

Utah Climate and Water Report

September, 2010



Buffalo Jump SCAN site near Woodruff, Utah

Photos by Karen Vaughan, USDA-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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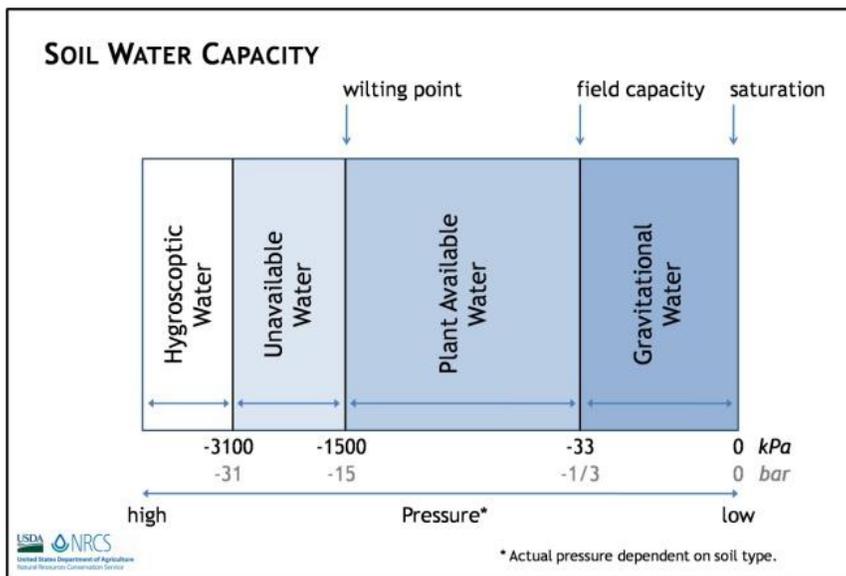
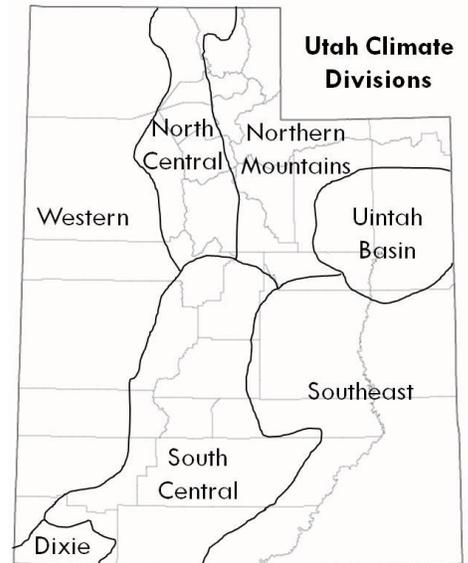
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Climate and Water Information

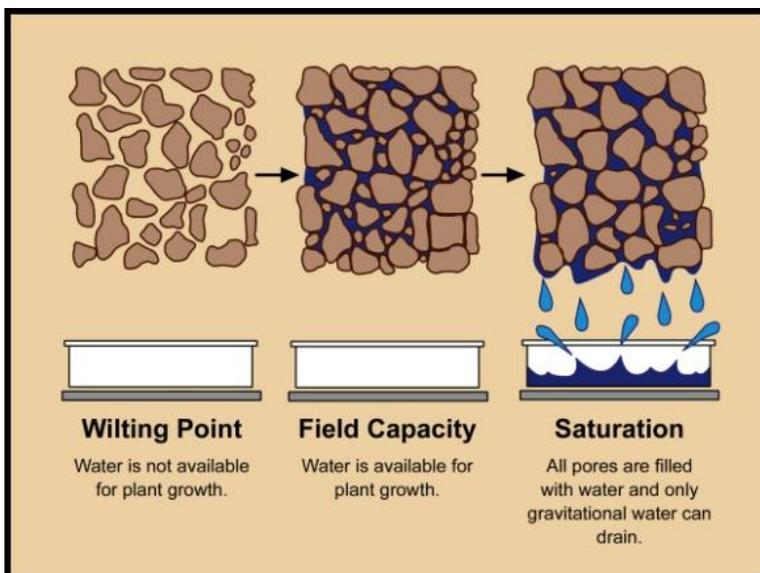
Soil Climate Analysis Network

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).

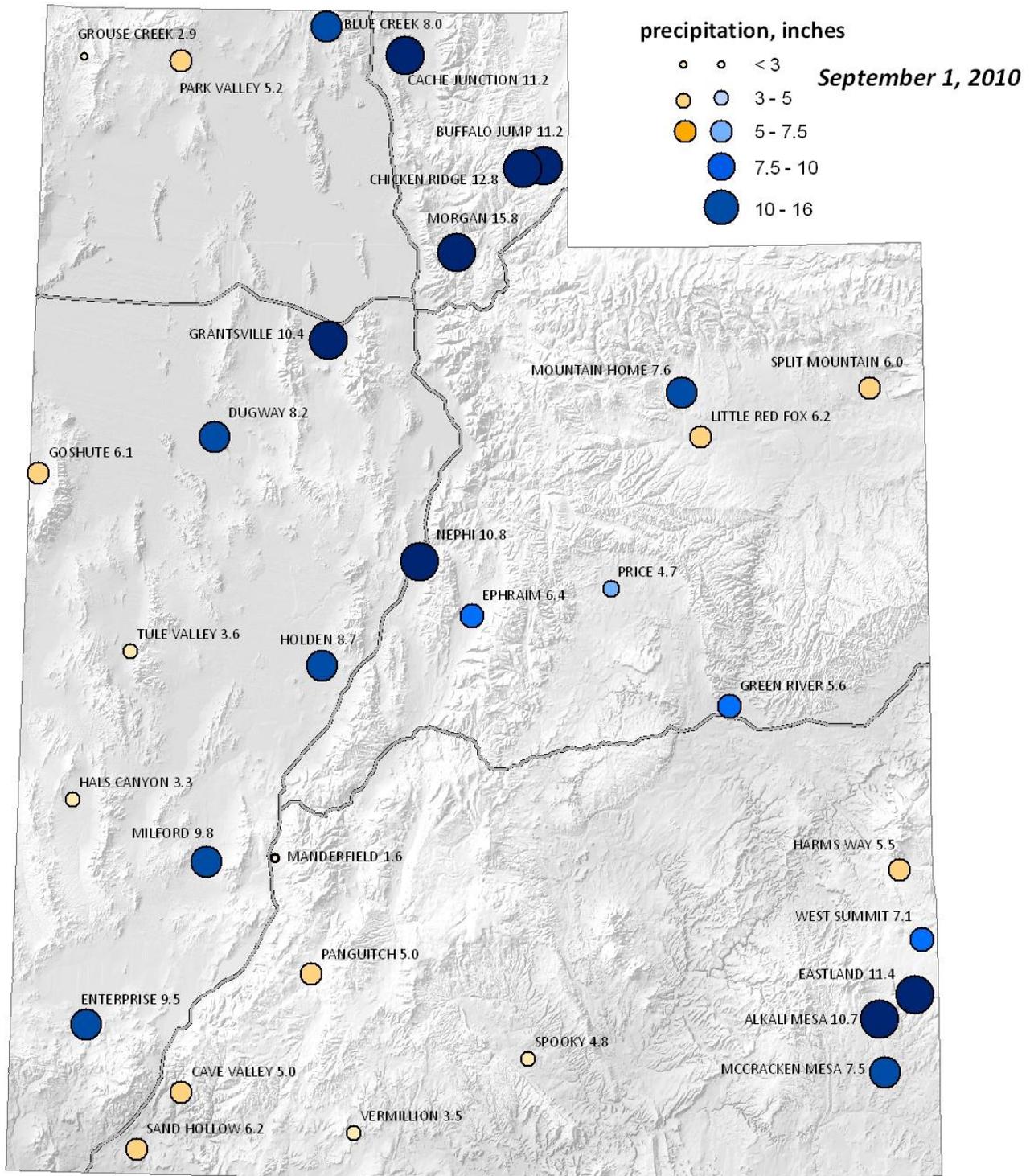


Explanation of soil water capacity definitions. Field capacity (FC) and wilting point (WP) are calculated in the laboratory for each soil horizon. The amount of water held between field capacity and wilting point is plant available.

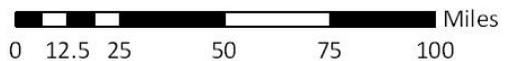


Visual explanation of soil water capacity definitions.

Utah SCAN Water Year Precipitation *



*since October 1, 2009 except new installations (ORANGE) at Park Valley 1/14/10; Goshute 3/1/10; Tule Valley 3/8/10; Hal's Canyon 3/9/10; Sand Hollow 1/27/10; Panguitch 1/25/10; Little Red Fox 1/20/10; Split Mountain 1/19/10; Harm's Way 3/3/10; Cave Valley 4/12/10; Vermillion 4/13/10; Spooky 4/14/10; Manderfield 4/16/10, and Grouse Creek 5/4/10. Data based on the first reading of the day.



Prepared by the USDA/NRCS Utah DCO
Salt Lake City, Utah
<http://www.wcc.nrcs.usda.gov/scan/Utah/utah.html>
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Provisional Data Subject to Revision

North Central

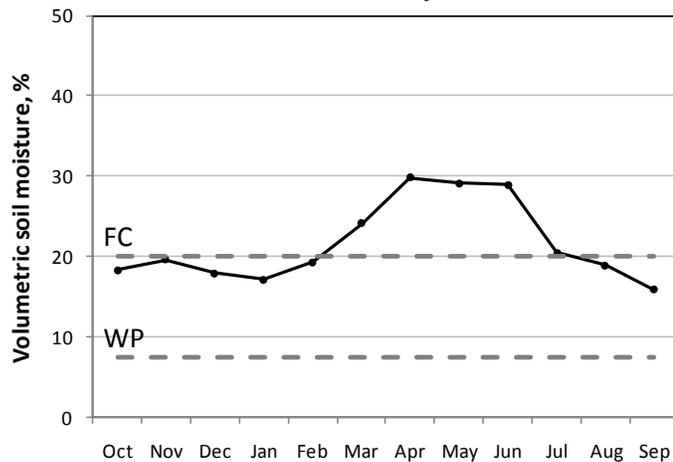
Soil Climate Analysis Network (SCAN)

Site name	County	Precip to Date*	Monthly Precip	Avg Air Temp	Soil Moisture					Soil Temperature				
					2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>in.</i>	<i>° F</i>	<i>volume %</i>					<i>° F</i>				
NORTH CENTRAL														
Blue Creek	<i>Box Elder</i>	8.0	0.08	54	9	13	21	25	23	61	68	69	69	67
Cache Junction	<i>Cache</i>	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Grantsville	<i>Tooele</i>	10.4	0.30	60	6	5	25	24	26	60	67	71	71	71

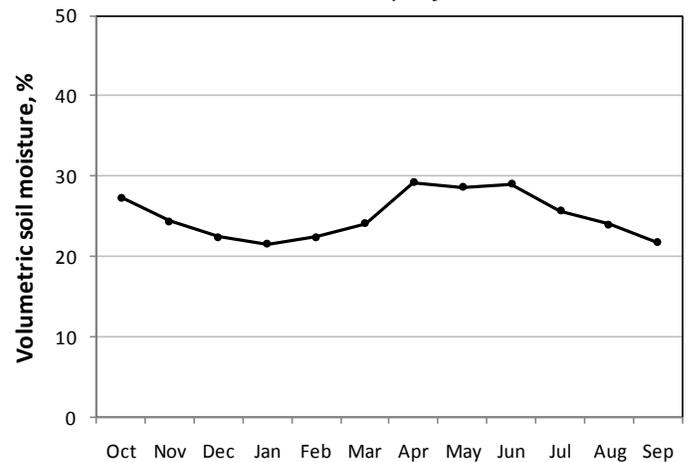
*since October 1, 2009 (nd) no data. Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station on the first of the month. Soil moisture and temperature values reflect conditions measured on the first of the month.

North Central

surface soil moisture



profile soil moisture



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 and **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region. *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.

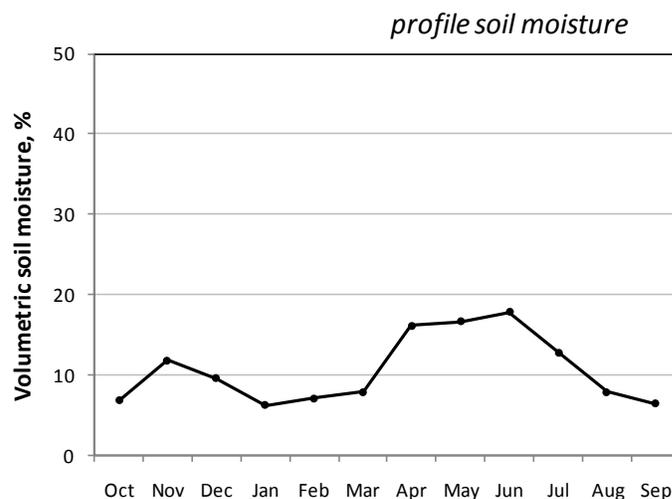
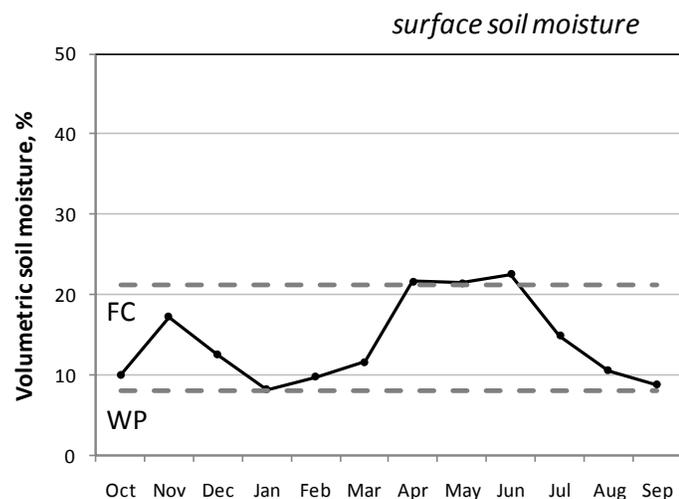
Northern Mountains

Soil Climate Analysis Network (SCAN)

Site name	County	Precip to Date*	Monthly Precip	Avg Air Temp	Soil Moisture					Soil Temperature				
					2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>in.</i>	<i>° F</i>	<i>volume %</i>					<i>° F</i>				
NORTHERN MOUNTAINS														
Chicken Ridge	<i>Morgan</i>	12.8	0.72	48	3	1	7	3	8	51	50	53	53	55
Buffalo Jump	<i>Rich</i>	11.2	0.81	51	6	9	12	9	-	60	62	62	62	-
Morgan	<i>Morgan</i>	15.8	0.46	56	13	13	11	6	6	60	61	64	64	63

*since October 1, 2009. Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station on the first of the month. Soil moisture and temperature values reflect conditions measured on the first of the month.

Northern Mountains



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 and **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region. *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.

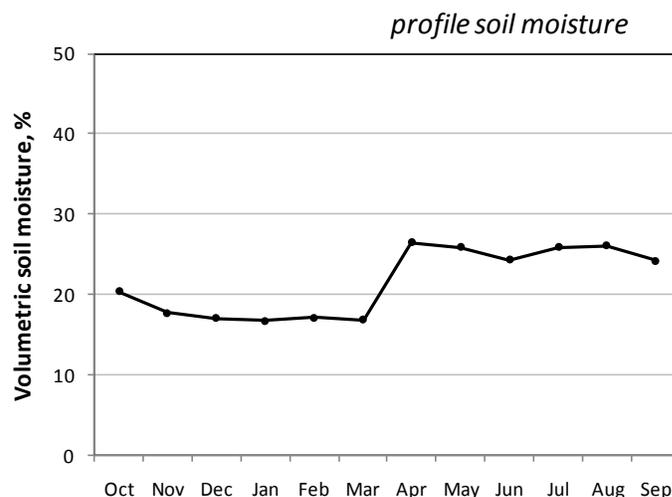
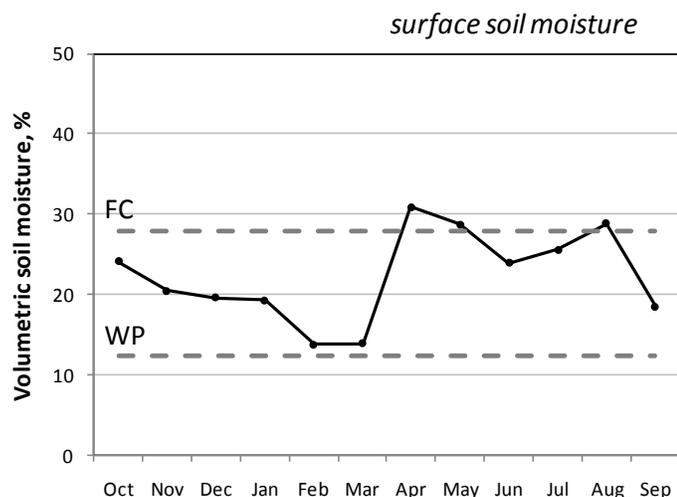
Uintah Basin

Soil Climate Analysis Network (SCAN)

Site name	County	Precip to Date*	Monthly Precip	Avg Air Temp	Soil Moisture					Soil Temperature				
					2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>in.</i>	<i>° F</i>	<i>volume %</i>					<i>° F</i>				
UINTAH BASIN														
Mountain Home	<i>Duchesne</i>	7.6	0.00	57	16	21	24	20	13	58	59	59	58	58
Little Red Fox	<i>Duchesne</i>	<u>6.2</u>	0.30	59	0	29	32	39	65	57	68	69	68	65
Split Mountain	<i>Uintah</i>	<u>6.0</u>	0.80	63	3	14	13	13	12	63	69	73	72	71

*since October 1, 2009 unless underlined (Little Red Fox 1/20/10; Split Mountain 1/19/10). Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station on the first of the month. Soil moisture and temperature values reflect conditions measured on the first of the month.

Uintah Basin



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 and **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region. *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.

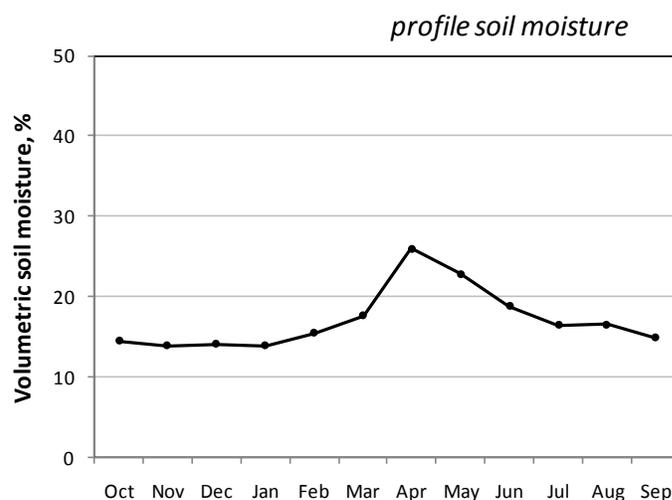
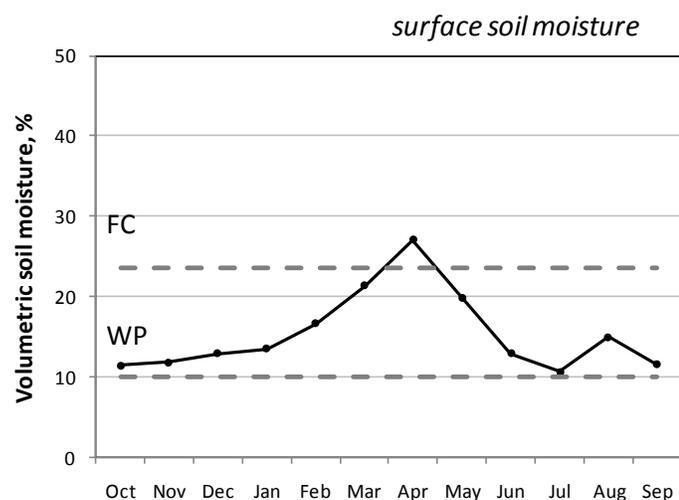
Southeast

Soil Climate Analysis Network (SCAN)

Site name	County	Precip to Date*	Monthly Precip	Avg Air Temp	Soil Moisture					Soil Temperature				
					2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>in.</i>	<i>° F</i>	<i>volume %</i>					<i>° F</i>				
SOUTHEAST														
Price	<i>Carbon</i>	4.7	0.22	64	0	7	13	17	19	71	77	77	73	72
Green River	<i>Emery</i>	5.6	0.15	64	8	9	8	5	11	70	74	78	77	78
Harm's Way	<i>San Juan</i>	<u>5.5</u>	1.21	63	8	2	16	17	7	71	66	71	68	65
West Summit	<i>San Juan</i>	7.1	0.94	62	15	21	14	16	21	60	63	68	65	65
Eastland	<i>San Juan</i>	11.4	1.36	62	11	12	9	24	25	63	67	66	64	63
Alkali Mesa	<i>San Juan</i>	10.7	1.17	65	8	14	15	19	14	64	65	69	69	68
McCracken Mesa	<i>San Juan</i>	7.5	0.40	70	10	17	15	18	14	73	78	79	74	73

*since October 1, 2009 unless underlined (Harm's Way 3/3/10). Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station on the first of the month. Soil moisture and temperature values reflect conditions measured on the first of the month.

Southeast



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 and **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region. *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.

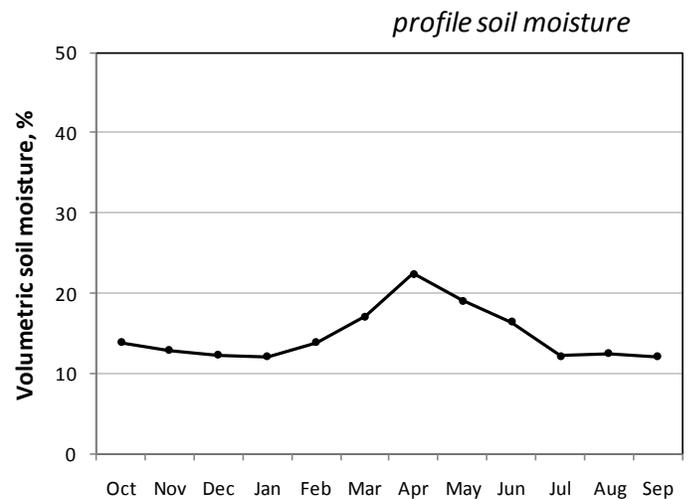
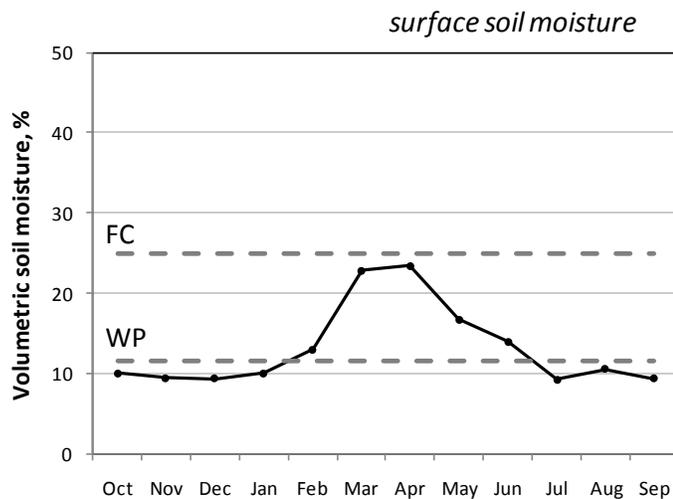
South Central

Soil Climate Analysis Network (SCAN)

Site name	County	Precip to Date*	Monthly Precip	Avg Air Temp	Soil Moisture					Soil Temperature				
					2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>in.</i>	<i>° F</i>	<i>volume %</i>					<i>° F</i>				
SOUTH CENTRAL														
Nephi	<i>Juab</i>	10.8	0.11	60	8	14	14	8	3	71	73	73	71	69
Ephraim	<i>Sanpete</i>	6.4	0.63	57	1	9	16	15	32	58	67	67	65	64
Holden	<i>Millard</i>	8.7	0.68	62	2	4	4	12	13	72	73	73	72	71
Milford	<i>Beaver</i>	9.8	0.38	59	16	20	16	27	18	72	73	71	69	67
Manderfield	<i>Beaver</i>	<u>1.6</u>	0.23	56	3	13	13	12	5	62	69	69	67	64
Circleville	<i>Piute</i>	nd	nd	56	20	12	21	13	13	56	56	57	59	59
Panguitch	<i>Garfield</i>	<u>5.0</u>	1.32	52	10	19	15	21	32	57	61	60	60	58
Cave Valley	<i>Washington</i>	<u>5.0</u>	0.43	55	0	0	1	1	0	45	66	71	70	69
Vermillion	<i>Kane</i>	<u>3.6</u>	1.46	60	0	0	2	4	9	56	63	68	65	64
Spooky	<i>Kane</i>	<u>4.8</u>	0.90	68	4	5	5	23	5	74	73	75	73	71

*since October 1, 2009 unless underlined (Panguitch 1/25/10; Cave Valley 4/12/10; Vermillion 4/13/10; Spooky 4/14/10; Manderfield 4/16/10), (nd) no data. Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station on the first of the month. Soil moisture and temperature values reflect conditions measured on the first of the month.

South 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 and **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region. *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.

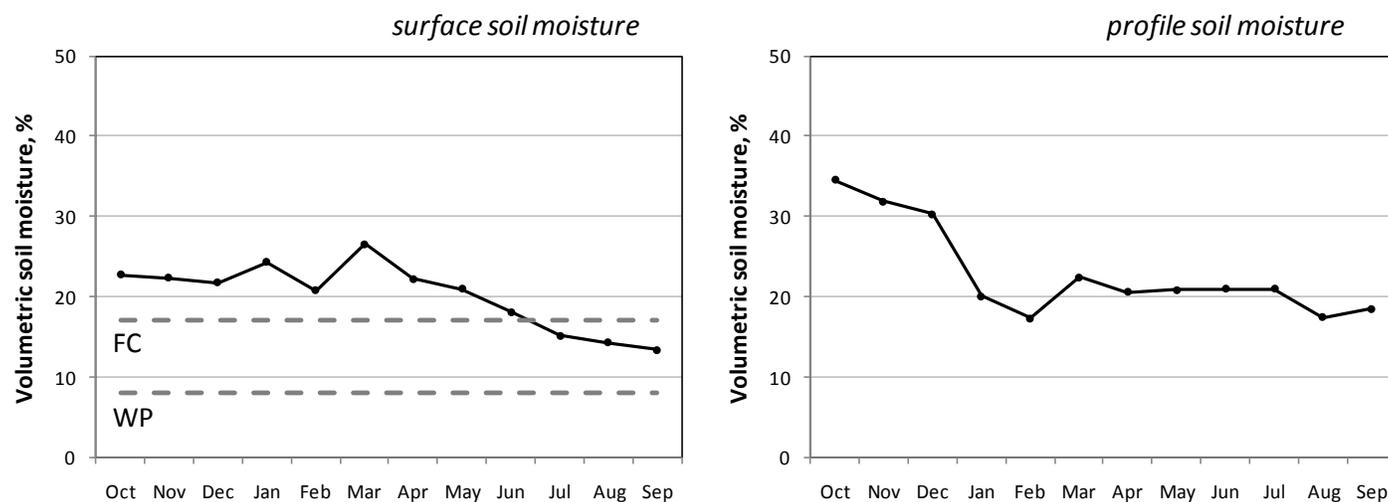
Western and Dixie

Soil Climate Analysis Network (SCAN)

Site name	County	Precip to Date*	Monthly Precip	Avg Air Temp	Soil Moisture					Soil Temperature				
					2"	4"	8"	20"	40"	2"	4"	8"	20"	40"
		<i>in.</i>	<i>in.</i>	<i>° F</i>	<i>volume %</i>					<i>° F</i>				
WESTERN														
Grouse Creek	<i>Box Elder</i>	<u>2.9</u>	0.13	53	2	5	12	18	18	57	65	68	65	66
Park Valley	<i>Box Elder</i>	<u>5.2</u>	0.30	55	1	3	12	35	25	58	65	69	70	68
Goshute	<i>Tooele</i>	<u>6.1</u>	0.38	57	6	20	25	35	37	55	62	68	67	67
Dugway	<i>Tooele</i>	8.2	0.59	63	29	34	40	nd	16	69	71	71	71	71
Tule Valley	<i>Millard</i>	<u>3.6</u>	0.09	66	4	8	22	13	9	67	77	82	80	80
Hal's Canyon	<i>Millard</i>	<u>3.3</u>	0.90	63	0	6	10	9	9	63	72	77	73	71
Enterprise	<i>Washington</i>	9.5	0.12	58	4	22	21	13	15	69	74	73	73	71
DIXIE														
Sand Hollow	<i>Washington</i>	<u>6.2</u>	0.01	74	0	0	1	1	1	64	80	87	83	82

*since October 1, 2009 unless underlined (Park Valley 1/14/10; Goshute 3/1/10; Tule Valley 3/8/10; Hal's Canyon 3/9/10; Sand Hollow 1/27/10; Grouse Creek 5/4/10), (nd) no data. Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station on the first of the month. 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 and **WP** is the mean permanent wilting point for the soil surface (0 to 12 inches) at SCAN sites within the region. *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.

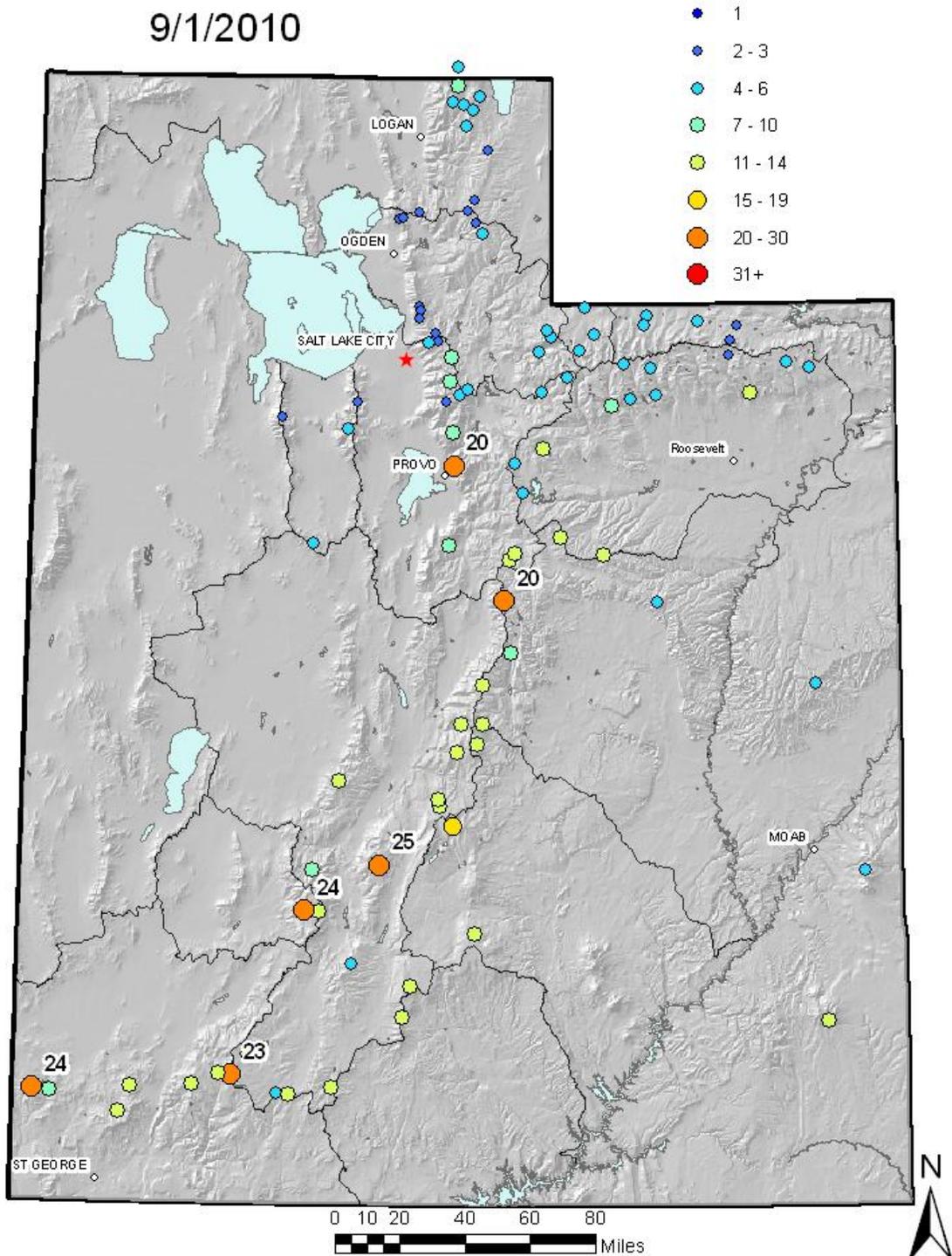
General Hydrologic Conditions

The data and analyses in the following section are from the Natural Resources Conservation Service (NRCS) SNOTEL network (precipitation and soil moisture), US Geological Survey (streamflow), and various additional sources of reservoir data including the Bureau of Reclamation, Water Conservancy Districts, and NRCS. These analyses provide information on general hydrologic conditions at higher elevation, snowfall driven environments that contribute greatly to potential water collection and storage.

Days Without Precipitation

Days since 0.5" Accumulated Precipitation

9/1/2010

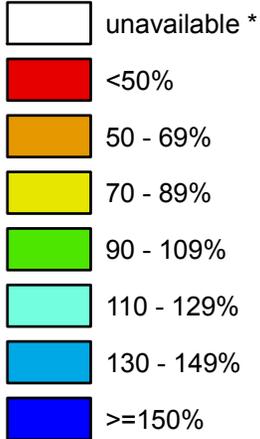


Utah

SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

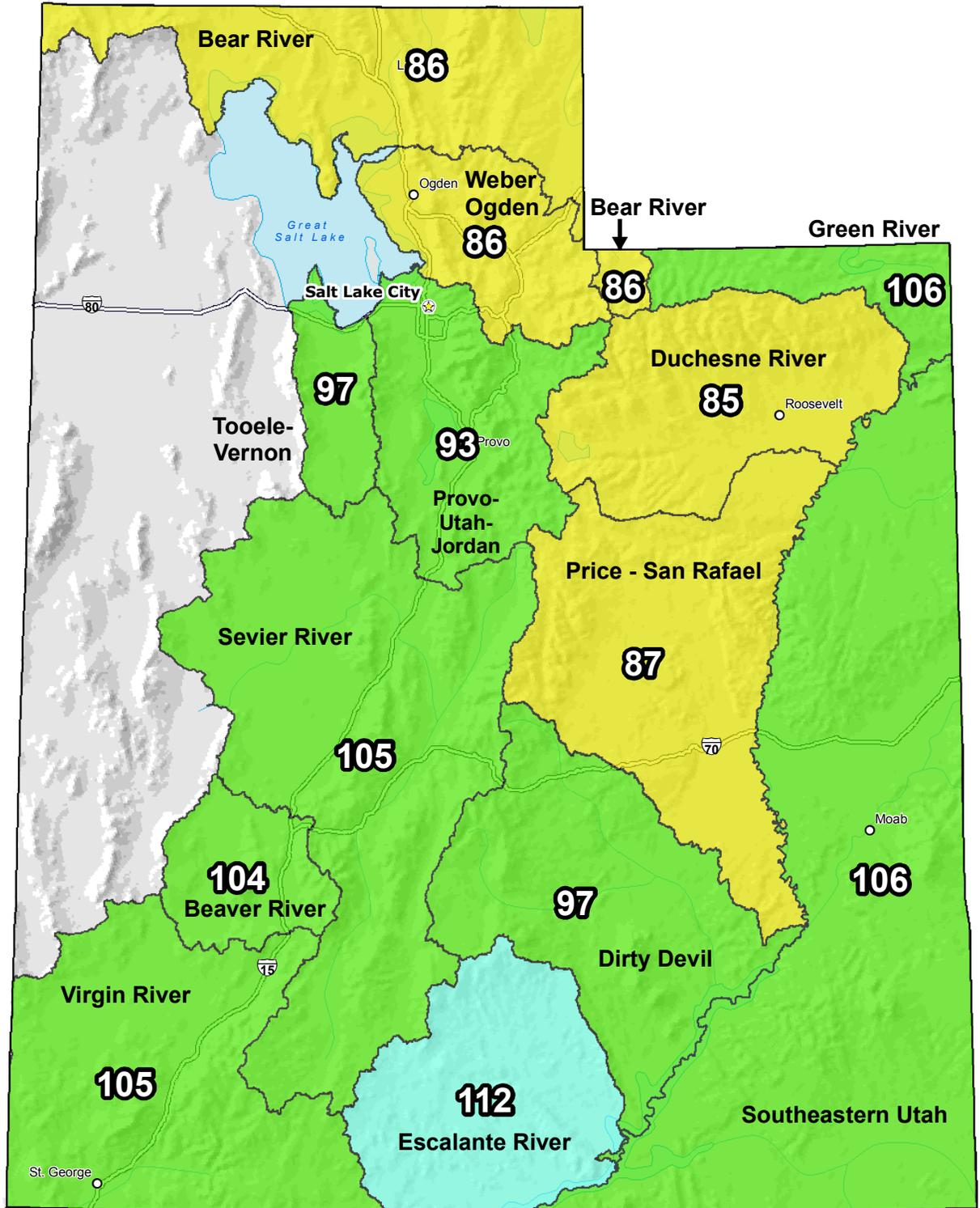
Sep 01, 2010

**Water Year
(Oct 1) to Date
Precipitation
Basin-wide
Percent of
1971-2000
Normal**



* Data unavailable at time of posting or measurement is not representative at this time of year

**Provisional Data
Subject to Revision**



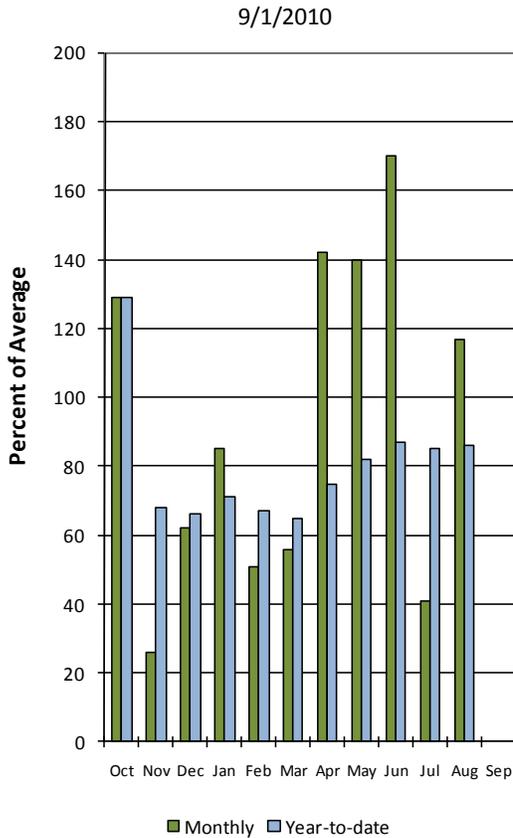
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Tom.Pagano@por.usda.gov 503 414 3010

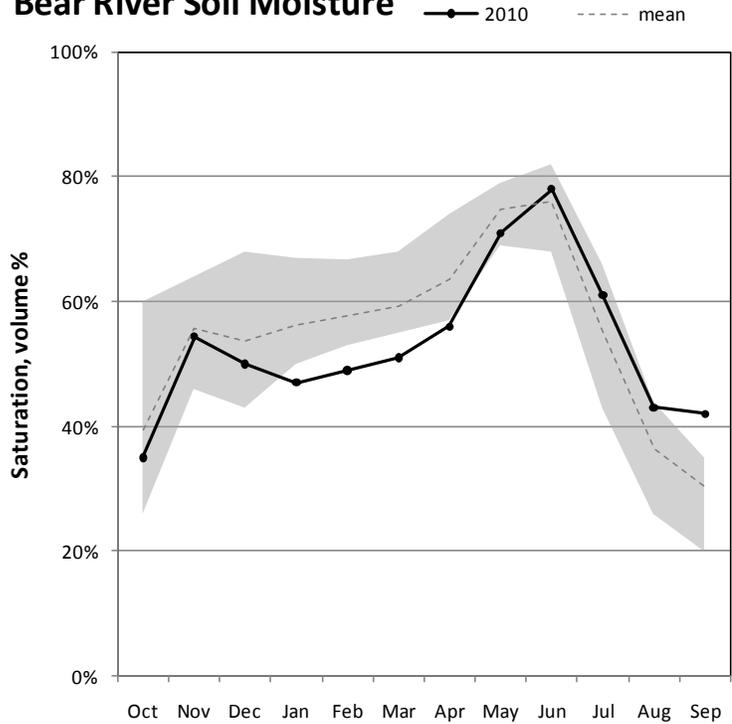
Bear River Basin September 1, 2010

Precipitation in August was above average at 117%, which brings the seasonal accumulation (Oct-Aug) to 87% of average. Reservoir storage is low at 34% of capacity, which is 3% lower than this time last year. Soil moisture is at 43% compared to 41% last year.

Bear River Precipitation

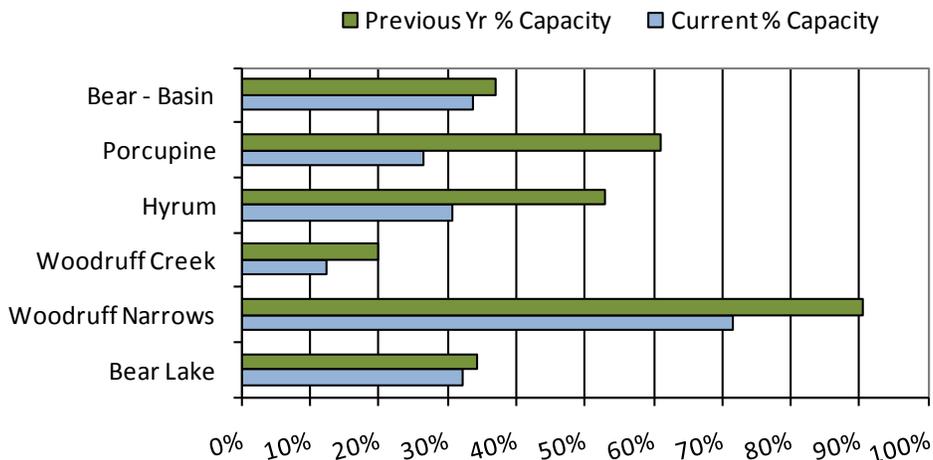


Bear River Soil Moisture



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.

September Bear River Reservoir Storage



What is a Water Availability Index?

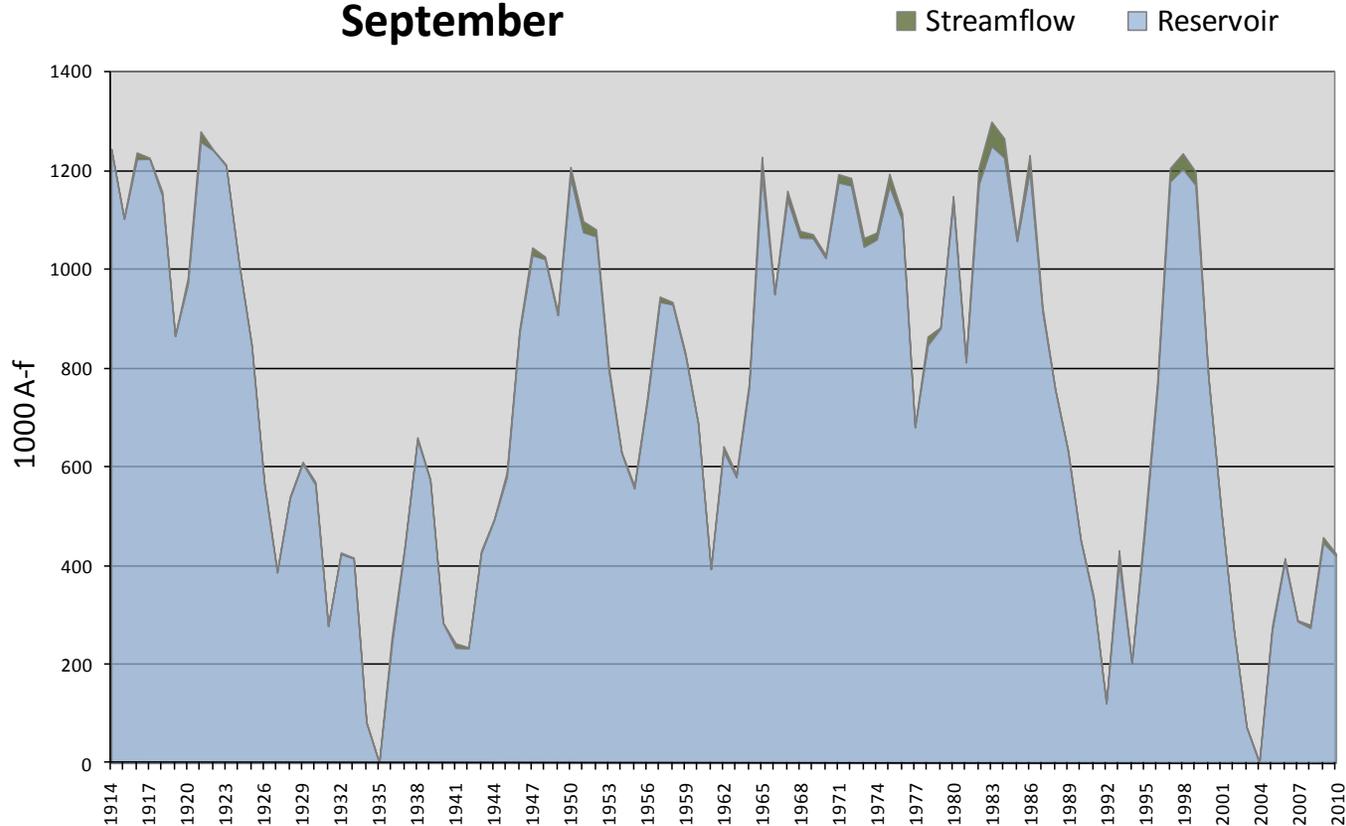
The Water Availability Index (WAI) is a 'snapshot in time' indicator of total surface water availability within a watershed for current reservoir storage and the immediate past month's streamflow set in a historical context. The WAI is very similar to the Surface Water Supply Index (SWSI) except the SWSI incorporates a predictive parameter – forecast streamflow for the runoff season, April-July in combination with reservoir storage. Due to its predictive component, the SWSI is primarily used as a planning tool whereas the WAI is used as a continuous monitoring tool giving a numerical rating of current water supply. The Water Availability index is calculated by combining observed reservoir storage (carryover) with observed runoff for the past month. WAI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry) with a value of zero (0) indicating median water supply as compared to historical analysis. WAI's are calculated in this fashion to be consistent with other hydroclimatic indicators such as the Palmer Drought Index and the Precipitation index.

Utah Snow Surveys has also chosen to display the WAI as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has a simple application. It can be best thought of as a scale of 1 to 99 with 1 being the drought of record (driest possible conditions) and 99 being the flood of record (wettest possible conditions) and a value of 50 representing average conditions. This rating scale is a percentile rating as well, for example a WAI of 75% means that this year's water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a WAI of 10% means that 90% of historical events have been greater than this one and that only 10% have had less total water supply. This scale is far more intuitive for most people and is totally comparable between basins: a WAI of 50% means the same relative ranking on watershed A as it does on watershed B, which may not be strictly true of the +4 to -4 scale.

September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Bear Lake	August accumulated inflow to Bear Lake (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Bear River	420	4	425	-2.38	21	32,33,43,06

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

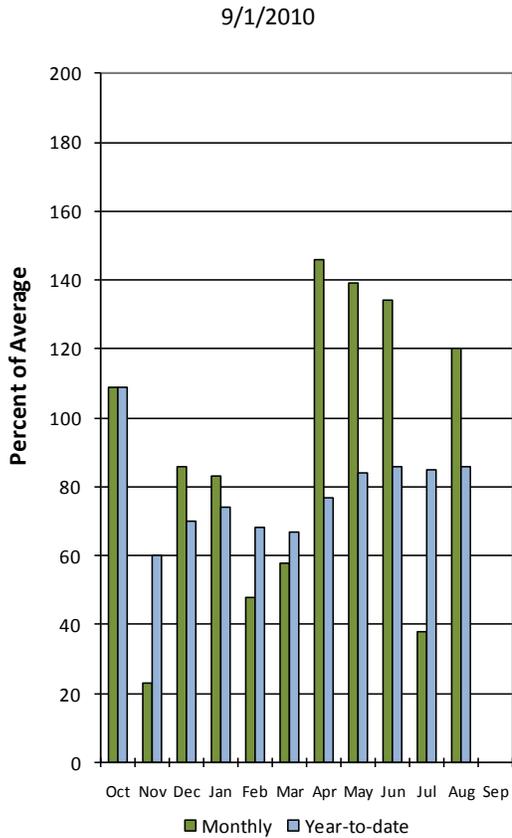
Bear Lake Water Availability Index September



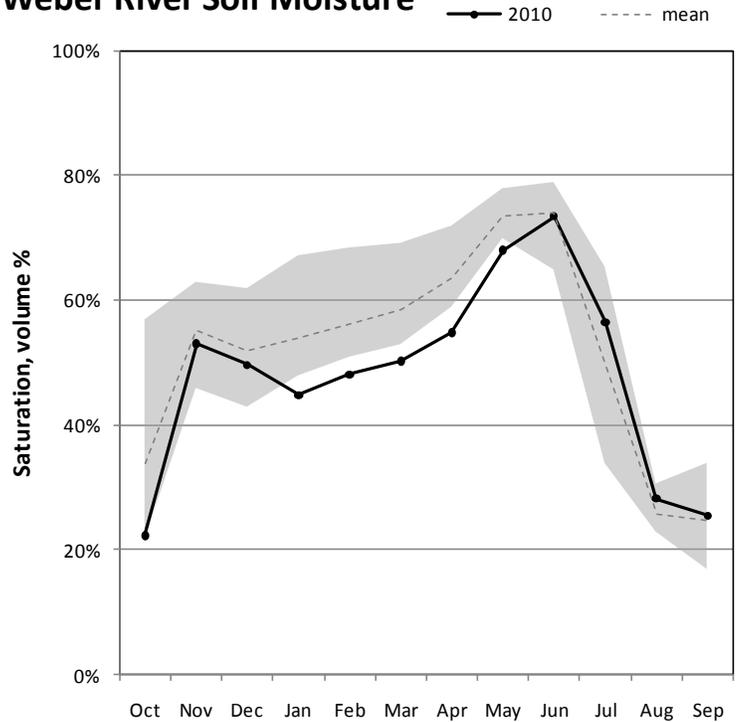
Weber and Ogden River Basin September 1, 2010

Precipitation in August was above average at 120%, which brings the seasonal accumulation (Oct-Aug) to 86% of average. Reservoir storage is at 73% of capacity, which is 4% lower than this time last year. Soil moisture is at 28% compared to 31% last year.

Weber River Precipitation

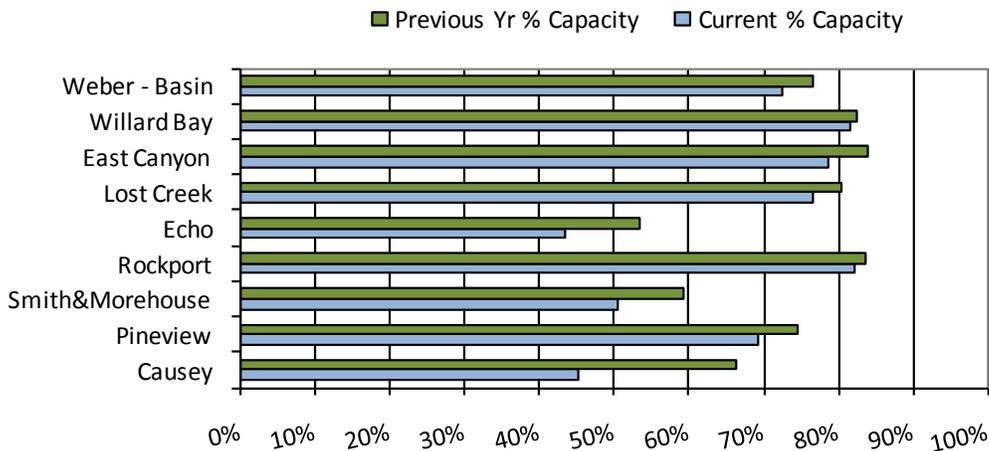


Weber River Soil Moisture



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.

September Weber Basin Reservoir Storage



September 1, 2010

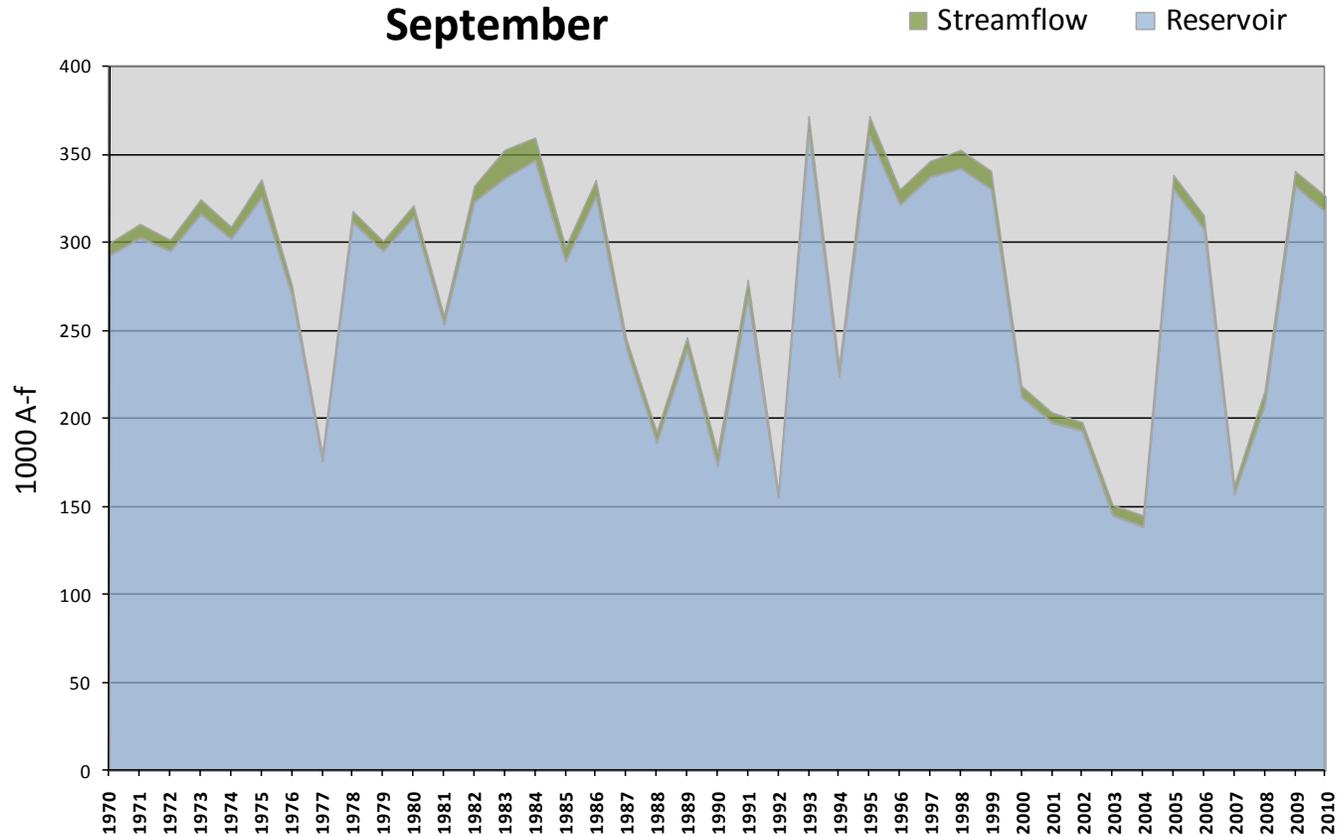
Water Availability Index

Basin or Region	August EOM* Reservoirs	August accumulated flow at Weber near Oakley (observed)	Reservoirs + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Weber River	318	9	327	1.39	67	73,80,82,96

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

Weber River - Water Availability Index

September



September 1, 2010

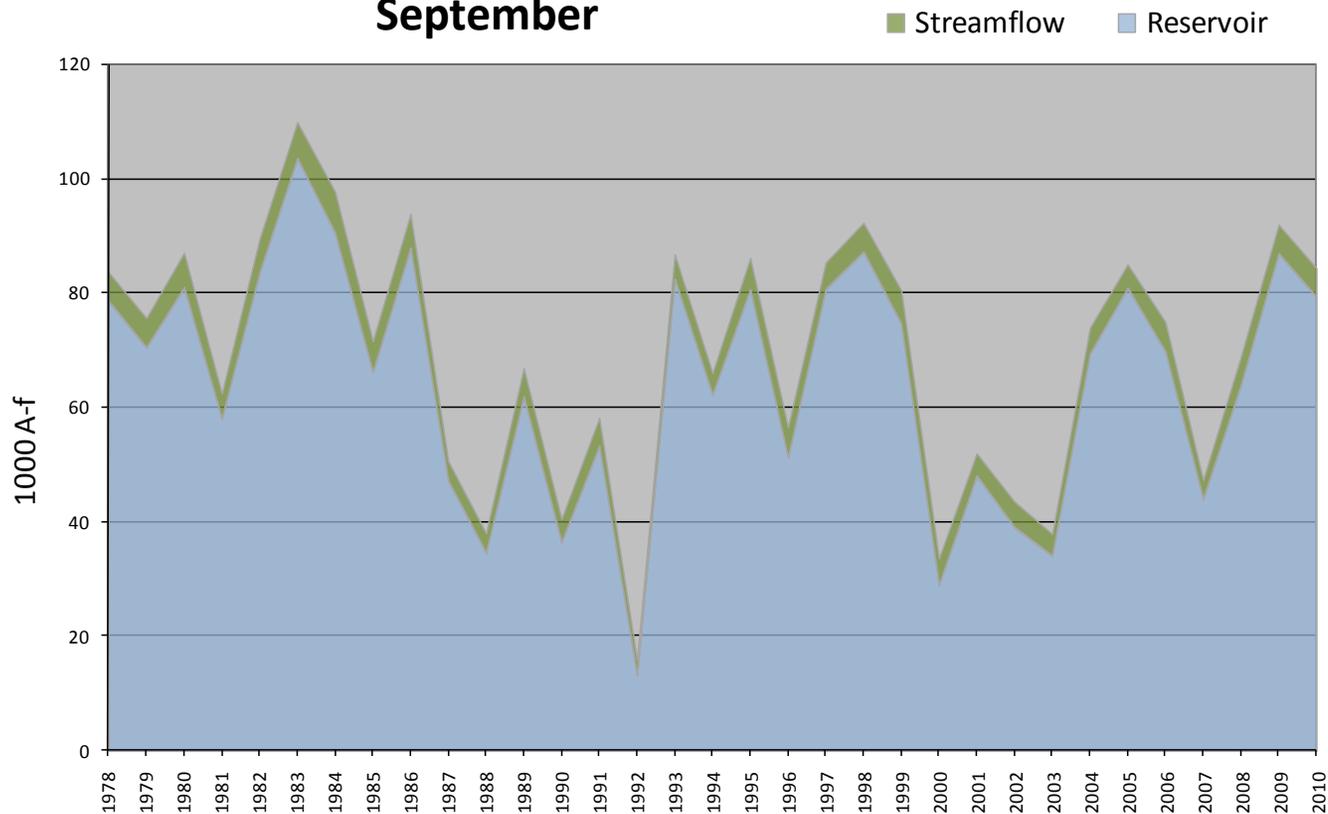
Water Availability Index

Basin or Region	August			WAI [#]	Percentile	Years with similar WAI
	August EOM* Pine View & Causey	accumulated flow at South Fork Ogden (observed)	Reservoir + Streamflow			
	KAF [^]	KAF	KAF			
Ogden River	79	5	84	1.23	65	78,97,99,05

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

Ogden River - Water Availability Index

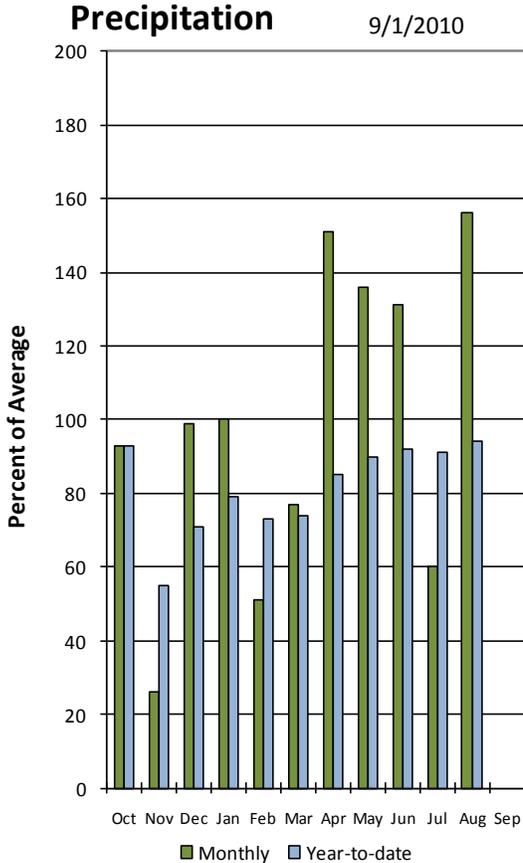
September



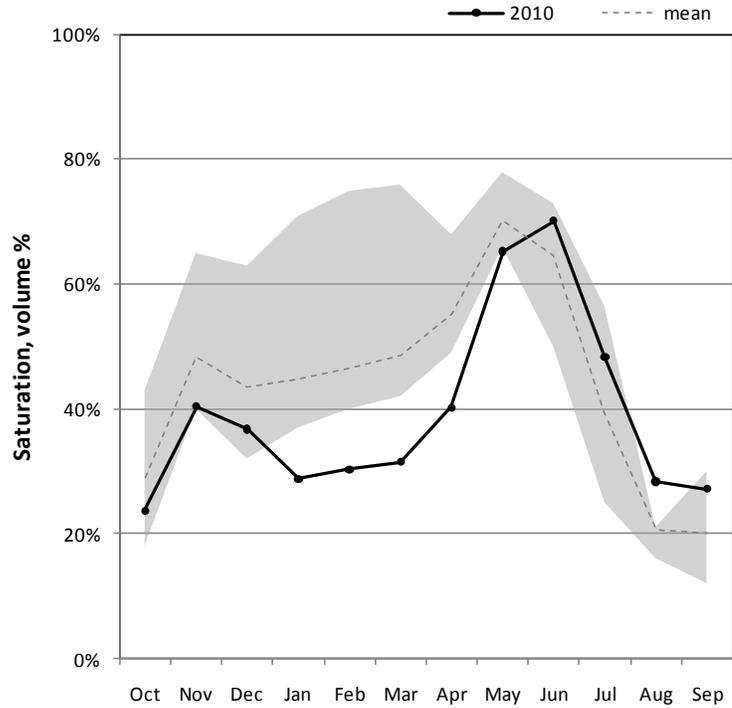
Utah Lake, Jordan River, & Tooele Valley Basins September 1, 2010

Precipitation in August was much above average at 156%, which brings the seasonal accumulation (Oct-August) to 94% of average. Reservoir storage is at 86% of capacity, which is 3% less than this time last year. Soil moisture is at 28% compared to 21% last year.

Jordan / Provo River

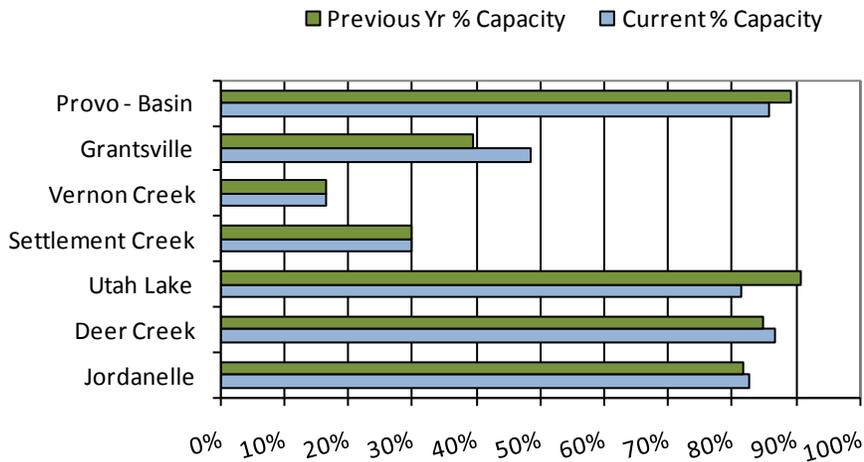


Jordan / Provo River Soil Moisture



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.

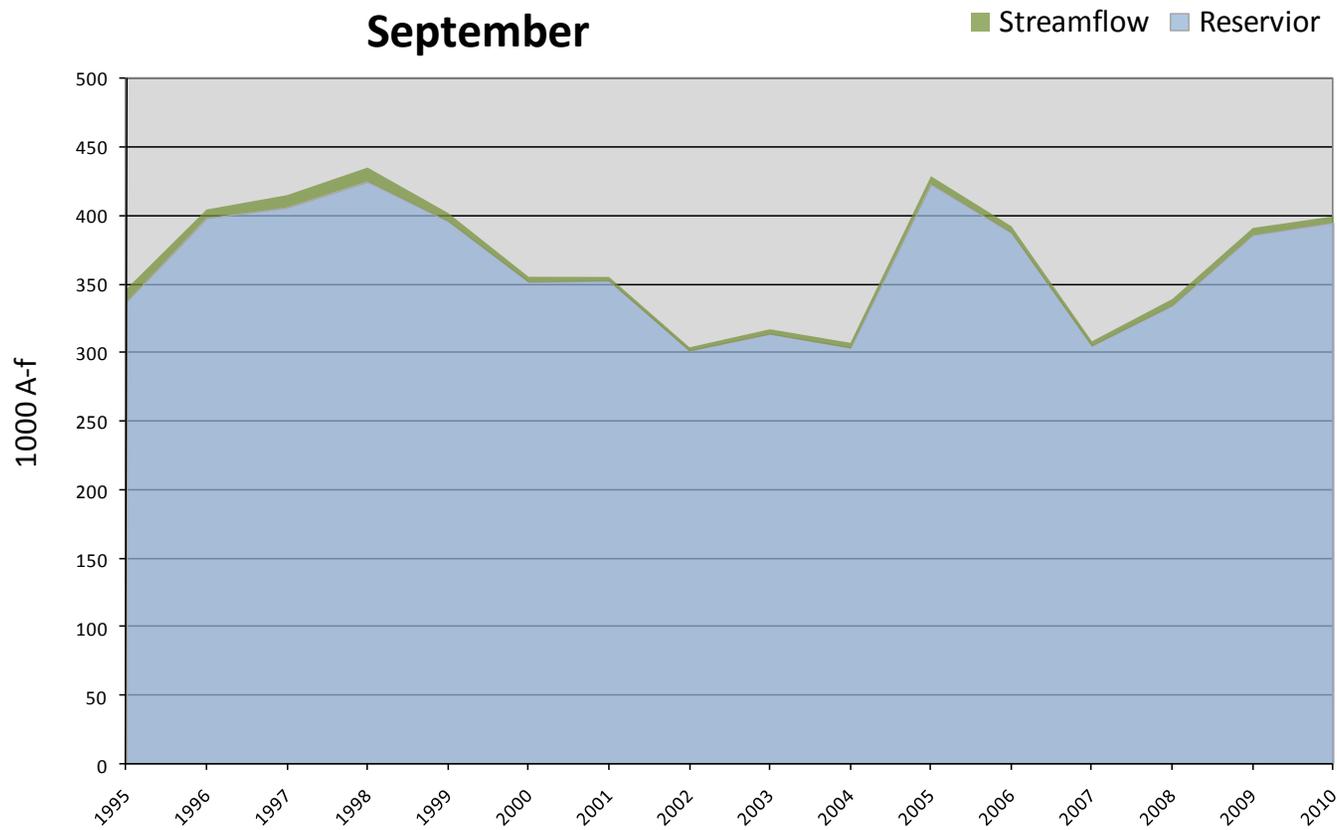
Jordan / Provo River Reservoir Storage



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Deer Creek, Jordanelle	August accumulated flow Provo River at Woodland (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Provo	395	4	399	1.23	65%	96, 99, 06, 09

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

Provo River - Water Availability Index
September

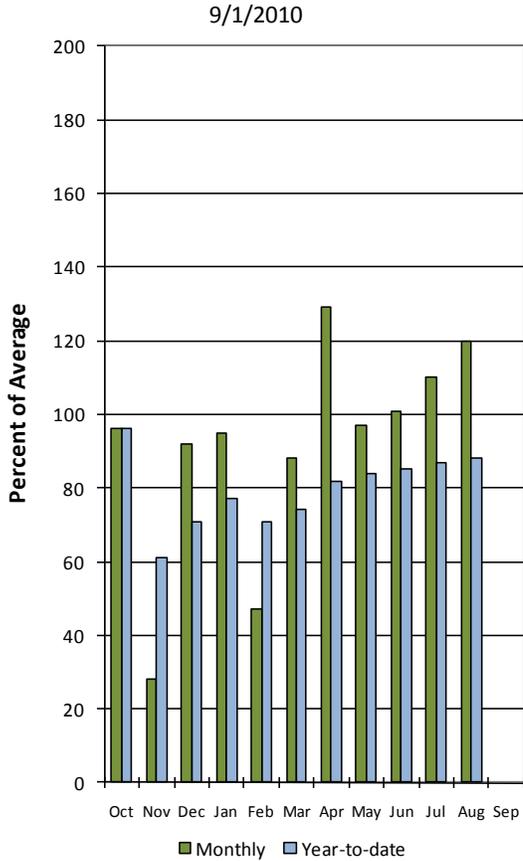


Utah Lake, Jordan River, and Tooele Valley Basins

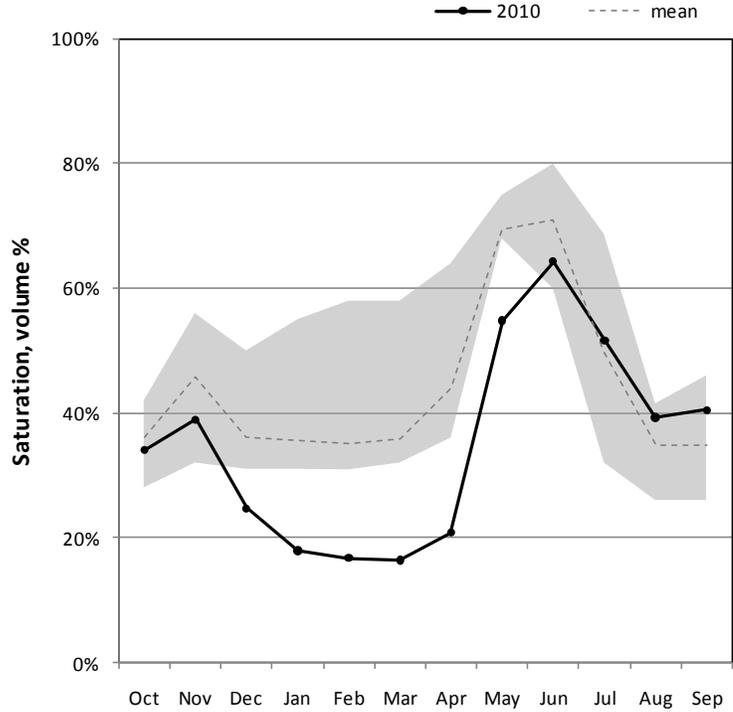
Uintah Basin and Dagget SCDs September 1, 2010

Precipitation in August was much above average at 137%, which brings the seasonal accumulation (Oct-Aug) to 91% of average. Reservoir storage is at 85% of capacity, which is 1% lower than at this time last year. Soil moisture is at 39% compared to 42% last year.

Uintah Precipitation

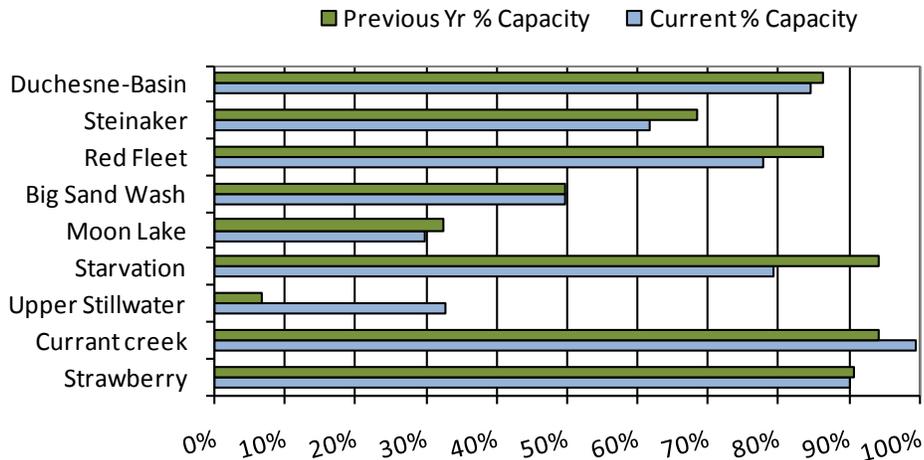


Uintah Basin Soil Moisture



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.

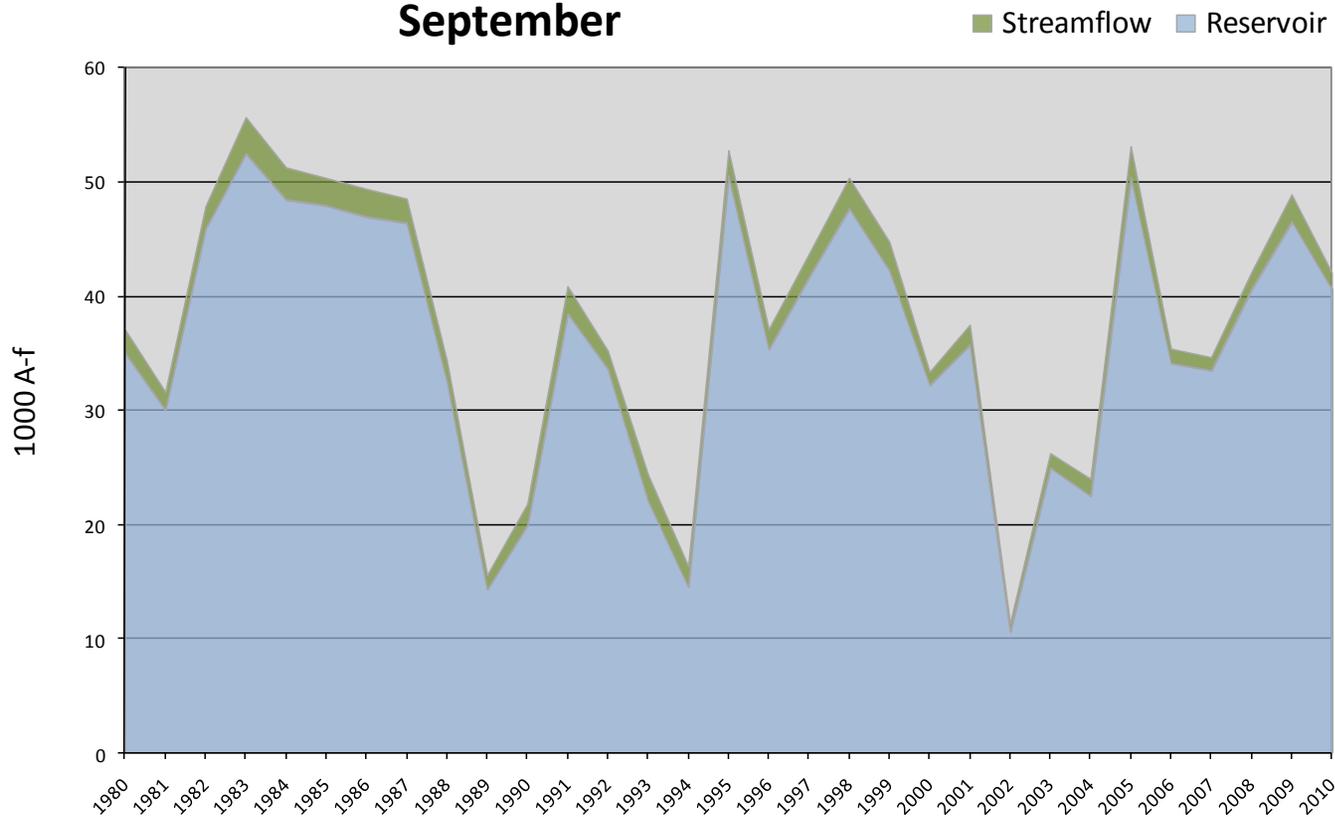
September Uintah Basin Reservoir Storage



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Red Fleet and Steinaker	August accumulated flow Big Brush Creek (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Eastern Uintah	41	1	42	0.52	56	91,97,01,08

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

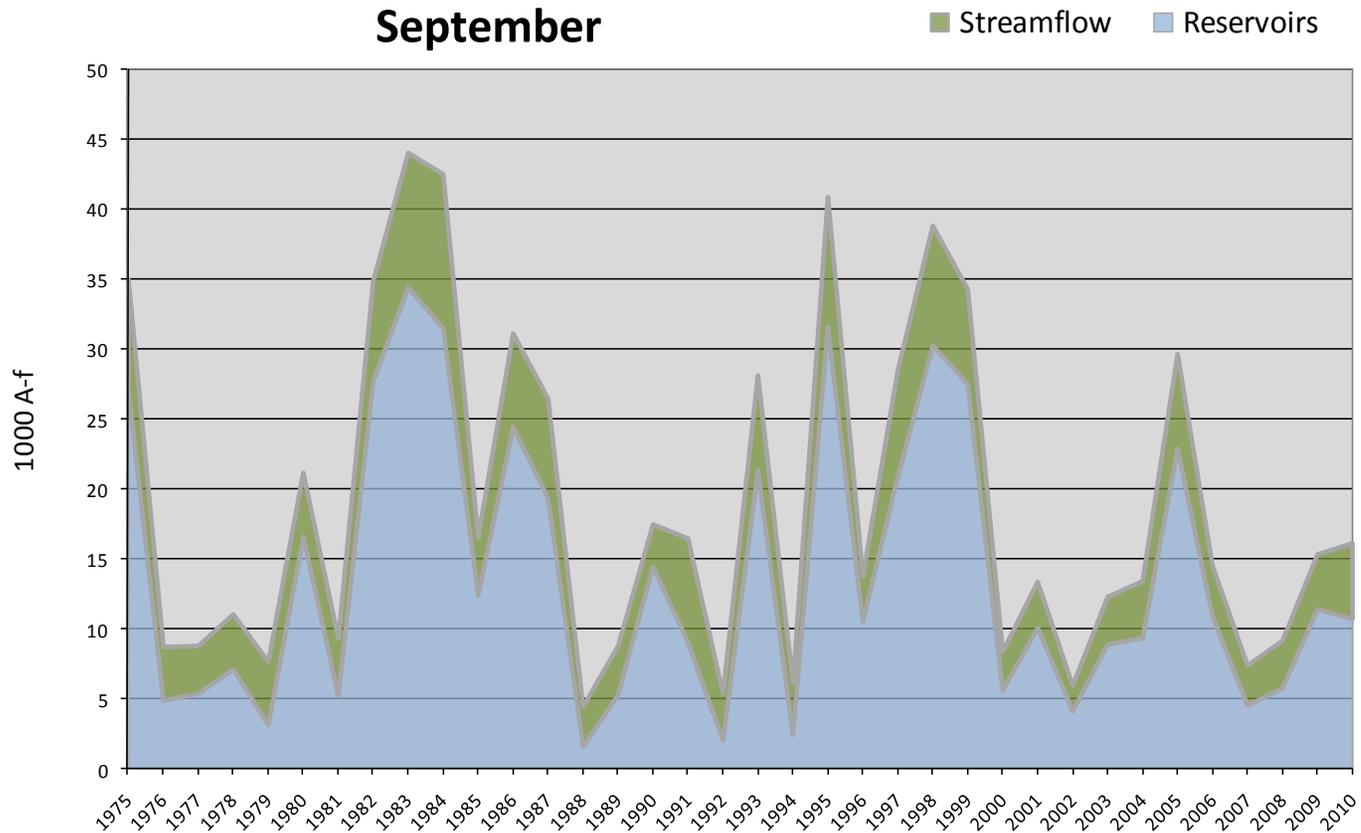
Eastern Uintah - Water Availability Index
September



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Moon Lake	August accumulated flow Lake Fork Creek above Moon Lake (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Moon Lake	11	5	15	0.34	54	85,91,06,09

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

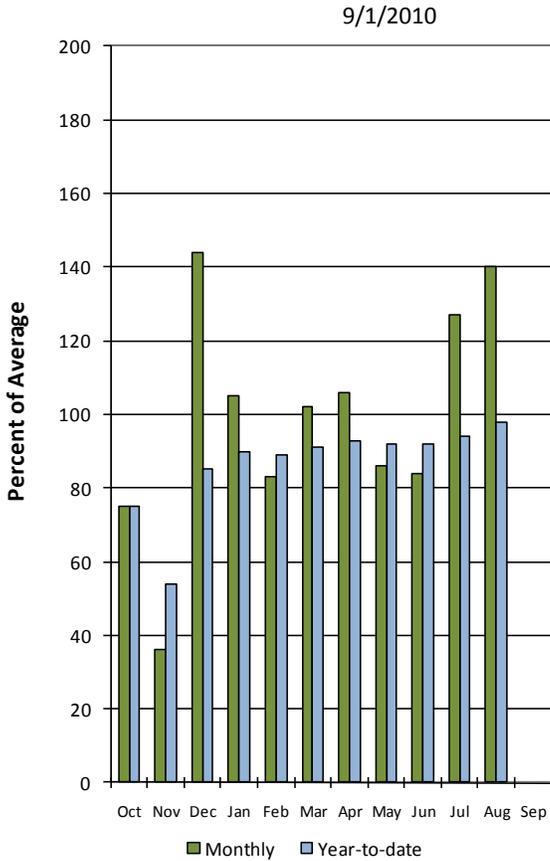
Moon Lake Water Availability Index September



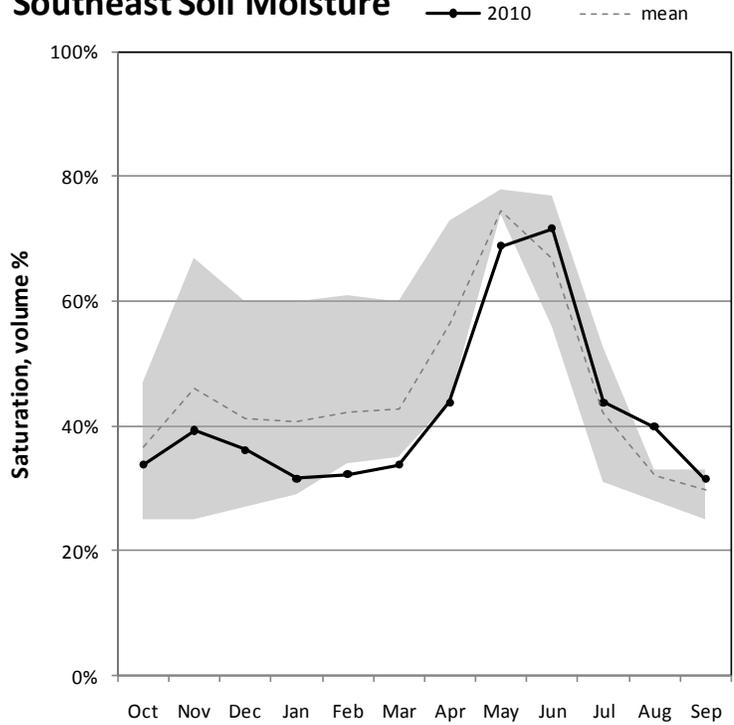
Southeast – Carbon, Emery, Wayne, Grand, and San Juan Counties September 1, 2010

Precipitation in August was above average at 140%, which brings the seasonal accumulation (Oct-Aug) to 98% of average. Reservoir storage is at 58% of capacity, which is 18% higher than this time last year. Soil moisture is at 32% compared to 25% last year.

Southeast Utah Precipitation

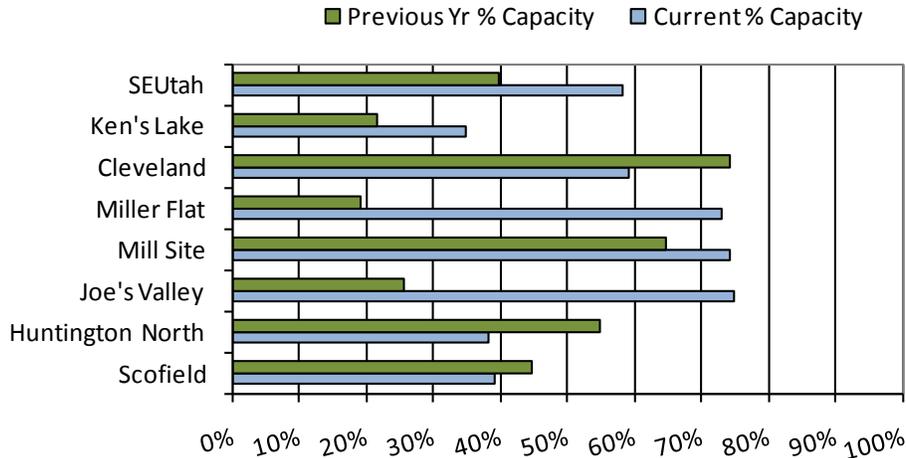


Southeast Soil Moisture



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.

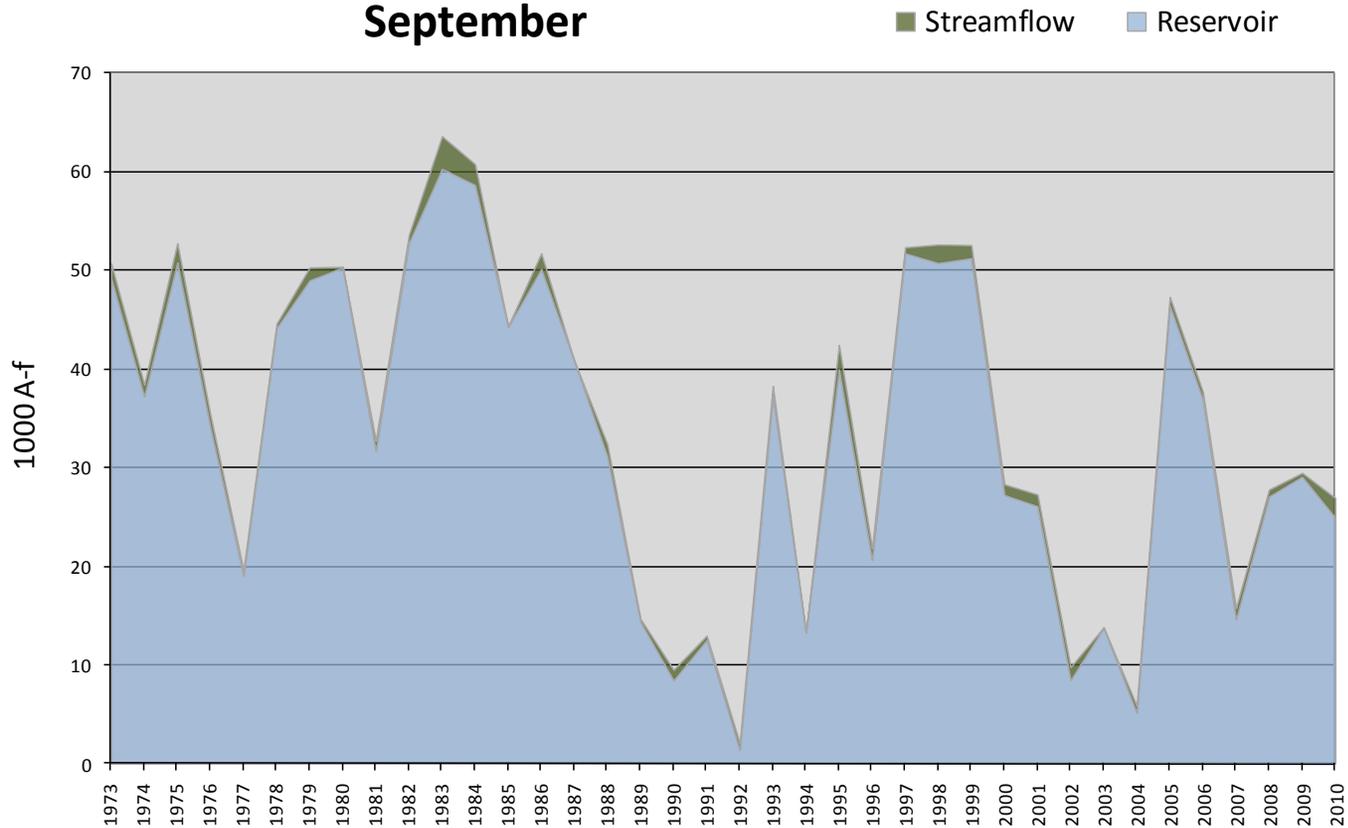
Southeast Utah Reservoir Storage



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Scofield	August accumulated inflow to Scofield (calculated)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Price River	60	3	64	3.31	90	98, 75, 84, 95

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

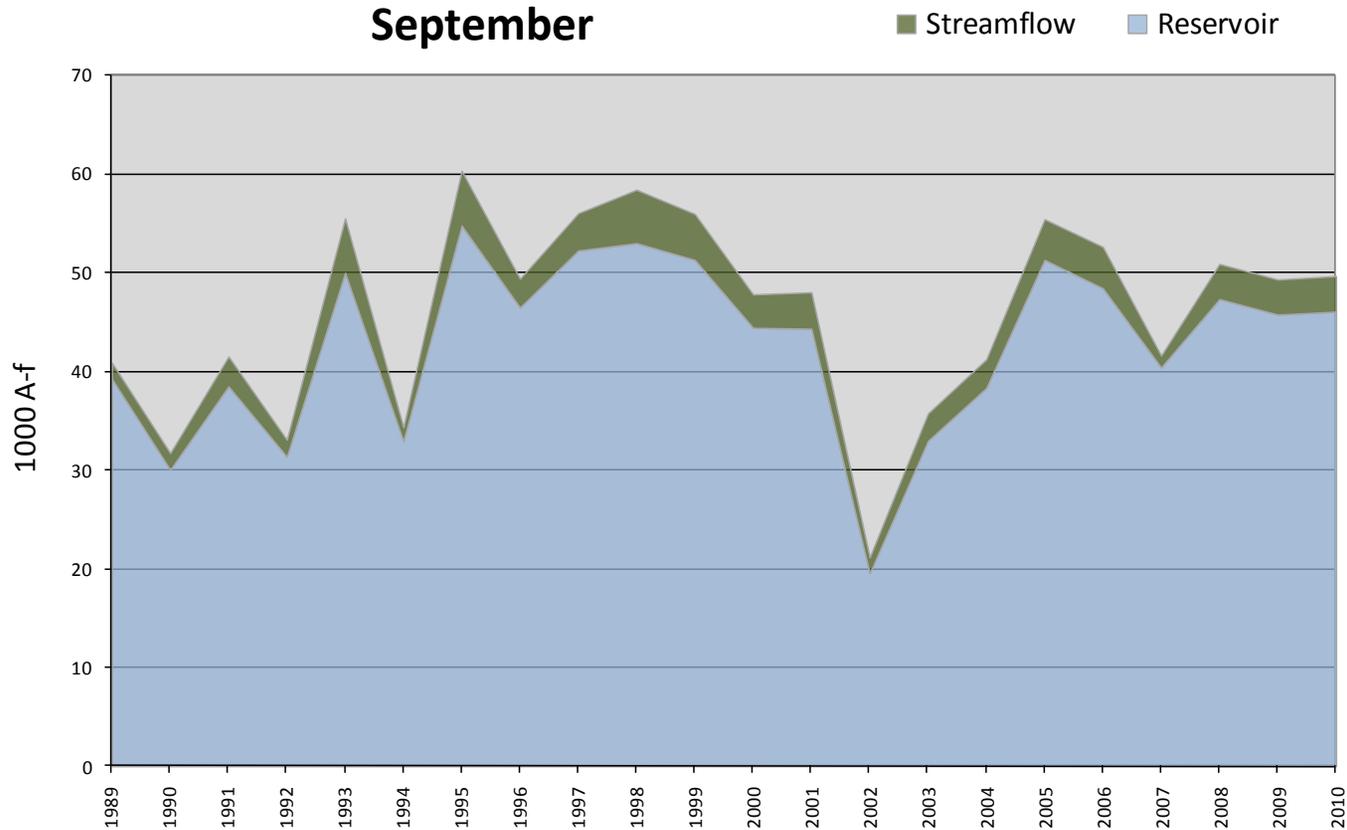
Price River - Water Availability Index
September



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Joe's Valley	August accumulated inflow to Joe's Valley (calculated)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Joe's Valley	46.1	3.6	49.7	0.91	61	09, 96, 08, 06

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

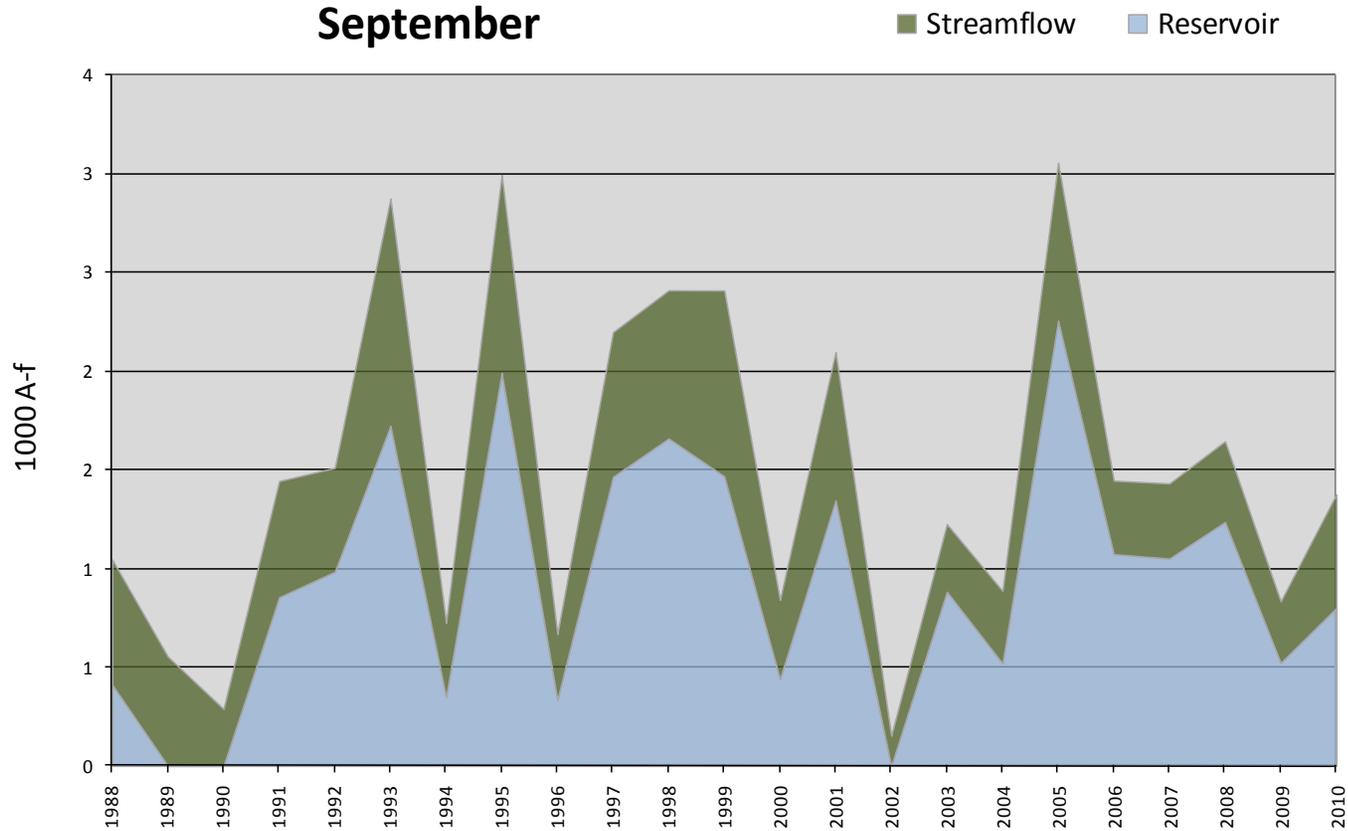
Joe's Valley - Water Availability Index
September



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Ken's Lake Reservoir	August accumulated flow Mill Creek at Sheley (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Moab	0.8	0.6	1.4	-0.35	46	88, 03, 07, 91

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

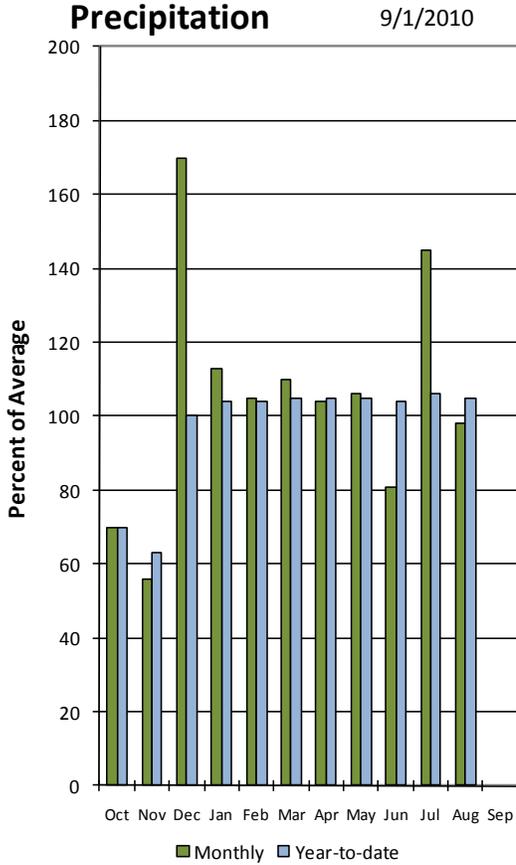
Moab - Water Availability Index
September



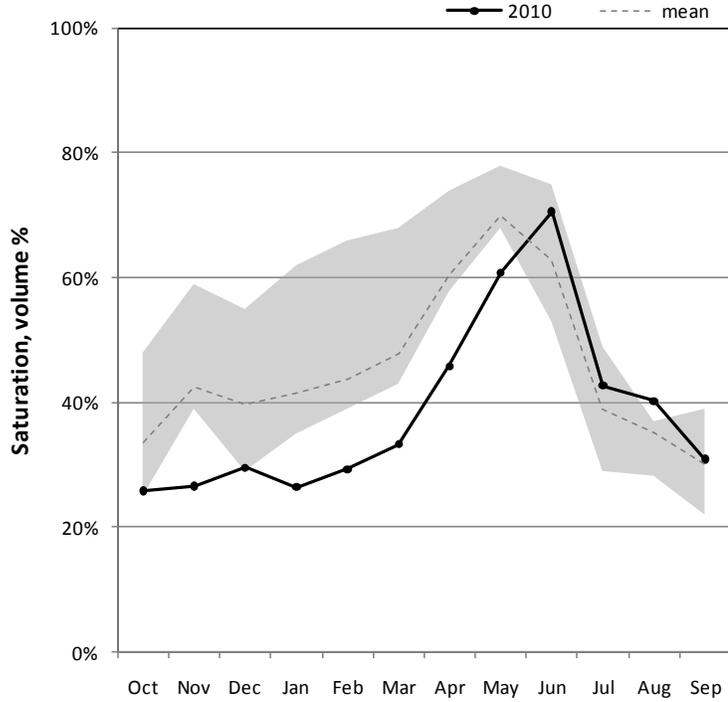
Sevier and Beaver River Basins September 1, 2010

Precipitation in August was near average at 98%, which brings the seasonal accumulation (Oct-Aug) to 105% of average. Reservoir storage is low at 25% of capacity, 5% more than last year. Soil moisture is at 31% compared to 22% last year.

Sevier /Beaver River

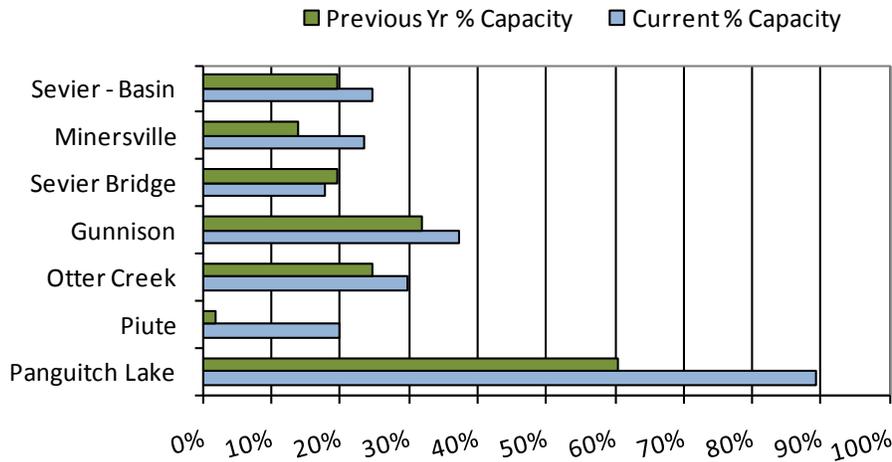


Sevier / Beaver River Soil Moisture



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.

Sevier / Beaver River Reservoir Storage

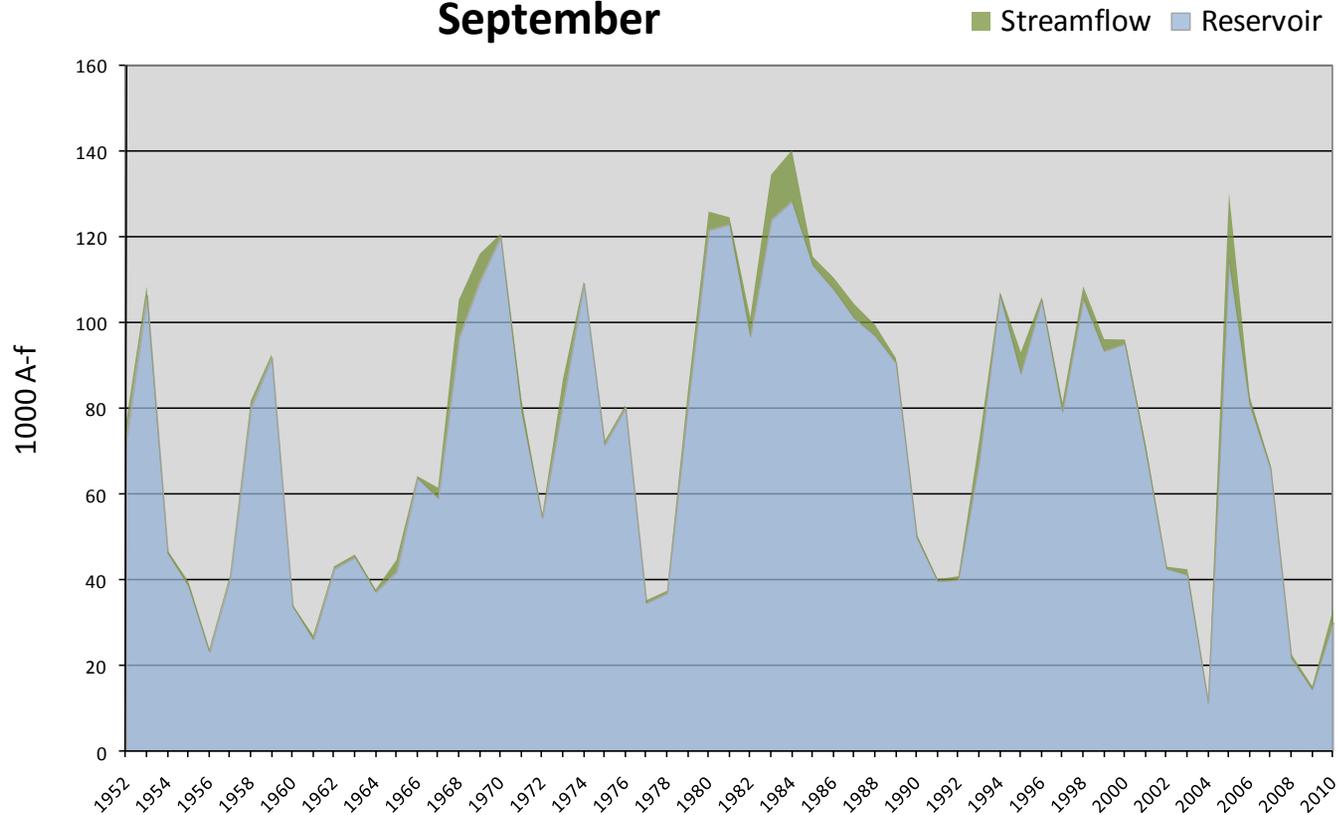


September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Otter Creek and Piute	August accumulated flow at Kingston (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Upper Sevier River	29.9	3.1	33.0	-3.33	10	56, 61, 60, 77

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

Upper Sevier River - Water Availability Index

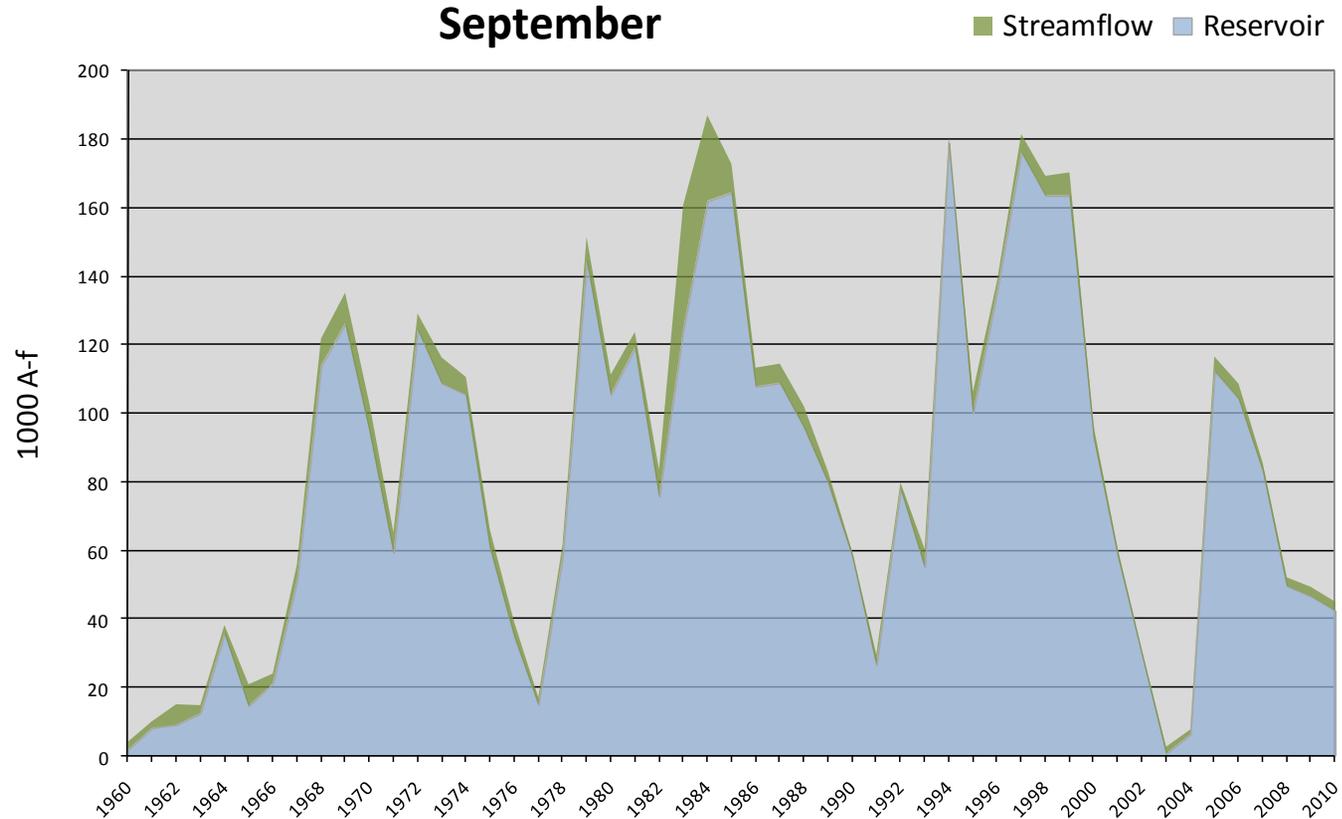
September



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Sevier Bridge	August accumulated flow Sevier at Gunnison (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
Lower Sevier River	42.3	2.6	44.9	-1.92	27	64, 76, 09, 08

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

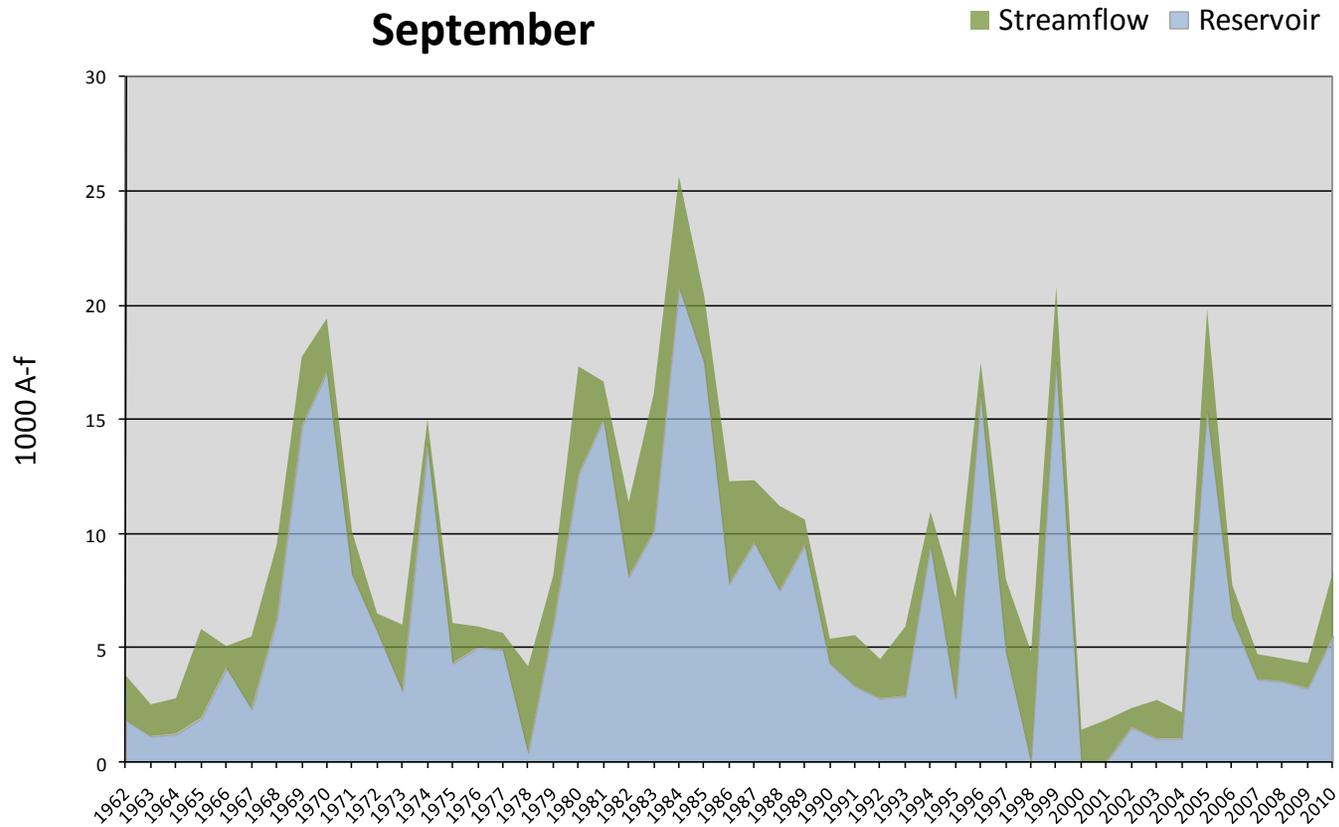
Lower Sevier River - Water Availability Index September



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Minersville Reservoir	August accumulated flow Beaver River at Beaver (<i>observed</i>)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Beaver	5.5	2.8	8.3	-0.83	40	71, 68, 79, 97

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

Beaver River - Water Availability Index September

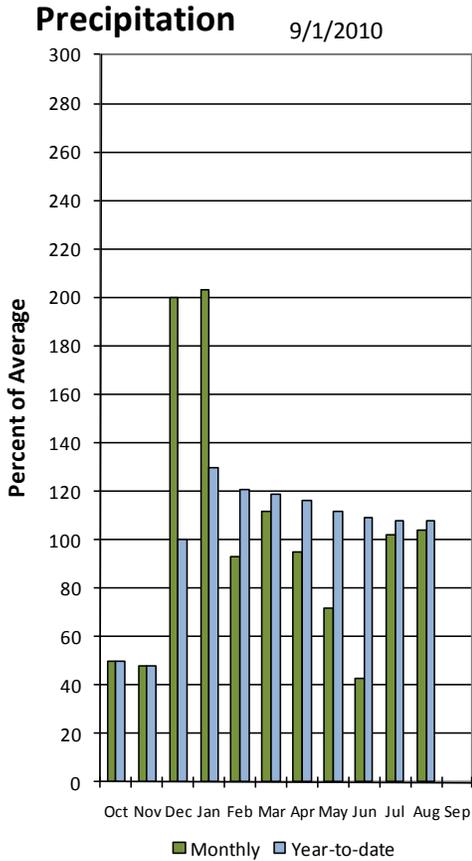


Southwest – E. Garfield, Kane, Washington, & Iron Counties

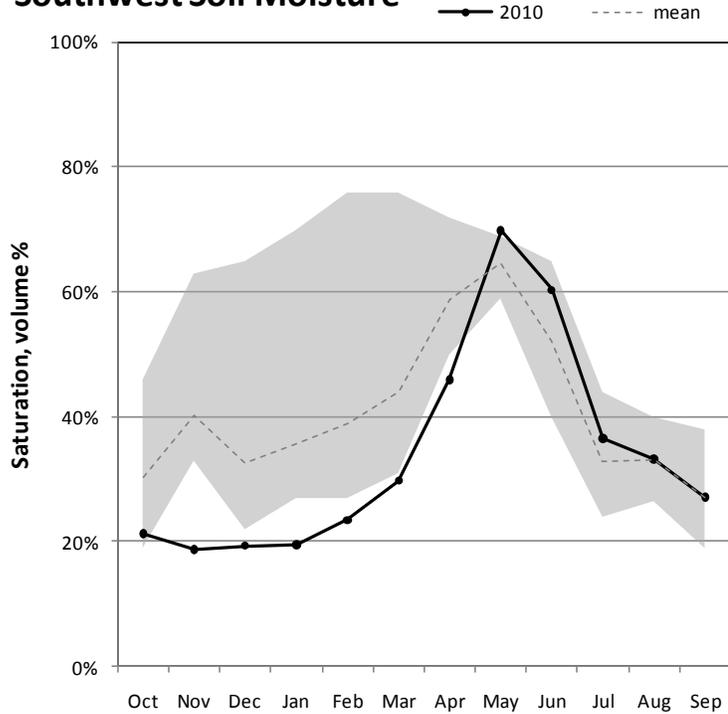
September 1, 2010

Precipitation in August was near average at 105%, which brings the seasonal accumulation (Oct-August) to 108% of average. Reservoir storage is low at 59% of capacity, which is the same as this time last year. Soil moisture is at 33% compared to 27% last year.

Southwest Utah

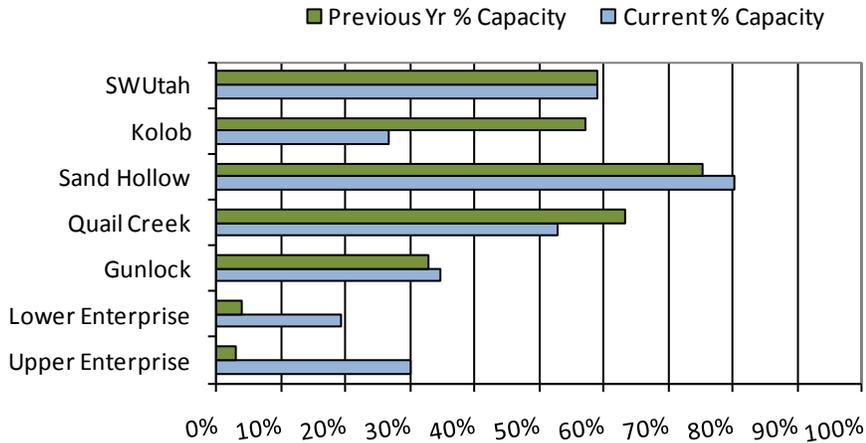


Southwest Soil Moisture



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.

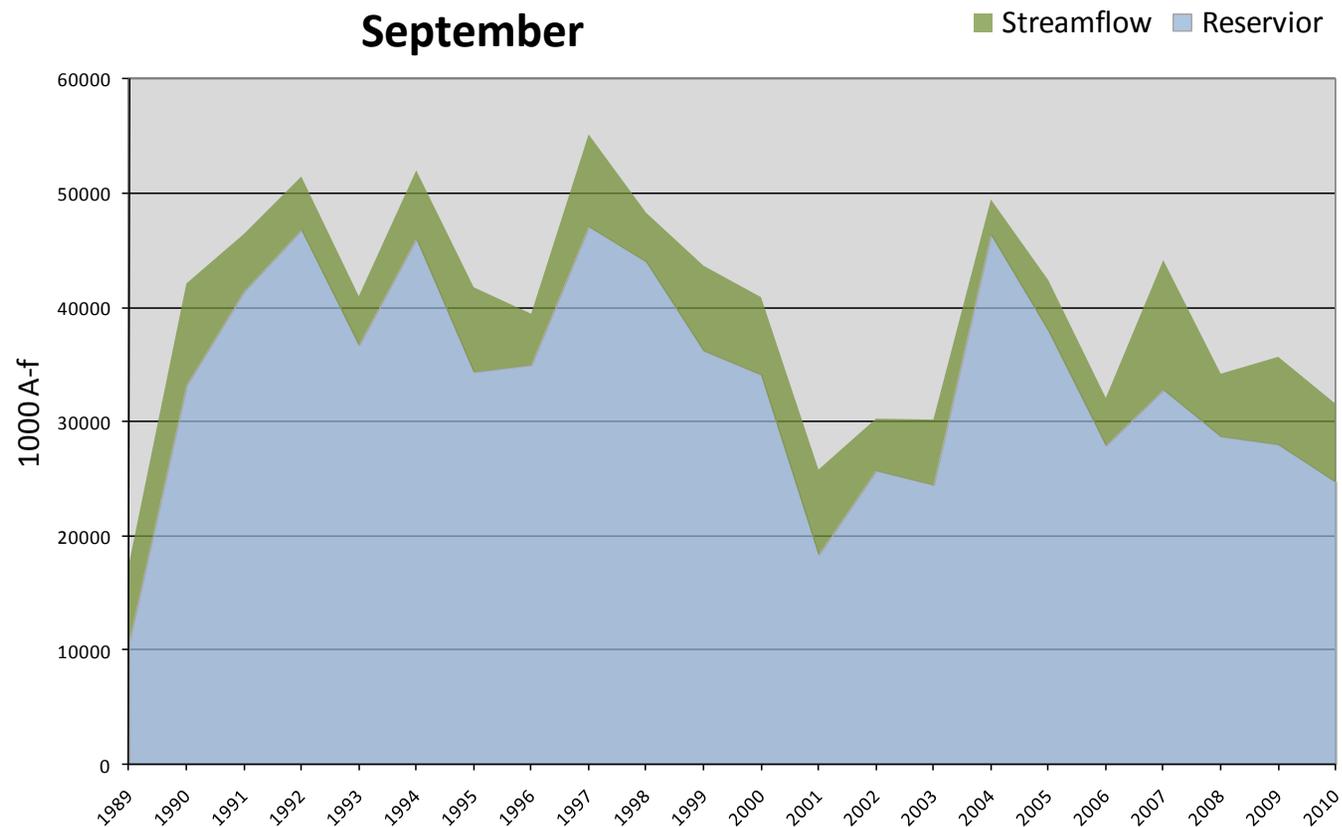
Southwest Utah Reservoir Storage



September 1, 2010		Water Availability Index				
Basin or Region	August EOM* Reservoir	August accumulated flow Virgin and Santa Clara Rivers (observed)	Reservoir + Streamflow	WAI [#]	Percentile	Years with similar WAI
	KAF [^]	KAF	KAF		%	
Southwest	24700	6872	31572	-2.36	22	08, 06, 02, 03

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

Southwest - Water Availability Index
September



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Utah Climate and Water Report

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Salt Lake City, UT

