

Utah Climate and Water Report

October 2012



Buck Flat SNOTEL near Ferron Reservoir, UT
Photo by Jordan Clayton, NRCS

Utah Climate and Water Report

The purpose of the Climate and Water Report is to provide a snapshot of current and immediate past climatic conditions and other information useful to agricultural and water user interests in Utah. The report utilizes data from several sources that represent specific parameters (streamflow data from the United States Geological Survey, reservoir data from the Bureau of Reclamation, and other sources), geography including high elevation United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Snowpack Telemetry (SNOTEL) data, and agriculturally important data from the USDA-NRCS Soil Climate Analysis Network (SCAN). Data on precipitation, soil moisture, soil temperature, reservoir storage, and streamflow are analyzed and presented. These data analyses can be used to increase irrigation efficiency and agricultural production. As with all data and analyses, there are limitations due to data quality, quantity, and spatial application.

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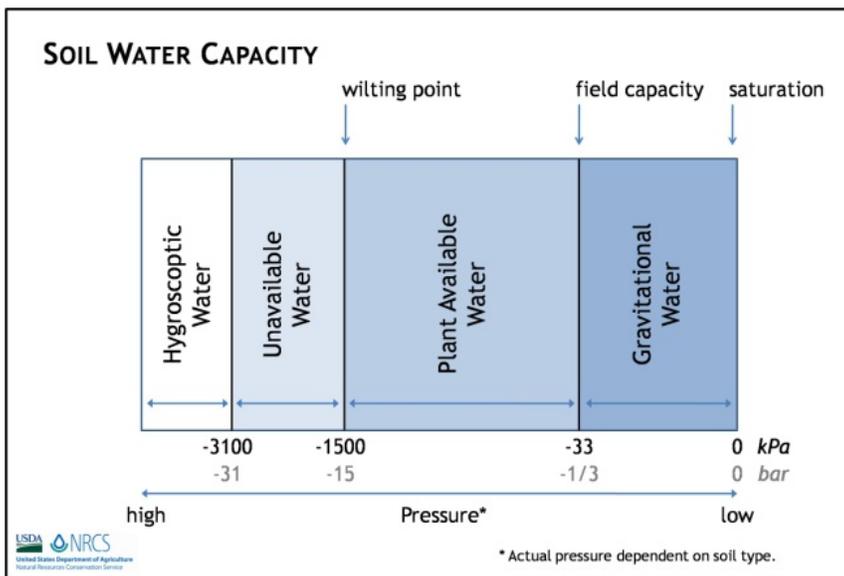
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Climate and Water Information

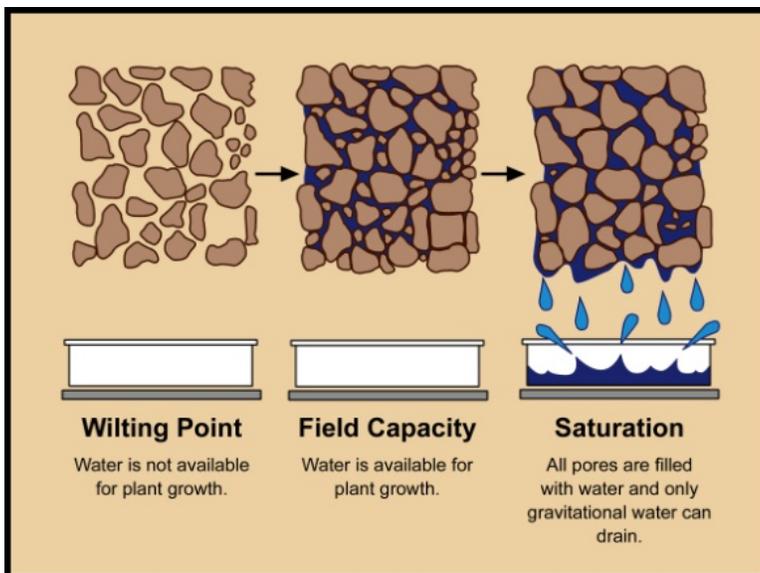
Soil Climate Analysis Network

Soil Climate Analysis Network (SCAN) stations are primarily located on low- to mid-elevation, agriculturally important landscapes that maintain representative soils. Elevations range from 3,000 to 7,000 ft. The SCAN network provides real-time soil moisture and temperature data coupled with additional climate information for use in natural resource planning, drought assessment, water resource management, and resource inventory. Stations are situated on non-irrigated, native soils, are remotely located, and collect hourly atmospheric and soils data that are available to the public online.

In order to summarize SCAN data, the 35 sites in Utah are grouped by climate divisions (North Central, Northern Mountains, Uintah Basin, Southeast, South Central, Dixie, and Western).



Explanation of soil water capacity definitions. Field capacity (FC) and wilting point (WP) are calculated in the laboratory for each soil horizon. The amount of water held between field capacity and wilting point is plant available.



Visual explanation of soil water capacity definitions.

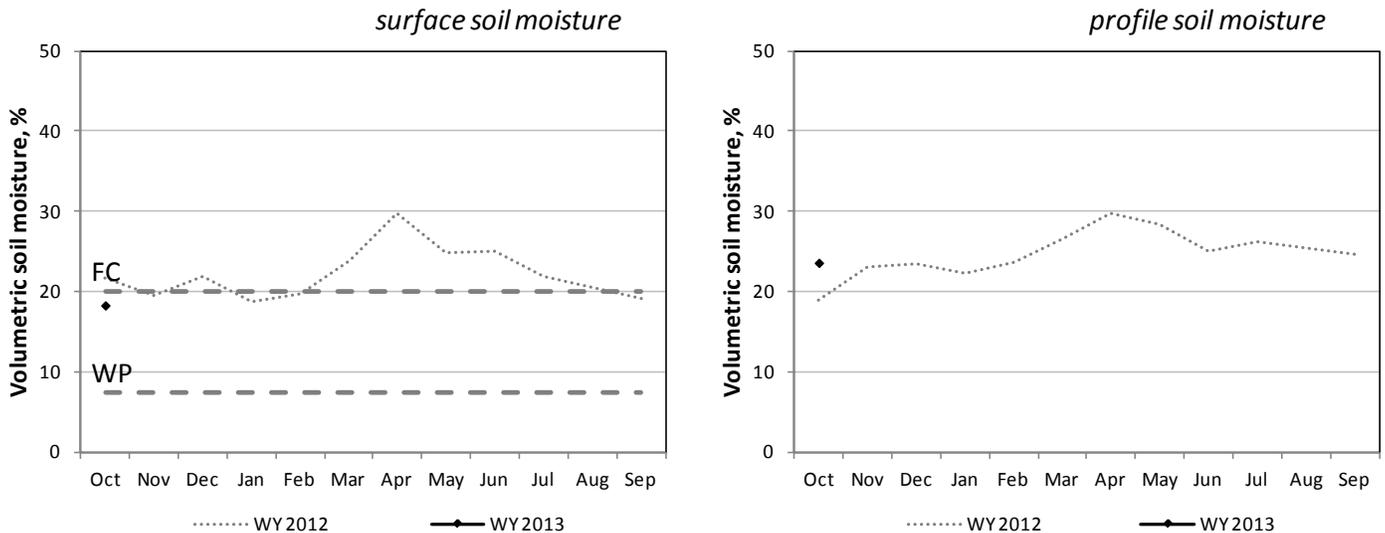
North Central

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>°F</i>				
NORTH CENTRAL												
Blue Creek	9.7	0.2	8	12	20	24	17	65	68	68	66	65
Cache Junction	12.1	0.3	15	14	28	31	31	59	60	60	60	59
Grantsville	7.1	0.6	3	20	26	26	26	62	66	68	68	58

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

North Central



Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

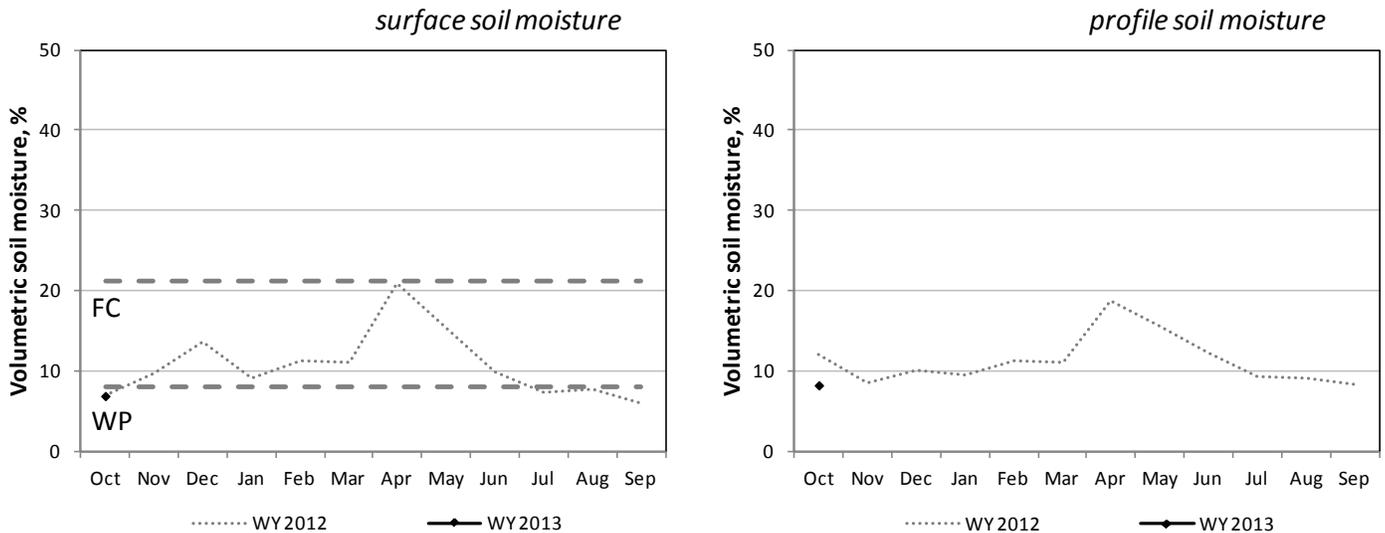
Northern Mountains

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>°F</i>				
NORTHERN MOUNTAINS												
Chicken Ridge	7.3	0.9	0	6	7	10	11	57	58	59	56	55
Buffalo Jump	6.4	1.3	7	10	9	8	-	61	62	62	59	-
Morgan	11.3	0.3	4	4	10	6	8	60	61	62	61	61

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

Northern Mountains



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Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

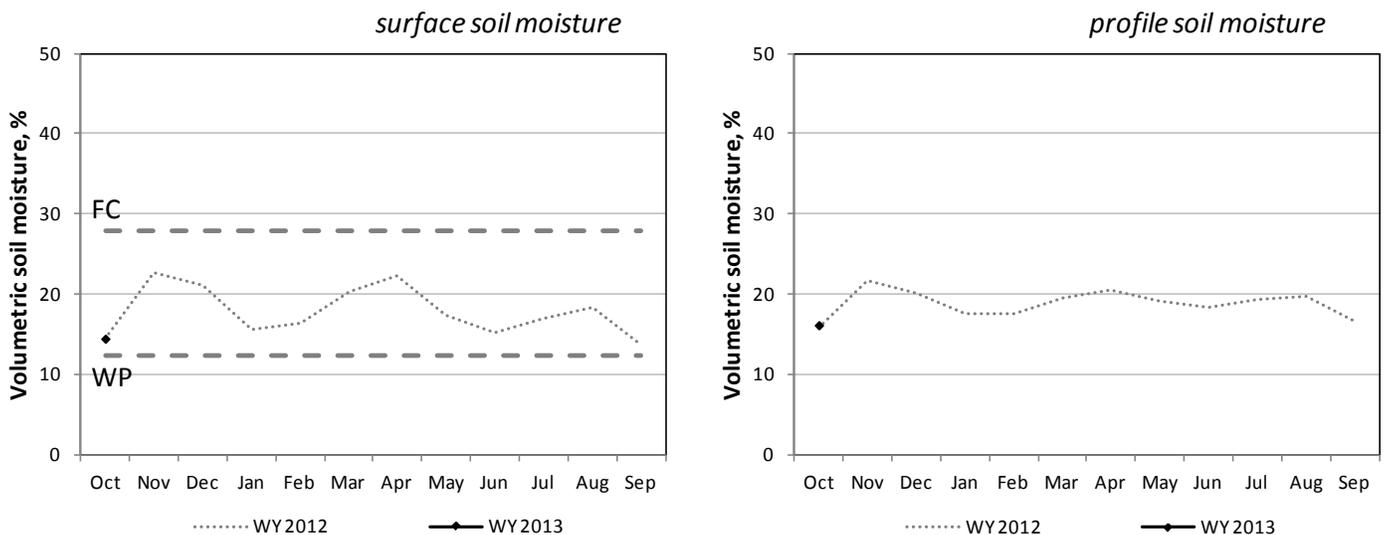
Uintah Basin

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>°F</i>				
UINTAH BASIN												
Mountain Home	9.0	0.7	12	19	22	18	10	55	57	57	57	57
Little Red Fox	5.4	1.0	5	13	19	22	24	54	63	64	62	62
Split Mountain	4.4	0.7	13	16	8	13	13	58	62	66	66	68

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Uintah Basin



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Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

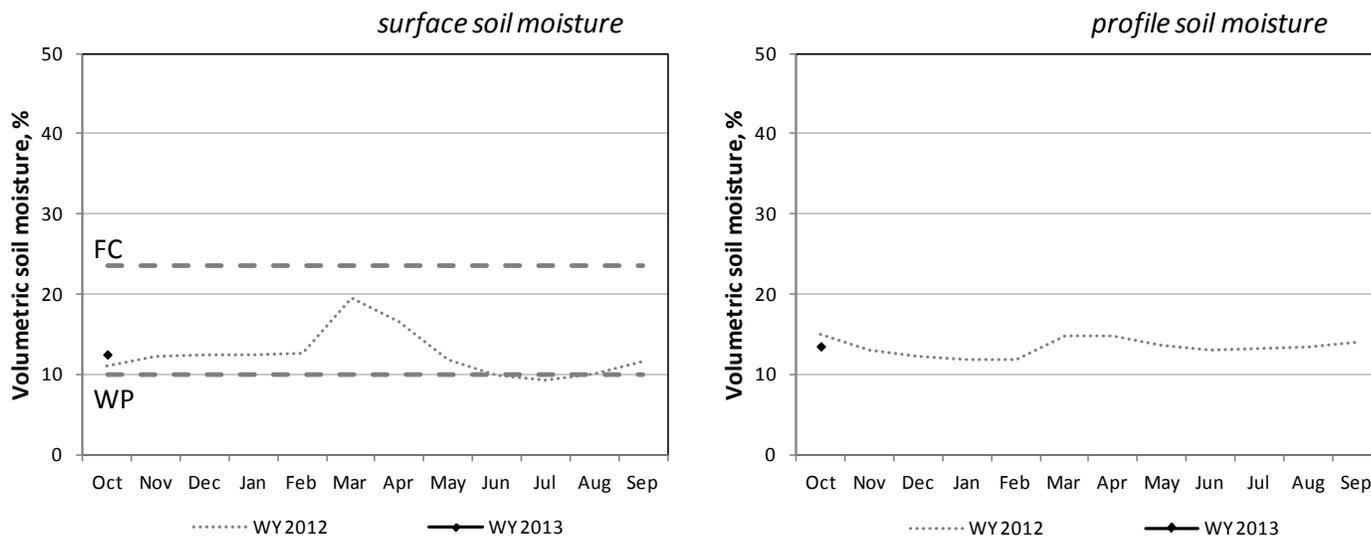
Southeast

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTHEAST												
Price	6.1	0.9	1	8	13	17	22	63	68	69	68	68
Green River	4.3	1.4	16	17	9	5	10	61	64	68	68	70
Harm's Way	6.2	1.0	7	0	13	14	6	64	59	64	62	63
West Summit	6.3	1.5	19	24	14	15	18	54	56	60	58	60
Eastland	8.8	1.0	9	10	8	23	20	58	61	61	61	62
Alkali Mesa	9.5	1.6	9	15	15	19	13	61	60	64	65	66
McCracken Mesa	7.1	1.6	15	15	14	16	13	64	69	70	68	69

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Southeast



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Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

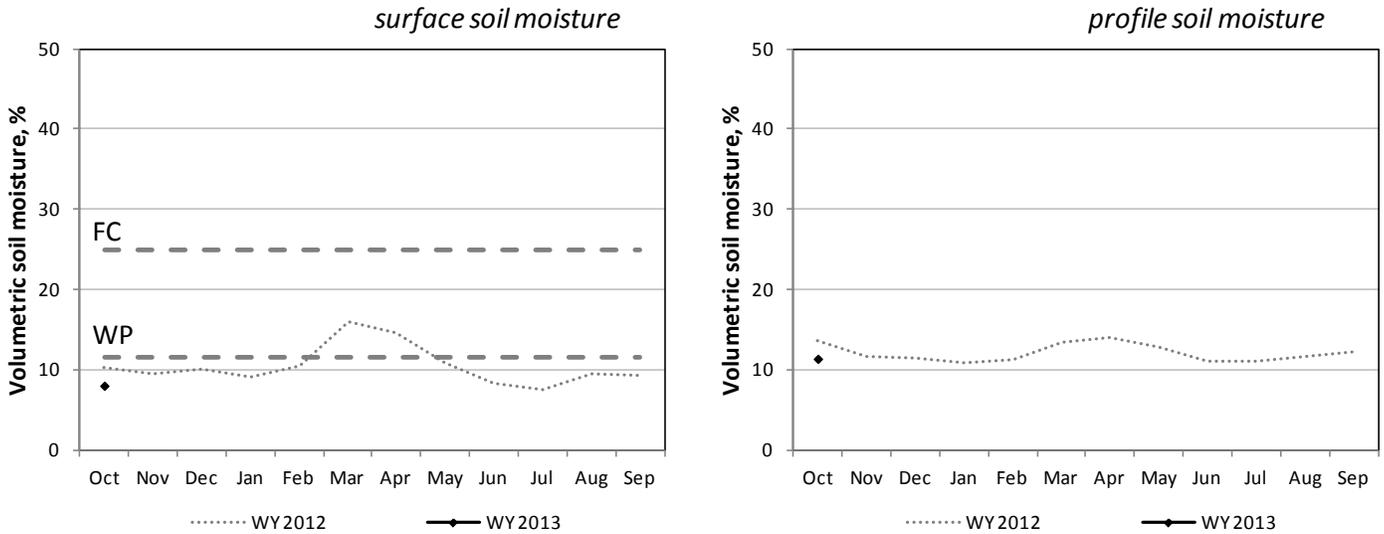
South Central

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
SOUTH CENTRAL												
Nephi	9.8	0.3	14	17	14	8	6	62	64	65	64	64
Ephraim	8.9	1.5	7	11	17	17	34	53	59	60	59	61
Holden	6.9	0.7	4	5	4	12	15	64	65	66	66	67
Milford	6.6	0.3	7	18	19	30	18	65	67	66	66	67
Manderfield	8.9	0.9	6	11	12	11	5	55	62	63	61	62
Circleville	2.8	0.3	6	4	6	9	9	62	61	63	63	60
Panguitch	7.2	0.7	3	16	12	20	30	51	52	52	55	56
Cave Valley	17.8	1.5	0	3	2	5	3	59	61	64	64	63
Vermillion	11.9	0.8	0	0	2	4	8	54	58	62	60	61
Spooky	5.0	0.7	1	1	3	12	2	69	68	69	69	69

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South Central



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Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

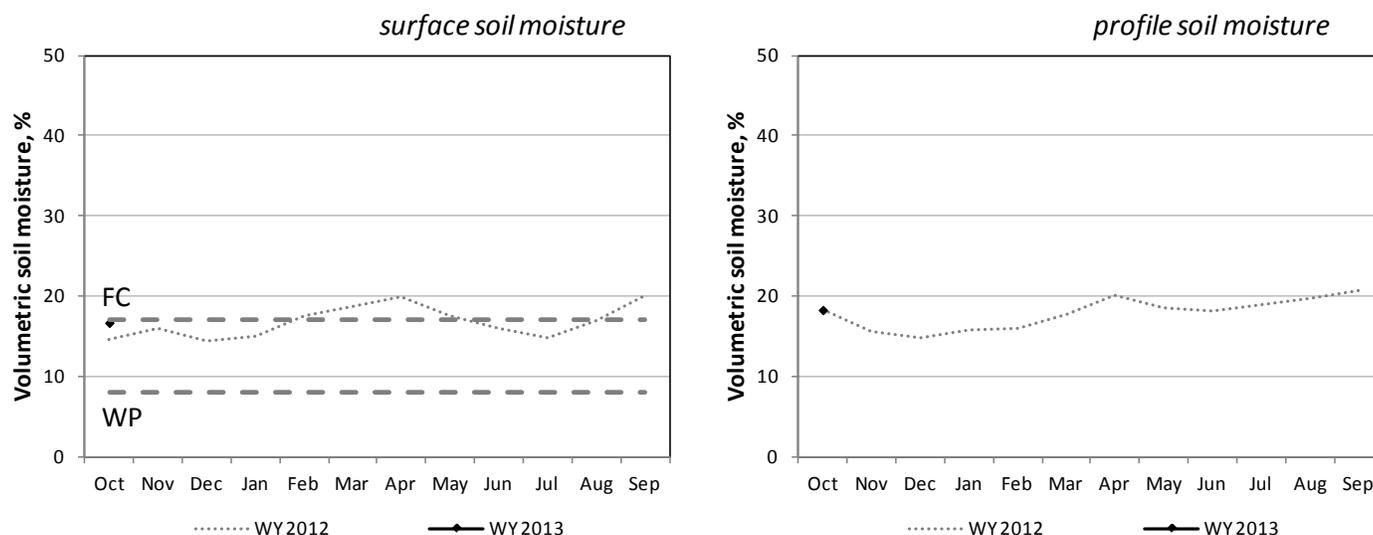
Western and Dixie

Soil Climate Analysis Network (SCAN)

Site name	Precip to Date*	Monthly Precip	Soil Moisture					Soil Temperature				
			2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
	<i>in.</i>	<i>in.</i>	<i>volume %</i>					<i>° F</i>				
WESTERN												
Grouse Creek	10.3	0.4	1	8	12	16	17	56	62	64	62	62
Park Valley	6.9	0.1	0	6	14	25	27	59	63	65	65	65
Goshute	5.4	0.8	18	31	49	37	32	53	59	64	62	64
Dugway	5.3	0.6	16	27	37	57	12	62	66	66	66	66
Tule Valley	6.0	1.8	13	16	25	17	10	62	70	75	73	73
Hal's Canyon	5.8	1.9	2	11	12	10	9	62	66	69	67	68
Enterprise	13.0	1.3	5	27	26	16	17	61	69	69	67	67
DIXIE												
Sand Hollow	13.0	1.1	0	1	1	3	0	69	76	78	76	76

* Precipitation since October 1 (beginning of the water year). Monthly Precip is the amount of precipitation accumulated in the past month. SCAN sites utilize tipping bucket rain gauges which do not accurately measure precipitation in the form of snowfall. Soil moisture and temperature values reflect conditions measured on the first of the month.

Western & Dixie



Surface soil moisture is the weighted mean of the water content measured at depths of 2, 4, and 8 inches. **FC** is the mean field capacity, **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region, and **WY** is the water year lasting October through September. *Profile soil moisture* is the weighted mean of water content measured at depths of 2, 4, 8, 20, and 40 inches.

Additional data available at the SCAN website, including: hourly air temperature, relative humidity, wind speed, wind direction, barometric pressure, precipitation, solar radiation, soil temperature, and soil moisture.

Utah Hydrologic Summary

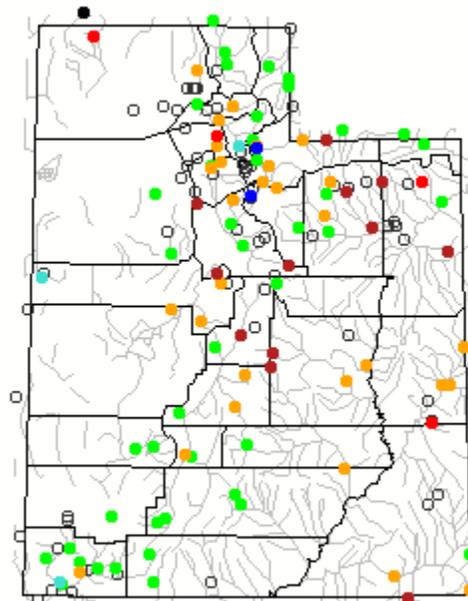
October 1, 2012

Current Conditions

Stream flow in southern Utah is near average due to exceptional precipitation in recent months. In southeastern, central and northern Utah, natural unregulated stream flow is below to much below average reflecting the past poor snowpack season combined with a very dry summer. The Water Availability Indexes (listed by basin later in this report) are uniformly much lower across the state than last year. The Water Availability Index simply shows a ledger book of water so to speak – what we currently have in the bank (reservoir storage) and our cash flow (current streamflow conditions), and combines the two for a snapshot of our current water health. These are ranked as a percentile with 50% being average and values less than 25% being very dry. Soil moisture is near to above normal in southern Utah and below normal in the remainder of the state. The Bear, Weber and Provo are exceptionally dry. Above average fall precipitation would be nice to bring all soils to a wetter condition. Precipitation across the state was much below to near normal for September in northern Utah (59%-92%) and below normal in southern Utah (73%-83%). Reservoir storage is generally low across the state at 60% of capacity compared to 87% of capacity last year. The Weber system is at 47% of capacity. Work on Echo reservoir (currently empty) should be completed soon and hopefully will begin to store water again. In summary – low stream flow in the north and average in the south, dry soil moisture north, wetter in the southwest, low reservoir storage pretty much all around – water year 2013 is not off to a great start. However, conditions looked very good at the beginning of water year 2012 and it turned out poorly – this year could be better. It could also be worse. We will have to play the hand dealt whatever it may be.

Current Utah Stream flow - Courtesy US Geological Survey

Wednesday, October 03, 2012 09:30ET

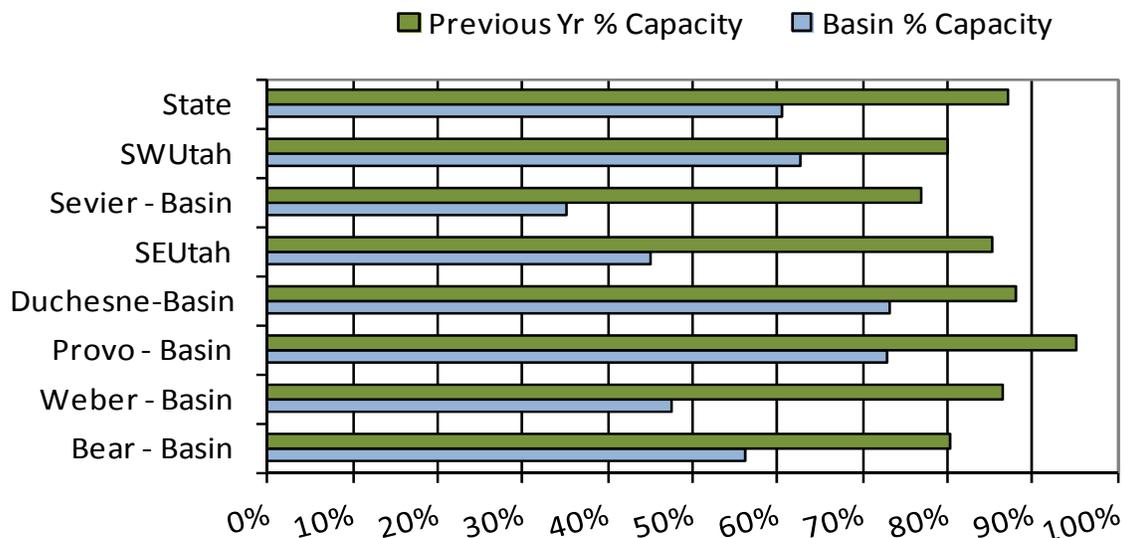


Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not ranked

Reservoir Storage

Reservoir storage statewide is currently at 60% of capacity, down 27% from last year. Many of the smaller reservoirs are less than 25% of capacity.

Statewide Reservoir Storage



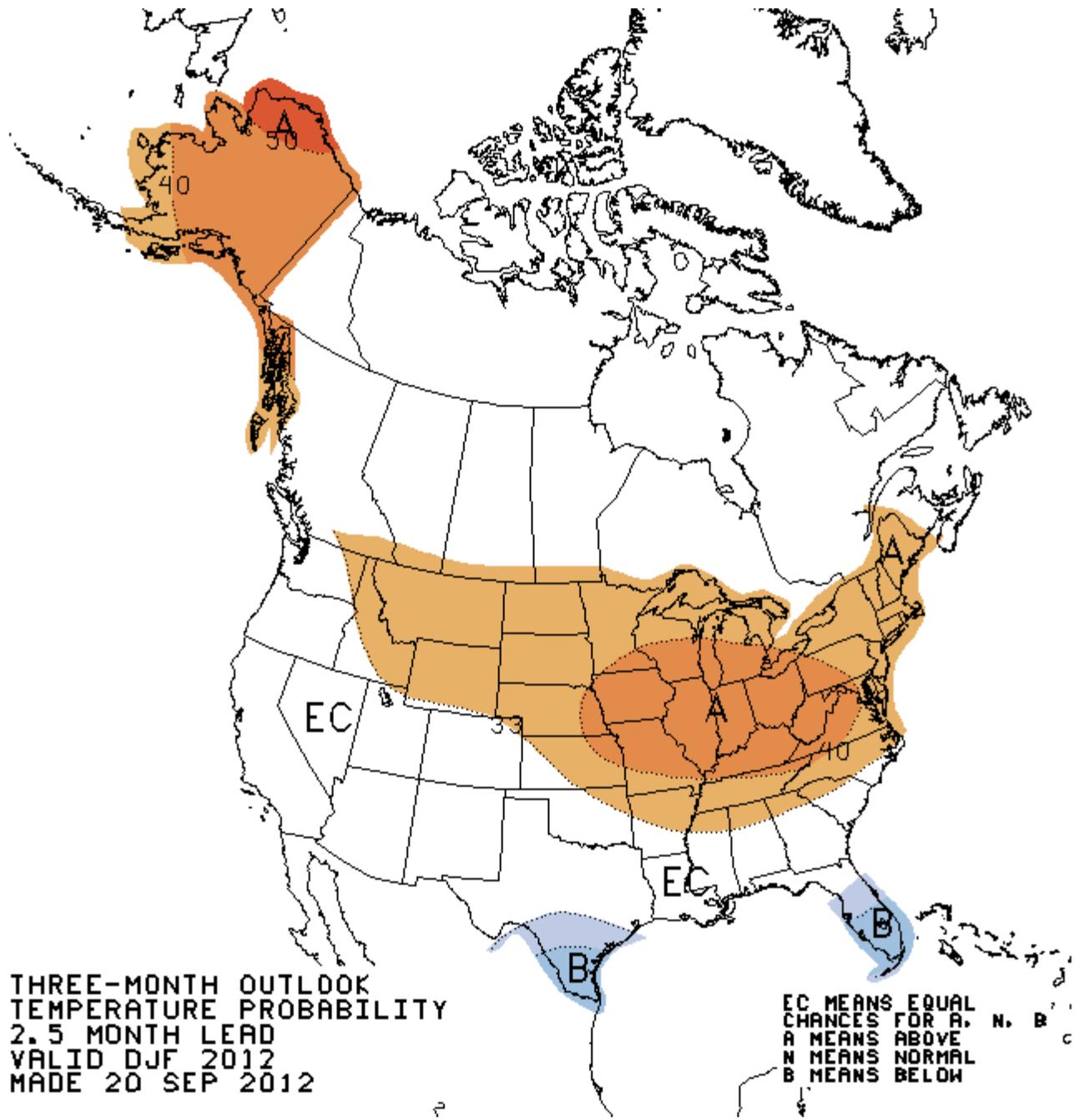
Future Climatic Conditions – Courtesy of National Climate Prediction Center, NOAA

Synopsis: Borderline ENSO-neutral/ weak El Niño conditions are expected to continue into Northern Hemisphere winter 2012-13, possibly strengthening during the next few months.

During September 2012, the trend towards El Niño slowed in several key oceanic and atmospheric indicators. However, the Pacific basin reflects borderline ENSO-neutral/ weak El Niño conditions. Equatorial sea surface temperatures (SST) remained elevated across the Pacific Ocean (Fig. 1), although anomalies decreased during the month as indicated by weekly index values in the Niño regions (Fig. 2). The oceanic heat content (average temperature in the upper 300m of the ocean) anomalies also weakened (Fig. 3), but continued to show large regions of above-average temperatures at depth across the equatorial Pacific (Fig. 4). Interestingly, low-level westerly wind anomalies were evident over the equatorial western Pacific Ocean (Fig. 5), which may portend possible strengthening of the subsurface anomalies in the coming months. Despite these winds, the atmosphere was still largely ENSO-neutral, as reflected by the Southern Oscillation index and near-average upper-level and lower-level winds across much of the Pacific. Tropical convection increased near the Date Line, which is consistent with weak El Niño conditions, but also remained elevated over eastern Indonesia, which is further westward than expected (Fig. 6). Thus, the atmosphere and ocean indicate borderline ENSO-neutral/ weak El Niño conditions.

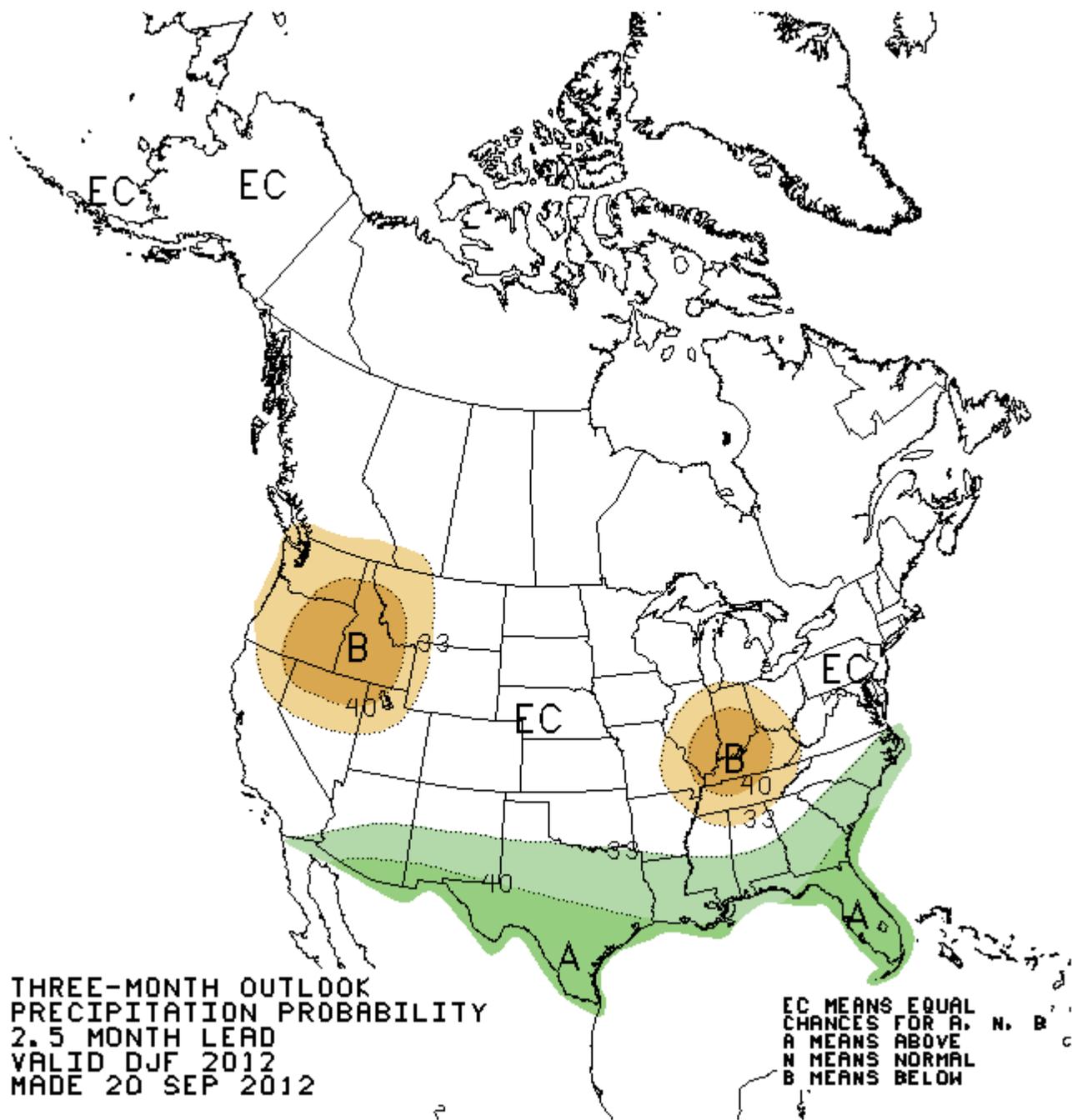
Compared to the past few months, the chance is reduced for El Niño to develop during Northern Hemisphere fall/winter 2012-13 (see [CPC/IRI consensus forecast](#)). Due to the recent slowdown in the development of El Niño, it is not clear whether a fully coupled El Niño will emerge. The majority of models indicate that borderline ENSO-neutral/ weak El Niño conditions will continue, and about half suggest that El Niño could develop, but remain weak (Fig. 7). The official forecast therefore favors the continuation of borderline ENSO-neutral/ weak El Niño conditions into Northern Hemisphere winter 2012-13, with the possibility of strengthening during the next few months.

Temperature probabilities for Dec-Feb, Courtesy of the Climate Prediction Center, NOAA



This graphic from the National Climate Prediction Center shows expected temperatures for December through February of this water year with all of Utah in the EC category (equal chances) meaning any outcome is possible.

Precipitation probabilities for Dec-Feb – Courtesy of the Climate Prediction Center, NOAA



This graphic from the Climate Prediction Center shows expected precipitation for December through February of this new water year with northwestern Utah perhaps a bit dryer with the remainder of the state in the equal chances (EC) category meaning any outcome is possible.

General Snowpack Information: <http://www.ut.nrcs.usda.gov/snow/>

Water Supply Information: <http://www.ut.nrcs.usda.gov/snow/watersupply/>

Surface Water Supply Index: <http://www.ut.nrcs.usda.gov/snow/watersupply/swsi.html>

Reservoir Information: http://www.ut.nrcs.usda.gov/snow/watersupply/res_graphs.html

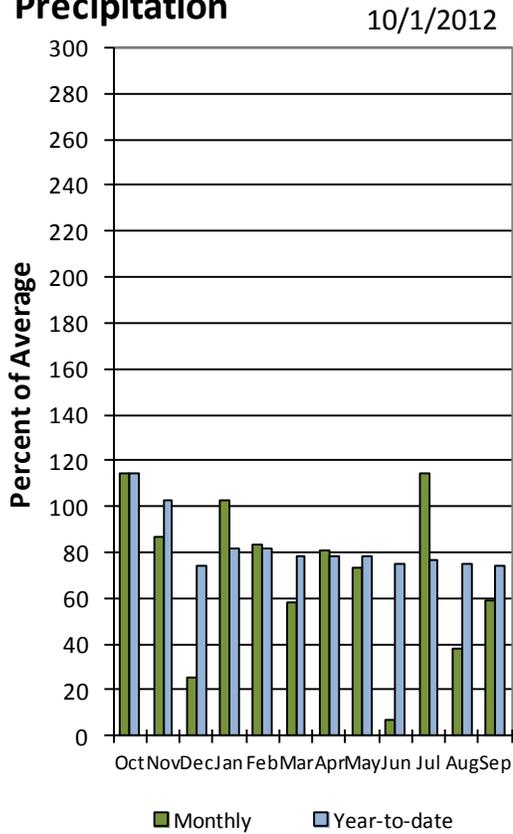
Daily Streamflow Forecasts: http://www.wcc.nrcs.usda.gov/wsf/daily_forecasts.html

NRCS will automatically Email or conventional mail the monthly NRCS Water Supply Outlook Report for Utah to anyone or organization who would like it. To be added to the list simply contact NRCS Snow Survey at: randy.julander@ut.usda.gov or by phone: (801)524.5213, or by mail at 245 N Jimmy Doolittle Rd, SLC UT, 84116. To see a copy of this report: <http://www.ut.nrcs.usda.gov/snow/watersupply/wsor.html>

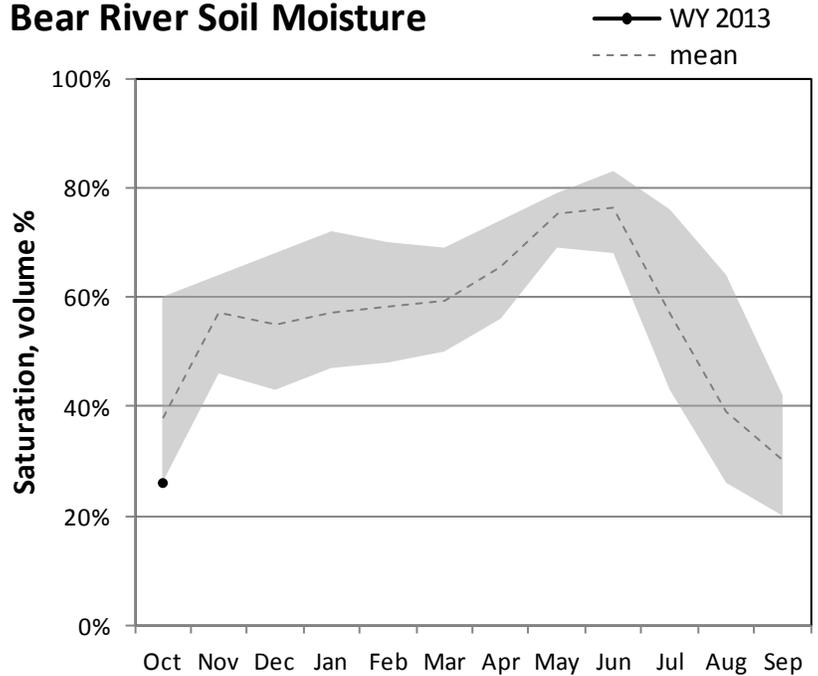
Bear River Basin October 1, 2012

Precipitation in September was much below average at 59% which brings the water year accumulation to 74%. Reservoir storage is at 56% of capacity, which is 24% lower than this time last year. Soil moisture is at 26% compared to 35% last year.

Bear River Precipitation

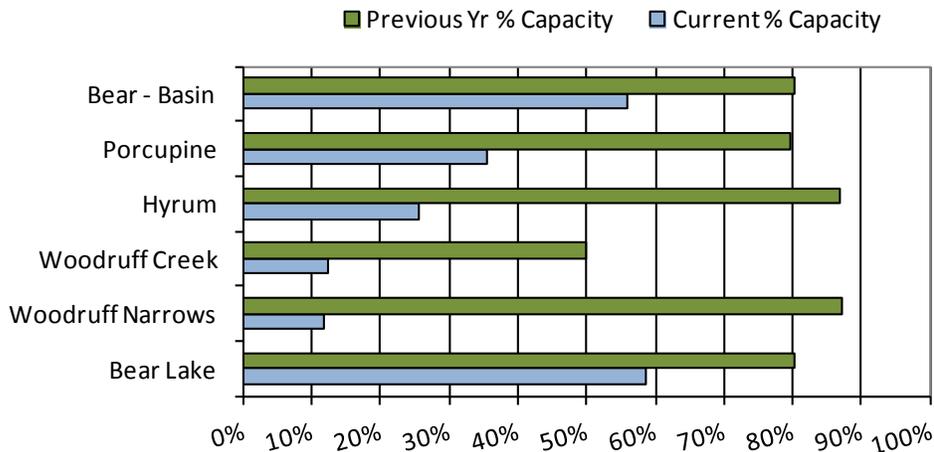


Bear River Soil Moisture



Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

Bear River Reservoir Storage



October 1, 2012

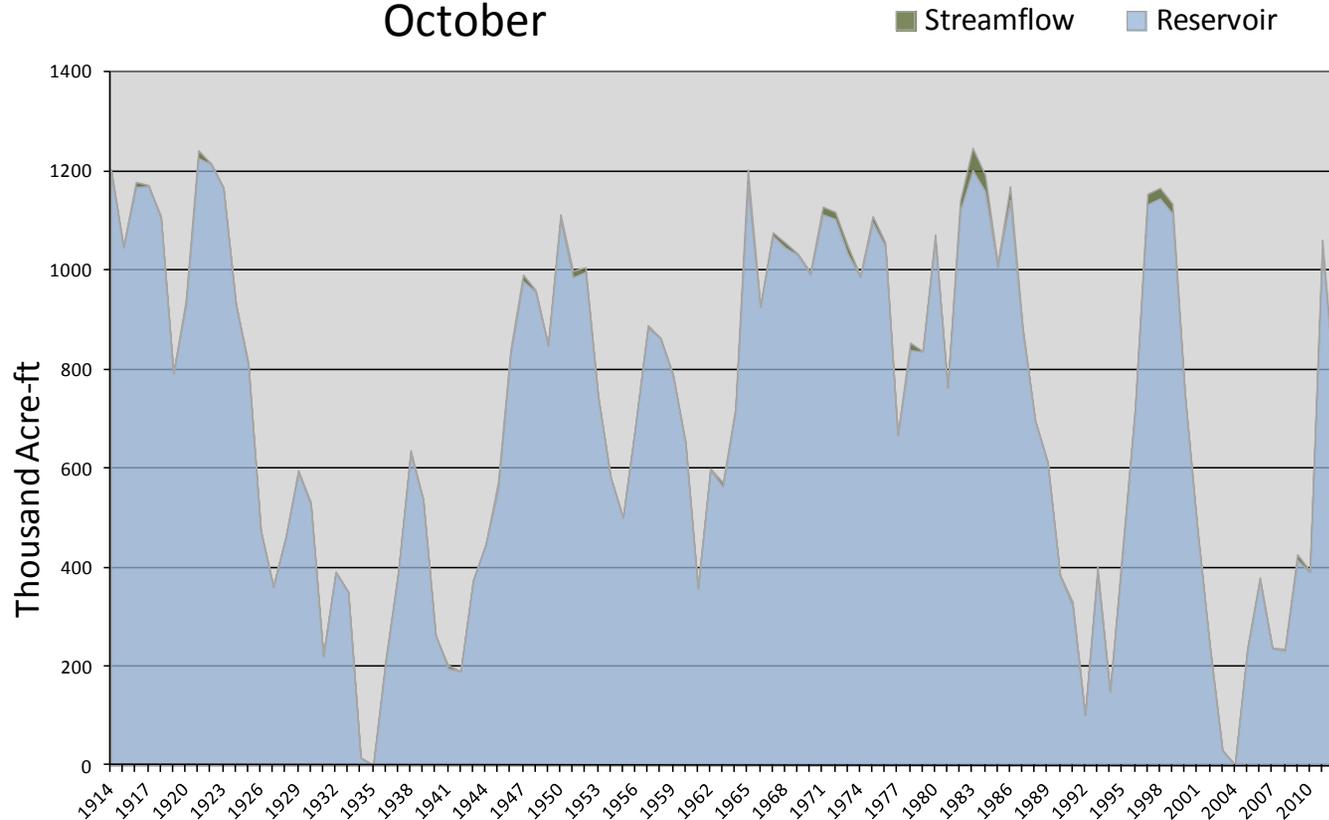
Water Availability Index

Basin or Region	September EOM* Bear Lake	September accumulated inflow to Bear Lake (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Bear River	764	0.5	765	0.17	52	00,81,59,19

*EOM, end of month; [#]WAI, water availability index; [^]KAF, thousand acre-feet.

Bear Lake - Water Availability Index

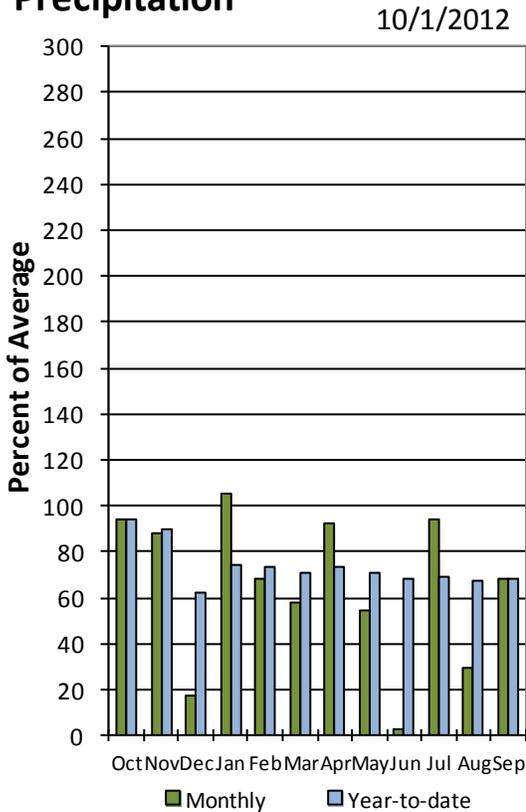
October



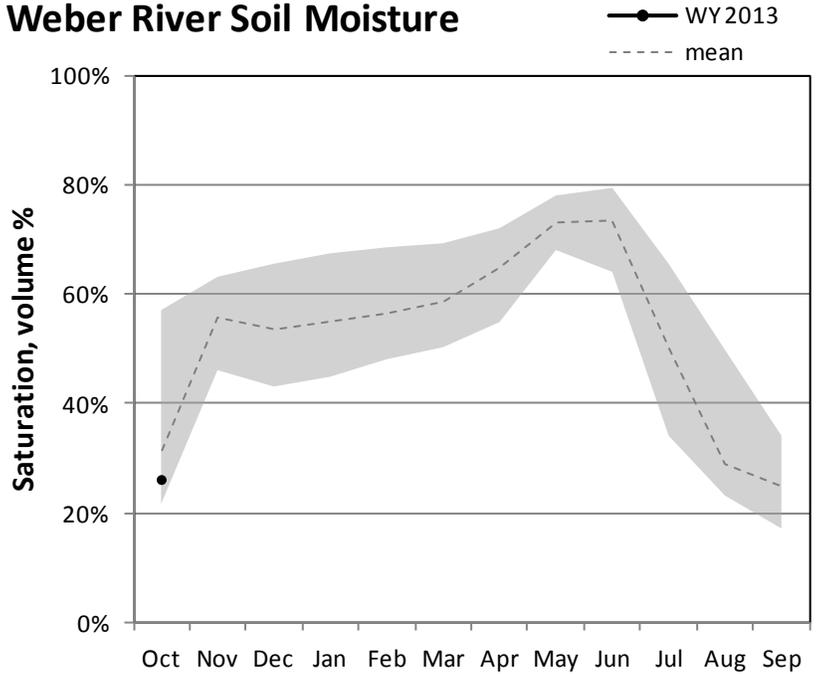
Weber and Ogden River Basin October 1, 2012

Precipitation in September was much below average at 67% which brings the water year accumulation to 68%. Reservoir storage is at 47% of capacity, which is 39% lower than this time last year. Soil moisture is at 26% compared to 28% last year.

Weber River Precipitation

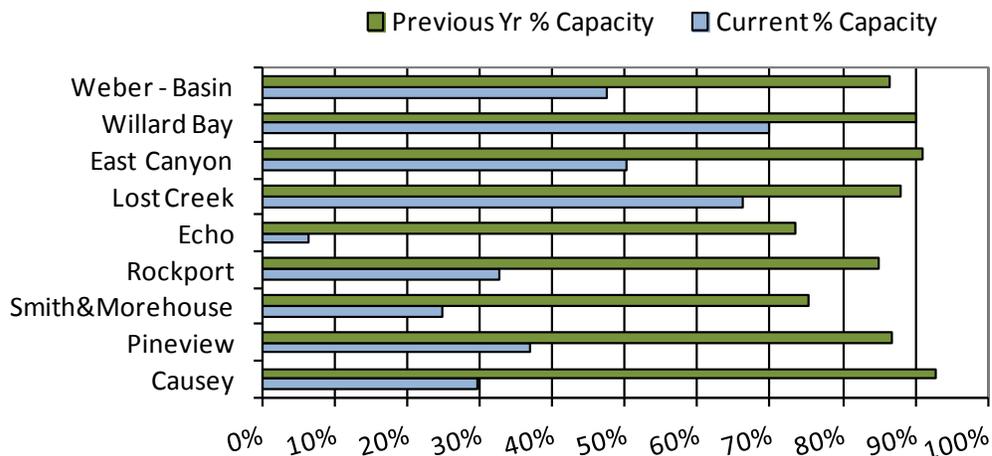


Weber River Soil Moisture



Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

Weber Basin Reservoir Storage

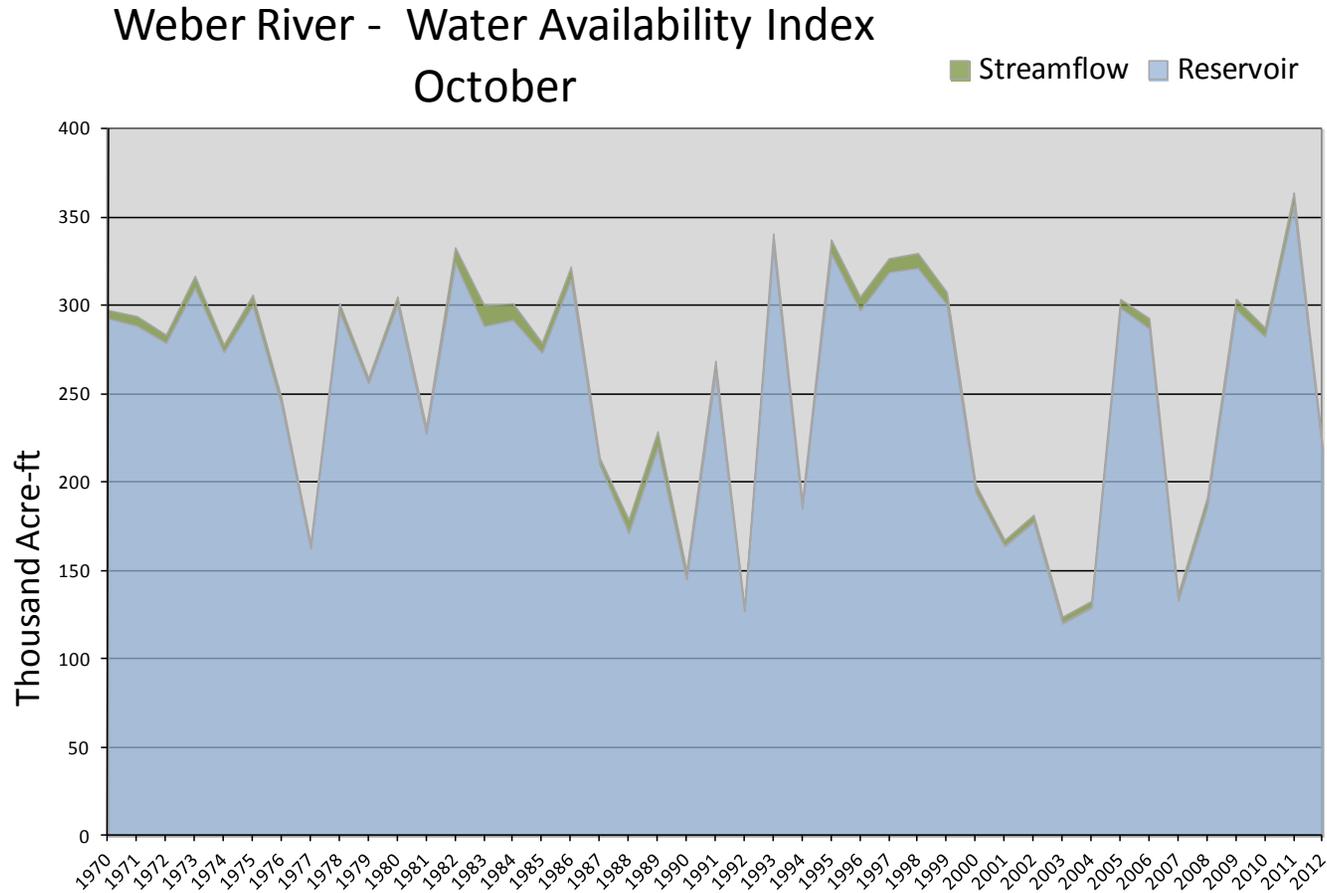


October 1, 2012

Water Availability Index

Basin or Region	September EOM* Reservoirs	September accumulated flow at Weber near Oakley (observed)	Reservoirs + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Weber River	216	3.1	219	-1.52	32	00,87,89,81

*EOM, end of month; #WAI, water availability index; ^KAF, thousand acre-feet.



October 1, 2012

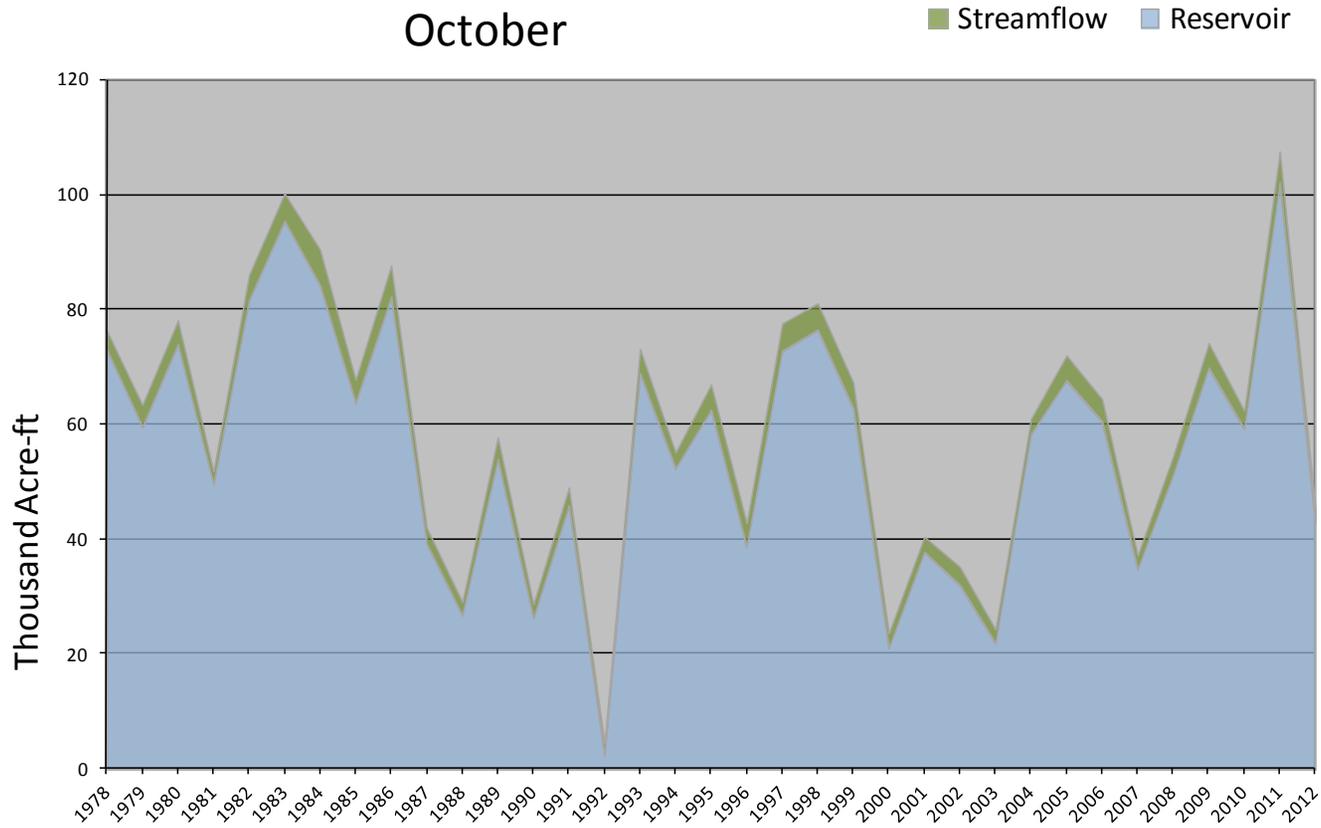
Water Availability Index

Basin or Region	September EOM* Pine View & Causey	September accumulated flow at South Fork Ogden (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Ogden River	43	2.2	45	-1.62	31	87,96,91,81

*EOM, end of month; #WAI, water availability index; ^KAF, thousand acre-feet.

Ogden River - Water Availability Index

October

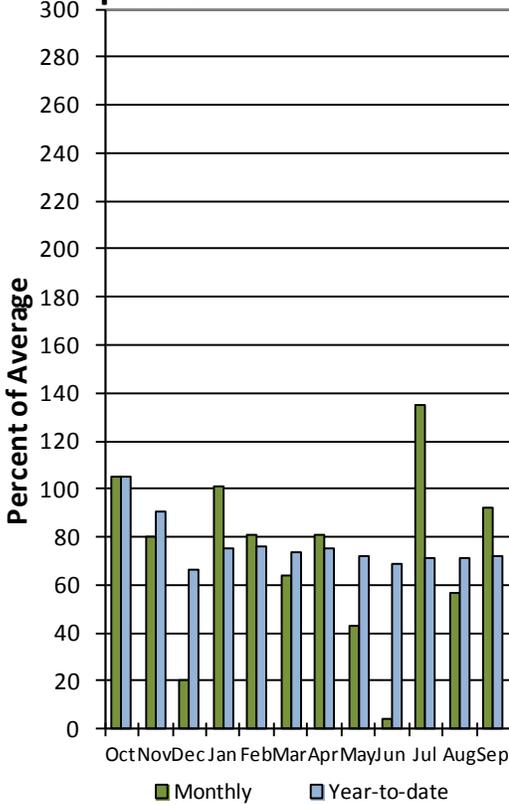


Utah Lake, Jordan River, & Tooele Valley Basins October 1, 2012

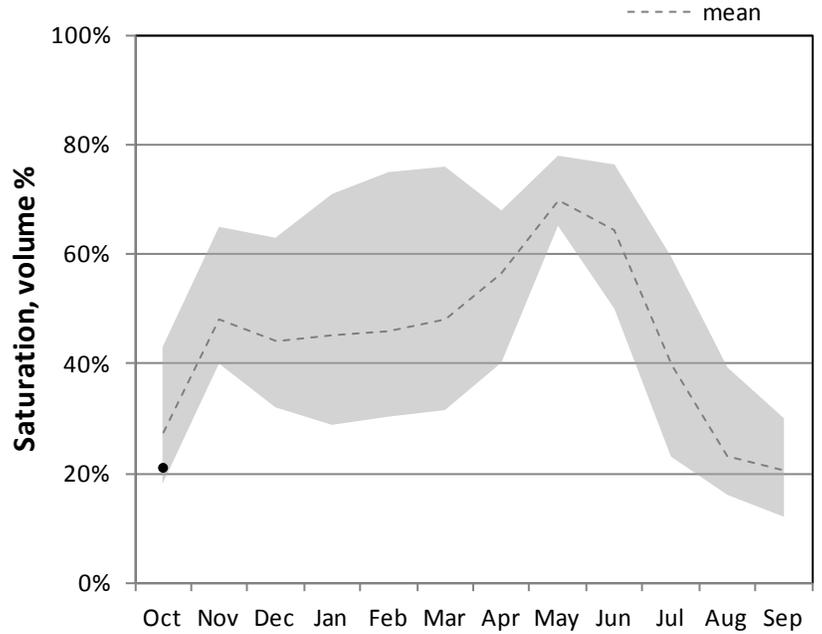
Precipitation in September was average at 92%, which brings the water year accumulation (Oct-Sept) to 72% of average. Reservoir storage is at 73% of capacity, which is 22% lower than this time last year. Soil moisture is at 21% compared to 25% last year.

Jordan / Provo River

Precipitation 10/1/2012

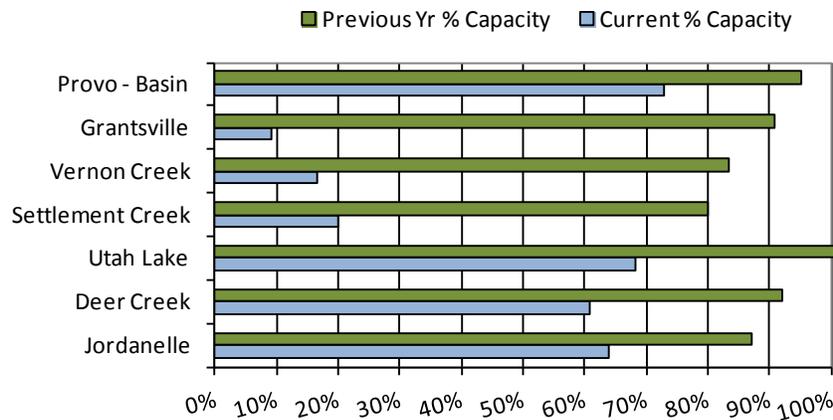


Jordan/Provo River Soil Moisture



Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

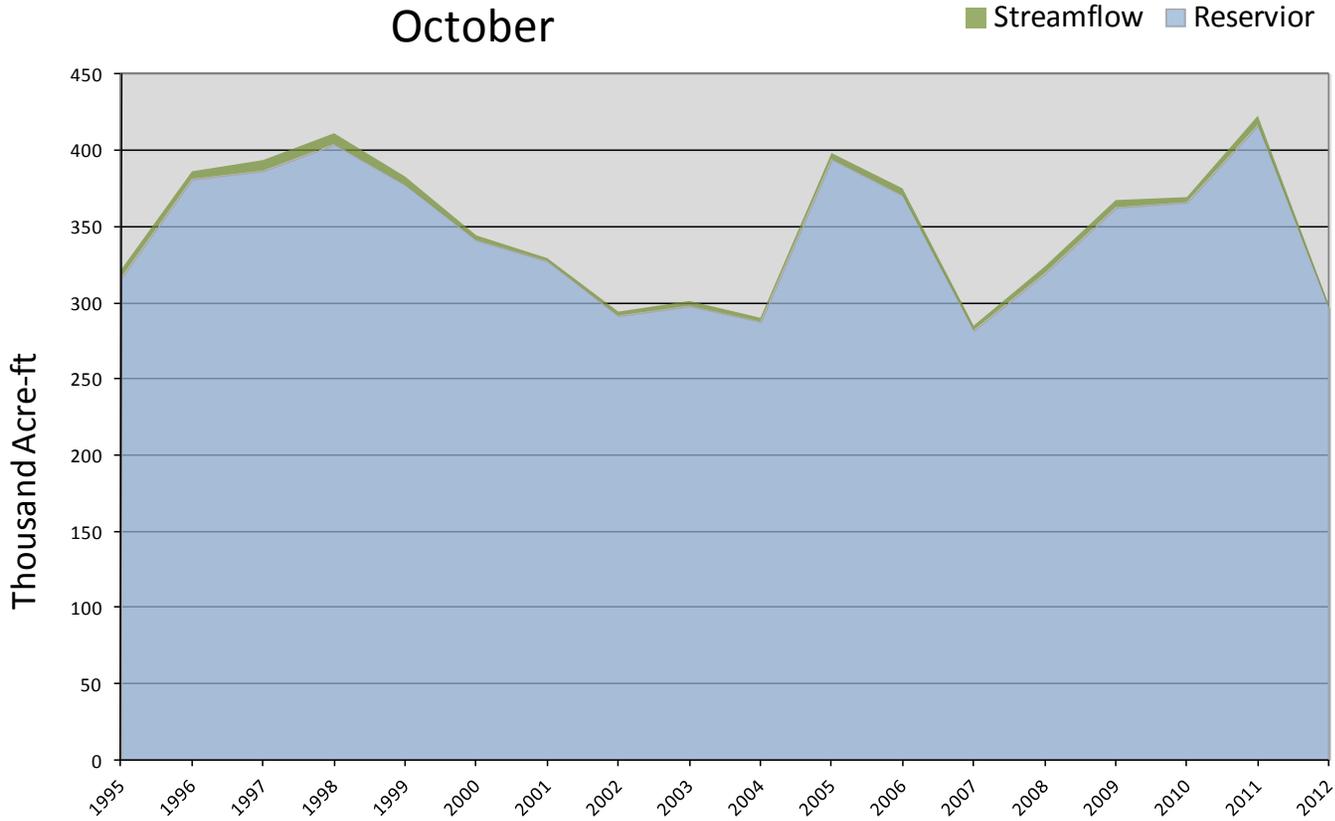
Provo River Reservoir Storage



October 1, 2012	Water Availability Index					
Basin or Region	September EOM* Deer Creek, Jordanelle	September accumulated flow Provo River at Woodland (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Provo	296	2	298	-2.41	21%	04, 02, 03, 95

**EOM, end of month; [#]WAI, water availability index; [^]KAF, thousand acre-feet.*

Provo River - Water Availability Index
October

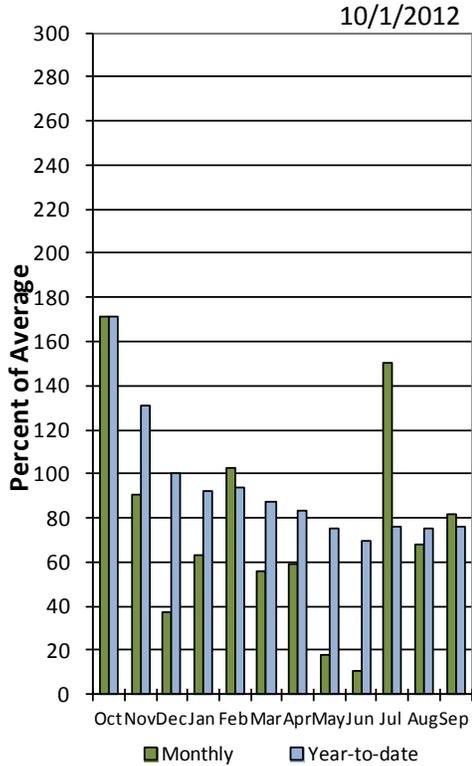


Utah Lake, Jordan River, and Tooele Valley Basins

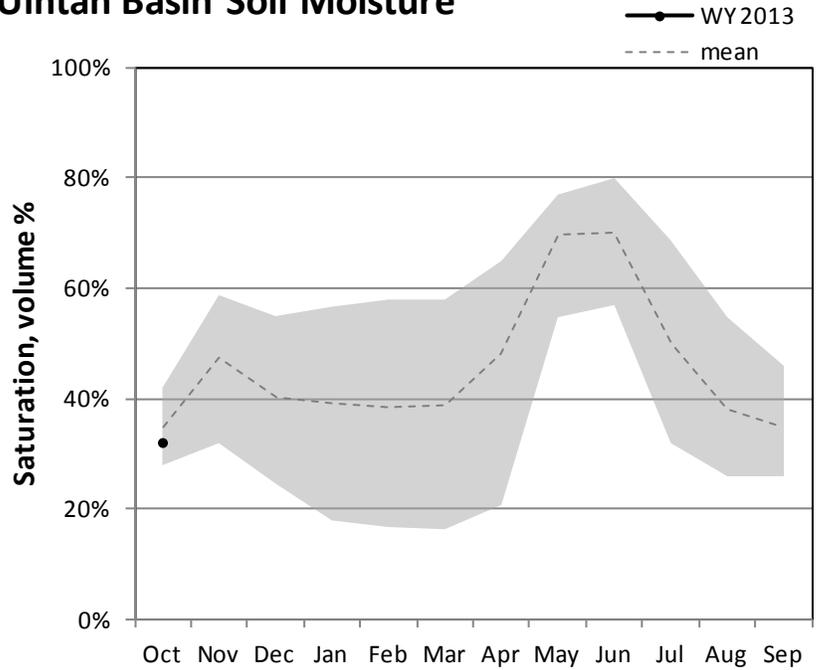
Uintah Basin and Dagget SCDs October 1, 2012

Precipitation in September was below average at 82%, bringing the water year accumulation to 76%. Reservoir storage is at 73% of capacity, 15% lower than this time last year. Soil moisture is at 32% compared to 34% last year.

Uintah Precipitation

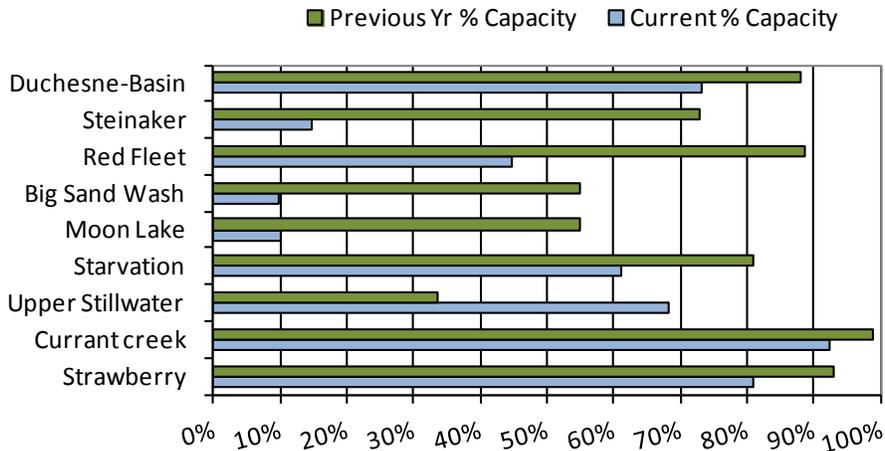


Uintah Basin Soil Moisture



Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

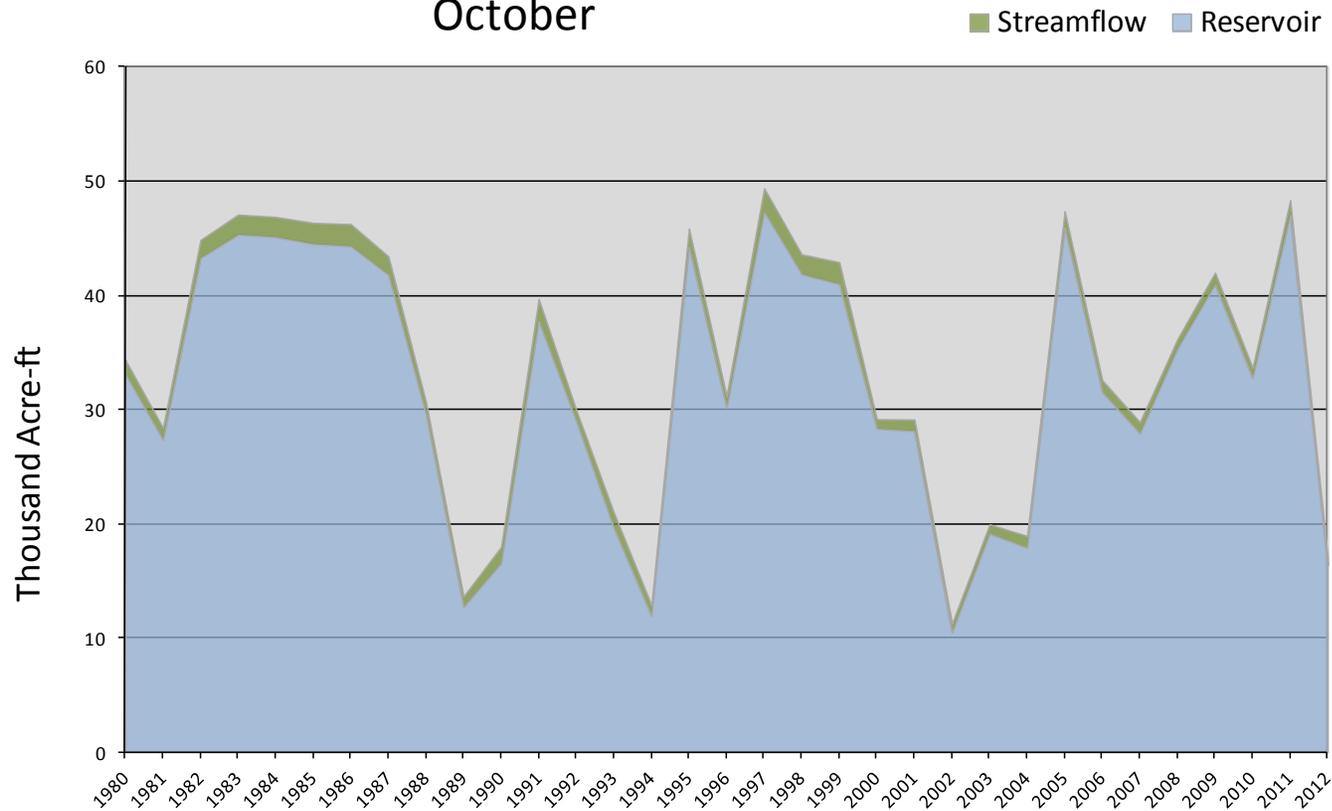
Uintah Basin Reservoir Storage



October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Red Fleet and Steinaker	September accumulated flow Big Brush Creek (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Eastern Uintah	16.4	0.7	17.1	-3.19	12	94, 89, 90, 04

**EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.*

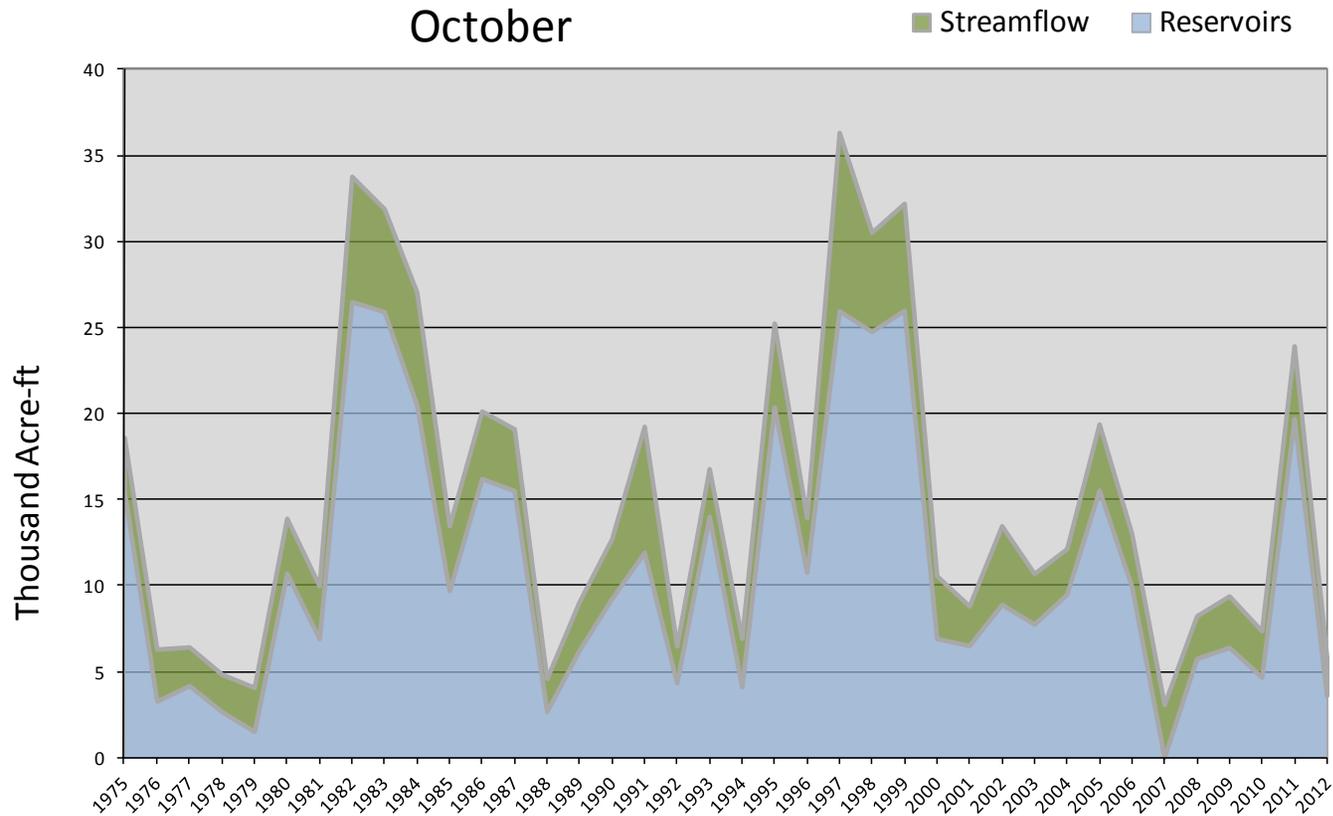
Eastern Uintah - Water Availability Index
October



October 1, 2012						
Water Availability Index						
Basin or Region	September EOM* Moon Lake	September accumulated flow Lake Fork Creek above Moon Lake (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Moon Lake	3.6	2.3	5.9	-3.10	13	88, 78, 76, 77

**EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.*

Moon Lake - Water Availability Index
October



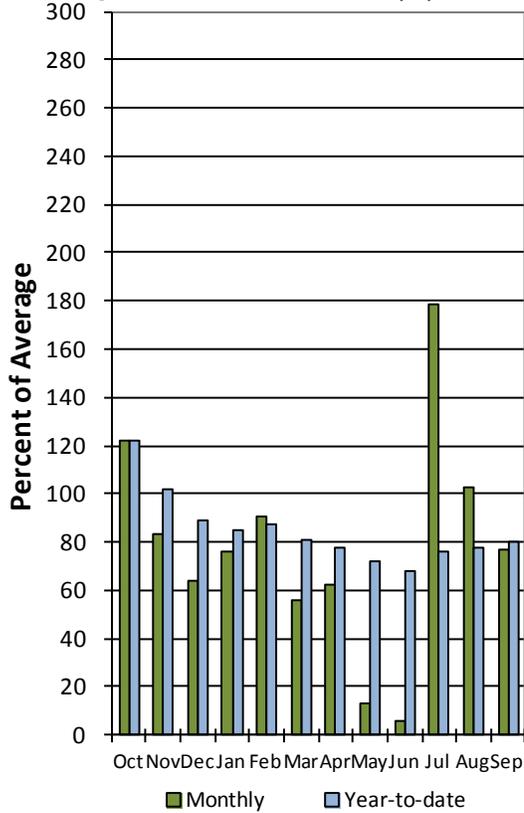
Southeast – Carbon, Emery, Wayne, Grand, and San Juan Counties October 1, 2012

Precipitation in September was below average at 78%, bringing the water year accumulation to 80%. Reservoir storage is at 45% of capacity, which is 40% lower than at this time last year. Soil moisture is at 30% compared to 40% at this time last year.

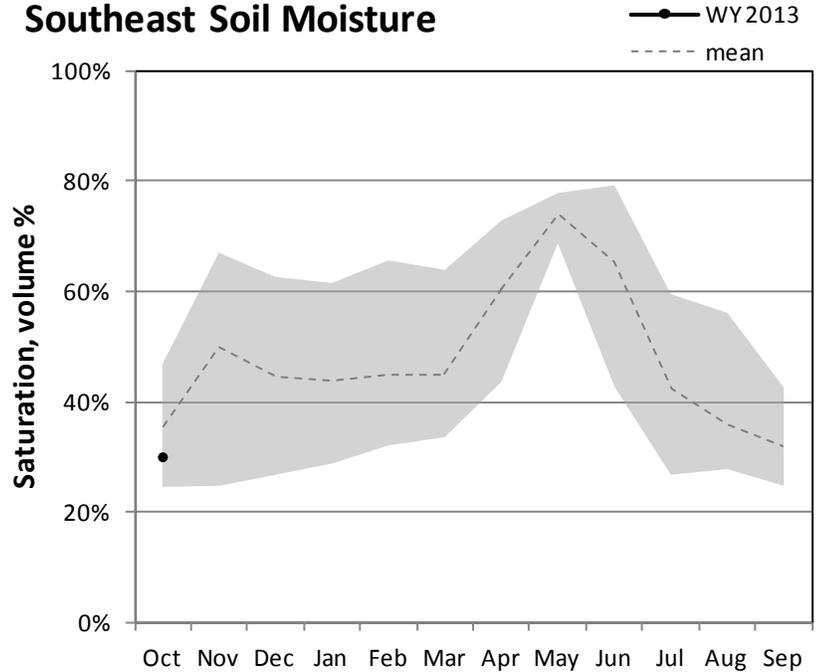
Southeast Utah

Precipitation

10/1/2012

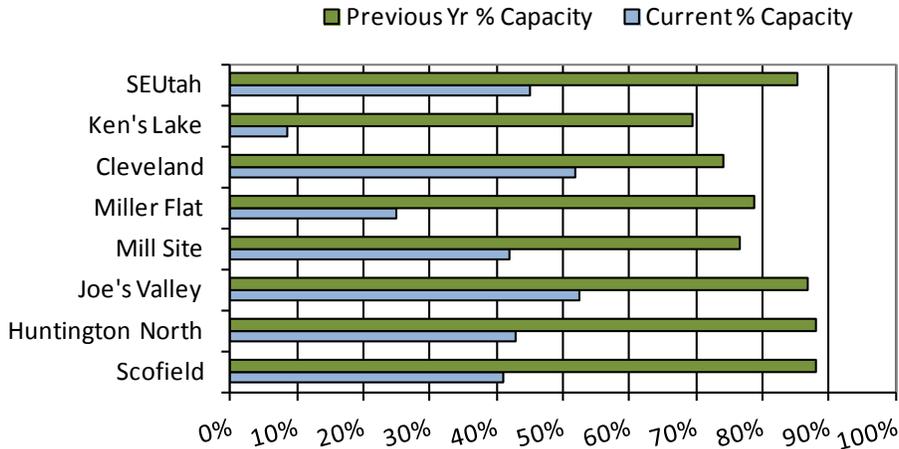


Southeast Soil Moisture



Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

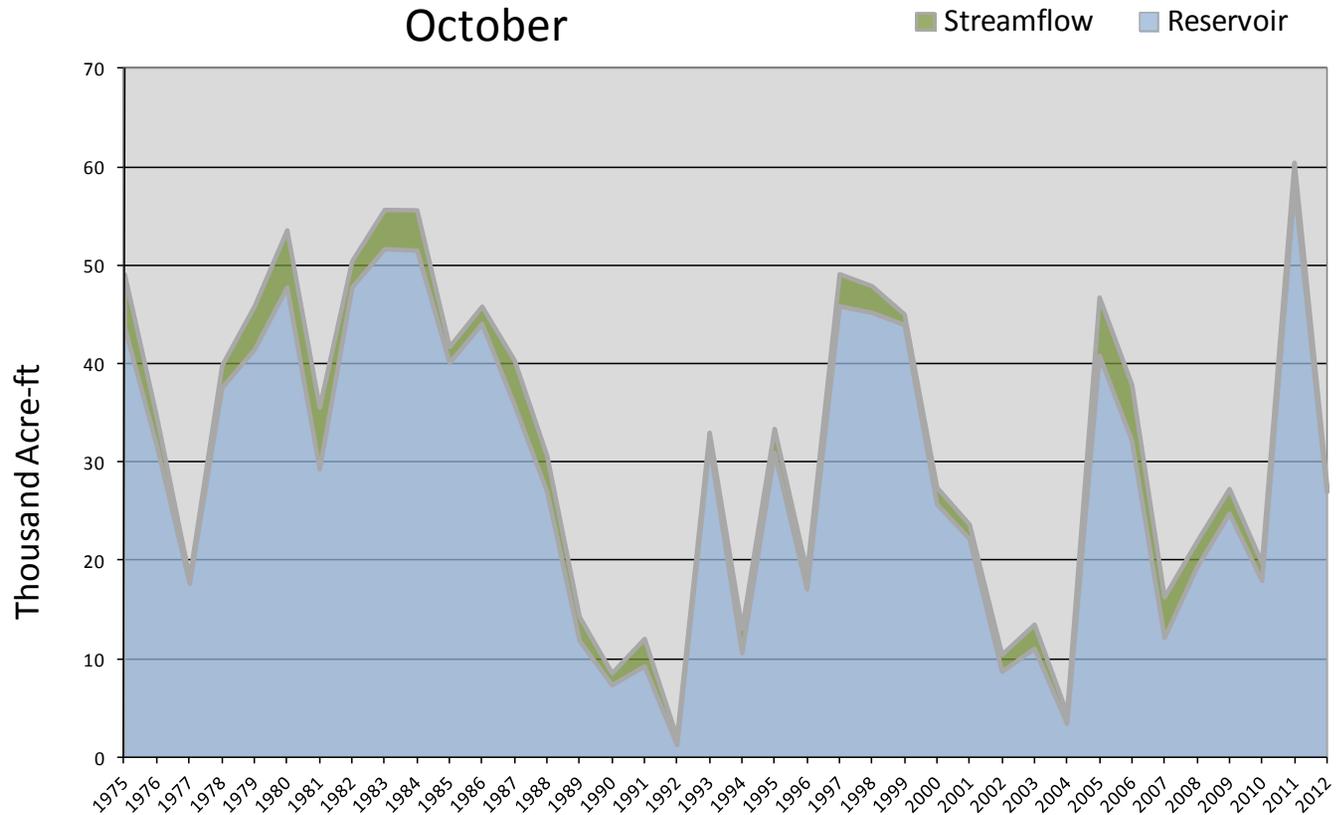
Southeast Utah Reservoir Storage



October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Scofield	September accumulated inflow to Scofield (calculated)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Price River	27.0	0.7	27.7	-0.53	44	09, 00, 88, 93

**EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.*

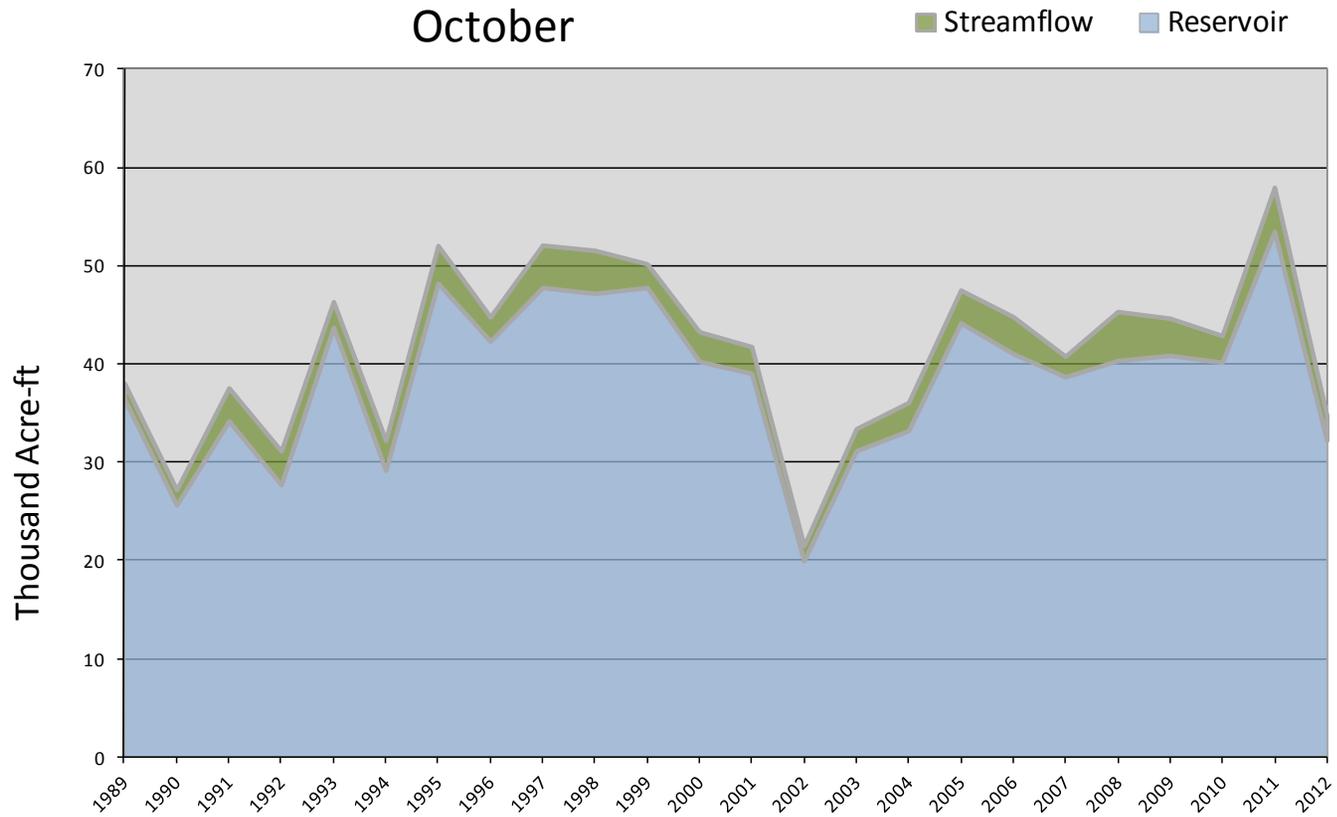
Price River - Water Availability Index
October



October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Joe's Valley	September accumulated inflow to Joe's Valley (calculated)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Joe's Valley	32.3	2.6	34.9	-2.17	24	94, 03, 04, 91

**EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.*

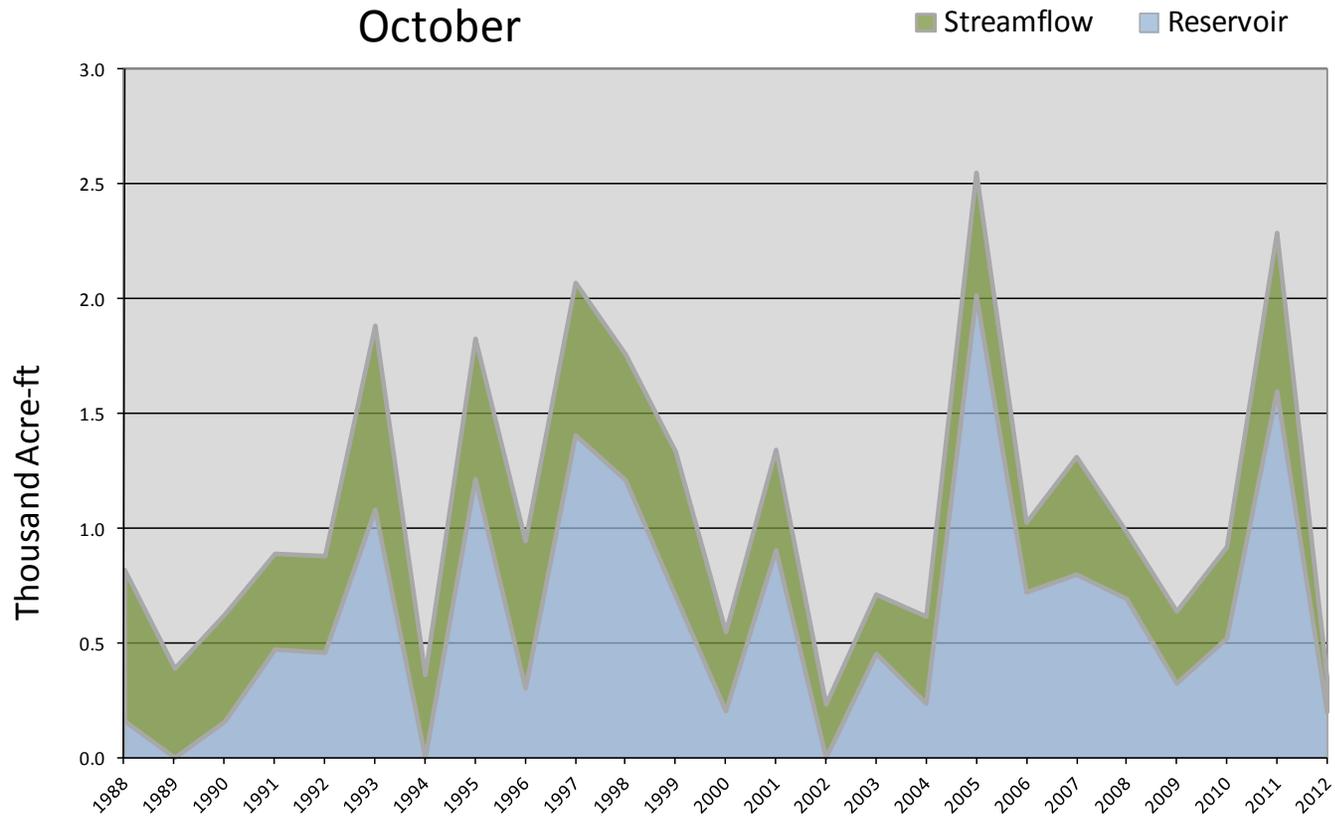
Joe's Valley - Water Availability Index
October



October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Ken's Lake Reservoir	September accumulated flow Mill Creek at Sheley (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Moab	0.2	0.1	0.3	-3.53	8	02, 94, 89

**EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.*

Moab - Water Availability Index
October



Sevier and Beaver River Basins

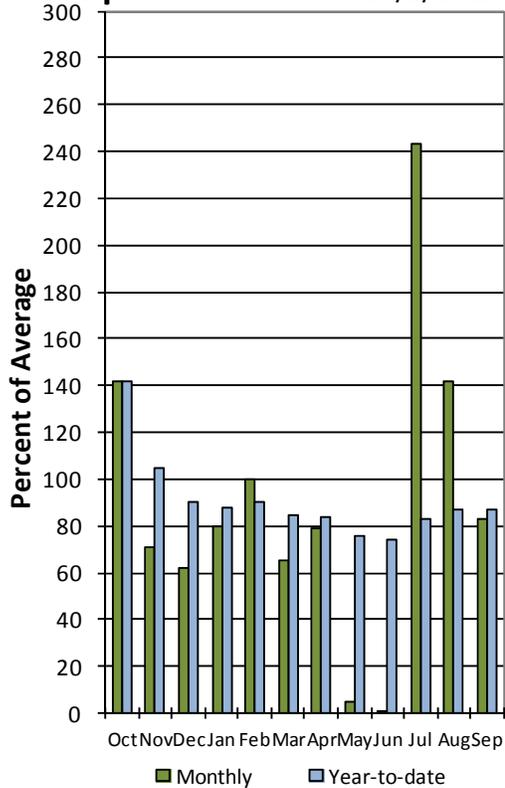
October 1, 2012

Precipitation in September was below average at 83%, which brings the seasonal accumulation (Oct-Sep) to 87% of average. Reservoir storage is low at 35% of capacity, 42% less than last year. Soil moisture is currently at 35%, last month – 45% and last year -42% of saturation.

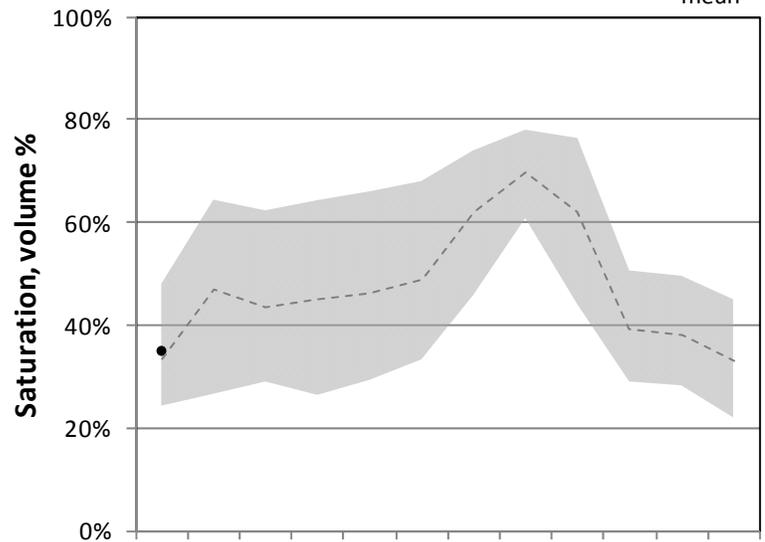
Sevier /Beaver River

Precipitation

10/1/2012

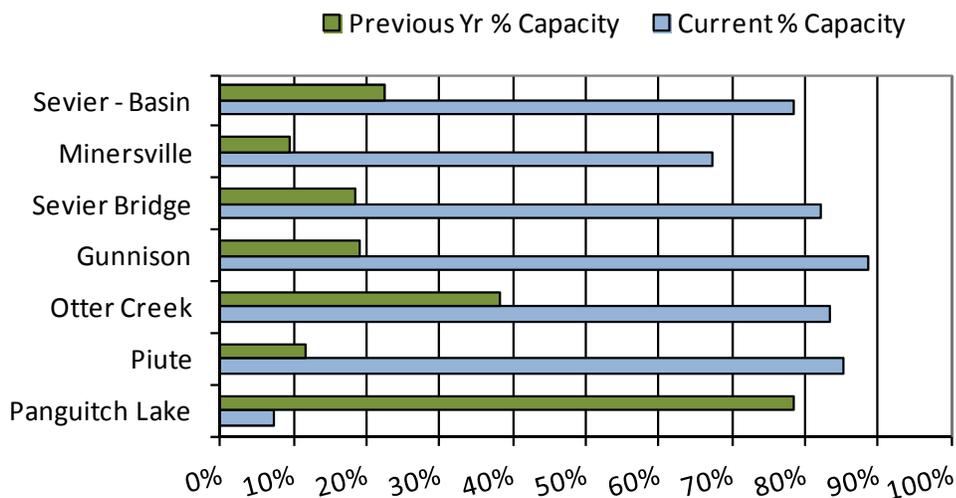


Sevier/Beaver River Soil Moisture



Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep
 Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

Sevier River Reservoir Storage



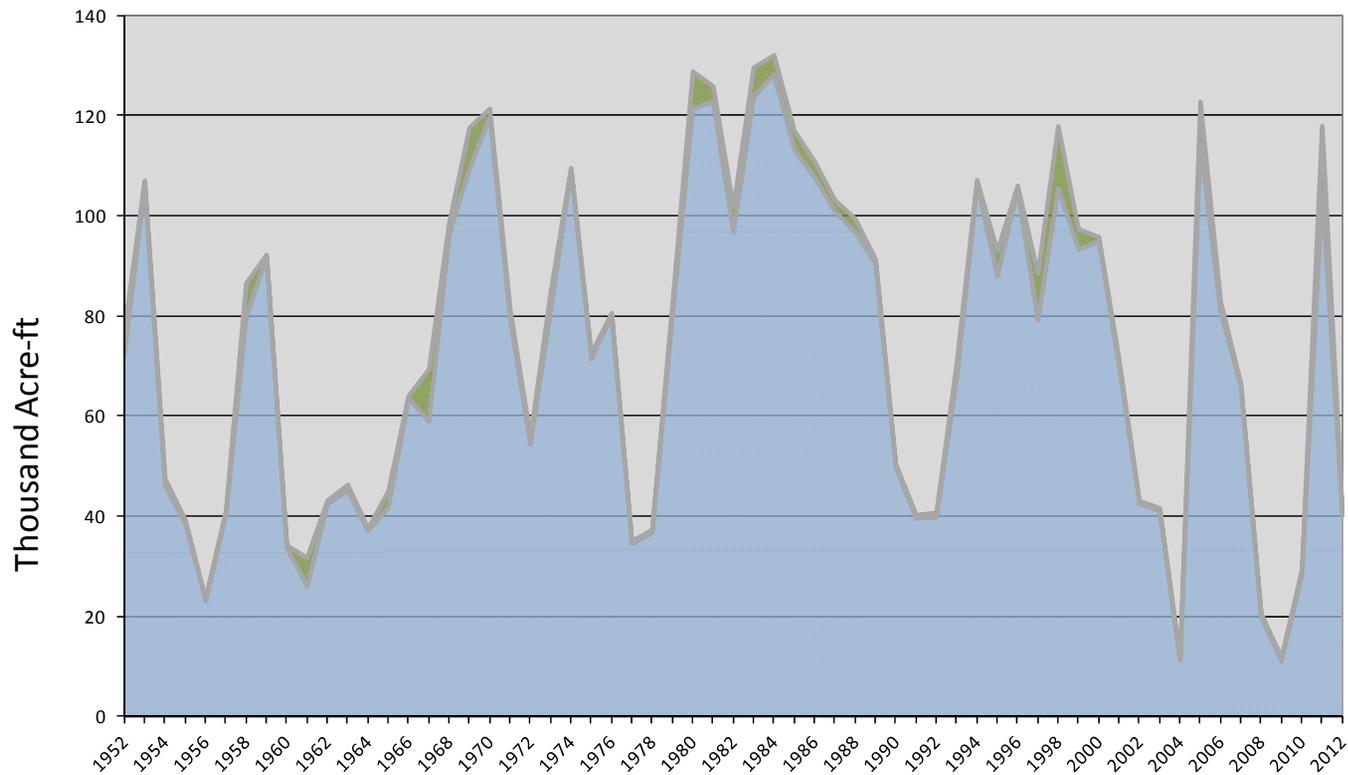
October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Otter Creek and Piute	September accumulated flow at Kingston (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Upper Sevier River	40	0.7	41	-2.28	23	91,92,57,03

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Upper Sevier River - Water Availability Index

October

■ Streamflow ■ Reservoir

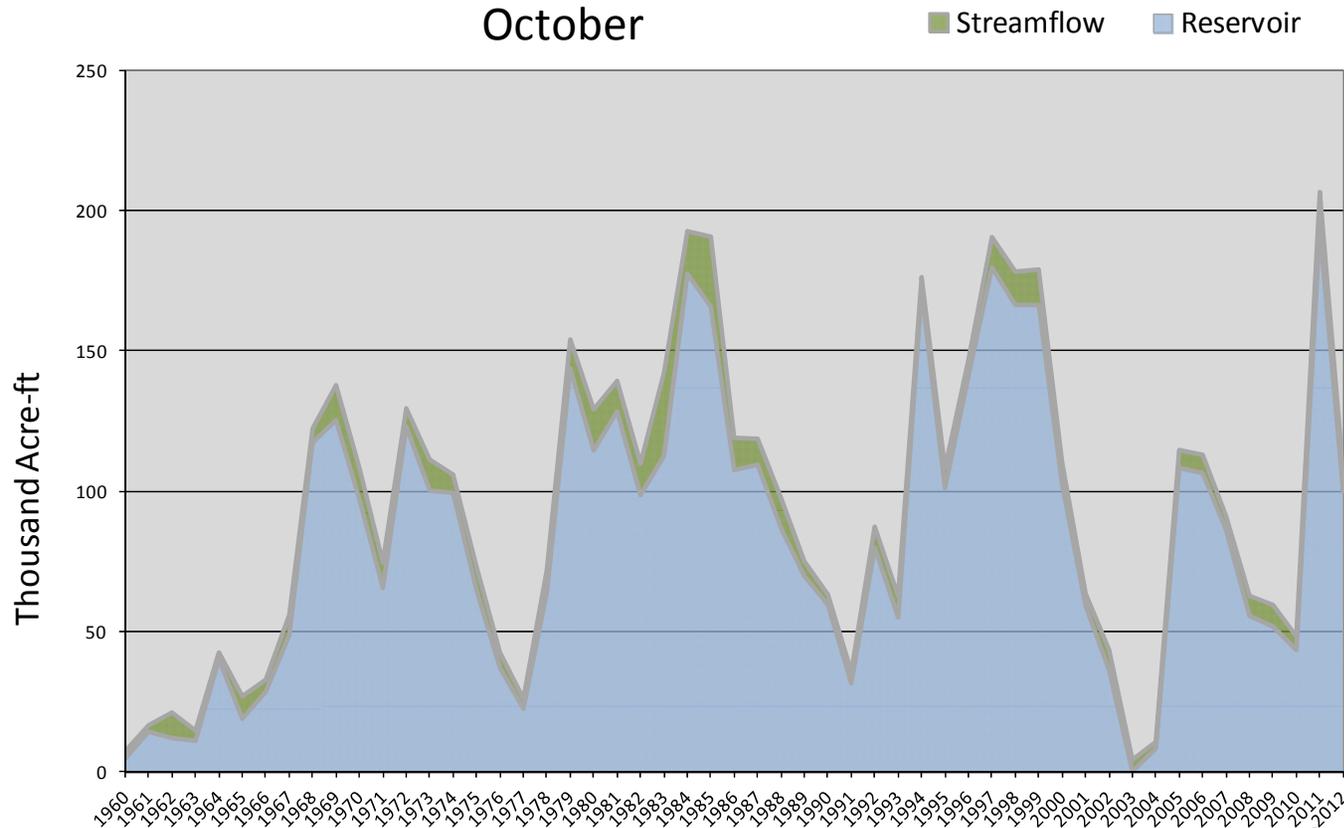


October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Sevier Bridge	September accumulated flow Sevier at Gunnison (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Lower Sevier River	100	7.0	107	0.31	54	88,74,70,95

**EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.*

Lower Sevier River - Water Availability Index

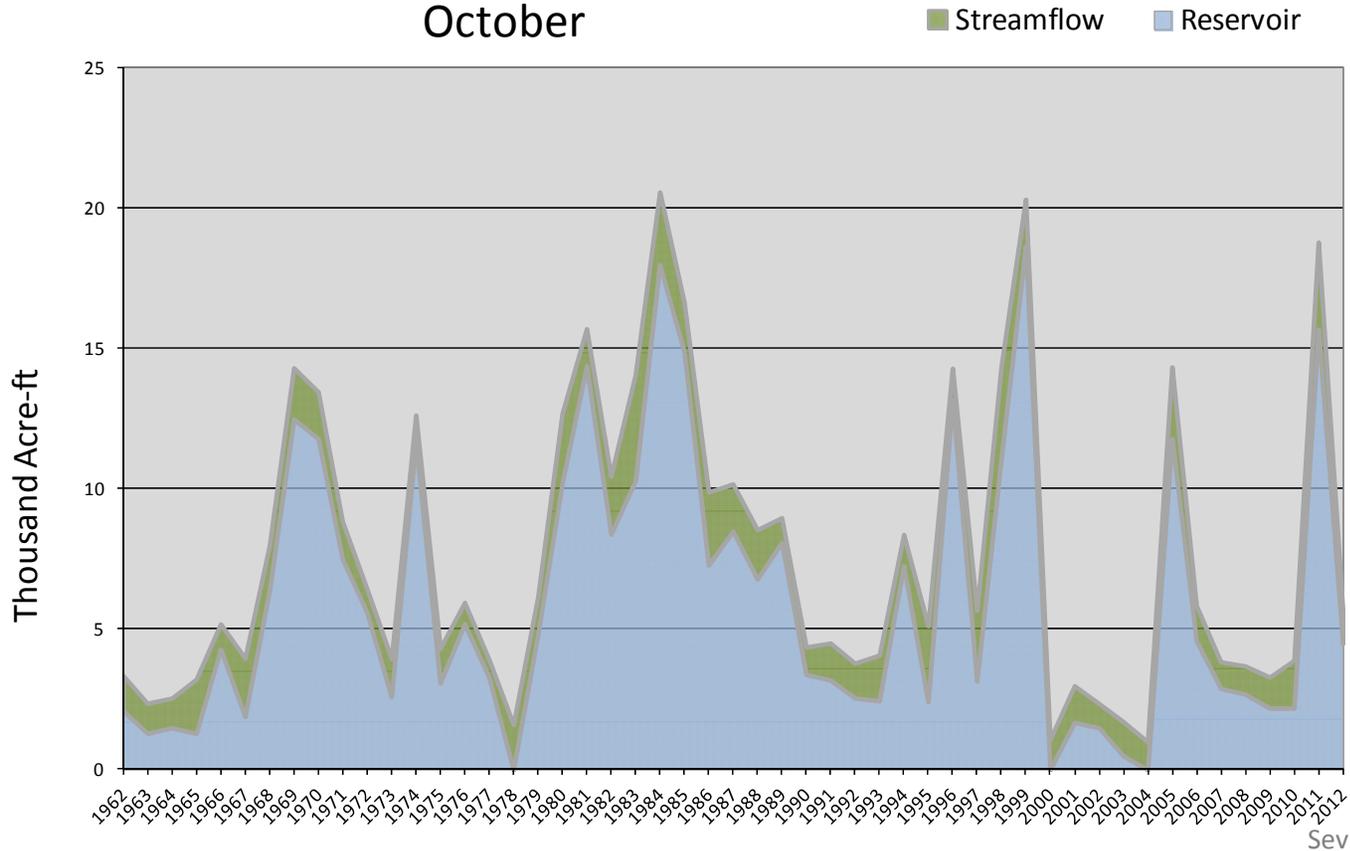
October



October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Minersville Reservoir	September accumulated flow Beaver River at Beaver (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Beaver	4.5	1.2	5.7	-0.16	48	66,97,06,76

*EOM, end of month; [#] WAI, water availability index; [^]KAF, thousand acre-feet.

Beaver River - Water Availability Index October



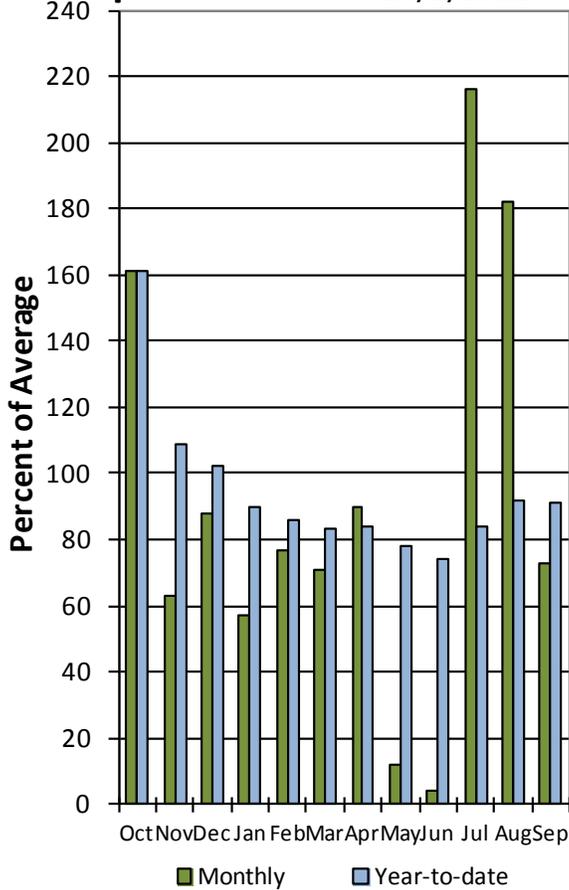
Southwest – E. Garfield, Kane, Washington, & Iron Counties October 1, 2012

Precipitation in September was below average at 73%, which brings the water year accumulation (Oct-Sept) to 91% of average. Reservoir storage is at 63% of capacity, which is 17% lower than last year at this time. Soil moisture is at 31% compared to 30% last year at this time.

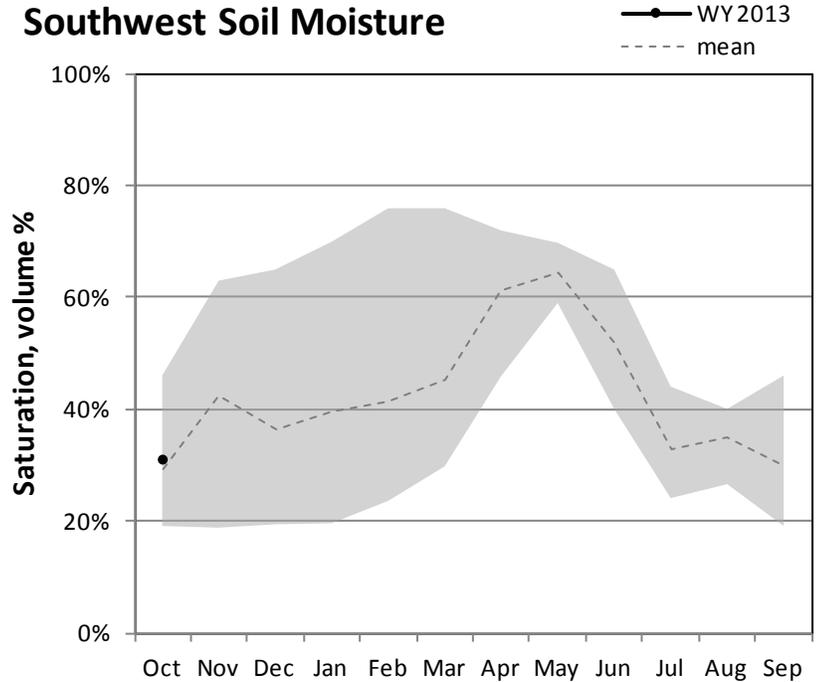
Southwest Utah

Precipitation

10/1/2012

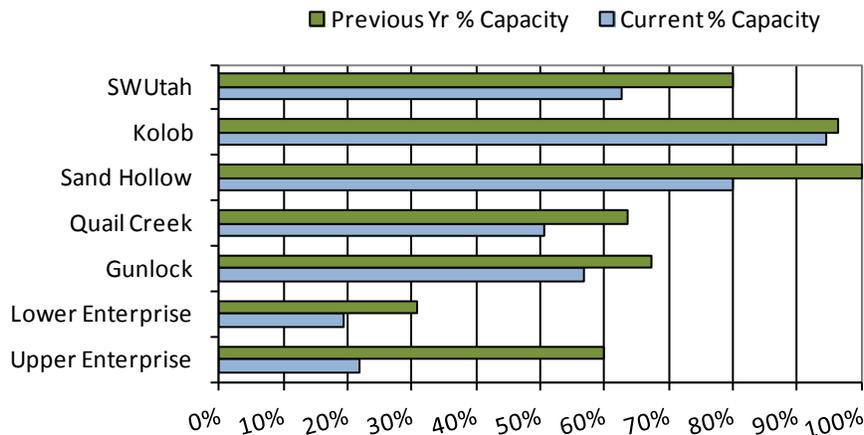


Southwest Soil Moisture



Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

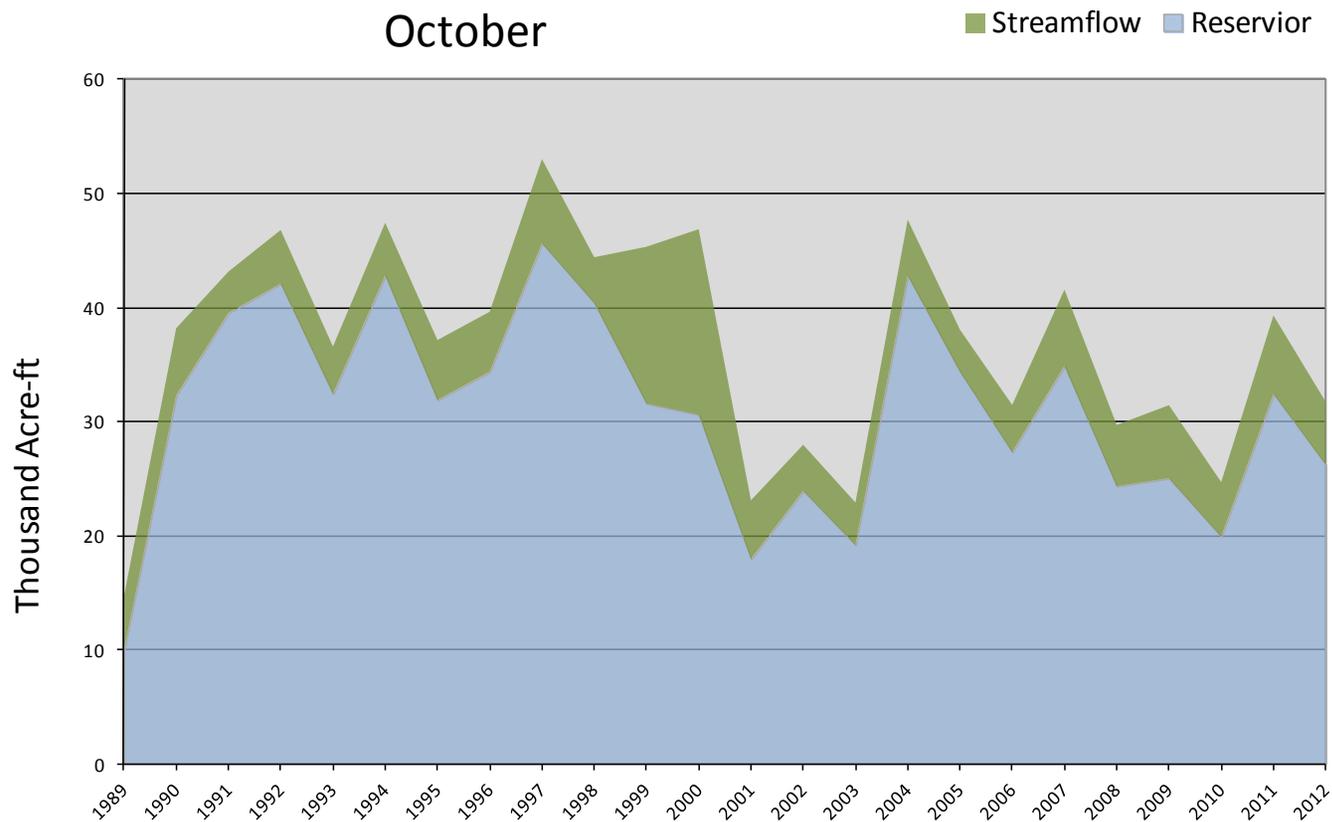
Southwest Utah Reservoir Storage



October 1, 2012		Water Availability Index				
Basin or Region	September EOM* Reservoir	September accumulated flow Virgin and Santa Clara Rivers (<i>observed</i>)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Southwest	26.2	5.5	31.7	-1.17	36	09, 06, 93, 95

**EOM, end of month; # WAI, water availability index; ^KAF, thousand acre-feet.*

Southwest - Water Availability Index
October



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Utah Climate and Water Report

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