NRCS
Natural Resources Conservation Service

Utah Water Supply Outlook Report

January, 2013

Weber Canyon – Thousand Peaks - December 30, 2012

Photo by Randall Julander, NRCS

Water Supply Outlook Reports
and Federal - State - Private Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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Or call toll free at (866) 632-9992 (voice) to obtain additional information, the appropriate office or to request documents. Individuals who are deaf, hard of hearing, or have speech disabilities may contact USDA through the Federal Relay service at (800) 877-8339 or (800) 845-6136 (in Spanish). USDA is an equal opportunity provider, employer, and lender. Persons with disabilities who require alternative means for communication of program information (e.g., Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

STATE OF UTAH GENERAL OUTLOOK
January 1, 2013

SUMMARY
As we at Snow Survey continue to improve our services to the Water User Community of Utah, we have made some changes to our Water Supply Outlook Report this year. We have restructured the report to match our daily Snowpack and Precipitation Update Report which means that there are more areas and most are distinct watersheds instead of general areas of the state. This allows for greater specificity, focus and continuity between data products for each area. For example, the Park Valley/Raft River area is no longer lumped together with the Bear River, the San Pitch is separate from the Sevier and southeast Utah now has several watersheds. We are also categorizing snowpack as a percent of median (1981-2010) rather than percent of average. Median (50% of historical observations above and 50% below) is a better representation of what we consider a "normal condition". This past summer, we were able to continue the process of automating snow courses to SNOTEL at the following locations: Yankee Reservoir, LaSal Mountain Lower, Buckboard Flat, Wrigley Creek, Mt Baldy, Rees Flat, Thistle Flat, GBRC Headquarters, GBRC Meadows, Huntington Horseshoe, Upper Joes Valley, Hobble Creek, Redden Mine, Bevan's Cabin and Buck Pasture. We were able to place limited instrumentation at Henrys Fork.

Water Supply Conditions. Long story short: 2011 – home run bases loaded. 2012 – Struck out watching the ball blow by. 2013 – Hey, welcome to normal. Snowpack across the state ranges from about 90% to a little above 120% with most areas right in that 90%-110% or so place we seldom see. Sweet! At this point we need to mention that it is only January and we hopefully have a lot of winter in front of us and any outcome is possible including a drought… but also including very high snow packs. This past summer was hot and dry along with a substantial portion of fall and early winter. Precipitation events prior to snowpack establishment helped bring bone dry soil moisture back to better conditions especially in southern Utah. Some areas in southern Utah received 5 to 10 inches of precipitation which not only replenished the soil moisture but improved stream flow as well.

SNOWPACK
January first snowpacks as measured by the NRCS SNOTEL system range from 92% of median on the Escalante to 134% over southwestern Utah.

PRECIPITATION
Mountain precipitation during December was 123% of average which brings the seasonal accumulation (Oct-Dec) 96% of normal.

SOIL MOISTURE
Soil Moisture had improved substantially from summer lows and ranges from 20% of saturation in southeast Utah to 65% on the Bear.

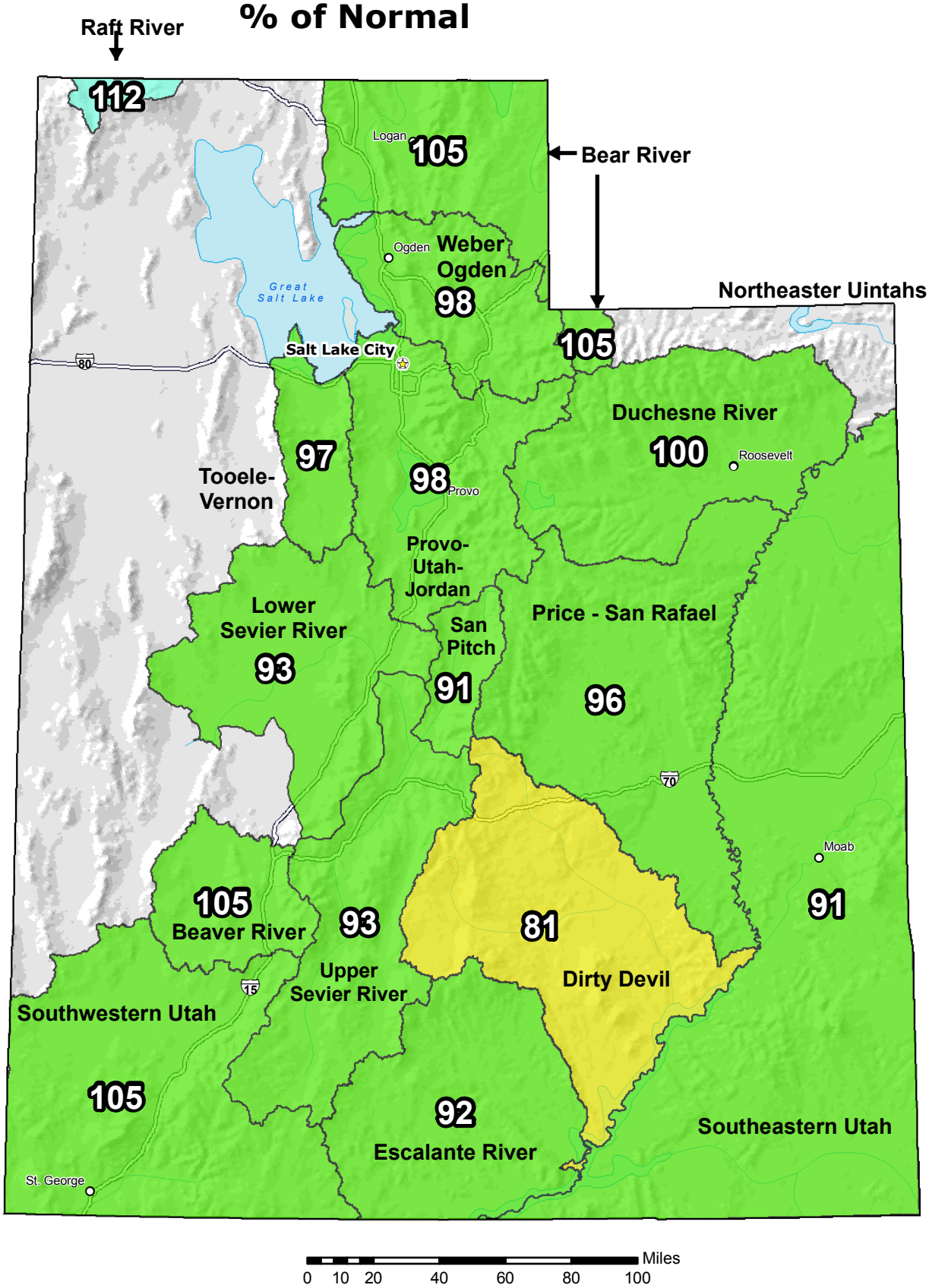
RESERVOIRS
Storage in 46 of Utah's key irrigation reservoirs is at 64% of capacity compared to 84% last year.

STREAMFLOW
Snowmelt streamflows are forecast to be below to near normal across the state this year. Forecast streamflows range from 56% for Lake Powell inflow to 136% on West Canyon Creek nr Cedar Fort. Most flows are forecast to be in the 80% to 100% range.

SURFACE WATER SUPPLY INDEX
Surface Water Supply indexes range from 20% in the eastern Uintah Basin to 73% on the lower Sevier.

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

Jan 01, 2013



Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >=150%

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

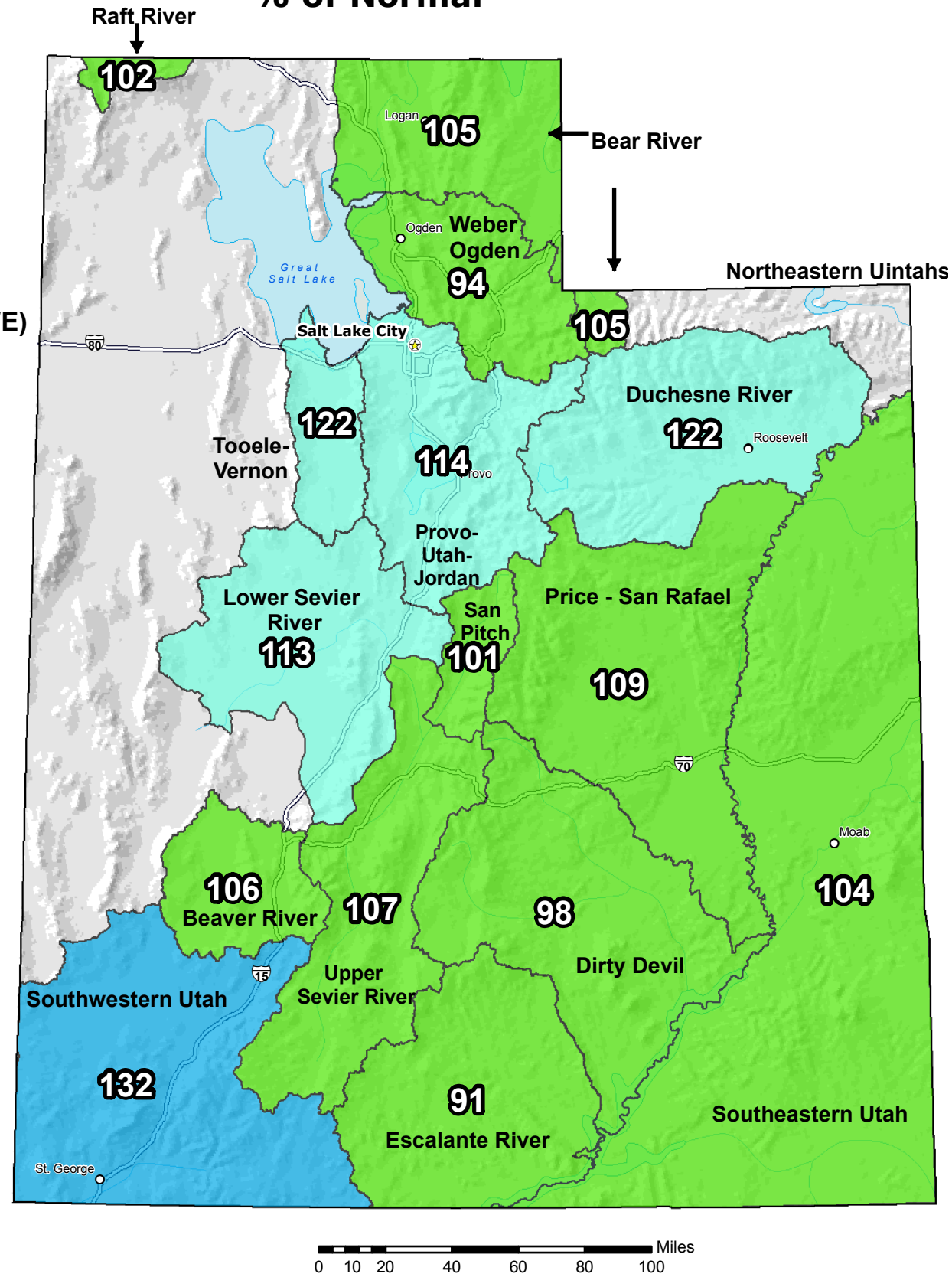
Provisional Data Subject to Revision

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 503 414 3047

Utah
SNOTEL Current Snow Water Equivalent (SWE) % of Normal

Jan 01, 2013



Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median

- unavailable *
- <50%
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Provisional Data Subject to Revision

The snow water equivalent percent of normal represents the current snow water equivalent 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).

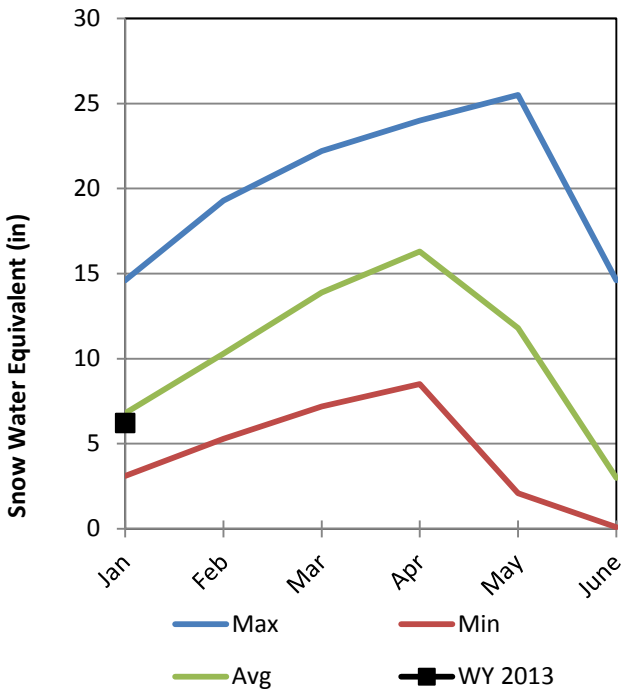
Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon http://www.wcc.nrcs.usda.gov/gis/
Based on data from http://www.wcc.nrcs.usda.gov/reports/
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Statewide Utah

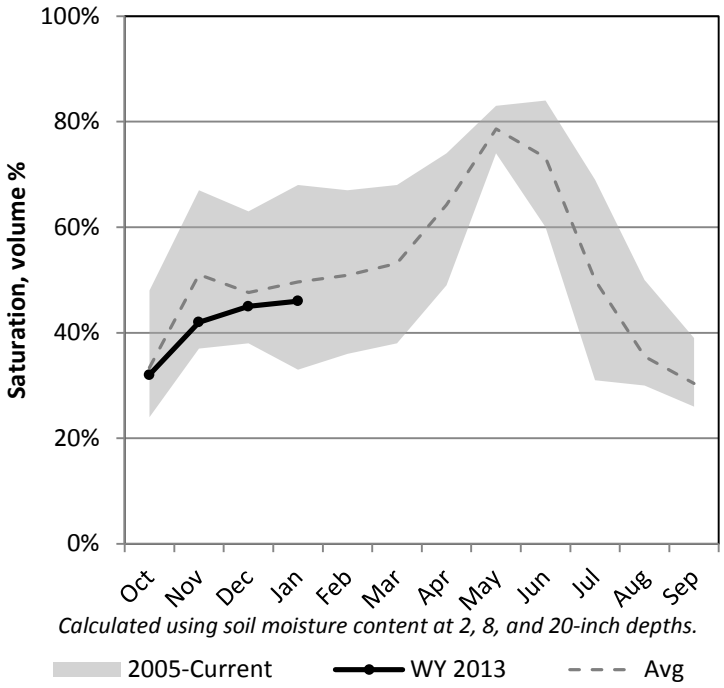
1/1/2013

Snowpack in Utah is near average at 108% of normal, compared to 69% last year. Precipitation in December was above average at 124%, which brings the seasonal accumulation (Oct-Dec) to 99% of average. Soil Moisture is at 46% compared to 48% last year. Reservoir storage is at 64% of average, compared to 84% last year. Forecast streamflow volumes range from 56% to 137% of average.

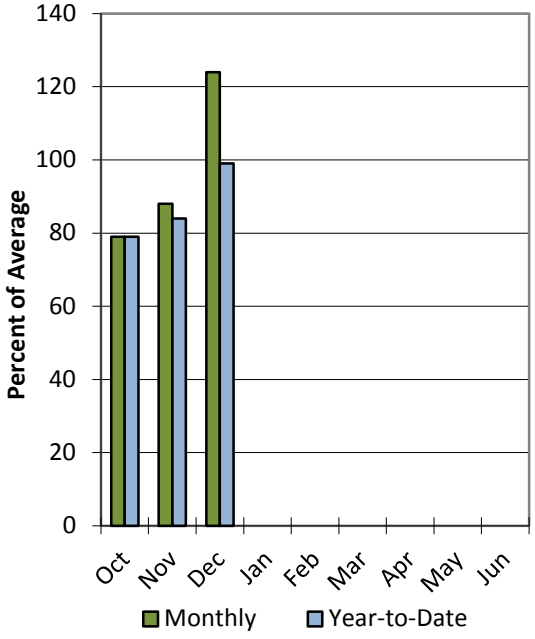
Snowpack



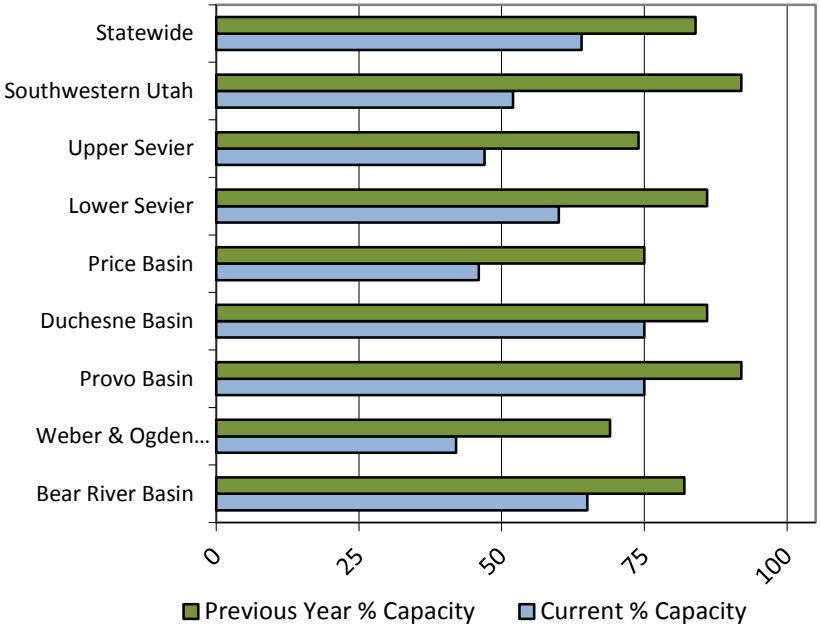
Soil Moisture



Precipitation



Reservoir Storage

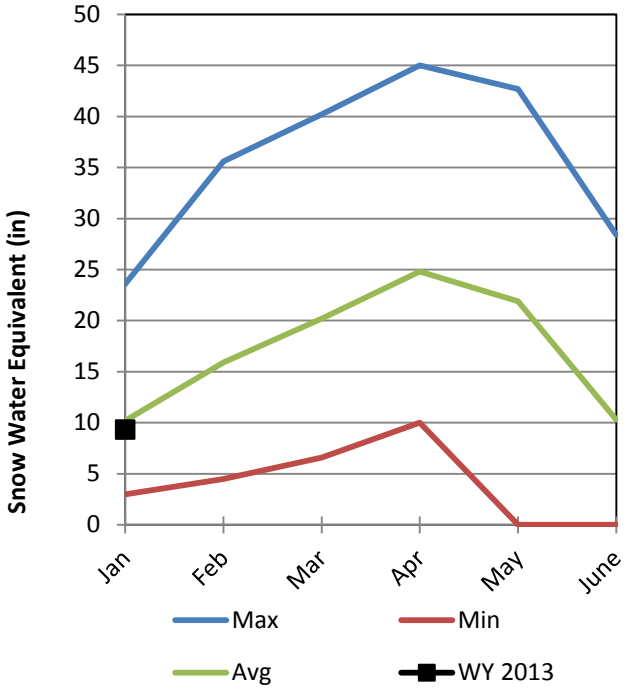


Raft River Basin

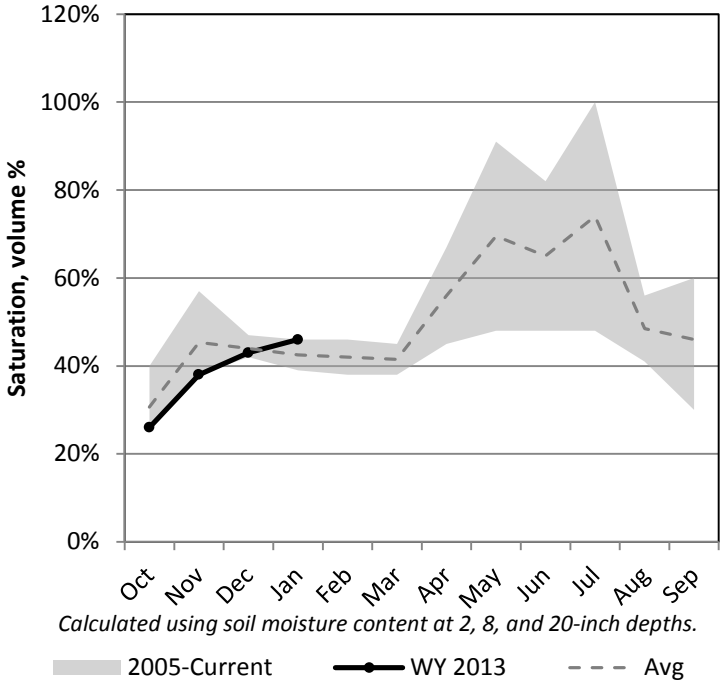
1/1/2013

Snowpack in the Raft River Basin is near average at 103% of normal, compared to 74% last year. Precipitation in December was much above average at 161%, which brings the seasonal accumulation (Oct-Dec) to 112% of average. Soil Moisture is at 46% compared to 39% last year. The forecast streamflow volume for Dunn Creek is 76% of average.

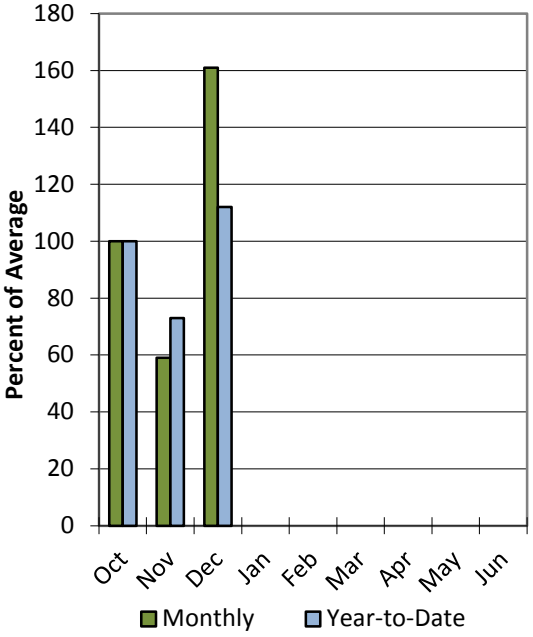
Snowpack



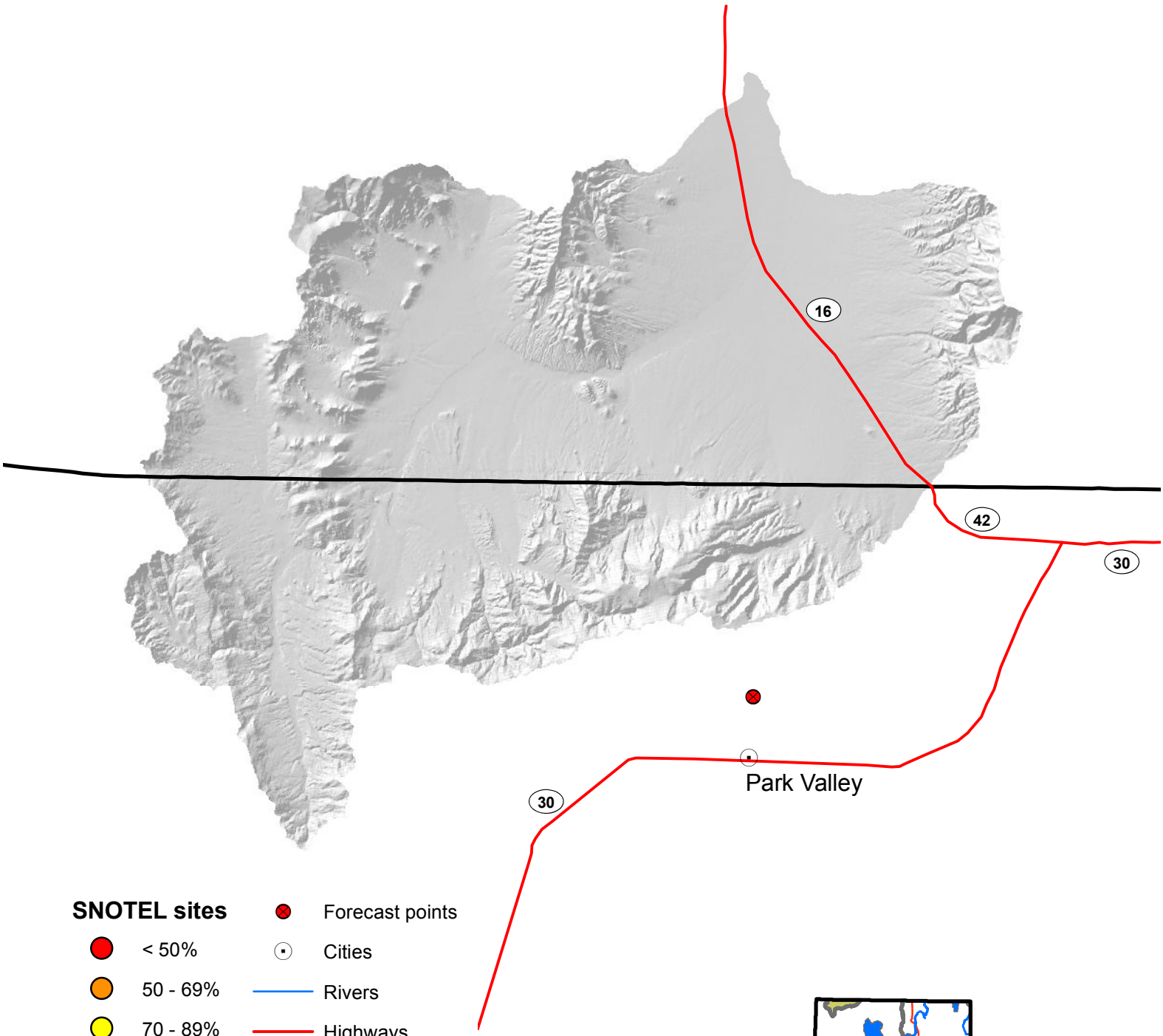
Soil Moisture



Precipitation



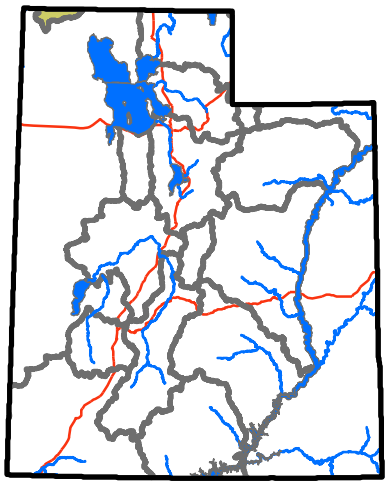
Raft basin



SNOTEL sites

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

- Forecast points
- Cities
- Rivers
- Highways



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Natural Resources Conservation Service

N

0 1.25 2.5 5 7.5 10 Miles

Raft River Basin as of January 1, 2013

RAFT RIVER BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Dunn Ck nr Park Valley	APR-JUL	0.14	1.10	2.20	76	3.20	4.20	2.90

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

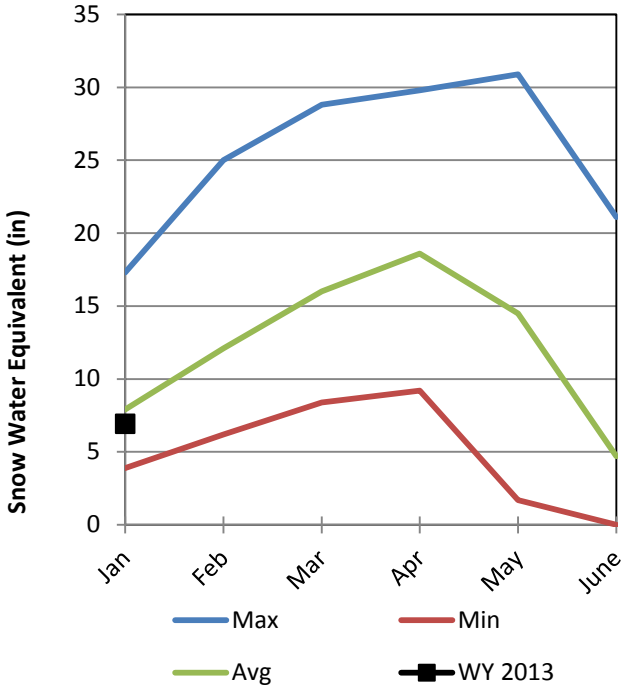
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

Bear River Basin

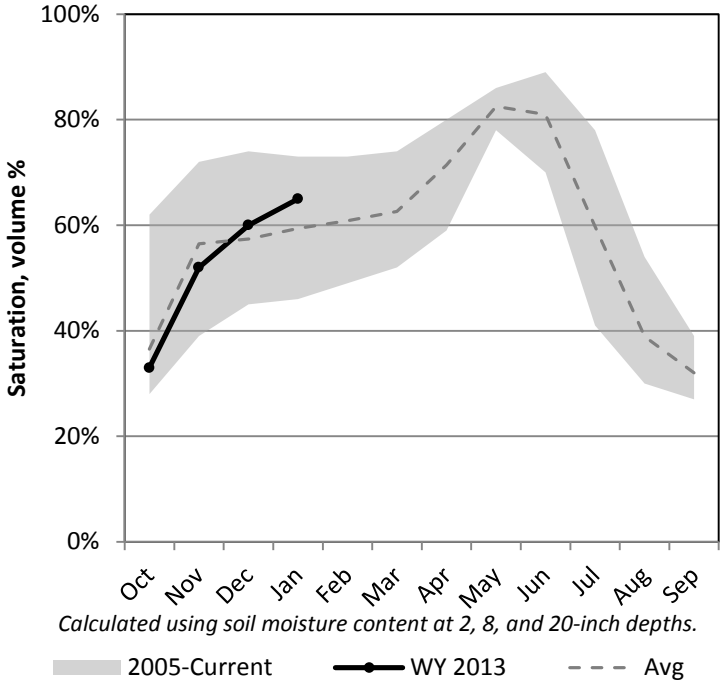
1/1/2013

Snowpack in the Bear River Basin is near average at 106% of normal, compared to 73% last year. Precipitation in December was above average at 121%, which brings the seasonal accumulation (Oct-Dec) to 105% of average. Soil Moisture is at 65% compared to 52% last year. Reservoir storage is at 65% of average, compared to 82% last year. Forecast streamflow volumes range from 67% to 95% of average. The surface water supply index is 49% for the Bear River.

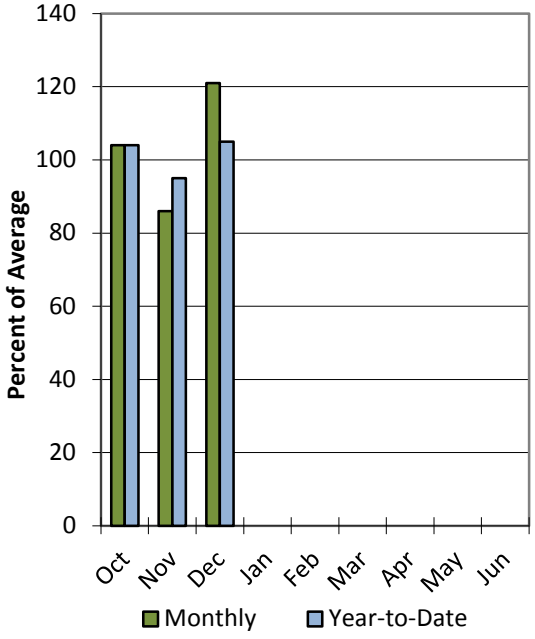
Snowpack



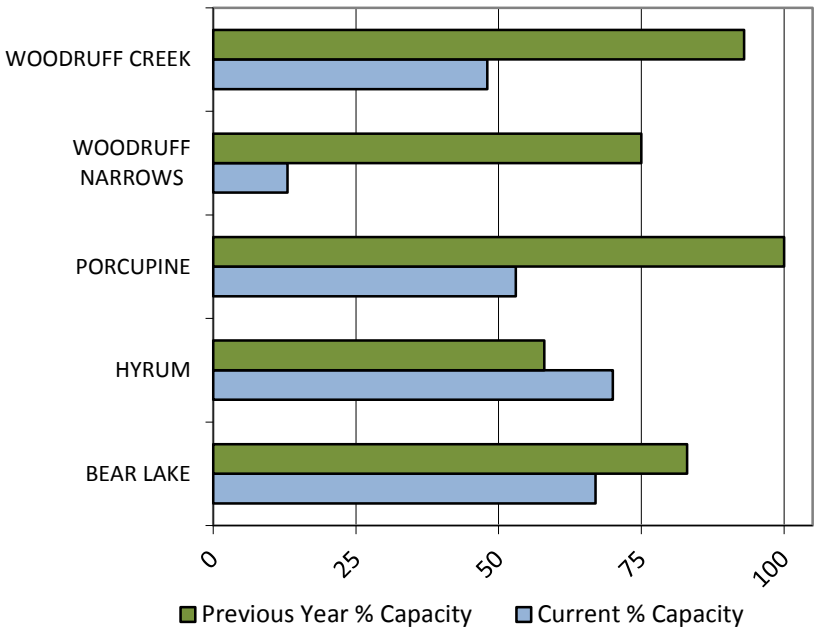
Soil Moisture



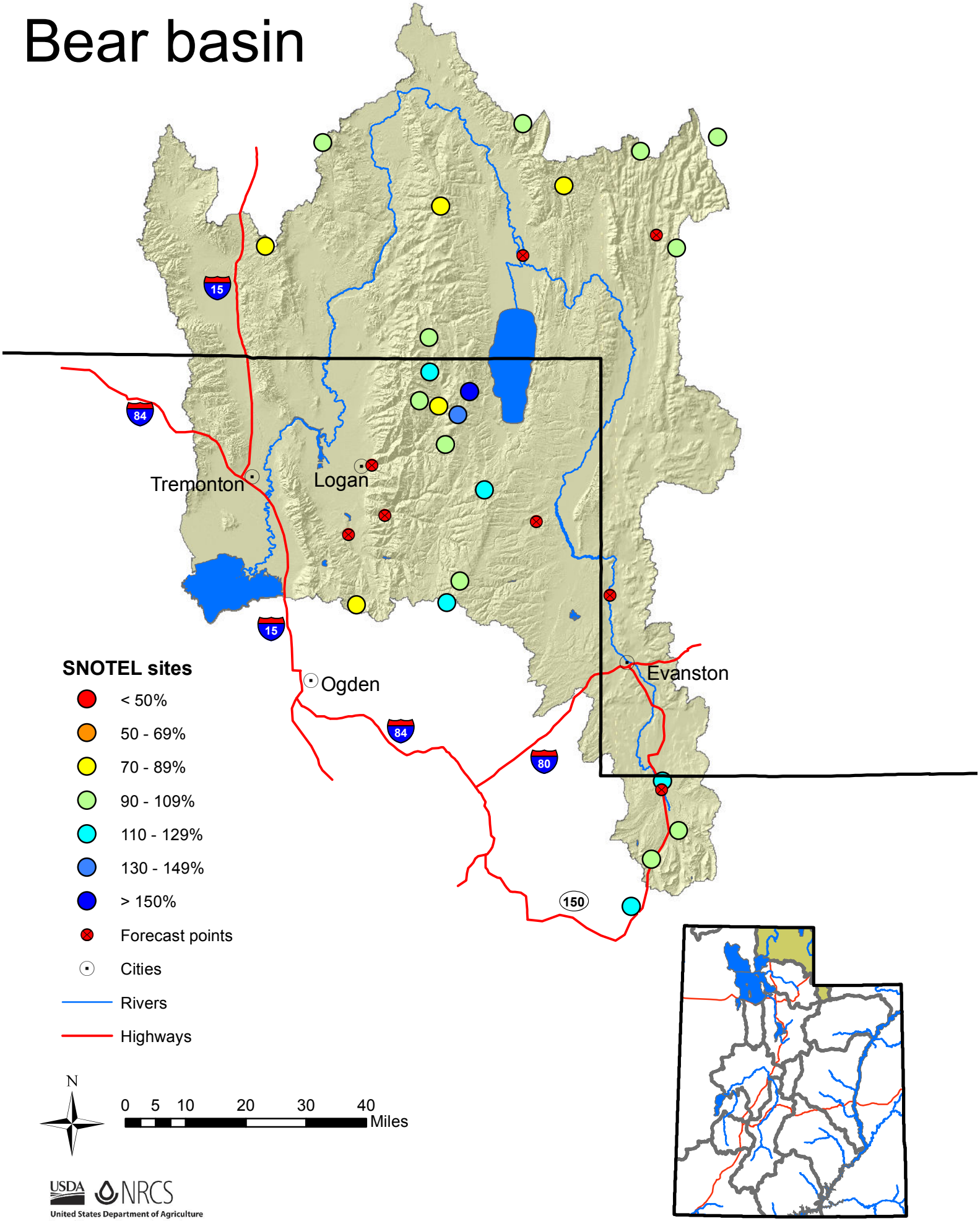
Precipitation



Reservoir Storage



Bear basin



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United States Department of Agriculture
Natural Resources Conservation Service

BEAR RIVER BASIN as of January 1, 2013

BEAR RIVER BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear R nr UT-WY State Line	APR-JUL	50	76	94	84	111	138	112
Bear R ab Res nr Woodruff	APR-JUL	30	66	91	75	116	153	121
Big Ck nr Randolph	APR-JUL	0.96	2.50	3.60	95	4.70	6.20	3.80
Smiths Fk nr Border	APR-JUL	39	61	76	85	91	113	89
Bear R bl Stewart Dam	APR-JUL	7.0	58	122	67	186	279	183
Little Bear R at Paradise	APR-JUL	2.0	19.9	32	78	44	62	41
Logan R nr Logan	APR-JUL	36	69	91	82	113	146	111
Blacksmith Fork nr Hyrum	APR-JUL	14.9	30	41	95	52	67	43

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

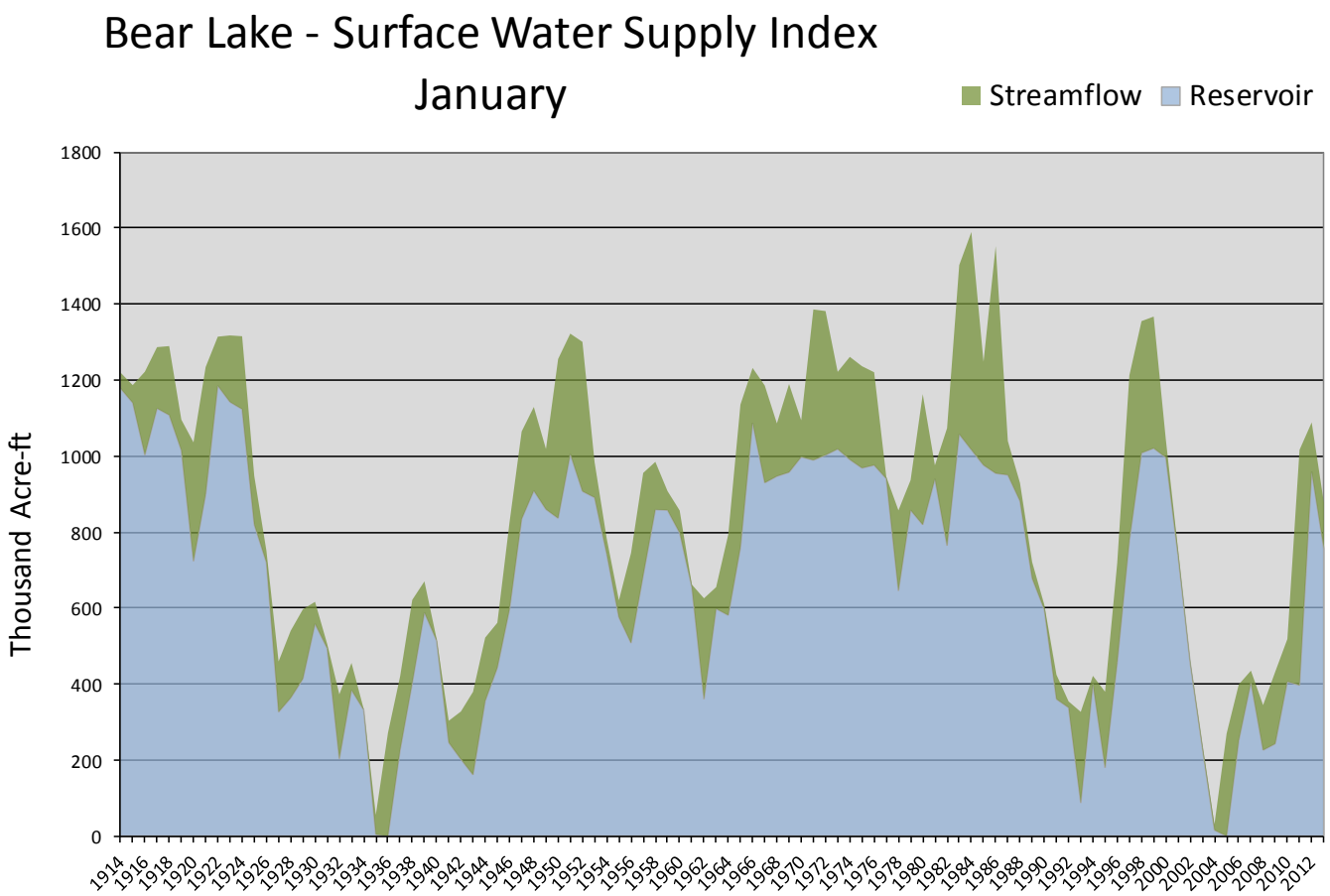
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013

Surface Water Supply Index

Basin or Region	December EOM* Bear Lake	April-July Forecast below Stewart Dam	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Bear River	**756**	**122**	**878**	**-0.12**	**49**	**60, 78, 59, 88**

**EOM, end of month; #SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

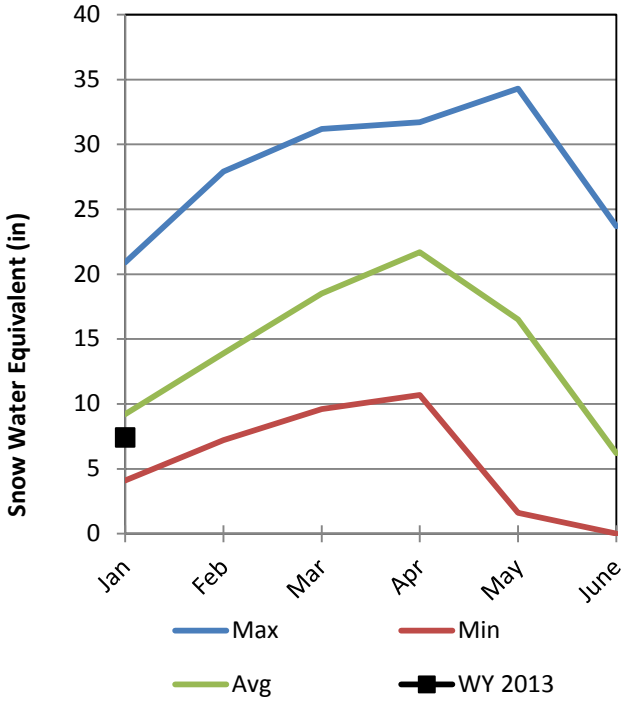


Weber & Ogden River Basins

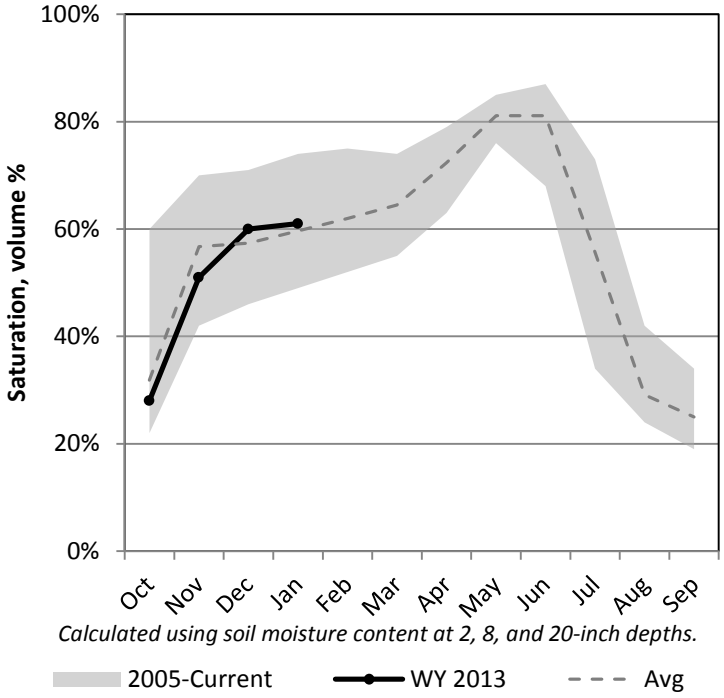
1/1/2013

Snowpack in the Weber & Ogden River Basins is near average at 95% of normal, compared to 58% last year. Precipitation in December was near average at 107%, which brings the seasonal accumulation (Oct-Dec) to 98% of average. Soil Moisture is at 61% compared to 53% last year. Reservoir storage is at 42% of average, compared to 69% last year. Forecast streamflow volumes range from 71% to 102% of average. The surface water supply index is 32% for the Ogden River, 47% for the Weber River.

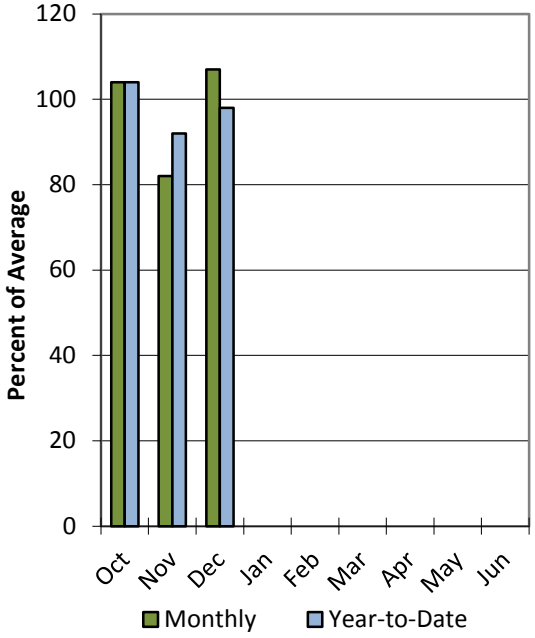
Snowpack



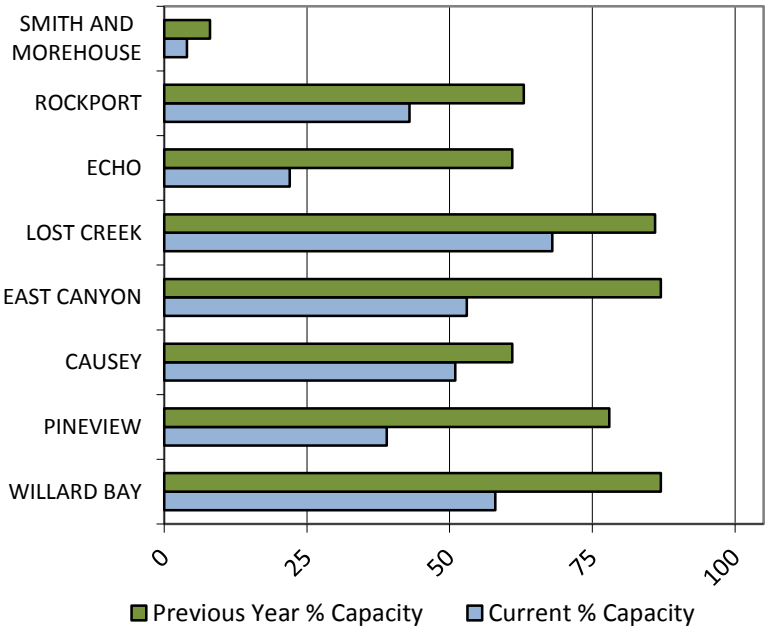
Soil Moisture



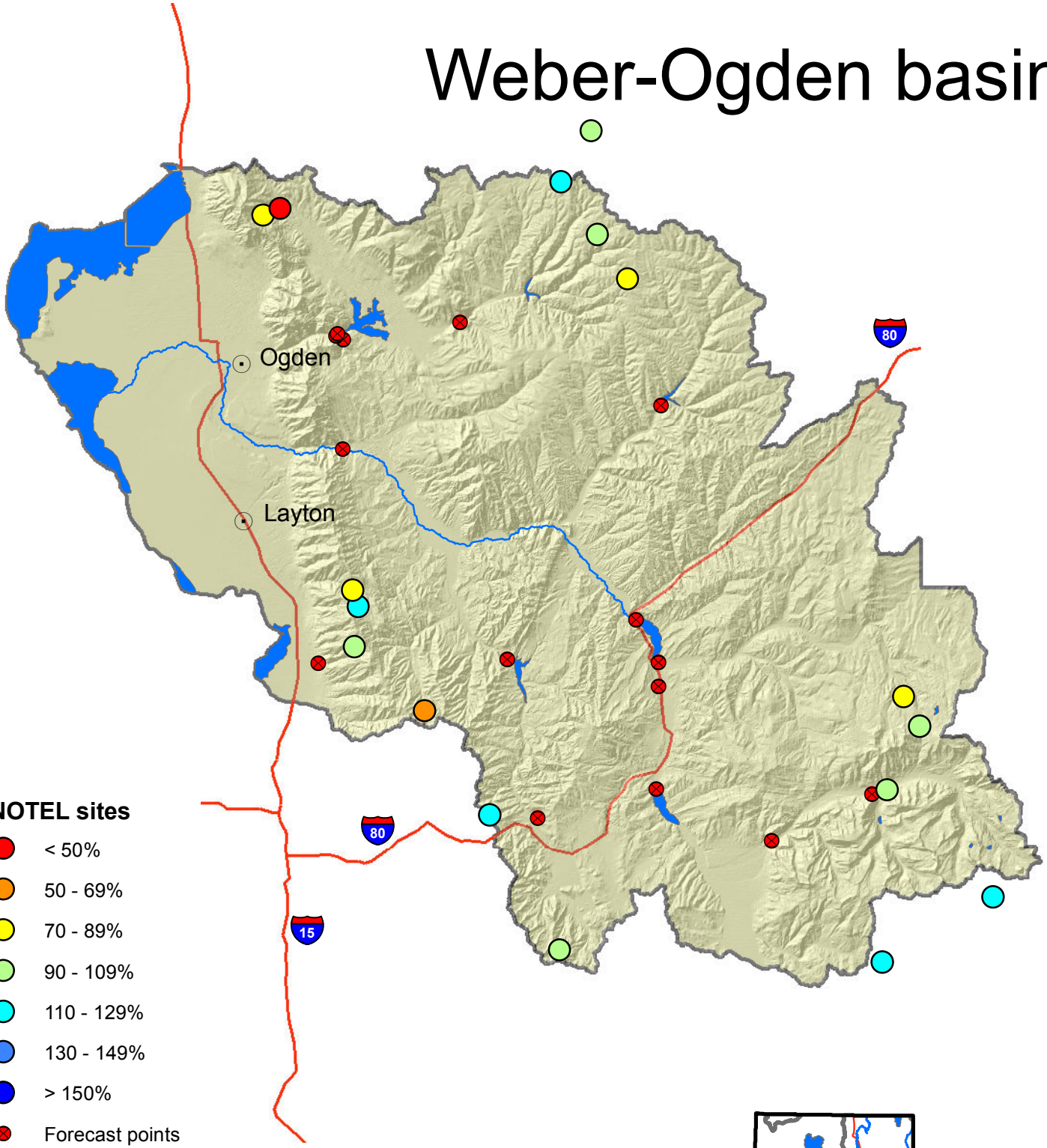
Precipitation



Reservoir Storage



Weber-Ogden basin



SNOTEL sites

- < 50%
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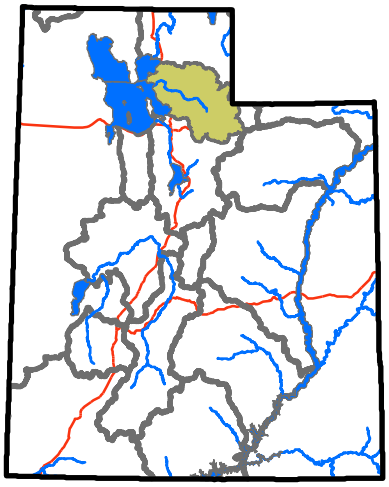
N

0 2.5 5 10 15 20 Miles



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Natural Resources Conservation Service

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Smith & Morehouse Res Inflow	APR-JUL	16.2	23	28	82	32	39	34
Weber R nr Oakley	APR-JUL	47	78	99	85	120	151	117
Rockport Res	APR-JUL	50	89	115	94	142	181	123
Weber R nr Coalville	APR-JUL	49	89	116	92	142	182	126
Chalk Ck at Coalville	APR-JUL	10.6	26	37	90	48	63	41
Echo Res Inflow	APR-JUL	55	99	129	78	159	203	166
Lost Ck Resv Inflow	APR-JUL	0.6	7.6	12.3	102	17.0	24	12.1
East Canyon Ck nr Jeremy Ranch	APR-JUL	0.4	6.6	10.9	72	15.2	21	15.2
East Canyon Ck nr Morgan	APR-JUL	4.0	15.4	23	82	31	42	28
Weber R at Gateway	APR-JUL	98	218	300	95	382	502	315
SF Ogden R nr Huntsville	APR-JUL	7.9	29	44	79	59	80	56
Pineview Res Inflow	APR-JUL	4.0	52	88	102	124	177	86
Wheeler Ck nr Huntsville	APR-JUL	0.50	2.90	4.50	71	6.20	8.60	6.30
Centerville Ck	APR-JUL	0.54	0.93	1.20	89	1.47	1.86	1.35

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

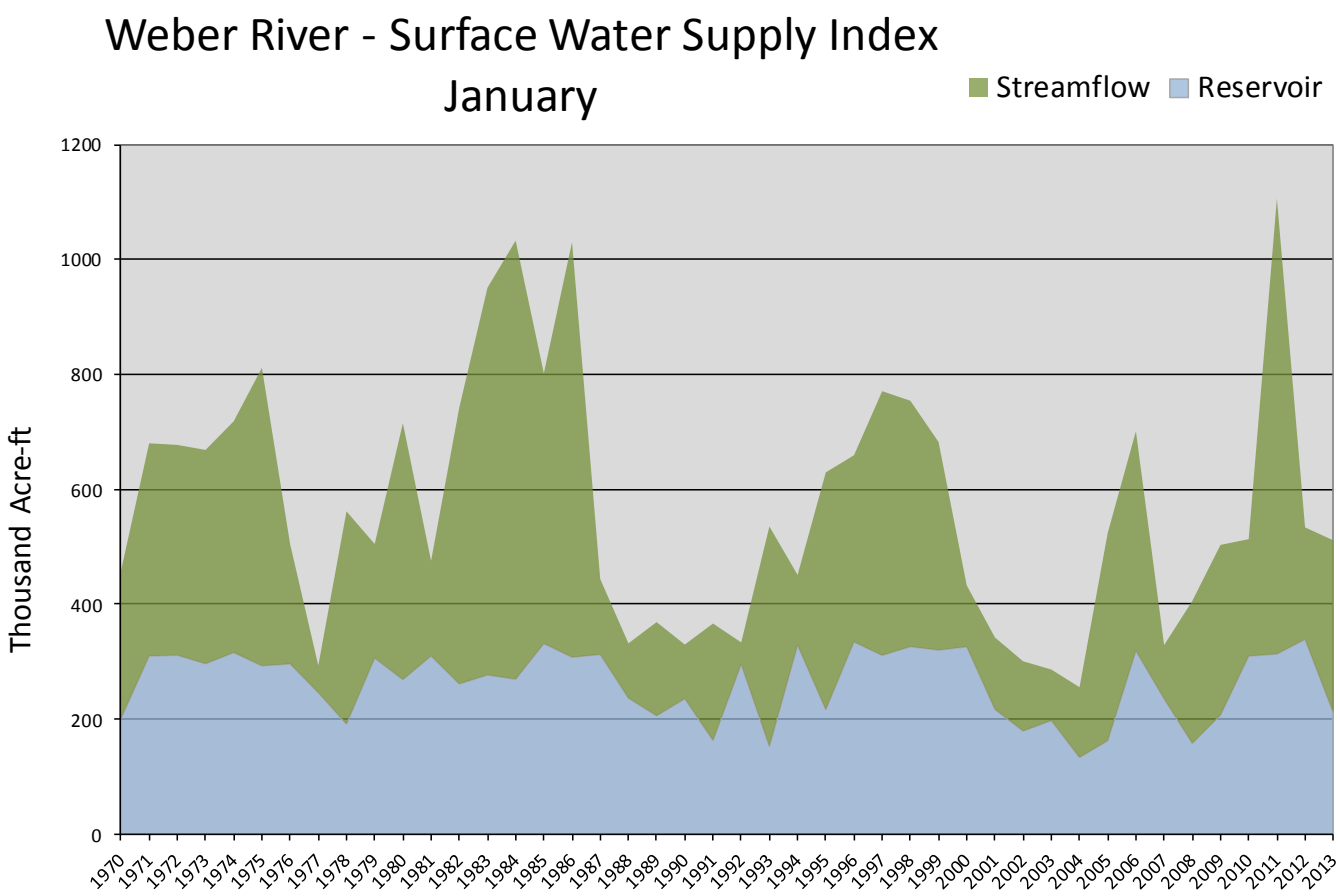
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013

Surface Water Supply Index

Basin or Region	December EOM* Pine View & Causey	April-July Forecast Pineview Reservoir Inflow	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Ogden River	**47**	**88**	**135**	**-1.46**	**32**	**89, 00, 91, 07**

**EOM, end of month; #SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

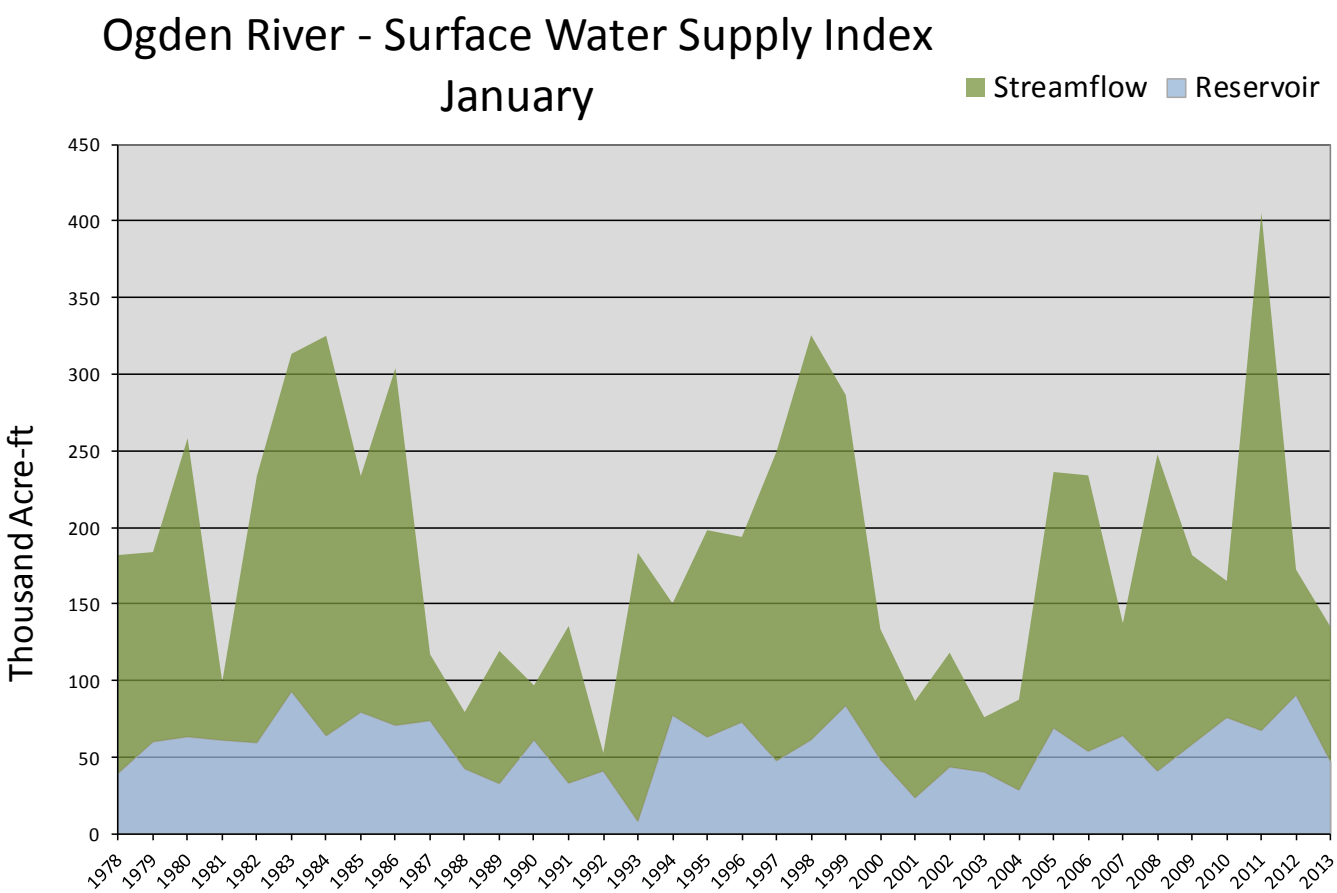


January 1, 2013

Surface Water Supply Index

Basin or Region	December EOM* Reservoirs	April-July Forecast Weber River at Gateway	Reservoirs + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Weber River	**211**	**300**	**511**	**-0.28**	**47**	**76, 79, 10, 05**

**EOM, end of month; #SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

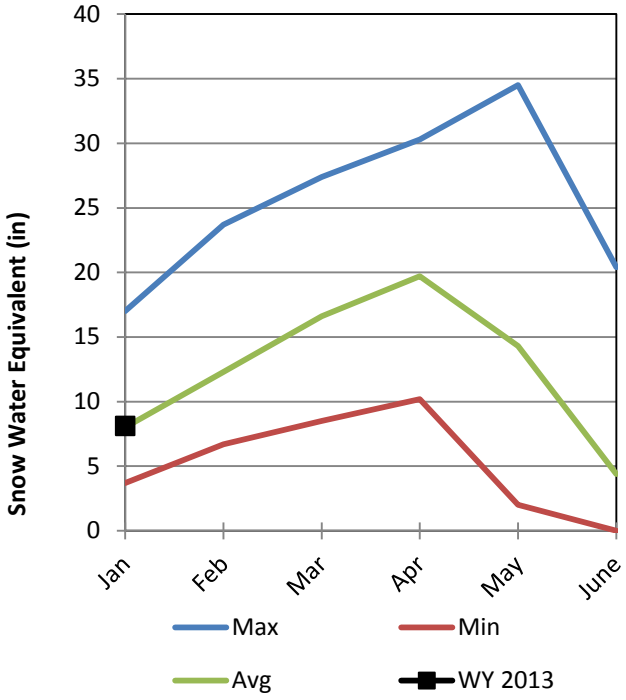


Provo & Jordan River Basins

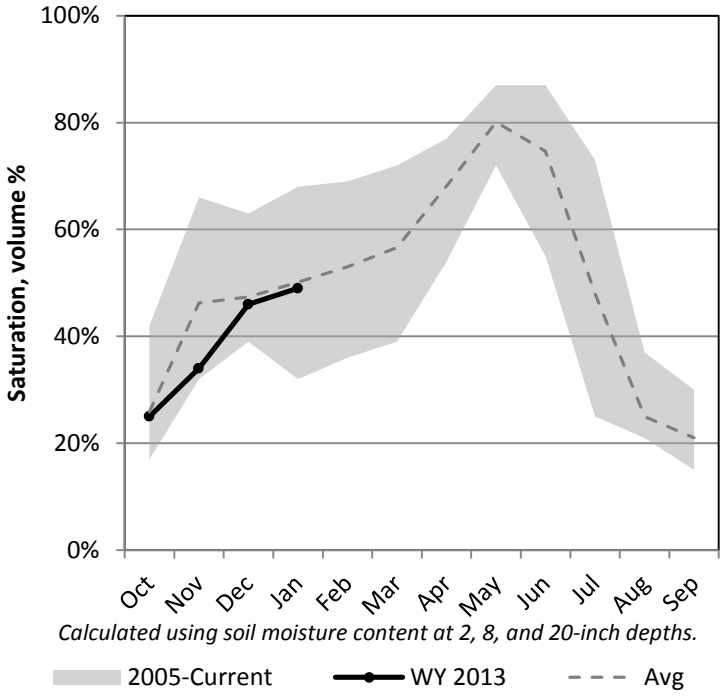
1/1/2013

Snowpack in the Provo & Jordan River Basins is above average at 116% of normal, compared to 56% last year. Precipitation in December was above average at 123%, which brings the seasonal accumulation (Oct-Dec) to 98% of average. Soil Moisture is at 49% compared to 39% last year. Reservoir storage is at 75% of average, compared to 92% last year. Forecast streamflow volumes range from 87% to 120% of average. The surface water supply index is 31% for the Provo River.

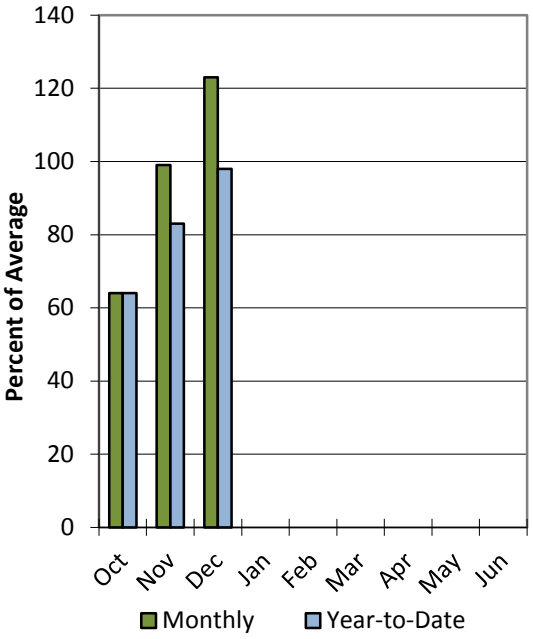
Snowpack



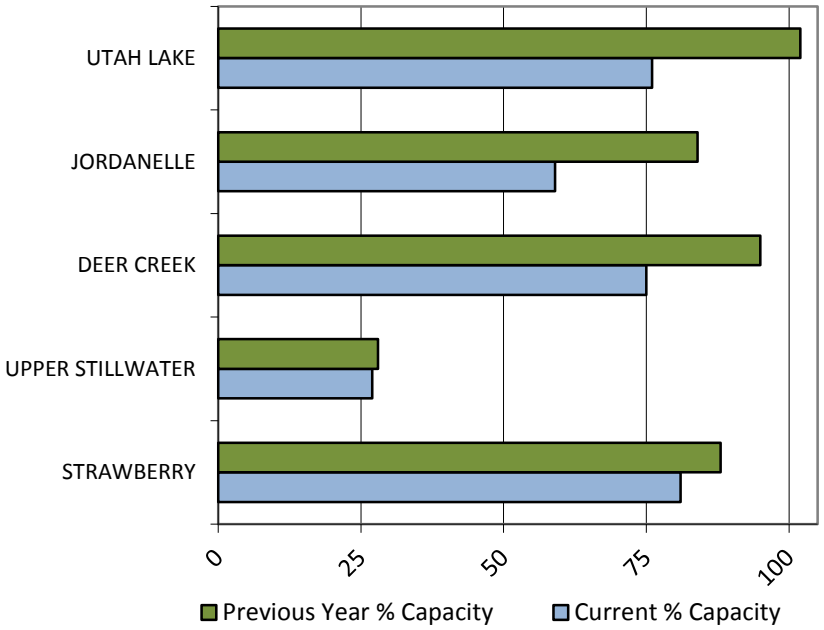
Soil Moisture



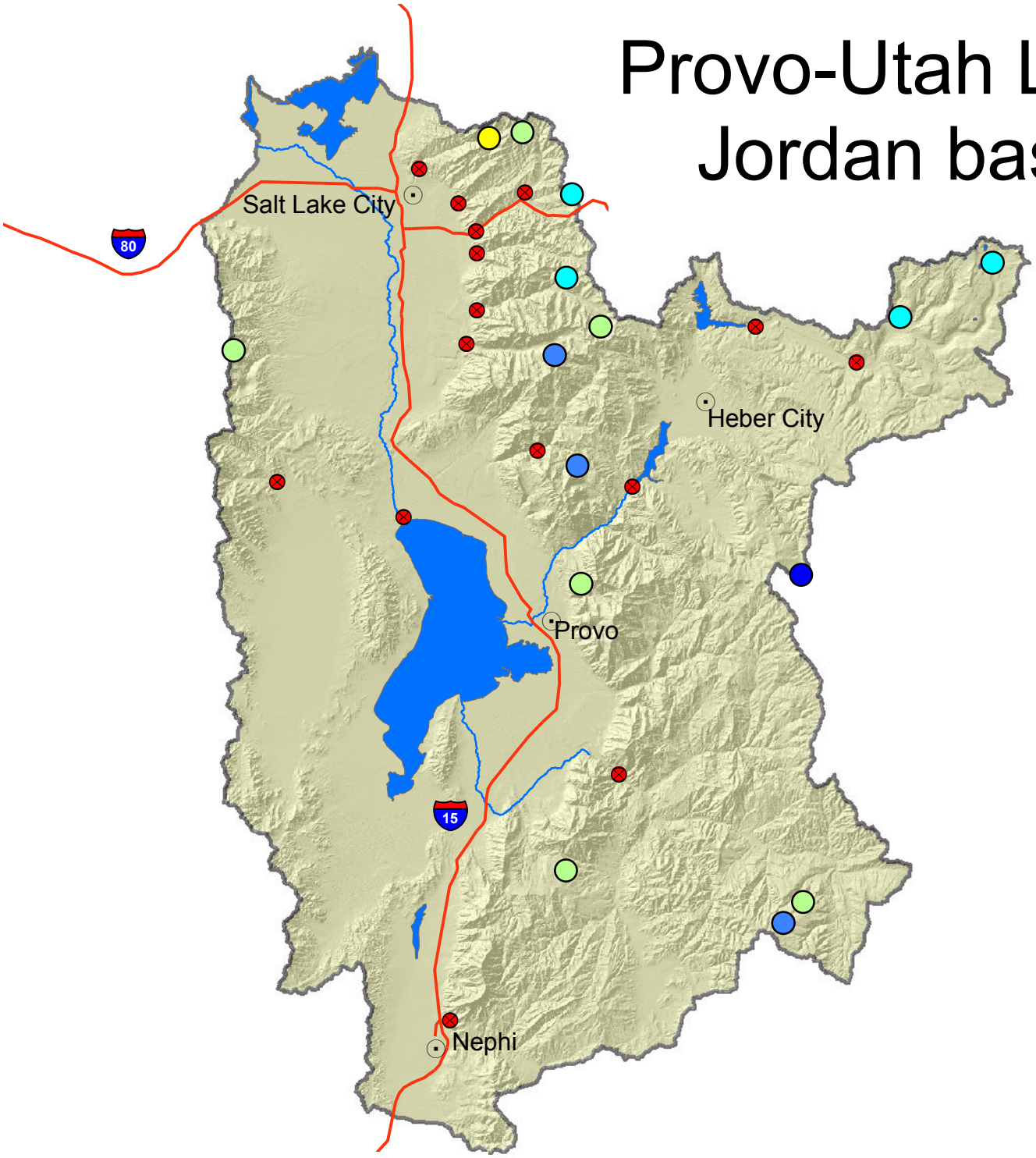
Precipitation



Reservoir Storage



Provo-Utah Lake-Jordan basin



SNOTEL sites

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
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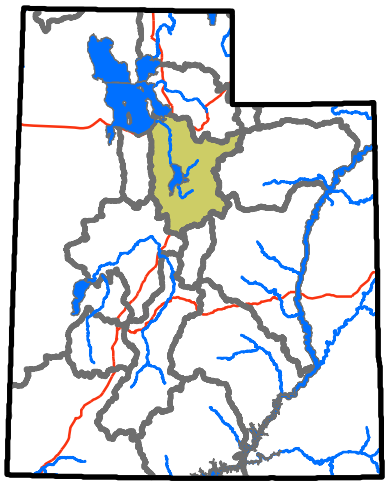
- > 150%

- Forecast points
- Cities
- Rivers
- Highways



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Natural Resources Conservation Service

0 2.5 5 10 15 20 Miles

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Salt Ck at Nephi	APR-JUL	1.59	5.90	8.90	94	11.90	16.20	9.50
Spanish Fk at Castilla	APR-JUL	1.5	41	71	103	101	145	69
Provo R nr Woodland	APR-JUL	52	75	93	93	113	145	100
Provo R nr Hailstone	APR-JUL	62	86	105	97	126	160	108
Provo R bl Deer Ck Dam	APR-JUL	44	86	114	98	142	183	116
American Fk ab Upper Powerplant	APR-JUL	9.4	22	30	94	38	51	32
Utah Lake Inflow	APR-JUL	39	110	318	120	618	887	265
L Cottonwood Ck nr SLC	APR-JUL	23	31	37	97	44	54	38
Big Cottonwood Ck nr SLC	APR-JUL	25	32	37	103	42	49	36
Mill Ck nr SLC	APR-JUL	3.40	5.30	6.60	103	7.80	9.70	6.40
Parley's Ck nr SLC	APR-JUL	4.9	10.9	15.0	106	19.1	25	14.2
Dell Fk nr SLC	APR-JUL	0.20	3.50	6.00	87	8.50	12.20	6.90
Emigration Ck nr SLC	APR-JUL	0.29	2.50	4.00	100	5.50	7.70	4.00
City Ck nr SLC	APR-JUL	2.70	5.60	7.50	97	9.50	12.40	7.70

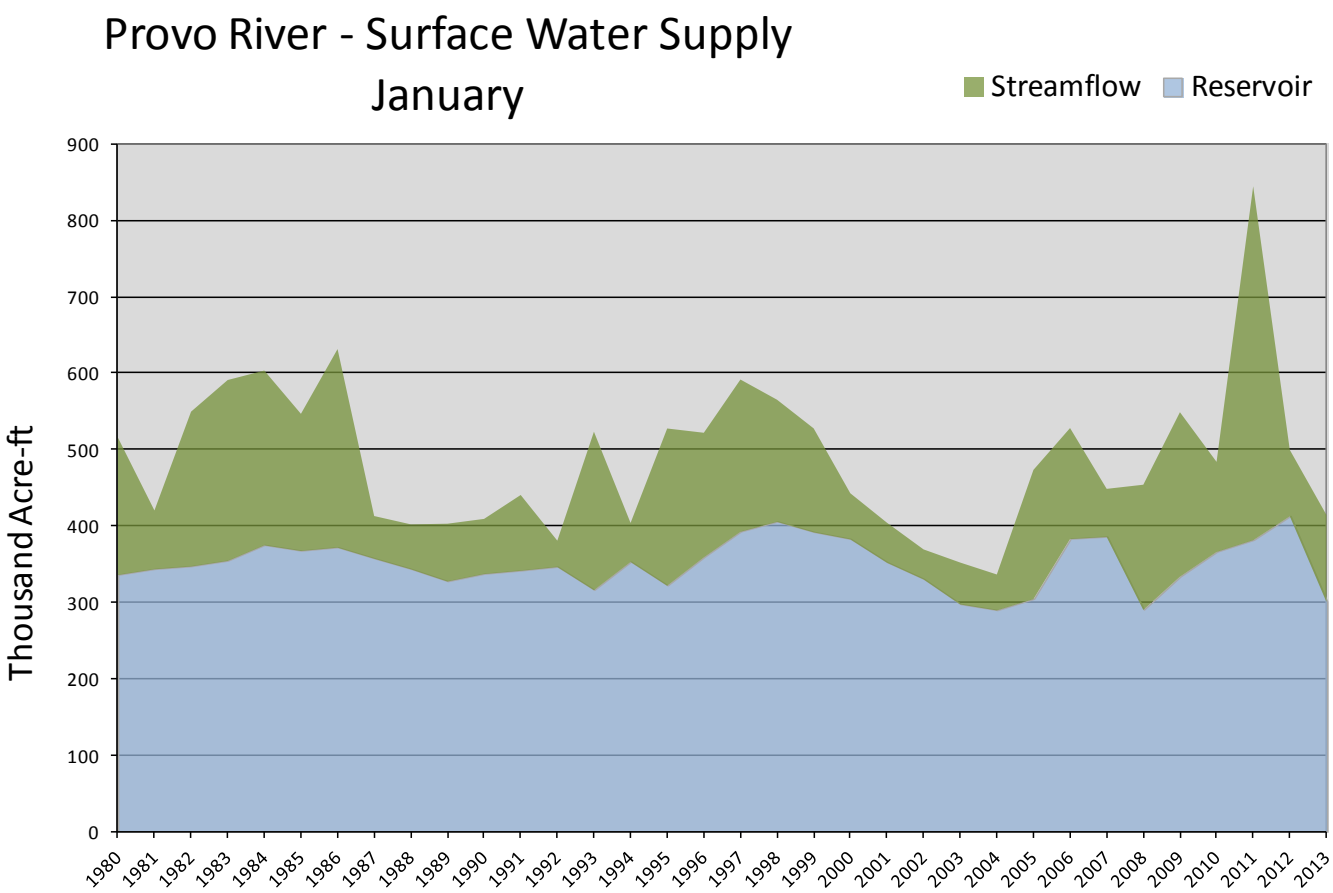
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Deer Creek, Jordanelle	April - July Forecast Provo River below Deer Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Provo River	**301**	**114**	**415**	**-1.55**	**31**	**96, 80, 10, 05**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

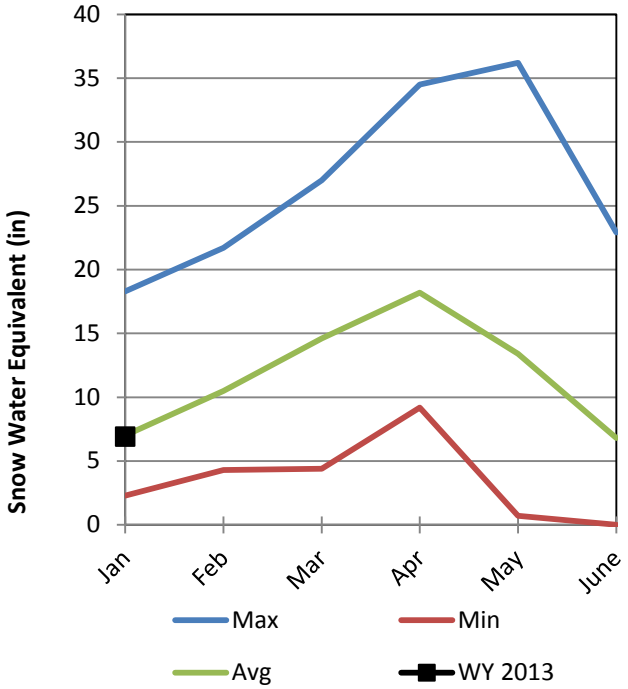


Tooele Valley and Vernon Creek Basins

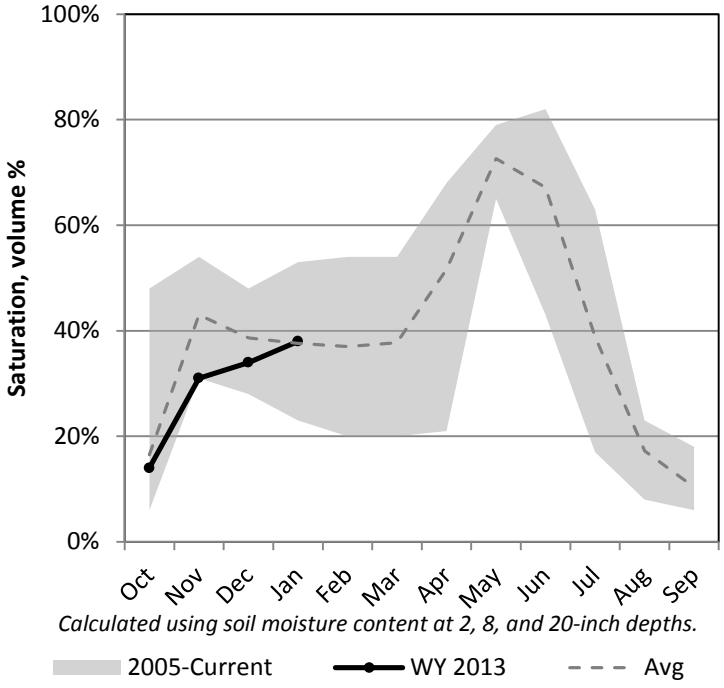
1/1/2013

Snowpack in the Tooele Valley and Vernon Creek Basins is above average at 123% of normal, compared to 52% last year. Precipitation in December was much above average at 144%, which brings the seasonal accumulation (Oct-Dec) to 98% of average. Soil Moisture is at 38% compared to 32% last year. Reservoir storage is at 27% of average, compared to 80% last year. Forecast streamflow volumes range from 94% to 136% of average.

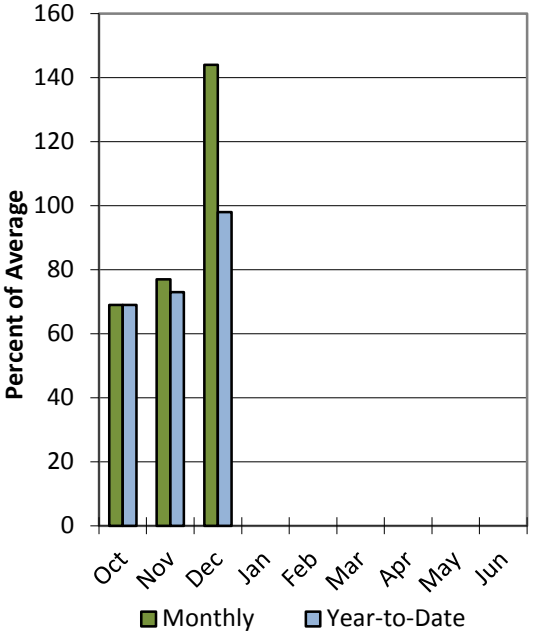
Snowpack



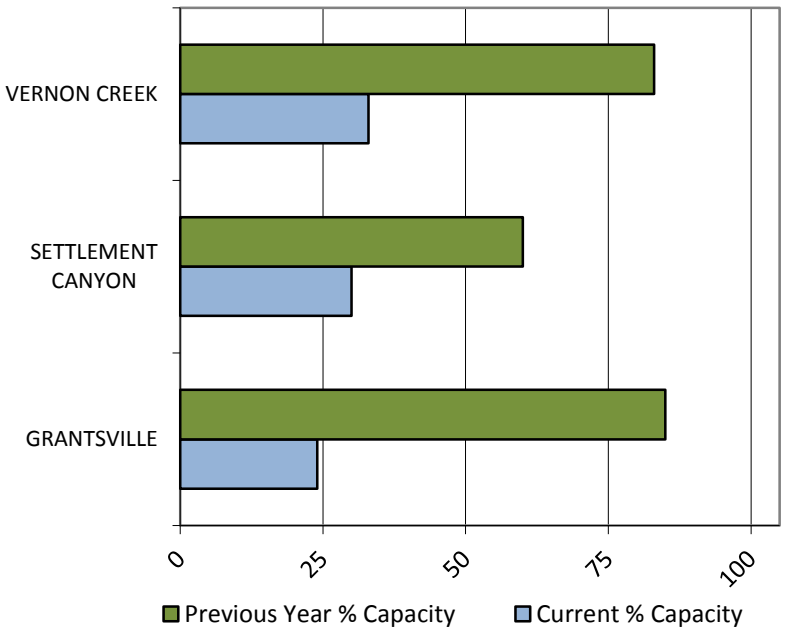
Soil Moisture



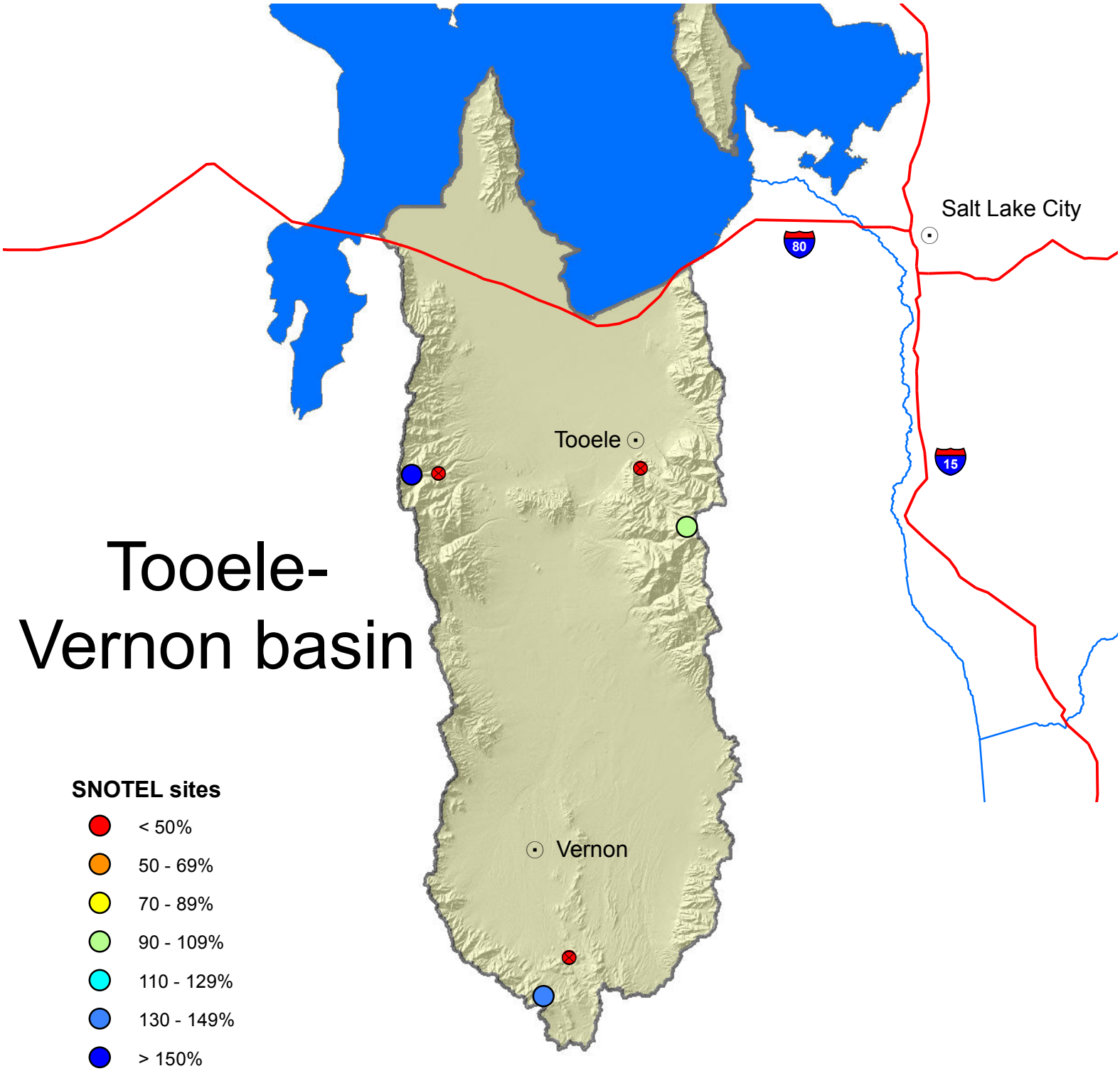
Precipitation



Reservoir Storage



Tooele-Vernon basin



SNOTEL sites

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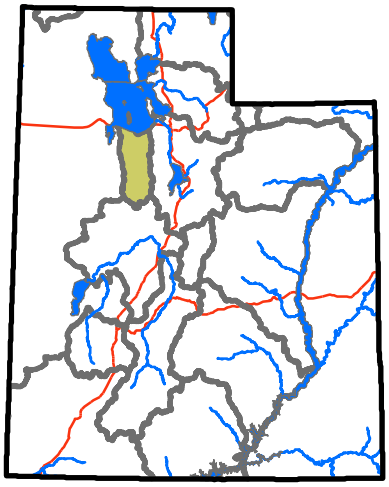
- Cities
- Rivers
- Highways

N

0 2.5 5 10 15 20 Miles



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Natural Resources Conservation Service

TOOELE VALLEY as of January 1, 2013

TOOELE VALLEY
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Vernon Ck nr Vernon	APR-JUL	0.07	0.76	1.31	94	1.86	2.70	1.39
S Willow Ck nr Grantsville	APR-JUL	1.33	2.30	2.90	94	3.50	4.50	3.10
W Canyon Ck nr Cedar Fort	APR-JUL	0.89	1.79	2.40	136	3.00	3.90	1.76

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

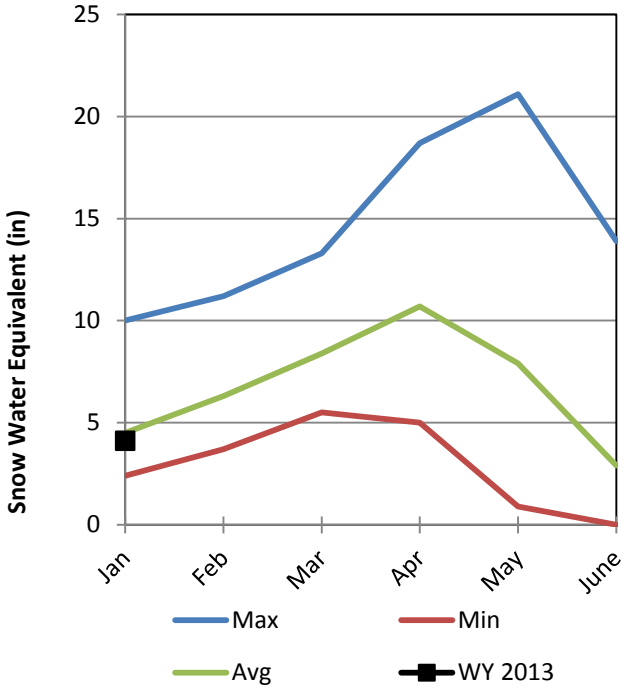
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

Northeastern Uintah Basin

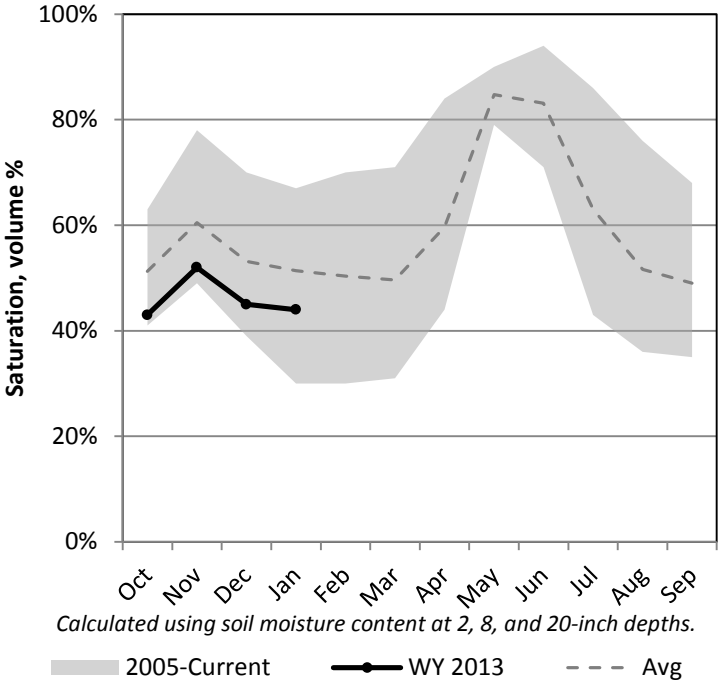
1/1/2013

Snowpack in the Northeastern Uintah Basin is near average at 103% of normal, compared to 101% last year. Precipitation in December was much above average at 133%, which brings the seasonal accumulation (Oct-Dec) to 95% of average. Soil Moisture is at 44% compared to 64% last year. Reservoir storage is at 79% of average, compared to 90% last year. Forecast streamflow volumes range from 76% to 85% of average.

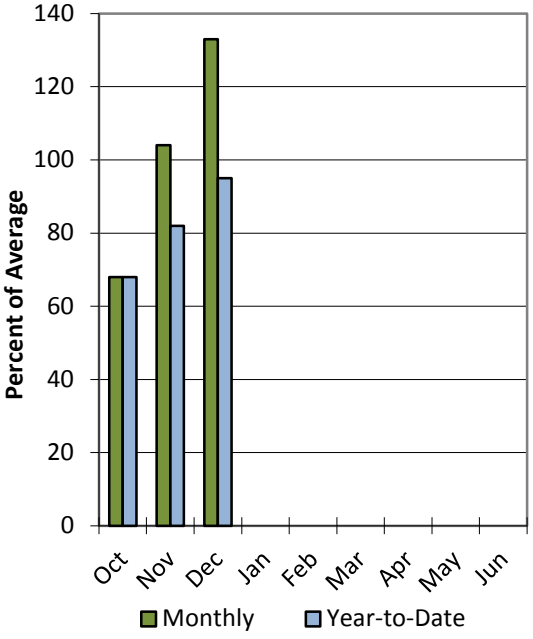
Snowpack



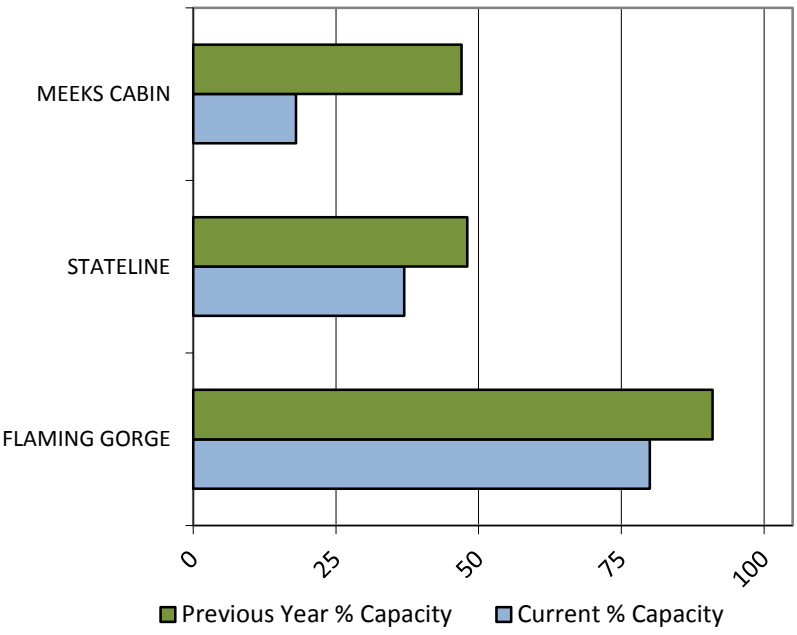
Soil Moisture



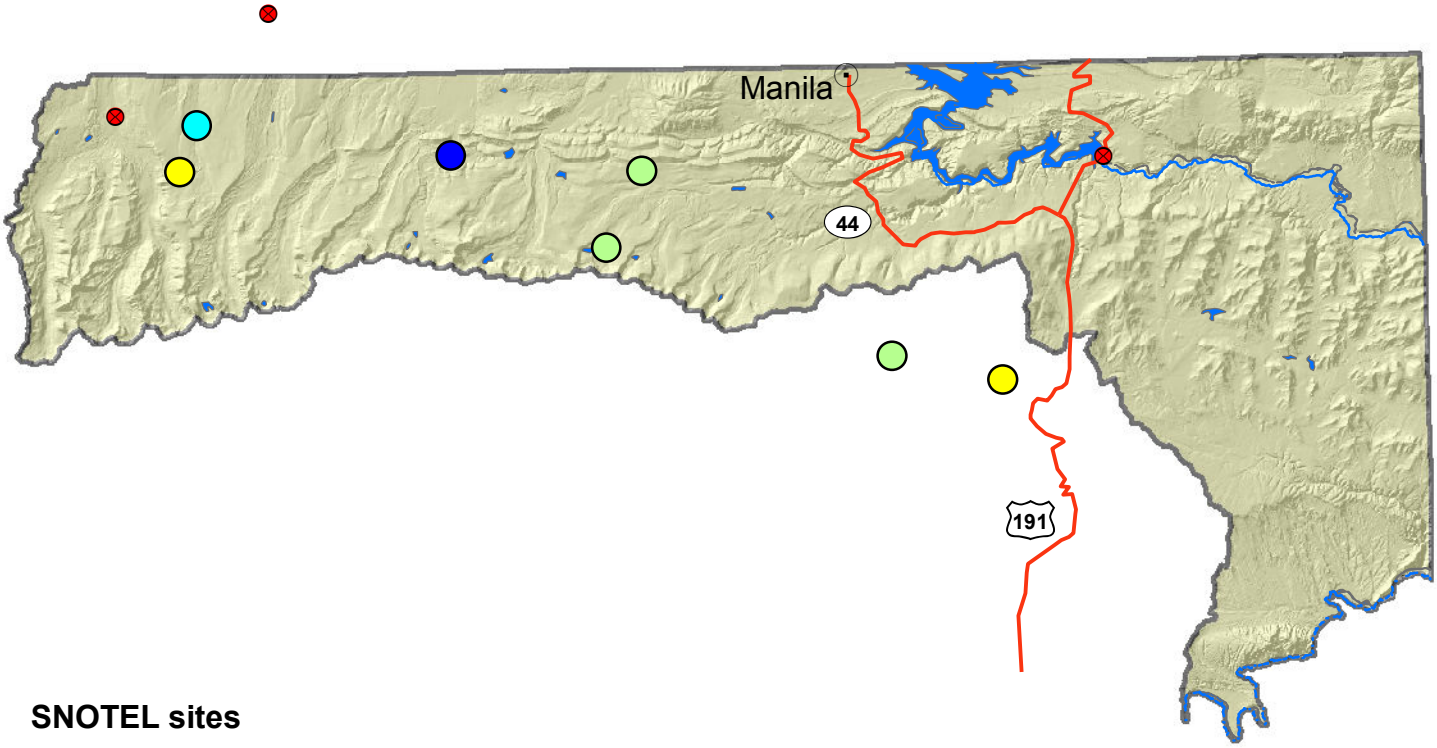
Precipitation



Reservoir Storage



Northeastern Utah



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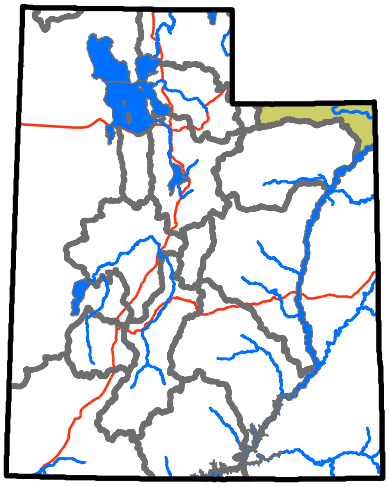
N

0 2.5 5 10 15 20 Miles



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Natural Resources Conservation Service

NORTHEASTERN UTAH as of January 1, 2013

NORTHEASTERN UTAH
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Blacks Fk nr Robertson	APR-JUL	44	60	73	82	87	109	89
EF of Smiths Fork nr Robertson (2)	APR-JUL	13.1	18.1	22	85	26	33	26
Flaming Gorge Reservoir Inflow (2)	APR-JUL	355	570	745	76	945	1280	980

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

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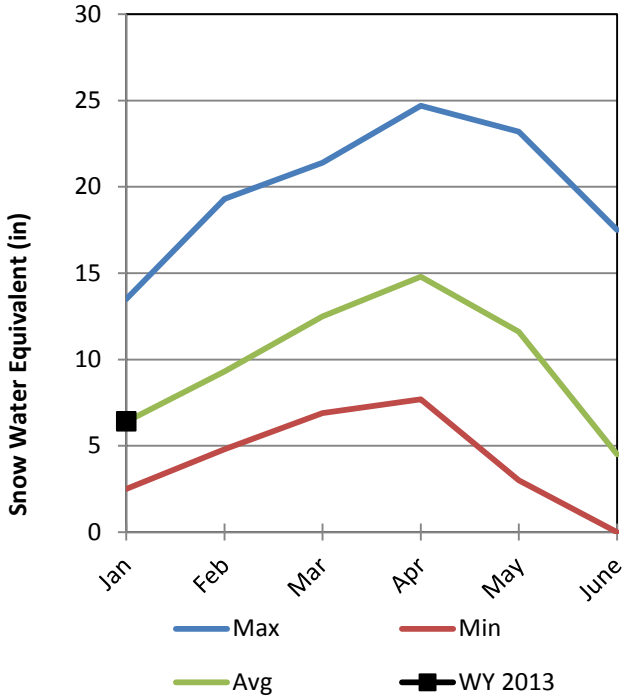
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

Duchesne River Basin

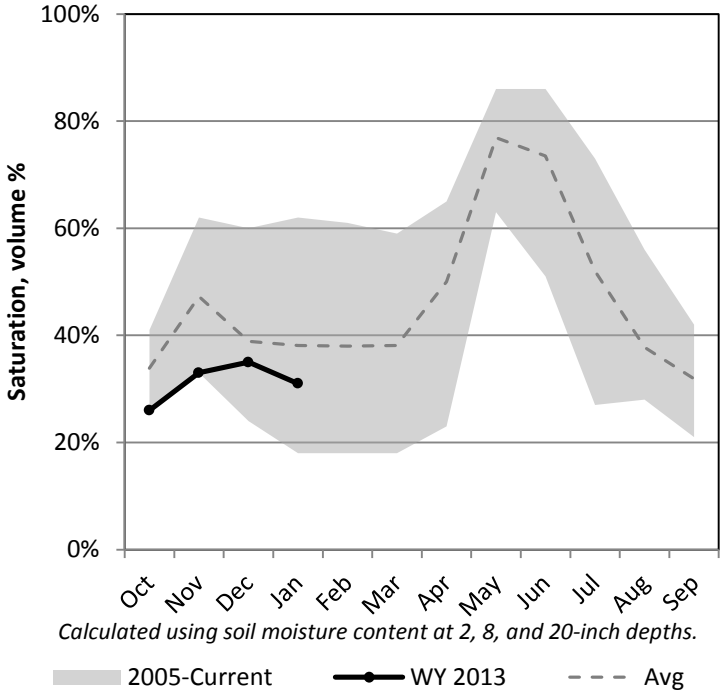
1/1/2013

Snowpack in the Duchesne River Basin is above average at 123% of normal, compared to 79% last year. Precipitation in December was above average at 124%, which brings the seasonal accumulation (Oct-Dec) to 100% of average. Soil Moisture is at 31% compared to 34% last year. Reservoir storage is at 75% of average, compared to 86% last year. Forecast streamflow volumes range from 77% to 88% of average. The surface water supply index is 48% for the Western Uintahs, 20% for the Eastern Uintahs.

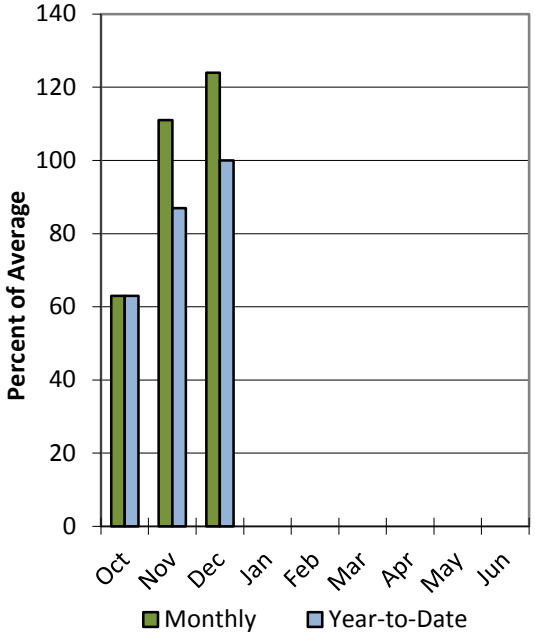
Snowpack



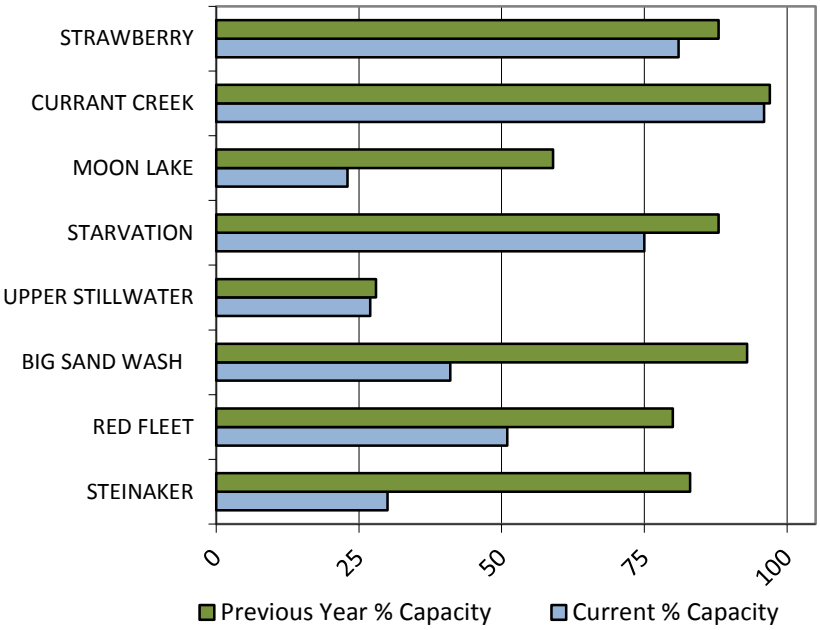
Soil Moisture



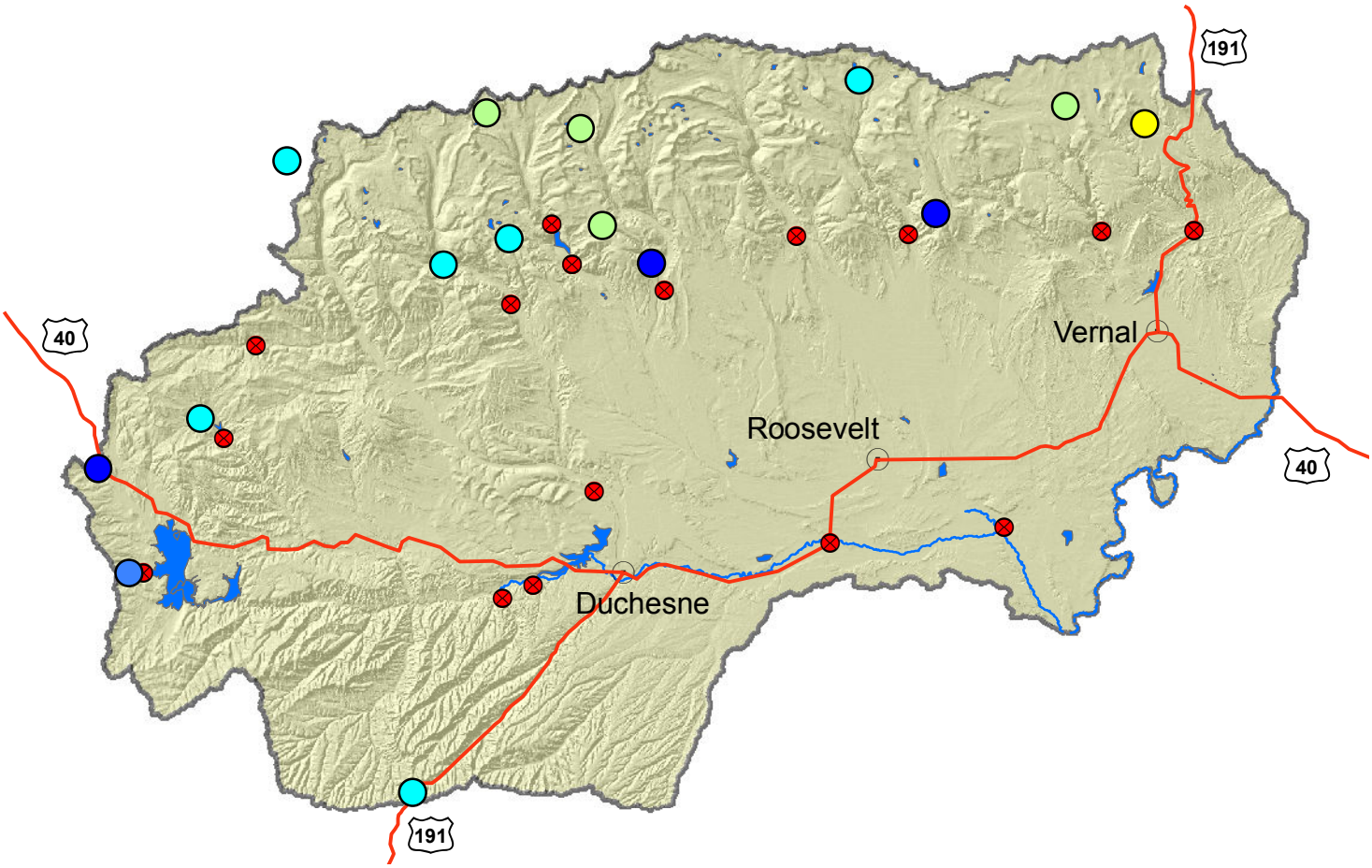
Precipitation



Reservoir Storage



Duchesne basin



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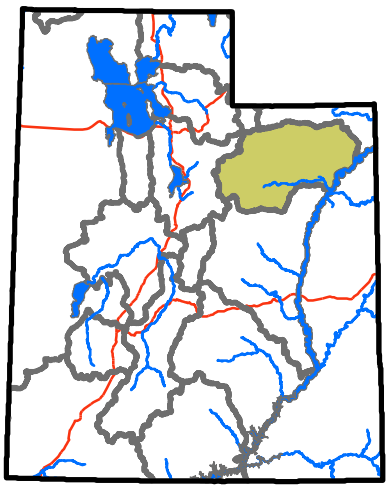
N

0 5 10 20 30 40 Miles



USDA NRCS
United States Department of Agriculture
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UINTAH BASIN as of January 1, 2013

UINTAH BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	10.4	14.1	17.0	81	20	25	21
Ashley Ck nr Vernal	APR-JUL	23	32	40	80	48	62	50
WF Duchesne R at VAT Diversion	APR-JUL	8.1	12.1	15.3	82	18.9	25	18.6
Duchesne R nr Tabiona (2)	APR-JUL	56	78	95	88	114	144	108
Upper Stillwater Reservoir Inflow (2	APR-JUL	37	52	63	85	75	95	74
Rock Ck nr Mountain Home (2)	APR-JUL	46	62	75	85	89	111	88
Duchesne R ab Knight Diversion (2)	APR-JUL	103	140	168	86	199	250	195
Strawberry R nr Soldier Springs (2)	APR-JUL	17.0	33	47	86	63	92	55
Currant Ck Reservoir Inflow (2)	APR-JUL	7.4	12.6	17.0	85	22	31	20
Strawberry R nr Duchesne (2)	APR-JUL	32	64	92	82	125	182	112
Lake Fork R ab Moon Lake Reservoir	APR-JUL	29	42	52	85	63	82	61
Yellowstone R nr Altonah	APR-JUL	31	43	52	85	62	78	61
Duchesne R at Myton (2)	APR-JUL	111	192	260	79	340	470	330
Uinta R bl Powerplant Diversion nr N	APR-JUL	28	46	61	82	78	107	74
Whiterocks R nr Whiterocks	APR-JUL	25	36	45	83	55	71	54
Duchesne R nr Randlett (2)	APR-JUL	109	210	295	77	395	570	385

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

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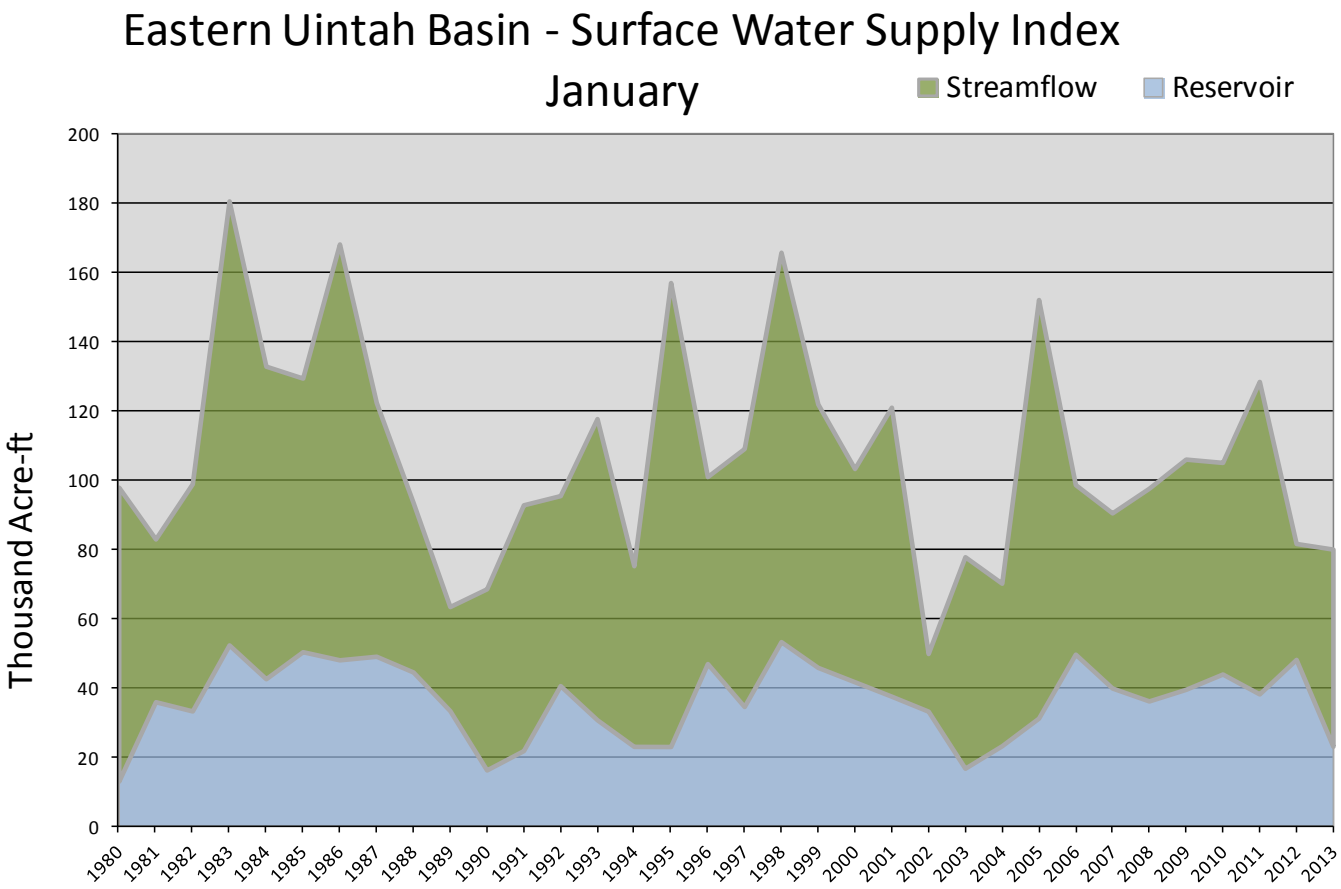
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

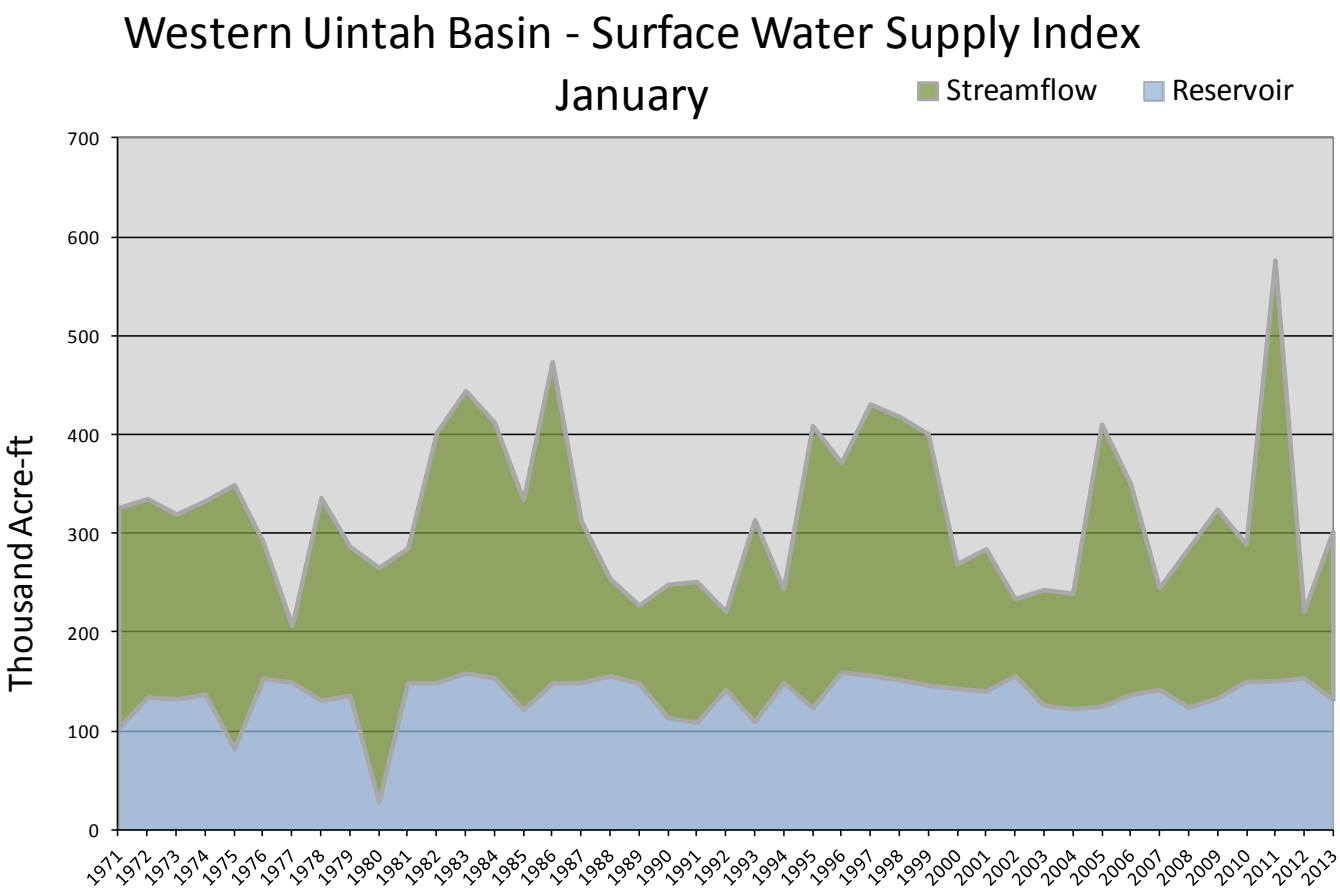
January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Red Fleet & Steinaker	April-July Forecast Big Brush & Ashley Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Eastern Uintah	**23.3**	**57.0**	**80.3**	**-2.50**	**20**	**94, 03, 12, 81**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*



January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Starvation & Upper Stillwater	April-July Forecast Rock Creek & Duchesne River	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Western Uintah	**133**	**170**	**303**	**-0.19**	**48**	**10, 76, 87, 93**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

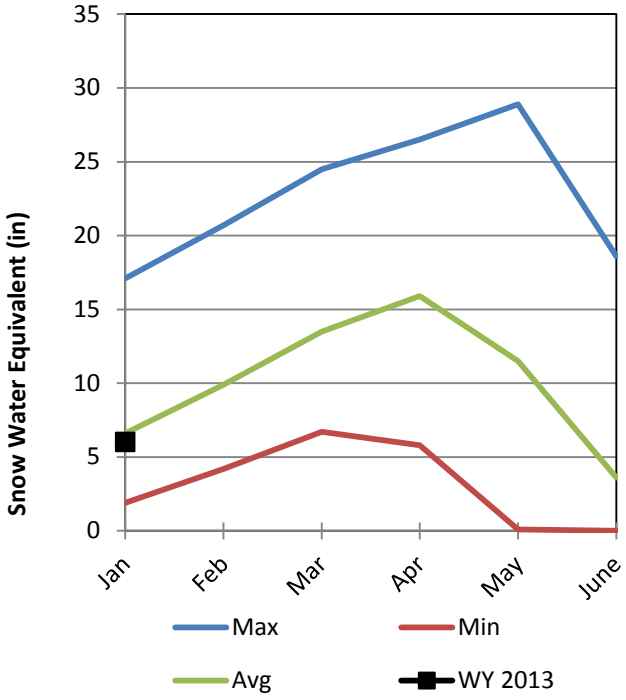


Price & San Rafael Basins

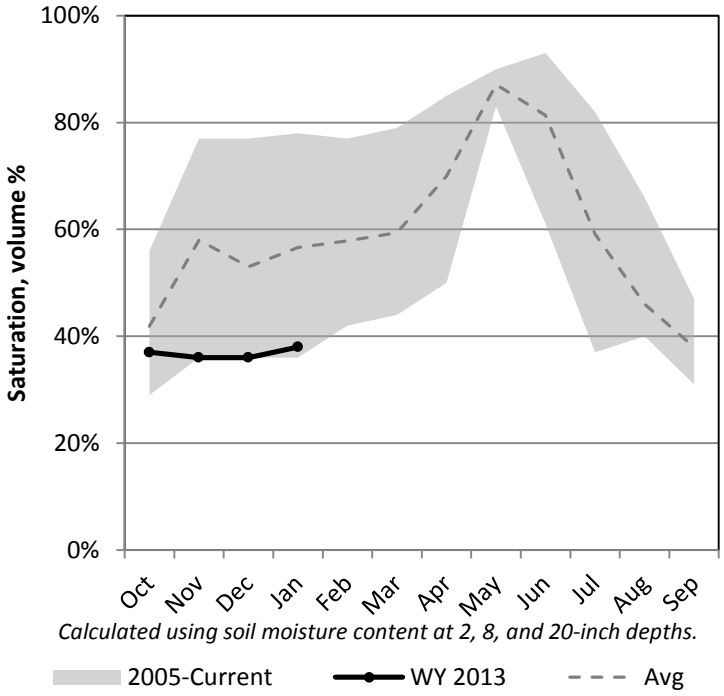
1/1/2013

Snowpack in the Price & San Rafael Basins is above average at 110% of normal, compared to 53% last year. Precipitation in December was much above average at 144%, which brings the seasonal accumulation (Oct-Dec) to 97% of average. Soil Moisture is at 38% compared to 55% last year. Reservoir storage is at 46% of average, compared to 75% last year. Forecast streamflow volumes range from 71% to 93% of average. The surface water supply index is 40% for the Price River, 31% for Joe's Valley, 37% for Ferron Creek.

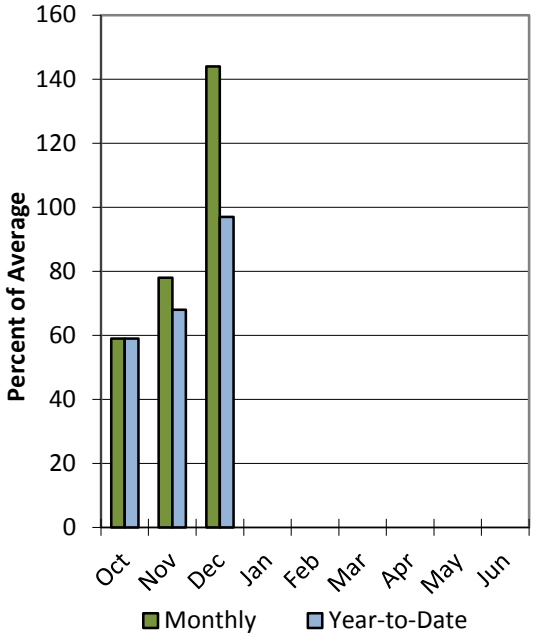
Snowpack



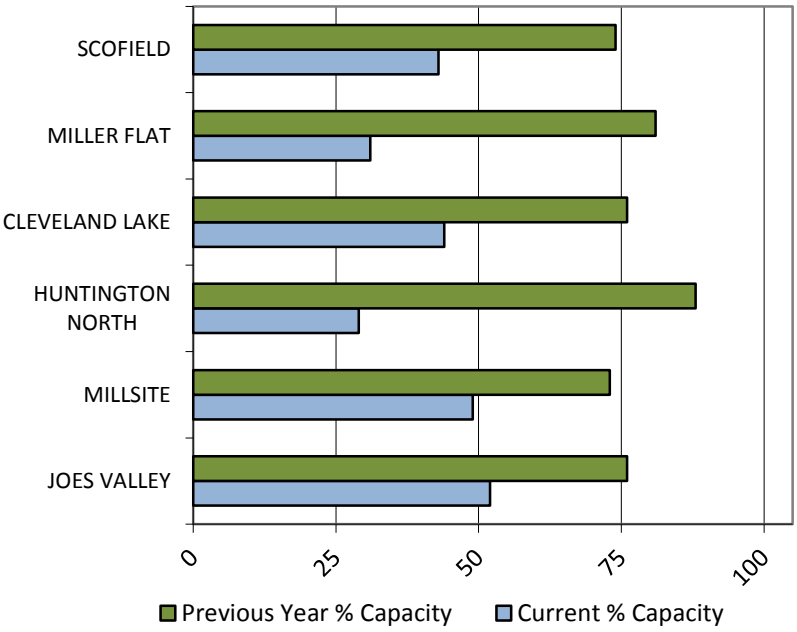
Soil Moisture



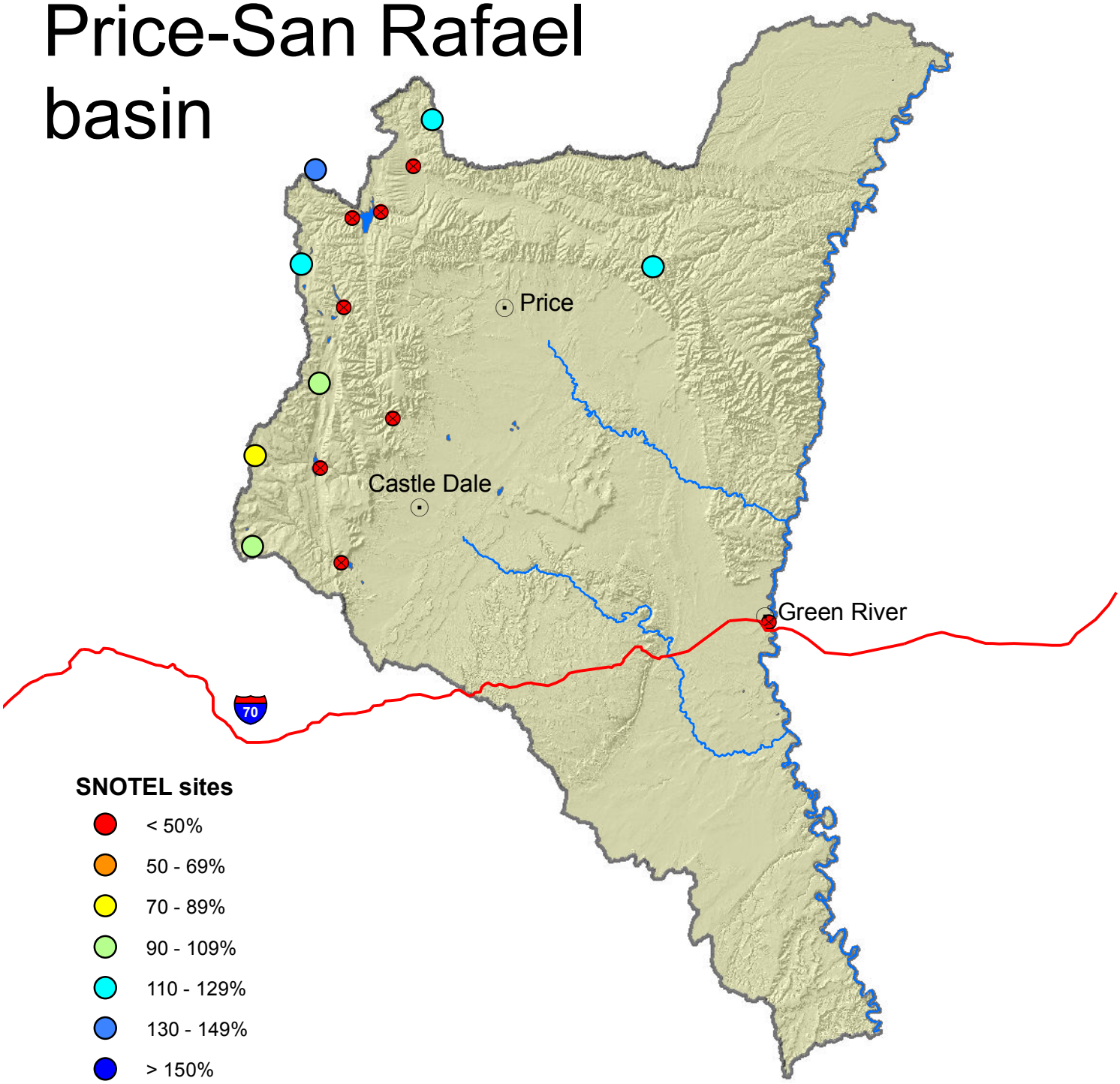
Precipitation



Reservoir Storage



Price-San Rafael basin

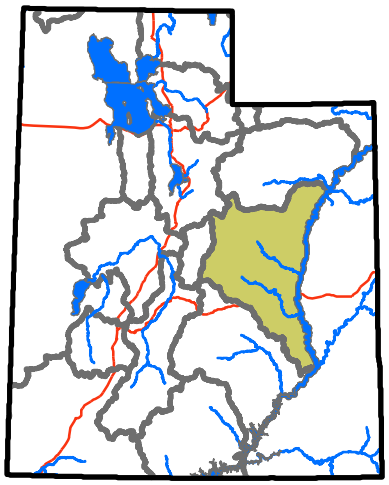


SNOTEL sites

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%
- Forecast points
- Cities
- Rivers
- Highways

N

0 5 10 20 30 40 Miles



USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

PRICE-SAN RAFAEL BASINS as of January 1, 2013

PRICE – SAN RAFAEL
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Fish Creek ab Reservoir nr Scofield	APR-JUL	15.3	22	27	90	33	42	30
Price R nr Scofield Reservoir (2)	APR-JUL	20	30	37	90	45	59	41
White R bl Tabbyune Ck	APR-JUL	5.6	10.2	14.0	90	18.5	26	15.5
Green R at Green River, UT (2)	APR-JUL	1010	1610	2100	71	2650	3580	2960
Electric Lake Inflow (2)	APR-JUL	5.7	9.2	12.0	90	15.2	21	13.3
Huntington Ck nr Huntington (2)	APR-JUL	19.6	29	37	93	46	60	40
Joe's Valley Reservoir Inflow (2)	APR-JUL	25	36	44	79	53	68	56
Ferron Ck (Upper Station) nr Ferron	APR-JUL	18.0	25	30	79	36	45	38

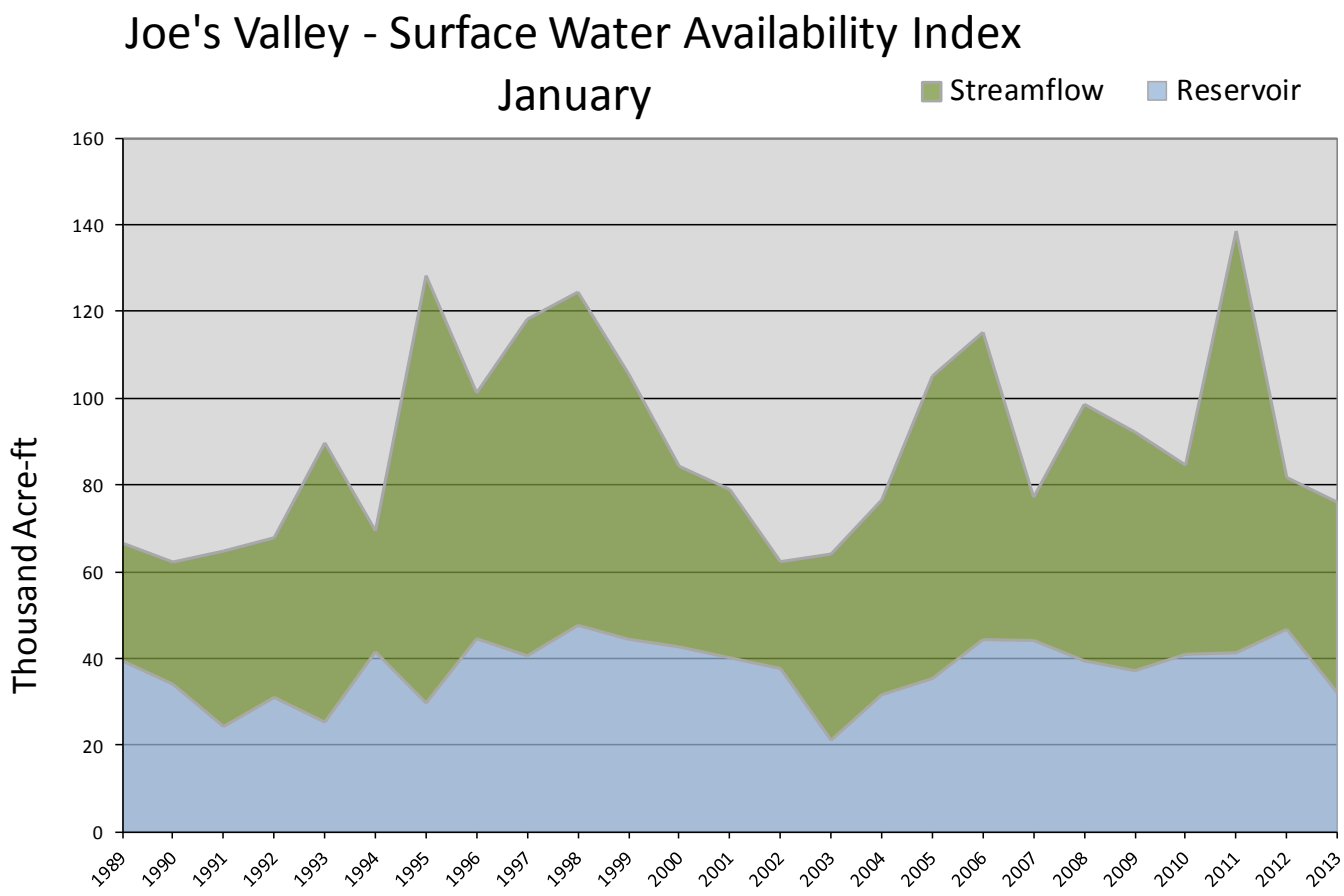
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

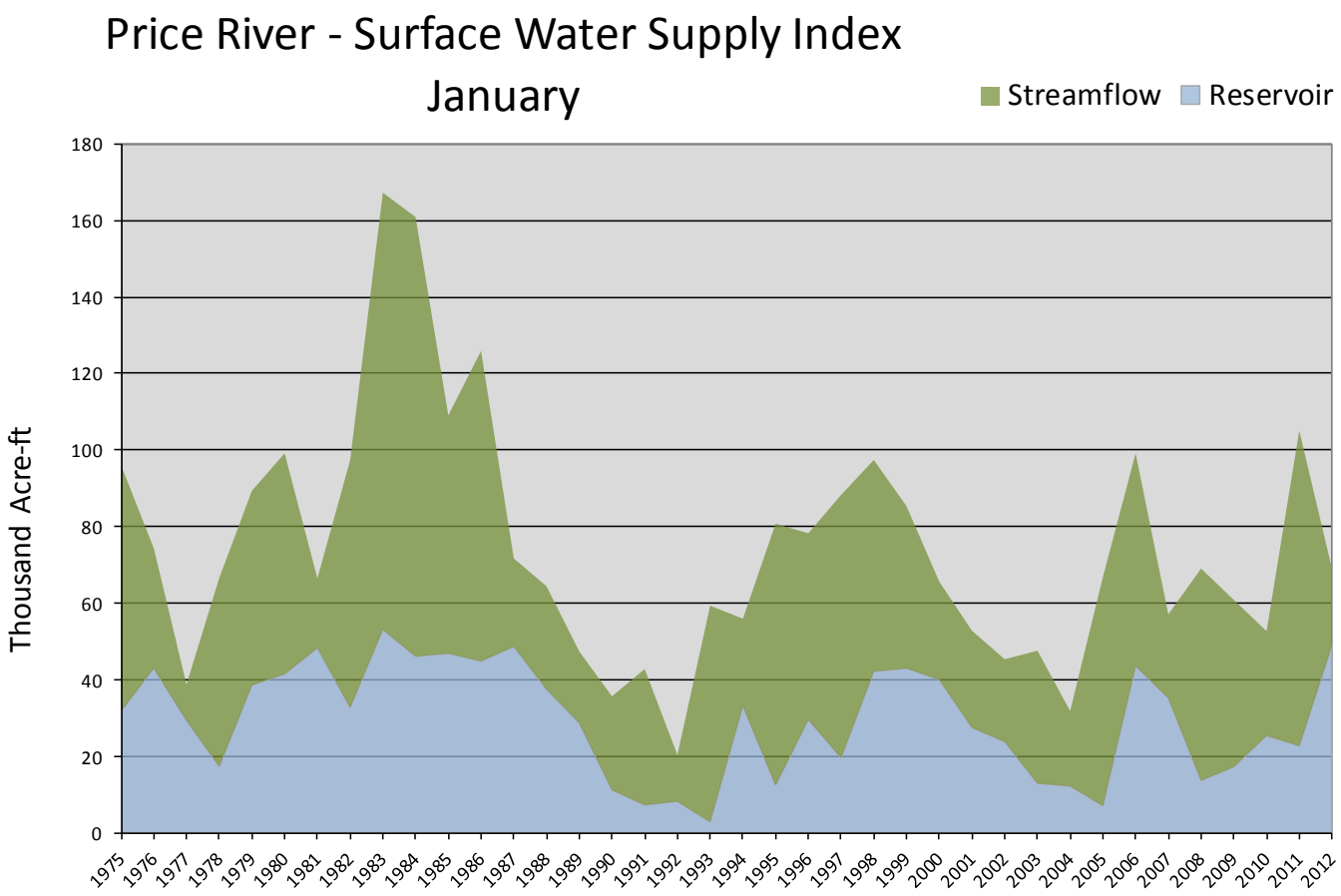
January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Joe's Valley	April-July Forecast Inflow to Joe's Valley	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Joe's Valley	**32.0**	**44.0**	**76.0**	**-1.60**	**31**	**92, 94, 04, 07**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*



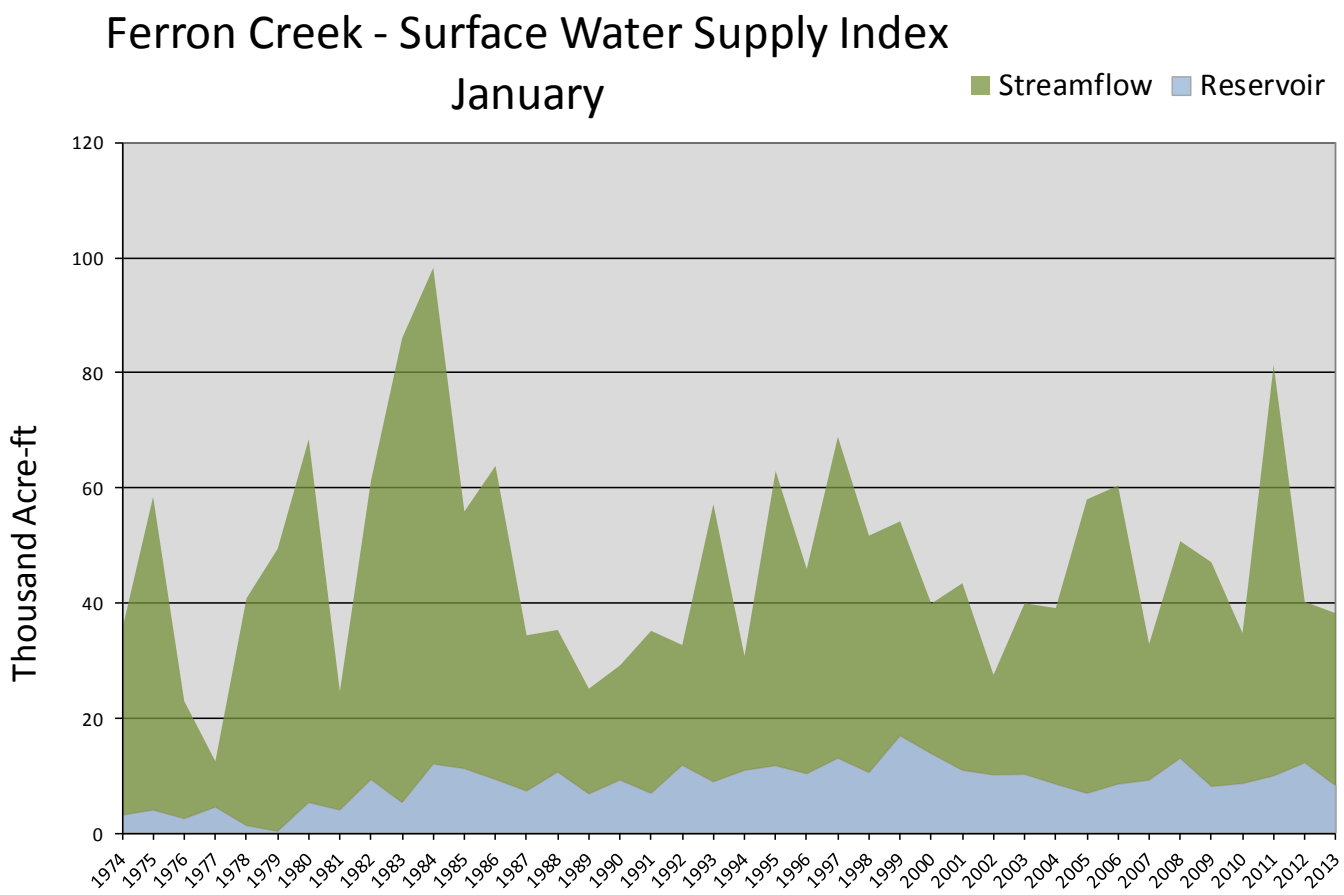
January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Scofield Reservoir	April-July Forecast @ Scofield	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Price River	**28.4**	**37.0**	**65.4**	**-0.83**	**40**	**09, 88, 00, 81**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*



January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Millsite Reservoir	April-July Forecast Ferron creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Ferron Creek	**8.2**	**30.0**	**38.2**	**-1.12**	**37**	**74, 88, 04, 00**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

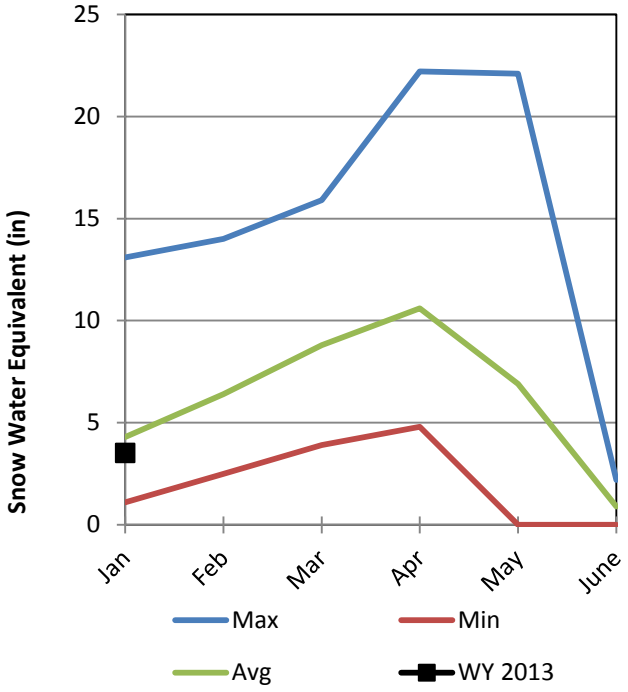


Dirty Devil Basin

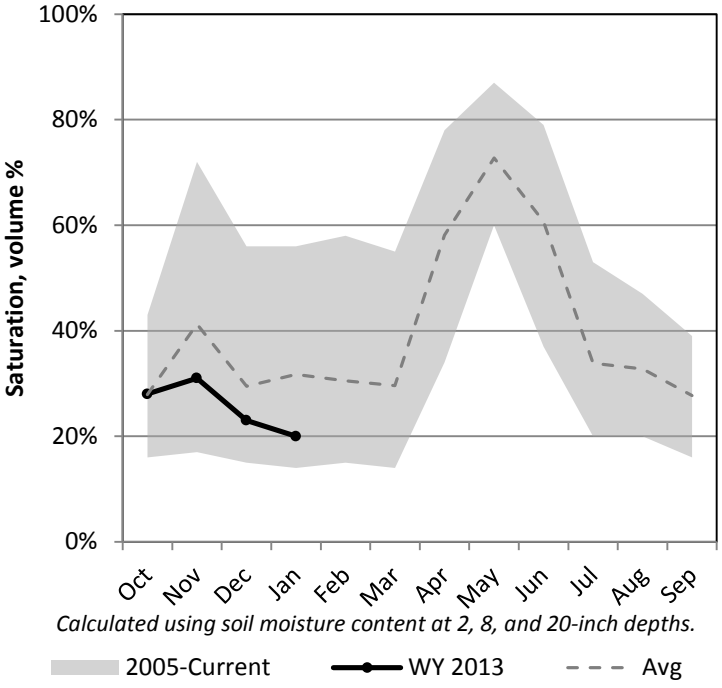
1/1/2013

Snowpack in the Dirty Devil Basin is near average at 100% of normal, compared to 94% last year. Precipitation in December was above average at 116%, which brings the seasonal accumulation (Oct-Dec) to 81% of average. Soil Moisture is at 20% compared to 26% last year. Forecast streamflow volumes range from 75% to 80% of average.

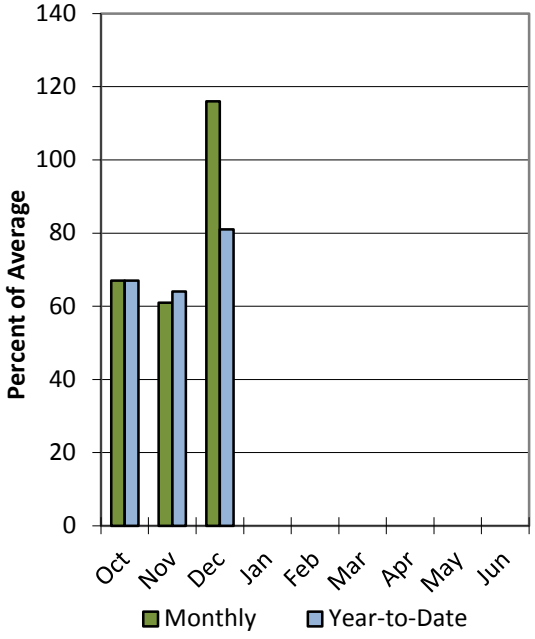
Snowpack



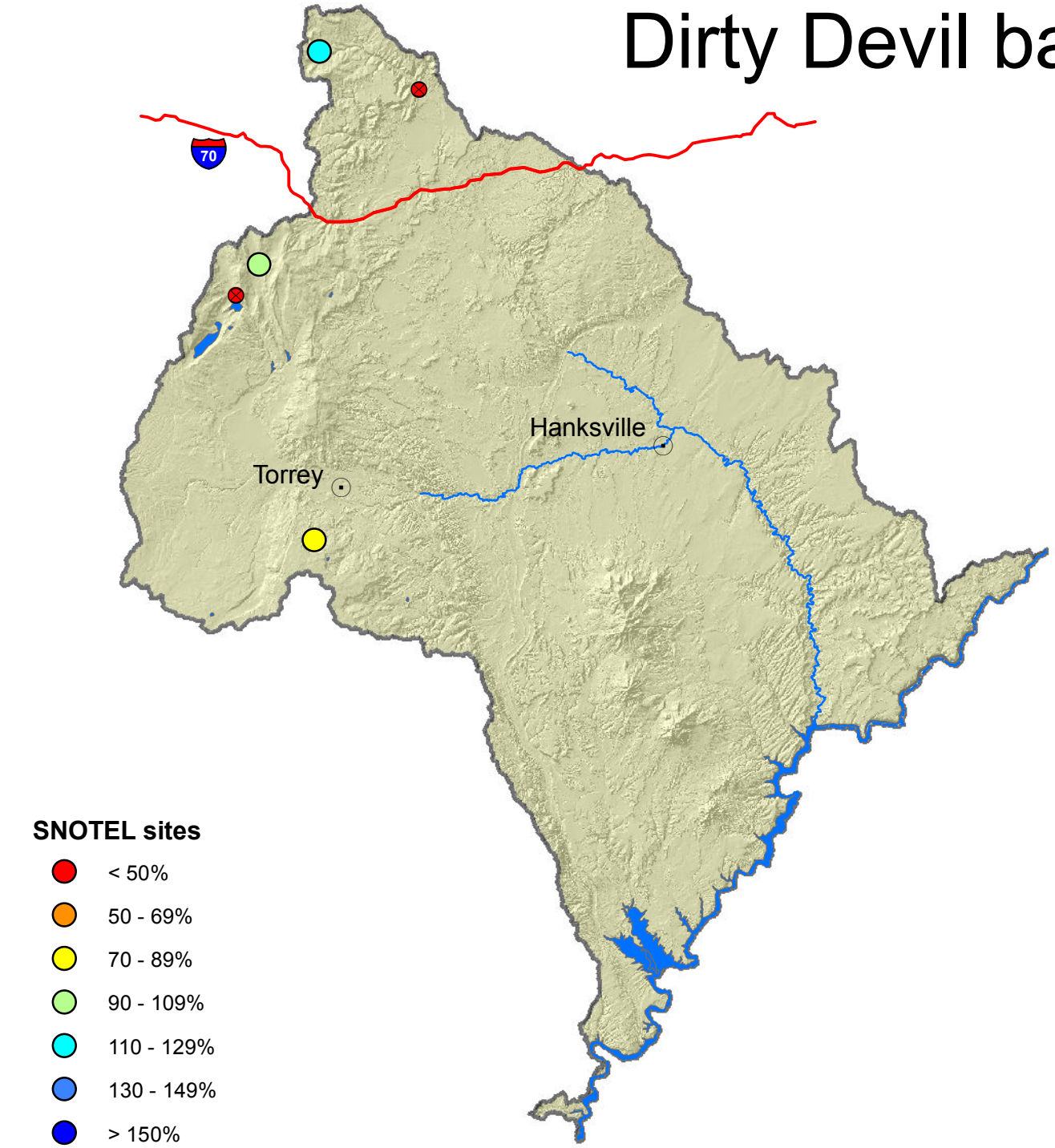
Soil Moisture



Precipitation



Dirty Devil basin



SNOTEL sites

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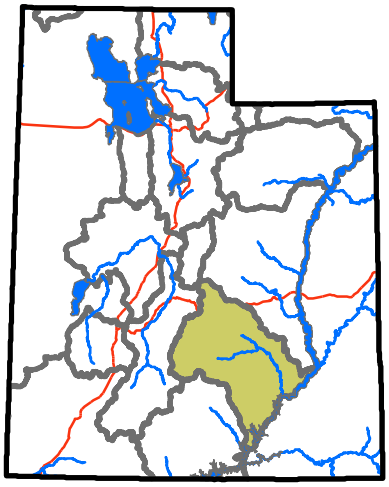
- Highways

N

0 5 10 20 30 40 Miles



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Natural Resources Conservation Service

DIRTY DEVIL BASIN as of January 1, 2013

DIRTY DEVIL
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Seven Mile Ck nr Fish Lake	APR-JUL	3.40	4.60	5.50	75	6.50	8.10	7.30
Muddy Ck nr Emery	APR-JUL	8.0	12.4	16.0	80	20	27	19.9

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

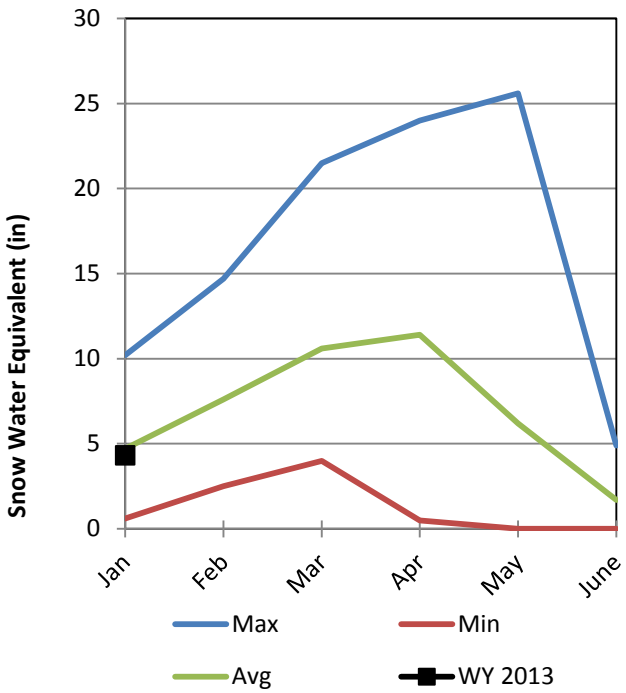
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

Southeastern Utah Basin

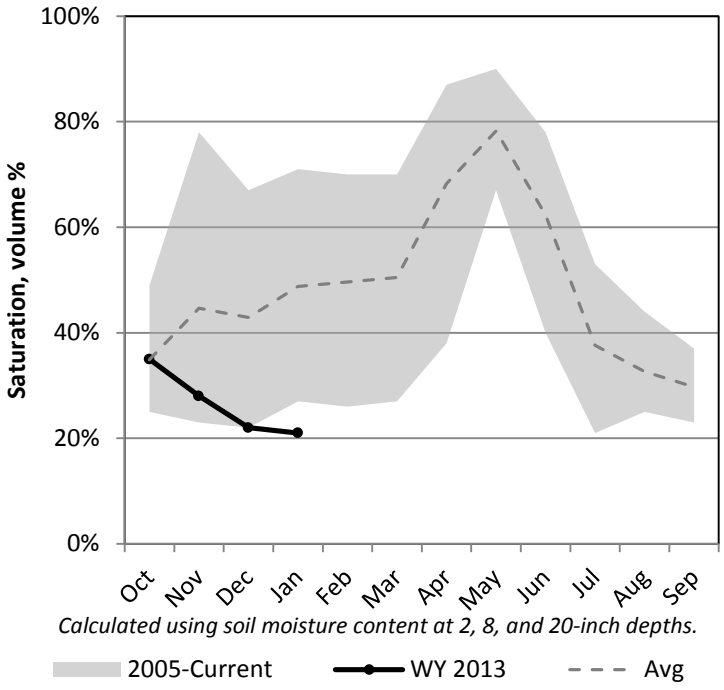
1/1/2013

Snowpack in the Southeastern Utah Basin is near average at 106% of normal, compared to 97% last year. Precipitation in December was much above average at 174%, which brings the seasonal accumulation (Oct-Dec) to 91% of average. Soil Moisture is at 21% compared to 56% last year. Reservoir storage is at 9% of average, compared to 70% last year. Forecast streamflow volumes range from 55% to 93% of average. The surface water supply index is 37% for Moab.

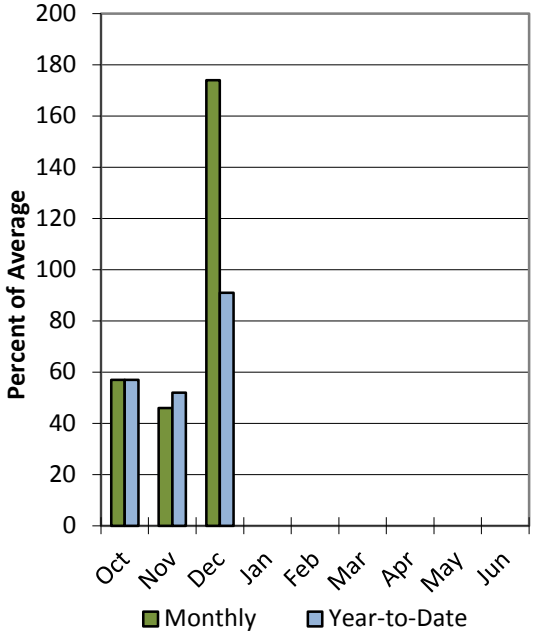
Snowpack



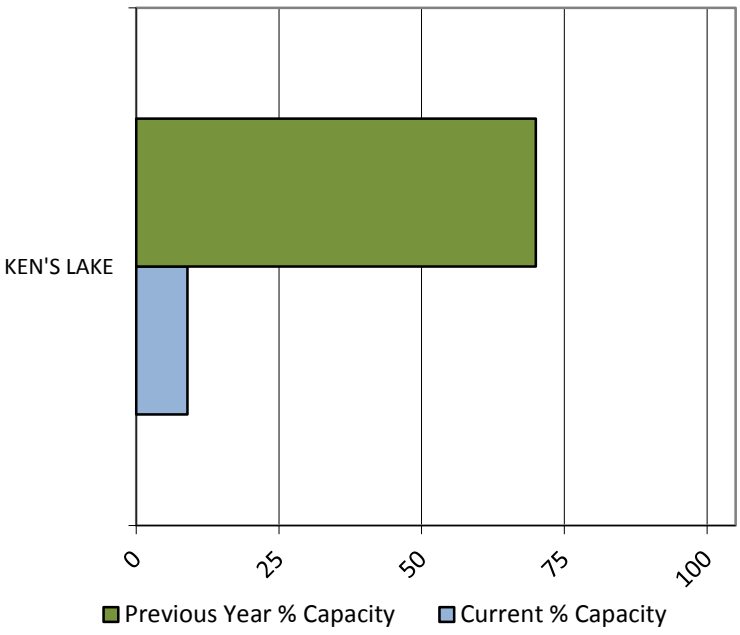
Soil Moisture



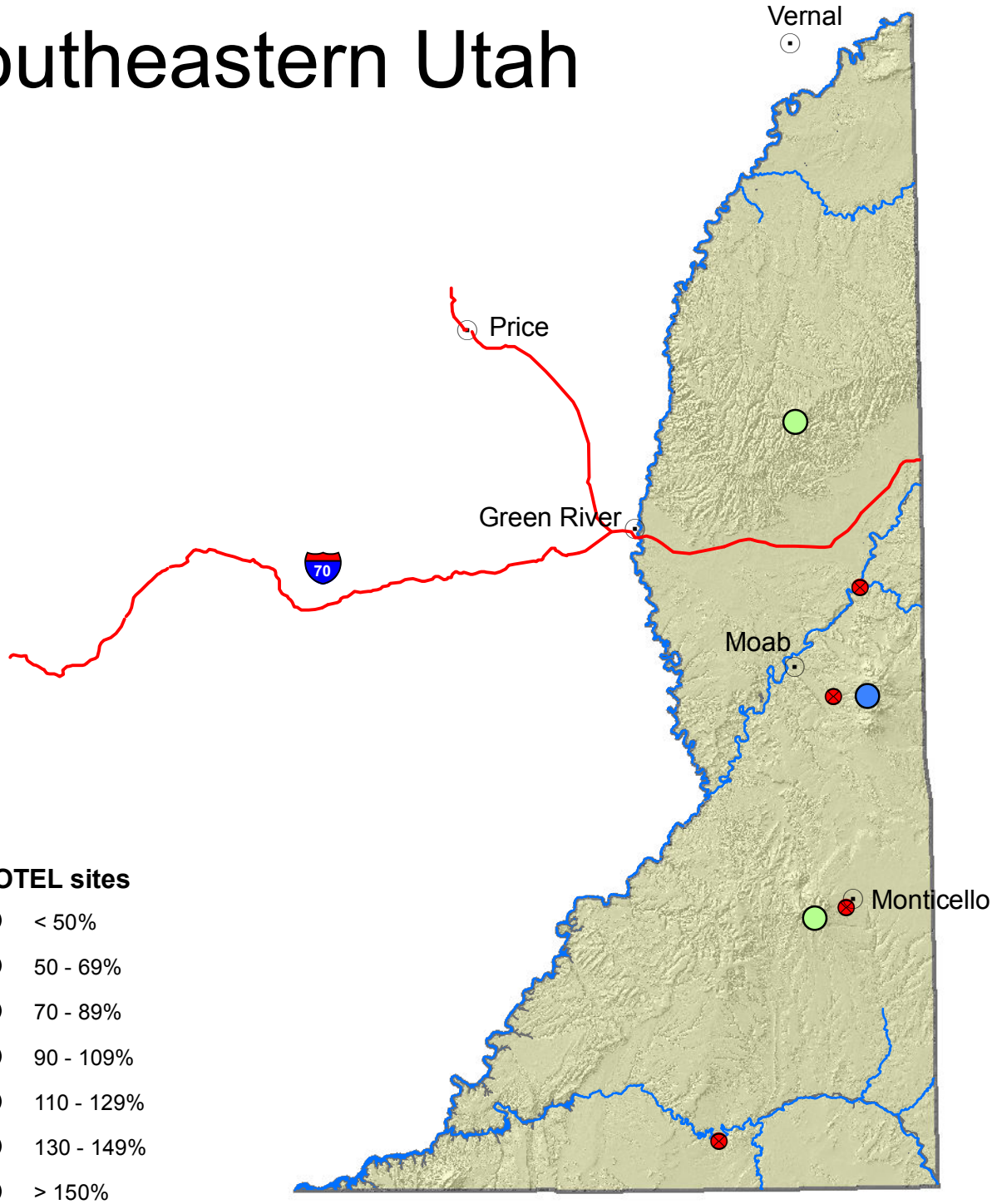
Precipitation



Reservoir Storage



Southeastern Utah



SNOTEL sites

- < 50%
- 50 - 69%
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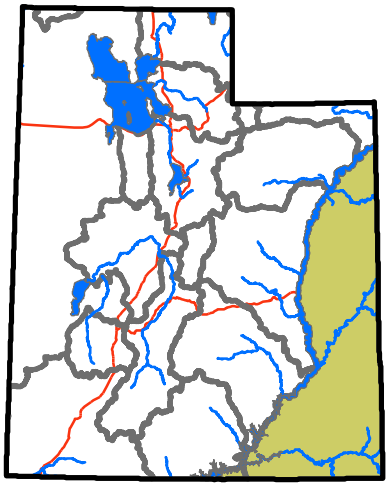
- Forecast points
- Cities
- Rivers
- Highways

N

0 5 10 20 30 40 Miles



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United States Department of Agriculture
Natural Resources Conservation Service

SOUTHEASTERN UTAH.
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	1.63	2.90	4.00	93	5.30	7.40	4.30
Colorado R nr Cisco (2)	APR-JUL	1290	2030	2630	61	3310	4450	4280
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.05	0.24	0.50	38	0.90	1.82	1.31
San Juan R nr Bluff (2)	APR-JUL	265	450	600	55	775	1070	1100

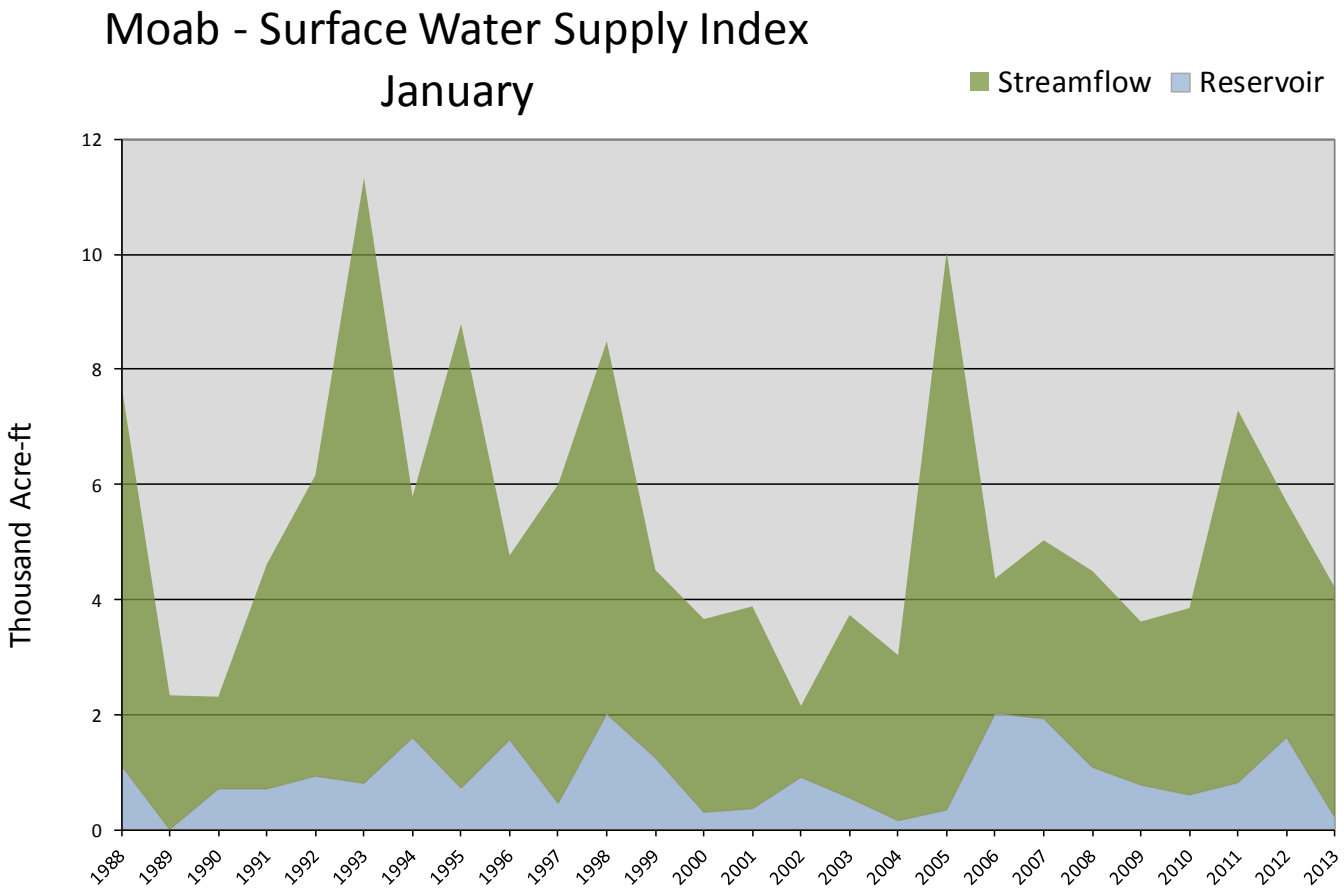
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Ken's Lake Reservoir	April-July Forecast Mill Creek at Sheley	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Moab	**0.2**	**4.0**	**4.2**	**-1.08**	**37**	**10, 01, 06, 08**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

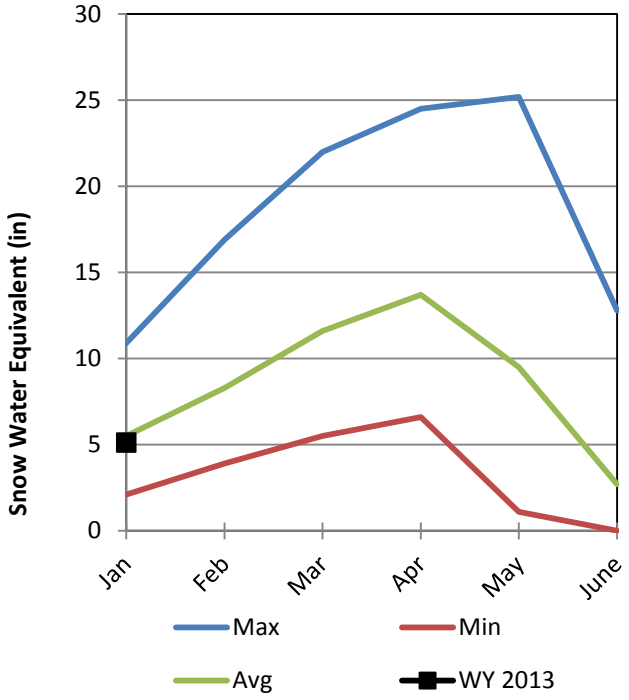


Upper Sevier River Basin

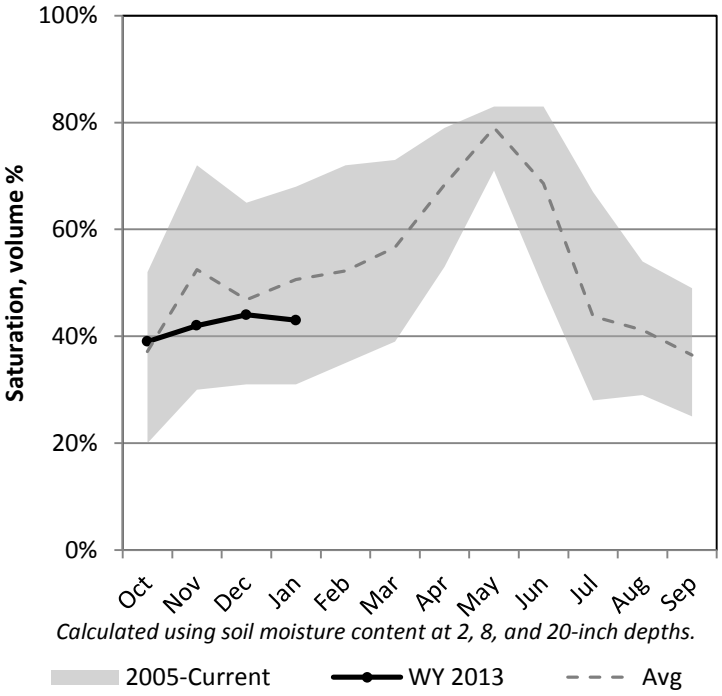
1/1/2013

Snowpack in the Upper Sevier River Basin is near average at 109% of normal, compared to 78% last year. Precipitation in December was much above average at 132%, which brings the seasonal accumulation (Oct-Dec) to 93% of average. Soil Moisture is at 43% compared to 54% last year. Reservoir storage is at 47% of average, compared to 74% last year. Forecast streamflow volumes range from 93% to 115% of average. The surface water supply index is 38% for the Upper Sevier.

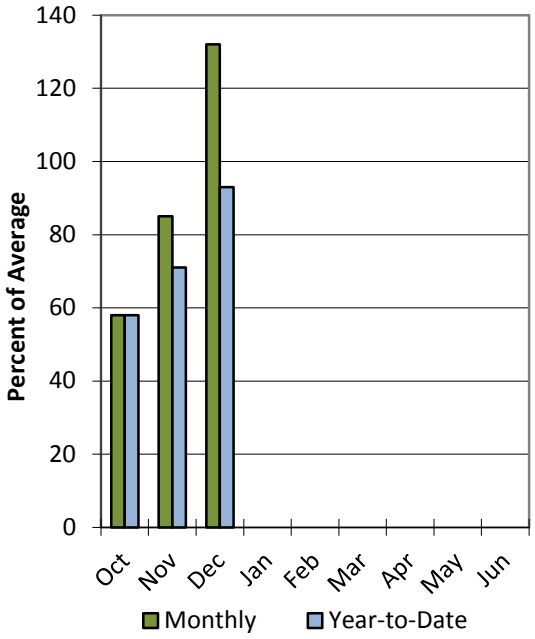
Snowpack



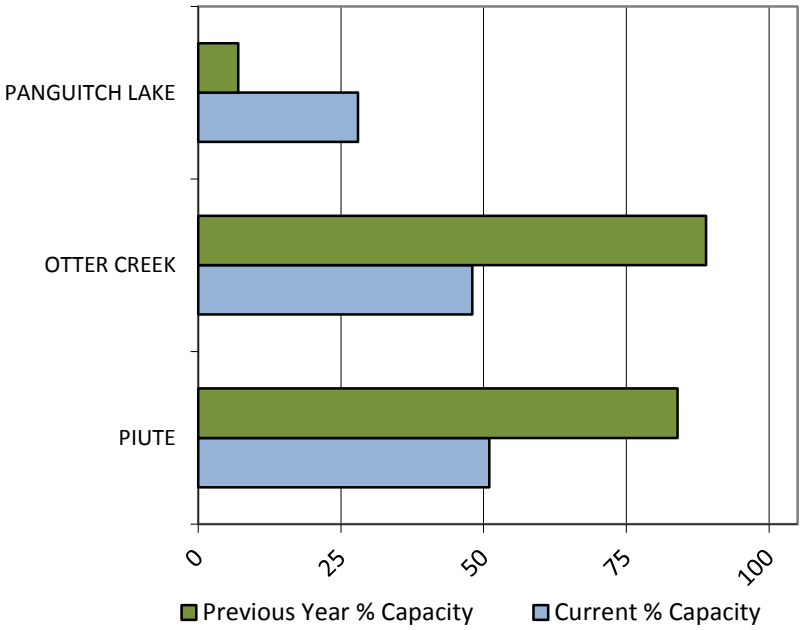
Soil Moisture



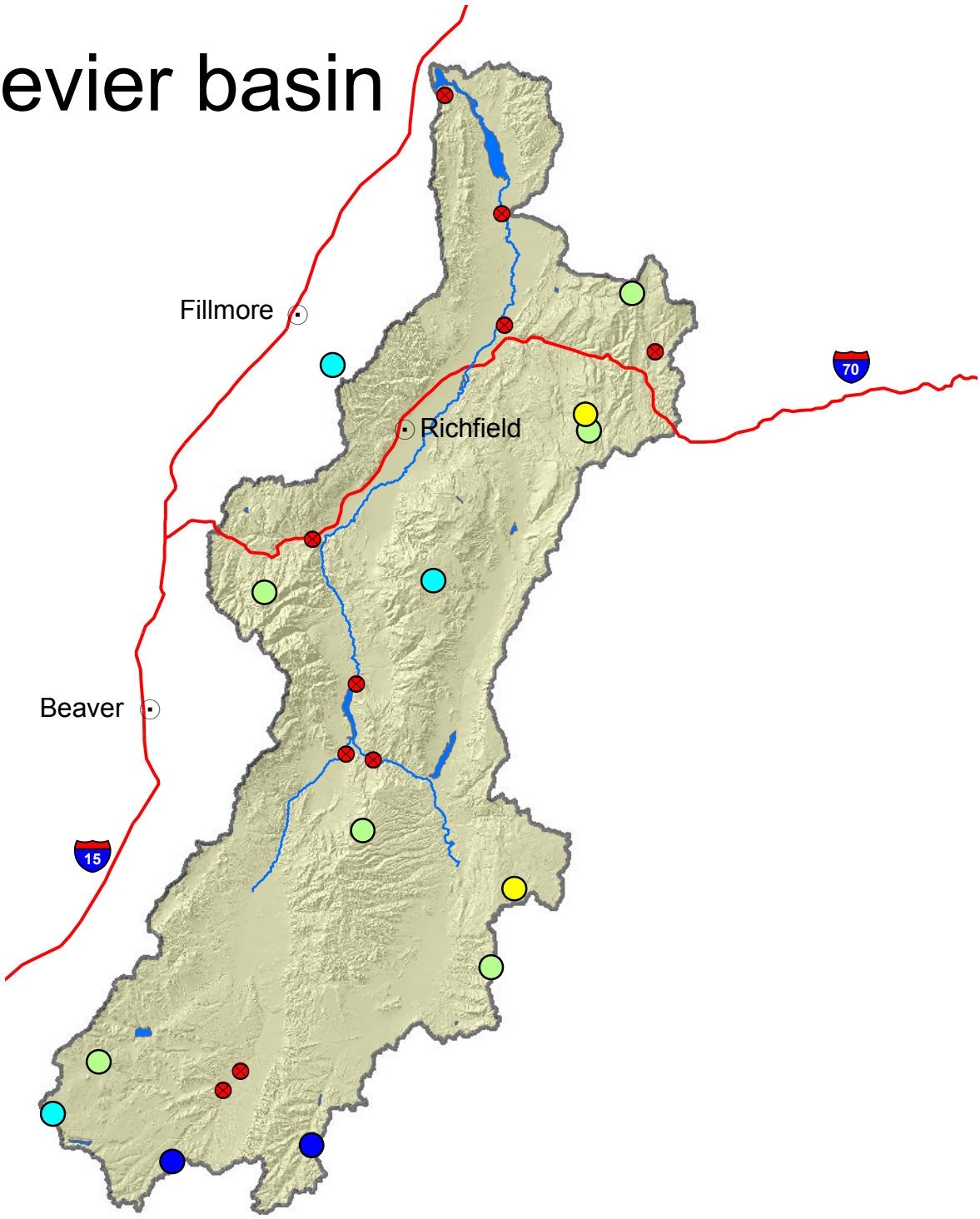
Precipitation



Reservoir Storage



Upper Sevier basin



SNOTEL sites

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- Forecast points
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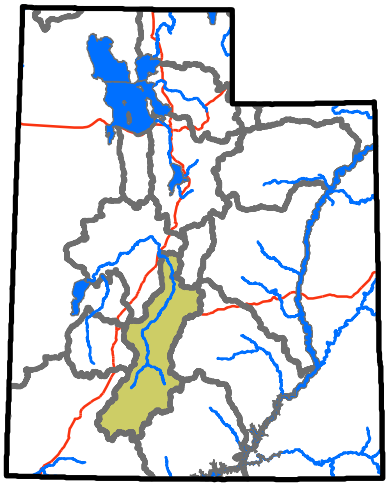
- Highways

N

0 5 10 20 30 40 Miles



USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

UPPER SEVIER BASIN as of January 1, 2013

UPPER SEVIER RIVER BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Mammoth Ck nr Hatch	APR-JUL	2.0	19.0	25	93	31	52	27
Sevier R at Hatch	APR-JUL	21	41	55	115	69	89	48
Sevier R nr Kingston	APR-JUL	1.0	18.7	34	103	49	72	33
EF Sevier R nr Kingston	APR-JUL	17.6	29	37	106	45	56	35
Sevier R bl Piute Dam	APR-JUL	14.9	47	68	103	89	121	66
Clear Ck ab Diversions nr Sevier	APR-JUL	8.3	15.2	20	95	25	32	21
Salina Ck nr Emery	APR-JUL	1.91	5.20	7.40	94	9.60	12.90	7.90
Salina Ck at Salina	APR-JUL	4.8	10.7	16.0	81	22	34	19.7

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
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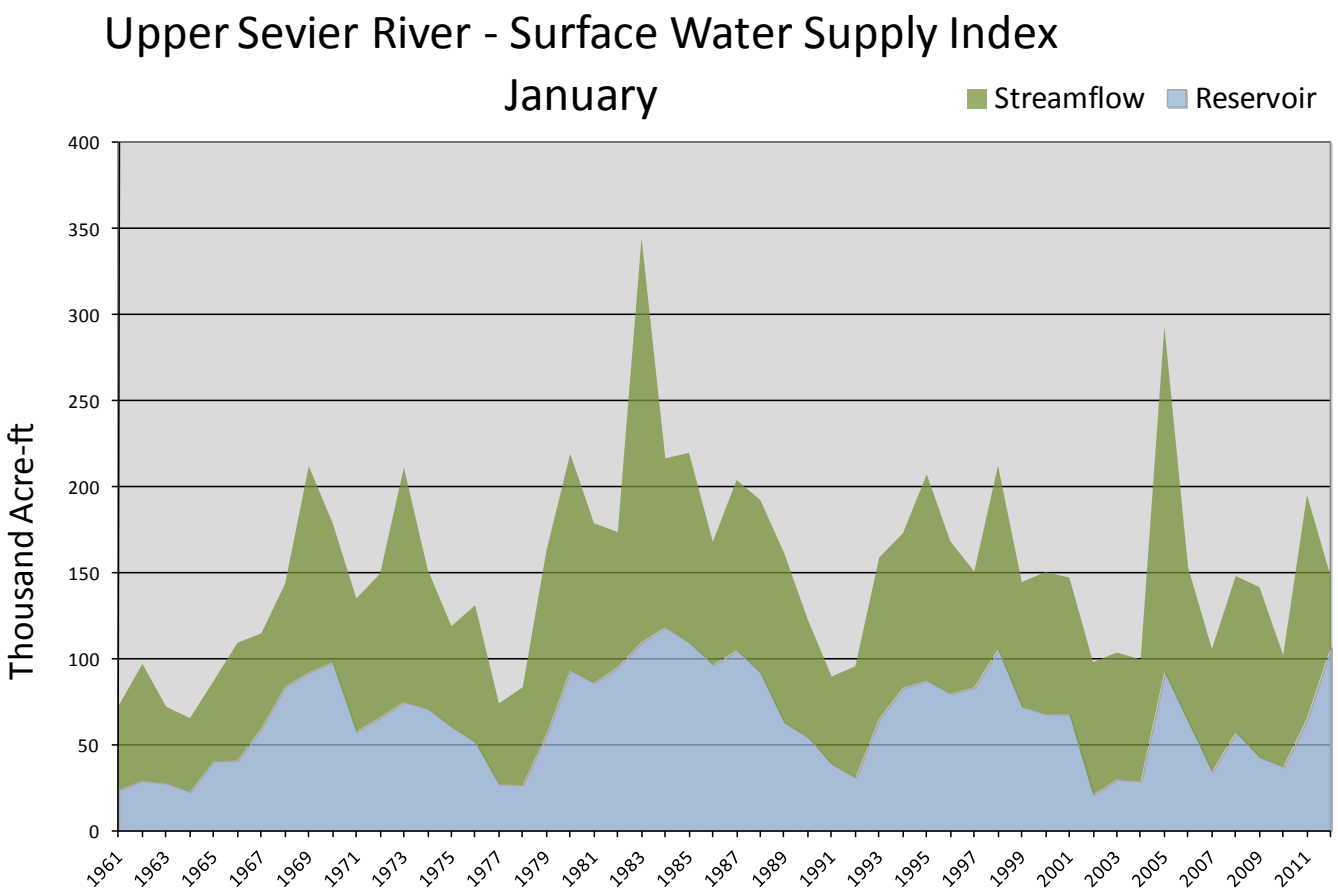
January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Piute & Otter Creek Reservoir	April-July Forecast Inflow to Piute Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Upper Sevier	**62.0**	**68**	**130**	**-0.99**	**38**	**75,90,59,76**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

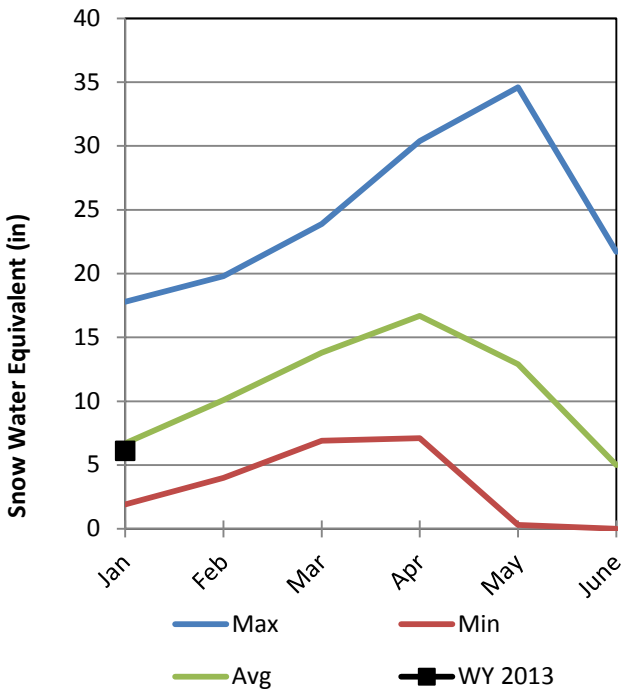


San Pitch River Basin

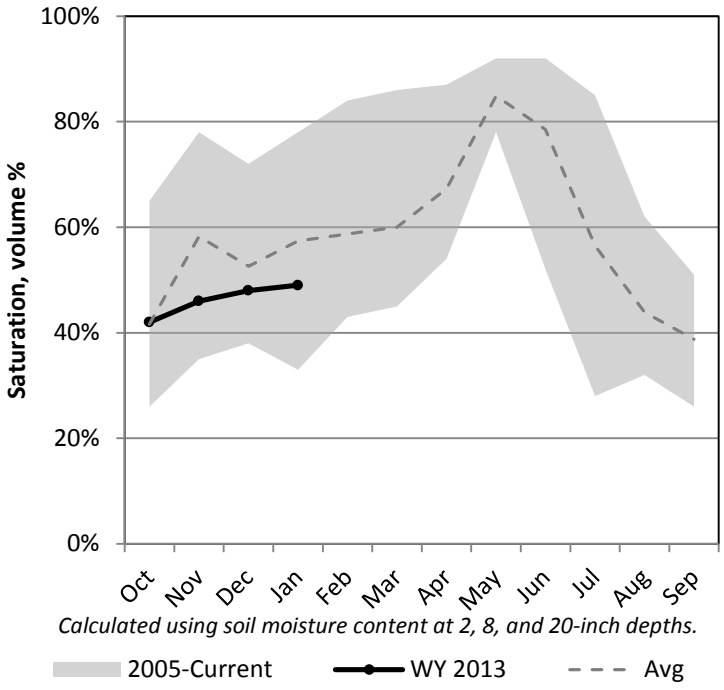
1/1/2013

Snowpack in the San Pitch River Basin is near average at 100% of normal, compared to 39% last year. Precipitation in December was much above average at 146%, which brings the seasonal accumulation (Oct-Dec) to 90% of average. Soil Moisture is at 49% compared to 57% last year. Reservoir storage is at 2% of average, compared to 90% last year. Forecast streamflow volumes range from 96% to 96% of average.

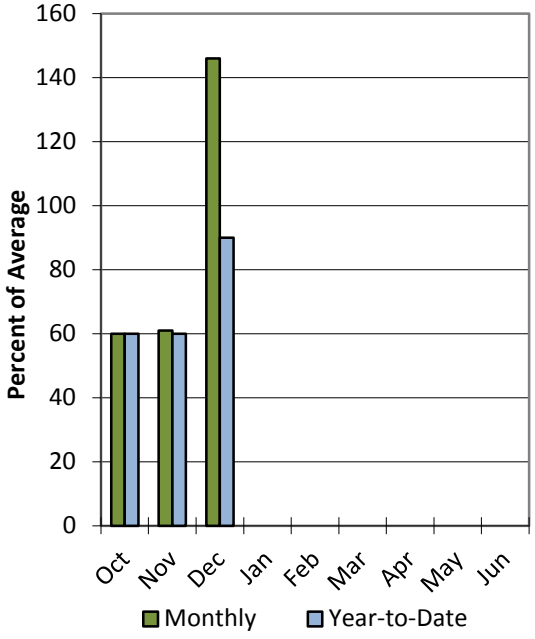
Snowpack



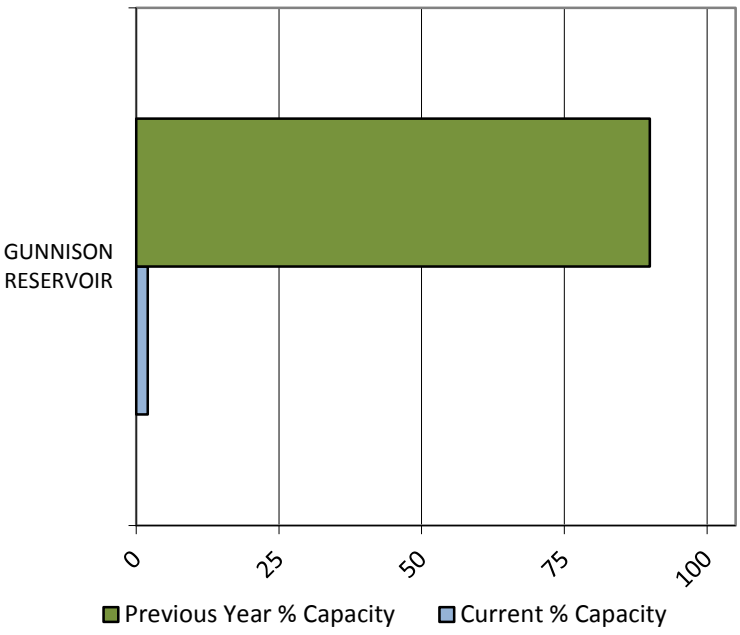
Soil Moisture



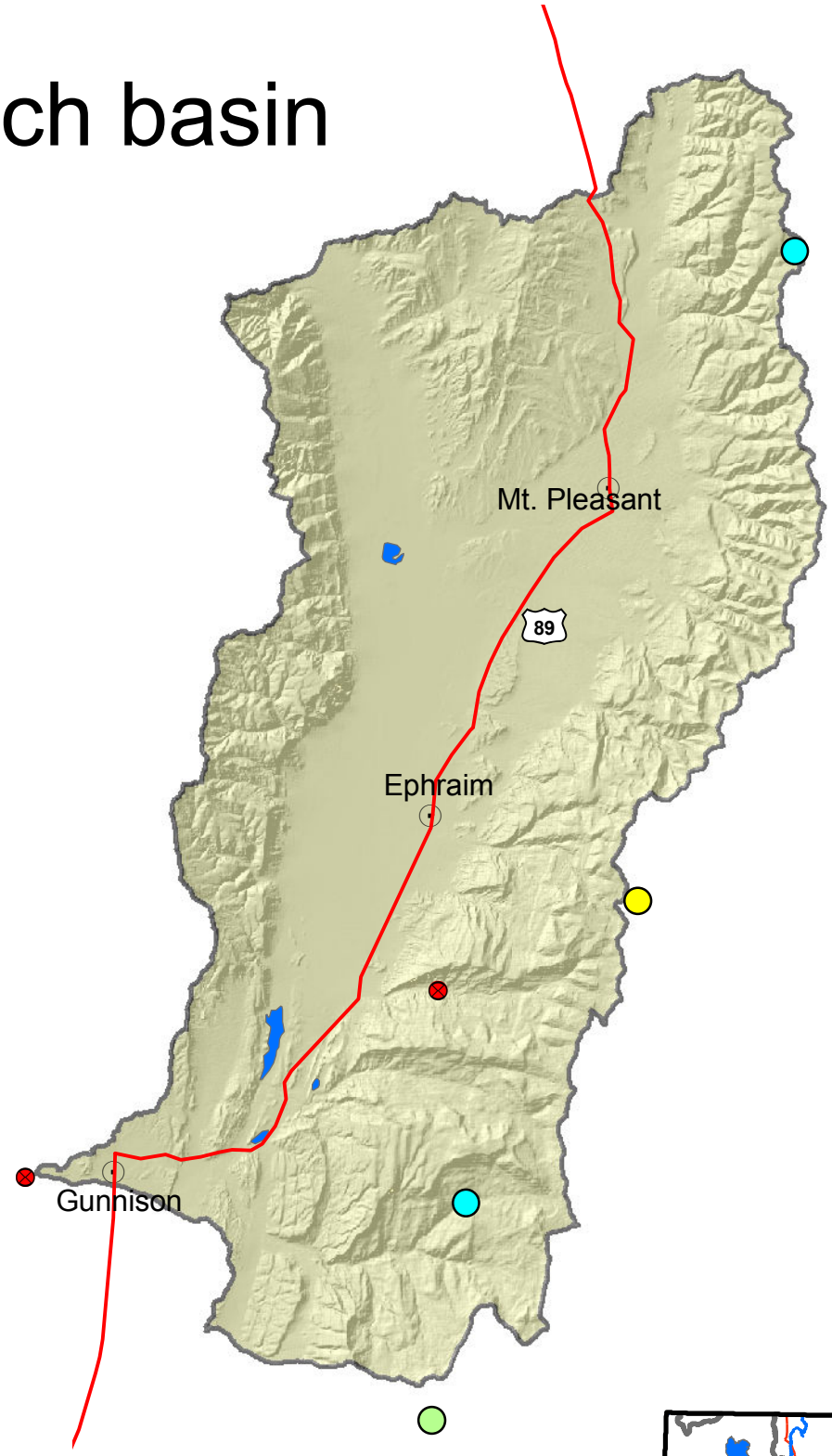
Precipitation



Reservoir Storage



San Pitch basin



SNOTEL sites

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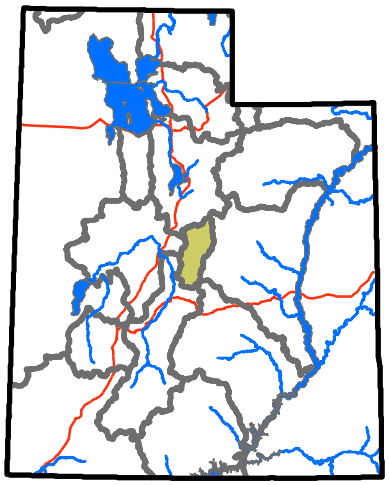
N

0 2.5 5 10 15 20 Miles



USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

SAN PITCH RIVER BASIN as of January 1, 2013

SAN PITCH RIVER BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Manti Ck Blw Dugway Ck Nr Manti	APR-JUL	9.3	13.0	16.0	96	19.2	25	16.7

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

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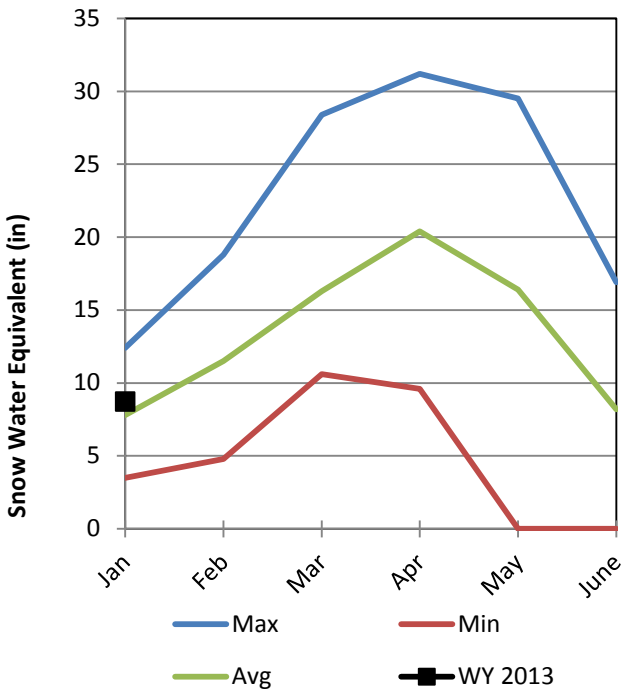
(3) - Median value used in place of average.

Lower Sevier River Basin

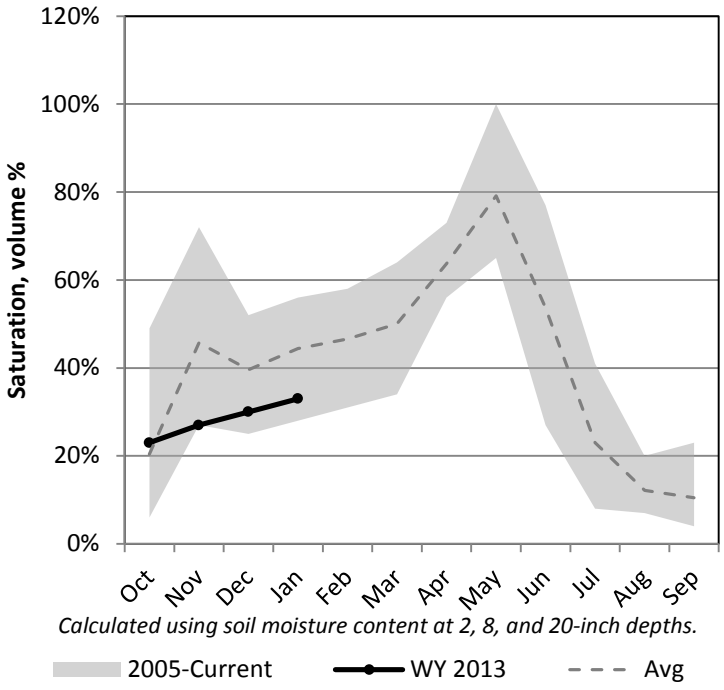
1/1/2013

Snowpack in the Lower Sevier River Basin is above average at 113% of normal, compared to 65% last year. Precipitation in December was much above average at 170%, which brings the seasonal accumulation (Oct-Dec) to 94% of average. Soil Moisture is at 33% compared to 43% last year. Reservoir storage is at 60% of average, compared to 88% last year. Forecast streamflow volumes range from 0% to 0% of average. The surface water supply index is 73% for the Lower Sevier.

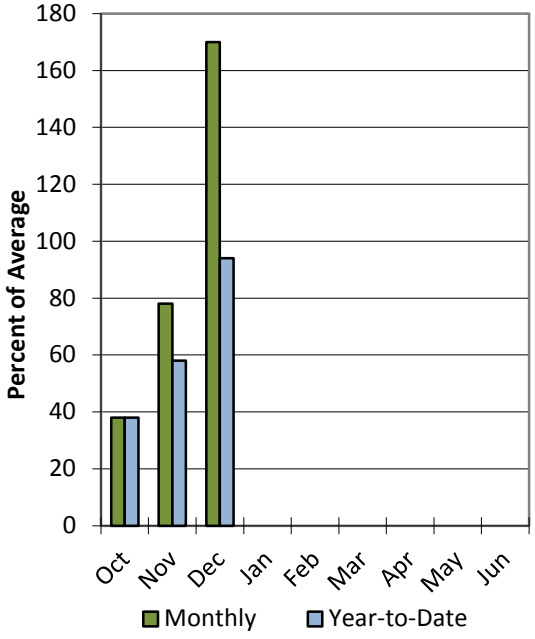
Snowpack



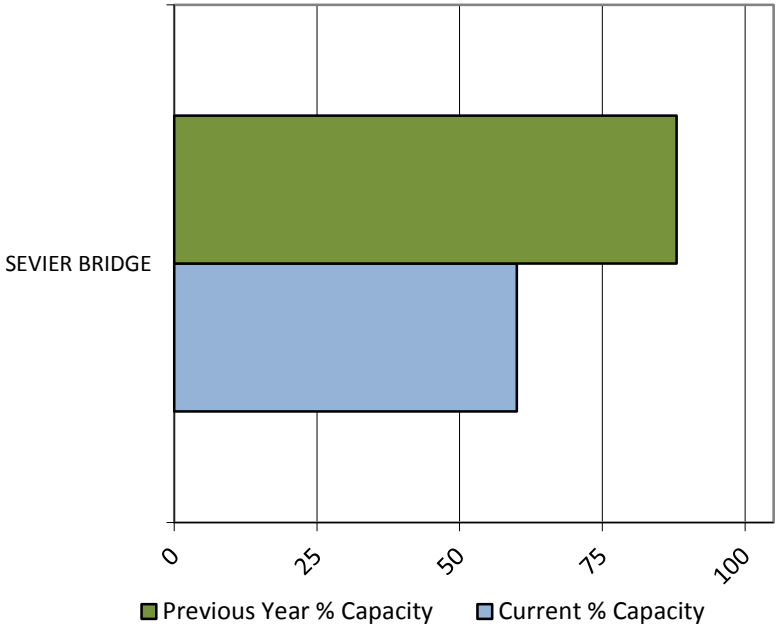
Soil Moisture



Precipitation



Reservoir Storage

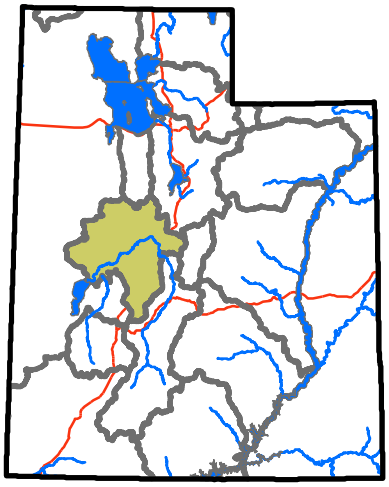


Lower Sevier basin

SNOTEL sites

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

- Forecast points
- Cities
- Rivers
- Highways



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N

0 2.5 5 10 15 20 Miles

LOWER SEVIER RIVER BASIN as of January 1, 2013

LOWER SEVIER RIVER BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Chicken Ck nr Levan	APR-JUL	1.00	2.20	3.40	76	5.00	8.10	4.50
Oak Creek nr Oak City	APR-JUL	0.62	0.99	1.30	78	1.65	2.20	1.66
Sevier R nr Gunnison	APR-JUL	54	86	108	109	130	162	99

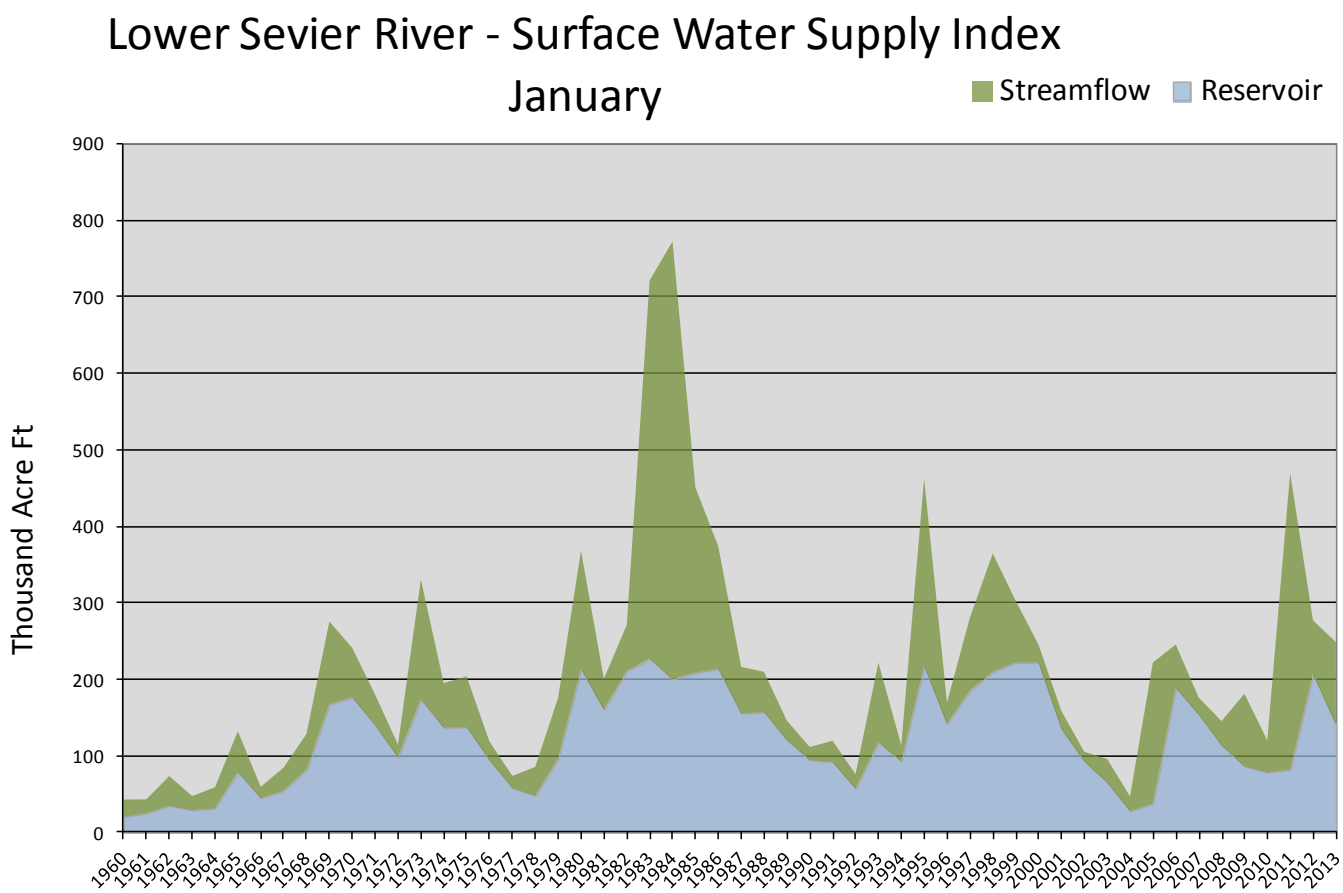
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Sevier Bridge Reservoir	April-July Forecast Inflow to Sevier Bridge Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Lower Sevier	**141.1**	**108**	**249**	**1.89**	**73**	**00,06,82,69**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

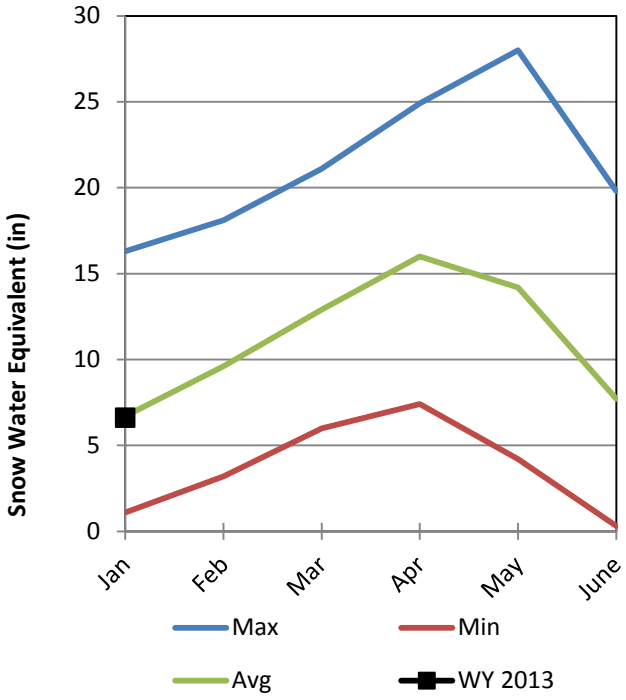


Beaver River Basin

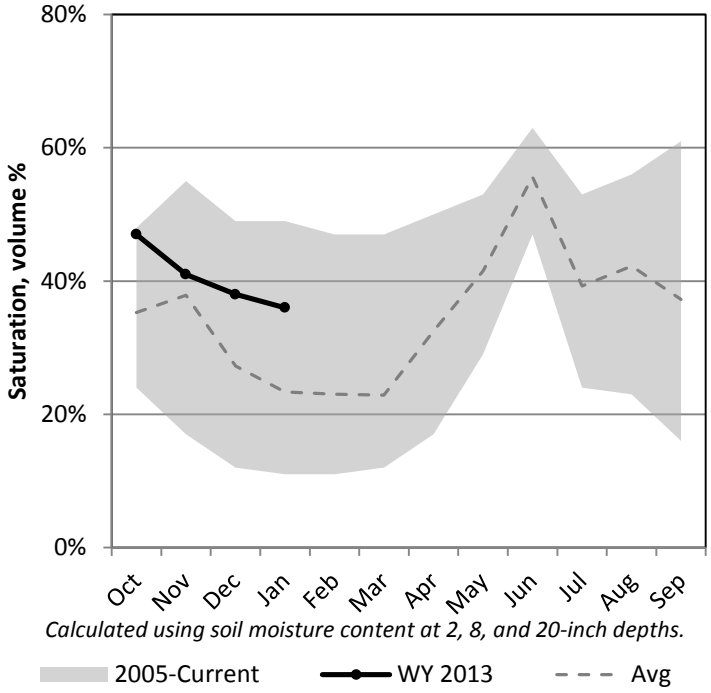
1/1/2013

Snowpack in the Beaver River Basin is near average at 105% of normal, compared to 48% last year. Precipitation in December was much above average at 140%, which brings the seasonal accumulation (Oct-Dec) to 106% of average. Soil Moisture is at 36% compared to 27% last year. Reservoir storage is at 36% of average, compared to 97% last year. The forecast streamflow volume for the Beaver River is 81% of average. The surface water supply index is 40% for the Beaver River.

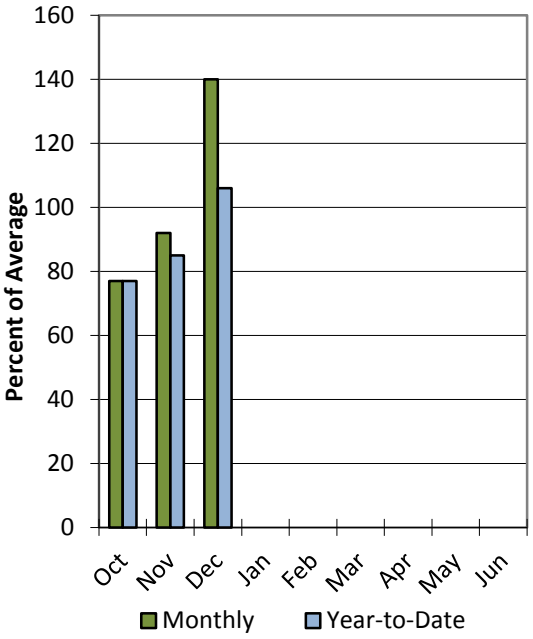
Snowpack



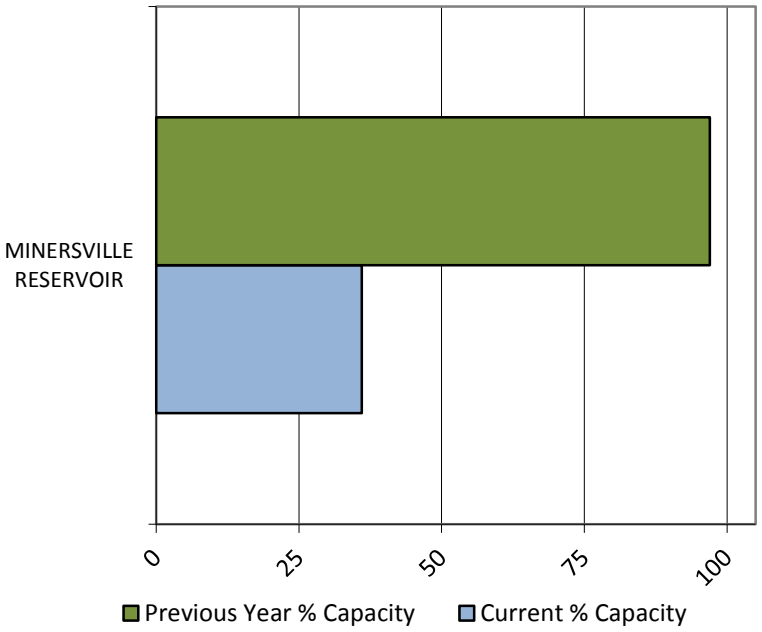
Soil Moisture



Precipitation



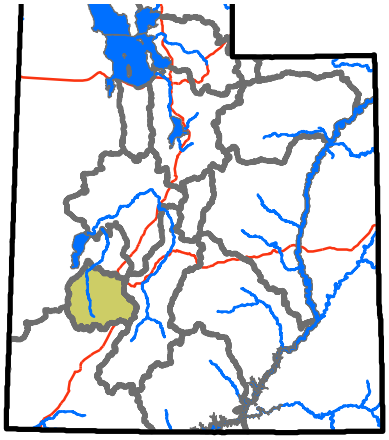
Reservoir Storage



< 50 %
Cities
50 - 69%
Rivers
70 - 89%
Highways
90 - 109%
110 - 129%
130 - 149%
> 150%

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

0 1.25 2.5 5 7.5 10
Miles



BEAVER RIVER BASIN as of January 1, 2013

BEAVER RIVER BASIN
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Beaver R nr Beaver	APR-JUL	4.0	14.2	21	81	28	38	26

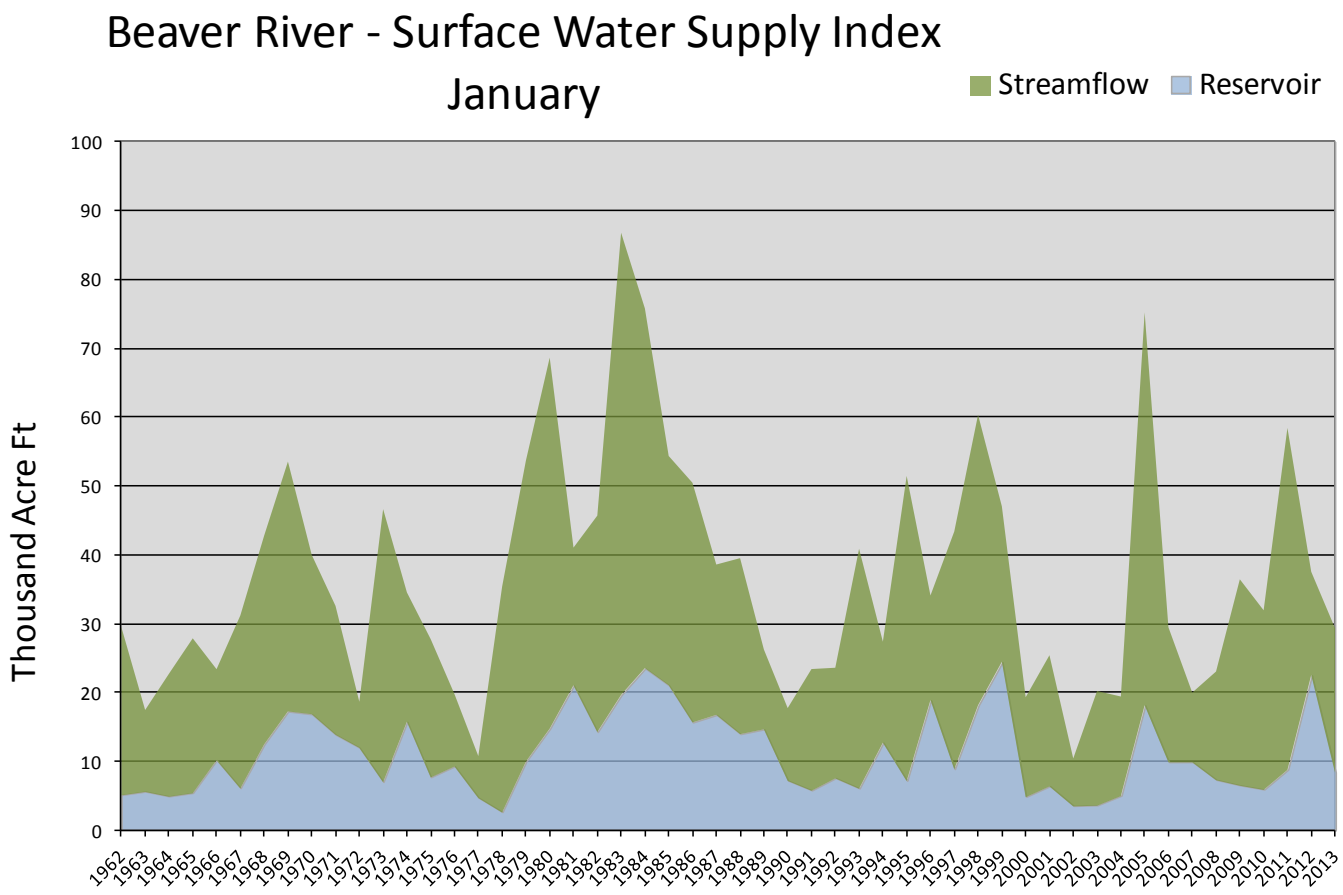
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Minersville Reservoir	April-July forecast Beaver River at Beaver	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Beaver	**8.4**	**21.0**	**29.4**	**-0.86**	**40**	**75,65,06,62**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*

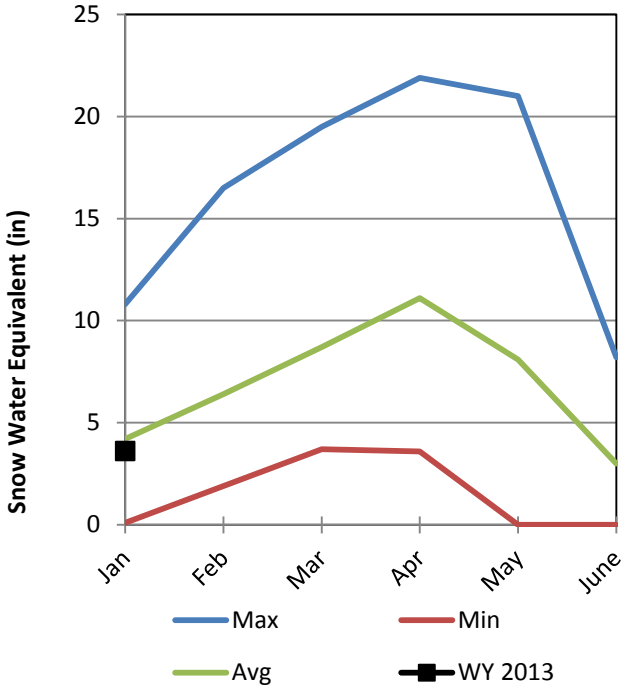


Escalante River Basin

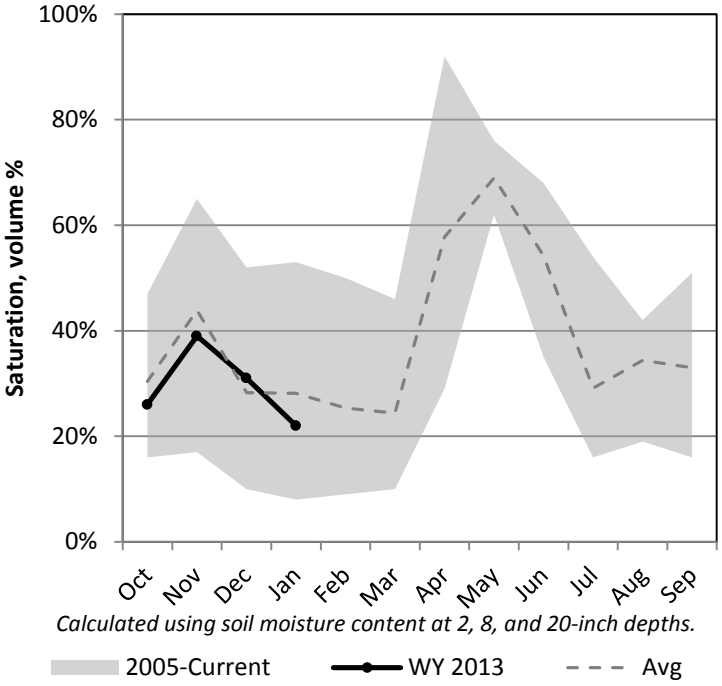
1/1/2013

Snowpack in the Escalante River Basin is near average at 92% of normal, compared to 121% last year. Precipitation in December was above average at 120%, which brings the seasonal accumulation (Oct-Dec) to 92% of average. Soil Moisture is at 22% compared to 37% last year. The forecast streamflow volume for Pine Creek is 92% of average.

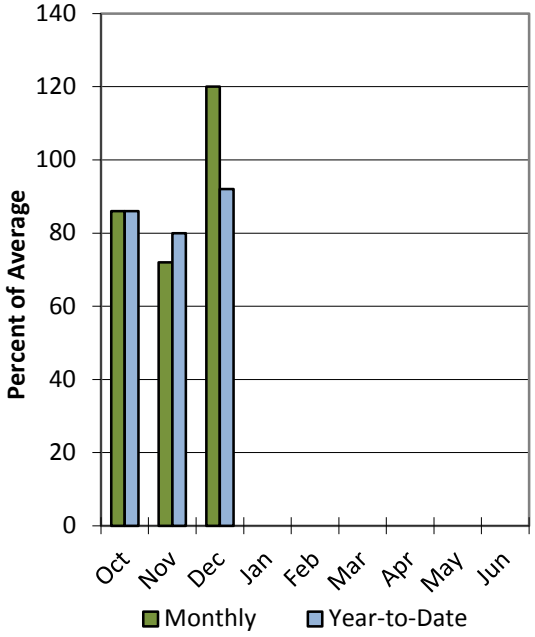
Snowpack



Soil Moisture



Precipitation

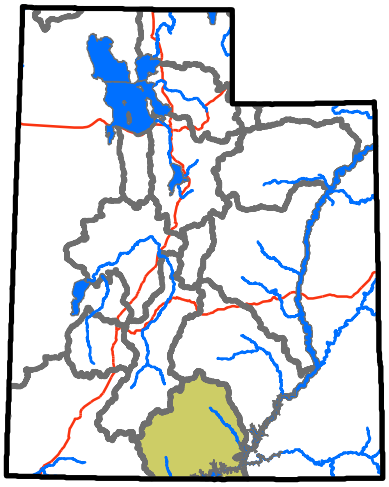


Escalante basin

SNOTEL sites

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

- Forecast points
- Cities
- Rivers
- Highways



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Natural Resources Conservation Service

0 2.5 5 10 15 20 Miles

ESCALANTE RIVER BASIN as of January 1, 2013

ESCALANTE RIVER BASIN.
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Pine Ck nr Escalante	APR-JUL	0.82	1.56	2.20	92	3.00	4.20	2.40

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

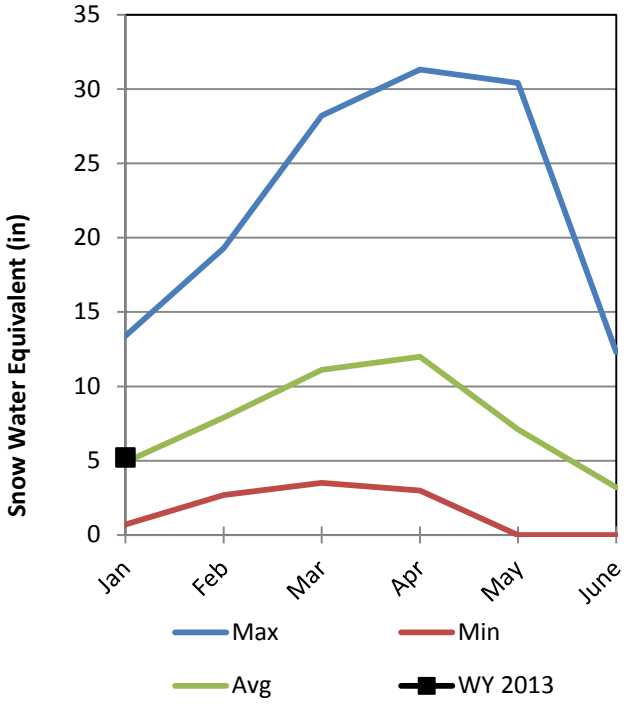
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

Southwestern Utah Basin

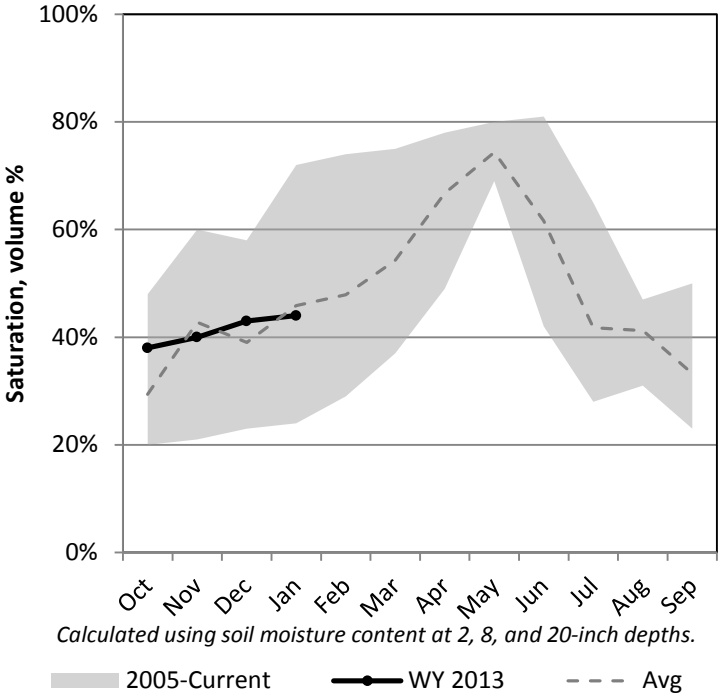
1/1/2013

Snowpack in the Southwestern Utah Basin is much above average at 135% of normal, compared to 71% last year. Precipitation in December was much above average at 136%, which brings the seasonal accumulation (Oct-Dec) to 105% of average. Soil Moisture is at 44% compared to 46% last year. Reservoir storage is at 52% of average, compared to 92% last year. Forecast streamflow volumes range from 56% to 97% of average. The surface water supply index is 46% for the Virgin River.

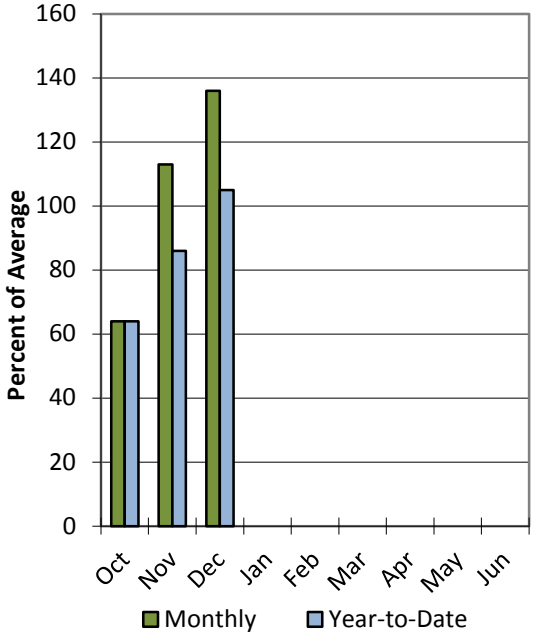
Snowpack



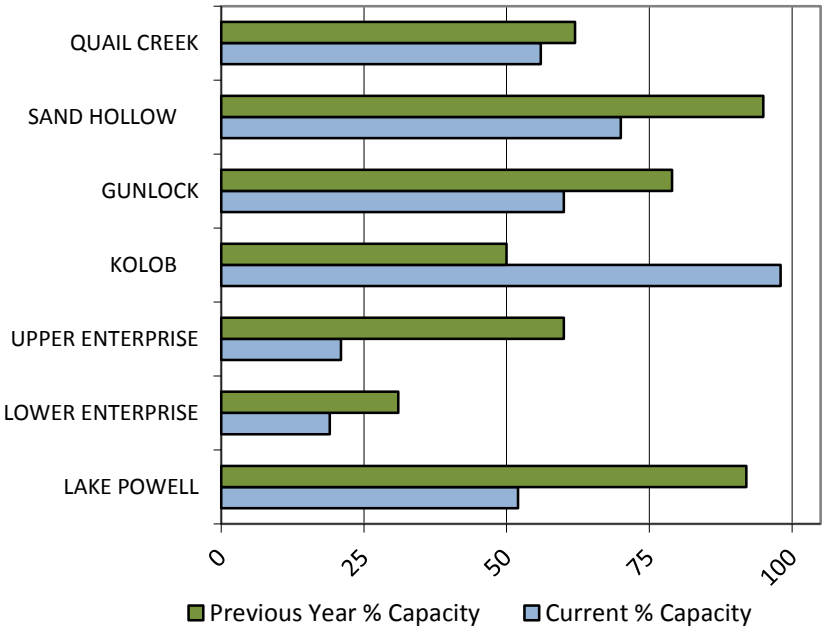
Soil Moisture



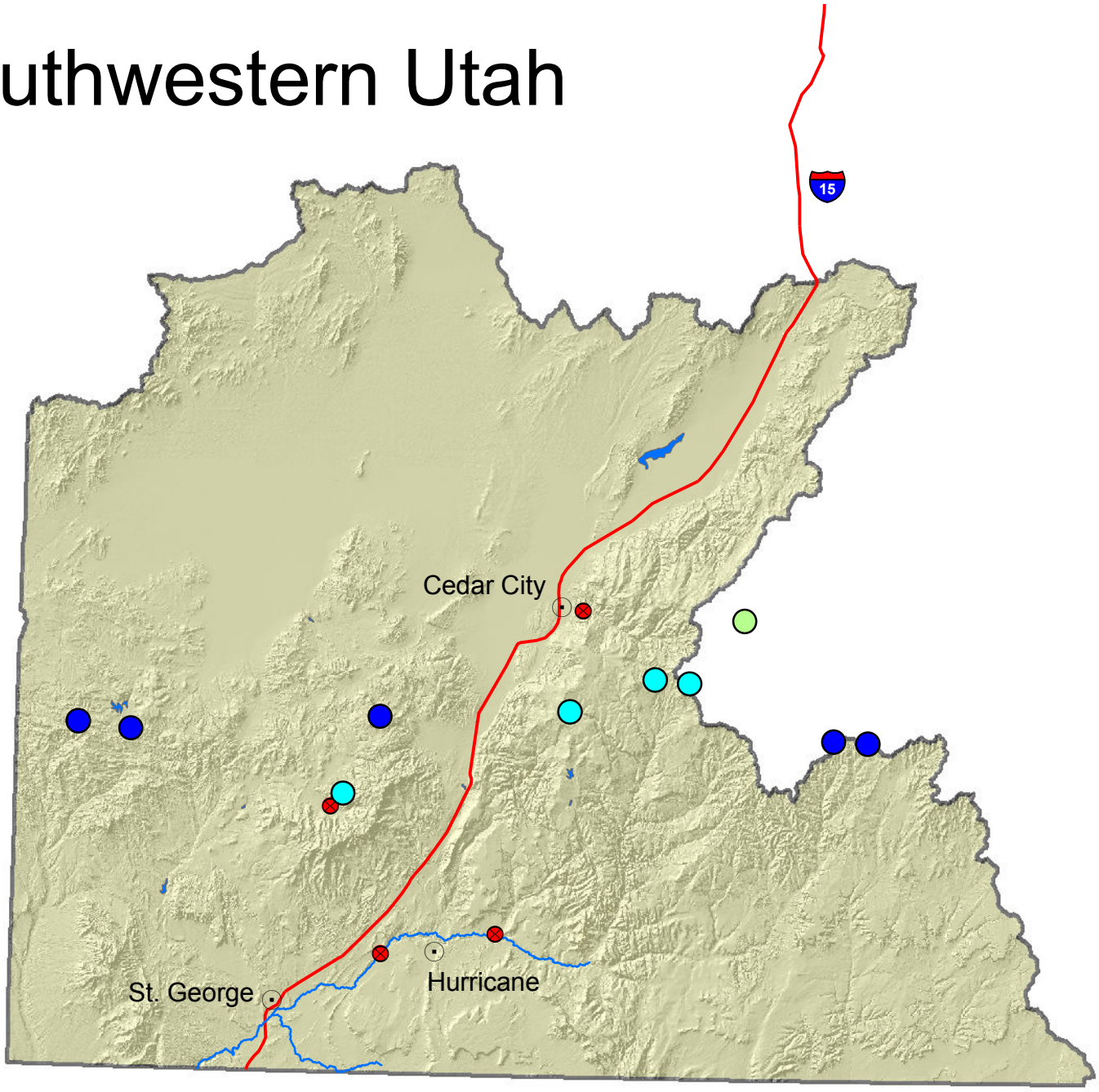
Precipitation



Reservoir Storage



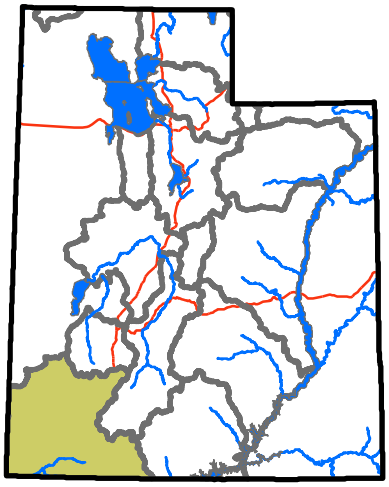
Southwestern Utah



SNOTEL sites

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%

- Forecast points
- Cities
- Rivers
- Highways



USDA NRCS
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Natural Resources Conservation Service

N

0 2.5 5 10 15 20 Miles

SOUTH WEST UTAH as of January 1, 2013

SOUTH WEST UTAH
Streamflow Forecasts - January 1, 2013

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Lake Powell Inflow (2)	APR-JUL	1810	3010	4000	56	5130	7040	7160
Virgin R at Virgin	APR-JUL	16.0	32	45	78	61	89	58
Virgin R nr Hurricane	APR-JUL	17.0	26	43	68	64	103	63
Santa Clara R nr Pine Valley	APR-JUL	0.95	2.50	4.00	80	5.80	9.10	5.00
Coal Ck nr Cedar City	APR-JUL	6.6	13.4	18.0	97	23	29	18.6

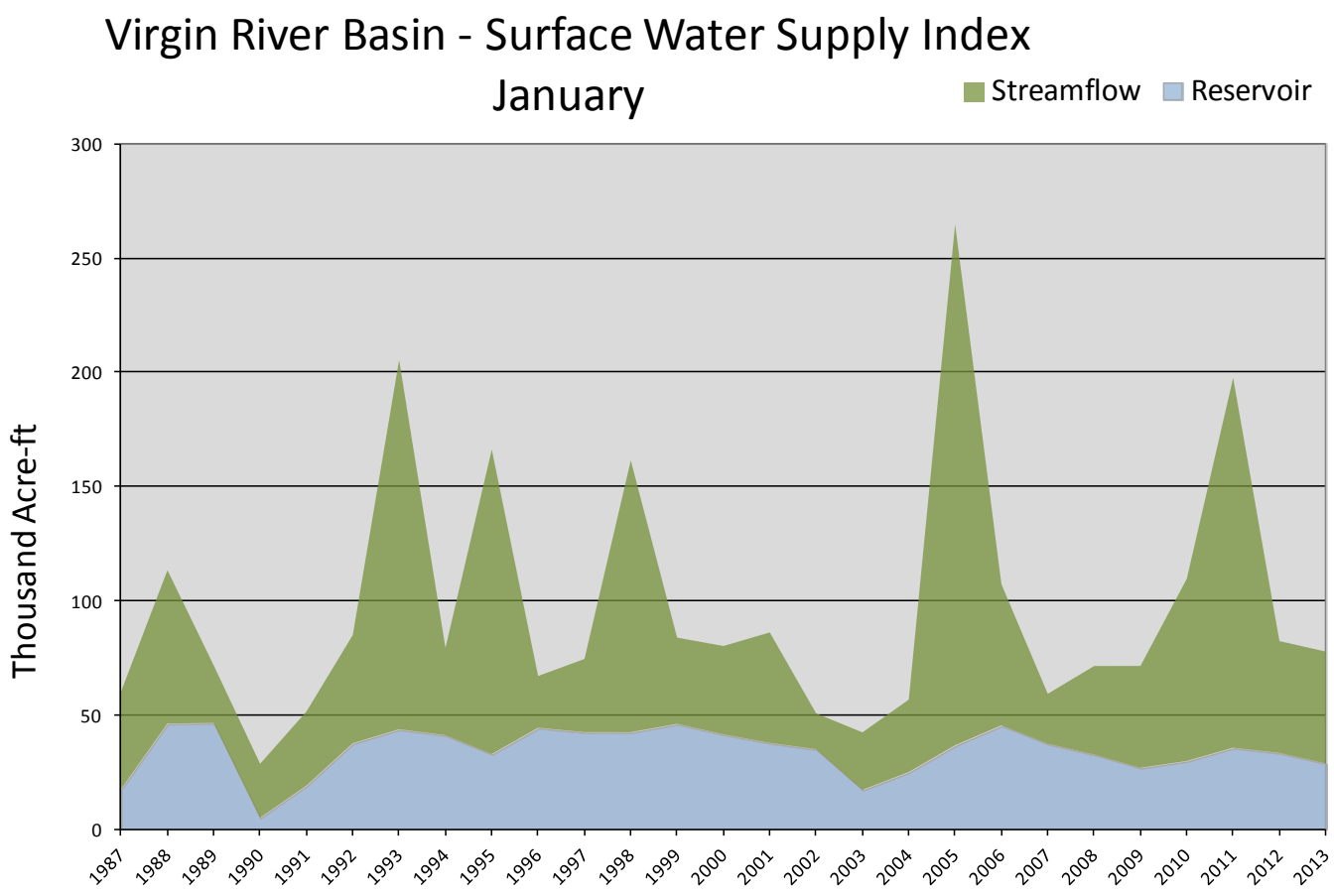
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1981-2010 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

January 1, 2013	**Surface Water Supply Index**					
Basin or Region	December EOM* Quail Creek and Gunlock Reservoirs	April-July forecast Virgin and Santa Clara Rivers	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Virgin River	**28.5**	**49.0**	**77.5**	**-0.30**	**46**	**89,97,94,00**

**EOM, end of month; # SWSI, Surface Water Supply Index; ^KAF, thousand acre-feet.*



January 1, 2013

Surface Water Supply Index

ID	Basin or Region	December EOM* Reservoirs	April-July Stream Forecast	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
		*KAF^*	*KAF*	*KAF*		*%*	
1	**Bear River**	**756**	**122**	**878**	**-0.12**	**49**	**60, 78, 59, 88**
2	**Ogden River**	**47**	**88**	**135**	**-1.46**	**32**	**89, 00, 91, 07**
3	**Weber River**	**211**	**300**	**511**	**-0.28**	**47**	**76, 79, 10, 05**
4	**Provo River**	**301**	**114**	**415**	**-1.55**	**31**	**96, 80, 10, 05**
5	**West Uintah Basin**	**133**	**170**	**303**	**-0.19**	**48**	**10, 76, 87, 93**
6	**East Uintah Basin**	**23.3**	**57.0**	**80**	**-2.50**	**20**	**94, 03, 12, 81**
7	**Price River**	**28.4**	**37.0**	**65.4**	**-0.83**	**40**	**09, 88, 00, 81**
8	**Joe's Valley**	**32.0**	**44.0**	**76.0**	**-1.60**	**31**	**92, 94, 04, 07**
9	**Ferron Creek**	**8.2**	**30.0**	**38.2**	**-1.12**	**37**	**74, 88, 04, 00**
10	**Moab**	**0.2**	**4.0**	**4.2**	**-1.08**	**37**	**10, 01, 06, 08**
11	**Upper Sevier River**	**62**	**68**	**130**	**-0.99**	**38**	**75, 09, 59, 76**
12	**Lower Sevier River**	**141**	**108**	**249**	**1.89**	**73**	**00, 06, 82, 69**
13	**Beaver River**	**8.4**	**21.0**	**29.4**	**-0.86**	**40**	**75, 65, 06, 62**
14	**Virgin River**	**28.5**	**49**	**78**	**-0.30**	**46**	**89,97,94,00**

**EOM, end of month; # SWSI, surface water supply index; ^KAF, thousand acre-feet.*

What is a Surface Water Supply Index?

The Surface Water Supply Index (SWSI) is a predictive indicator of total surface water availability within a watershed for the spring and summer water use seasons. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow which are based on current snowpack and other hydrologic variables. SWSI 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. SWSI'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 SWSI as a PERCENT CHANCE OF NON-EXCEEDANCE. While this is a cumbersome name, it has the simplest 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 SWSI of 75% means that this years water supply is greater than 75% of all historical events and that only 25% of the time has it been exceeded. Conversely a SWSI 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 SWSI 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.

Issued by

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Natural Resources Conservation Service
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245 North Jimmy Doolittle Road
Salt Lake City, UT 84116
(801) 524-5213

Utah Water Supply Outlook Report

Natural Resources Conservation Service
Salt Lake City, UT