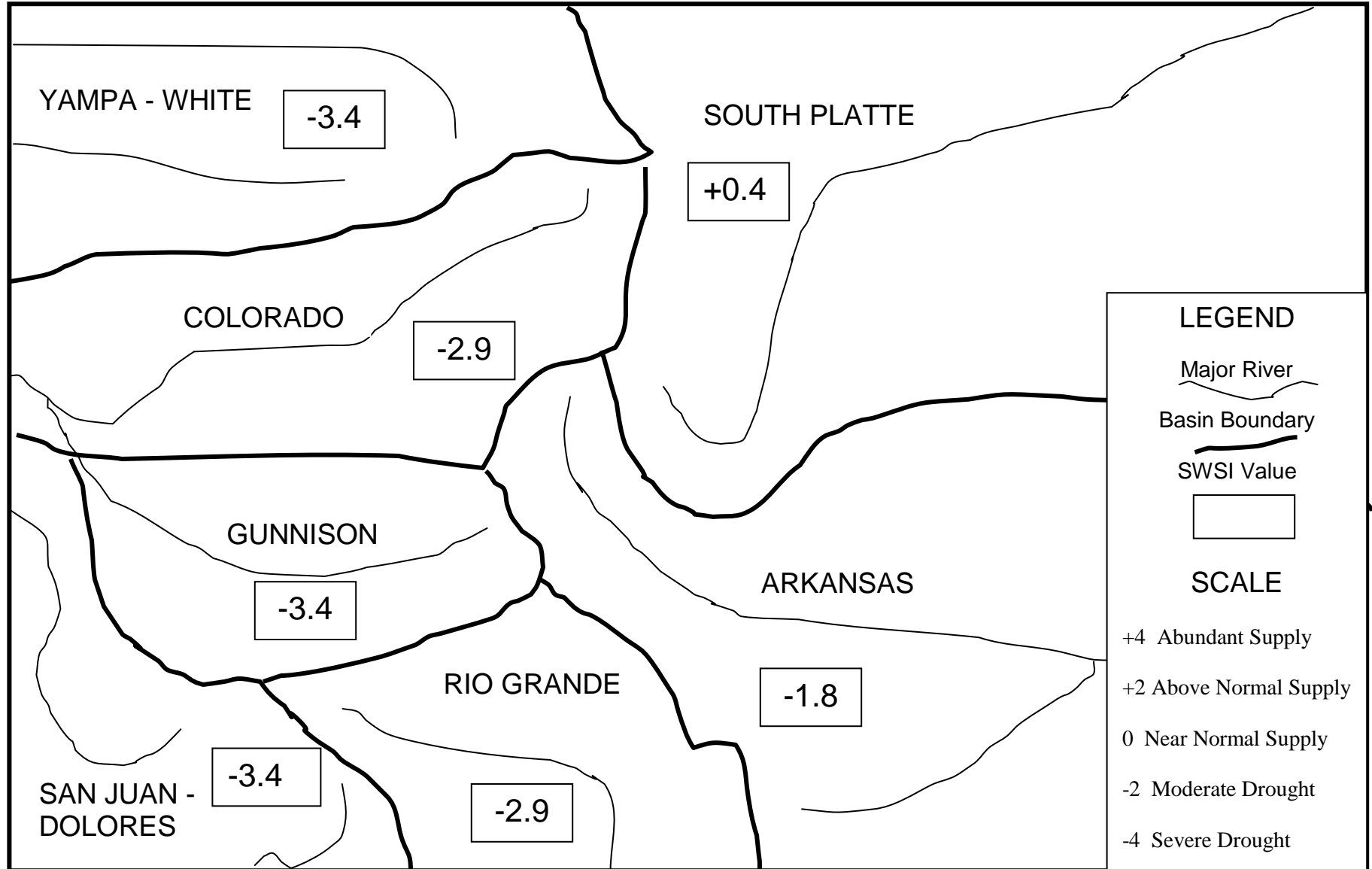
The statewide SWSI values for October (November 1) range from a high value of +0.4 in the South Platte Basin to a low value of -3.4 in the Gunnison, White/Yampa, and San Juan/Dolores basins. SWSIs for each basin decreased in October when compared to September, indicating drier conditions. Precipitation was below normal (historical median) in all basins. Streamflow was below normal in all basins except for the South Platte.

The following SWSI values were computed for each of the seven major basins for November 1, 2012, and reflect the conditions during the month of October.

<u>Basin</u>	<u>November 1, 2012 SWSI Value</u>	<u>Change From Previous Month</u>	<u>Change From Previous Year</u>
South Platte	0.4	-0.6	-2.9
Arkansas	-1.8	-0.4	-2.0
Rio Grande	-2.9	-0.6	-4.2
Gunnison	-3.4	-0.2	-3.9
Colorado	-2.9	-1.1	-5.6
Yampa/White	-3.4	-0.6	-6.9
San Juan/Dolores	-3.4	-0.2	-3.4

<u>Scale</u>								
-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



November 1, 2012

Basinwide Conditions Assessment

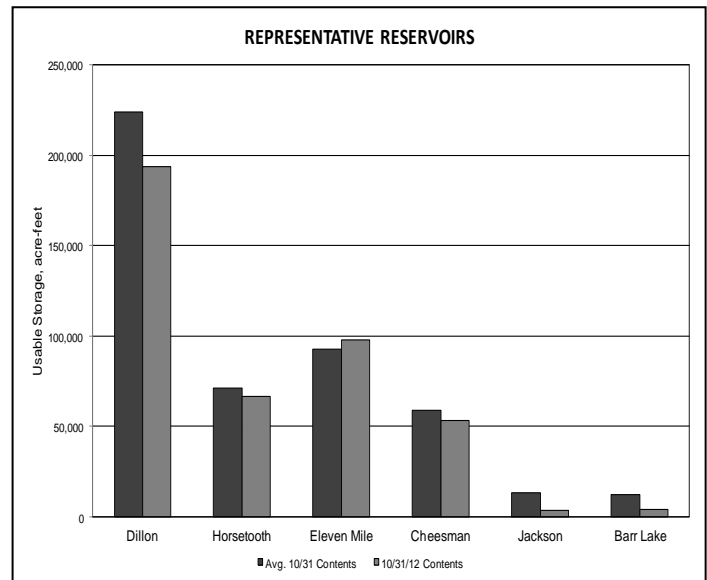
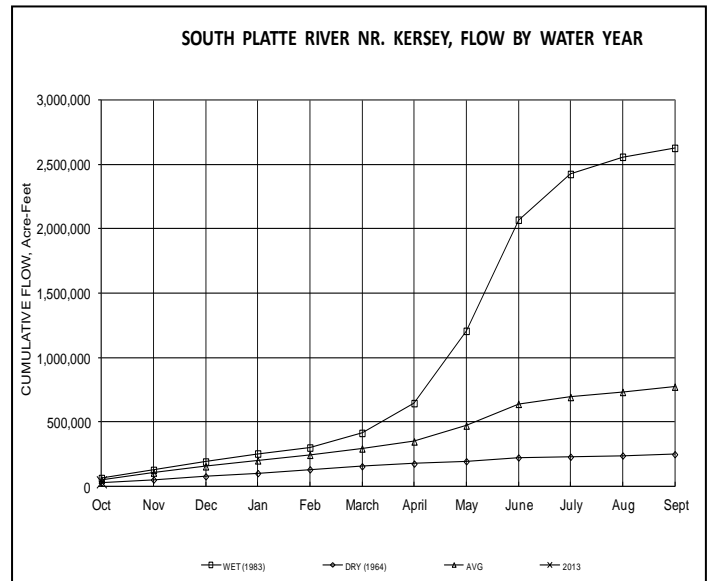
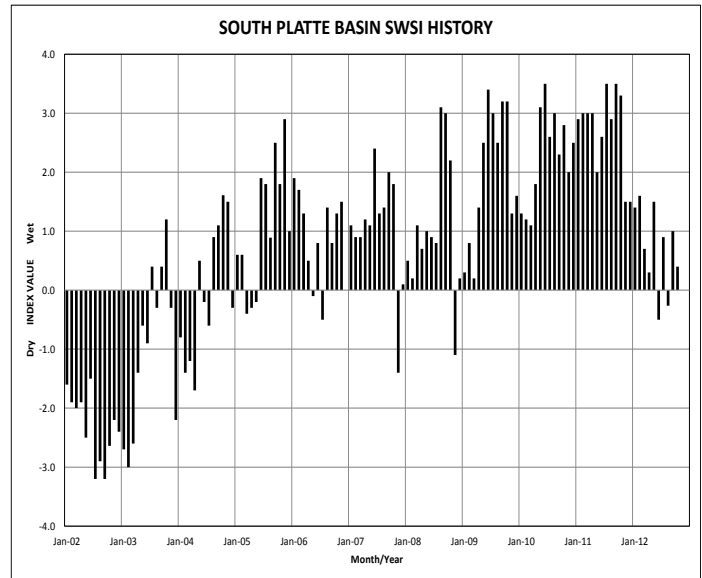
The SWSI value for the month was +0.4. Reservoir storage in Dillon, Horsetooth, Eleven Mile, Cheesman, Jackson, and Barr Lake, the major component in computing the SWSI value, was 89% of normal as of the end of October. Cumulative storage in the major plains reservoirs (Julesburg, North Sterling, and Prewitt) is at 16% of capacity. Cumulative storage in the major upper-basin reservoirs (Cheesman, Eleven Mile, Spinney, and Antero) is at 82% of capacity.

The September improvement in water conditions for the South Platte basin largely disappeared in an October that was dominated by mild and dry weather. The mainstem river calls during October reflected these weather conditions as they were more senior than normal for the month. The South Platte compact call that came on May 16 finally went off on October 15 with the end of the state line flow requirement. On the brighter side, reservoirs that had not completely filled or that had re-fill rights were able to exercise those rights and get a bit of a head start on filling for next irrigation season.

Stream flows at both the Kersey and Julesburg index gages remained below average for October, but were closer to the October historical means than had been the case in September. The Kersey gage monthly mean stream flow was 527 cfs or 78% (up from 71% in September) of the historic mean of 669 cfs. This compares to an October 2002 mean of 325 cfs. The October Julesburg gage monthly mean stream flow value was 87 cfs or 29% (up from 19% in September) of the historic mean of 301 cfs. This compares to an October 2002 mean of 25 cfs.

Outlook

The December – February National Weather Service outlook for the South Platte basin is for a virtual certainty of above average temperatures with equal chances of below or above average precipitation. Also, the drought outlook for November through January has the South Platte basin (and all of Colorado) virtually in the center of a huge area of drought persistence.



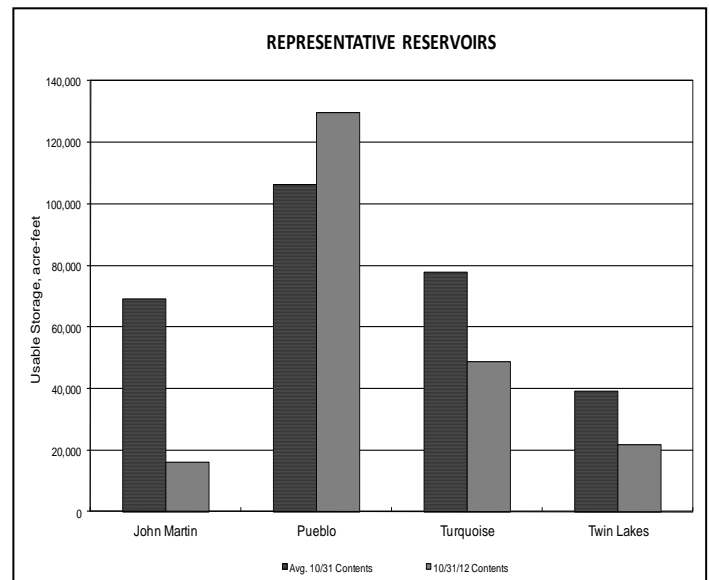
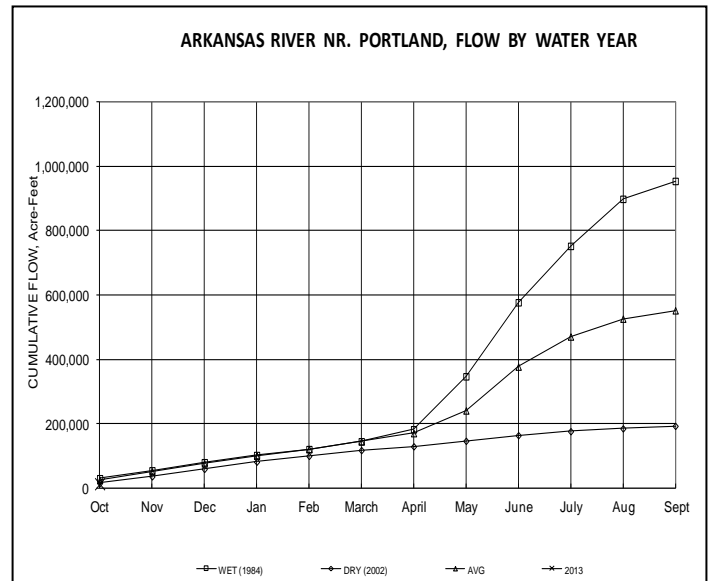
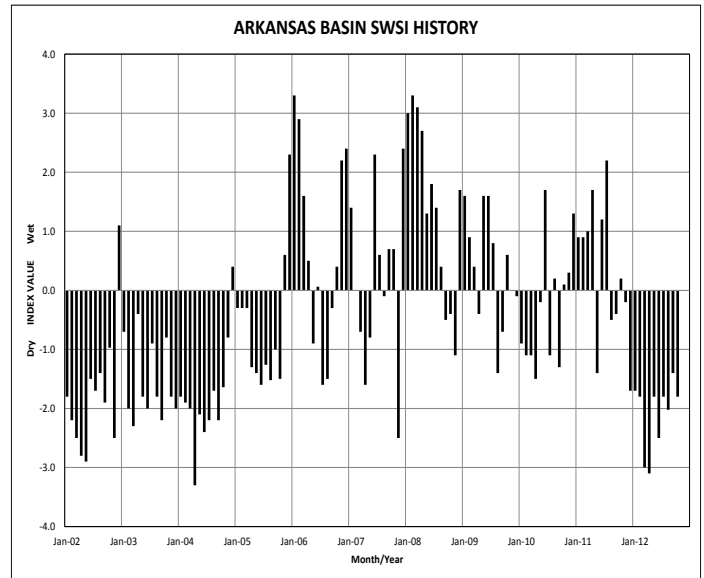
Basinwide Conditions Assessment

The SWSI value for the month was -1.8. Although flows were very low, strong precipitation and reservoir storage moderated this month's SWSI. Flow at the gaging station Arkansas River near Portland was 208 cfs, as compared to the long-term average of 406 cfs. Storage in Turquoise, Twin Lakes, Pueblo, and John Martin reservoirs totaled 74% of the long term average as of the end of October.

The river call for October began as a split call with the Salida Ditch (5-1-1882) as the call upstream of Pueblo Reservoir and the Fort Lyon Canal (4-15-1884) being the call below Pueblo Reservoir. The month ended with a call setting at the Fort Lyon Canal (4-15-1884).

A meeting of the Winter Water Board of Directors was held on October 19, 2012. Planning for the upcoming storage season which runs from November 15, 2012 through March 14, 2013 was the topic at this meeting.

Winter Compact storage in John Martin Reservoir began at midnight on October 31, 2012. Storage in Trinidad Reservoir began on October 15, 2012.



Basinwide Conditions Assessment

The SWSI value for the month was -2.9. Storage in Platoro, Rio Grande, and Santa Maria reservoirs totaled 64% of the long term average as of the end of October.

Flow at the gaging station Rio Grande near Del Norte averaged 221 cfs (46% of normal). The Conejos River near Mogote had a mean flow of 50 cfs (43% of normal). In general, streamflow in the upper Rio Grande Basin was only one-third to two-thirds of the long term average. Many drainages had streamflow levels drop to the same poor level as in 2002.

Precipitation during October in Alamosa was 0.37 inches, 0.30 inches below normal. Temperatures continue to be above normal. A single rain and snowfall event on October 12 brought some relief to the parched Valley, but the white-capped peaks were short-lived.

Outlook

National Weather Service long-term forecasts call for above normal temperatures this winter. They are non-committal as to precipitation. Southern Colorado would surely appreciate a heavy snowpack this winter.

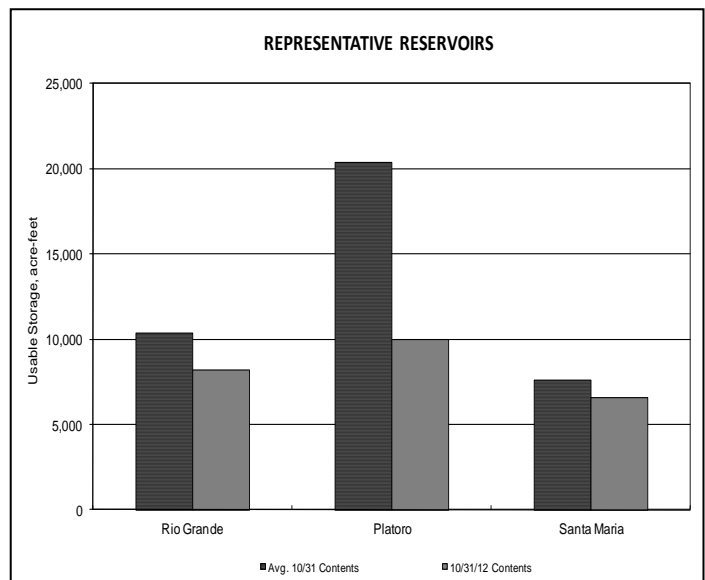
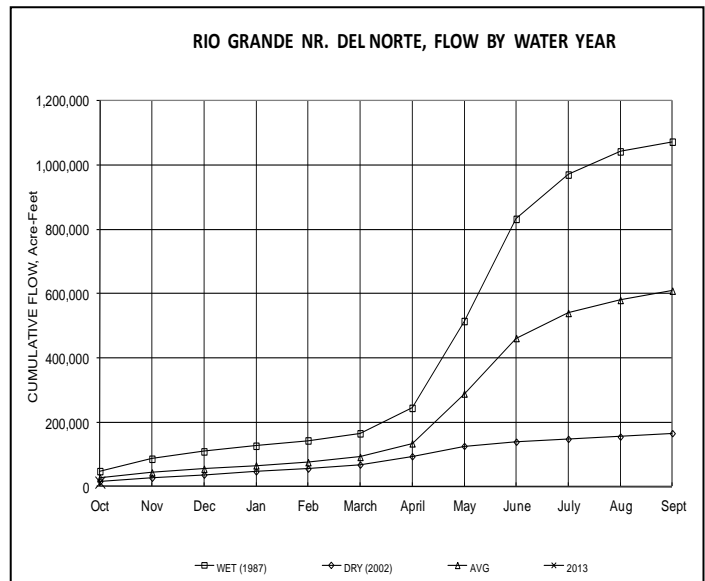
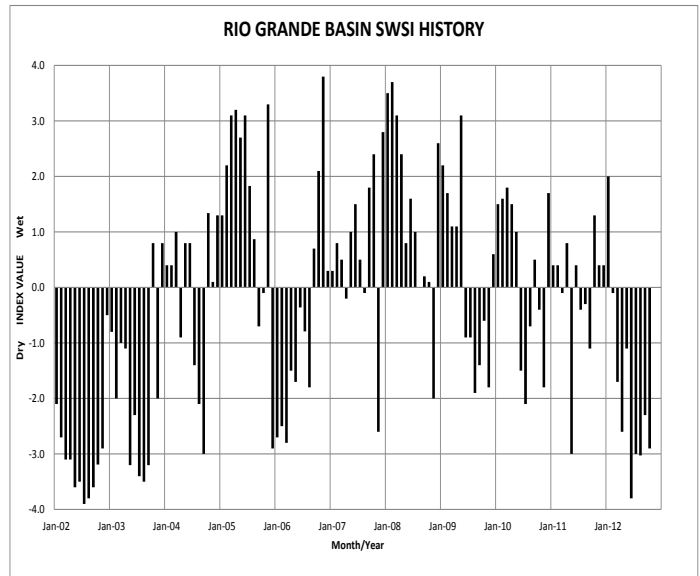
Administrative/Management Concerns

Reservoirs in the basin reduced outflows and began storing inflow as October came to a close. Current reservoir storage in the upper Rio Grande basin is dismal.

Pursuant to SEO Policy 2010-1, irrigation season closed for the majority of the San Luis Valley on November 1, with the Alamosa / La Jara and Culebra set for November 9. In order to reduce over delivery to the downstream states under the Rio Grande Compact, the Conejos River and its tributaries will continue diversions until weather conditions end the irrigation run. The decrees allowing diversions from the Rio Grande for recharge use will be in effect for about two weeks into November. Administrators look at these late-season runs as an opportunity to recharge the Valley's aquifers. Also, this won't adversely impact Colorado's delivery obligation under the Rio Grande Compact as any delivery requirement to New Mexico and Texas will easily be fulfilled.

Public Use Impacts

The weather was sufficiently mild to allow those ditches in priority to continue diversion for irrigation throughout October. Lack of precipitation continues to be a problem for many ranchers. Soil moisture conditions are poor.



Basinwide Conditions Assessment

The SWSI value for the month was -3.4. Flow at the gaging station Uncompahgre River near Ridgeway was 58 cfs, as compared to the long-term average of 90 cfs. Storage in Taylor Park, Crawford, and Fruitland reservoirs totaled 77% of the long term average as of the end of October.

Extremely dry conditions persisted through October with the Gunnison and San Miguel River basins receiving less than 50 percent of average precipitation during the month. Most mountain locations have not yet experienced the first major snowstorm of the season and are at 0 to 30 percent of normal snowpack at the end of October. Although snowpack on November 1st is not a good indicator of the water supply for 2013, it is a poor start to the accumulation season nonetheless. Temperatures basin wide were around 3 degrees above average, which extended the growing season and increased consumptive use for the month of October. Streamflows remain well below average throughout the Gunnison basin due to the dry conditions and relatively high consumptive use previously mentioned.

Outlook

Precipitation forecasts for the next 90 day period continue to predict equal chances of below or above average precipitation while temperatures are forecast to be above normal.

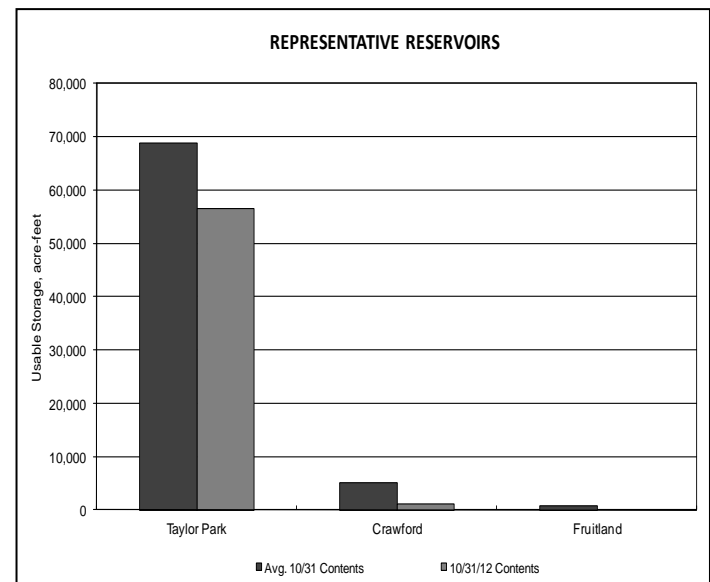
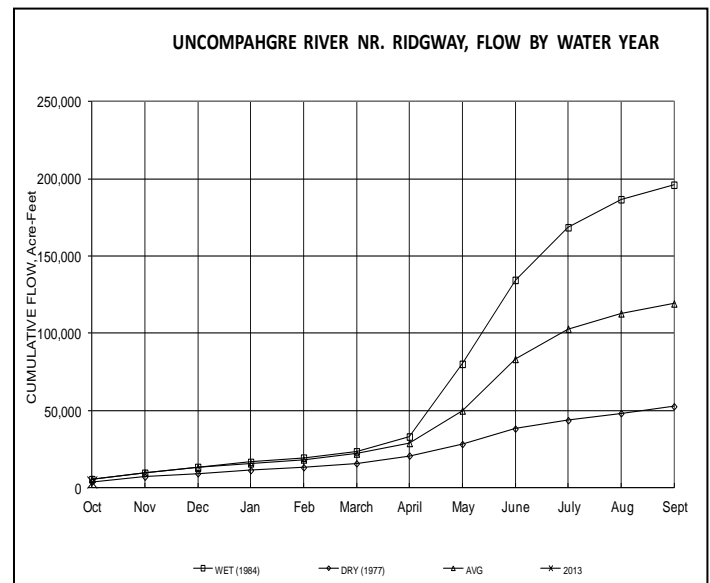
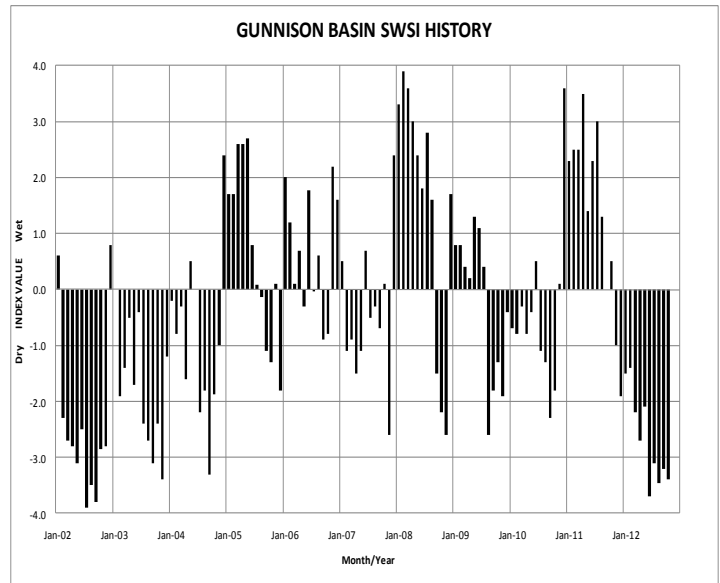
Administrative/Management Concerns

Some stream systems, such as Surface Creek, remained on call past the end of October due to unusually high temperatures that extended the growing season. This has prevented some reservoirs with junior rights, such as Fruitgrowers Reservoir, from initiating storage at the beginning of November. Grand Mesa reservoirs ended the season with 15 to 18 percent of storage capacity remaining, lower than the 20 percent that remained on November 1, 2002. These 90-plus reservoirs will begin filling in November, as allowed by the out of priority storage statute. If Fruitgrowers Reservoir, which is located downstream of the Grand Mesa, does not fill during the spring of 2013, water will have to be released from the Grand Mesa reservoirs to fill it.

Taylor Park Reservoir ended the season on November 1st with a physical content of 56,579 acre-feet and a first fill account containing 74,659 acre-feet (includes 18,080 acre-feet of first fill stored in the Aspinall Unit). Thankfully, due to wise storage management, the 2013 water year will begin for the Uncompahgre Valley Water Users (UVWUA) with a much greater amount in storage than the beginning of 2003 where only 26,741 acre-feet remained in Taylor Park's first fill account on November 1, 2002.

Blue Mesa appears to have bottomed out at 324,615 acre-feet on October 14th, or 34 percent of capacity. Although the flow targets at Whitewater, as specified in the Aspinall Unit Operations Record of Decision (ROD) have decreased to 750 cfs, inflows to the Aspinall Unit have hovered around only 350 cfs, meaning that releases at Crystal to meet target flows have been close to the entire inflow, preventing Blue Mesa from storing water.

Discussions between the Redlands Power Canal and the Colorado River Water Conservation District (CRWCD) continue regarding compensation for lost power revenue to prevent a Redlands Power Canal (RPC) call. Until this agreement is reached a call from the RPC is possible, which would require curtailment of winter diversions throughout the Gunnison basin.



Basinwide Conditions Assessment

The SWSI value for the month was -2.9. Flow at the gaging station Colorado River near Dotsero was 956 cfs, as compared to the long-term average of 1,318 cfs. Storage in Green Mountain, Ruedi, and Williams Fork reservoirs totaled 70% of normal as of the end of October.

Outlook

Colorado River flows fell with the net decrease in Green Mountain, Williams Fork, and Wolford Mountain reservoir releases in late October. Flows will continue to decrease and run significantly below average through November with further release reductions from Williams Fork and Green Mountain Reservoirs in mid-November. Roaring Fork River flows will decrease slightly with lowered Ruedi Reservoir releases to near minimum flow levels on the lower Fryingpan River. Grand Valley Irrigation calls have ended. Free river conditions will exist on the Colorado from here forward pending a Shoshone Hydro Power Plant call.

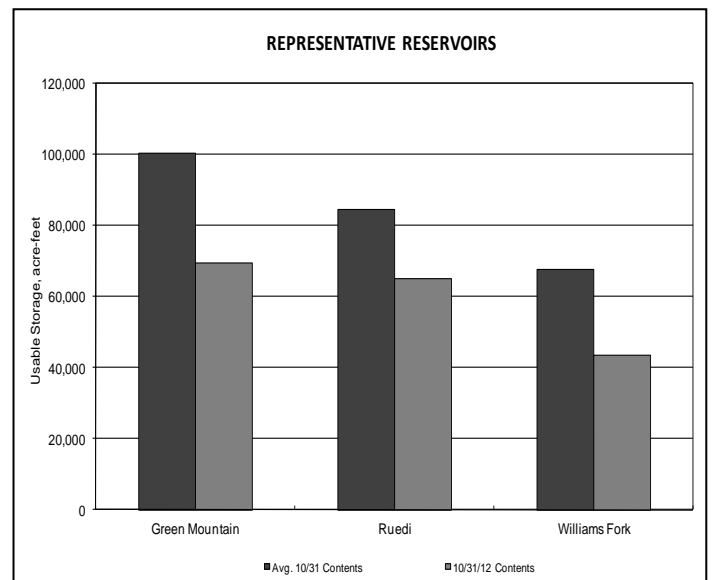
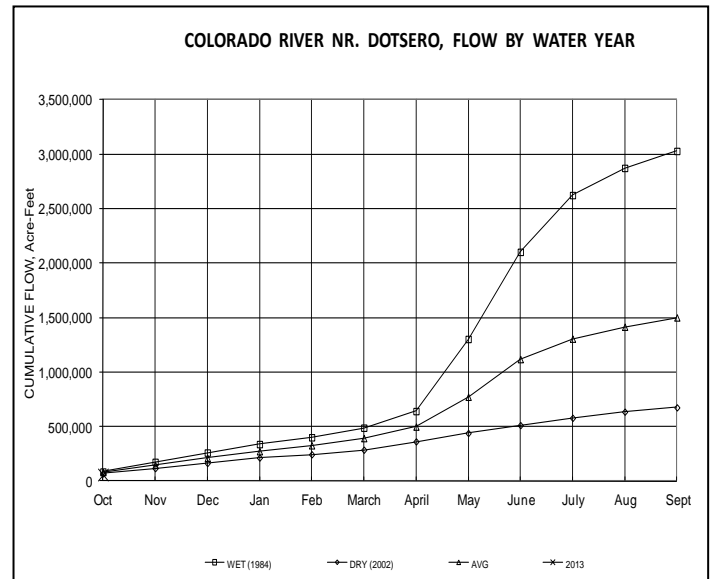
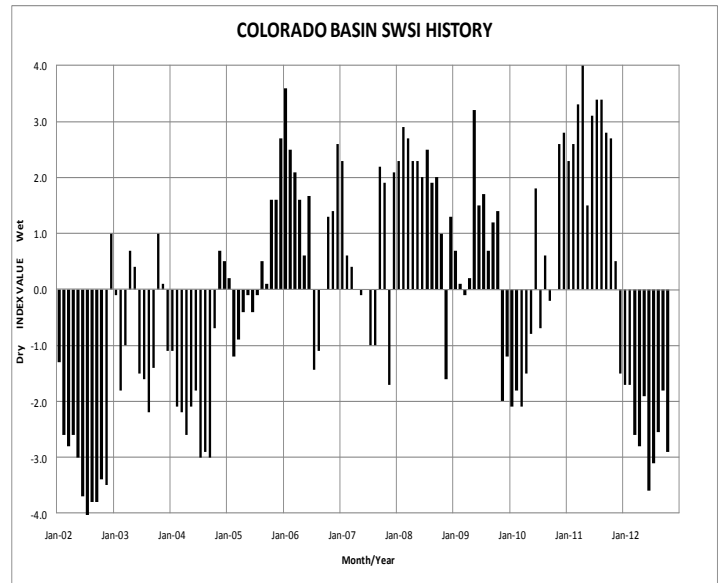
The western Colorado forecast through the month of November calls for below average precipitation.

Administrative/Management Concerns

The call for the Grand Valley Water Users 730 right ended October 17th. The Grand Valley Irrigation call continued under the Grand Valley Irrigation Canal (GVIC) 119 cfs right until October 23rd. Shoshone Power plant will remain shut down through November. Williams Fork and Green Mountain Reservoir operators are boosting flows under voluntary participation in the Shoshone Outage Protocol releasing a combined additional volume of approximately 90 cfs. A call is in place by the Blue River Diversion Project on the main stem of the Blue River as of October 23rd.

Public Use Impacts

The ski season began with a few areas opening on October 18th, including A Basin, Breckenridge, Copper Mountain, Keystone, and Loveland.



Basinwide Conditions Assessment

The SWSI value for the month was -3.4. Flow at the gaging station Yampa River at Steamboat was 81 cfs, as compared to the long-term average of 139 cfs.

October precipitation was below average in the Yampa, White, and North Platte River basins. Precipitation for the month, as measured at the SNOTEL sites operated by NRCS, was reported at 74% of average for the Yampa, White, and North Platte River basins. Total precipitation for water year 2013 as a percent of average in the combined basins at the end of October is 74%. Streamflows in the Yampa, White, and North Platte River basins remained well below average for October and most of Division 6 continues to be experiencing severe to extreme drought conditions as classified by the US Drought Monitor.

Outlook

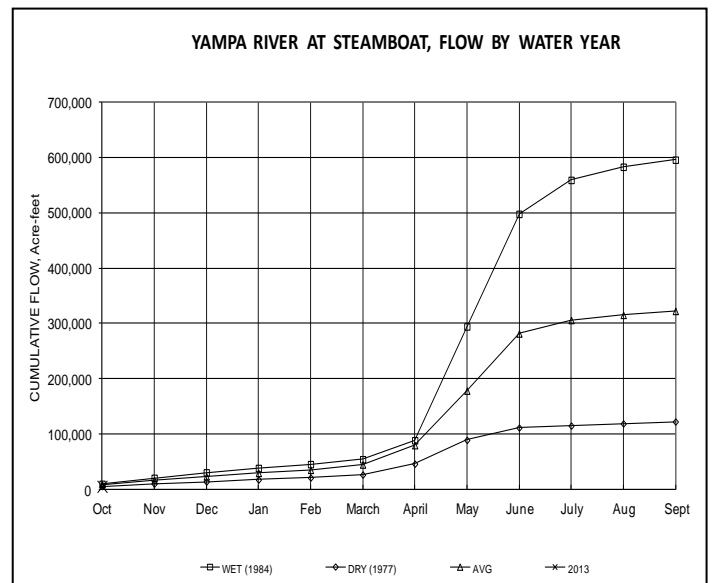
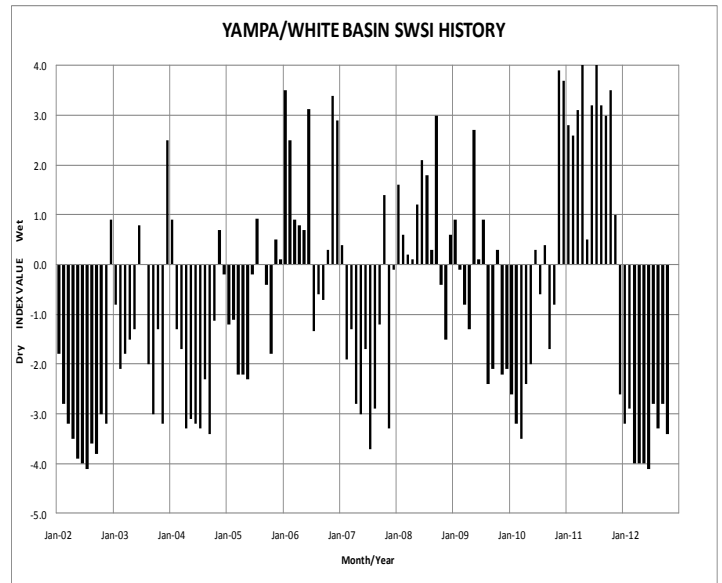
As of October 31st, Fish Creek Reservoir was storing approximately 2,009 AF, 48% of capacity. Yamcolo Reservoir was storing 3,160 AF, 35% of capacity. On October 31st, Elkhead Creek Reservoir was storing 16,432 AF, or 66% of capacity. Lastly, Stagecoach Reservoir was storing 26,550 AF, 79% of capacity.

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

Public Use Impacts

Trout fishing at Stagecoach Reservoir is reported as very good with tailwater fishing excellent. The reservoir was recently stocked. The reservoir is now closed to boating for winter and will reopen May 1st, conditions permitting.

Steamboat Lake is lower than normal for this time of year. Boating is closed at Steamboat Lake for the season. Winter conditions have arrived, but all park roads remain open, conditions permitting.



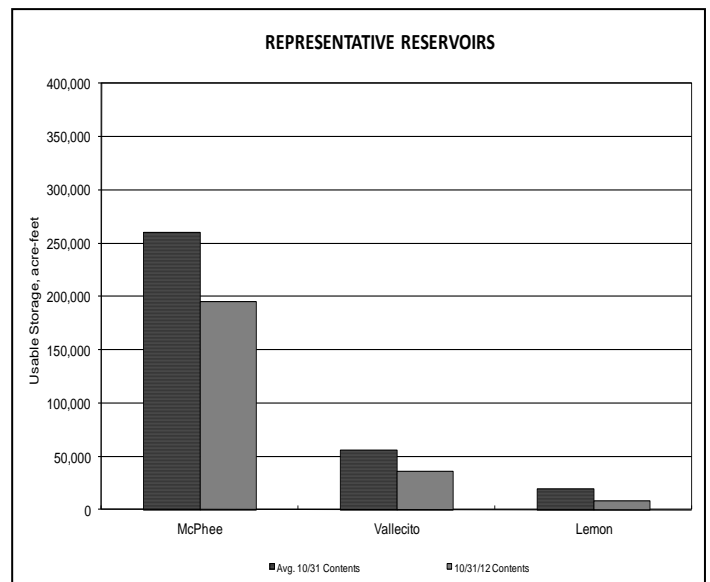
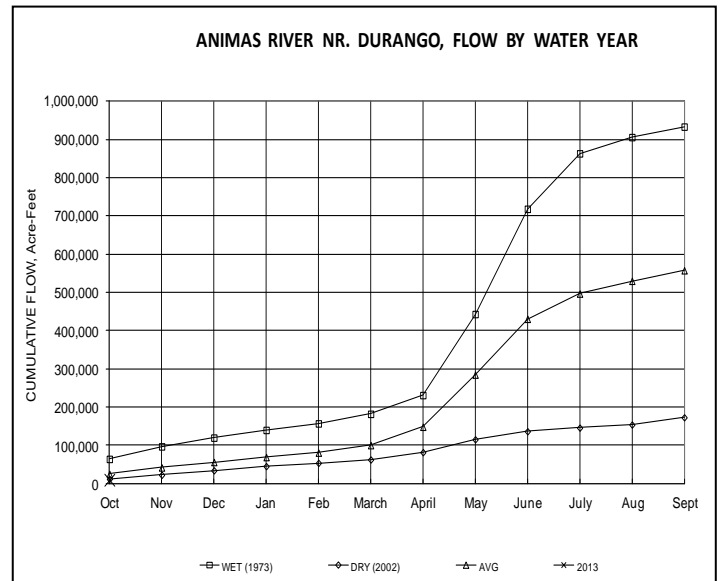
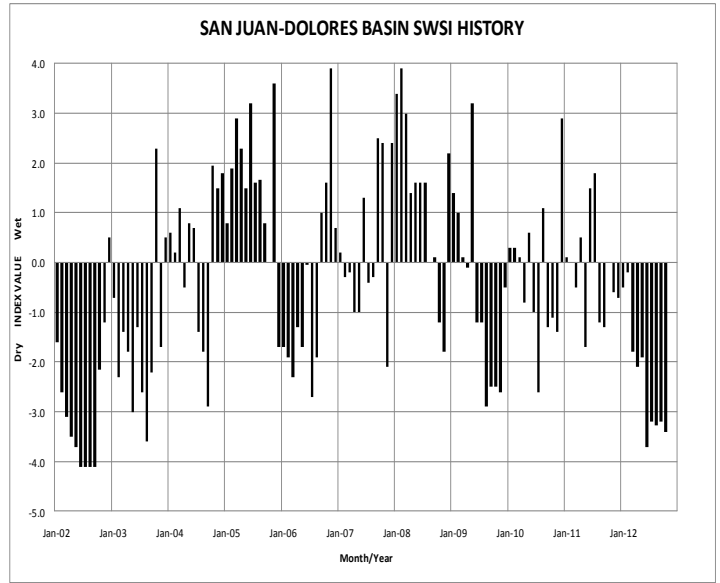
Basinwide Conditions Assessment

The SWSI value for the month was -3.4. Flow at the Animas River at Durango averaged 151 cfs (36% of average). The flow at the Dolores River at Dolores averaged 37 cfs (28% of average). The La Plata River at Hesperus averaged 4.7 cfs (30% of average).

Precipitation to date in Durango, for the water year, is 0.24 inches, 12% of the 30-year average of 2.00 inches. The average high and low temperatures for the month of October in Durango were 69° and 32°. In comparison, the 30-year average high and low for the month is 65° and 34°. At the end of the month Vallecito Reservoir contained 35,770 acre-feet compared to its average content of 51,683 acre-feet (69% of average). McPhee Reservoir was up to 195,009 acre-feet compared to its average content of 268,777 (73% of average), while Lemon Reservoir was up to 7,990 acre-feet as compared to its average content of 19,627 acre-feet (41% of average).

Precipitation (0.24-inches) was well below average for October in Durango. There are 105 years out of 118 years of record where there was more precipitation than this year. The flows on the Animas River were well below average this October. The total flow this October was the lowest on record out of 102 years. The total flow was 9,296 acre-feet. The second lowest monthly total flow occurred in 1956. The total flow October, 1956 was 9,987 acre-feet. The other basins within the division did not fare much better. There are 99 years out of 104 years of record where there was more flow at the Dolores River at Dolores and 92 years out of 96 years of record where there was more flow at the La Plata River at Hesperus.

Several wild fires that began in October continued to burn at the end of the month.



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