

# Utah Climate and Water Report

September 2011



Looking South from Mill D,  
Big Cottonwood Canyon, UT.  
*Photo by Beau Uriona, 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.

## Report Content

### 1) Climate and Water Information – Soil Climate Analysis Network

- a) Utah SCAN Water Year Precipitation
- b) North Central
- c) Northern Mountains
- d) Uintah Basin
- e) Southeast
- f) South Central
- g) Western and Dixie
- h) 2010 Minimum Soil Temperatures at Utah SCAN sites

### 2) General Hydrological Conditions

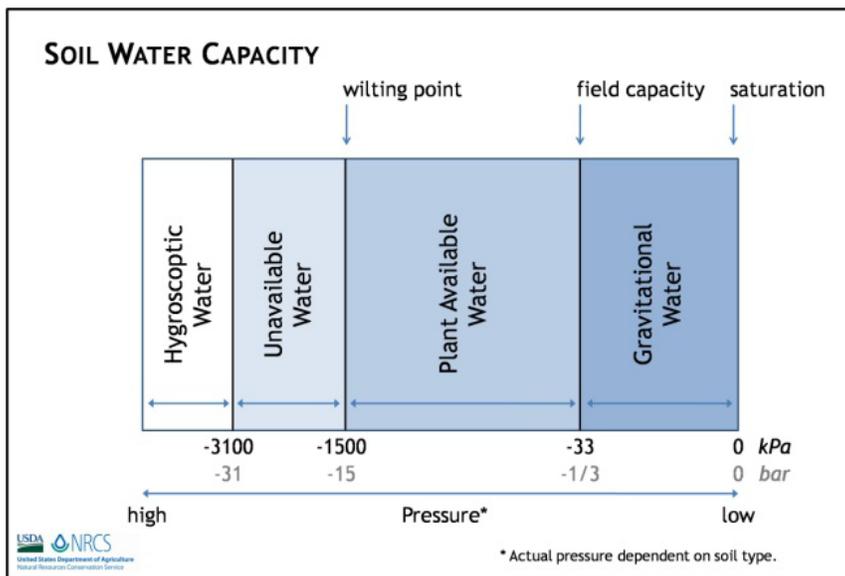
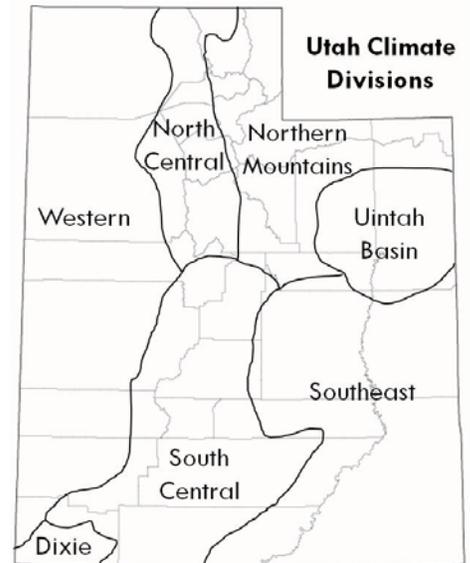
- a) SNOTEL Current Snow Water Equivalent (SWE) % of Normal
- b) SNOTEL Water Year to Date Precipitation
- c) Bear River Basin
  - Water Availability Index
- d) Weber and Ogden River Basins
  - Water Availability Index
- e) Utah Lake, Jordan River, and Tooele Valley Basins
  - Water Availability Index
- f) Uintah Basin
  - Water Availability Index
- g) Southeast River Basins
  - Water Availability Index
- h) Sevier and Beaver River Basins
  - Water Availability Index
- i) E. Garfield, Kane, Washington, and Iron Co.
  - Water Availability Index

# Climate and Water Information

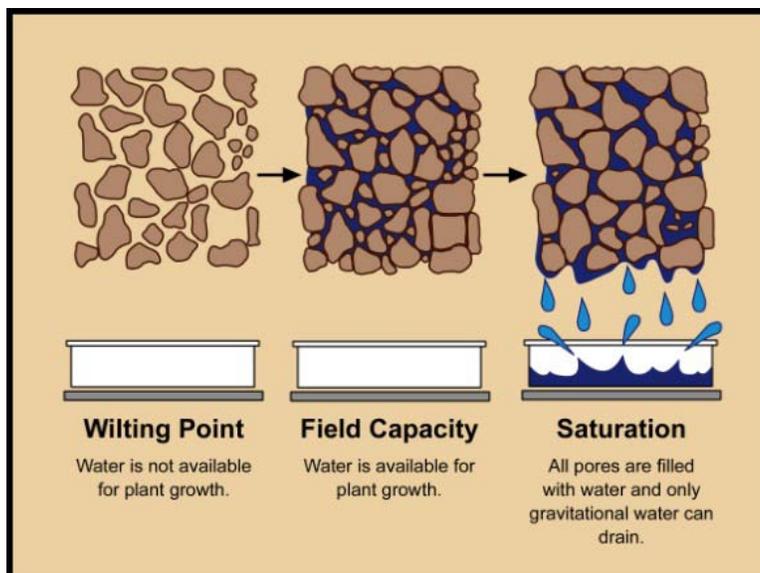
## Soil Climate Analysis Network

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.**

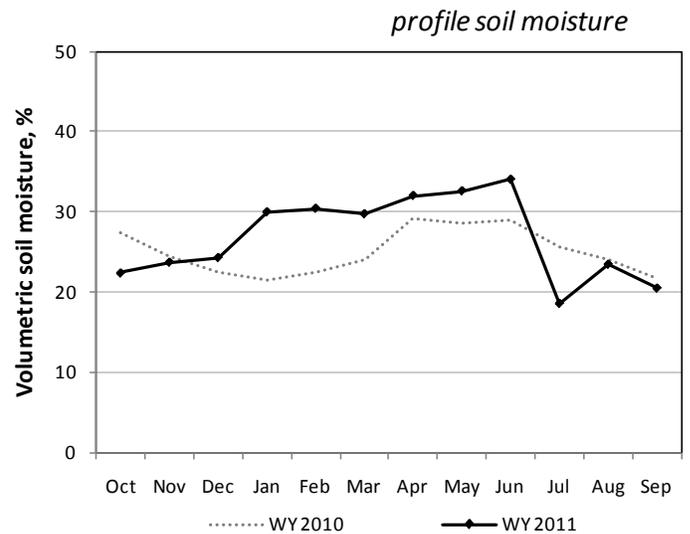
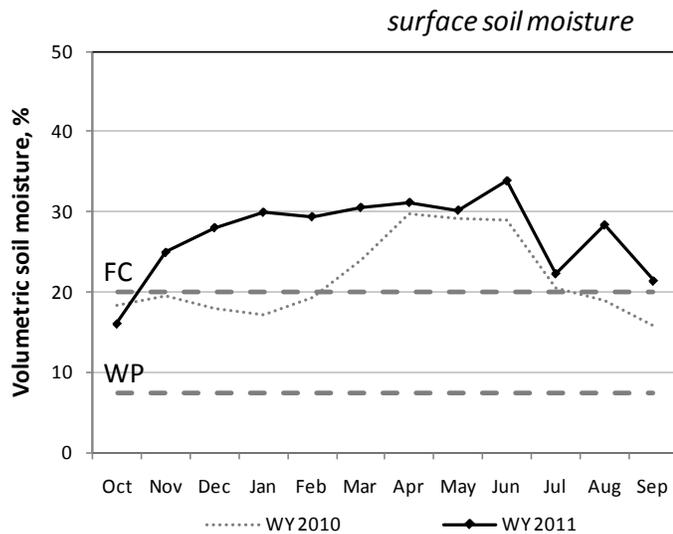
# North Central

## Soil Climate Analysis Network (SCAN)

Site name	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>				
<b>NORTH CENTRAL</b>														
Blue Creek	<i>Box Elder</i>	17.3	0.4	75	13	16	23	26	22	73	77	77	73	68
Cache Junction	<i>Cache</i>	25.7	0.1	74	16	20	28	27	29	67	68	66	64	60
Grantsville	<i>Tooele</i>	17.0	0.1	83	1	5	24	31	29	78	81	81	75	72

\*since October 1, 2010. 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. 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

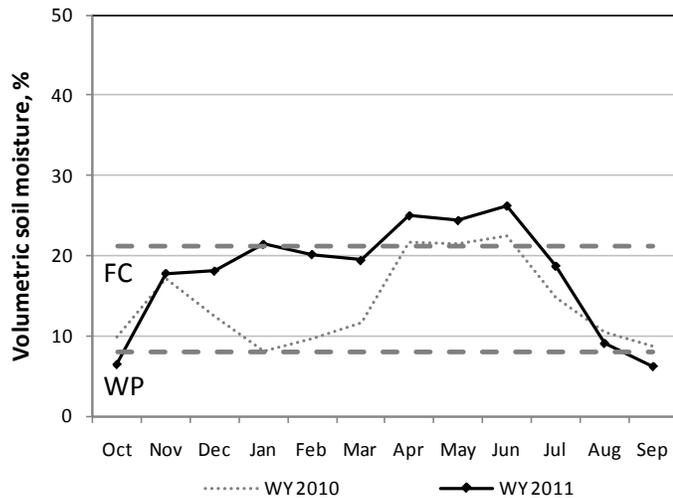
## Soil Climate Analysis Network (SCAN)

Site name	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>				
<b>NORTHERN MOUNTAINS</b>														
Chicken Ridge	<i>Morgan</i>	18.0	1.1	102	2	3	7	5	8	38	38	40	58	58
Buffalo Jump	<i>Rich</i>	15.3	0.9	69	9	10	10	9	-	66	68	69	66	-
Morgan	<i>Morgan</i>	26.6	0.5	75	7	13	16	10	7	72	73	73	71	69

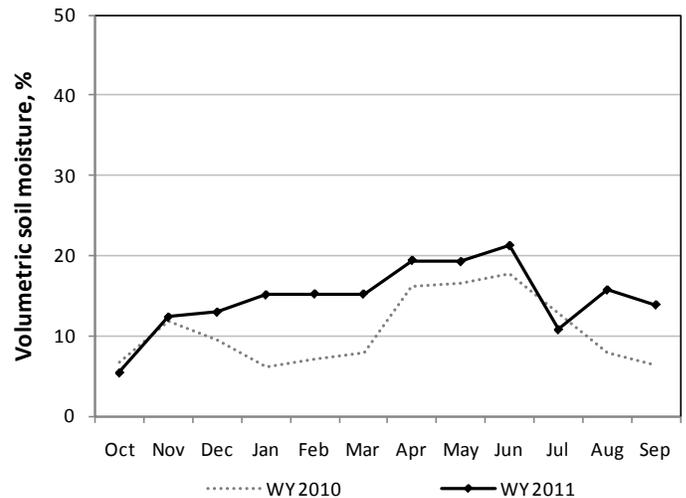
\*since October 1, 2010. Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station. Soil moisture and temperature values reflect conditions measured on the first of the month.

## Northern Mountains

*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, **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.

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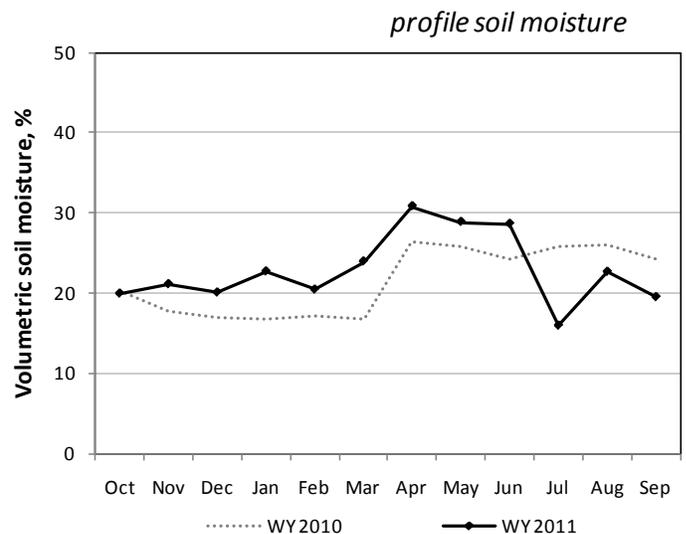
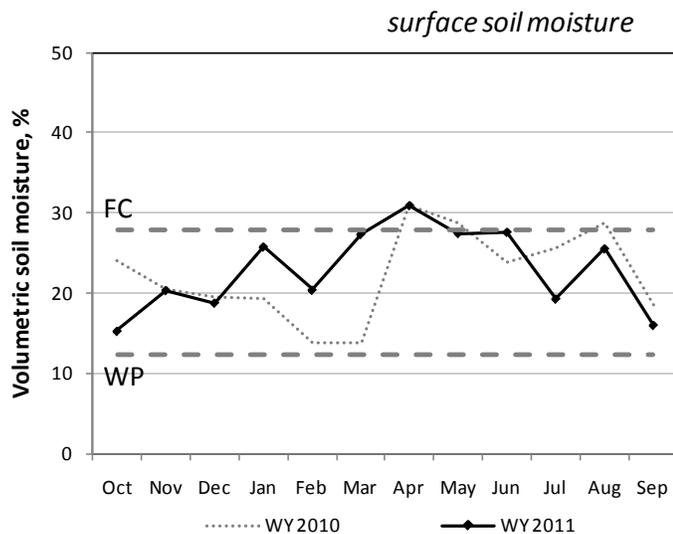
# Uintah Basin

## 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>				
<b>UINTAH BASIN</b>														
Mountain Home	<i>Duchesne</i>	22.3	1.0	66	14	21	23	20	12	62	63	62	61	58
Little Red Fox	<i>Duchesne</i>	13.0	0.6	68	13	19	26	27	33	63	72	73	70	66
Split Mountain	<i>Uintah</i>	11.1	0.1	73	2	14	13	14	13	73	80	81	78	73

\*since October 1, 2010. 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. 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, **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.

# Southeast

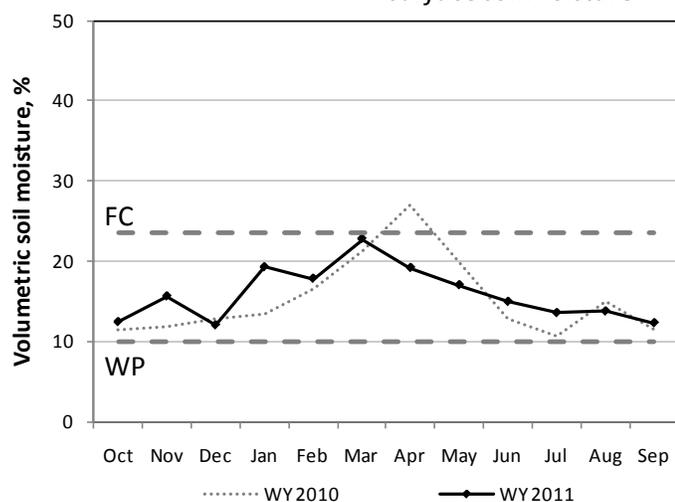
## Soil Climate Analysis Network (SCAN)

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>				
<b>SOUTHEAST</b>														
Price	<i>Carbon</i>	11.7	0.3	72	0	10	17	19	22	72	79	81	78	75
Green River	<i>Emery</i>	6.5	0.1	76	5	7	9	6	11	82	85	86	84	81
Harm's Way	<i>San Juan</i>	10.7	1.2	70	7	0	14	15	7	71	67	72	70	67
West Summit	<i>San Juan</i>	7.8	1.2	68	13	17	15	16	19	63	65	70	67	66
Eastland	<i>San Juan</i>	11.2	0.9	68	8	11	5	23	21	67	70	71	69	67
Alkali Mesa	<i>San Juan</i>	10.0	0.4	72	6	8	15	20	14	72	69	75	75	73
McCracken Mesa	<i>San Juan</i>	6.3	0.1	32	7	10	13	18	14	78	82	83	80	77

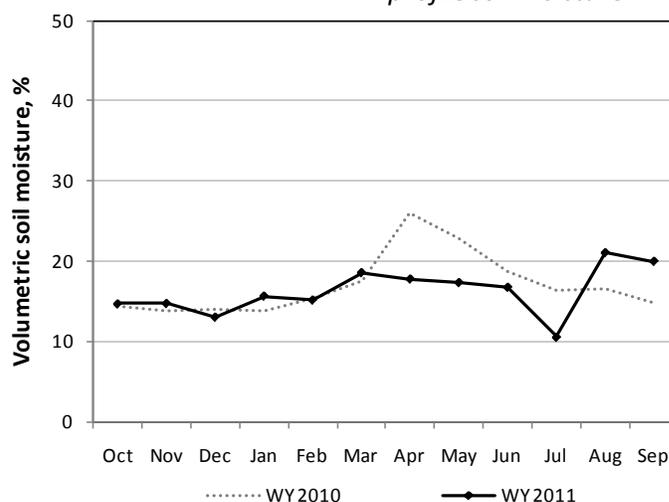
\*since October 1, 2010. Monthly Precip is the amount of precipitation accumulated in the past month and Avg Air Temp is the average air temperature measured at the SCAN station. Soil moisture and temperature values reflect conditions measured on the first of the month.

### Southeast

*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, **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.**

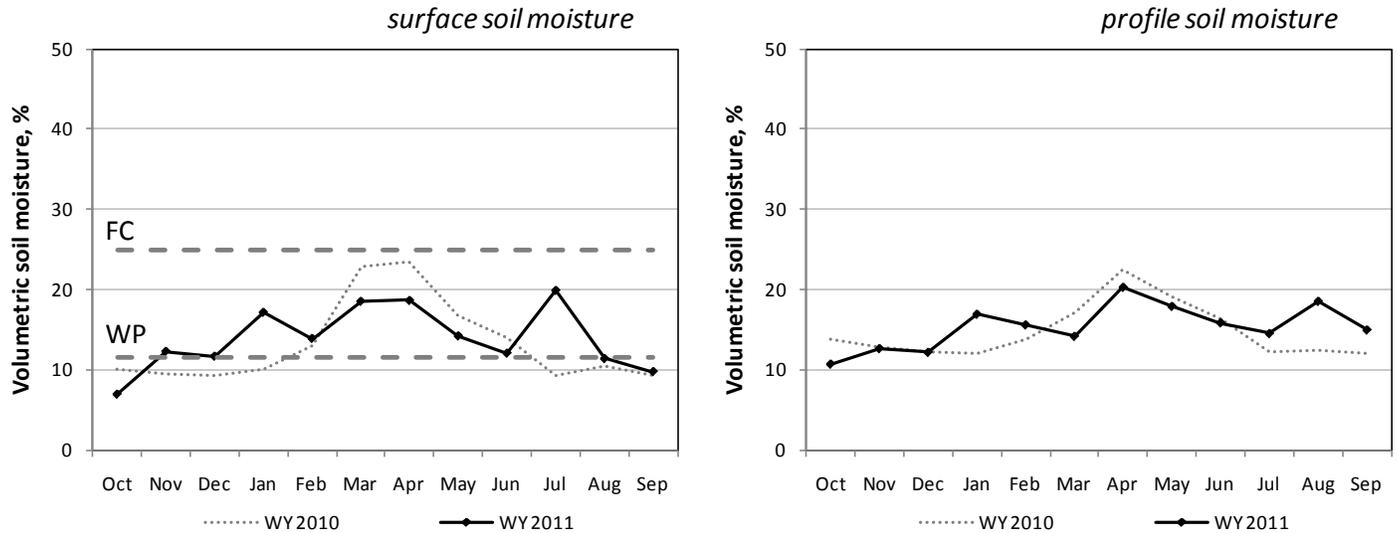
# South Central

## 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>				
<b>SOUTH CENTRAL</b>														
Nephi	Juab	15.7	0.3	76	11	16	15	8	6	73	74	74	71	67
Ephraim	Sanpete	12.8	0.4	68	4	10	16	16	33	63	67	68	64	62
Holden	Millard	12.6	0.6	76	2	5	6	14	16	77	78	78	75	71
Milford	Beaver	12.8	0.8	73	7	16	18	30	18	77	79	76	73	69
Manderfield	Beaver	20.2	0.7	70	2	11	13	12	6	65	70	71	69	65
Circleville	Piute	12.2	1.8	65	11	7	8	9	9	66	65	67	66	###
Panguitch	Garfield	13.2	1.5	62	5	18	13	20	39	58	60	59	59	56
Cave Valley	Washington	29.2	0.3	73	0	0	1	0	0	70	75	79	73	69
Vermillion	Kane	17.3	0.3	73	0	0	2	4	8	64	68	71	67	65
Spooky	Kane	#N/A	#N/A	#N/A	###	###	###	###	###	###	###	###	###	###

\*since October 1, 2010. 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. 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, 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.

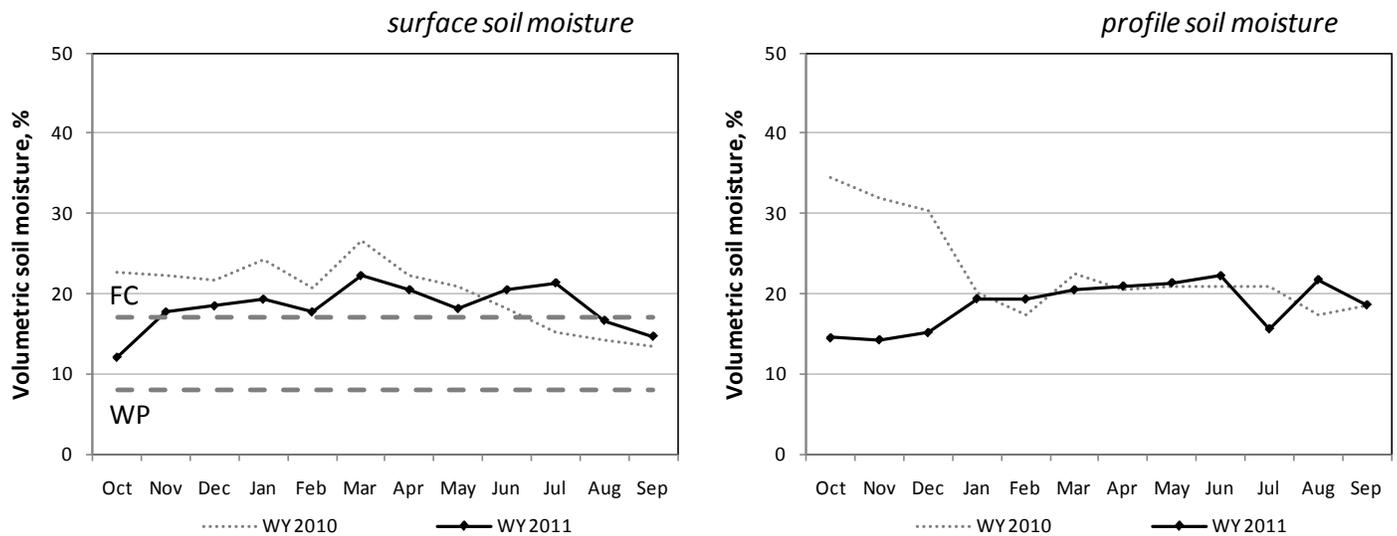
# Western and Dixie

## 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>				
<b>WESTERN</b>														
Grouse Creek	<i>Box Elder</i>	14.3	0.2	69	1	5	14	17	18	69	75	75	71	68
Park Valley	<i>Box Elder</i>	13.1	0.4	72	0	3	14	21	26	69	75	78	76	71
Goshute	<i>Tooele</i>	16.6	0.6	74	16	24	53	51	47	63	68	73	70	67
Dugway	<i>Tooele</i>	13.2	0.0	81	11	24	37	nd	14	76	80	80	76	73
Tule Valley	<i>Millard</i>	14.3	0.8	82	16	15	27	10	12	76	83	87	85	83
Hal's Canyon	<i>Millard</i>	10.0	0.6	75	2	4	10	10	9	66	74	80	76	72
Enterprise	<i>Washington</i>	15.6	0.1	72	4	21	22	15	16	71	78	78	76	71
<b>DIXIE</b>														
Sand Hollow	<i>Washington</i>	12.5	0.2	90	0	0	1	0	1	82	93	94	88	82

\*since October 1, 2010, (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. 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.**

## 2010 Minimum Soil Temperatures at Utah SCAN sites

Minimum soil temperatures and number of days less than or equal to 32°F.

Site Name	2-inch		4-inch		8-inch		20-inch		40-inch	
	min. temp	#								
	°F	days								
Alkali Mesa	23	34	22	45	29	5	34	0	36	0
Blue Creek	20	64	24	26	26	22	33	0	38	0
Buffalo Jump	19	125	24	121	26	113	31	68	R	
Cache Junction	22	83	24	54	27	50	34	0	38	0
Chicken Ridge	23	133	26	102	26	92	33	0	35	0
Circleville	19	82	21	96	21	127	29	29	37	0
Dugway	15	56	21	39	26	28	35	0	37	0
Eastland	28	38	31	23	32	0	34	0	36	0
Enterprise	23	52	29	32	30	27	34	0	40	0
Ephraim	18	105	26	56	30	6	35	0	38	0
Grantsville	22	65	27	42	32	7	38	0	46	0
Green River	15	99	16	94	21	89	27	44	35	0
Holden	26	27	27	29	29	21	33	0	41	0
Lightning Ridge	32	12	34	0	33	0	33	0	35	0
Little Red Fox	28	43	29	44	30	41	33	0	36	0
McCracken Mesa	26	55	31	8	33	0	36	0	40	0
Milford	22	43	27	26	29	11	36	0	42	0
Morgan	24	80	26	82	27	56	32	1	34	0
Mountain Home	25	27	28	19	30	11	34	0	38	0
Nephi	24	34	27	22	30	6	36	0	39	0
Panguitch	25	53	28	35	29	29	33	0	38	0
Price	15	79	21	71	25	50	32	0	37	0
Sand Hollow	33	0	36	0	40	0	43	0	46	0
Split Mountain	18	53	20	52	23	51	28	41	34	0
West Summit	20	53	22	55	28	6	33	0	36	0

min. temp, minimum temperature recorded; #, number of days less than or equal to 32°F; R, bedrock; site installation not complete in time to calculate 2010 frost depth at Harm's Way, Goshute, Hal's Canyon, Tule Valley, Vermillion, Cave Valley, Grouse Creek, Spooky, Manderfield, and Park Valley.

# Utah Hydrologic Summary

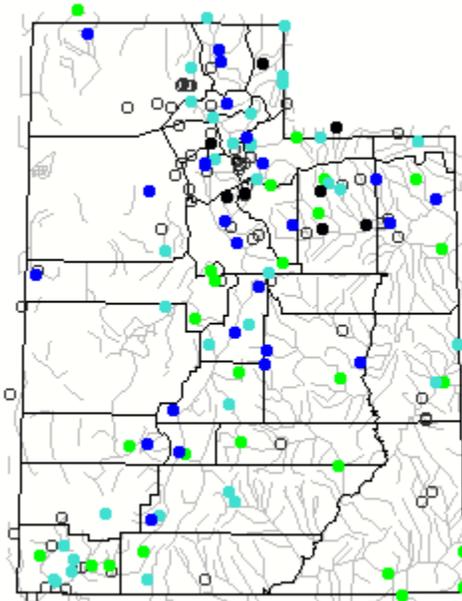
September 1, 2011

## Current Conditions

Soil moisture uniformly across the state are extremely high – at or above recorded levels. Precipitation across the state was near normal for August at 90% statewide. Streamflows across the state remain very high with many running at or higher than the 75 percentile level. Reservoir storage is exceptionally high with a state wide average of 91% of capacity. Given the current condition of streamflow combined with high reservoir status and an irrigation season that is all but over at this point, many reservoirs across the state should be able to fill and spill with just the fall and winter time base flow. With regard to 2012 climate, there is considerable speculation that La Nina may form again suggesting dry in the south and a bit wetter in the north.

## Current Utah Streamflow - Courtesy US Geological Survey

Tue., Sept. 06, 2011 11:30ET



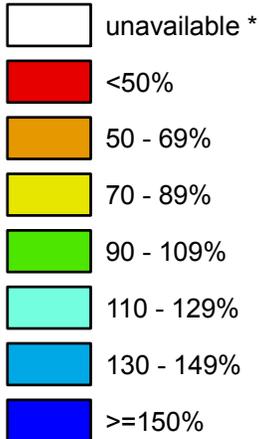
Explanation - Percentile classes						
						
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High Not ranked

# Utah

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

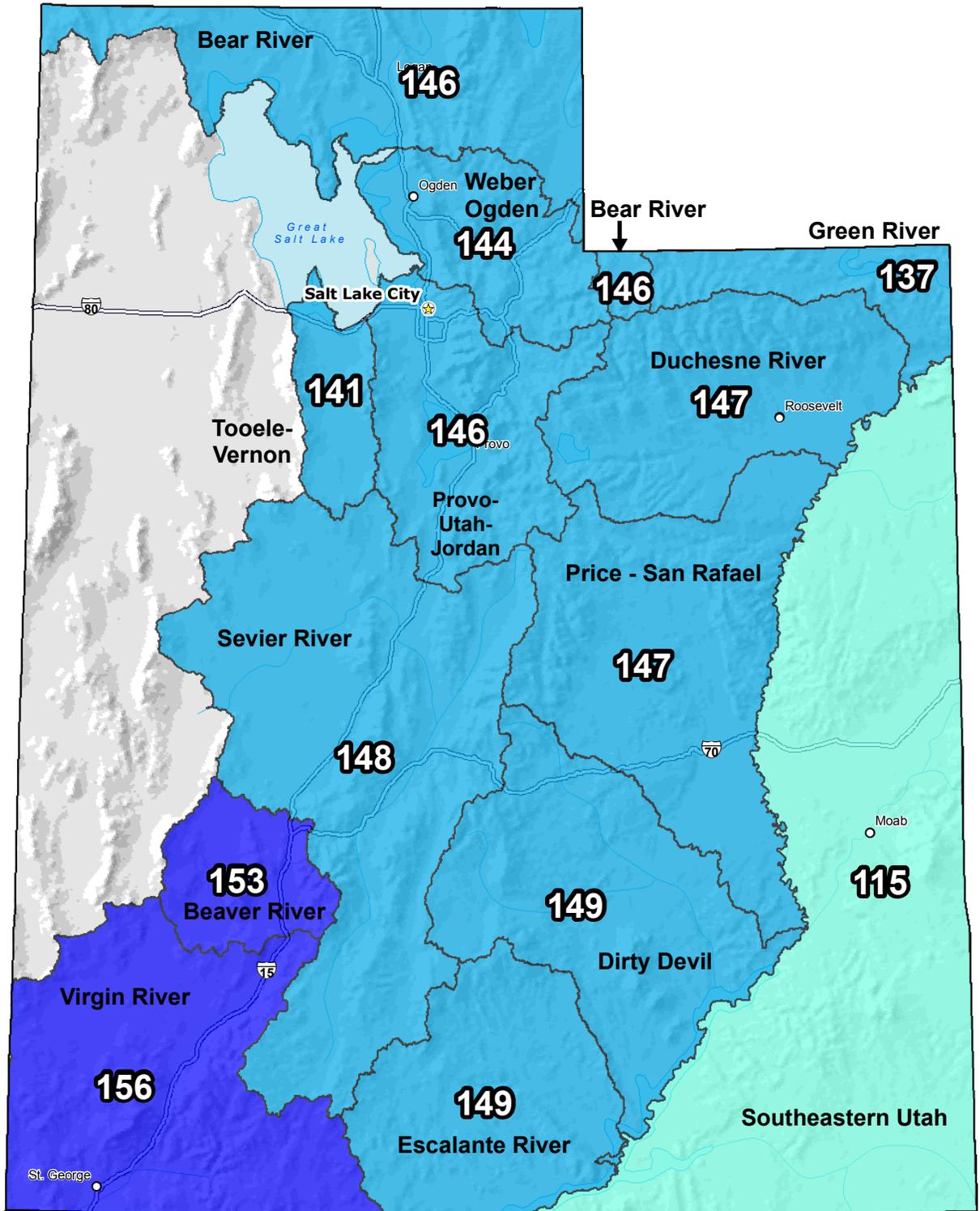
**Sep 01, 2011**

**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**



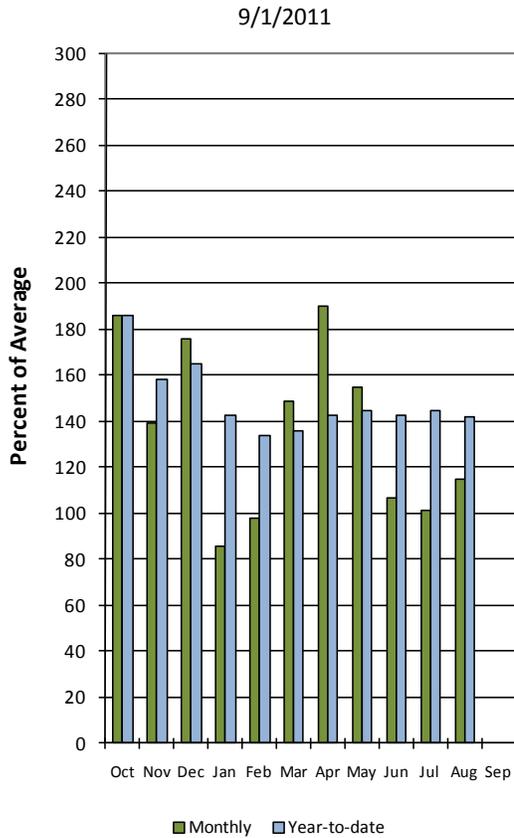
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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: [Jim.Marron@por.usda.gov](mailto:Jim.Marron@por.usda.gov) 503 414 3047

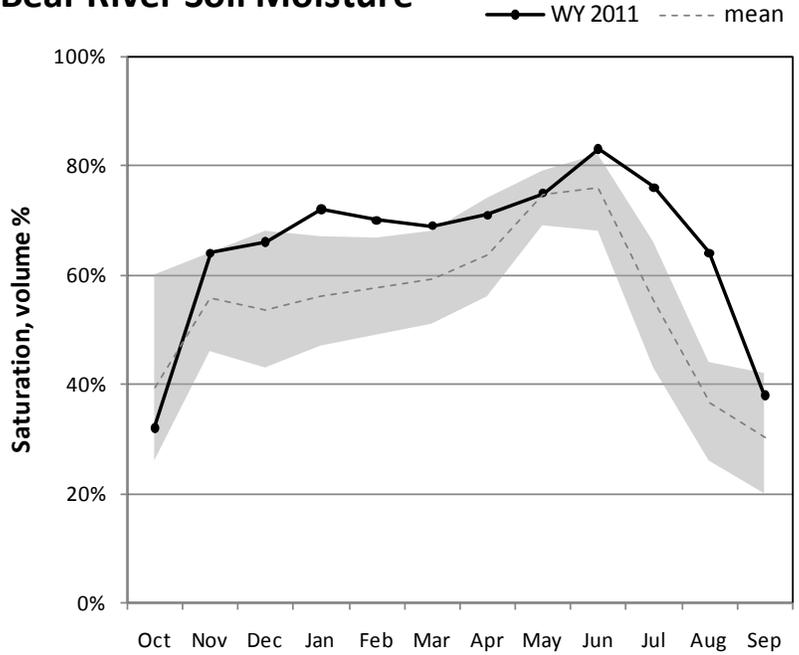
## Bear River Basin September 1, 2011

Precipitation in August was above average at 115% which brings the water year accumulation to 142%. Reservoir storage is at 85% of capacity, which is 51% higher than this time last year. Soil moisture is at 38% compared to 42% last year.

### Bear River Precipitation

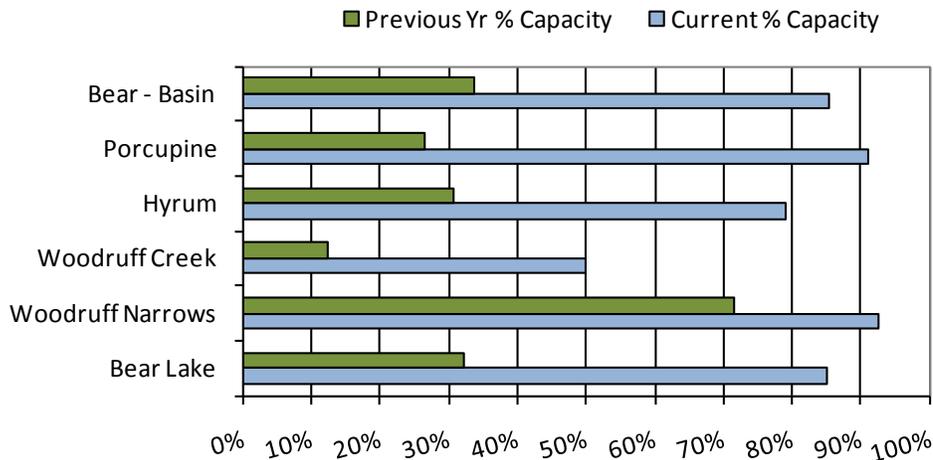


### Bear River Soil Moisture



*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



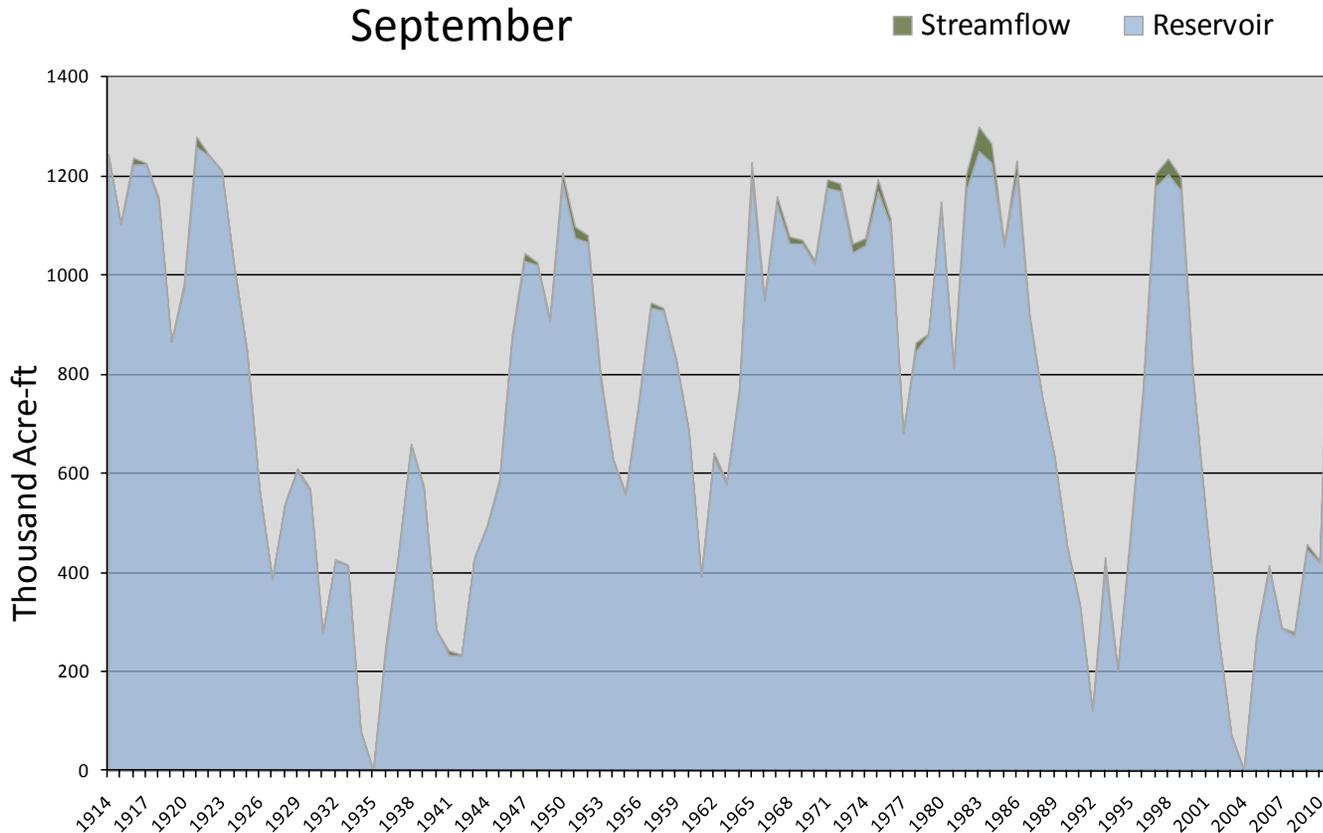
September 1, 2011

## Water Availability Index

Basin or Region	August EOM*	August accumulated inflow to Bear Lake ( <i>observed</i> )	Reservoir + Streamflow	WAI <sup>#</sup>	Percentile	Years with similar WAI
	Bear Lake					
	KAF <sup>^</sup>	KAF	KAF		%	
<b>Bear River</b>	<b>1109</b>	<b>34.7</b>	<b>1144</b>	<b>2.31</b>	<b>78</b>	<b>15, 76, 80, 18</b>

\*EOM, end of month; <sup>#</sup> WAI, water availability index; <sup>^</sup>KAF, thousand acre-feet.

### Bear Lake - Water Availability Index September

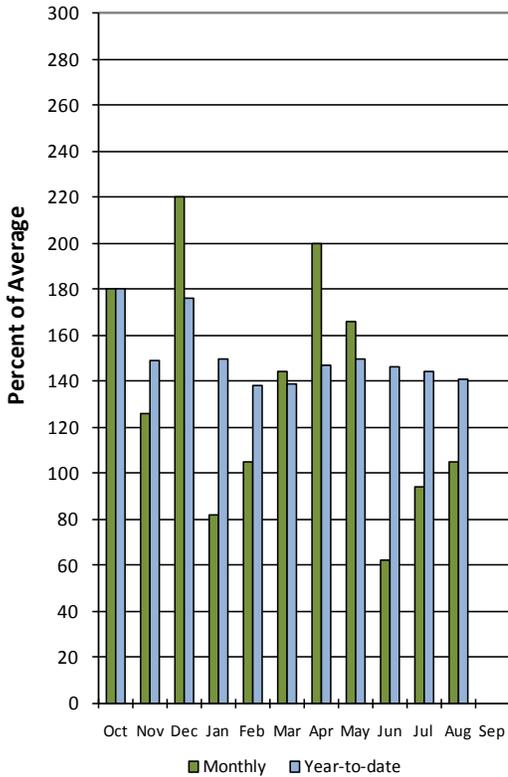


## Weber and Ogden River Basin September 1, 2011

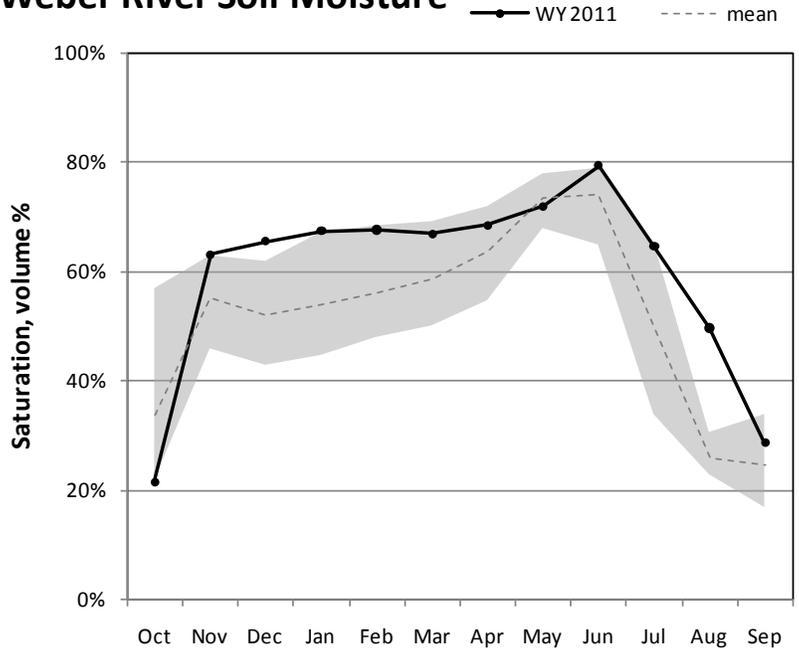
Precipitation in August was near average at 105% which brings the water year accumulation to 141%. Reservoir storage is at 87% of capacity, which is 14% higher than this time last year. Soil moisture is at 29% compared to 26% last year.

### Weber River Precipitation

9/1/2011

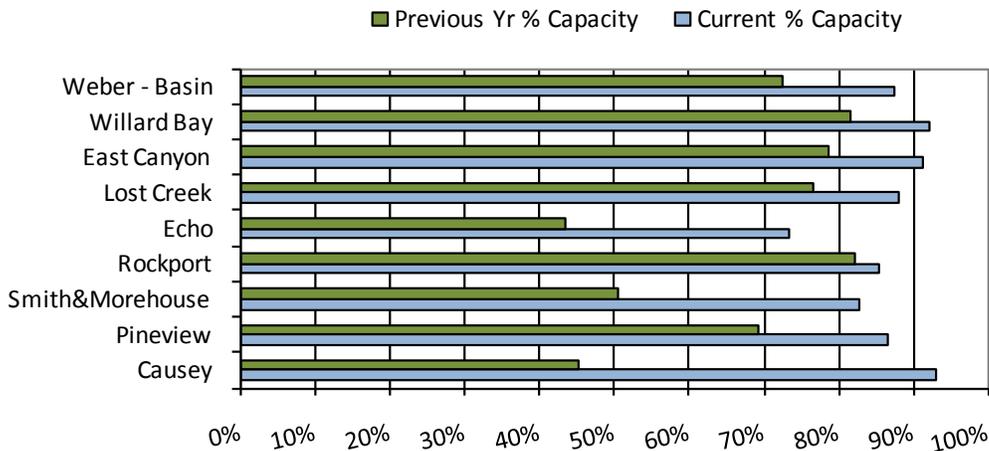


### Weber River Soil Moisture



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



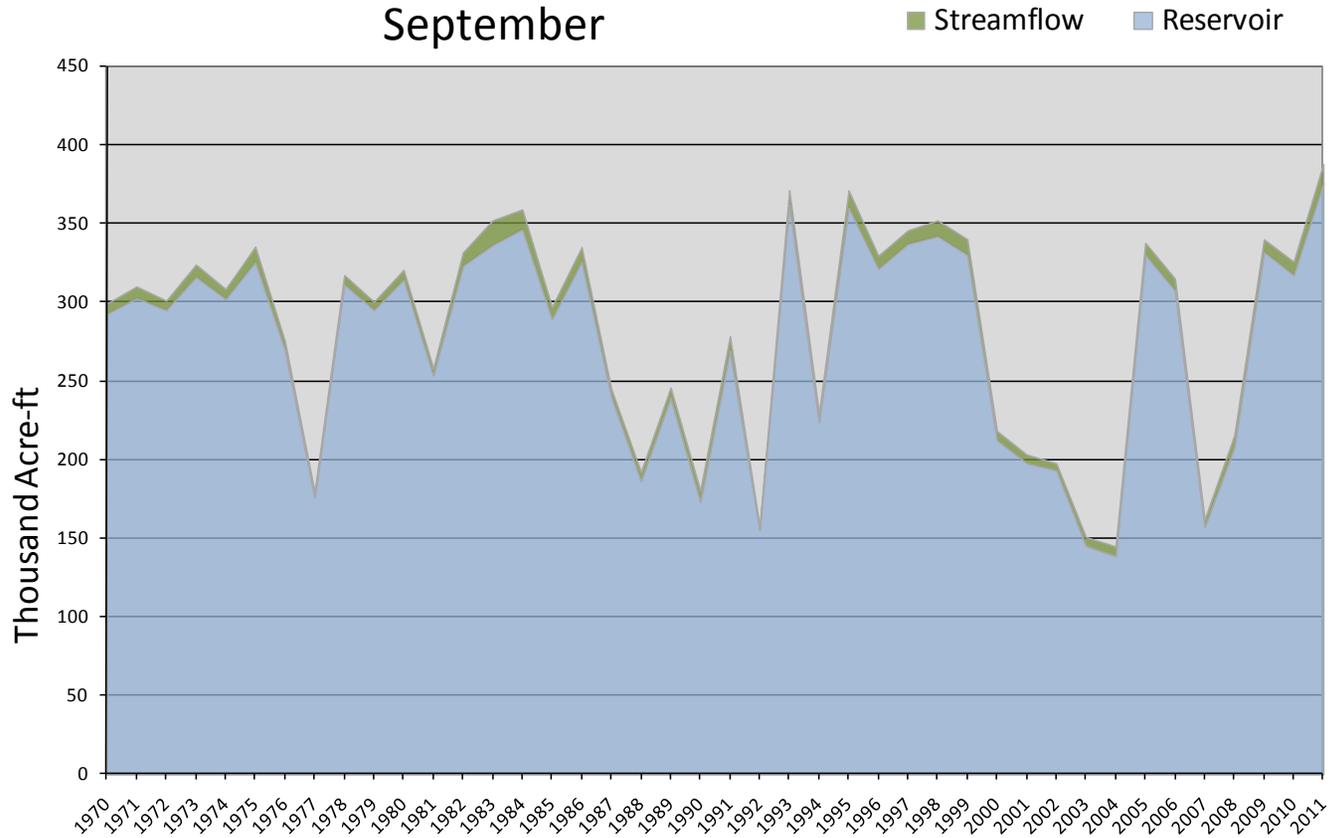
September 1, 2011

## Water Availability Index

Basin or Region	August EOM*	August accumulated flow at Weber near Oakley (observed)	Reservoirs + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
<b>Weber River</b>	<b>376</b>	<b>12.5</b>	<b>388</b>	<b>3.97</b>	<b>98</b>	<b>83, 84, 95, 93</b>

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

### Weber River - Water Availability Index September



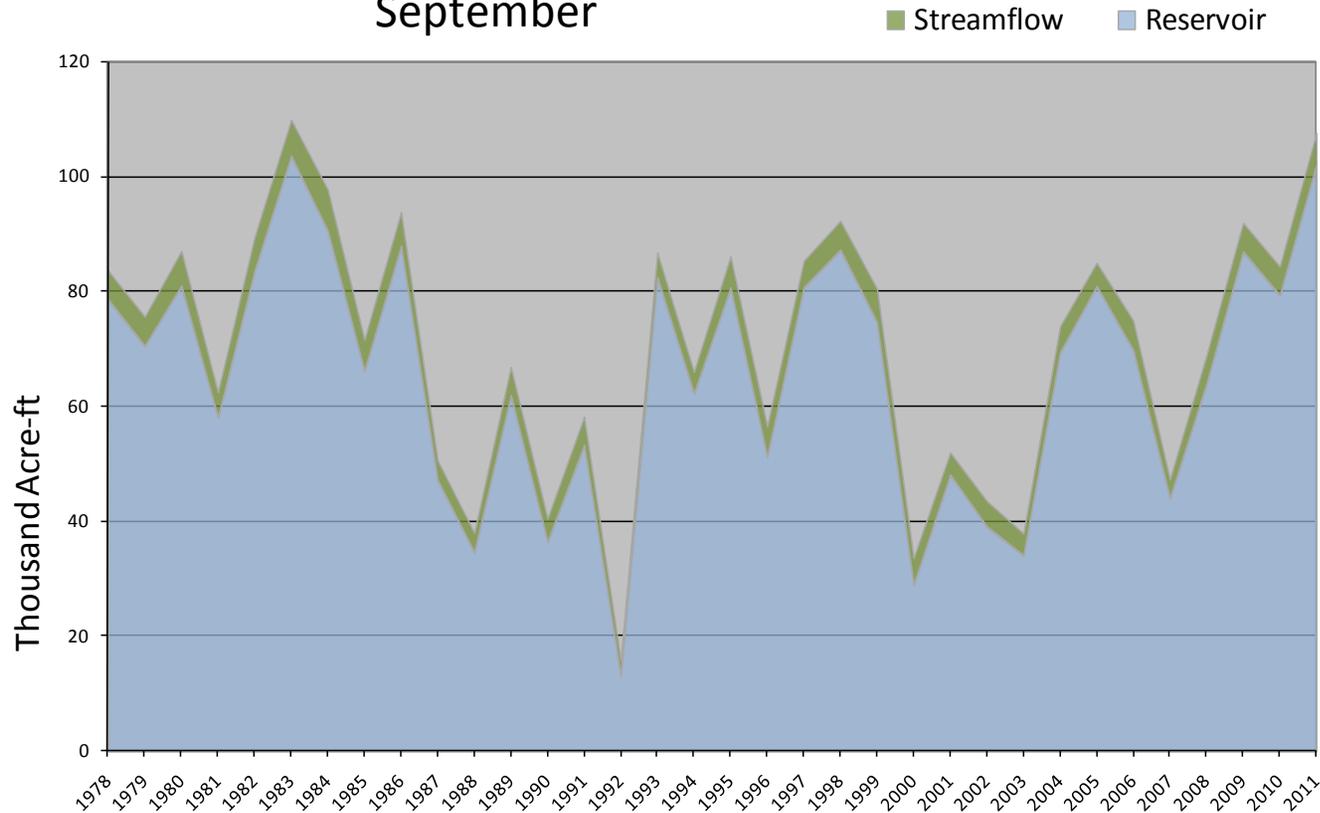
September 1, 2011

## Water Availability Index

Basin or Region	August EOM* Pine View & Causey	August accumulated flow at South Fork Ogden (observed)	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
<b>Ogden River</b>	<b>102</b>	<b>5.5</b>	<b>108</b>	<b>1.08</b>	<b>94</b>	<b>98, 86, 84, 83</b>

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

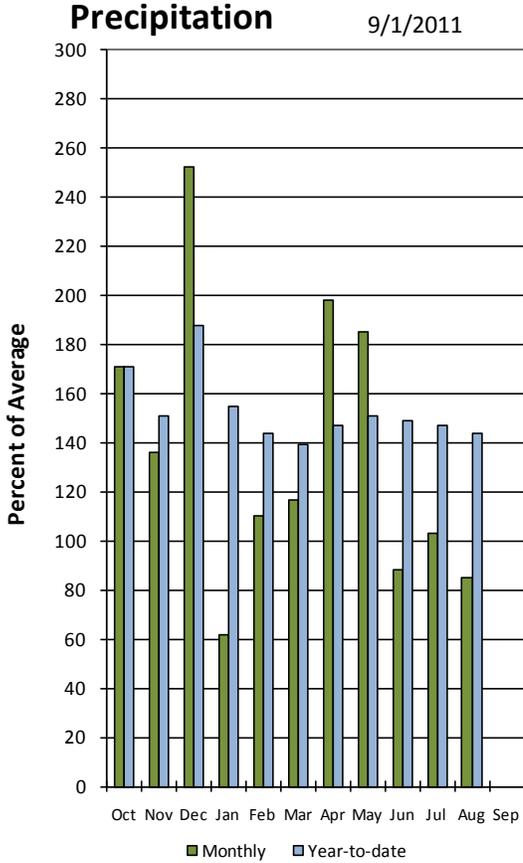
### Ogden River - Water Availability Index September



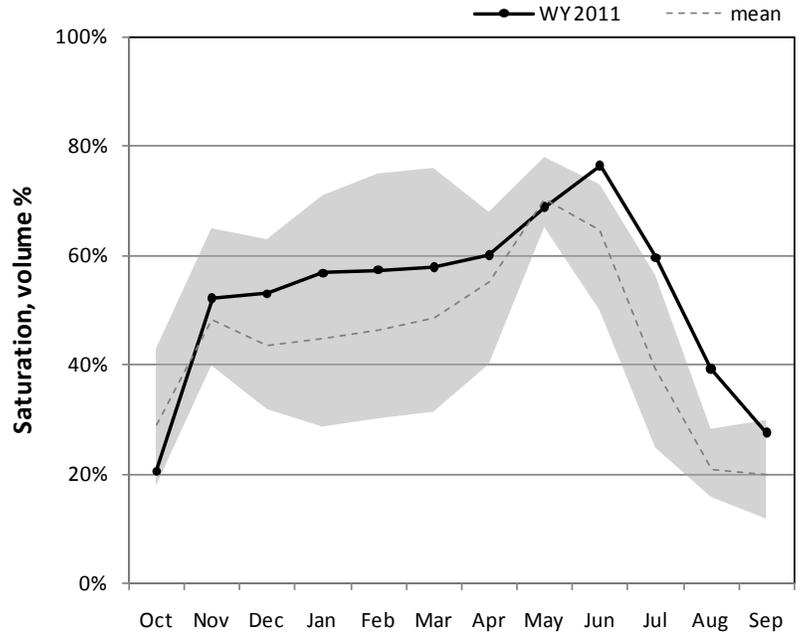
## Utah Lake, Jordan River, & Tooele Valley Basins September 1, 2011

Precipitation in August was below average at 85%, bringing water year accumulation to 144%. Reservoir storage is at 100% of capacity, which is 14% more than this time last year. Soil moisture is at 28% compared to 27% last year at this time.

### Jordan / Provo River

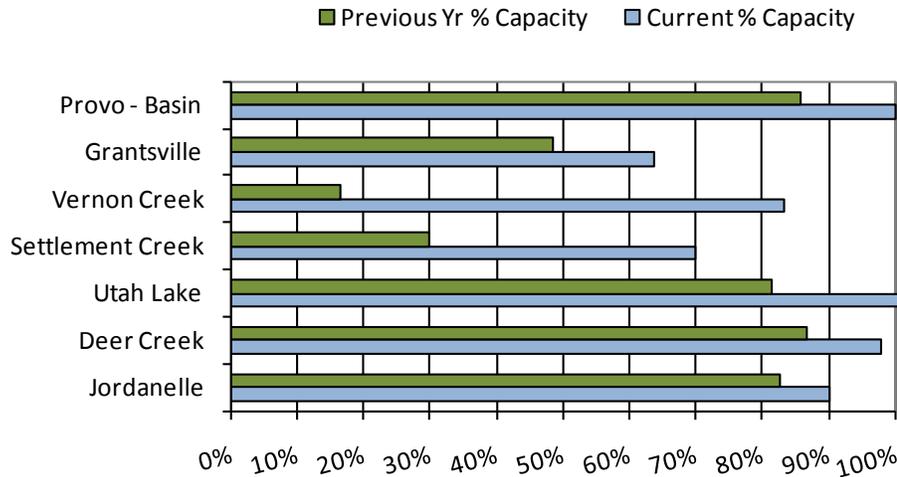


### Jordan / Provo River Soil Moisture



*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.*

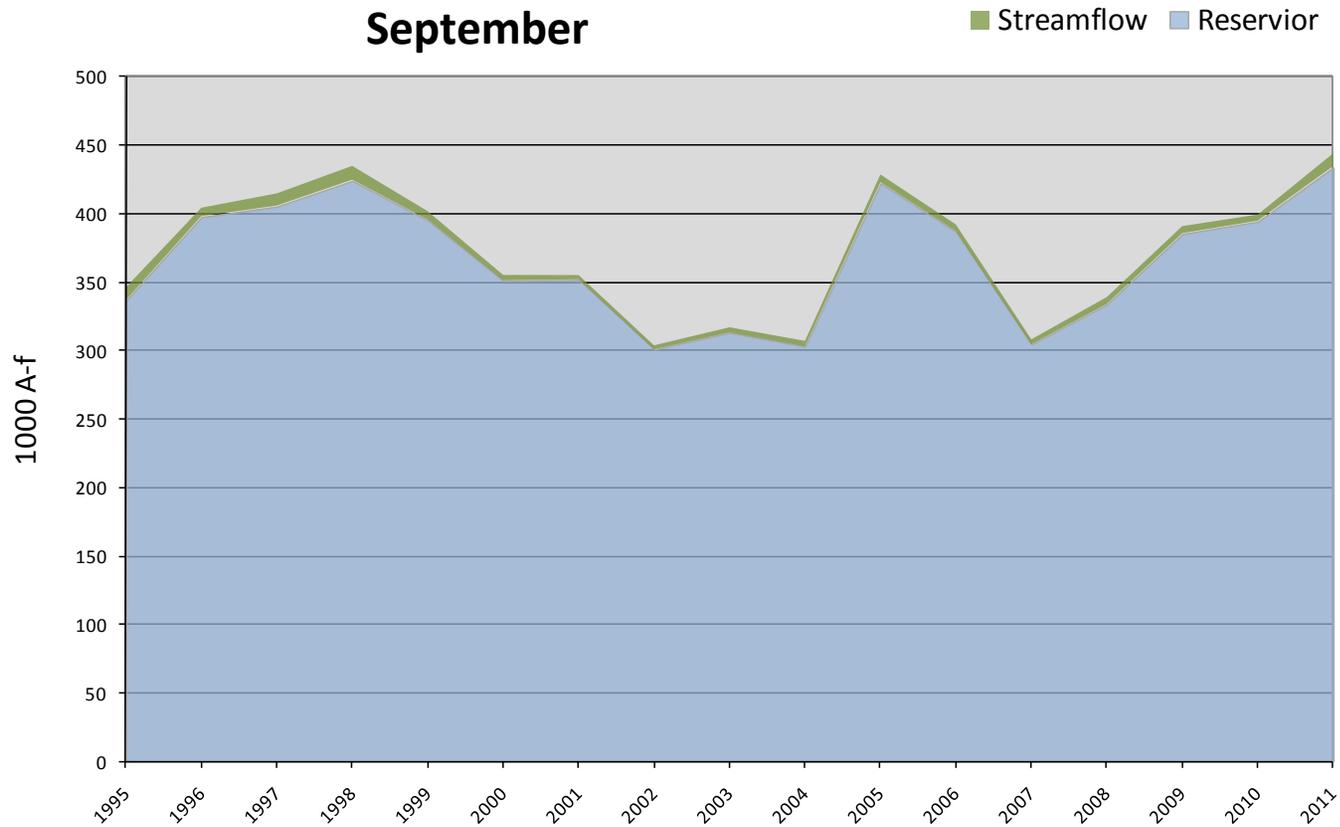
### September Provo River Reservoir Storage



September 1, 2011		Water Availability Index				
Basin or Region	August EOM* Deer Creek, Jordanelle	August accumulated flow Provo River at Woodland (observed)	Reservoir + Streamflow	WAI <sup>#</sup>	Percentile	Years with similar WAI
	KAF <sup>^</sup>	KAF	KAF		%	
<b>Provo</b>	<b>435</b>	<b>9</b>	<b>444</b>	<b>3.70</b>	<b>94%</b>	<b>96, 97, 05, 98</b>

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

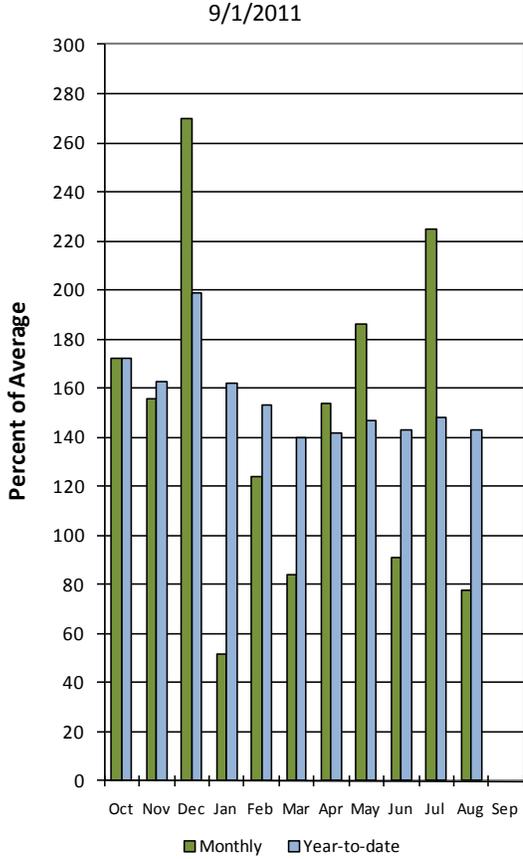
Provo River - Water Availability Index  
September



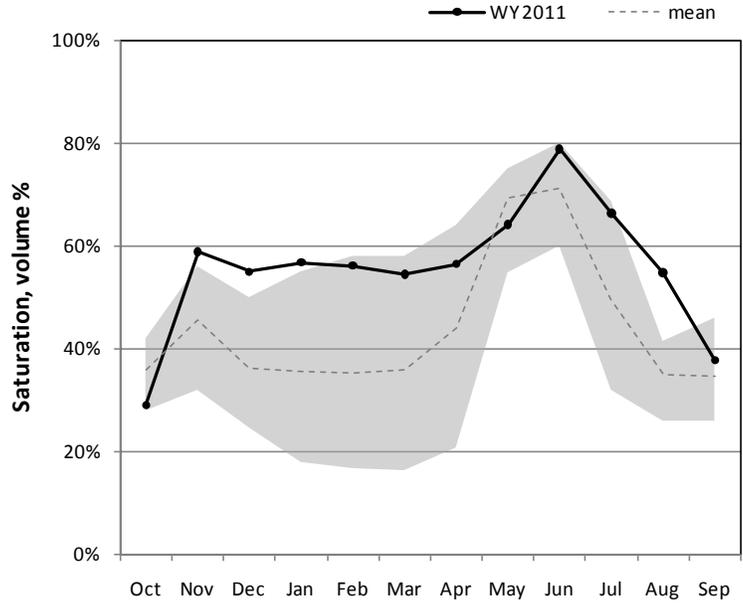
## Uintah Basin and Dagget SCDs September 1, 2011

Precipitation in August was below average at 78%, bringing the water year accumulation to 143%. Reservoir storage is at 93% of capacity, 8% higher than this time last year. Soil moisture is at 38% compared to 41% last year.

### Uintah Precipitation

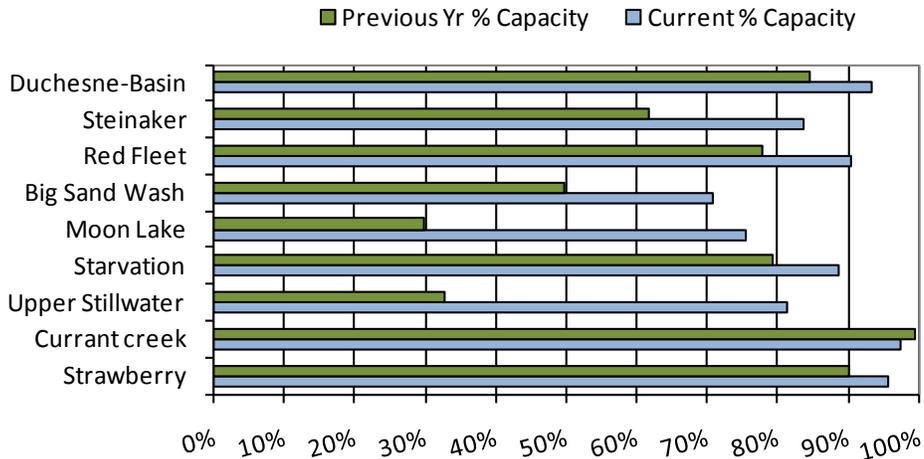


### Uintah Basin Soil Moisture



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.

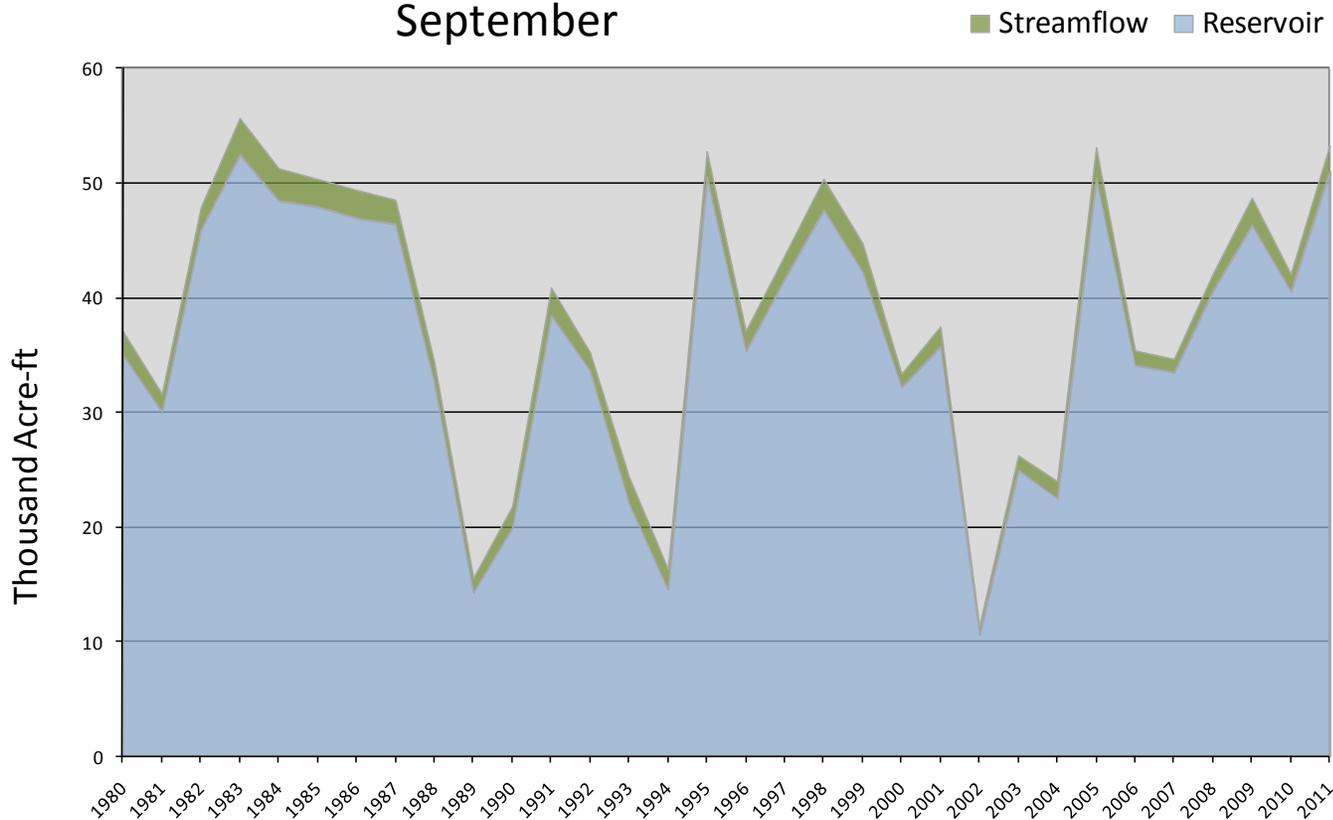
### September Uintah Basin Reservoir Storage



September 1, 2011		Water Availability Index				
Basin or Region	August EOM* Red Fleet and Steinaker	August accumulated flow Big Brush Creek ( <i>observed</i> )	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
<b>Eastern Uintah</b>	<b>51.1</b>	<b>2.2</b>	<b>53.3</b>	<b>3.66</b>	<b>94</b>	<b>84, 95, 05, 83</b>

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

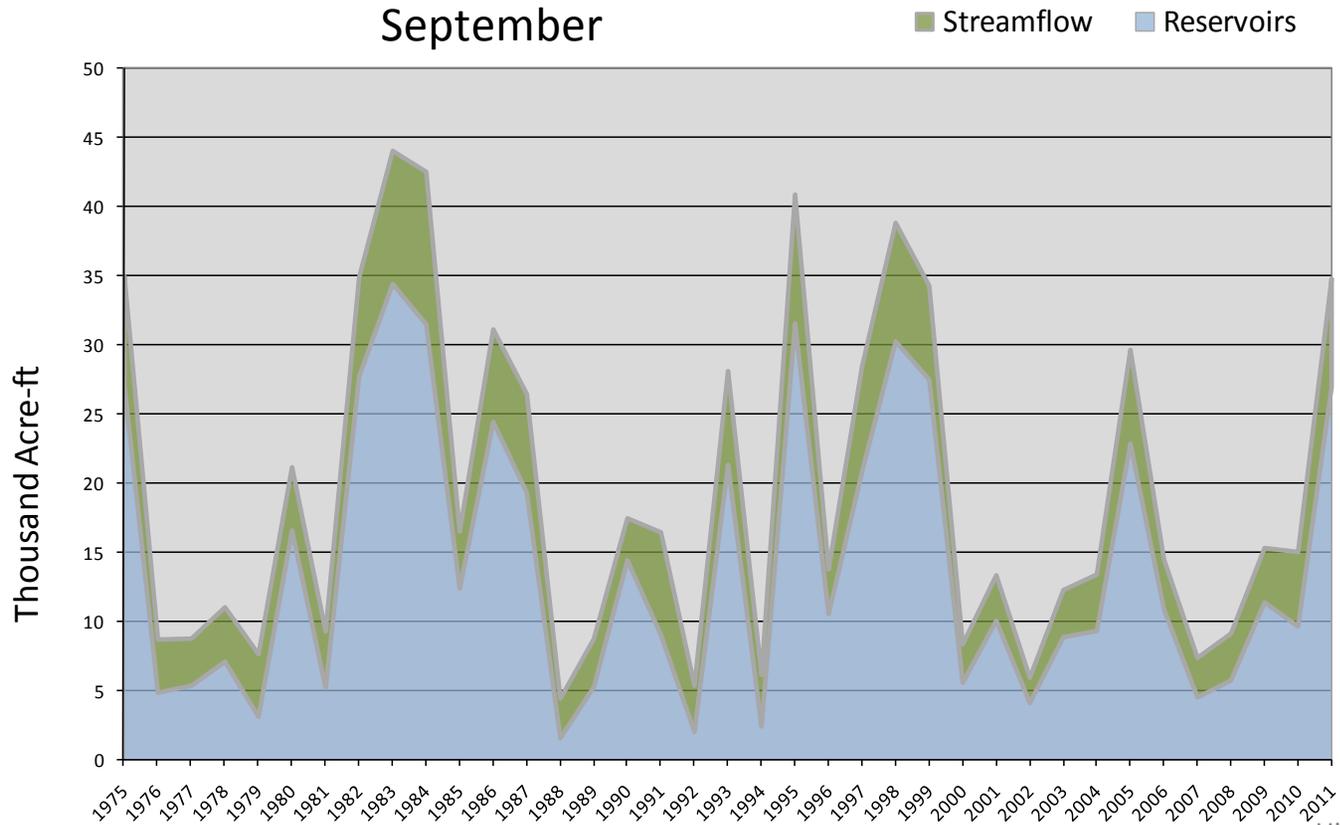
Eastern Uintah - Water Availability Index  
September



September 1, 2011						
Water Availability Index						
Basin or Region	August EOM* Moon Lake	August accumulated flow Lake Fork Creek above Moon Lake ( <i>observed</i> )	Reservoir + Streamflow	WAI <sup>#</sup>	Percentile	Years with similar WAI
	KAF <sup>^</sup>	KAF	KAF		%	
<b>Moon Lake</b>	<b>27.0</b>	<b>7.9</b>	<b>34.9</b>	<b>2.63</b>	<b>82</b>	<b>86, 99, 82, 75</b>

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

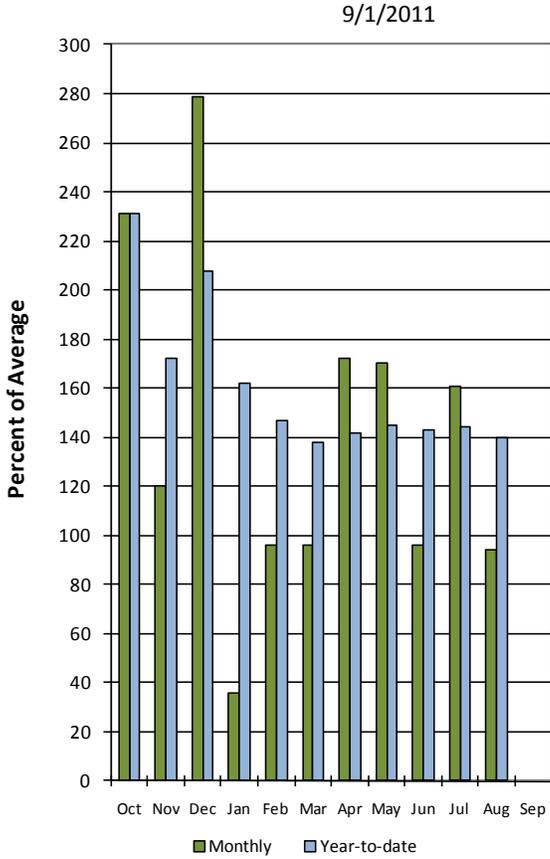
Moon Lake - Water Availability Index  
September



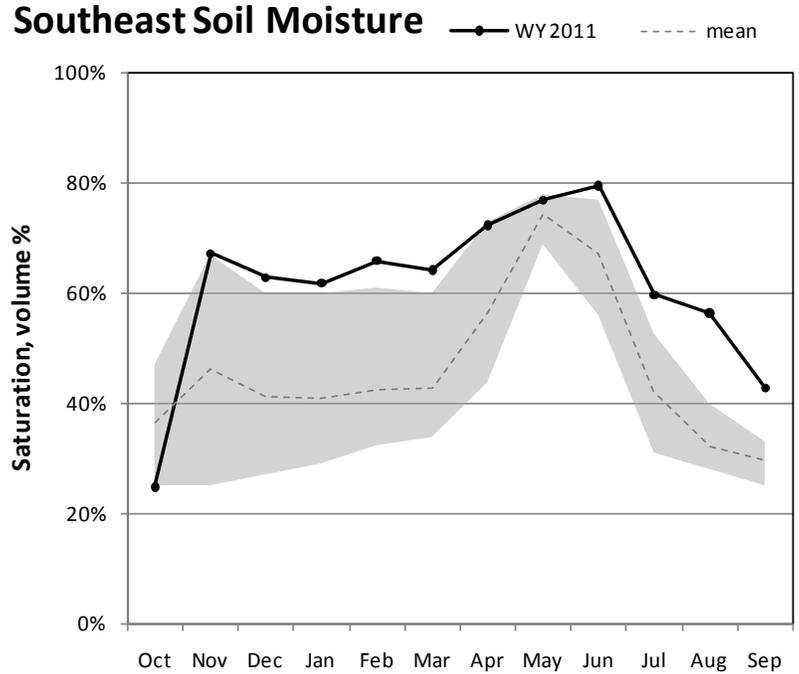
## Southeast – Carbon, Emery, Wayne, Grand, and San Juan Counties September 1, 2011

Precipitation in August was average at 94%, bringing the water year accumulation to 140%. Reservoir storage is at 88% of capacity, which is 30% higher at this time last year. Soil moisture is at 43% compared to 32% last year.

### Southeast Utah Precipitation

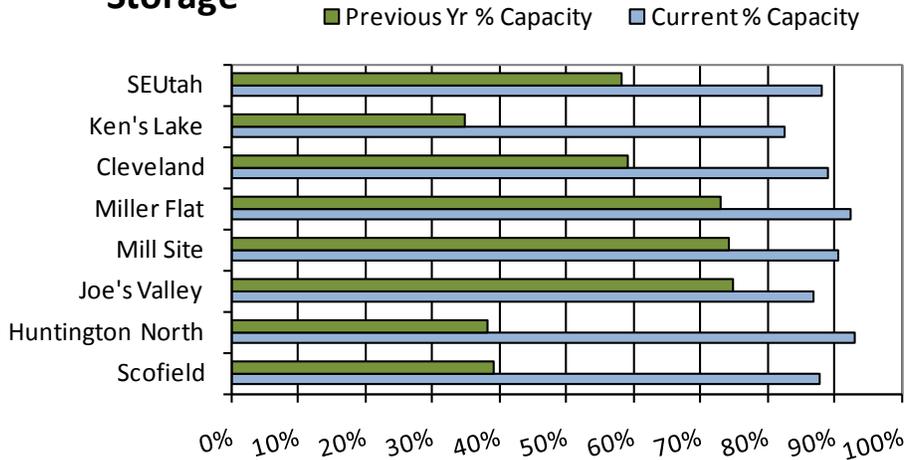


### Southeast Soil Moisture



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.

### September Southeast Utah Reservoir Storage



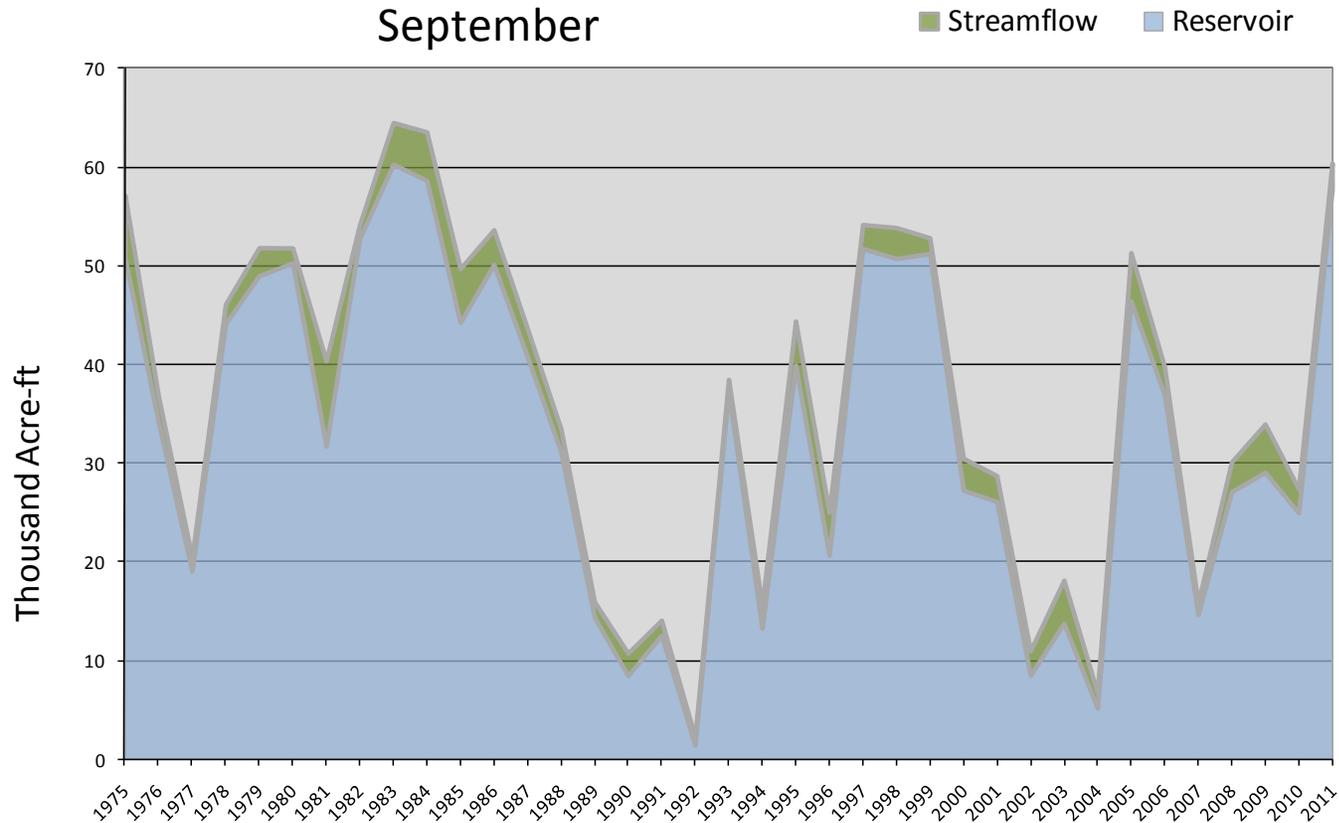
September 1, 2011

## 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		%	
<b>Price River</b>	<b>57.8</b>	<b>2.7</b>	<b>60.5</b>	<b>3.51</b>	<b>92</b>	<b>82, 75, 84, 83</b>

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

Price River - Water Availability Index  
September



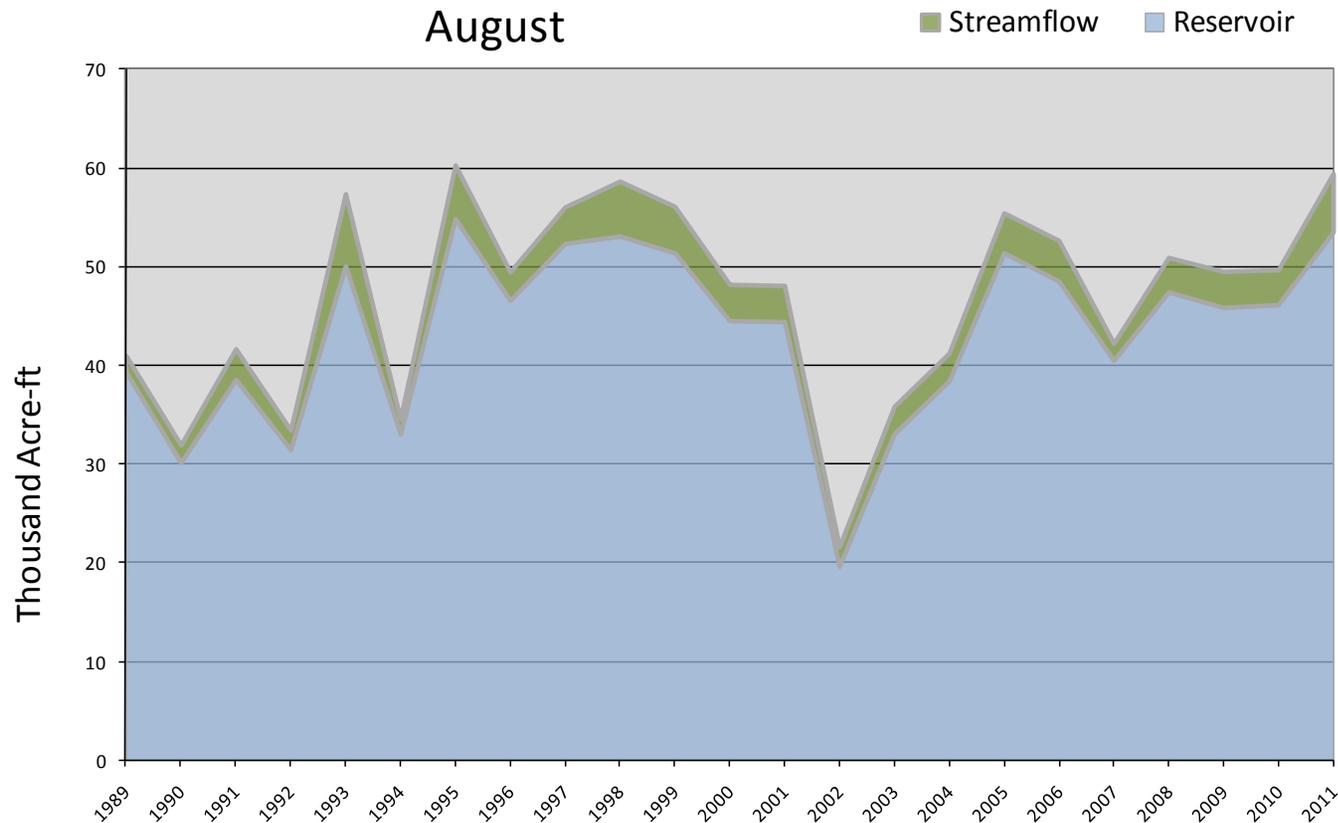
September 1, 2011

## 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		%	
<b>Joe's Valley</b>	<b>53.5</b>	<b>5.9</b>	<b>59.4</b>	<b>3.47</b>	<b>92</b>	<b>99, 93, 98, 95</b>

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

### Joe's Valley - Water Availability Index August



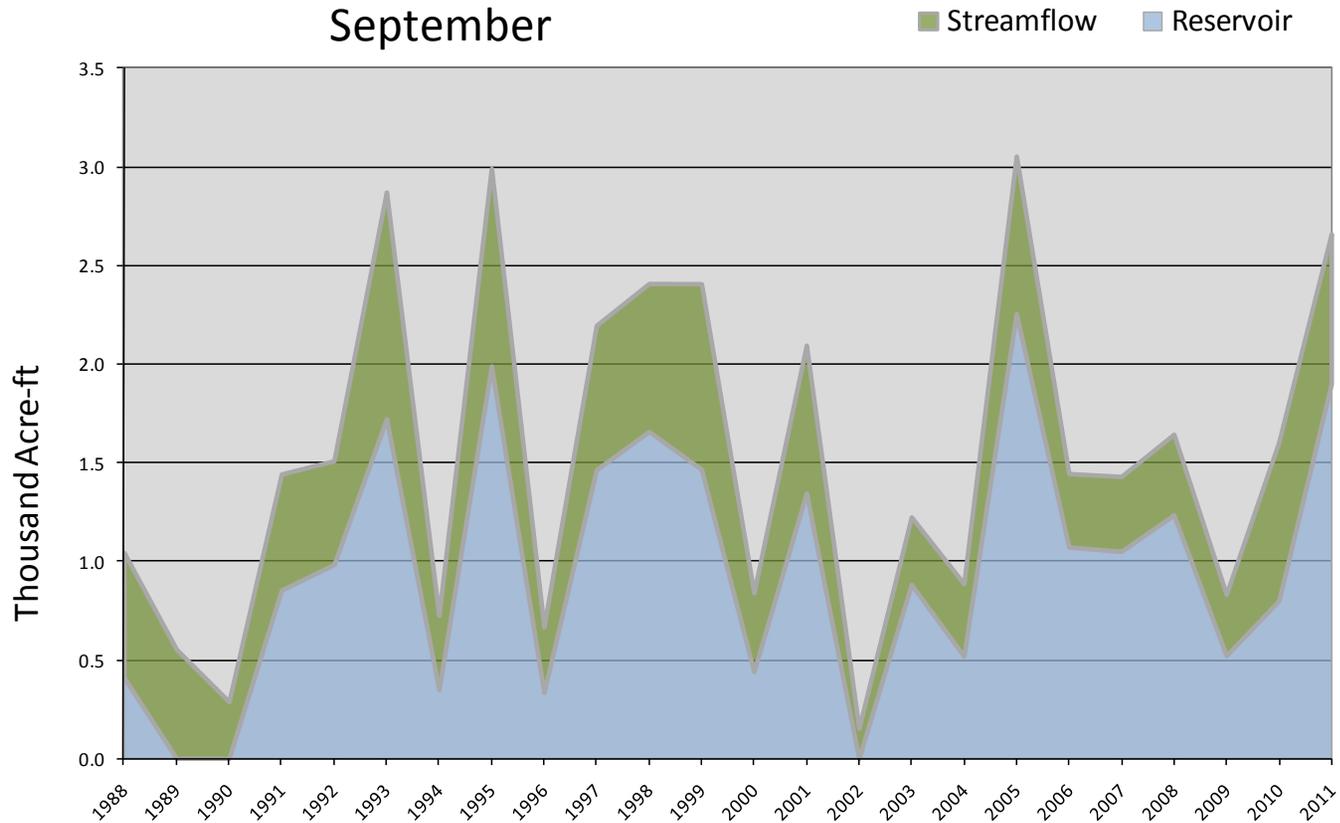
September 1, 2011

## Water Availability Index

Basin or Region	August EOM* Ken's Lake Reservoir	August accumulated flow Mill Creek at Sheley ( <i>observed</i> )	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
<b>Moab</b>	<b>1.9</b>	<b>0.8</b>	<b>2.7</b>	<b>3.50</b>	<b>92</b>	<b>98, 93, 05, 95</b>

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

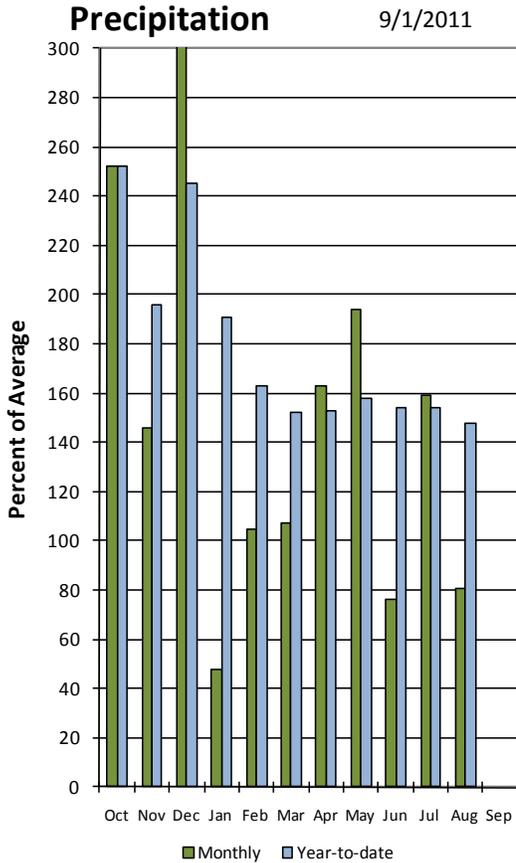
### Moab - Water Availability Index September



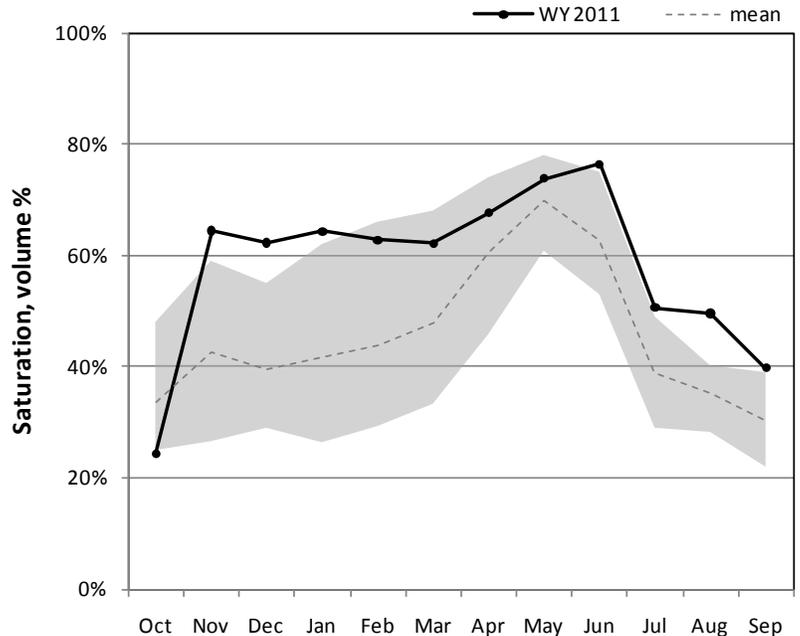
## Sevier and Beaver River Basins September 1, 2011

Precipitation in August was below average at 81%, which brings the seasonal accumulation (Oct-Aug) to 148% of average. Reservoir storage is at 77% of capacity compared to 25% last year. Soil moisture is high for this time of year : current 40%, last month – 50% and last year -31% of saturation. Water supply conditions are high as indicated by the Water Availability Index: Upper Sevier – 85%, Lower Sevier – 98% and Beaver 96%.

### Sevier /Beaver River

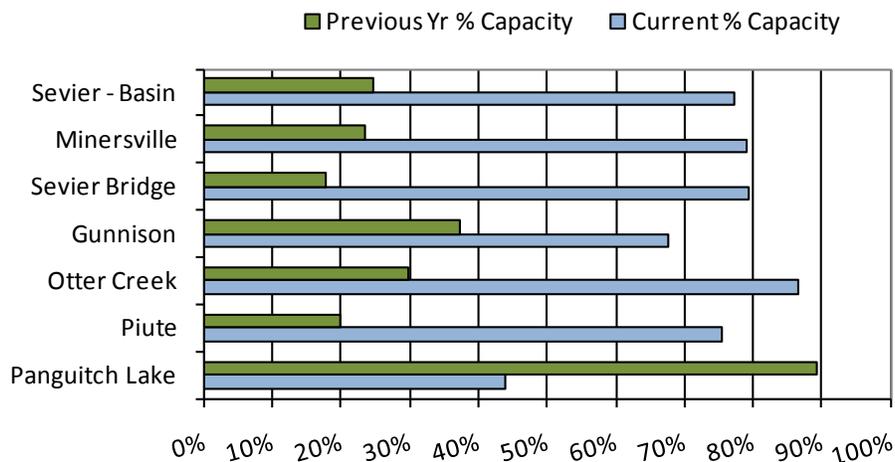


### Sevier / Beaver River Soil Moisture



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.

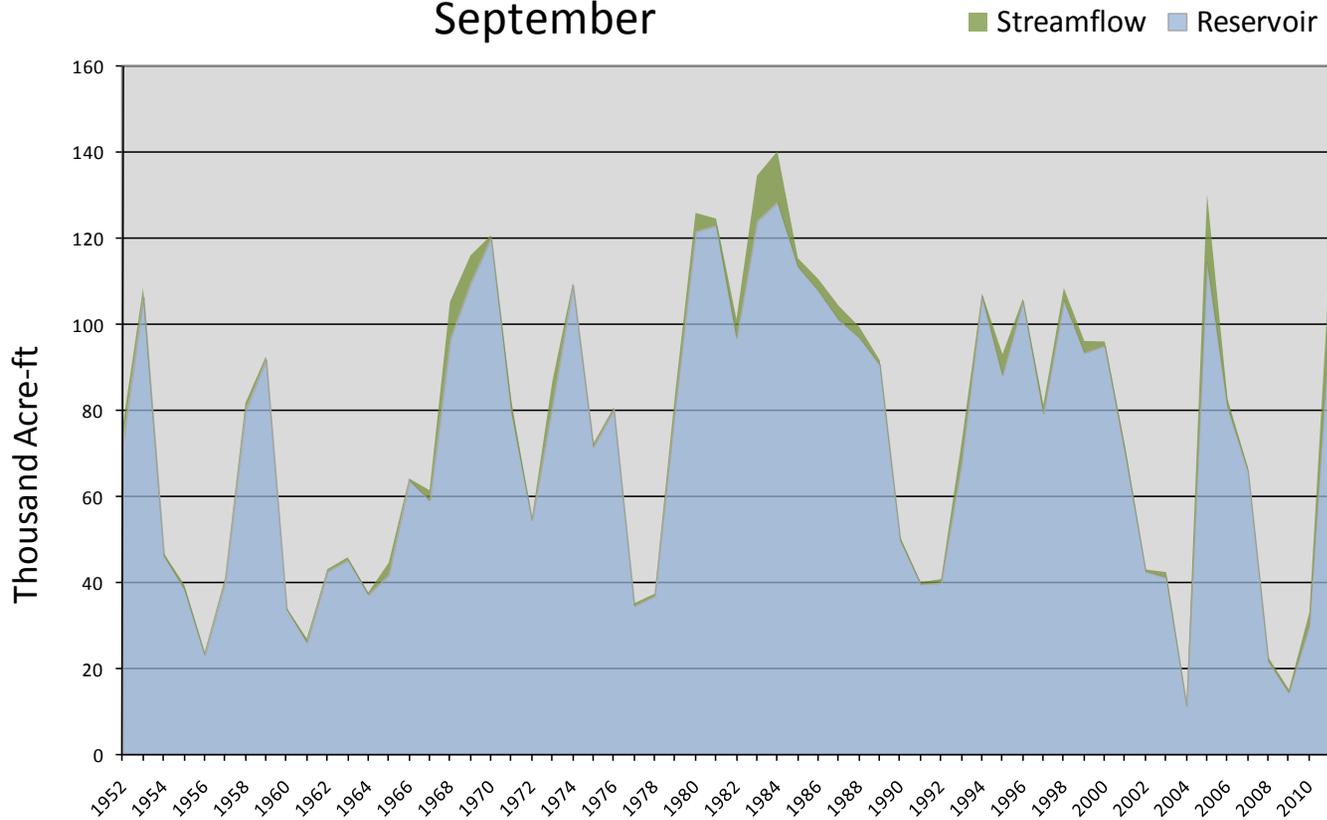
### September Sevier River Reservoir Storage



September 1, 2011		Water Availability Index				
Basin or Region	August EOM* Otter Creek and Piute	August accumulated flow at Kingston ( <i>observed</i> )	Reservoir + Streamflow	WAI <sup>#</sup>	Percentile	Years with similar WAI
	<i>KAF</i> <sup>^</sup>	<i>KAF</i>	<i>KAF</i>		%	
<b>Upper Sevier River</b>	<b>99.7</b>	<b>14.2</b>	<b>113.9</b>	<b>2.94</b>	<b>85</b>	<b>74,86,85,69</b>

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

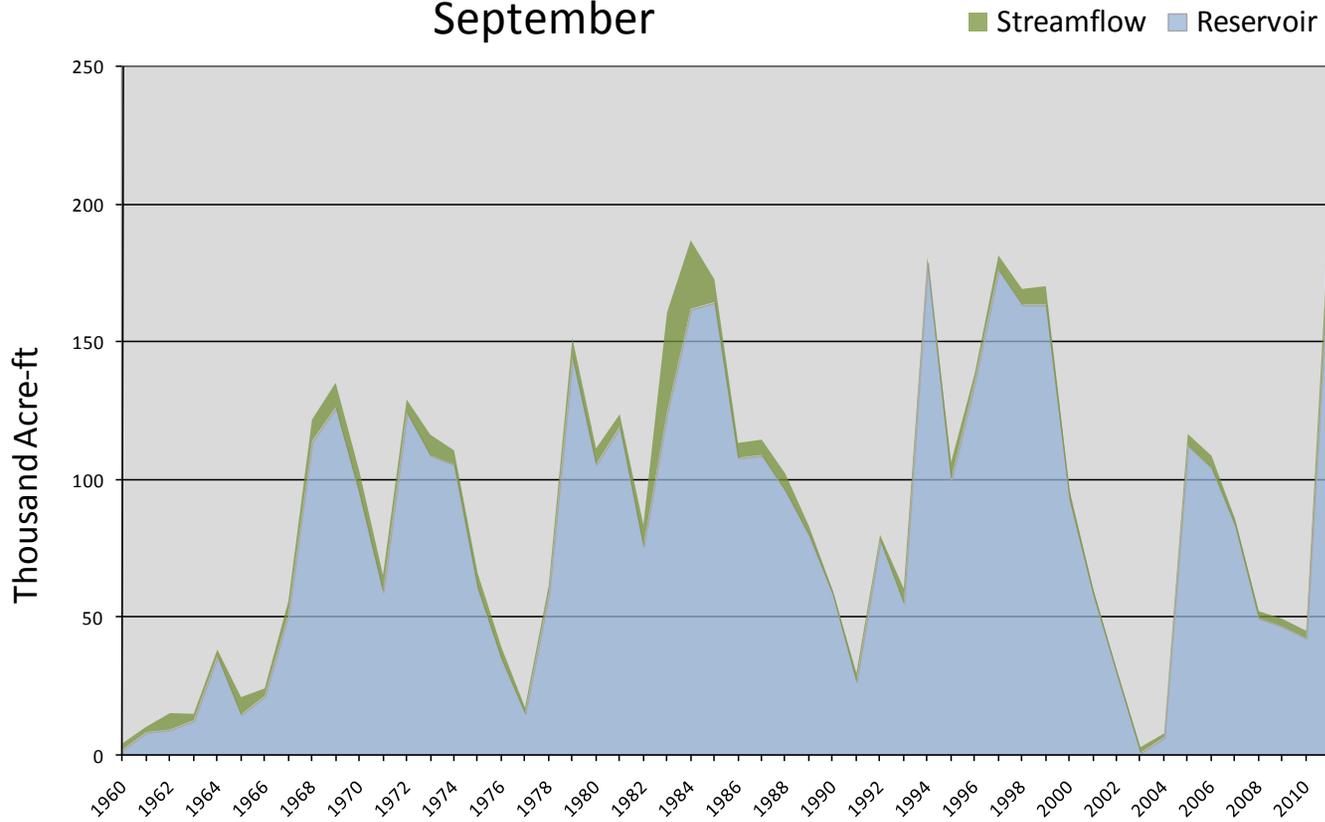
Upper Sevier River - Water Availability Index  
September



September 1, 2011		Water Availability Index				
Basin or Region	August EOM* Sevier Bridge	August accumulated flow Sevier at Gunnison ( <i>observed</i> )	Reservoir + Streamflow	WAI#	Percentile	Years with similar WAI
	KAF^	KAF	KAF		%	
<b>Lower Sevier River</b>	<b>187.1</b>	<b>11.6</b>	<b>198.7</b>	<b>4.01</b>	<b>98</b>	<b>85, 94, 97, 84</b>

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

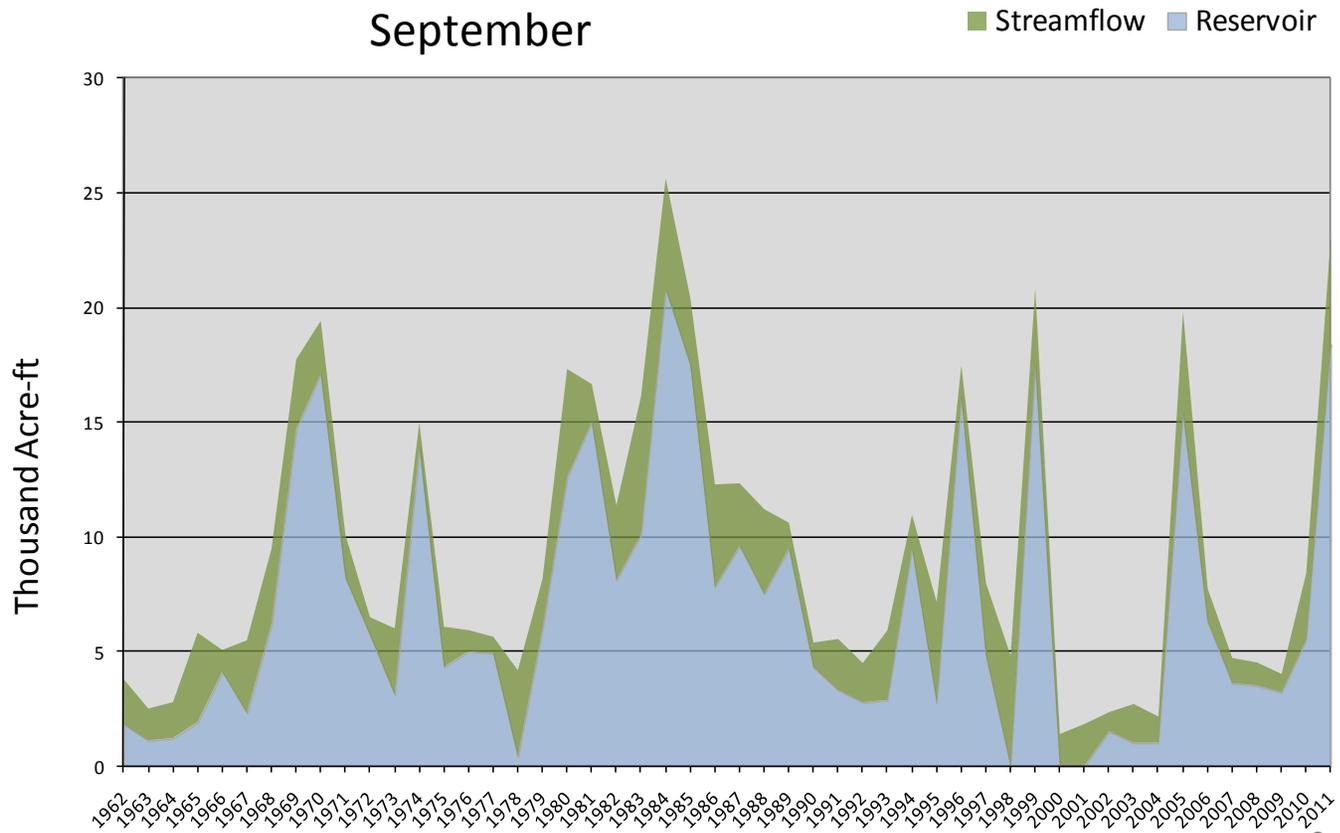
### Lower Sevier River - Water Availability Index September



September 1, 2011		Water Availability Index				
Basin or Region	August EOM* Minersville Reservoir	August accumulated flow Beaver River at Beaver ( <i>observed</i> )	Reservoir + Streamflow	WAI <sup>#</sup>	Percentile	Years with similar WAI
	KAF <sup>^</sup>	KAF	KAF		%	
<b>Beaver</b>	<b>18.4</b>	<b>4.7</b>	<b>23.1</b>	<b>3.84</b>	<b>96</b>	<b>85,99,84</b>

*\*EOM, end of month; <sup>#</sup>WAI, water availability index; <sup>^</sup>KAF, thousand acre-feet.*

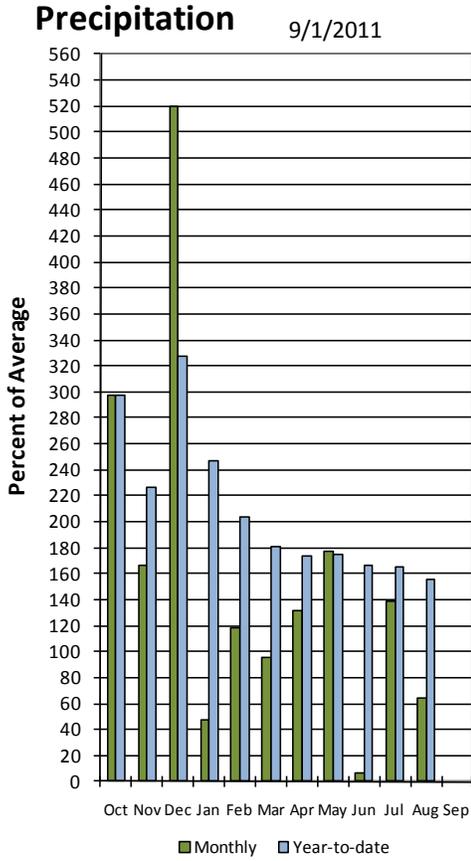
Beaver River - Water Availability Index  
September



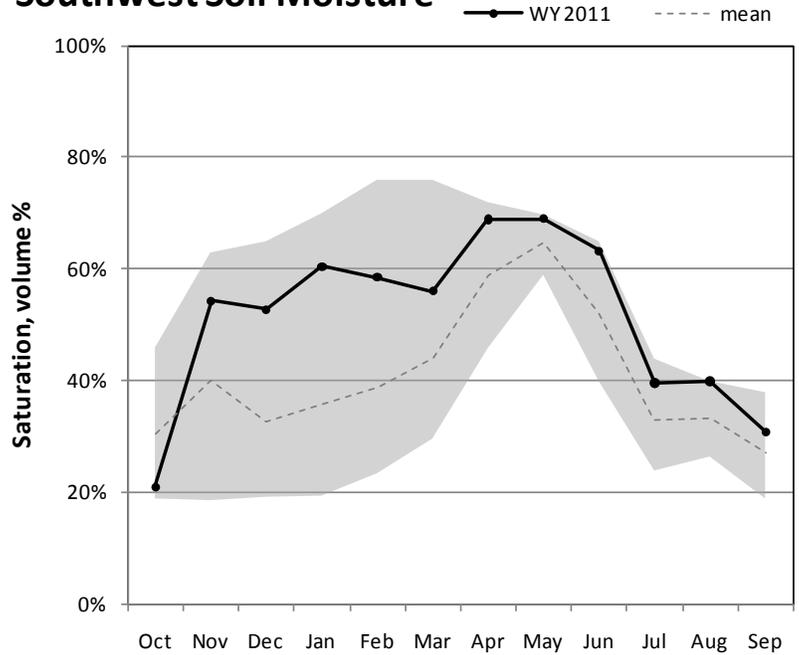
## Southwest – E. Garfield, Kane, Washington, & Iron Counties September 1, 2011

Precipitation in August was much below average at 64%, bringing water year accumulation to 156%. Reservoir storage is at 77% of capacity, 18% higher than last year at this time. Soil moisture is at 31% compared to 27% at this time last year.

### Southwest Utah

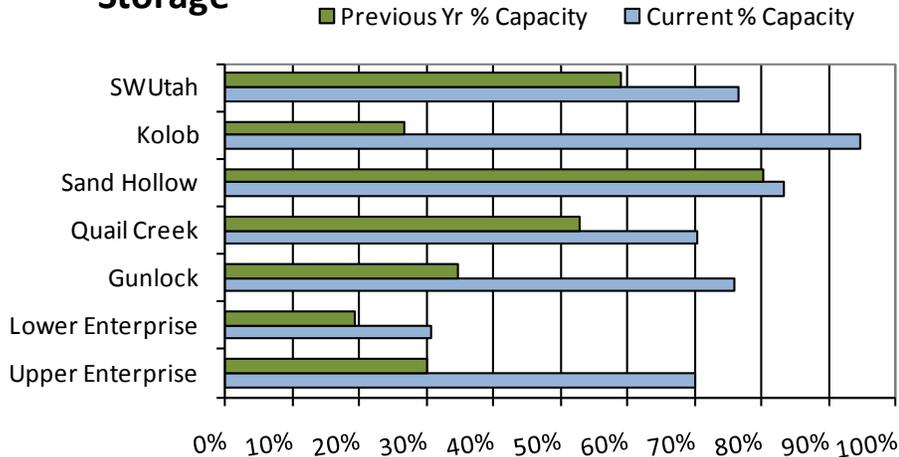


### Southwest Soil Moisture



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.

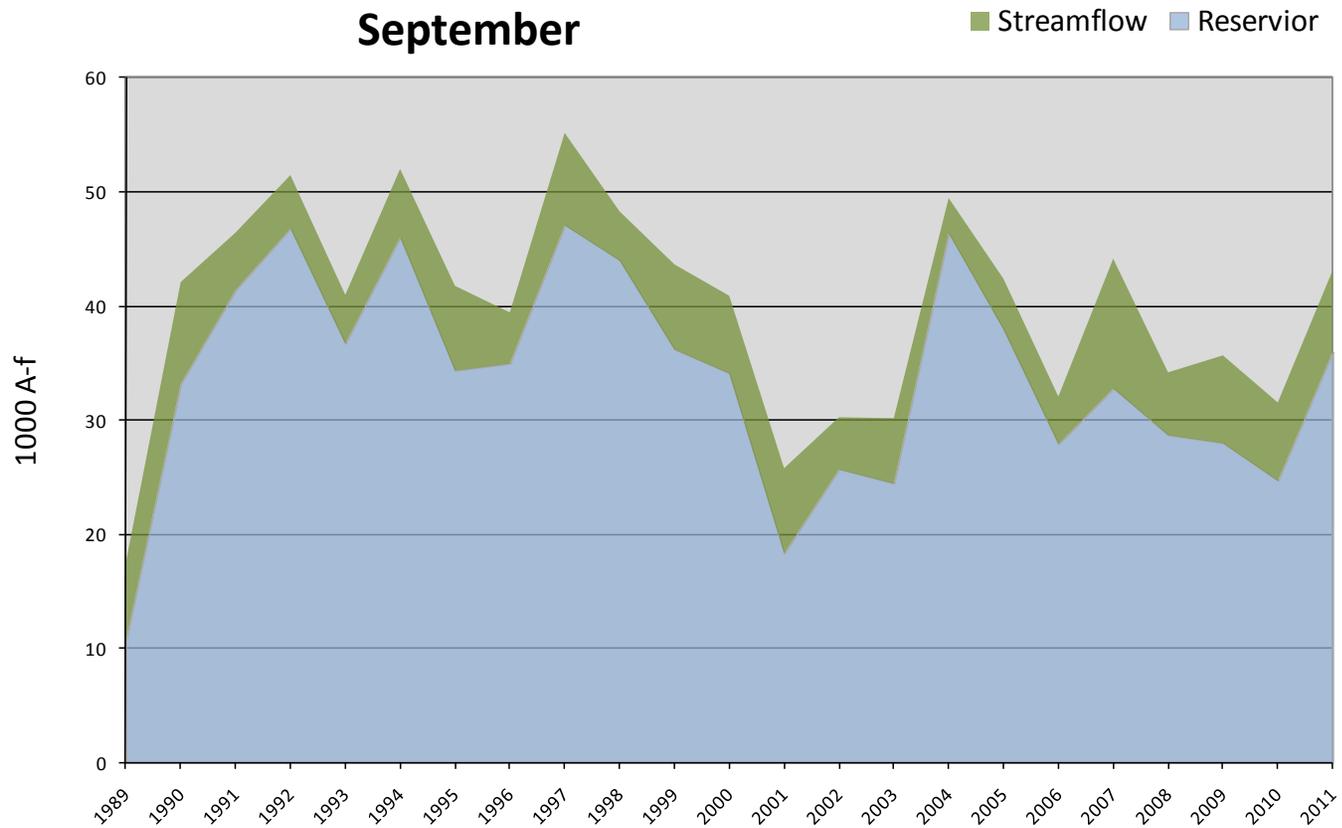
### September Southwest Utah Reservoir Storage



September 1, 2011		Water Availability Index				
Basin or Region	August EOM* Reservoir	August accumulated flow Virgin and Santa Clara Rivers (observed)	Reservoir + Streamflow	WAI <sup>#</sup>	Percentile	Years with similar WAI
	KAF <sup>^</sup>	KAF	KAF		%	
<b>Southwest</b>	<b>36</b>	<b>7</b>	<b>43</b>	<b>1.04</b>	<b>63%</b>	<b>90, 05, 99, 07</b>

*\*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**  
Natural Resources Conservation Service  
Salt Lake City, UT

