



Utah Water Supply Outlook Report

May 1, 2013



Kent Sutcliffe near Redden Mine Snow Course, Hoyts Peak.
Photo by Randy Julander

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

For more water supply and resource management information, contact:

Snow Survey Staff, 245 N Jimmy Doolittle Rd, SLC Utah, 84041 - Phone: (801)524-5213

Travis Thomason, Area Conservationist, 340 N. 600 E., Richfield, UT 84701 - Phone: (435) 896-6441

Don Ashby, Area Conservationist, 2871 S Commerce Way, Ogden UT 84401 (801)629-0580 x15

Barry Hamilton, Area Conservationist, 540 W, Price River Dr. Price, UT 84501-2813 - Phone: (435) 637-0041

Internet Address: <http://www.ut.nrcs.usda.gov/snow/>

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers. If you believe you experienced discrimination when obtaining services from USDA, participating in a USDA program, or participating in a program that receives financial assistance from USDA, you may file a complaint with USDA. Information about how to file a discrimination complaint is available from the Office of the Assistant Secretary for Civil Rights. USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex (including gender identity and expression), marital status, familial status, parental status, religion, sexual orientation, political beliefs, genetic information, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) To file a complaint of discrimination, complete, sign, and mail a program discrimination complaint form, available at any USDA office location or online at www.ascr.usda.gov, or write to: USDA Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW, Washington, DC 20250-9410 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

May 1, 2013

SUMMARY

April was the month we wished we had for January, February and March. It fished half of the state from the fire back into the frying pan and we are glad for that little bit of improvement over what has been a very dry winter. Cool and wet are a welcome respite from cold and dry – if only May will cooperate with the wet part, it would go a long way to reducing water use early in the season. While northern Utah had a great April, southern Utah and particularly the southeast remained squarely in the fire and with snow packs nearly gone or going fast, stream flow has laid down and died like a hot house tomato planted outside in February... in Randolph or Panguitch. The only positive here is that at least it's not last year where snow packs in the southeast melted out three weeks earlier than this year. Snow packs are basically melted out on Escalante, Dirty Devil, and southeast Utah with the Sevier and the Price in the 50% to 70% range. Snow packs in northern Utah are mostly in the 65% to 85% range with a few areas higher. April precipitation was average to much above average (100%-135%) over northern Utah and below to near average over southern Utah (65%-95%), which brings the year to date precipitation to below normal statewide at 81%. Current soil moisture saturation levels in runoff producing areas are: Bear – 80%, Weber – 79%, Provo – 77%, Uintah Basin – 71%, SE Utah – 71%, Sevier – 78% and SW Utah – 69% of saturation. Reservoir storage is currently at 73% of capacity statewide which is 18% less than last year at this time. General runoff conditions are extremely poor in southeastern Utah and generally poor for the remainder of the state. May-July stream flow forecasts range from 11% for the White River below Tabbyune Creek to 59% of average for Lakefork above Moon Lake. Surface Water Supply Indices range from 4% for Moab to 53% for the Lower Sevier. Surface water supply indexes below 25% include: Weber, Ogden, Provo, East Uintah Basin, Price, Joes Valley, Ferron, Moab, Upper Sevier and the Virgin. Water users with reservoir storage may have short supplies this year and those reliant on direct stream flow will experience shortages.

SNOWPACK

May first snowpacks as measured by the NRCS SNOTEL system are as follows: Bear - 80%, Weber - 70%, Provo - 66%, Duchesne - 86%, Price – 54%, southeast Utah - 9%, upper Sevier - 69%, San Pitch – 65% and southwest Utah - 41% and the statewide figure is 74% of average. Given current conditions, most watersheds will have melted out this month or in early June.

PRECIPITATION

Mountain precipitation as measured by the NRCS SNOTEL system during April was: Bear – 105%, Weber – 102%, Provo – 111%, Uintahs – 135%, SE Utah – 101%, Sevier – 94%, SW Utah – 65% and the statewide figure is 106% of average. This brings the seasonal accumulation (Oct-April) to 81% of average statewide.

RESERVOIRS

Storage in 46 of Utah's key irrigation reservoirs is at 73% of capacity, 18% less than last year. Reservoir storage by Basin: Bear – 64%, Weber – 63%, Provo – 81%, Uintah Basin – 80%, SE Utah – 49%, Sevier – 73%, SW Utah – 70% of capacity.

STREAMFLOW

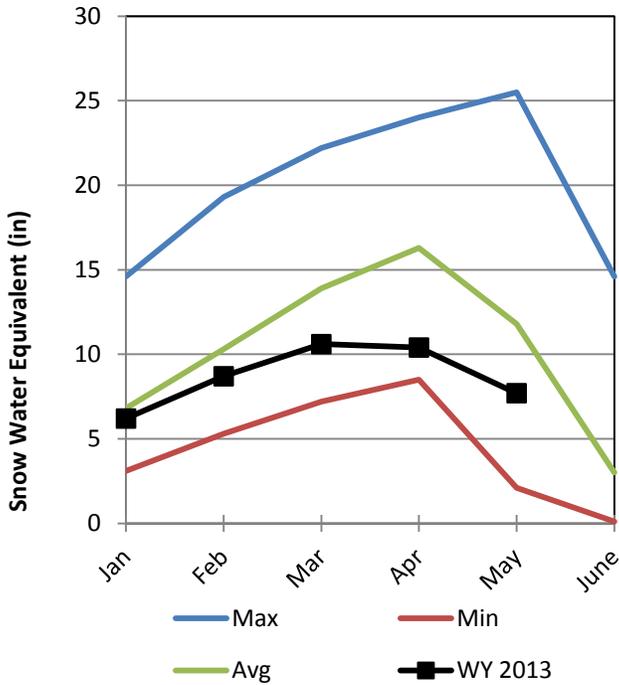
Snowmelt streamflows are expected to be much below average across the state this year. Forecast stream flows range from 11% on the South Creek Nr Monticello to 79% on Big Brush Creek near Vernal. Most flows are forecast to be in the 25% to 50% range. Much of southeast Utah are currently or will soon be experiencing very low stream flows with the remainder of the state soon to follow.

Statewide Utah

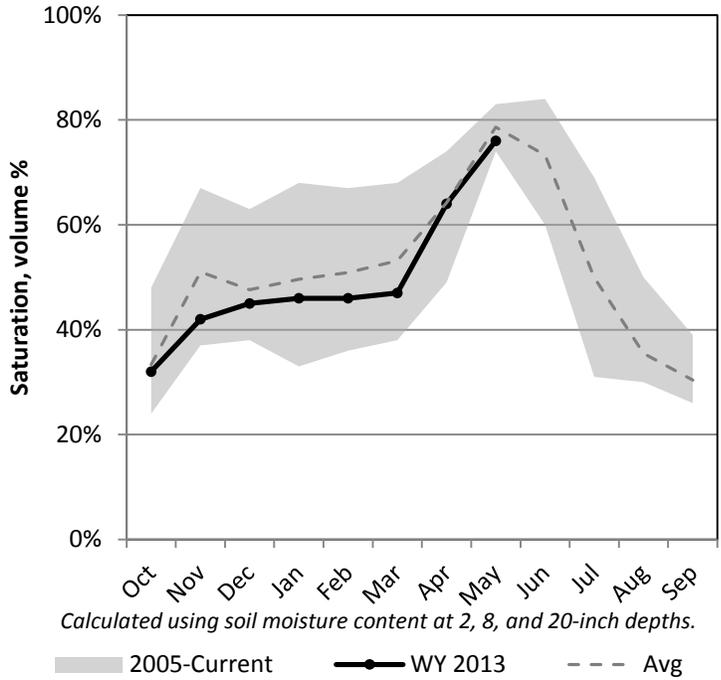
5/1/2013

Snowpack in Utah is below average at 72% of normal, compared to 29% last year. Precipitation in April was near average at 109%, which brings the seasonal accumulation (Oct-Apr) to 81% of average. Soil moisture is at 76% compared to 79% last year. Reservoir storage is at 65% of capacity, compared to 86% last year. Forecast streamflow volumes range from 11% to 69% of average.

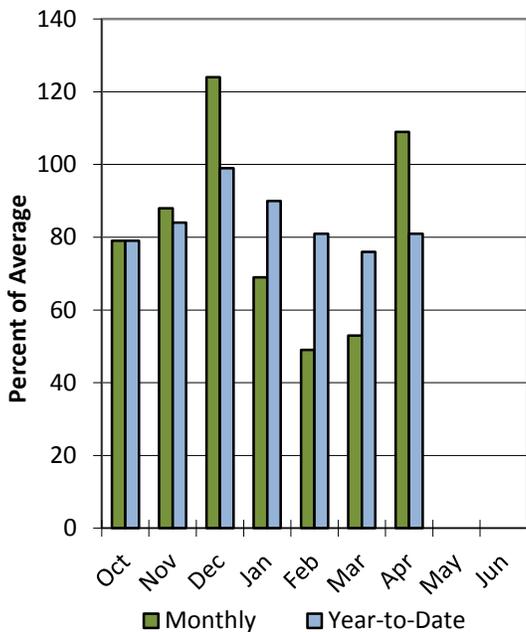
Snowpack



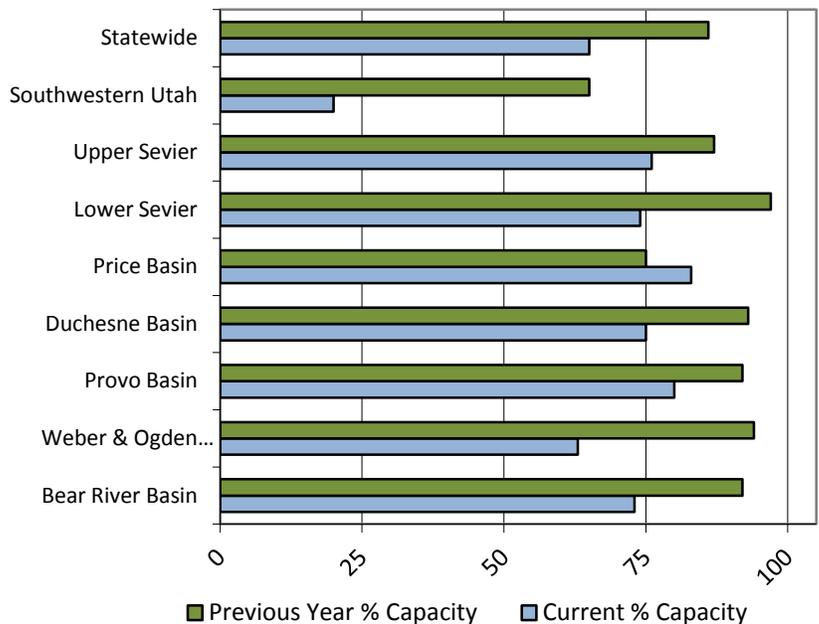
Soil Moisture



Precipitation



Reservoir Storage

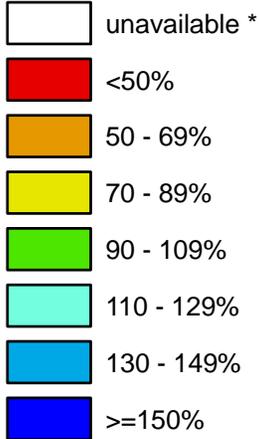


Utah

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

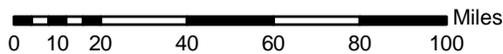
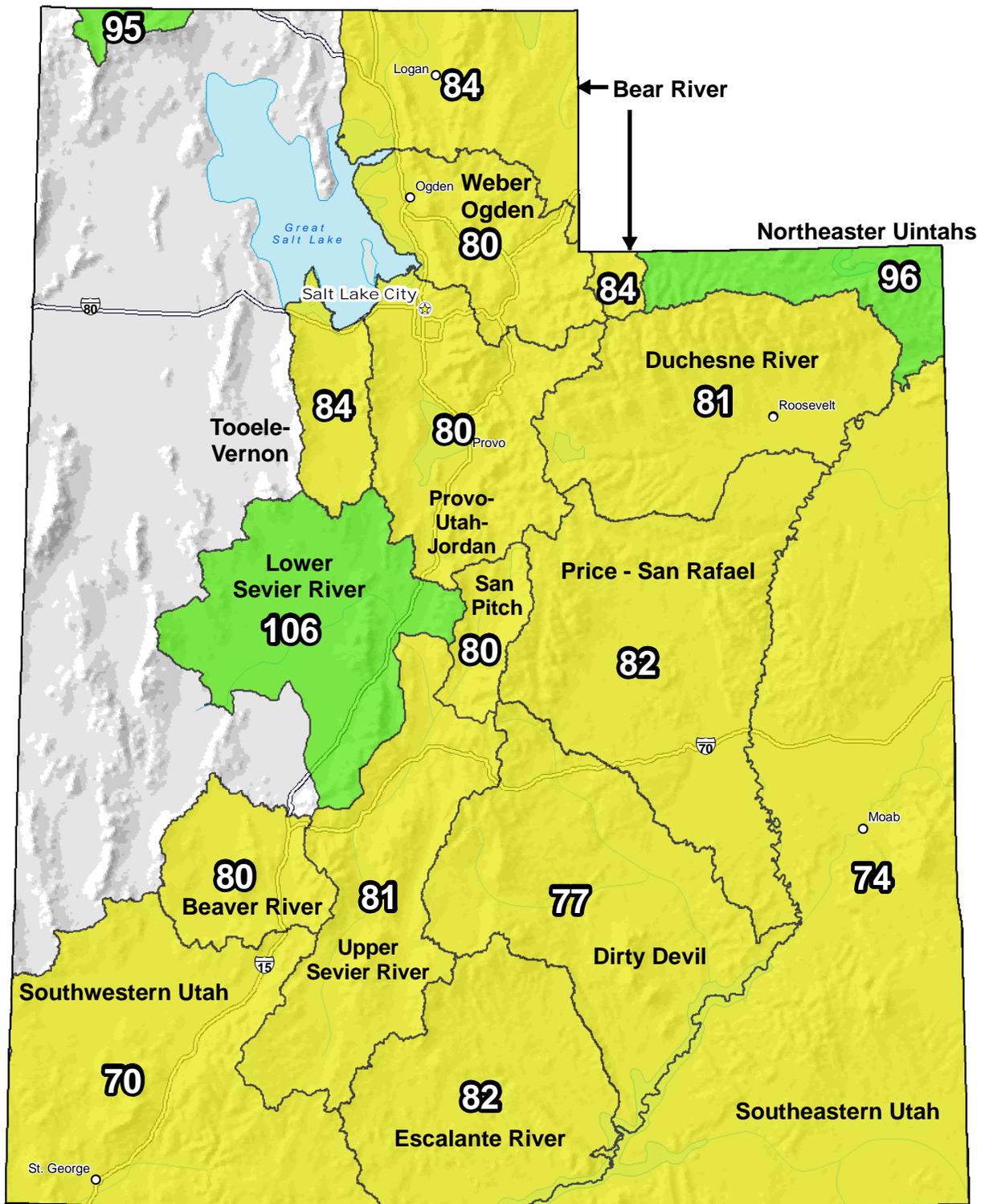
May 01, 2013

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



* 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).

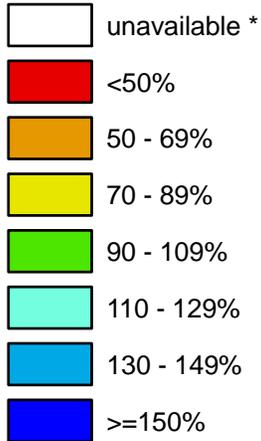
Prepared by the USDA/NRCS National Water and Climate Center
Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim.Marron@por.usda.gov 503 414 3047

Utah

SNOTEL Current Snow Water Equivalent (SWE) % of Normal

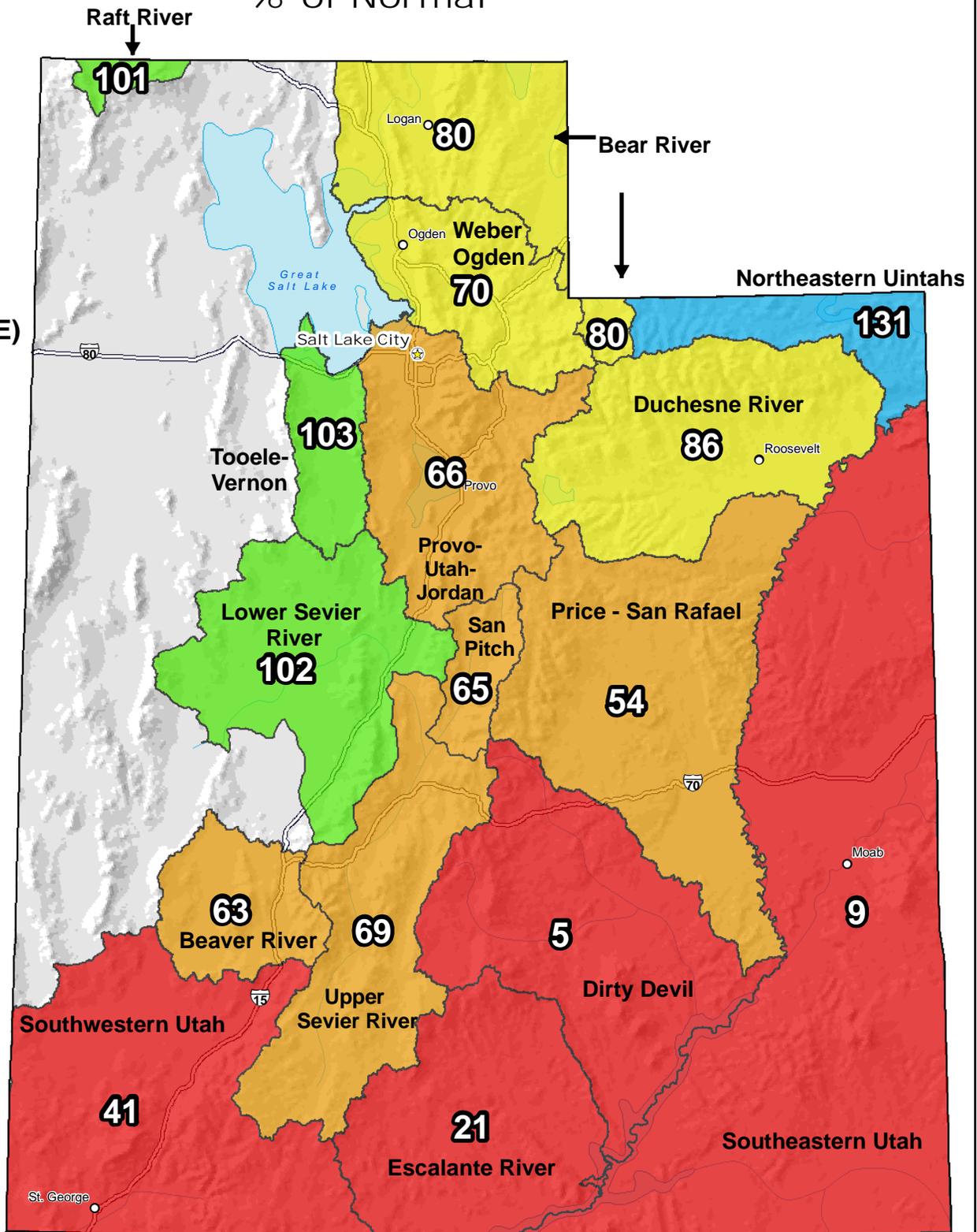
May 01, 2013

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



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

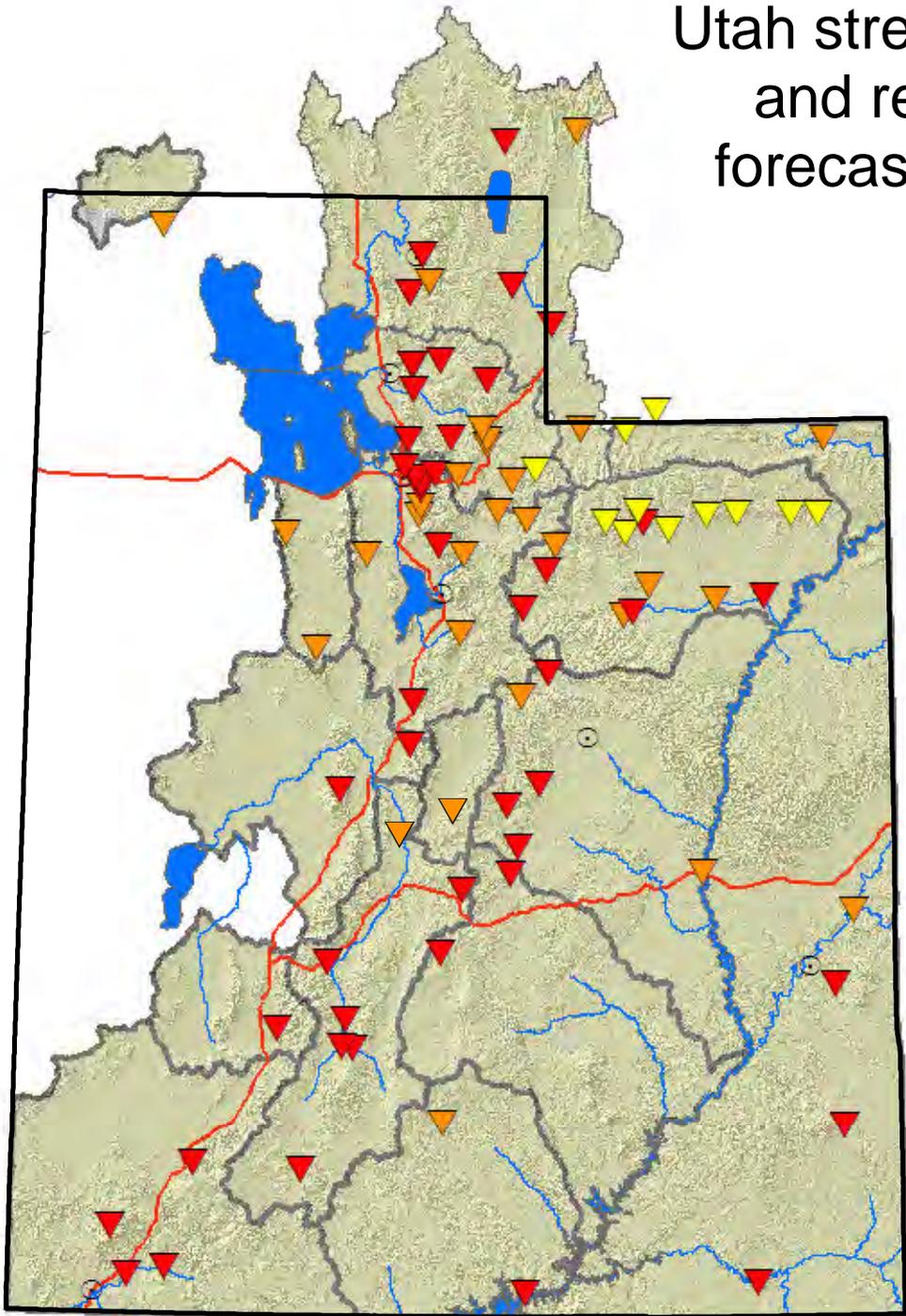
**Provisional Data
Subject to Revision**



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

Utah streamflow and reservoir forecast points

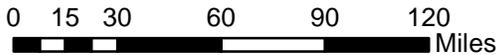


Percent normal

- | | | | |
|---|-------------|---|-----------------|
| ▼ | < 50% | △ | Forecast points |
| ▼ | 50 - 69% | ⊙ | Cities |
| ▼ | 70 - 89% | — | Rivers |
| ▲ | 90 - 109% | — | Highways |
| ▲ | 110 - 129% | | |
| ▲ | 130 - 149% | | |
| ▲ | > 150% | | |
| △ | no % avail. | | |



 United States Department of Agriculture
 Natural Resources Conservation Service

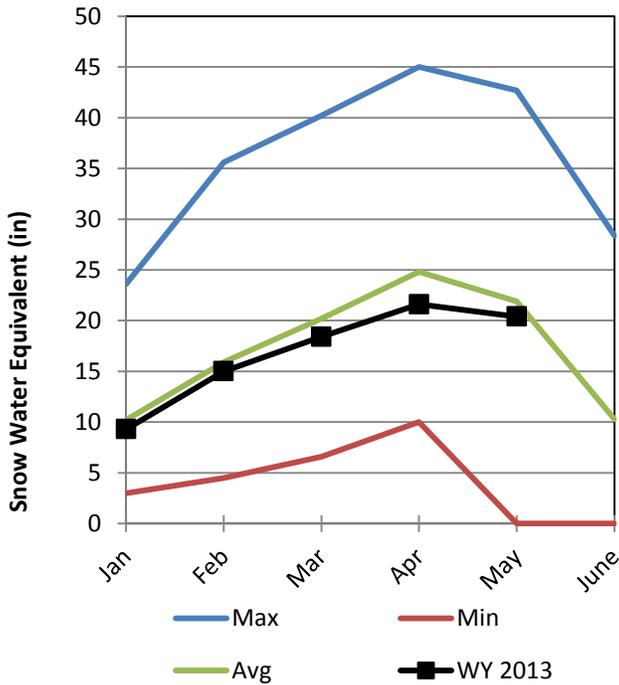


Raft River Basin

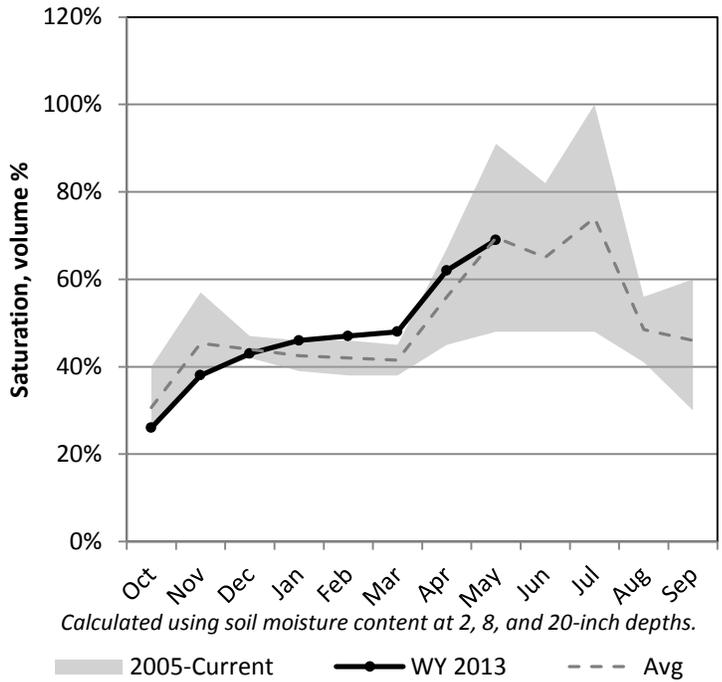
5/1/2013

Snowpack in the Raft River Basin is near average at 101% of normal, compared to 60% last year. Precipitation in April was above average at 130%, which brings the seasonal accumulation (Oct-Apr) to 95% of average. Soil moisture is at 69% compared to 91% last year. The forecast streamflow volume for Dunn Creek is 50% of average.

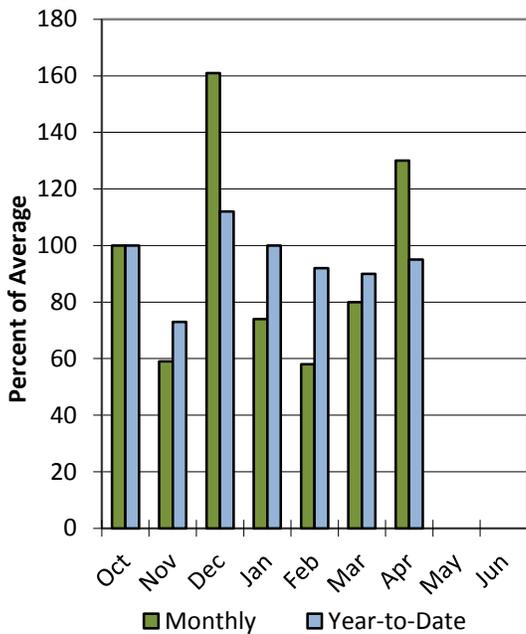
Snowpack



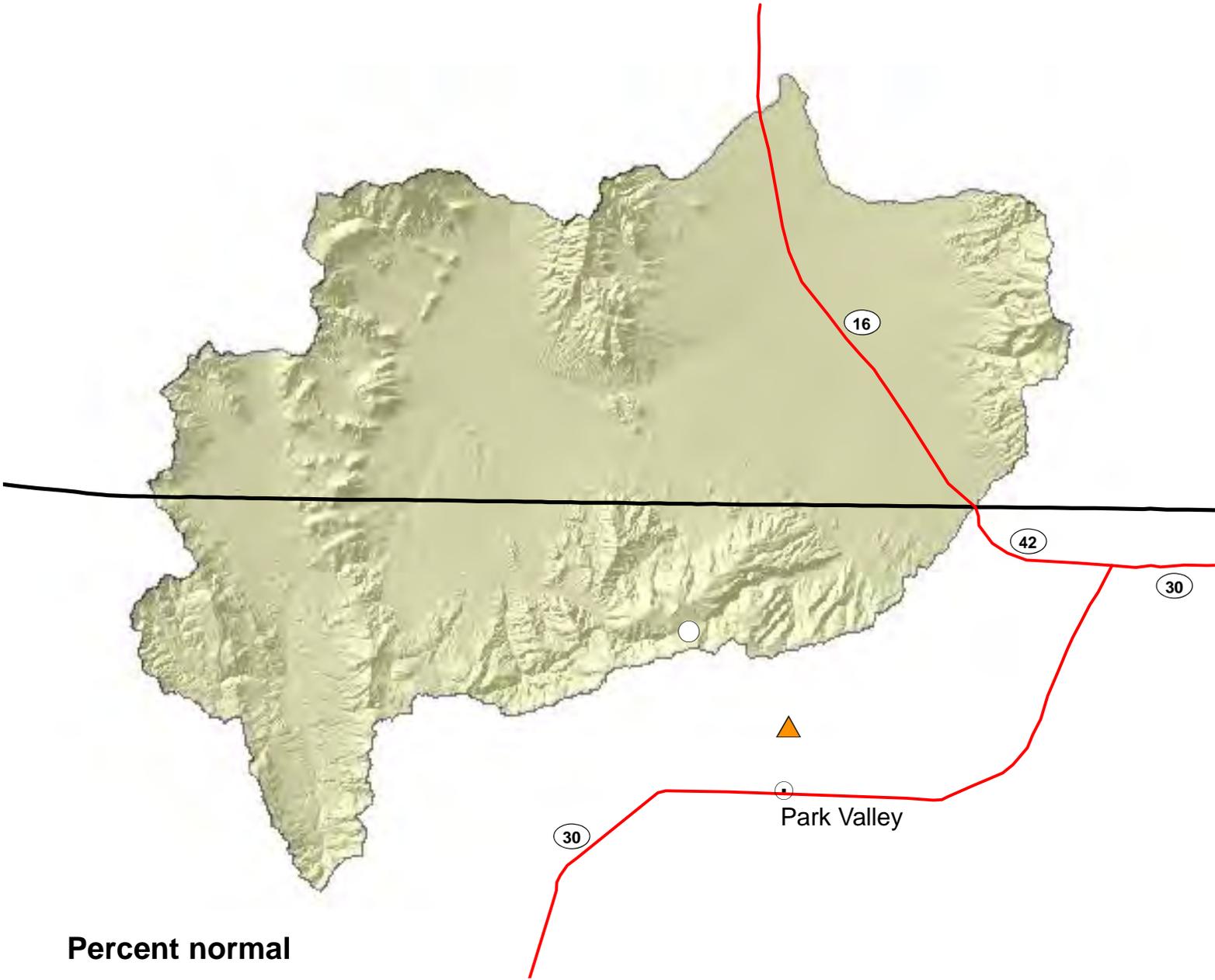
Soil Moisture



Precipitation

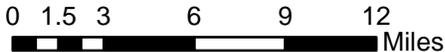
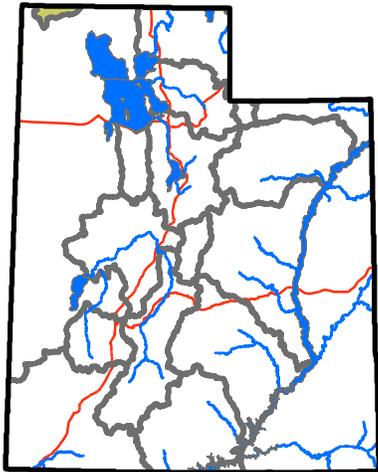


Raft basin



Percent normal

- < 50%
 - 50 - 69%
 - 70 - 89%
 - 90 - 109%
 - 110 - 129%
 - 130 - 149%
 - > 150%
 - no % avail.
- SNOTEL sites
 - Forecast points
 - Rivers
 - Highways
 - Cities



```

=====
                                RAFT RIVER BASIN
                                Streamflow Forecasts - May 1, 2013
=====
Forecast Point | <<===== Drier ===== Future Conditions ===== Wetter =====>> |
Forecast       | ===== Chance Of Exceeding * ===== |
Period         | 90%      70%      50%      30%      10%      30-Yr Avg. |
                | (1000AF) (1000AF) | (1000AF) (% AVG.) | (1000AF) (1000AF) | (1000AF) |
=====
Dunn Ck nr Park Valley | APR-JUL 0.03  0.44  1.50  52  2.10  2.70  2.90 |
                    | MAY-JUL 0.03  0.47  1.30  50  1.77  2.30  2.60 |
=====

```

* 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.

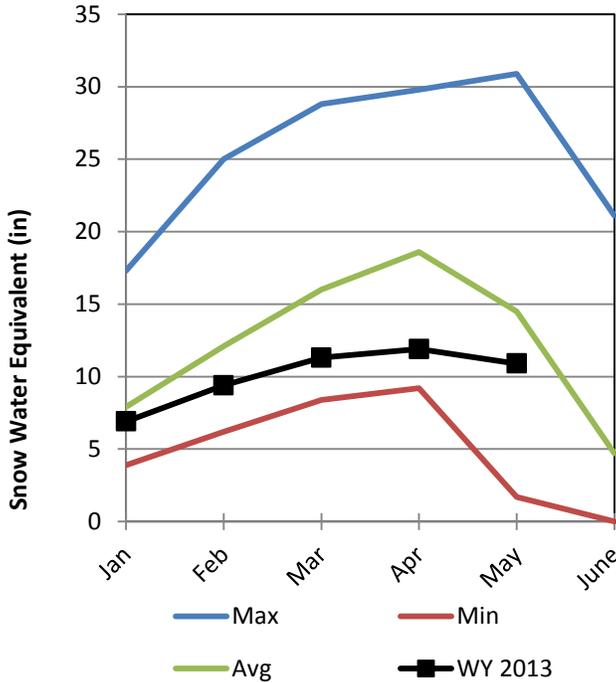
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

Bear River Basin

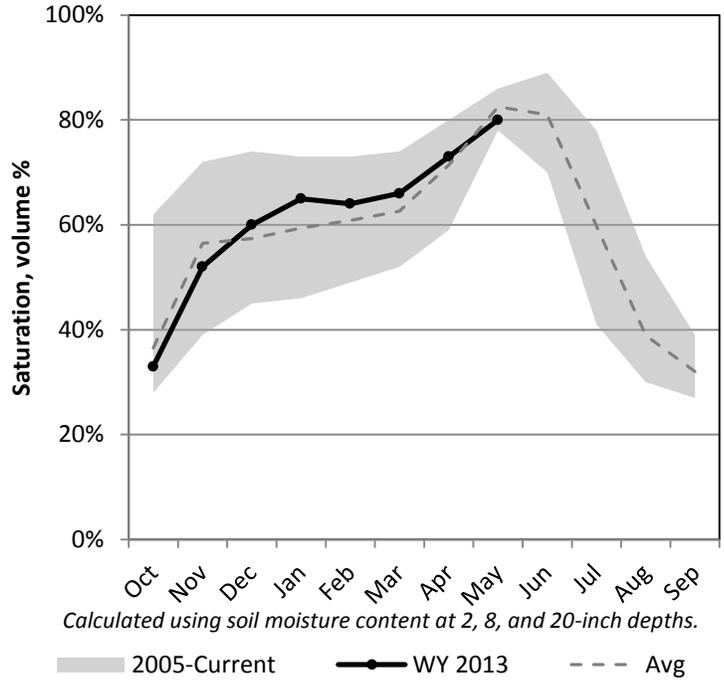
5/1/2013

Snowpack in the Bear River Basin is below average at 80% of normal, compared to 38% last year. Precipitation in April was above average at 121%, which brings the seasonal accumulation (Oct-Apr) to 84% of average. Soil moisture is at 80% compared to 85% last year. Reservoir storage is at 73% of capacity, compared to 92% last year. Forecast streamflow volumes range from 19% to 62% of average. The surface water supply index is 46% for the Bear River.

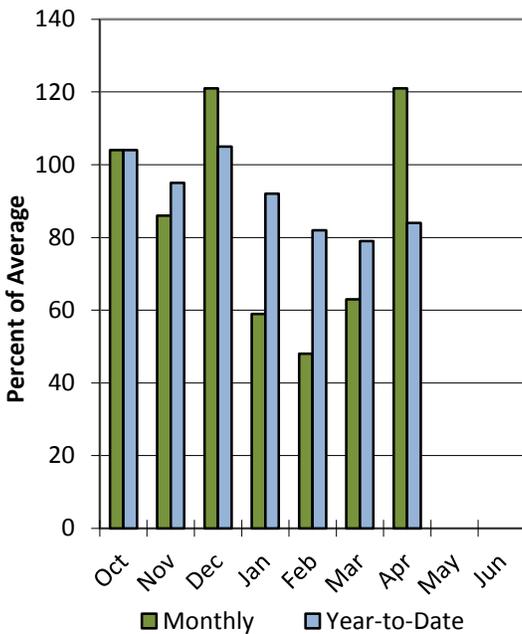
Snowpack



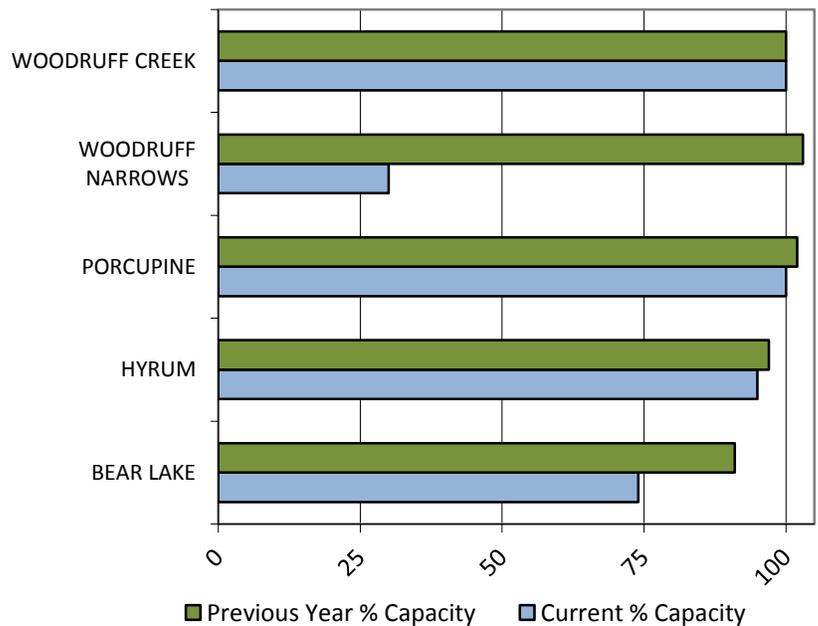
Soil Moisture



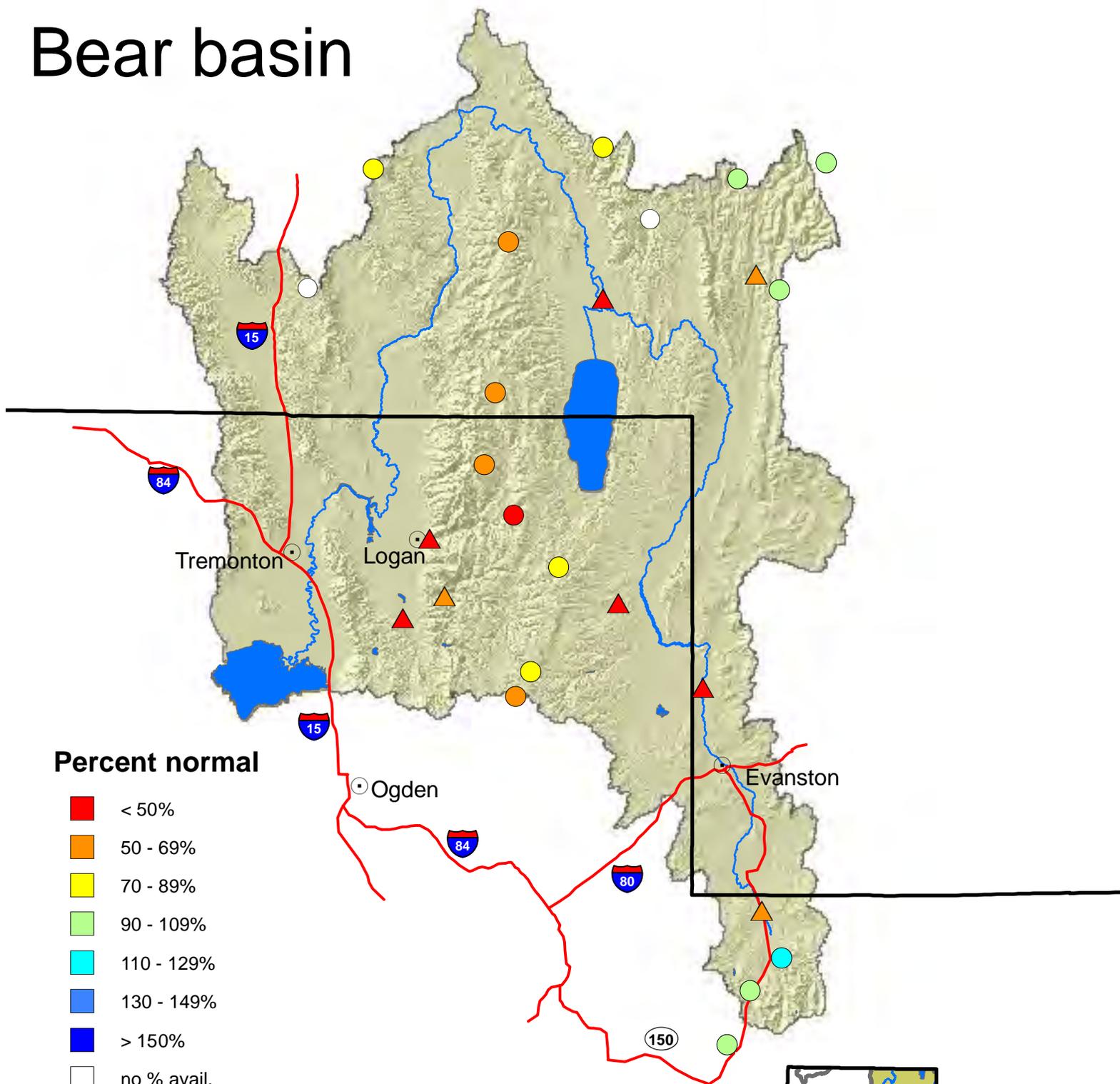
Precipitation



Reservoir Storage



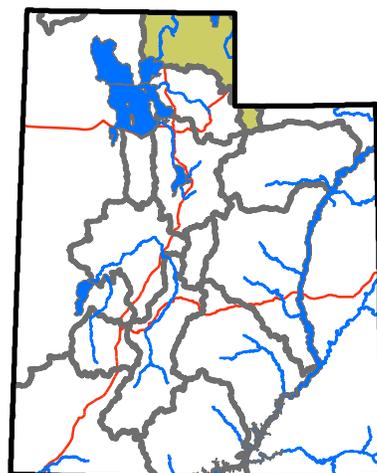
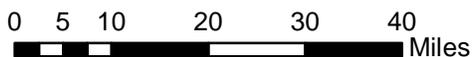
Bear basin



Percent normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%
- no % avail.

- SNOTEL sites
- Forecast points
- Rivers
- Highways
- Cities



BEAR RIVER BASIN
Streamflow Forecasts - May 1, 2013

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)	
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)
Bear R nr UT-WY State Line	APR-JUL	47	61	70	63	79	93	112	
	MAY-JUL	43	56	64	62	72	85	104	
Bear R ab Res nr Woodruff	APR-JUL	29	47	60	50	73	91	121	
	MAY-JUL	21	38	50	48	62	79	105	
Big Ck nr Randolph	APR-JUL	0.45	0.95	1.53	40	2.11	2.93	3.80	
	MAY-JUL	0.12	0.62	1.20	39	1.78	2.60	3.10	
Smiths Fk nr Border	APR-JUL	42	50	55	62	60	68	89	
	MAY-JUL	36	44	49	61	54	62	80	
Bear R bl Stewart Dam	APR-JUL	2.0	9.0	35	19	70	122	183	
	MAY-JUL	1.0	9.0	28	19	56	97	146	
Little Bear R at Paradise	APR-JUL	0.8	8.7	15.0	37	21	31	41	
	MAY-JUL	0.8	4.1	10.0	36	15.9	25	28	
Logan R nr Logan	APR-JUL	27	41	50	45	59	73	111	
	MAY-JUL	20	34	43	45	52	66	96	
Blacksmith Fork nr Hyrum	APR-JUL	3.5	16.3	25	58	34	47	43	
	MAY-JUL	0.3	9.1	17.0	55	25	37	31	

* 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.

May 1, 2013

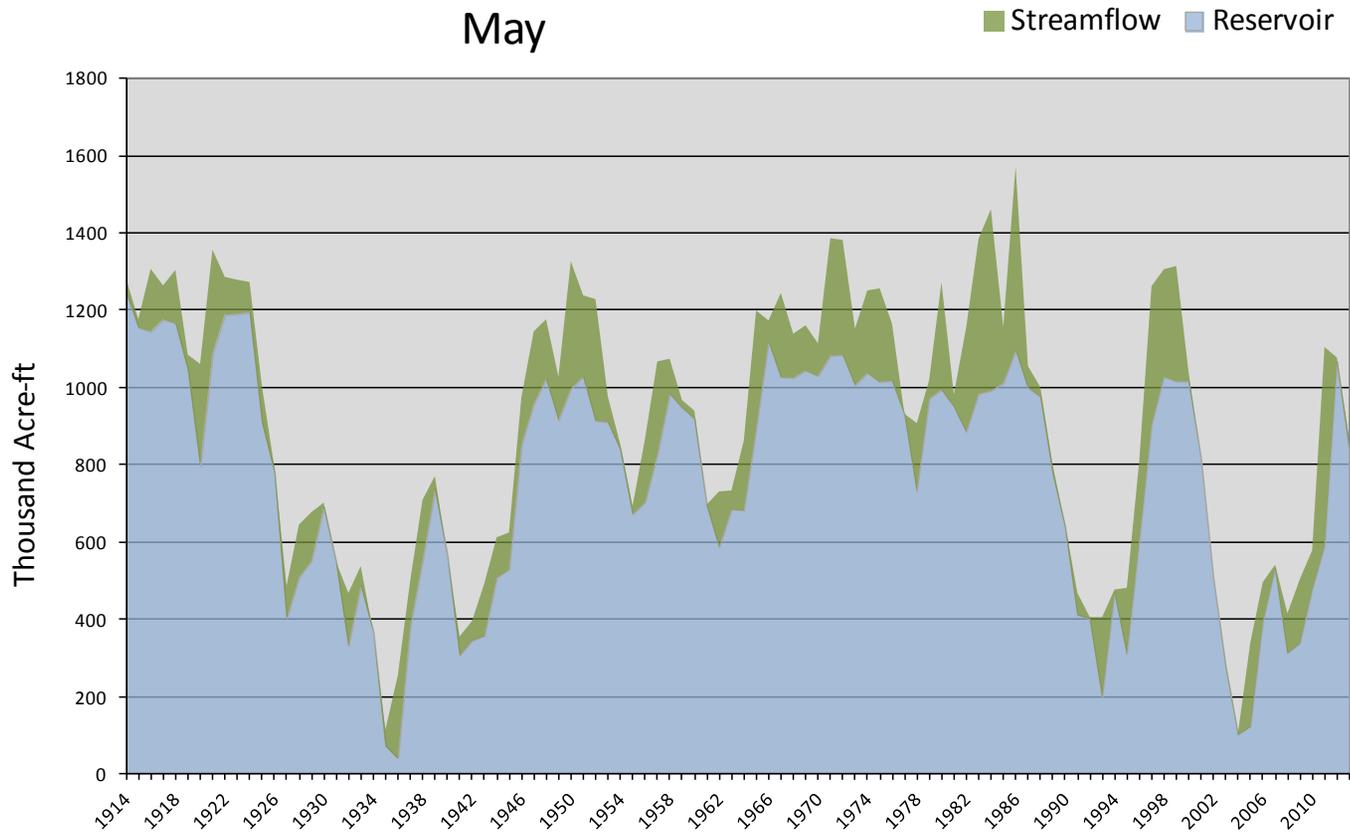
Surface Water Supply Index

Basin or Region	April EOM* Bear Lake	May-July Forecast below Stewart Dam	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Bear River	841	28	869	-0.37	46	64, 56, 78, 77

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

Bear River - Surface Water Supply Index

May

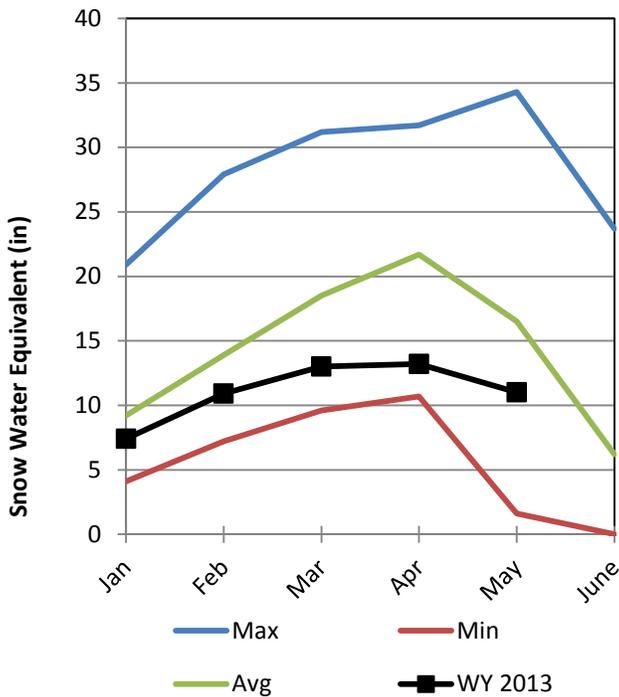


Weber & Ogden River Basins

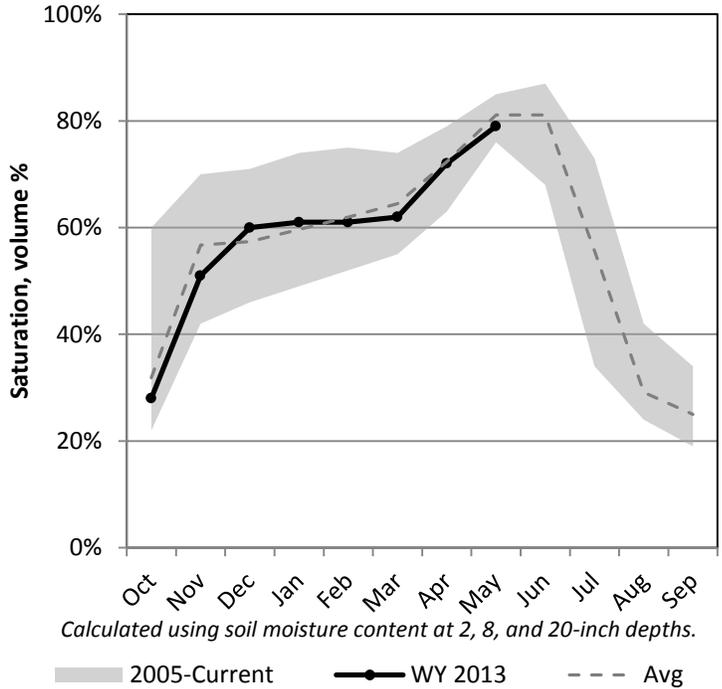
5/1/2013

Snowpack in the Weber & Ogden River Basins is below average at 70% of normal, compared to 29% last year. Precipitation in April was near average at 104%, which brings the seasonal accumulation (Oct-Apr) to 80% of average. Soil moisture is at 79% compared to 83% last year. Reservoir storage is at 63% of capacity, compared to 94% last year. Forecast streamflow volumes range from 38% to 70% of average. The surface water supply index is 11% for the Ogden River, 20% for the Weber River.

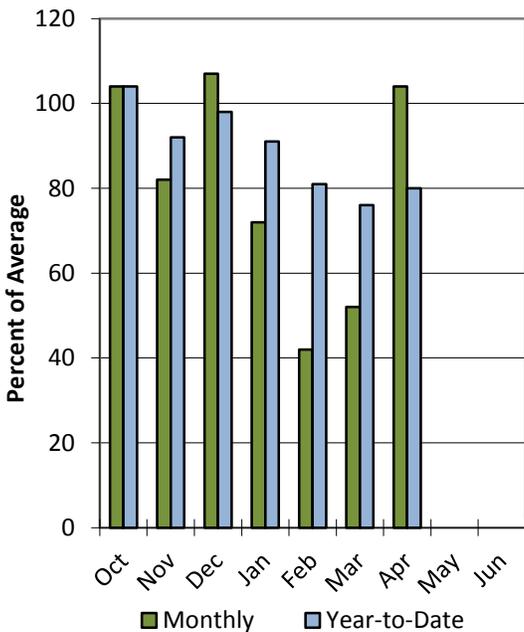
Snowpack



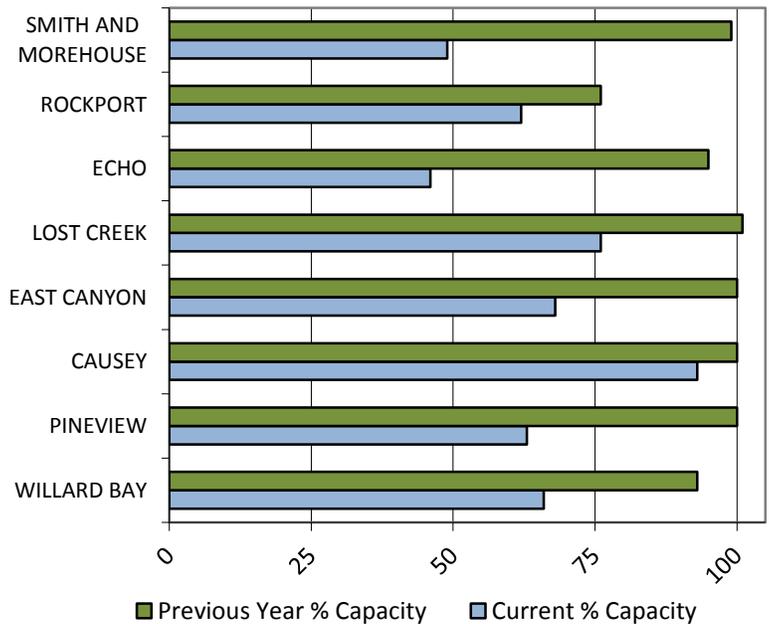
Soil Moisture



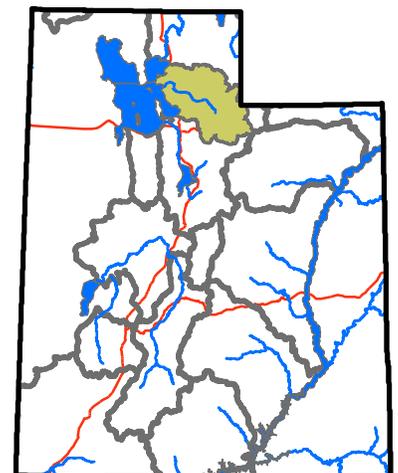
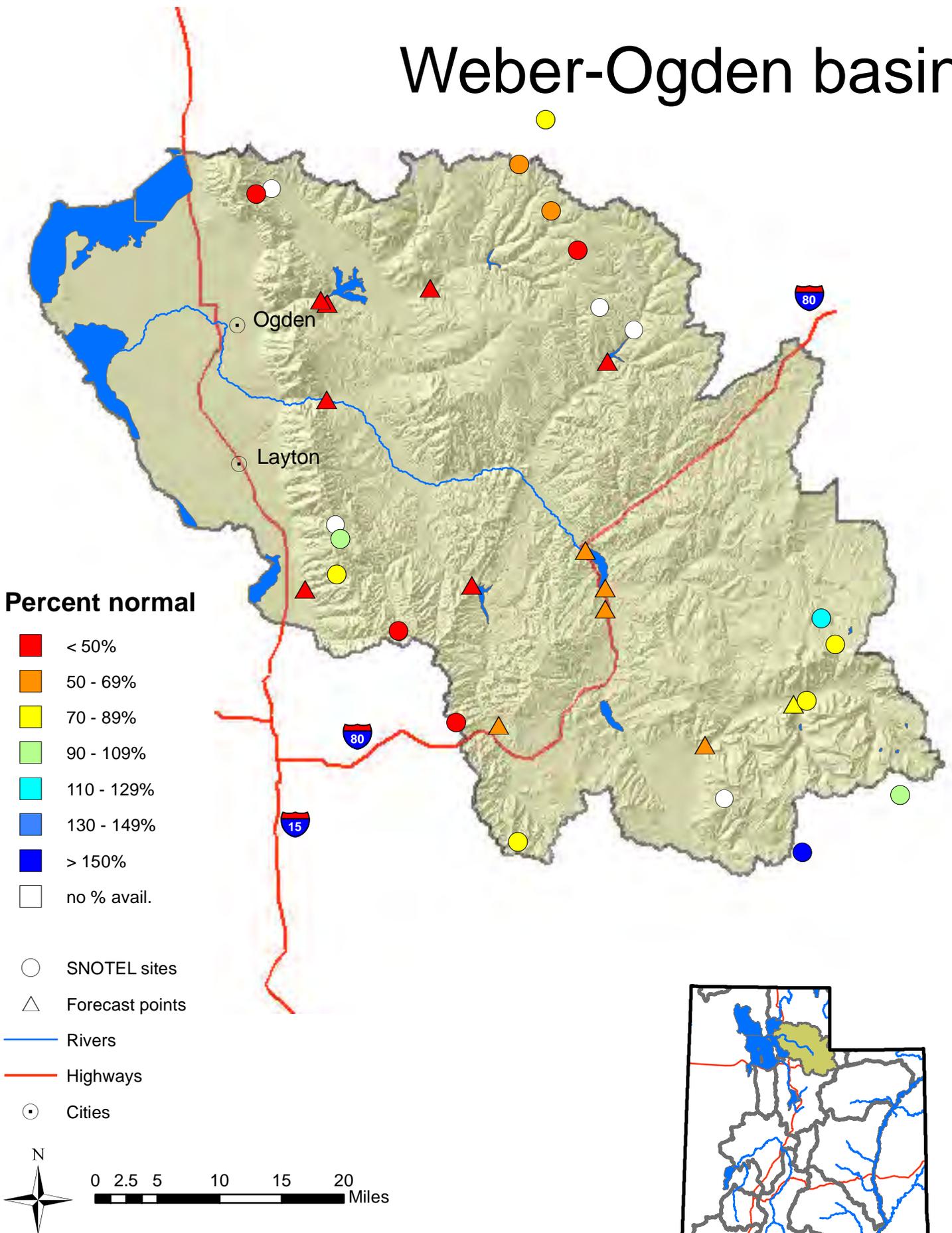
Precipitation



Reservoir Storage



Weber-Ogden basin



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

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>		Chance Of Exceeding *				30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Smith & Morehouse Res Inflow	APR-JUL	18.9	21	23	68	25	27	34
	MAY-JUL	16.9	19.3	21	68	23	25	31
Weber R nr Oakley	APR-JUL	61	74	82	70	90	103	117
	MAY-JUL	50	63	72	68	81	94	106
Rockport Res	APR-JUL	54	70	81	66	92	108	123
	MAY-JUL	44	59	69	65	79	94	106
Weber R nr Coalville	APR-JUL	45	64	77	61	90	109	126
	MAY-JUL	41	58	69	65	80	97	106
Chalk Ck at Coalville	APR-JUL	0.8	12.2	20	49	28	39	41
	MAY-JUL	1.4	9.5	17.0	50	24	36	34
Echo Res Inflow	APR-JUL	18.0	58	85	51	112	152	166
	MAY-JUL	17.0	52	76	50	100	135	152
Lost Ck Resv Inflow	APR-JUL	0.2	2.8	5.8	48	8.8	13.2	12.1
	MAY-JUL	0.17	1.17	3.80	45	6.40	10.30	8.50
East Canyon Ck nr Jeremy Ranch	APR-JUL	3.1	6.4	8.7	57	11.0	14.3	15.2
	MAY-JUL	0.2	2.4	5.6	55	8.8	13.4	10.2
East Canyon Ck nr Morgan	APR-JUL	2.7	8.6	12.6	45	16.6	22	28
	MAY-JUL	0.4	4.5	7.5	39	10.5	14.9	19.4
Weber R at Gateway	APR-JUL	6.0	90	150	48	210	299	315
	MAY-JUL	5.0	67	115	48	163	234	240
SF Ogden R nr Huntsville	APR-JUL	11.7	19.6	25	45	30	38	56
	MAY-JUL	5.2	11.6	16.0	40	20	27	40
Pineview Res Inflow	APR-JUL	1.7	13.6	34	40	54	85	86
	MAY-JUL	1.1	7.4	20	38	36	53	53
Wheeler Ck nr Huntsville	APR-JUL	0.19	1.20	2.20	35	3.20	5.90	6.30
	MAY-JUL	0.13	0.57	1.50	35	2.40	3.80	4.30
Centerville Ck	APR-JUL	0.37	0.54	0.65	48	0.76	0.93	1.35
	MAY-JUL	0.16	0.36	0.50	47	0.64	0.84	1.07

* 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.

May 1, 2013

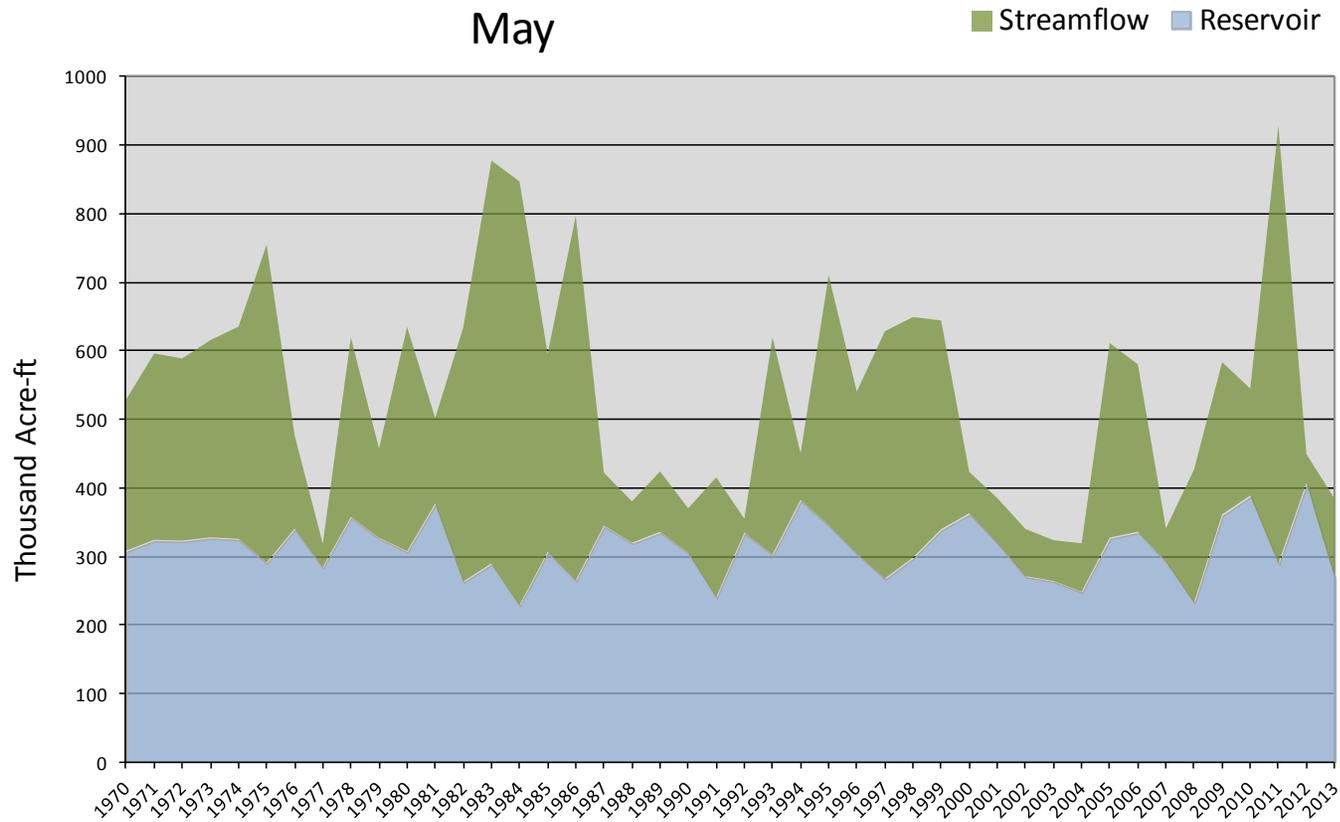
Surface Water Supply Index

Basin or Region	April EOM* Reservoirs	May-July Forecast Weber River at Gateway	Reservoirs + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Weber River	268	115	383	-2.50	20	90, 88, 01, 91

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

Weber River Surface Water Supply Index

May

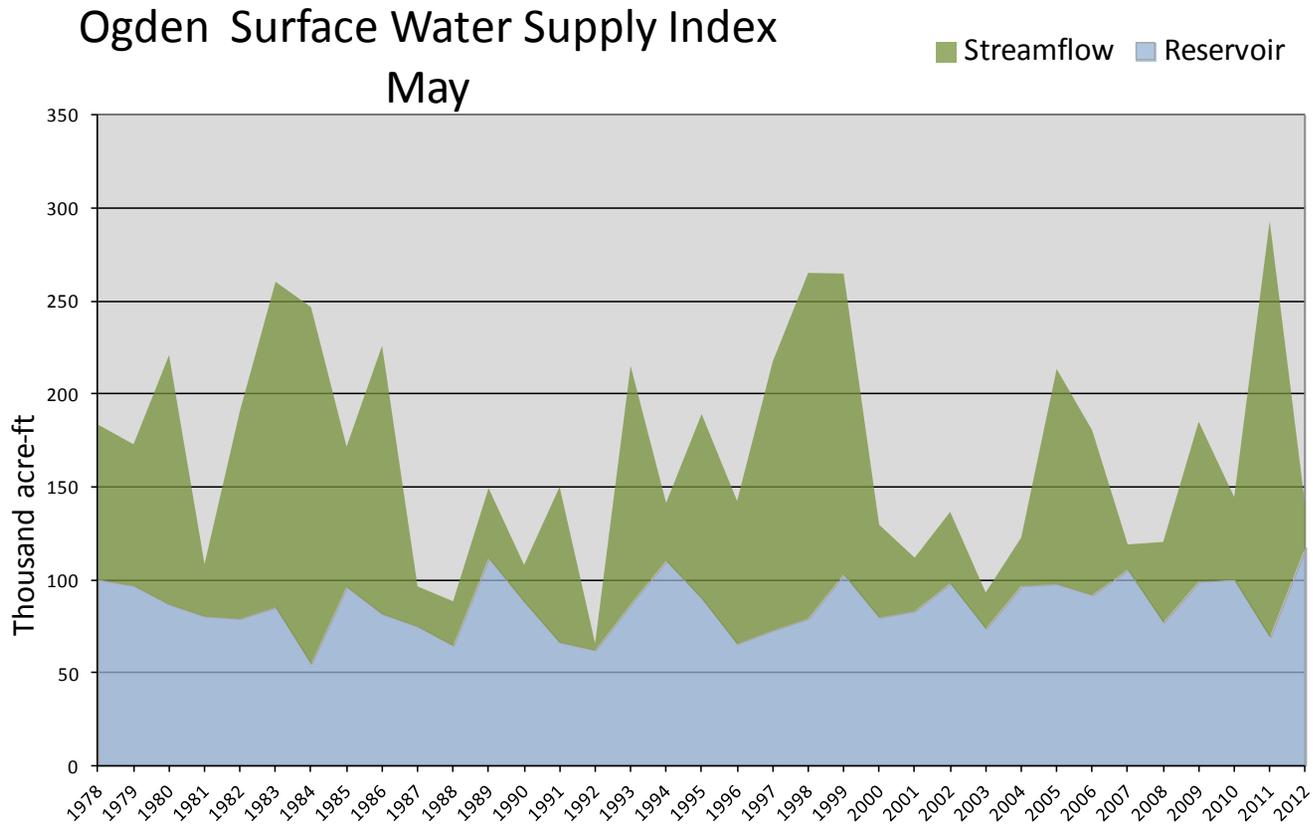


May 1, 2013

Surface Water Supply Index

Basin or Region	April EOM* Pine View & Causey	May-July Forecast Pineview Reservoir Inflow	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Ogden River	75.5	20.0	95.5	-3.27	11	88, 03, 87, 90

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

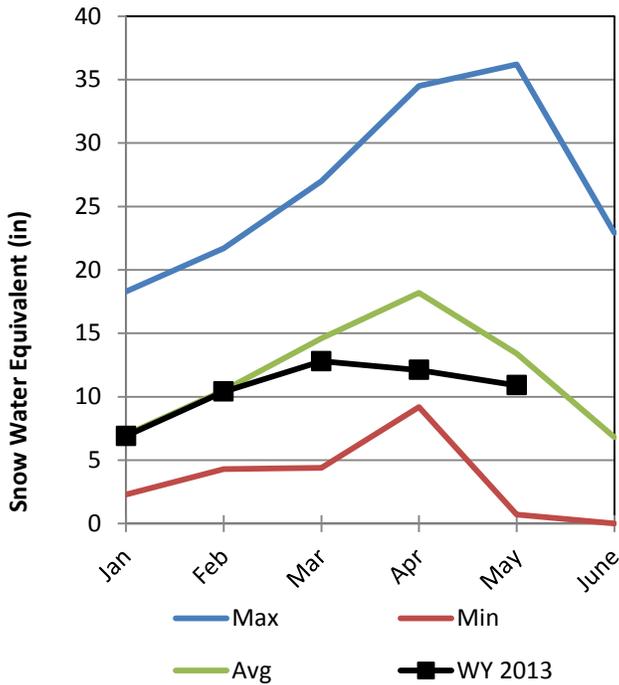


Tooele & Vernon Creek Basins

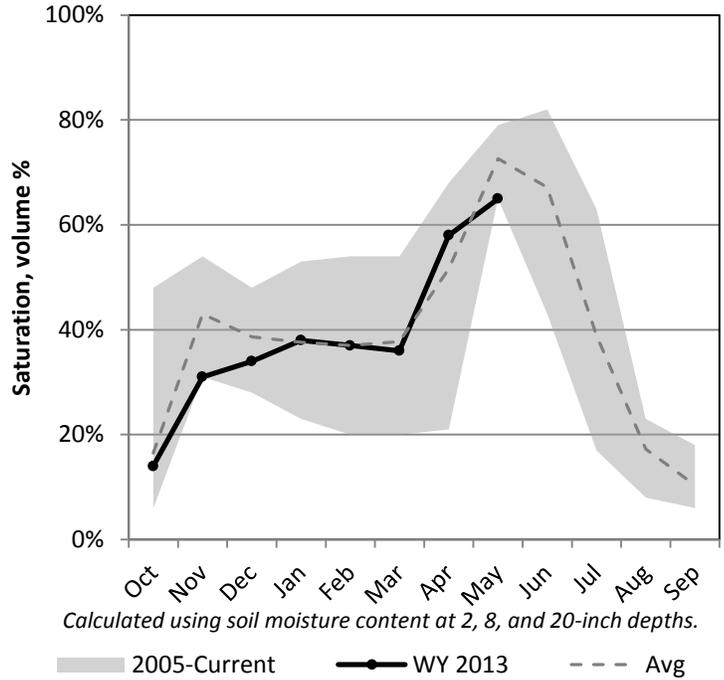
5/1/2013

Snowpack in the Tooele & Vernon Creek Basins is near average at 97% of normal, compared to 12% last year. Precipitation in April was much above average at 133%, which brings the seasonal accumulation (Oct-Apr) to 84% of average. Soil moisture is at 65% compared to 76% last year. Reservoir storage is at 69% of capacity, compared to 88% last year. Forecast streamflow volumes range from 50% to 65% of average.

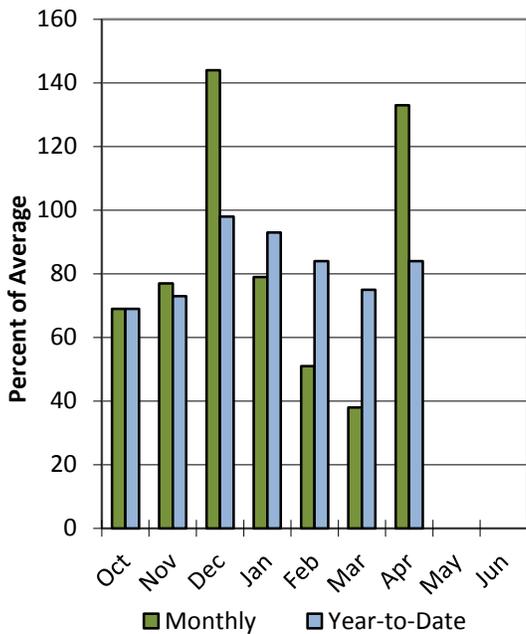
Snowpack



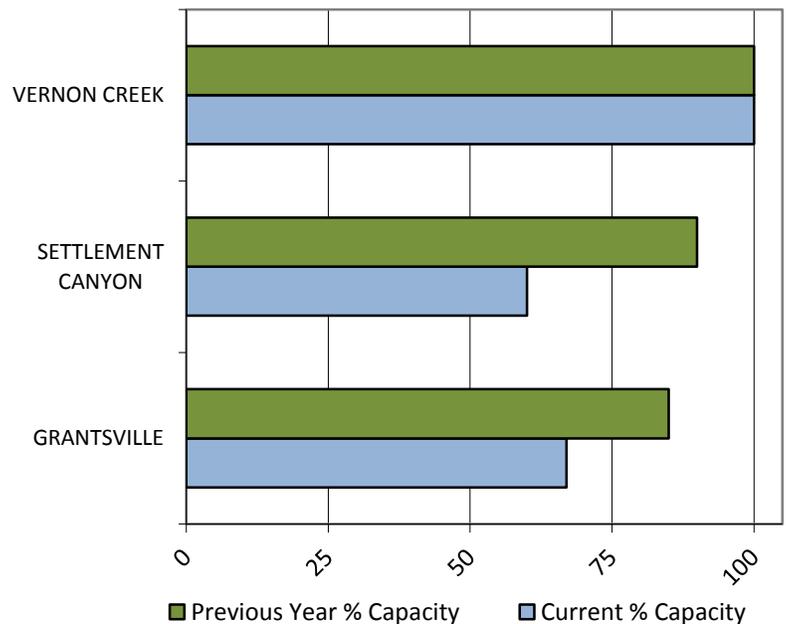
Soil Moisture



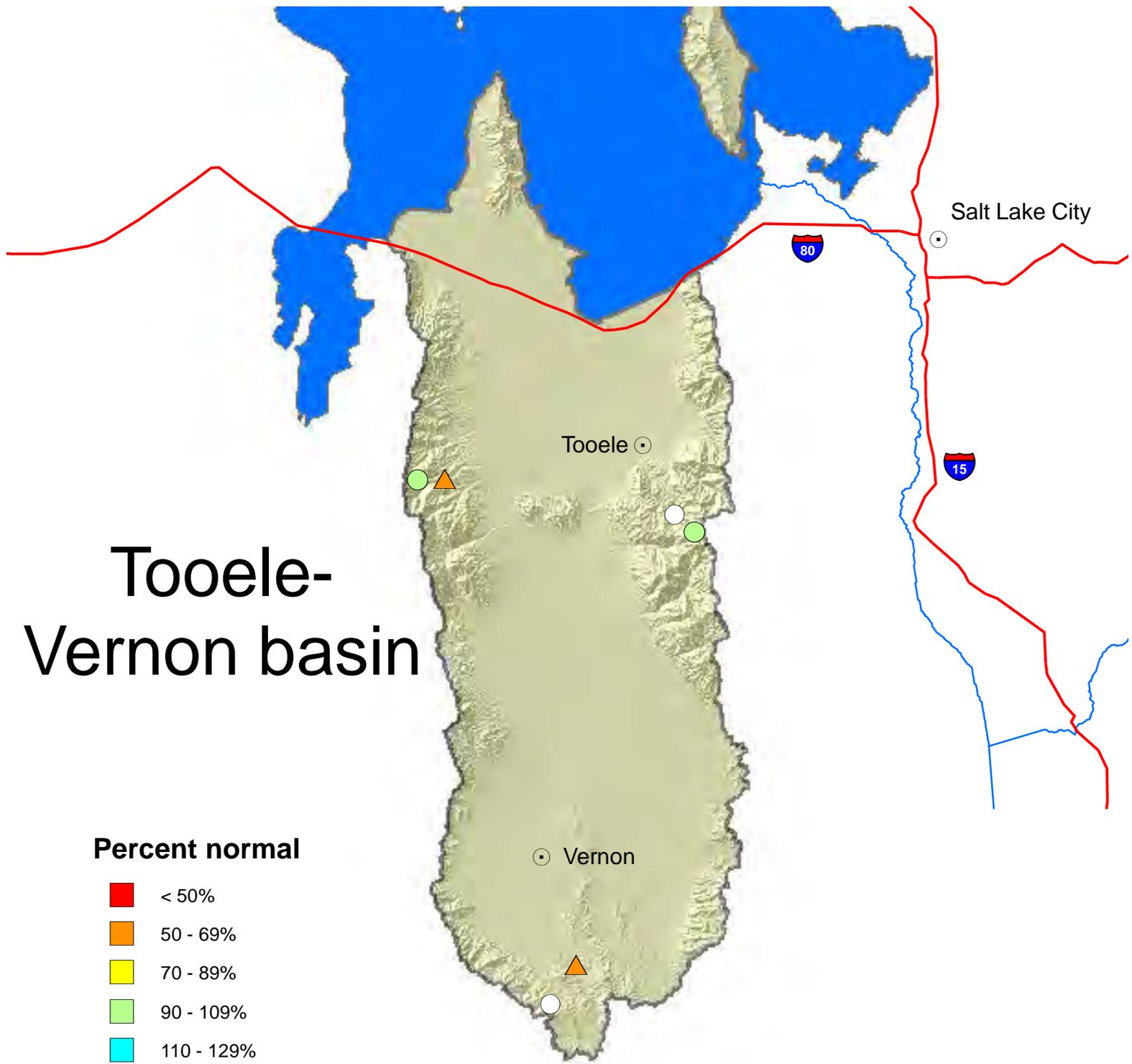
Precipitation



Reservoir Storage



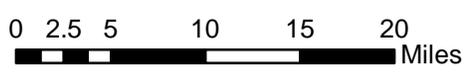
Tooele-Vernon basin



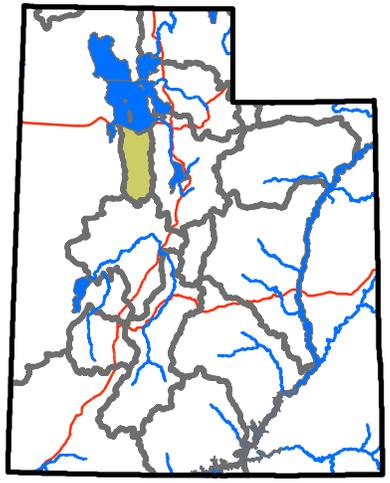
Percent normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%
- no % avail.

- SNOTEL sites
- ▲ Forecast points
- Rivers
- Highways
- Cities



United States Department of Agriculture
 Natural Resources Conservation Service



TOOELE VALLEY								
Streamflow Forecasts - May 1, 2013								
Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)		
Vernon Ck nr Vernon	APR-JUL	0.04	0.30	0.70	50	1.10	1.69	1.39
	MAY-JUL	0.03	0.20	0.50	50	0.80	1.25	1.01
S Willow Ck nr Grantsville	APR-JUL	1.07	1.63	2.00	65	2.40	3.00	3.10
	MAY-JUL	0.85	1.36	1.70	63	2.00	2.60	2.70
W Canyon Ck nr Cedar Fort	APR-JUL	0.36	0.86	1.20	68	1.54	2.00	1.76
	MAY-JUL	0.21	0.68	1.00	65	1.32	1.79	1.54

* 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.

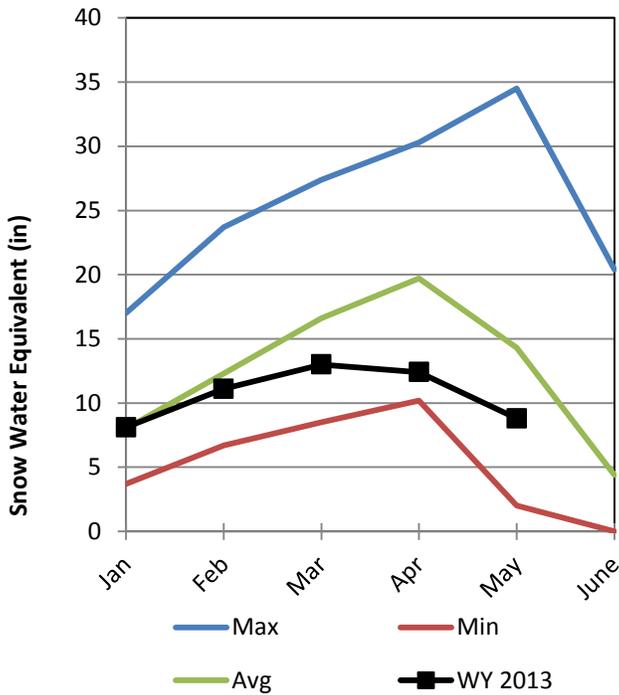
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

Provo & Jordan River Basins

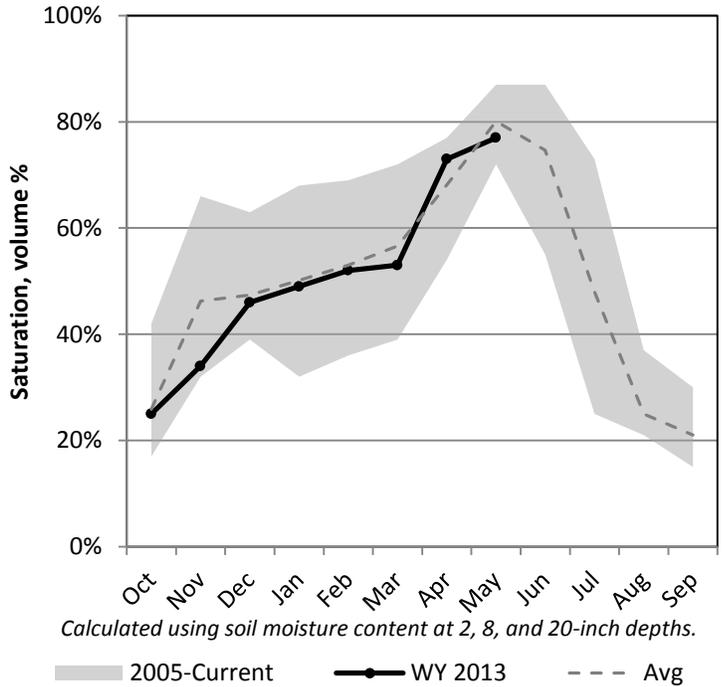
5/1/2013

Snowpack in the Provo & Jordan River Basins is much below average at 66% of normal, compared to 27% last year. Precipitation in April was near average at 104%, which brings the seasonal accumulation (Oct-Apr) to 79% of average. Soil moisture is at 77% compared to 79% last year. Reservoir storage is at 80% of capacity, compared to 93% last year. Forecast streamflow volumes range from 24% to 69% of average. The surface water supply index is 9% for the Provo River.

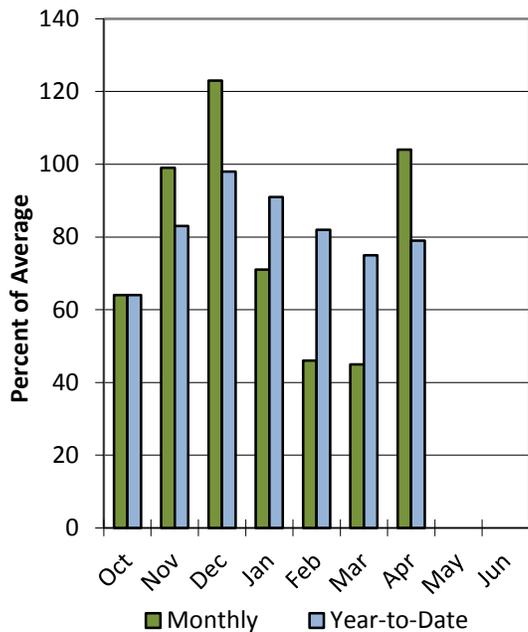
Snowpack



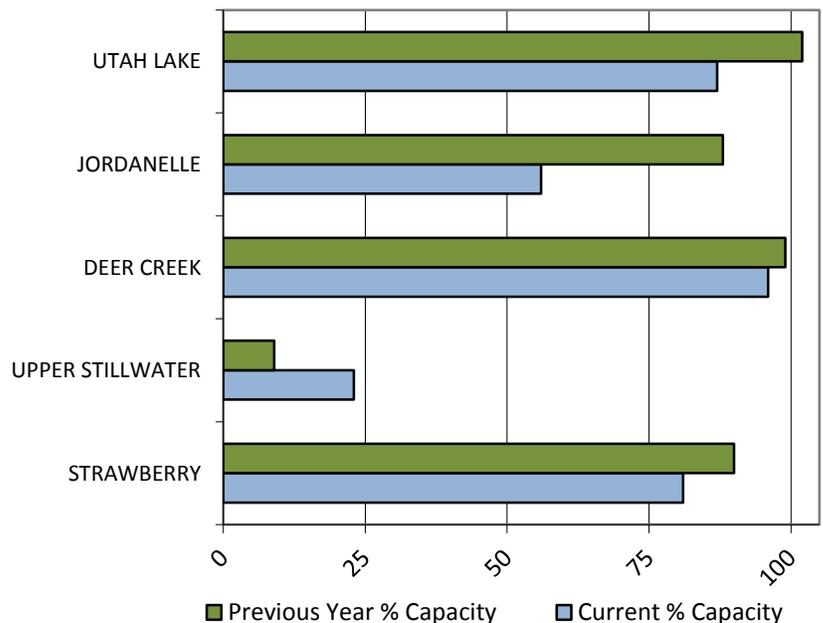
Soil Moisture



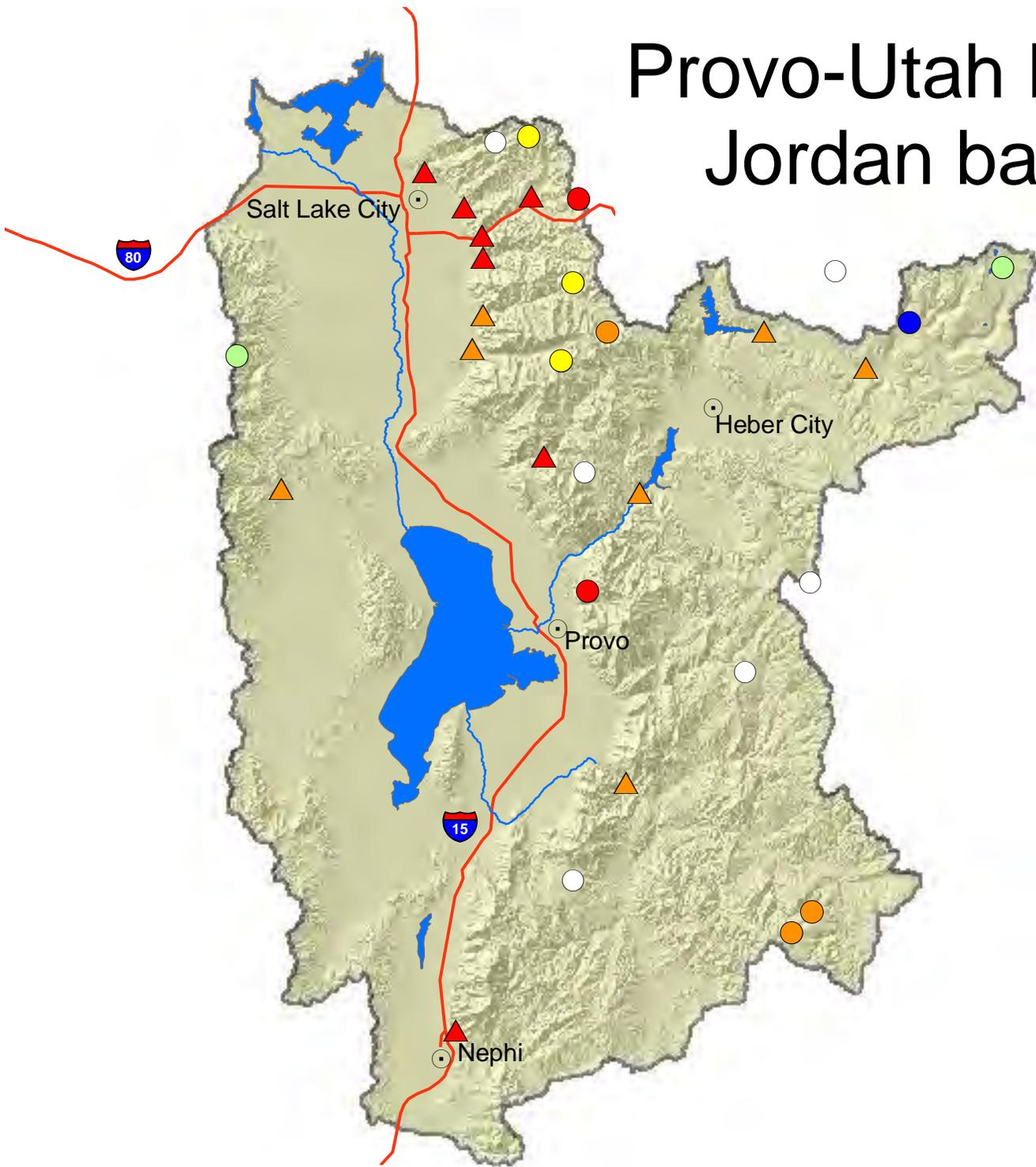
Precipitation



Reservoir Storage



Provo-Utah Lake-Jordan basin

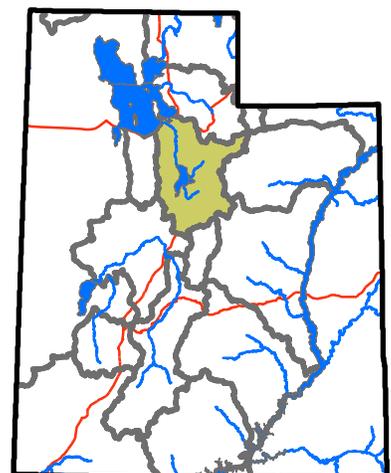
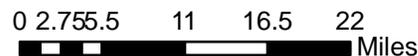


Percent normal

- | | | | |
|--|-------------|--|-----------------|
| ■ | < 50% | | SNOTEL sites |
| ■ | 50 - 69% | | Forecast points |
| ■ | 70 - 89% | — | Rivers |
| ■ | 90 - 109% | — | Highways |
| ■ | 110 - 129% | | Cities |
| ■ | 130 - 149% | | |
| ■ | > 150% | | |
| | no % avail. | | |



United States Department of Agriculture
 Natural Resources Conservation Service



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

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>		Chance Of Exceeding *				30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Salt Ck at Nephi	APR-JUL	0.29	1.65	3.00	32	4.30	6.30	9.50
	MAY-JUL	0.23	1.01	2.10	28	3.20	4.80	7.60
Spanish Fk at Castilla	APR-JUL	0.7	10.2	39	57	68	110	69
	MAY-JUL	1.1	4.5	31	57	58	96	54
Provo R nr Woodland	APR-JUL	46	59	69	69	80	96	100
	MAY-JUL	38	52	61	69	70	84	89
Provo R nr Hailstone	APR-JUL	46	61	72	67	84	104	108
	MAY-JUL	33	44	52	55	61	75	94
Provo R bl Deer Ck Dam	APR-JUL	36	54	67	58	80	98	116
	MAY-JUL	25	42	53	56	64	81	94
American Fk ab Upper Powerplant	APR-JUL	4.7	10.2	14.0	44	17.8	23	32
	MAY-JUL	3.3	8.5	12.0	40	15.5	21	30
Utah Lake Inflow	APR-JUL	5.0	58	175	66	262	519	265
	MAY-JUL	4.0	23	119	62	165	321	192
L Cottonwood Ck nr SLC	APR-JUL	18.9	24	27	71	31	36	38
	MAY-JUL	18.7	22	25	68	28	32	37
Big Cottonwood Ck nr SLC	APR-JUL	15.0	21	25	69	29	35	36
	MAY-JUL	12.4	17.5	21	64	24	30	33
Mill Ck nr SLC	APR-JUL	0.13	0.90	2.30	36	3.70	5.70	6.40
	MAY-JUL	0.06	0.42	1.60	27	2.80	4.50	5.90
Parley's Ck nr SLC	APR-JUL	0.3	3.5	6.1	43	8.7	12.5	14.2
	MAY-JUL	0.3	1.0	3.1	24	5.3	8.6	12.8
Dell Fk nr SLC	APR-JUL	0.14	1.45	3.10	45	4.80	7.20	6.90
	MAY-JUL	0.10	0.51	2.00	39	3.50	5.70	5.10
Emigration Ck nr SLC	APR-JUL	0.08	0.42	1.50	38	2.60	4.20	4.00
	MAY-JUL	0.03	0.34	1.00	32	1.94	3.30	3.10
City Ck nr SLC	APR-JUL	0.35	2.50	4.00	52	5.50	7.60	7.70
	MAY-JUL	0.08	2.10	3.40	47	4.70	6.70	7.30

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

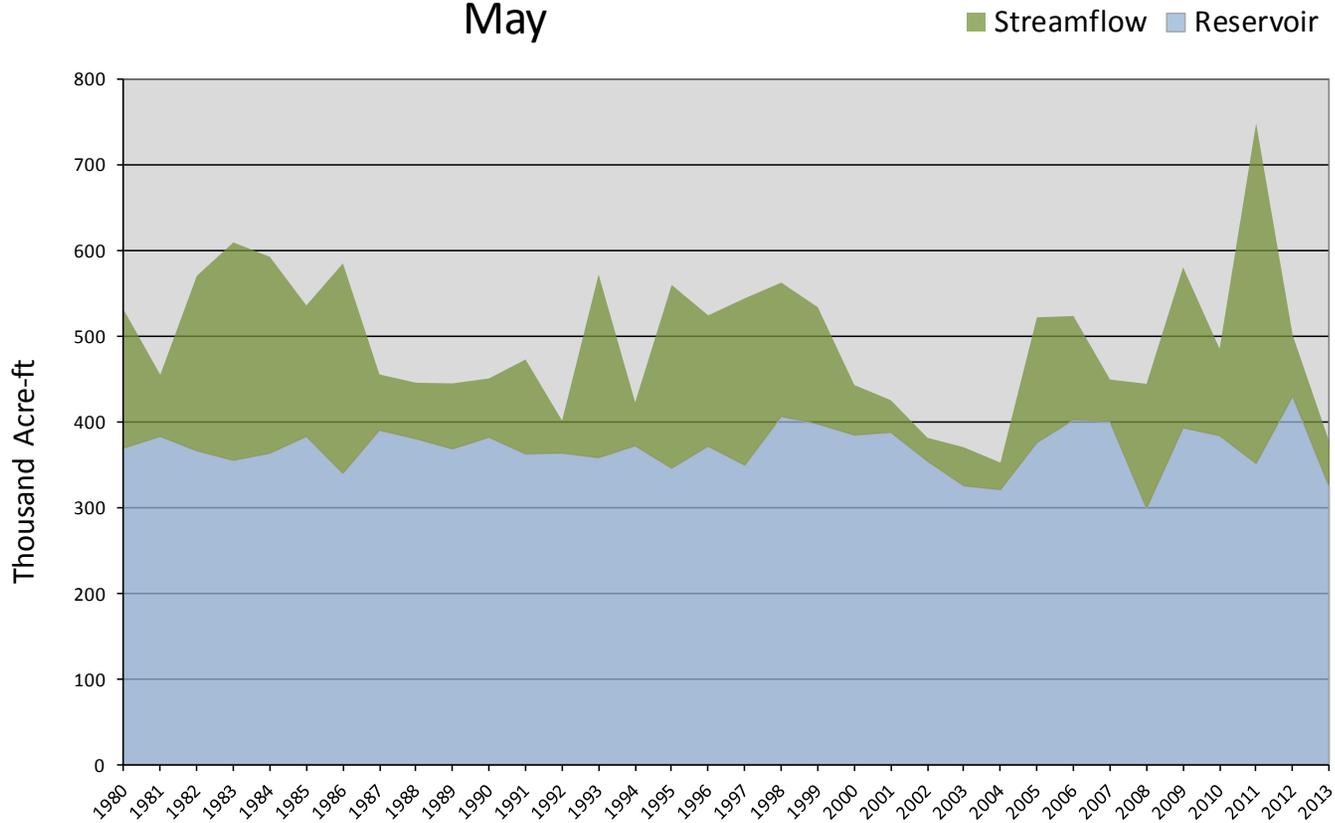
The average is computed for the 1981-2010 base period.

- (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.

5/1/2013		Surface Water Supply Index				
Basin or Region	April EOM* Deer Creek, Jordanelle	May - July Forecast Provo River below Deer Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Provo River	324	53	377	-3.45	9	04,03,02,92

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

Provo River SWSI@ Deer Creek Inflow
May

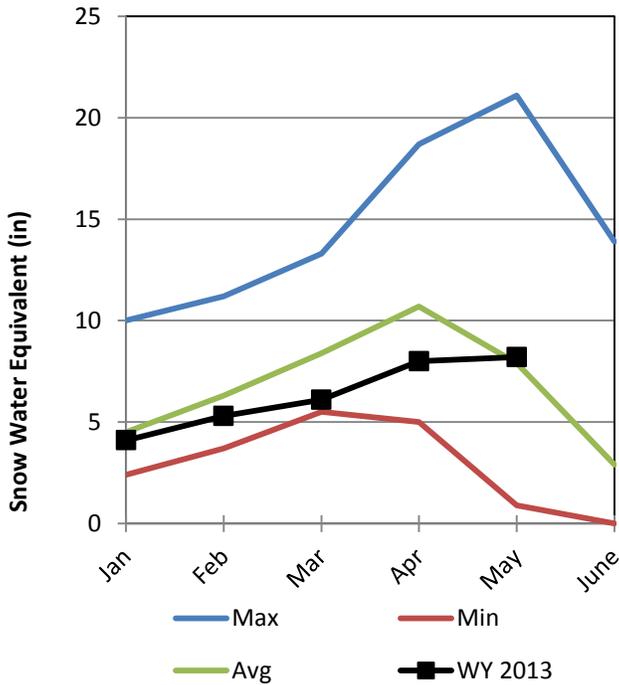


Northeastern Uintah Basin

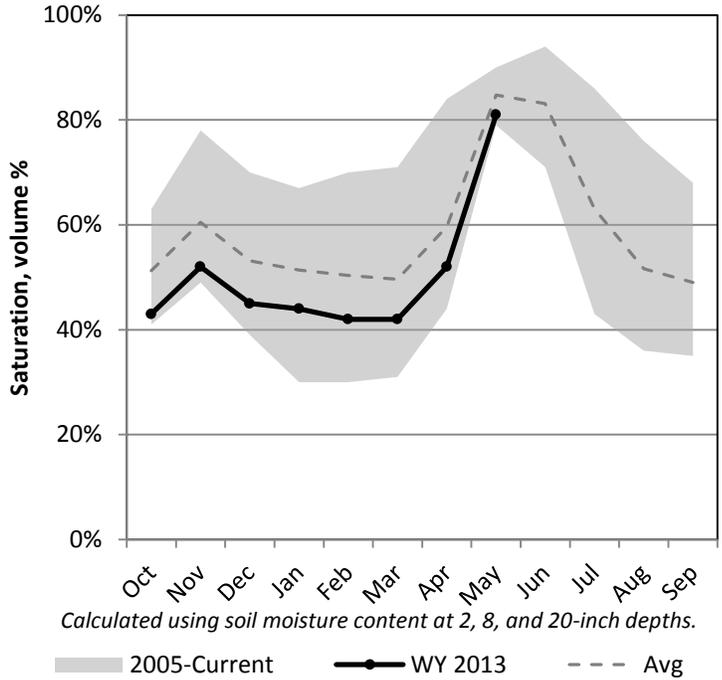
5/1/2013

Snowpack in the Northeastern Uintah Basin is much above average at 131% of normal, compared to 23% last year. Precipitation in April was much above average at 150%, which brings the seasonal accumulation (Oct-Apr) to 96% of average. Soil moisture is at 81% compared to 89% last year. Reservoir storage is at 80% of capacity, compared to 85% last year. Forecast streamflow volumes range from 59% to 79% of average.

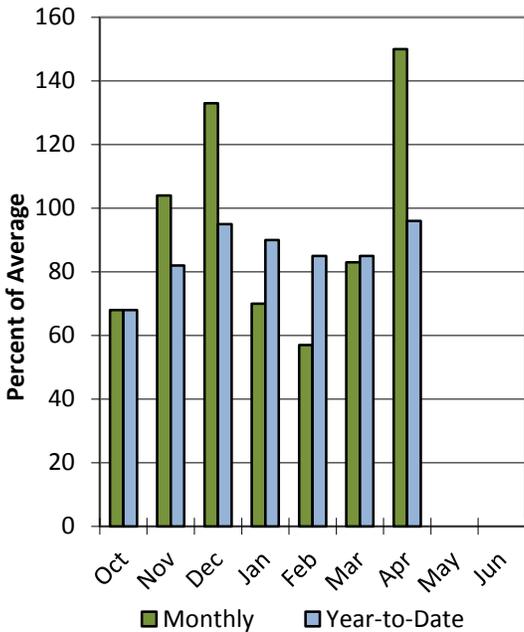
Snowpack



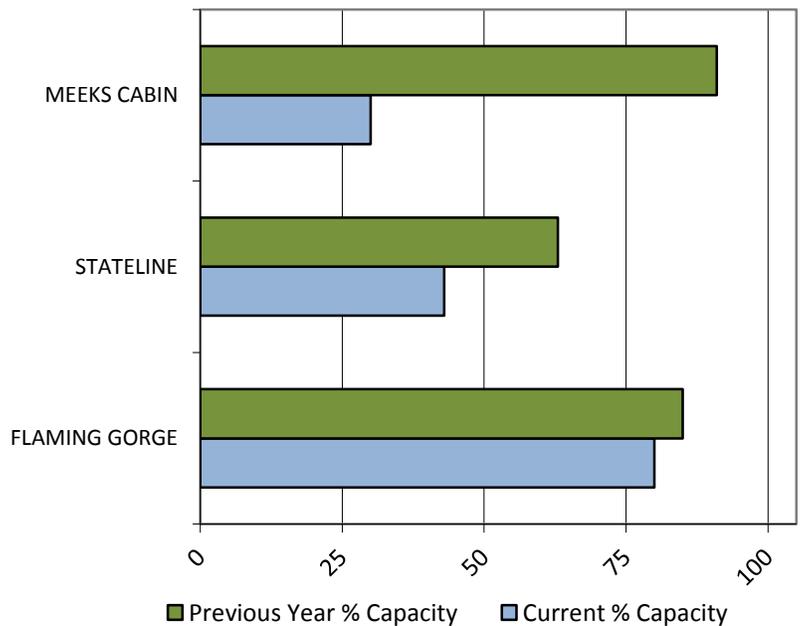
Soil Moisture



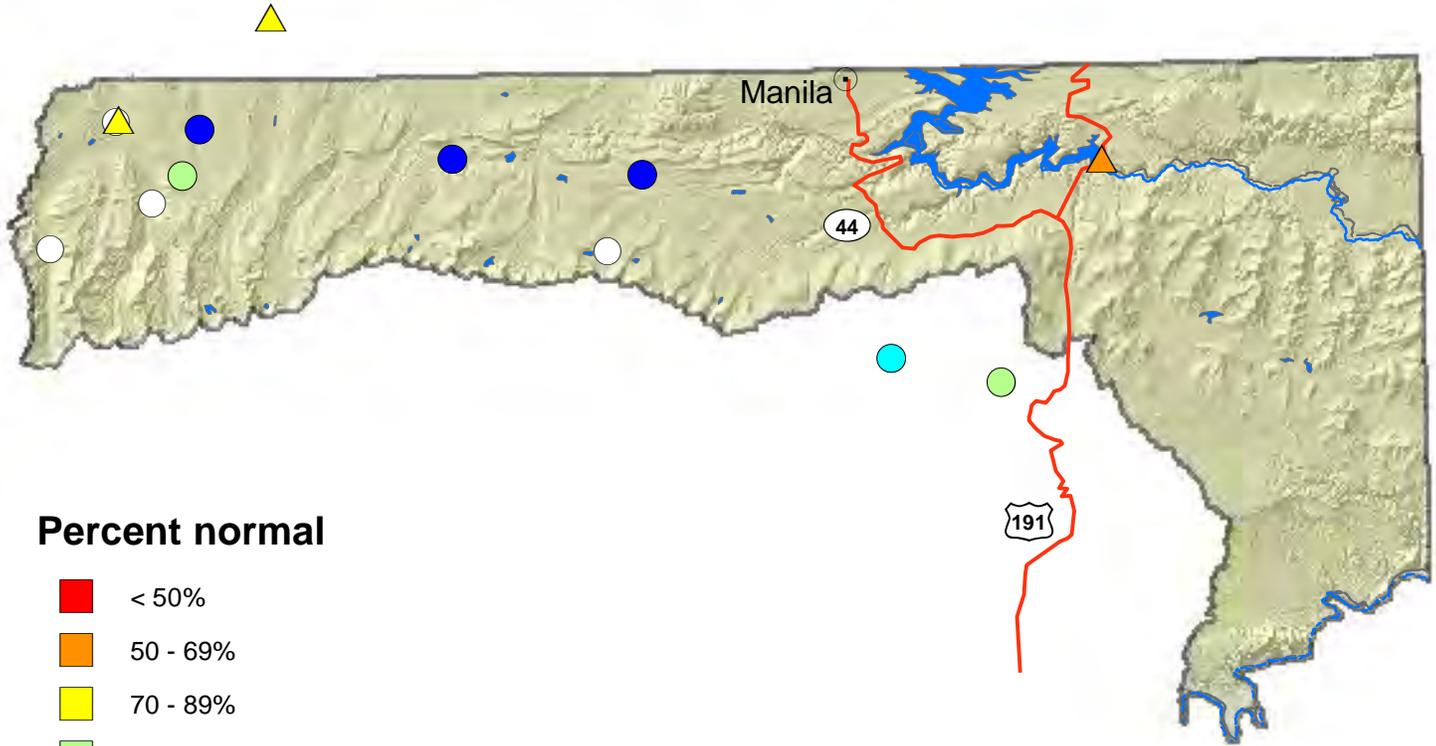
Precipitation



Reservoir Storage



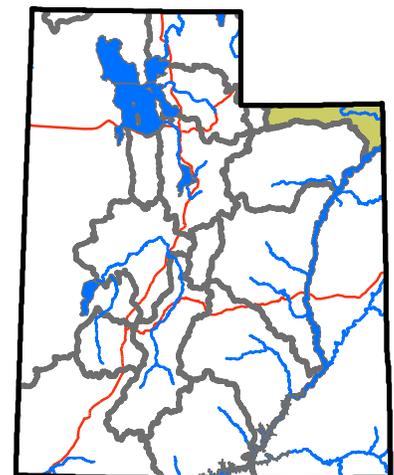
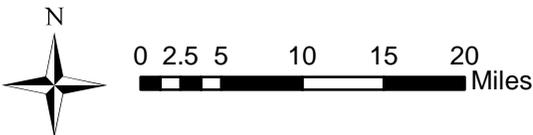
Northeastern Utah



Percent normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%
- no % avail.

- SNOTEL sites
- △ Forecast points
- Rivers
- Highways
- Cities



NORTHEASTERN UTAH Streamflow Forecasts - May 1, 2013										
Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)		
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)			30% (1000AF)	10% (1000AF)
Blacks Fk nr Robertson	APR-JUL	56	64	70	79	76	86	89		
	MAY-JUL	53	61	67	79	73	83	85		
EF of Smiths Fork nr Robertson (2)	APR-JUL	12.2	16.4	19.6	75	24	29	26		
	MAY-JUL	11.6	15.8	19.0	73	23	28	26		
Flaming Gorge Reservoir Inflow (2)	APR-JUL	405	500	570	58	645	770	980		
	MAY-JUL	335	430	500	59	575	700	845		

* 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.

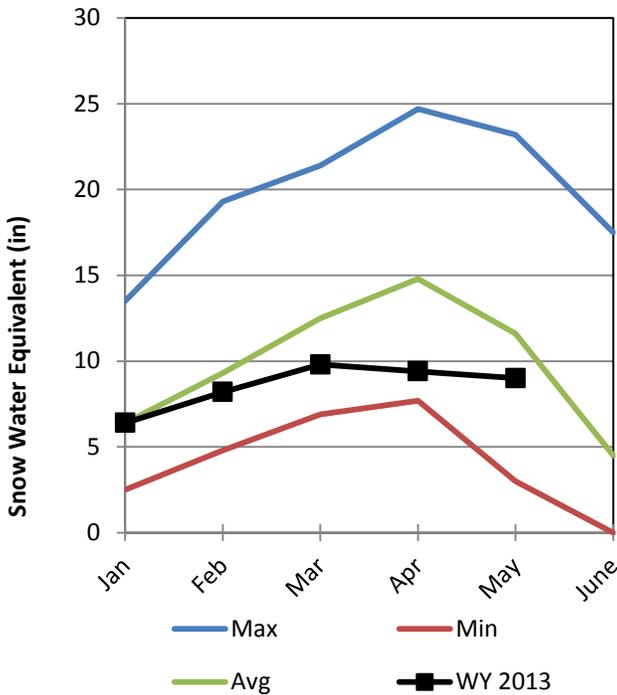
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

Duchesne River Basin

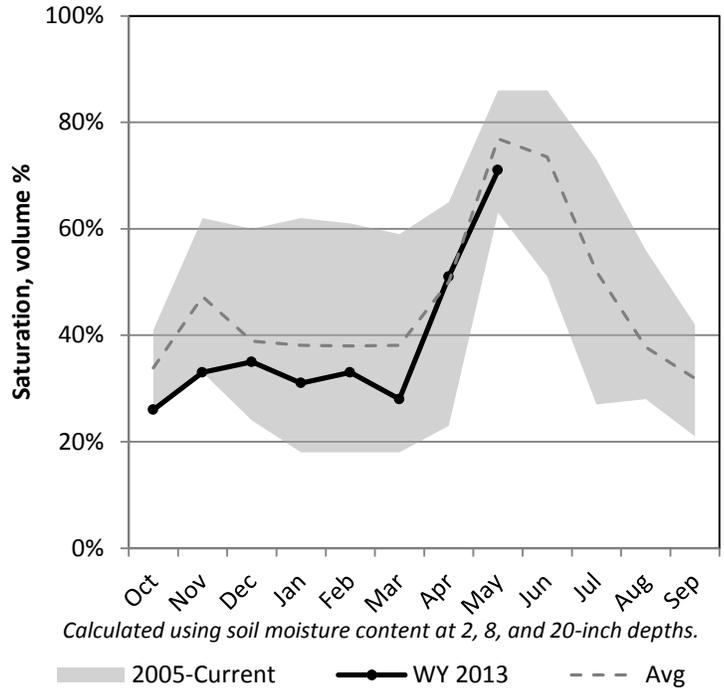
5/1/2013

Snowpack in the Duchesne River Basin is below average at 85% of normal, compared to 37% last year. Precipitation in April was much above average at 135%, which brings the seasonal accumulation (Oct-Apr) to 81% of average. Soil moisture is at 71% compared to 78% last year. Reservoir storage is at 80% of capacity, compared to 89% last year. Forecast streamflow volumes range from 23% to 79% of average. The surface water supply index is 50% for the Western Uintahs, 17% for the Eastern Uintahs.

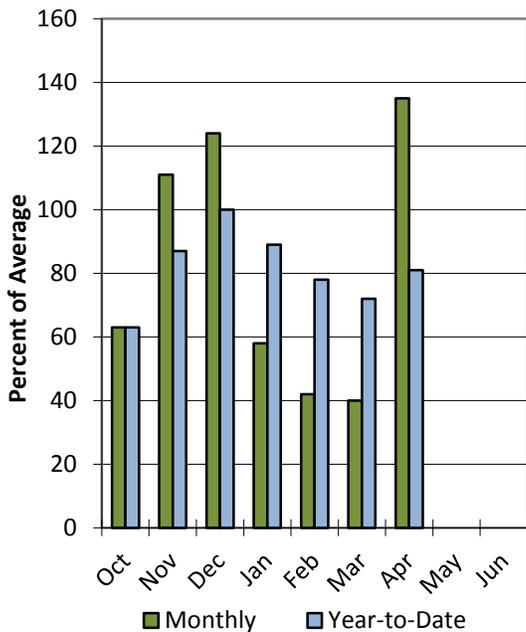
Snowpack



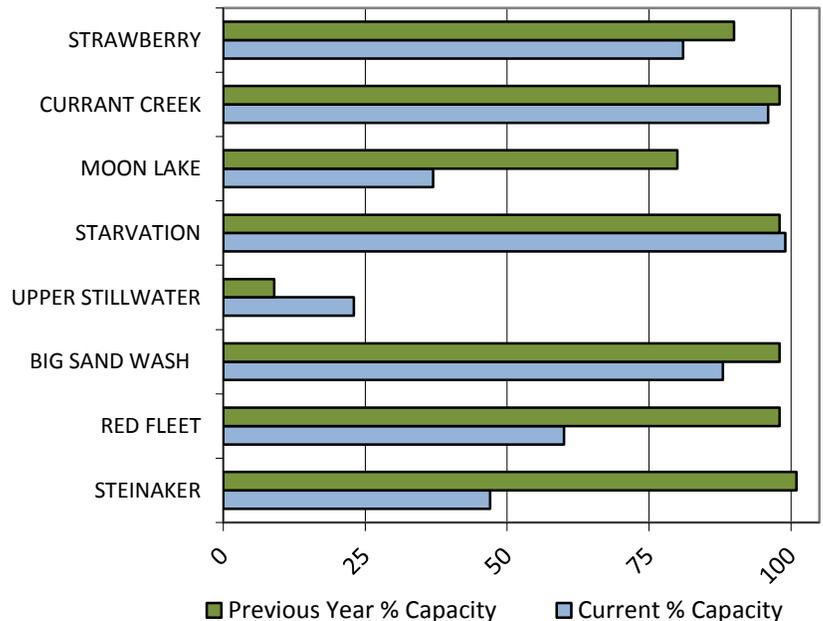
Soil Moisture



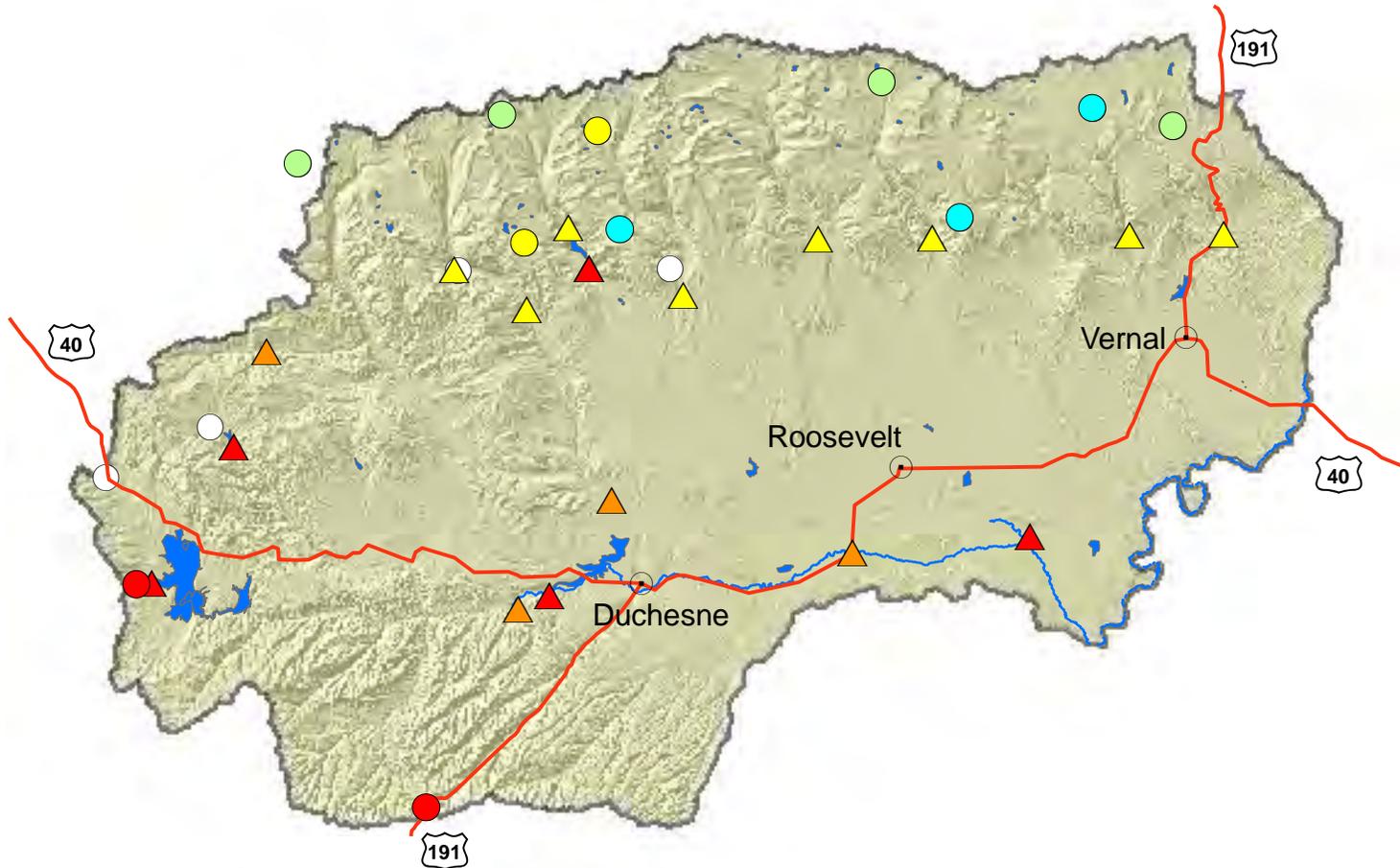
Precipitation



Reservoir Storage

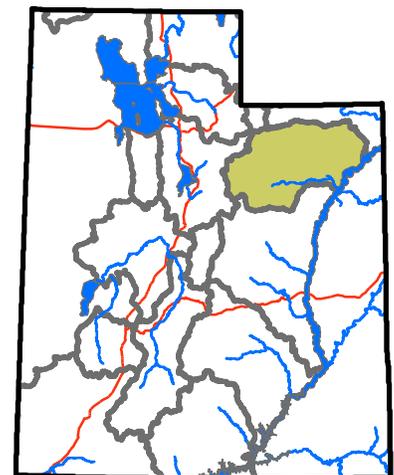
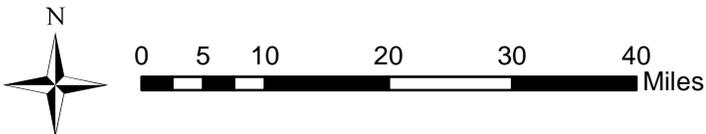


Duchesne basin



Percent normal

- < 50%
 - 50 - 69%
 - 70 - 89%
 - 90 - 109%
 - 110 - 129%
 - 130 - 149%
 - > 150%
 - no % avail.
- SNOTEL sites
 - Forecast points
 - Rivers
 - Highways
 - Cities



UINTAH BASIN Streamflow Forecasts - May 1, 2013								
Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ===== Wetter =====>>		Chance Of Exceeding *				30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	11.0	13.5	15.4	73	17.4	21	21
	MAY-JUL	10.2	12.7	14.6	79	16.6	19.8	18.4
Ashley Ck nr Vernal	APR-JUL	25	32	37	74	42	51	50
	MAY-JUL	23	30	35	75	40	49	47
WF Duchesne R at VAT Diversion	APR-JUL	7.3	9.2	10.6	57	12.1	14.6	18.6
	MAY-JUL	6.7	8.6	10.0	58	11.5	14.0	17.3
Duchesne R nr Tabiona (2)	APR-JUL	53	64	72	67	80	94	108
	MAY-JUL	46	57	65	66	73	87	98
Upper Stillwater Reservoir Inflow (2)	APR-JUL	45	52	57	77	62	70	74
	MAY-JUL	43	50	55	78	60	68	71
Rock Ck nr Mountain Home (2)	APR-JUL	55	61	65	74	69	76	88
	MAY-JUL	51	57	61	73	65	72	84
Duchesne R ab Knight Diversion (2)	APR-JUL	104	123	136	70	150	172	195
	MAY-JUL	92	111	124	69	138	160	179
Strawberry R nr Soldier Springs (2)	APR-JUL	6.1	10.1	14.1	26	19.1	28	55
	MAY-JUL	2.0	6.0	10.0	23	15.0	24	43
Currant Ck Reservoir Inflow (2)	APR-JUL	5.0	6.8	8.3	42	10.0	12.7	20
	MAY-JUL	3.7	5.5	7.0	41	8.7	11.4	17.1
Strawberry R nr Duchesne (2)	APR-JUL	19.0	28	36	32	45	62	112
	MAY-JUL	9.8	19.0	27	30	36	53	91
Lake Fork R ab Moon Lake Reservoir	APR-JUL	30	37	43	71	49	58	61
	MAY-JUL	29	36	42	72	48	57	58
Lake Fork R bl Moon Lake Reservoir (2)	APR-JUL	37	43	47	71	51	58	66
	MAY-JUL	35	41	45	71	49	56	63
Yellowstone R nr Altonah	APR-JUL	34	40	45	74	50	58	61
	MAY-JUL	31	37	42	74	47	55	57
Duchesne R at Myton (2)	APR-JUL	102	139	168	51	200	255	330
	MAY-JUL	78	115	144	50	176	230	290
Uinta R bl Powerplant Diversion nr N	APR-JUL	38	47	54	73	61	73	74
	MAY-JUL	36	45	52	73	59	71	71
Whiterocks R nr Whiterocks	APR-JUL	28	35	40	74	46	55	54
	MAY-JUL	26	33	38	75	44	53	51
Duchesne R nr Randlett (2)	APR-JUL	106	152	189	49	230	300	385
	MAY-JUL	81	127	164	48	205	275	345

* 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.

May 1, 2013

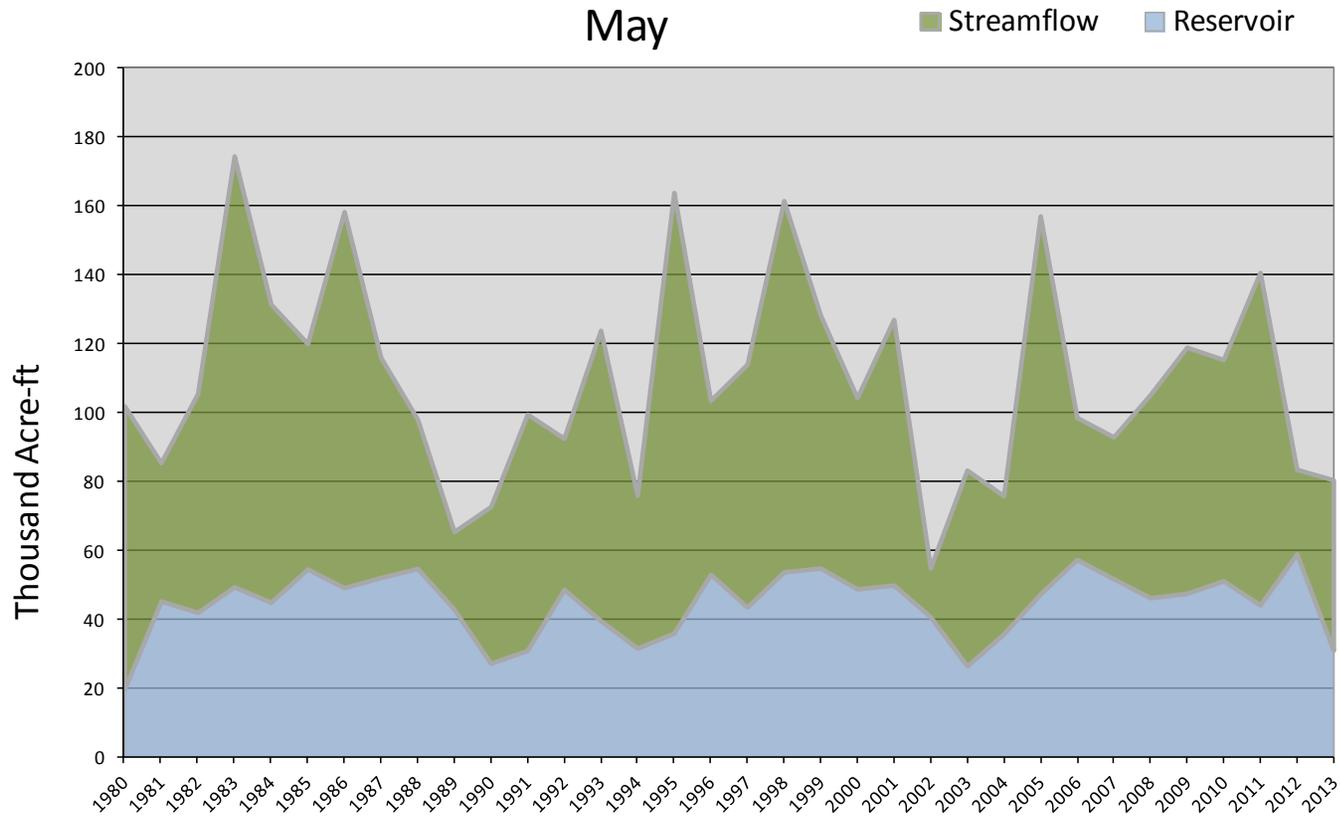
Surface Water Supply Index

Basin or Region	April EOM* Red Fleet & Steinaker	May-July Forecast Big Brush & Ashley Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Eastern Uintah	30.9	49.6	80.5	-2.74	17	04, 94, 03, 12

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

Eastern Uintah Basin - Surface Water Supply Index

May



May 1, 2013

Surface Water Supply Index

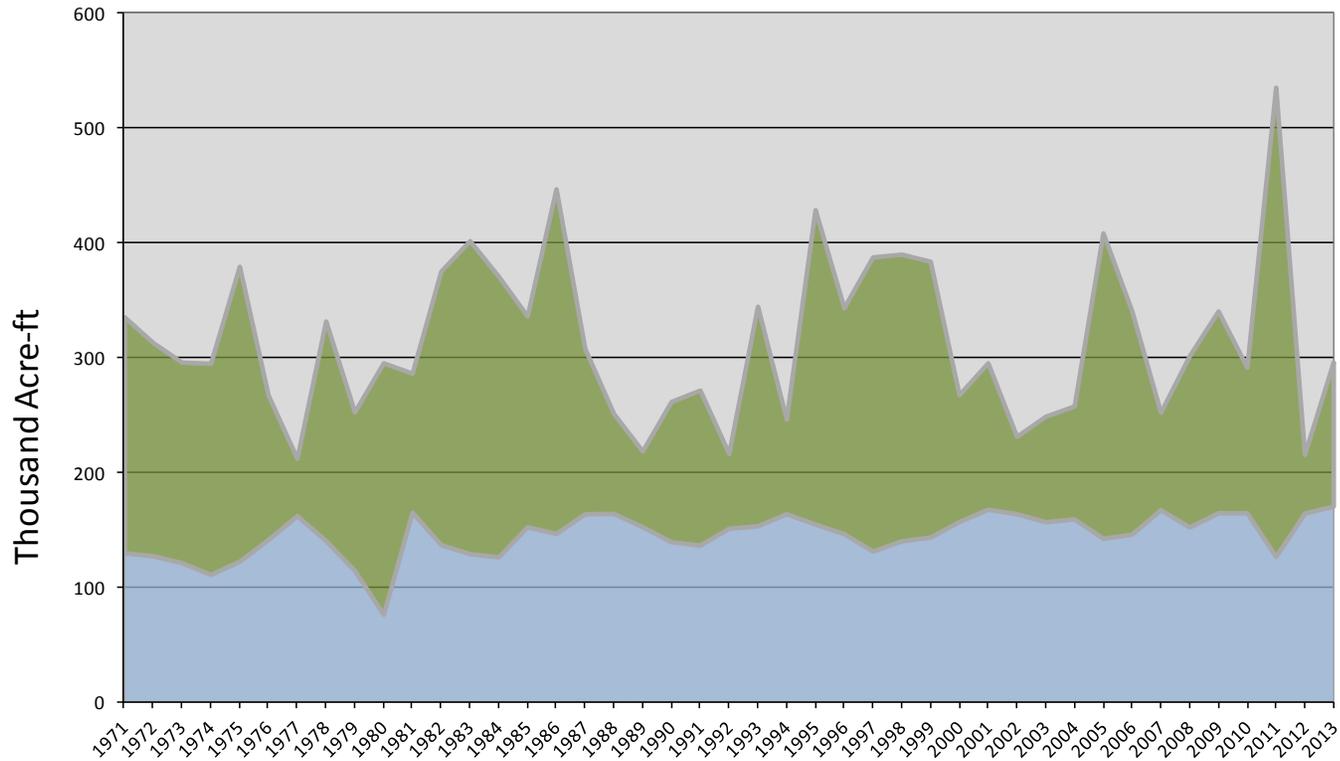
Basin or Region	April EOM* Starvation & Upper Stillwater	May-July Forecast Rock Creek & Duchesne River	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Western Uintah	171	126	297	0.00	50	01, 73, 08, 87

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

Western Uintah Basin - Surface Water Supply Index

May

■ Streamflow ■ Reservoir

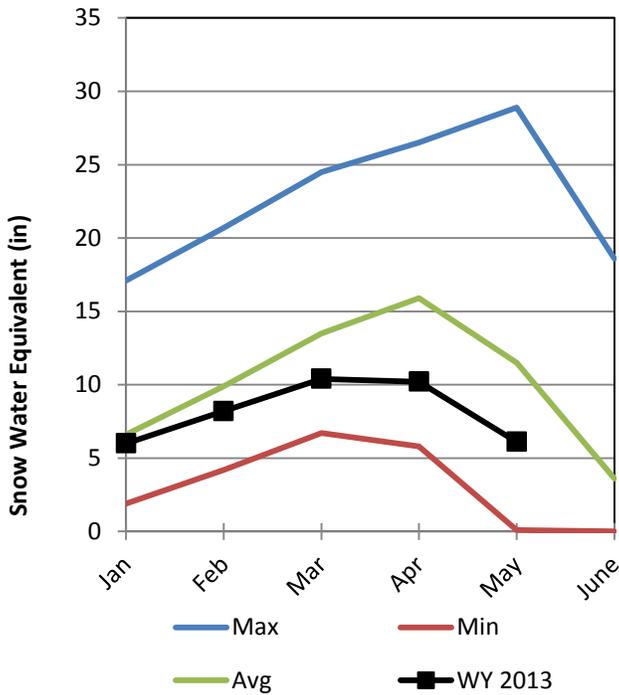


Price & San Rafael Basins

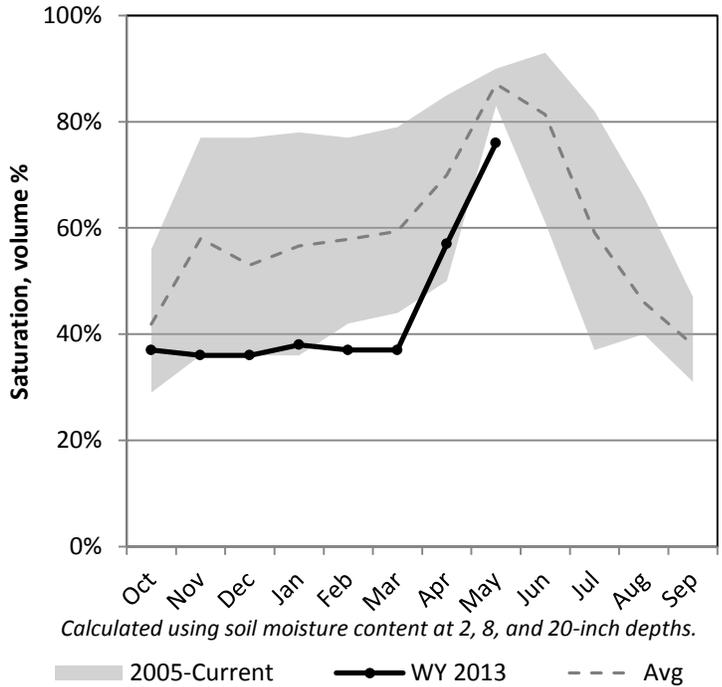
5/1/2013

Snowpack in the Price & San Rafael Basins is much below average at 55% of normal, compared to 1% last year. Precipitation in April was near average at 105%, which brings the seasonal accumulation (Oct-Apr) to 80% of average. Soil moisture is at 76% compared to 90% last year. Reservoir storage is at 49% of capacity, compared to 83% last year. Forecast streamflow volumes range from 41% to 62% of average. The surface water supply index is 15% for the Price River, 4% for Joe's Valley, 5% for Ferron Creek.

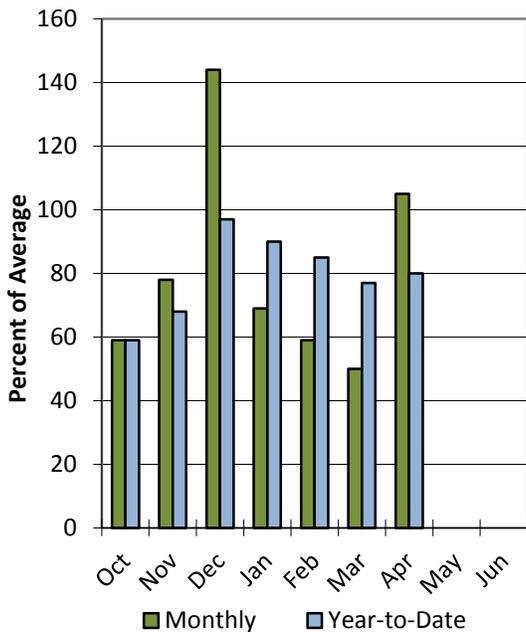
Snowpack



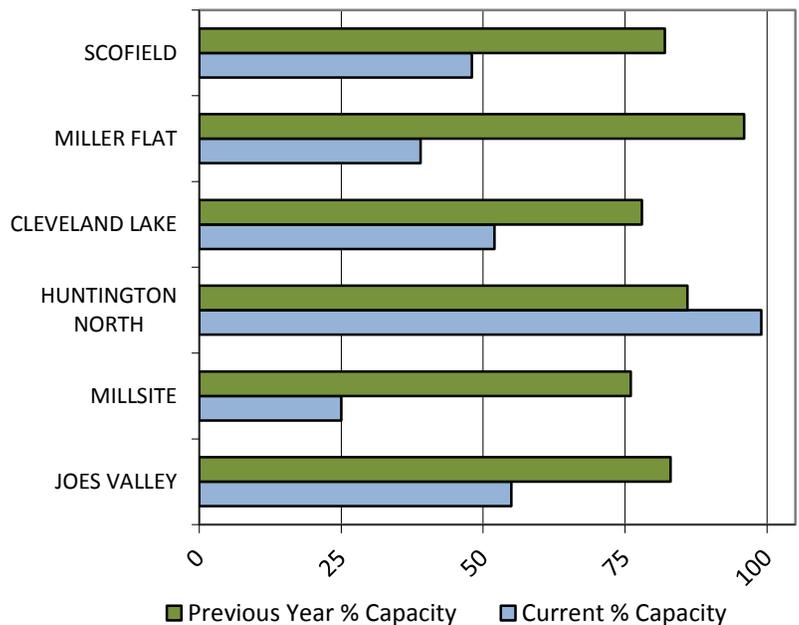
Soil Moisture



Precipitation



Reservoir Storage

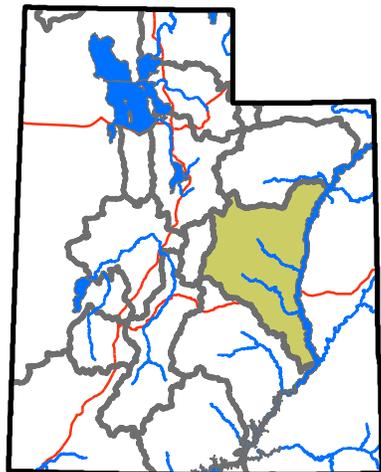
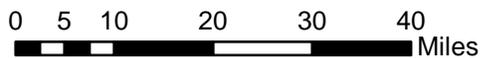


Price-San Rafael basin

Percent normal

- < 50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- > 150%
- no % avail.

- SNOTEL sites
- Forecast points
- Rivers
- Highways
- Cities



PRICE - SAN RAFAEL
Streamflow Forecasts - May 1, 2013

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ===== Wetter =====>>		Chance Of Exceeding *				30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
Fish Ck ab Reservoir nr Scofield	APR-JUL	12.9	15.9	18.2	61	21	24	30
	MAY-JUL	10.7	13.7	16.0	62	18.5	22	26
Price R nr Scofield Reservoir (2)	APR-JUL	13.6	17.7	21	51	25	30	41
	MAY-JUL	10.7	14.8	18.0	51	22	27	35
White R bl Tabbyune Creek	APR-JUL	3.3	4.6	5.6	36	6.7	8.5	15.5
	MAY-JUL	2.6	3.9	4.9	41	6.0	7.8	11.9
Green R at Green River, UT (2)	APR-JUL	1179	1454	1660	56	1881	2235	2960
	MAY-JUL	1008	1284	1490	59	1712	2066	2540
Electric Lake Inflow (2)	APR-JUL	3.8	5.0	5.8	44	6.7	8.2	13.3
	MAY-JUL	3.0	4.2	5.0	42	5.9	7.4	11.8
Huntington Ck nr Huntington (2)	APR-JUL	13.0	16.0	18.3	46	21	24	40
	MAY-JUL	11.7	14.7	17.0	46	19.4	23	37
Joe's Valley Reservoir Inflow (2)	APR-JUL	16.2	21	25	45	29	36	56
	MAY-JUL	14.4	19.3	23	44	27	34	52
Ferron Ck (Upper Station) nr Ferron	APR-JUL	13.7	16.1	17.9	47	19.7	23	38
	MAY-JUL	12.8	15.2	17.0	49	18.8	22	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.

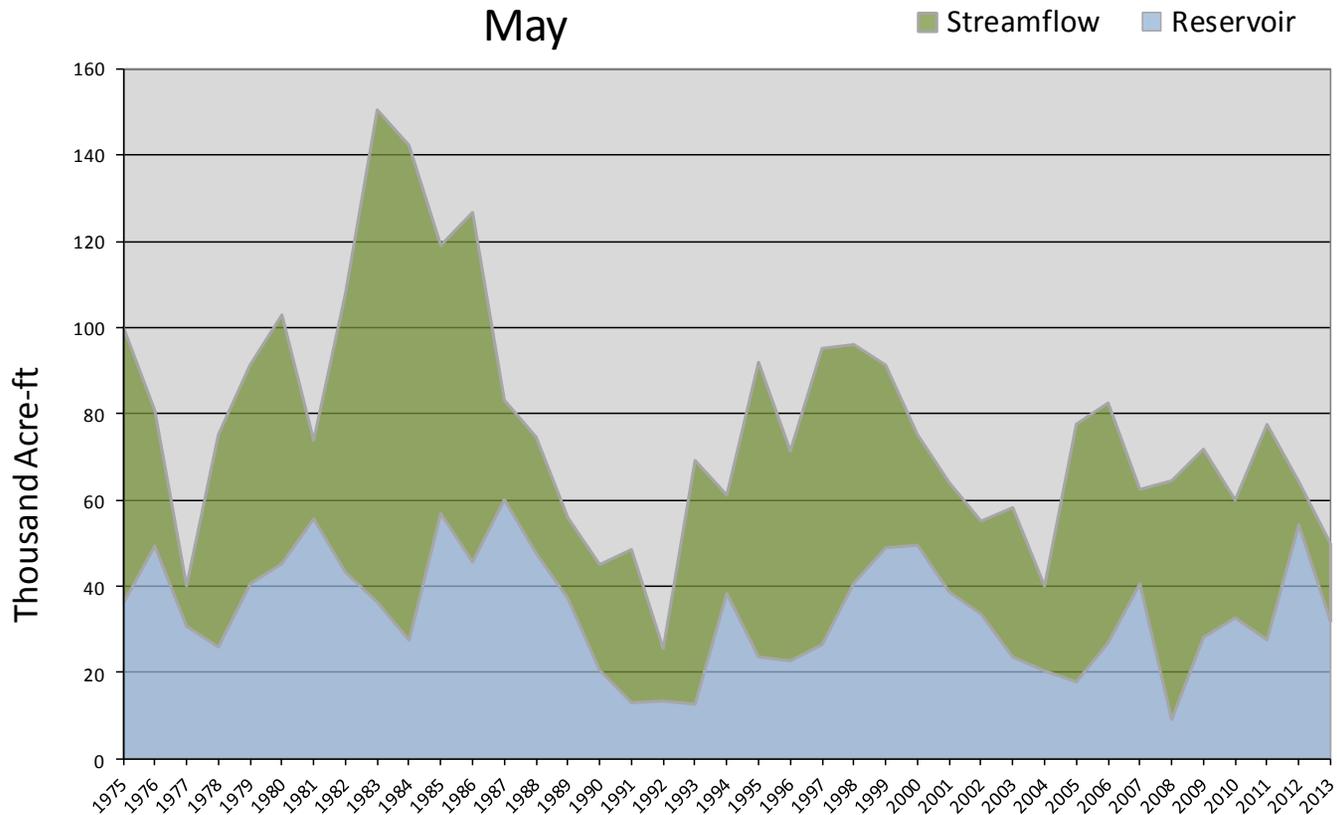
May 1, 2013

Surface Water Supply Index

Basin or Region	April EOM* Scofield Reservoir	May-July Forecast Scofield	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Price River	31.8	18.0	49.8	-2.92	15	90, 91, 02, 89

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

Price River - Surface Water Supply Index



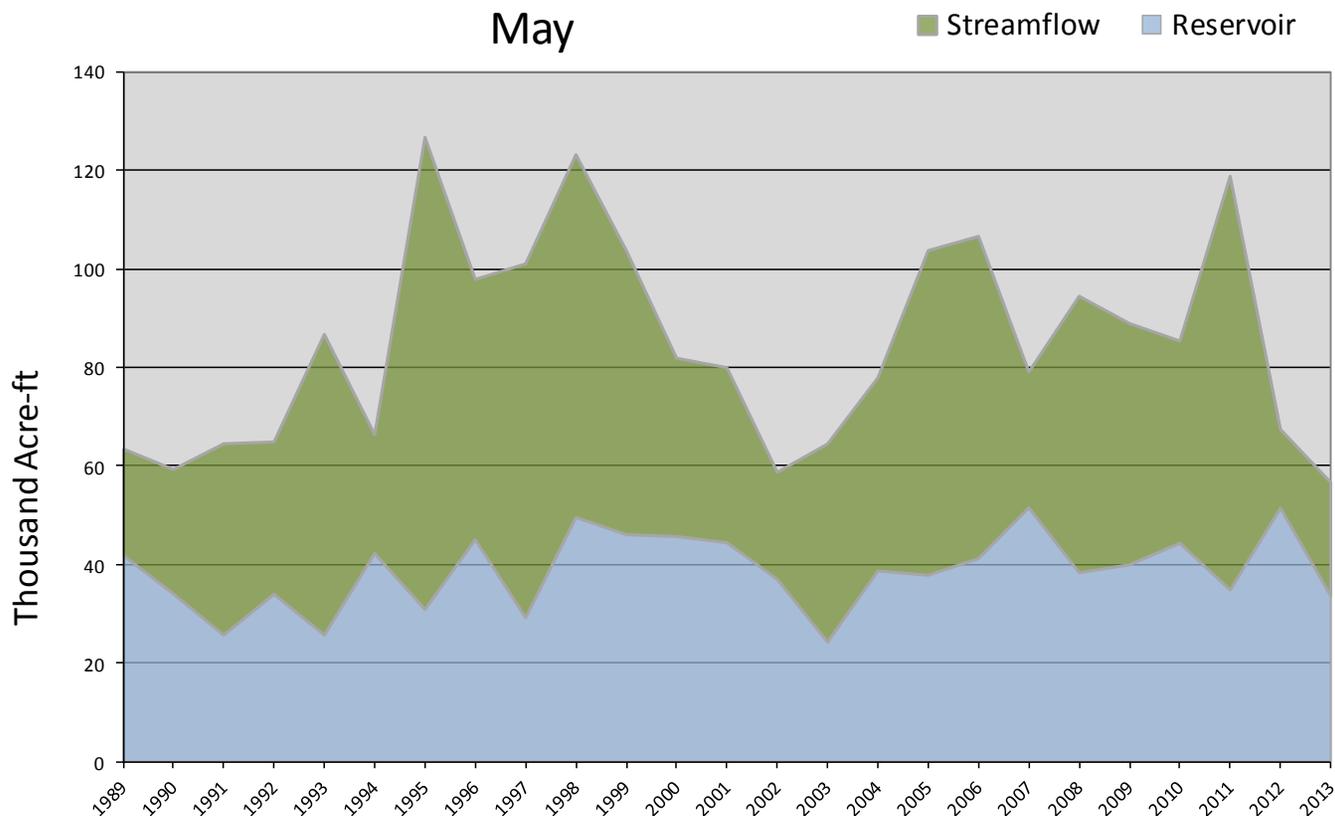
May 1, 2013

Surface Water Supply Index

Basin or Region	April EOM* Joe's Valley	May-July Forecast Inflow to Joe's Valley	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Joe's Valley	33.6	23.0	56.6	-3.85	4	02, 90

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

Joe's Valley - Surface Water Supply Index



May 1, 2013

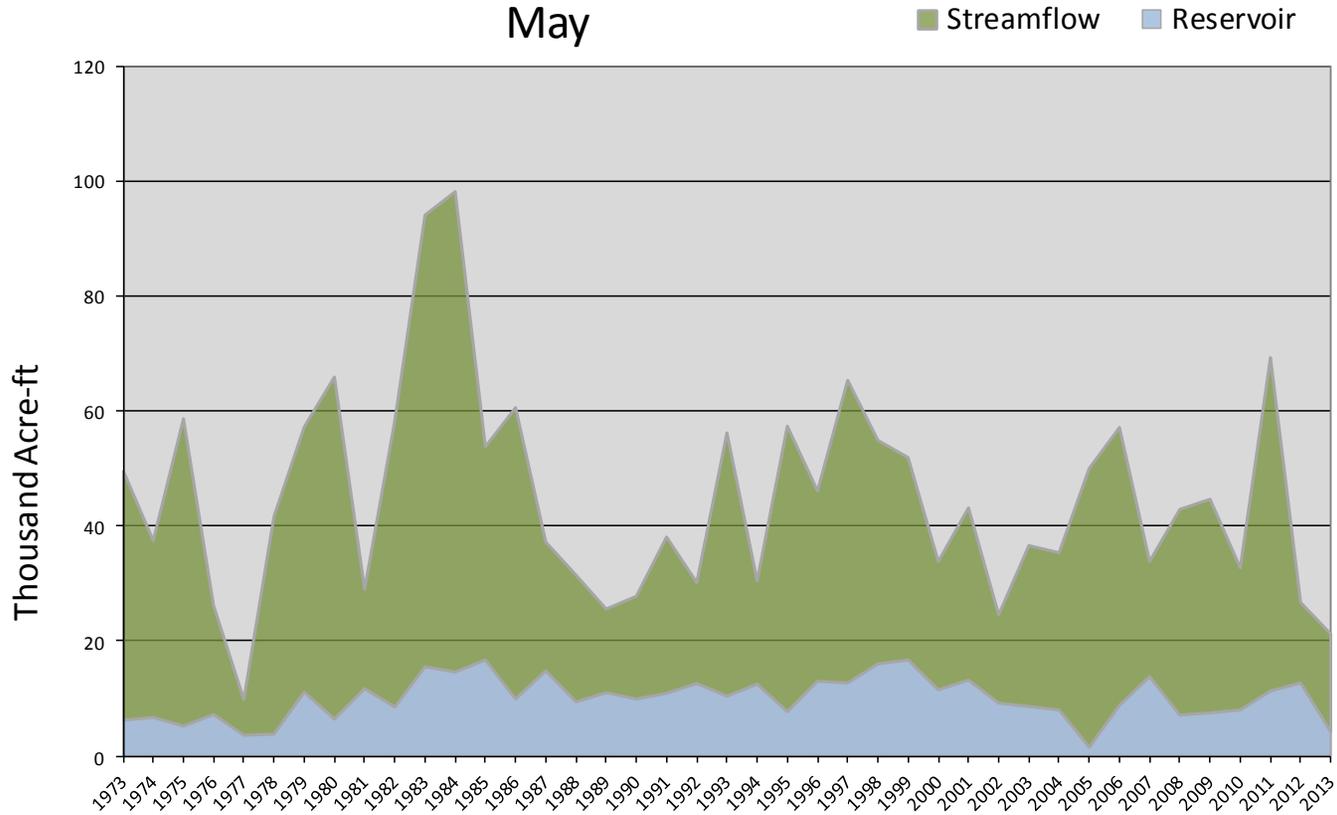
Surface Water Supply Index

Basin or Region	April EOM* Millsite Reservoir	May-July Forecast Ferron creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Ferron Creek	4.2	17.0	21.2	-3.77	5	77, 02, 89

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

Ferron Creek - Surface Water Supply Index

May

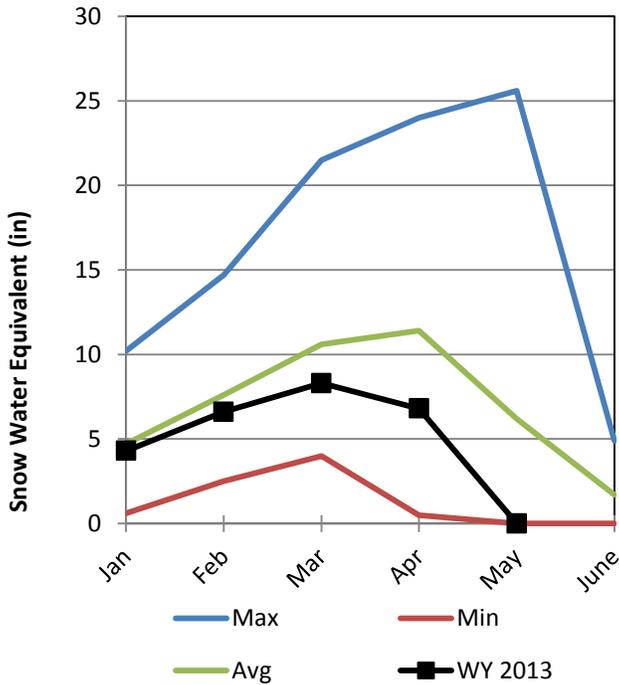


Southeastern Utah Basin

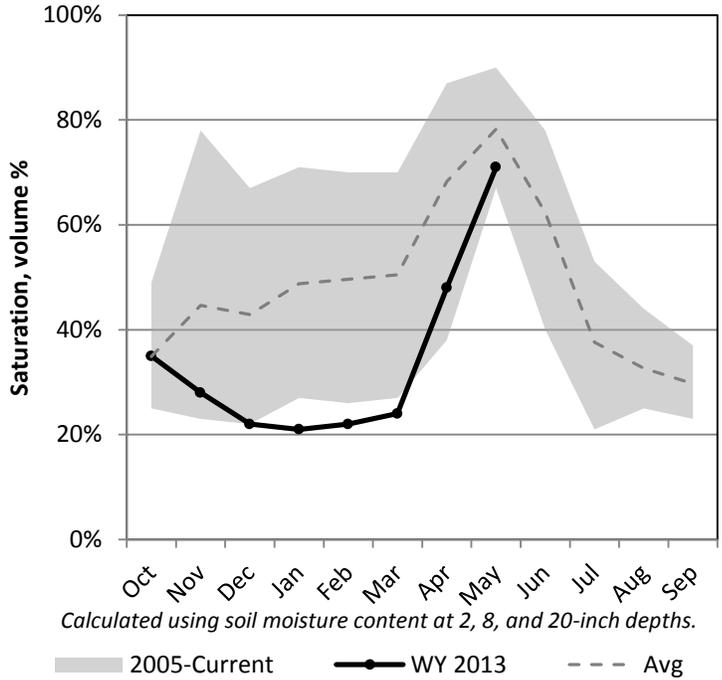
5/1/2013

Snowpack in the Southeastern Utah Basin is much below average at 0% of normal, compared to 0% last year. Precipitation in April was below average at 73%, which brings the seasonal accumulation (Oct-Apr) to 74% of average. Soil moisture is at 71% compared to 72% last year. Reservoir storage is at 20% of capacity, compared to 65% last year. Forecast streamflow volumes range from 11% to 53% of average. The surface water supply index is 4% for Moab.

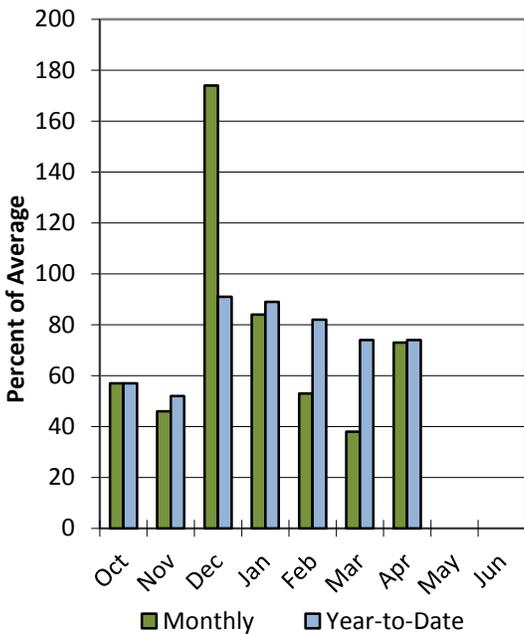
Snowpack



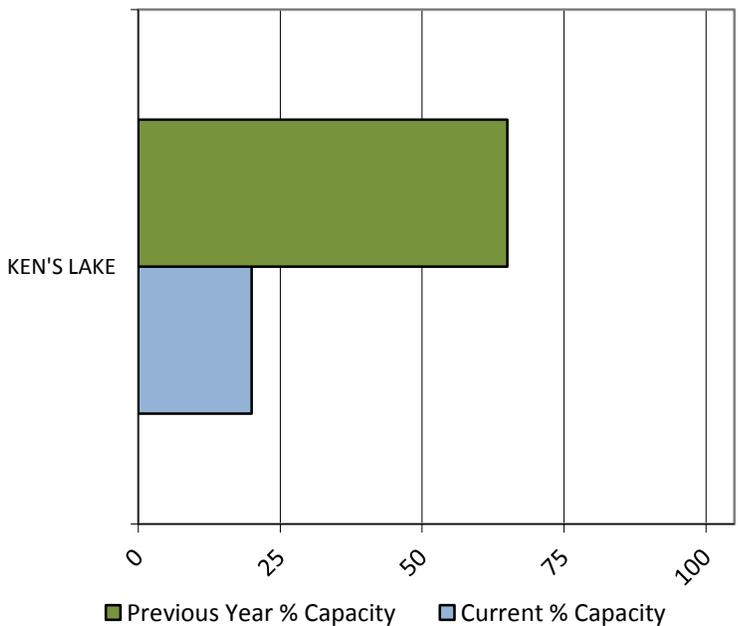
Soil Moisture



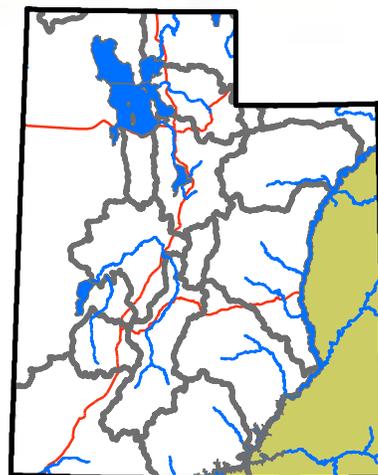
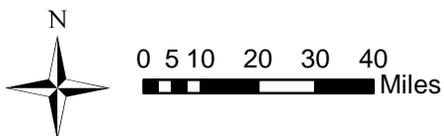
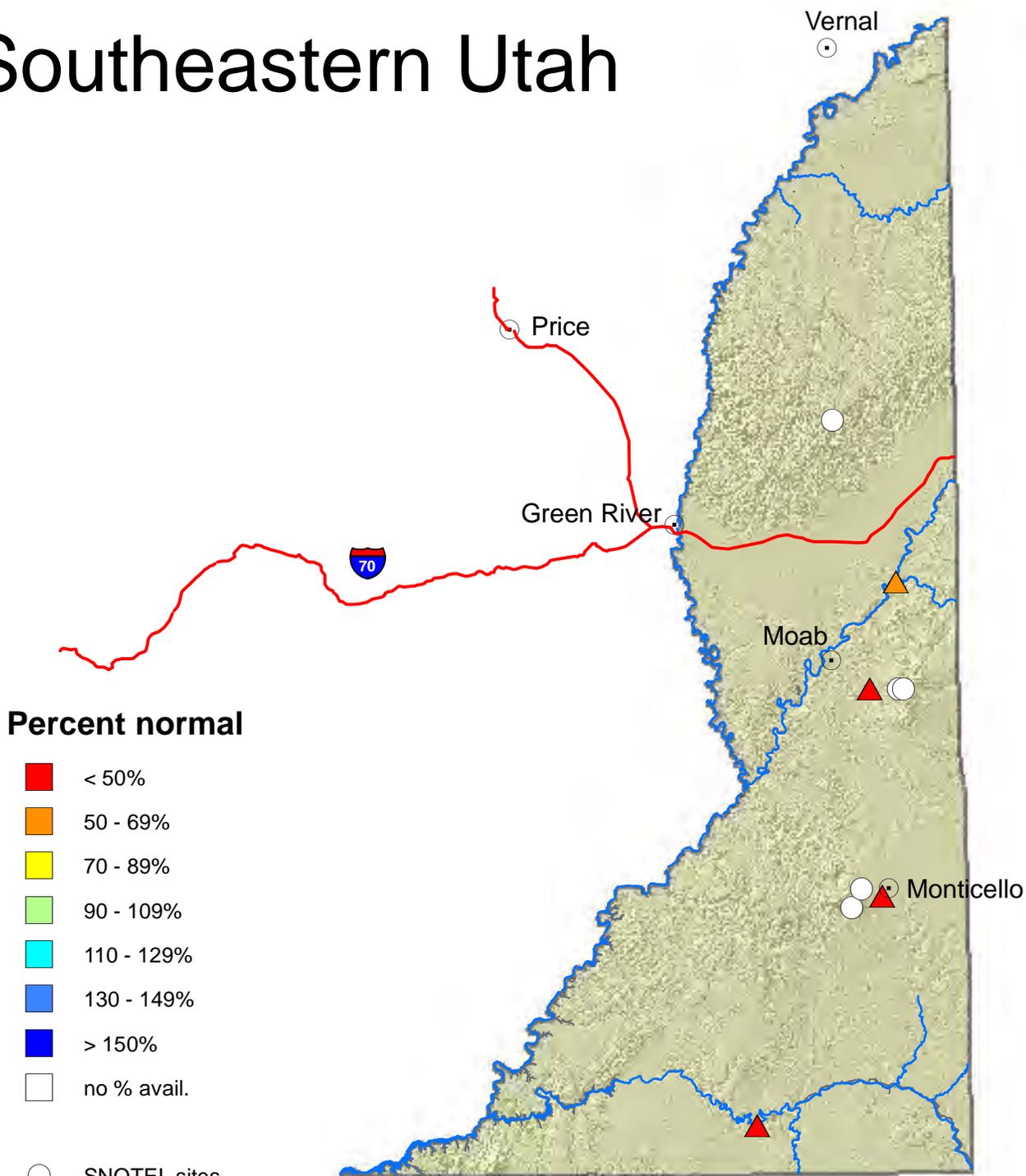
Precipitation



Reservoir Storage



Southeastern Utah



SOUTHEASTERN UTAH.
Streamflow Forecasts - May 1, 2013

Forecast Point	Forecast Period	<<==== Drier ==== Future Conditions ==== Wetter =====>>						30-Yr Avg. (1000AF)
		90%		50%		10%		
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
Colorado R nr Cisco (2)	APR-JUL	1679	1980	2200	51	2433	2800	4280
	MAY-JUL	1460	1760	1980	53	2210	2580	3720
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	0.85	1.23	1.54	36	1.90	2.50	4.30
	MAY-JUL	0.56	0.94	1.25	34	1.61	2.20	3.70
South Ck ab Lloyd's Reservoir nr Mon	MAR-JUL	0.01	0.04	0.08	6	0.13	0.25	1.31
	MAY-JUL	0.01	0.04	0.08	11	0.13	0.25	0.75
San Juan R nr Bluff (2)	APR-JUL	194	248	290	26	337	414	1100
	MAY-JUL	123	177	220	26	267	345	855

* 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.

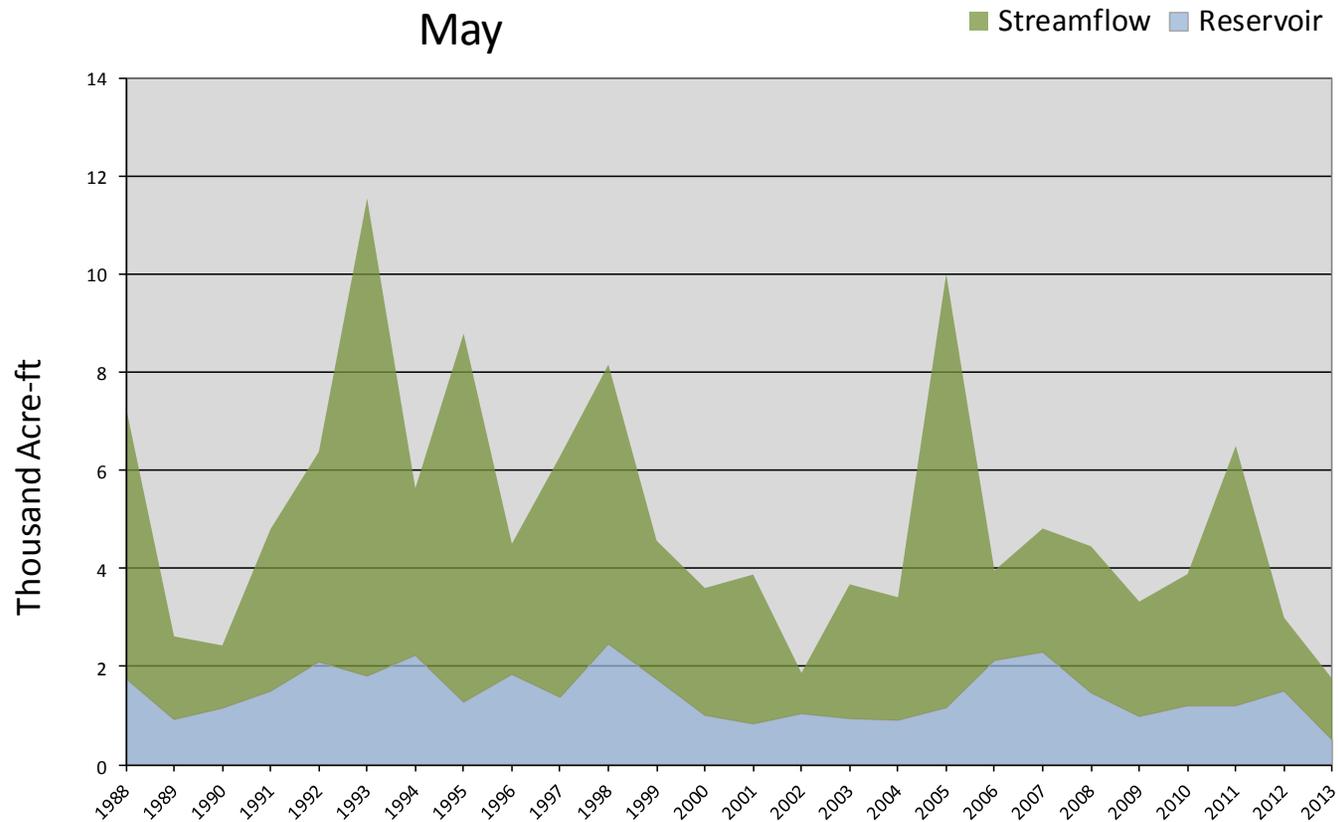
May 1, 2013

Surface Water Supply Index

Basin or Region	April EOM* Ken's Lake Reservoir	May-July Forecast Mill Creek at Sheley	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Moab	0.5	1.3	1.8	-3.86	4	02, 90

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

Moab - Surface Water Supply Index May

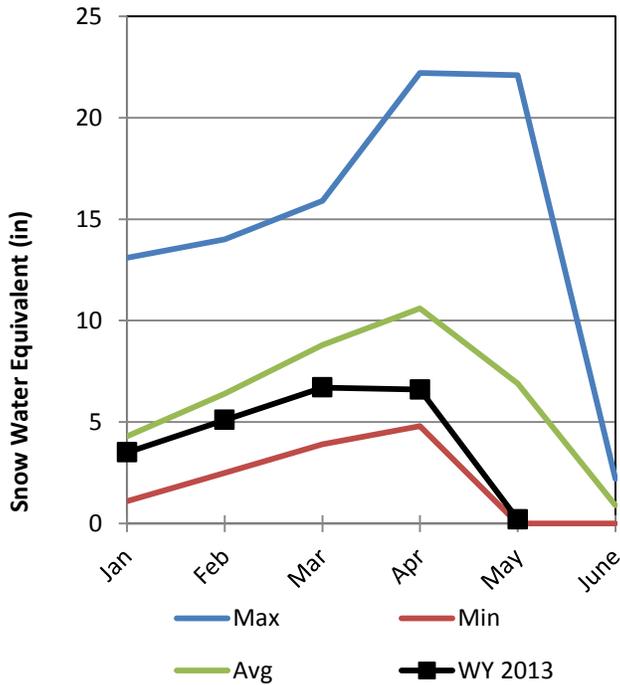


Dirty Devil Basin

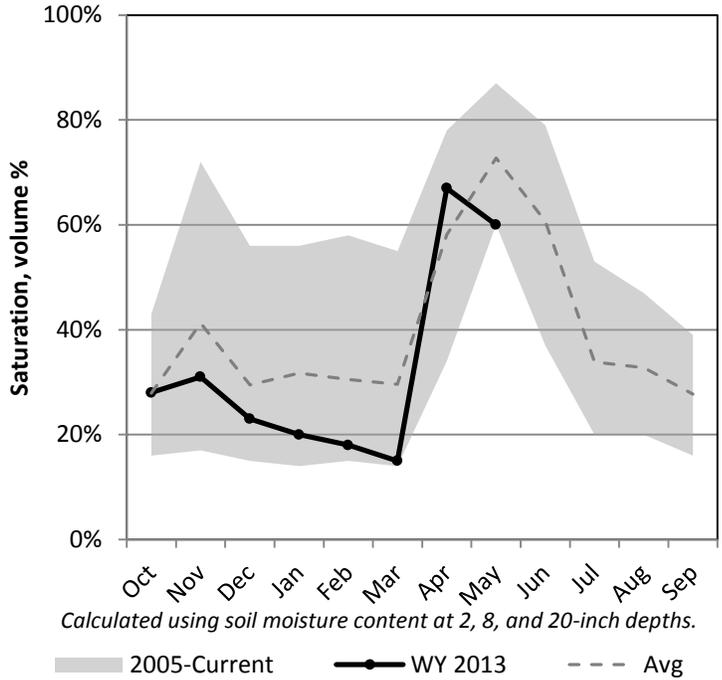
5/1/2013

Snowpack in the Dirty Devil Basin is much below average at 5% of normal, compared to 0% last year. Precipitation in April was near average at 97%, which brings the seasonal accumulation (Oct-Apr) to 78% of average. Soil moisture is at 60% compared to 60% last year. Forecast streamflow volumes range from 44% to 48% of average.

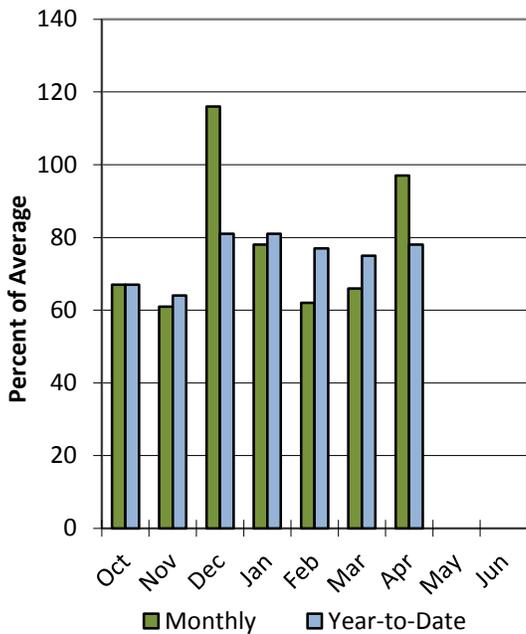
Snowpack



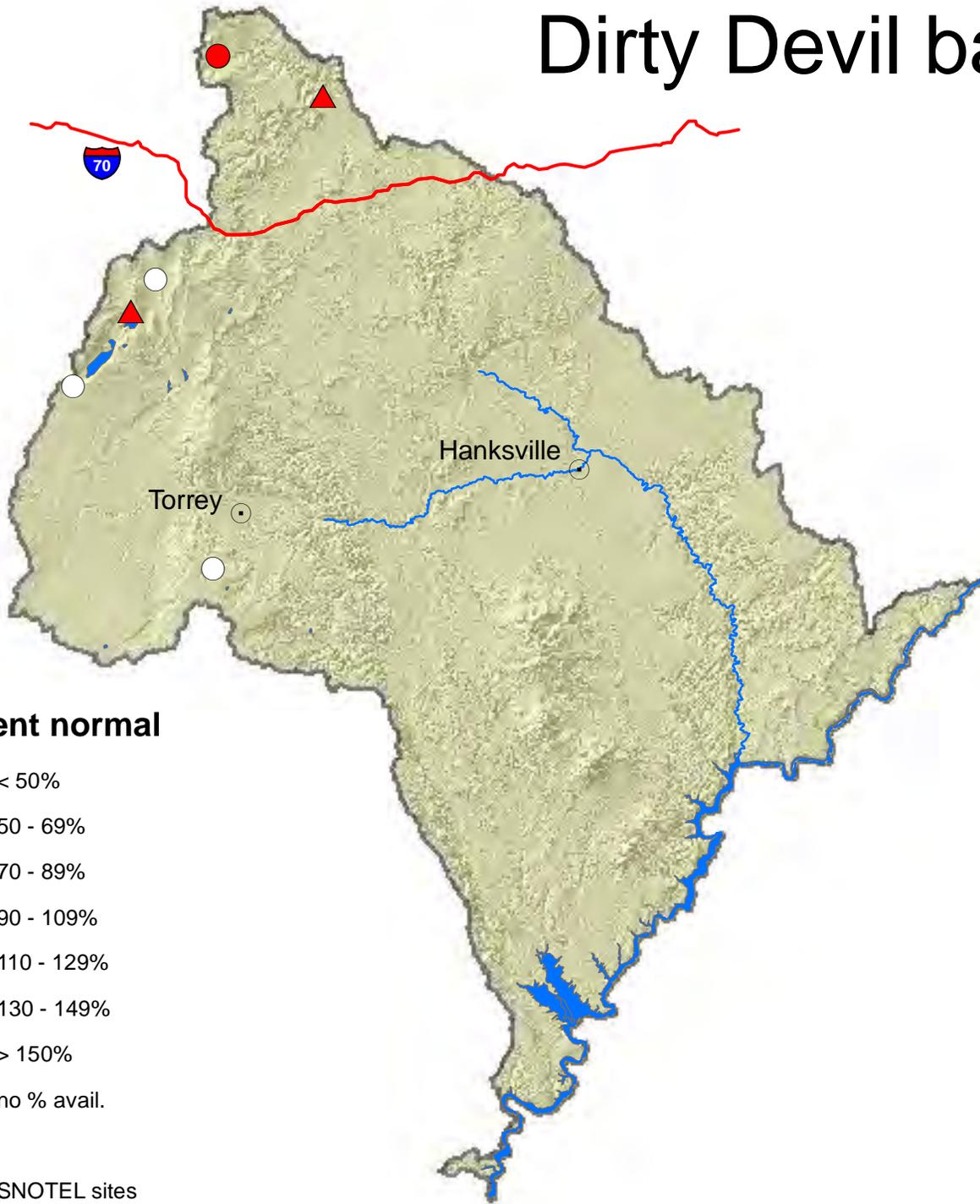
Soil Moisture



Precipitation



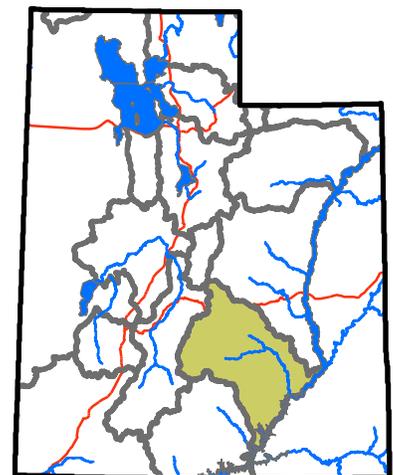
Dirty Devil basin



Percent normal



- SNOTEL sites
- Forecast points
- Rivers
- Highways
- Cities



DIRTY DEVIL Streamflow Forecasts - May 1, 2013								
Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>					30-Yr Avg. (1000AF)	
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)
Seven Mile Ck nr Fish Lake	APR-JUL	3.30	3.90	4.30	59	4.70	5.40	7.30
	MAY-JUL	2.00	2.60	3.00	48	3.40	4.10	6.30
Muddy Ck nr Emery	APR-JUL	4.7	6.8	8.6	43	10.6	13.8	19.9
	MAY-JUL	4.1	6.2	8.0	44	10.0	13.2	18.1

* 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.

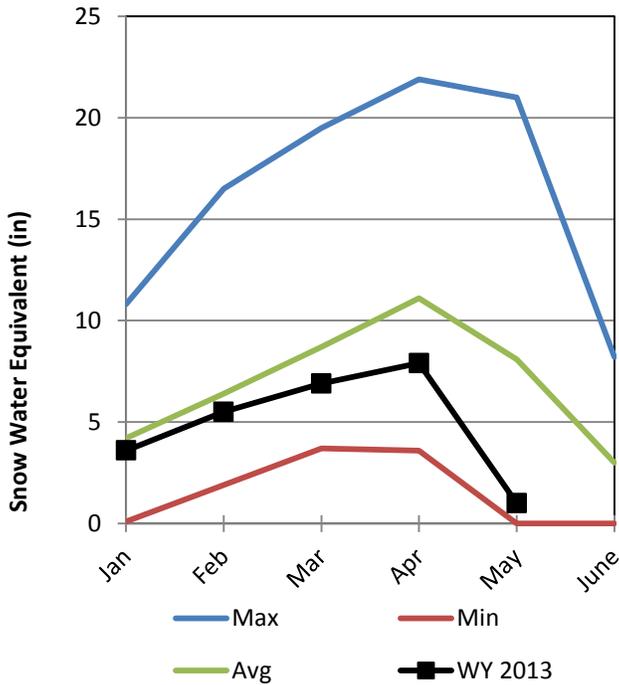
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

Escalante River Basin

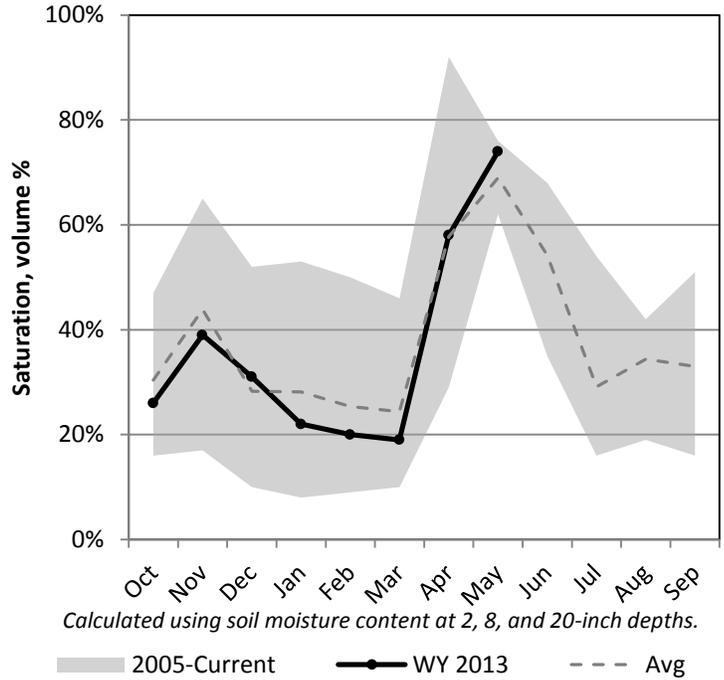
5/1/2013

Snowpack in the Escalante River Basin is much below average at 21% of normal, compared to 0% last year. Precipitation in April was below average at 74%, which brings the seasonal accumulation (Oct-Apr) to 81% of average. Soil moisture is at 74% compared to 62% last year. The forecast streamflow volume for Pine Creek is 54% of average.

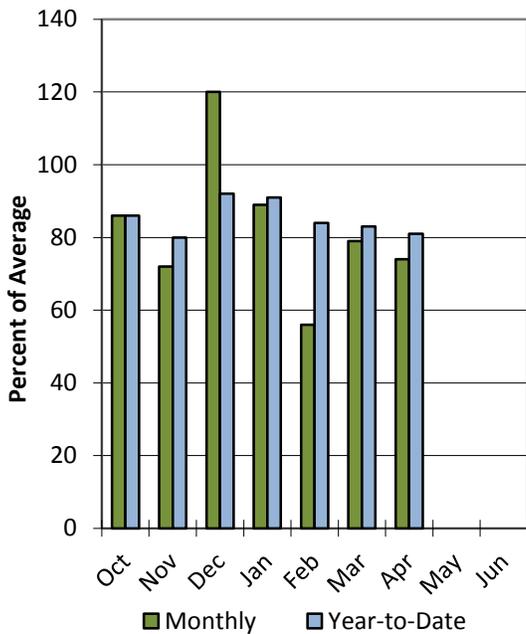
Snowpack



Soil Moisture



Precipitation

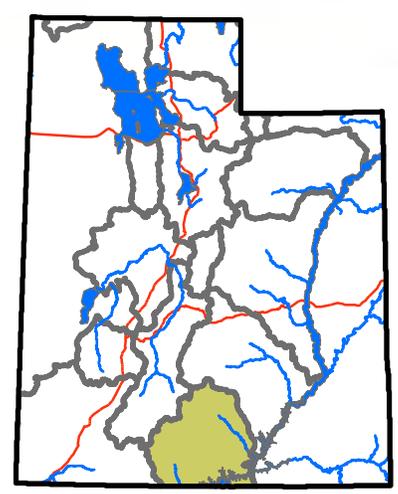


Escalante basin



Percent normal

- | | |
|---|---|
| < 50% | SNOTEL sites |
| 50 - 69% | Forecast points |
| 70 - 89% | Rivers |
| 90 - 109% | Highways |
| 110 - 129% | Cities |
| 130 - 149% | |
| > 150% | |
| no % avail. | |



ESCALANTE RIVER BASIN as of May 1, 2013

ESCALANTE RIVER BASIN.								
Streamflow Forecasts - May 1, 2013								
Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	
Pine Ck nr Escalante	APR-JUL	0.66	1.00	1.29	54	1.63	2.20	2.40
	MAY-JUL	0.37	0.71	1.00	54	1.34	1.93	1.86

* 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.

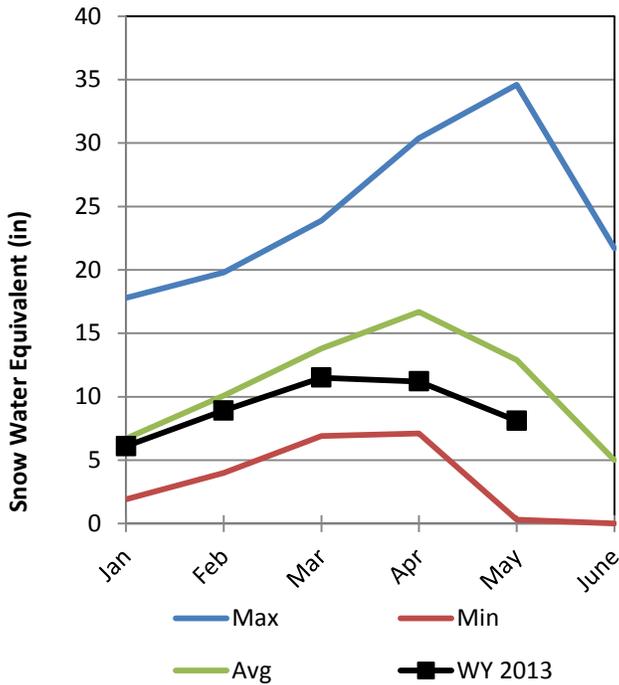
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

San Pitch River Basin

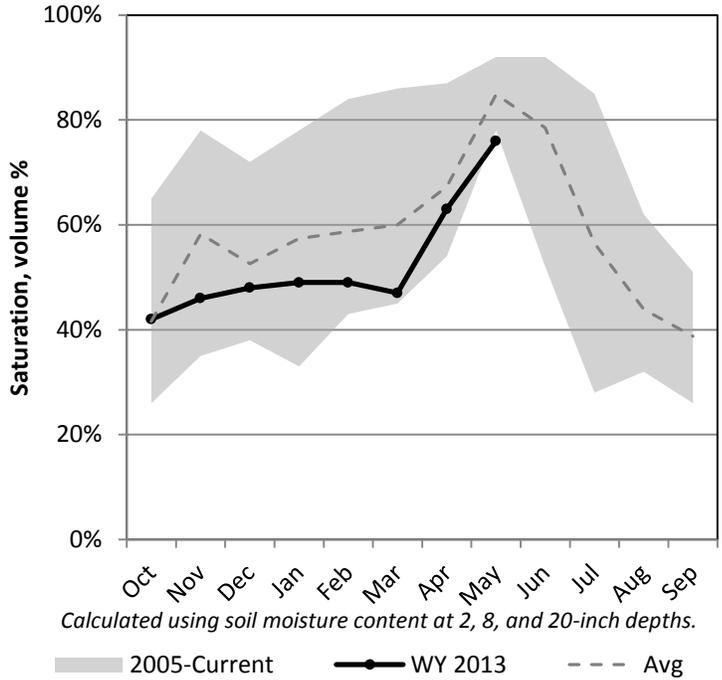
5/1/2013

Snowpack in the San Pitch River Basin is much below average at 65% of normal, compared to 2% last year. Precipitation in April was near average at 101%, which brings the seasonal accumulation (Oct-Apr) to 79% of average. Soil moisture is at 76% compared to 90% last year. Reservoir storage is at 54% of capacity, compared to 101% last year. The forecast streamflow volume for Manti Creek is 61% of average.

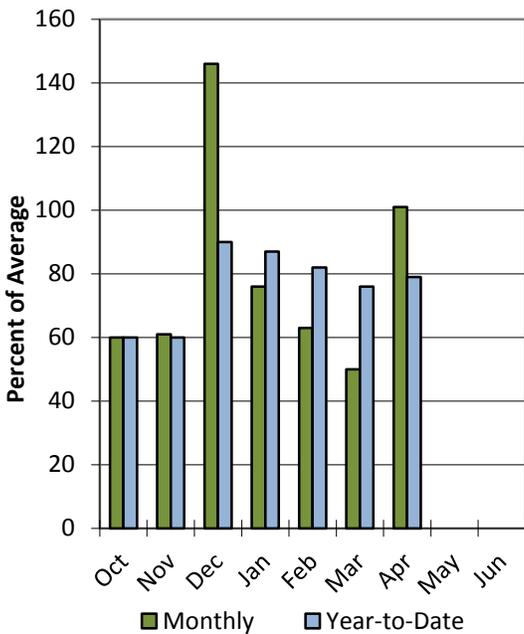
Snowpack



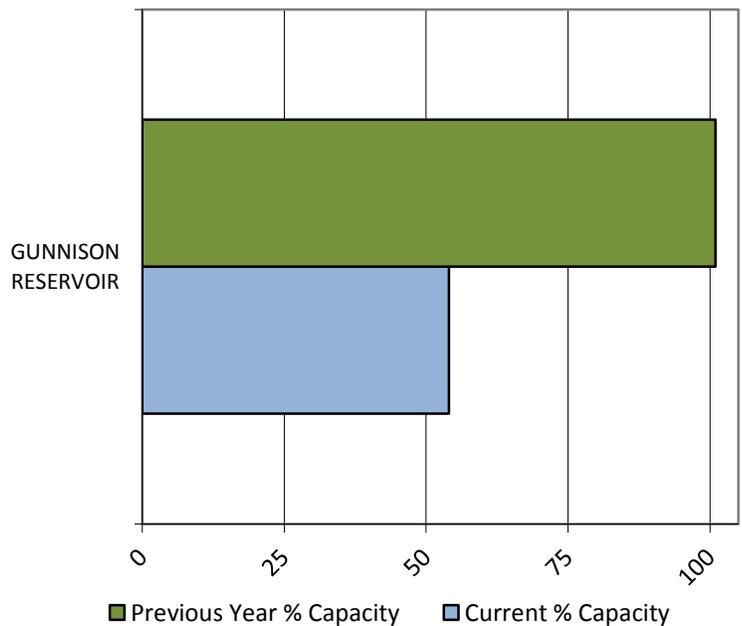
Soil Moisture



Precipitation

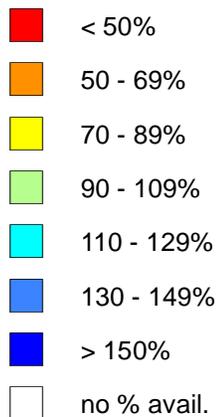


Reservoir Storage

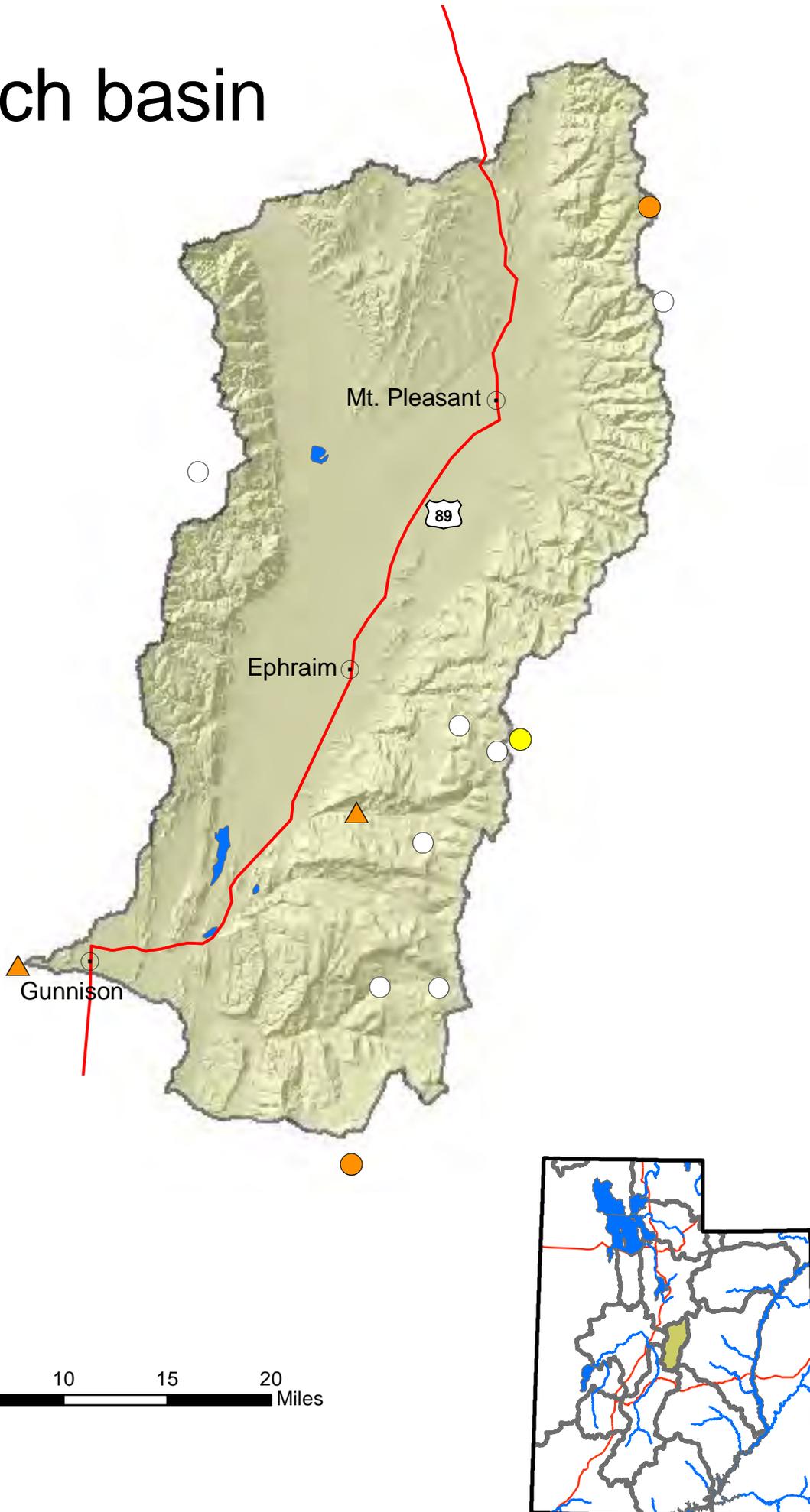


San Pitch basin

Percent normal



- SNOTEL sites
- △ Forecast points
- Rivers
- Highways
- ⊙ Cities



SAN PITCH RIVER BASIN												
Streamflow Forecasts - May 1, 2013												
Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>					30-Yr Avg. (1000AF)					
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (1000AF) (% AVG.)		30% (1000AF)		10% (1000AF)		
		Manti Ck Blw Dugway Ck Nr Manti	APR-JUL	6.7	8.6	10.0		60	11.5	14.0	16.7	
	MAY-JUL	6.3	8.2	9.5	61	11.0	13.4	15.5				

* 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.

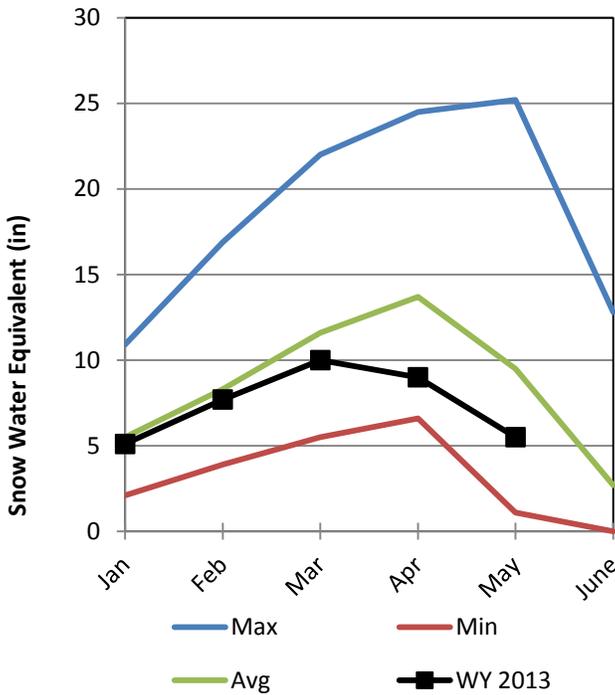
- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
- (2) - The value is natural volume - actual volume may be affected by upstream water management.
- (3) - Median value used in place of average.

Upper Sevier River Basin

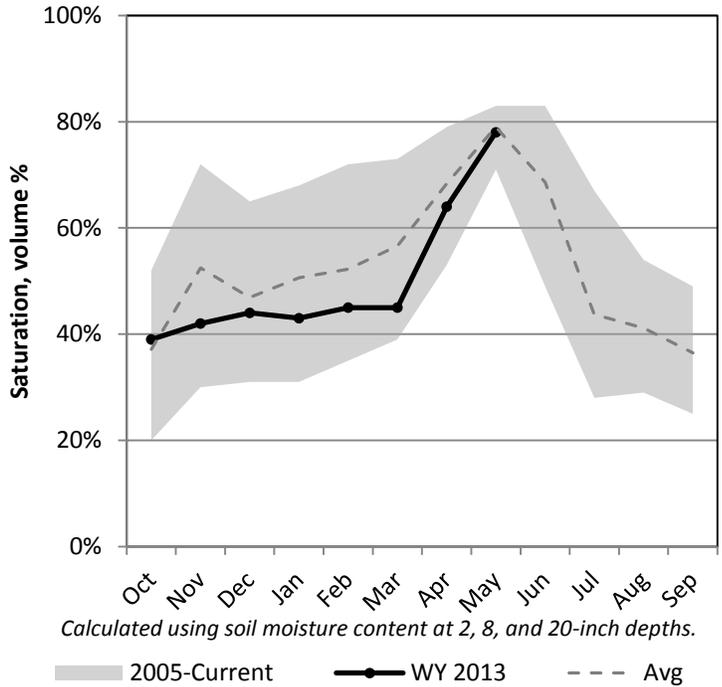
5/1/2013

Snowpack in the Upper Sevier River Basin is much below average at 68% of normal, compared to 29% last year. Precipitation in April was near average at 101%, which brings the seasonal accumulation (Oct-Apr) to 81% of average. Soil moisture is at 78% compared to 76% last year. Reservoir storage is at 76% of capacity, compared to 87% last year. Forecast streamflow volumes range from 34% to 48% of average. The surface water supply index is 21% for the Upper Sevier.

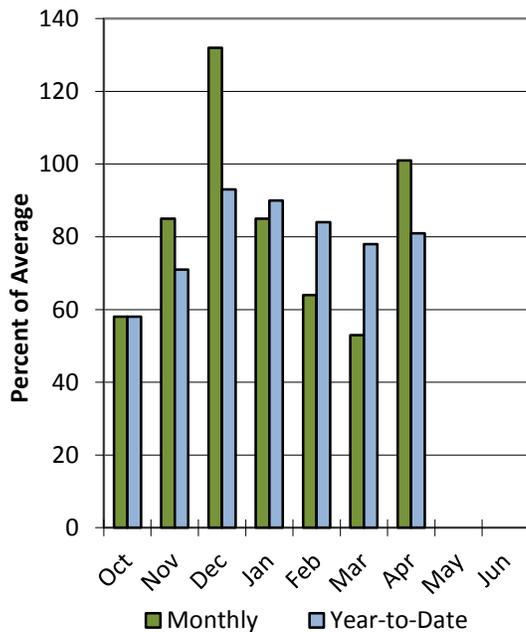
Snowpack



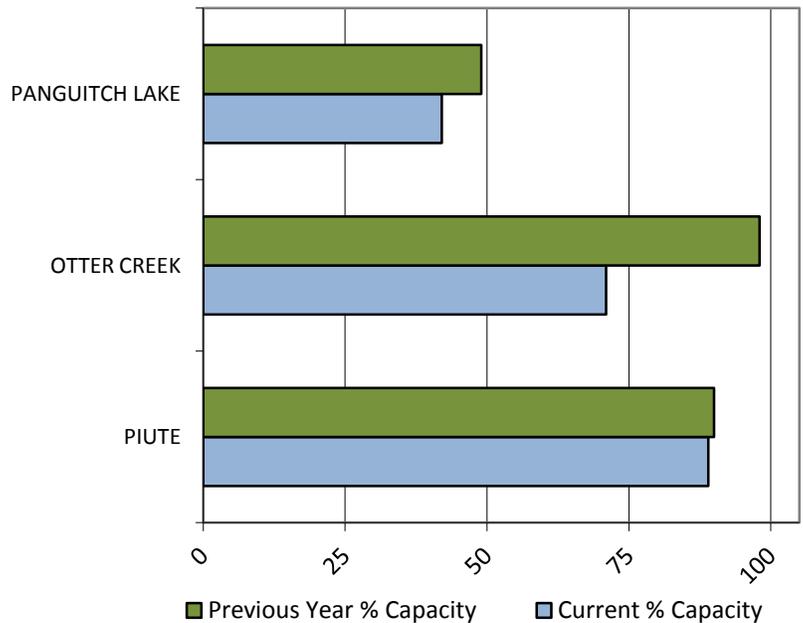
Soil Moisture



Precipitation

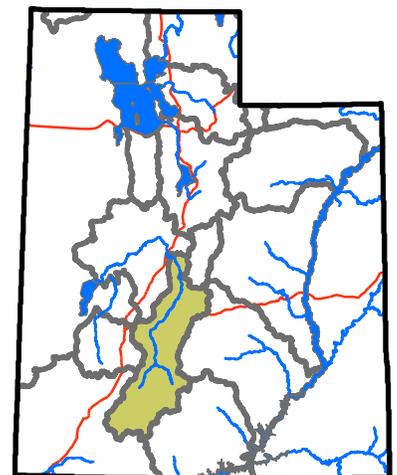
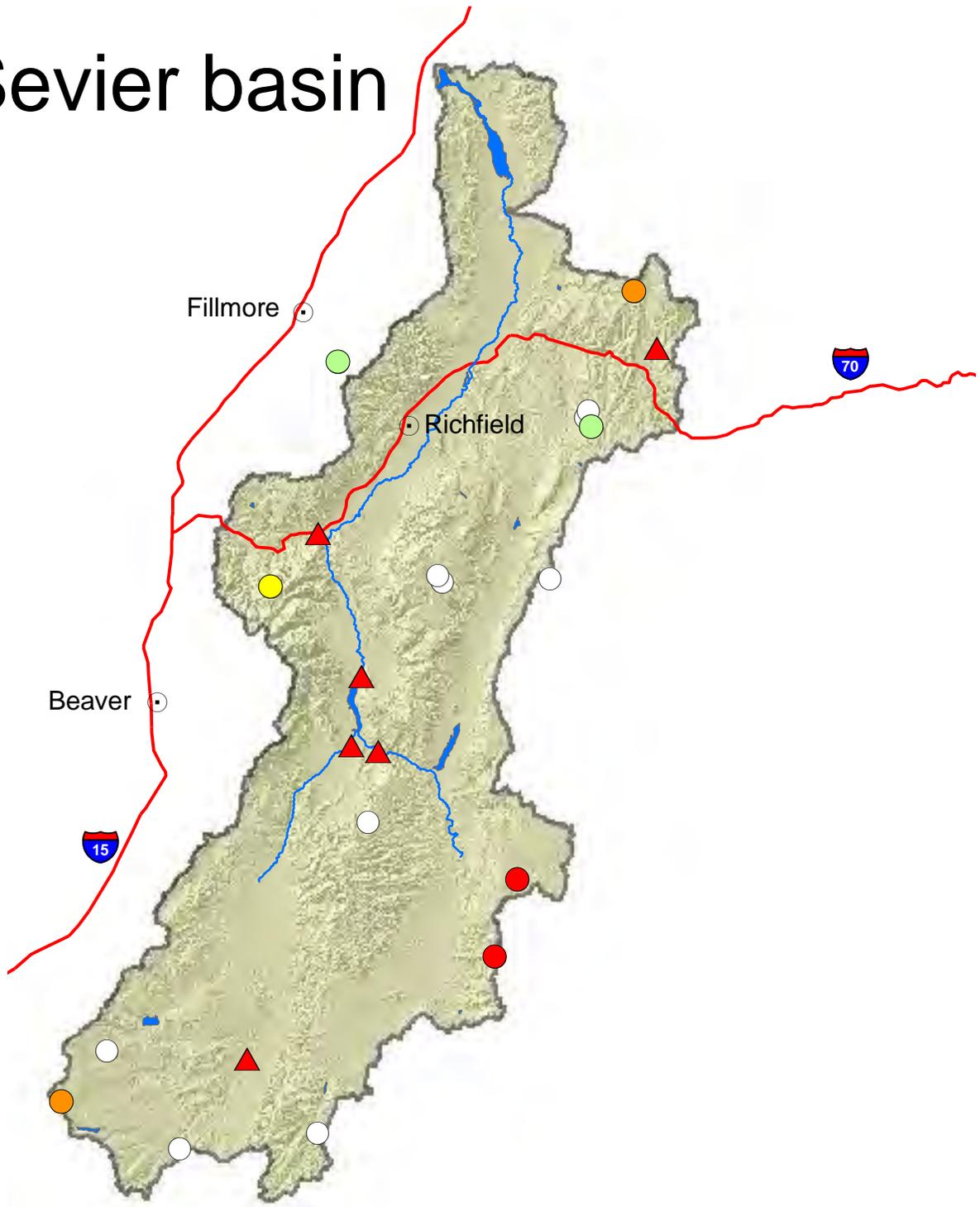
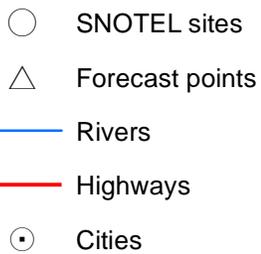
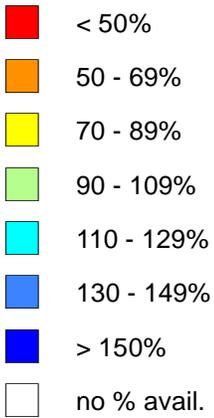


Reservoir Storage



Upper Sevier basin

Percent normal



UPPER SEVIER BASIN as of May 1, 2013

UPPER SEVIER RIVER BASIN Streamflow Forecasts - May 1, 2013												
Forecast Point	Forecast Period	<<==== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)				
		90%		70%		50%			30%		10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)		(1000AF)	(1000AF)		
Mammoth Ck nr Hatch	APR-JUL	0.3	4.3	15.0	56	23	34	27				
	MAY-JUL	0.2	3.5	12.0	48	23	30	25				
Sevier R at Hatch	APR-JUL	8.4	17.1	23	48	29	38	48				
	MAY-JUL	6.8	13.5	18.0	43	23	29	42				
Sevier R nr Kingston	APR-JUL	0.3	6.4	15.0	46	24	36	33				
	MAY-JUL	0.3	2.8	11.0	42	19.2	31	26				
EF Sevier R nr Kingston	APR-JUL	1.0	11.7	19.0	54	26	37	35				
	MAY-JUL	0.6	6.5	14.4	48	22	34	30				
Sevier R bl Piute Dam	APR-JUL	1.3	9.3	28	42	47	74	66				
	MAY-JUL	1.3	8.9	18.0	33	30	54	55				
Clear Ck ab Diversions nr Sevier	APR-JUL	3.6	8.0	11.0	52	14.0	18.4	21				
	MAY-JUL	4.7	6.5	8.0	47	9.6	12.2	17.0				
Salina Ck nr Emery	APR-JUL	0.08	1.18	2.80	35	4.40	6.80	7.90				
	MAY-JUL	0.07	0.93	2.40	34	3.90	6.00	7.00				

* 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.

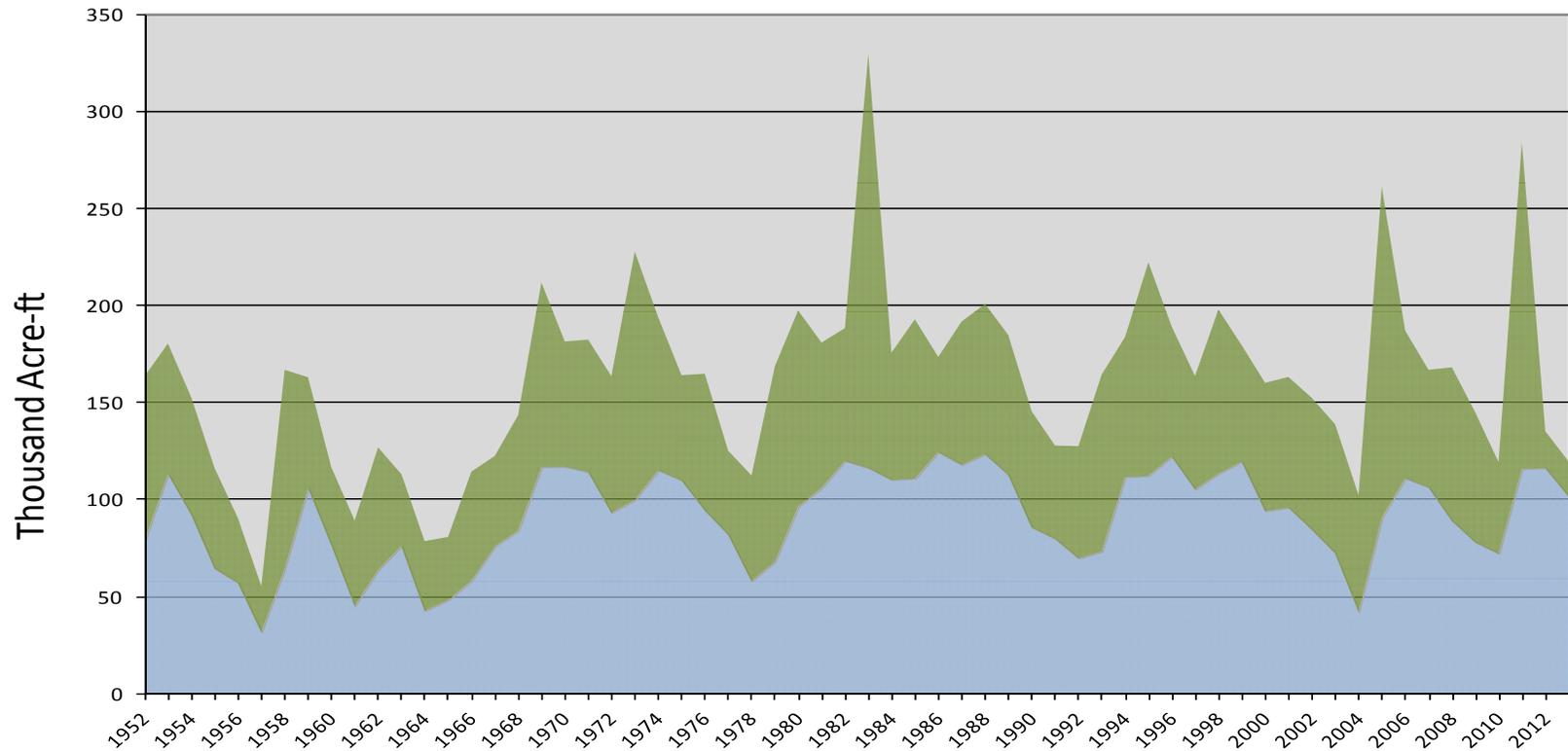
May 1, 2013		Upper Sevier Surface Water Supply Index				
Basin or Region	April EOM* Piute & Otter Creek Reservoir	May-July Forecast Inflow to Piute Reservoir	Reservoir + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	KAF [^]	KAF	KAF		%	
Upper Sevier	102	18.0	120	-2.45	21	60,10,67,77

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

Upper Sevier River Surface Water Supply Index

May

■ Streamflow ■ Reservoir

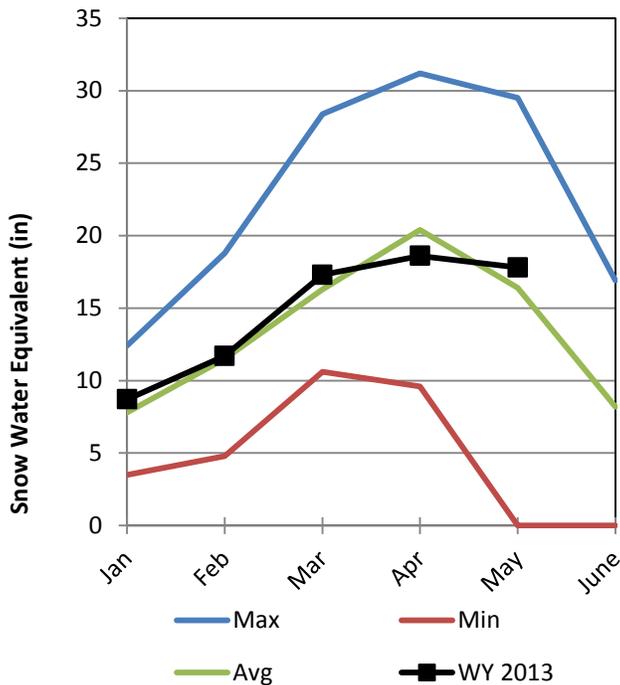


Lower Sevier River Basin

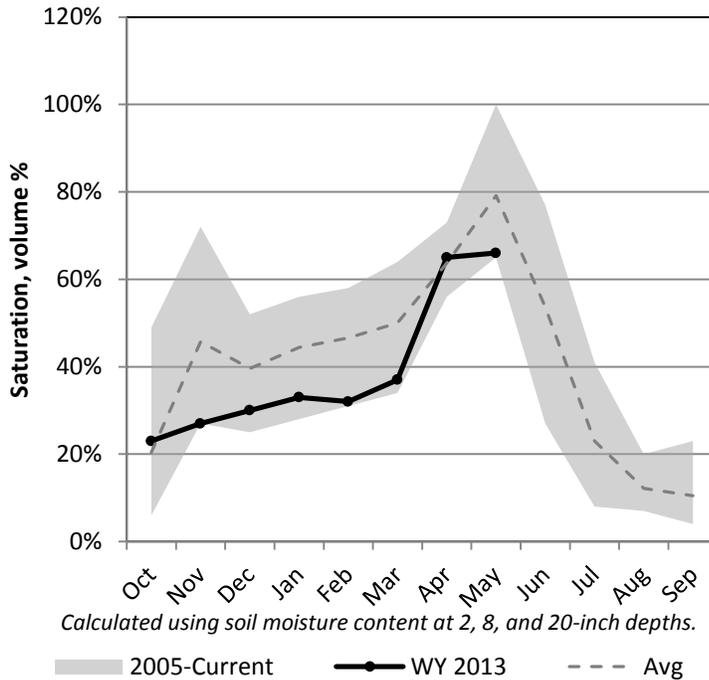
5/1/2013

Snowpack in the Lower Sevier River Basin is near average at 101% of normal, compared to 14% last year. Precipitation in April was much above average at 177%, which brings the seasonal accumulation (Oct-Apr) to 106% of average. Soil moisture is at 66% compared to 65% last year. Reservoir storage is at 74% of capacity, compared to 97% last year. Forecast streamflow volumes range from 18% to 51% of average. The surface water supply index is 53% for the Lower Sevier.

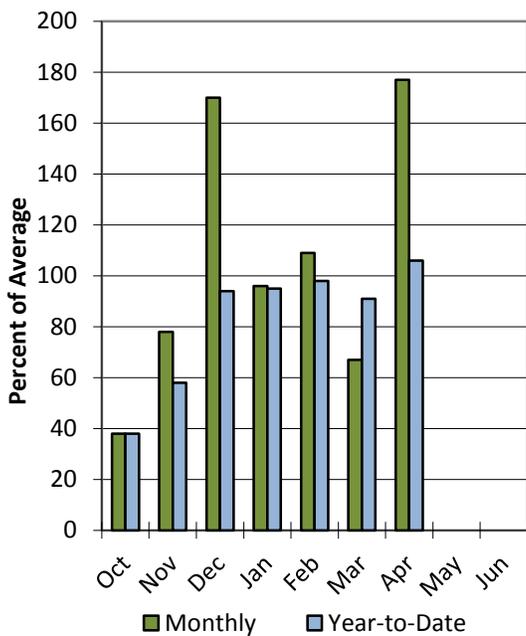
Snowpack



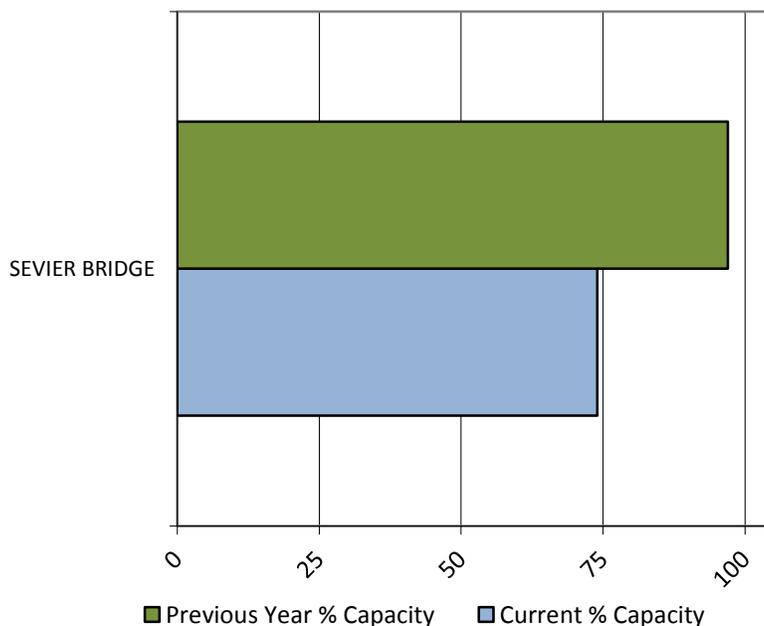
Soil Moisture



Precipitation



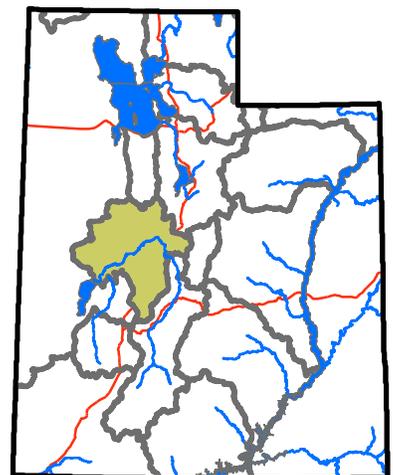
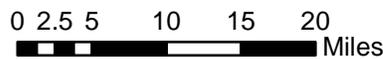
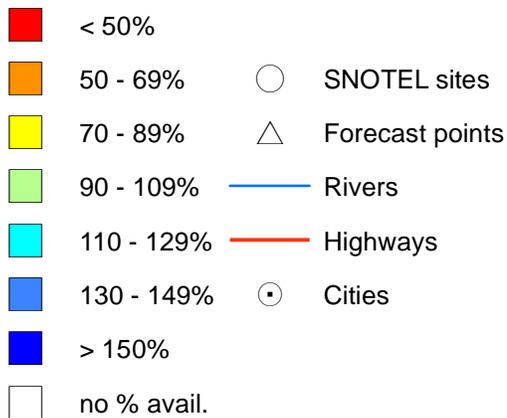
Reservoir Storage



Lower Sevier basin



Percent normal



LOWER SEVIER RIVER BASIN as of May 1, 2013

LOWER SEVIER RIVER BASIN
Streamflow Forecasts - May 1, 2013

Forecast Point	Forecast Period	<<===== Drier =====		Future Conditions		===== Wetter =====>>		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	
Sevier R nr Gunnison	APR-JUL	2.0	30	50	51	70	101	99
	MAY-JUL	2.6	25	41	48	57	79	86
Chicken Ck nr Levan	APR-JUL	1.21	1.54	1.80	40	2.10	2.60	4.50
	MAY-JUL	0.28	0.75	1.20	35	1.75	2.80	3.40
Oak Creek nr Oak City	APR-JUL	0.19	0.31	0.40	24	0.50	0.68	1.66
	MAY-JUL	0.03	0.12	0.20	19	0.31	0.50	1.07

* 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.

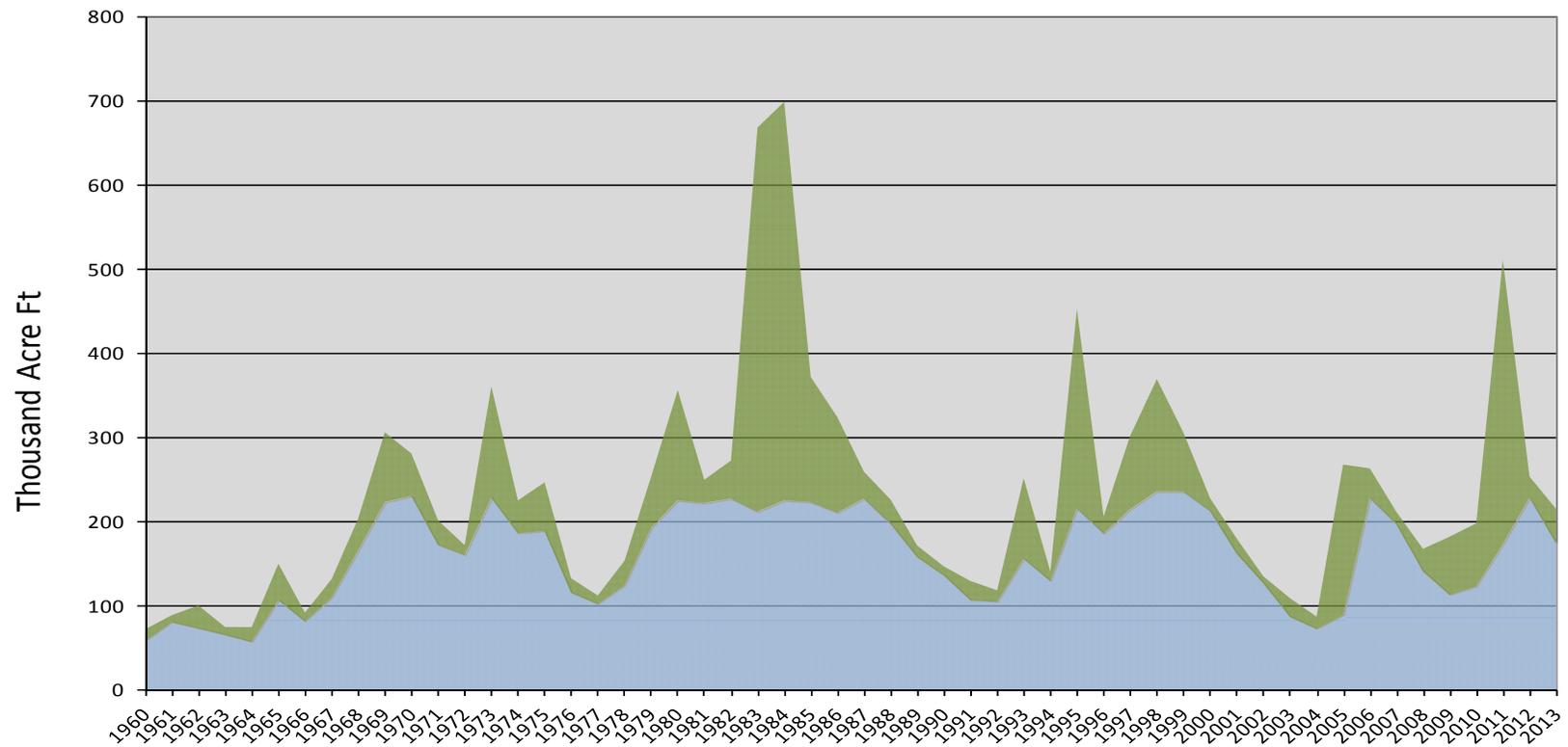
May 1, 2013	Lower Sevier Surface Water Supply Index					
Basin or Region	April EOM* Sevier Bridge Reservoir	May-July Forecast Inflow to Sevier Bridge Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Lower Sevier	175	41.0	216	0.23	53	96,07,74,88

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

Lower Sevier River Surface Water Supply Index

May

■ Streamflow ■ Reservoir

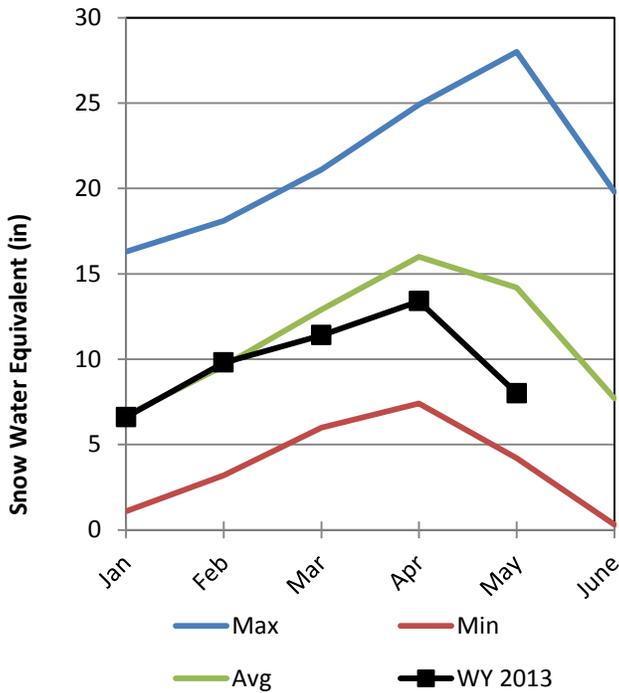


Beaver River Basin

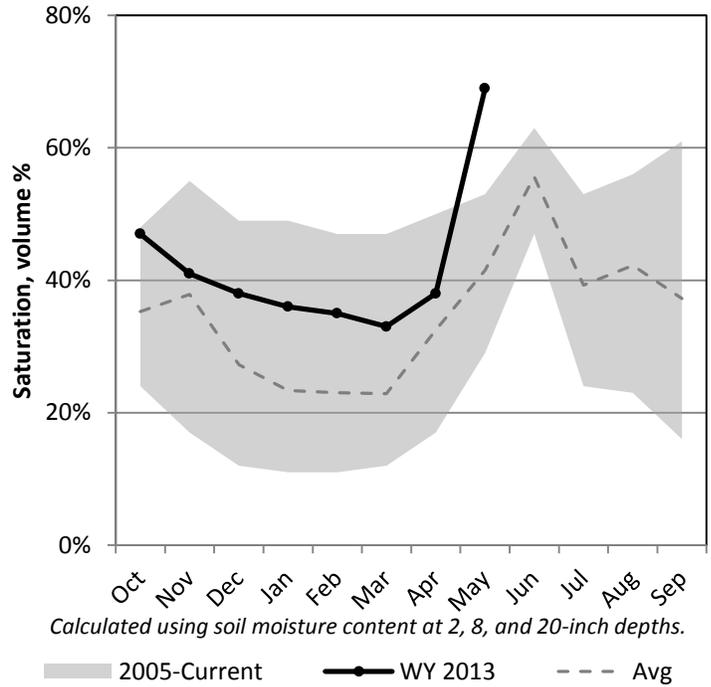
5/1/2013

Snowpack in the Beaver River Basin is much below average at 63% of normal, compared to 54% last year. Precipitation in April was much below average at 49%, which brings the seasonal accumulation (Oct-Apr) to 80% of average. Soil moisture is at 69% compared to 45% last year. Reservoir storage is at 60% of capacity, compared to 103% last year. The forecast streamflow volume for the Beaver River is 43% of average. The surface water supply index is 21% for the Beaver River.

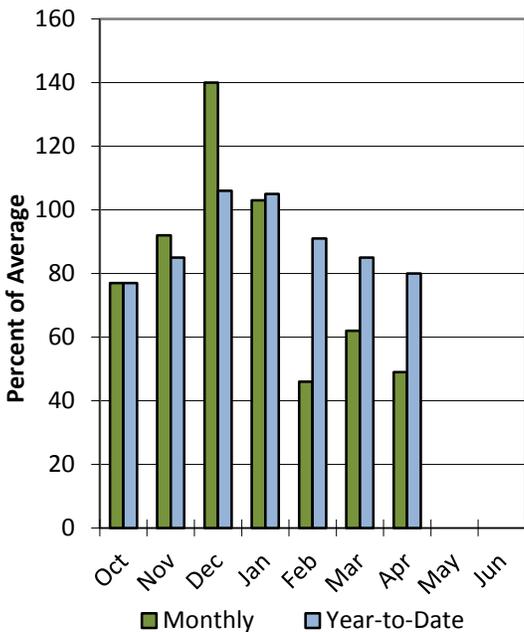
Snowpack



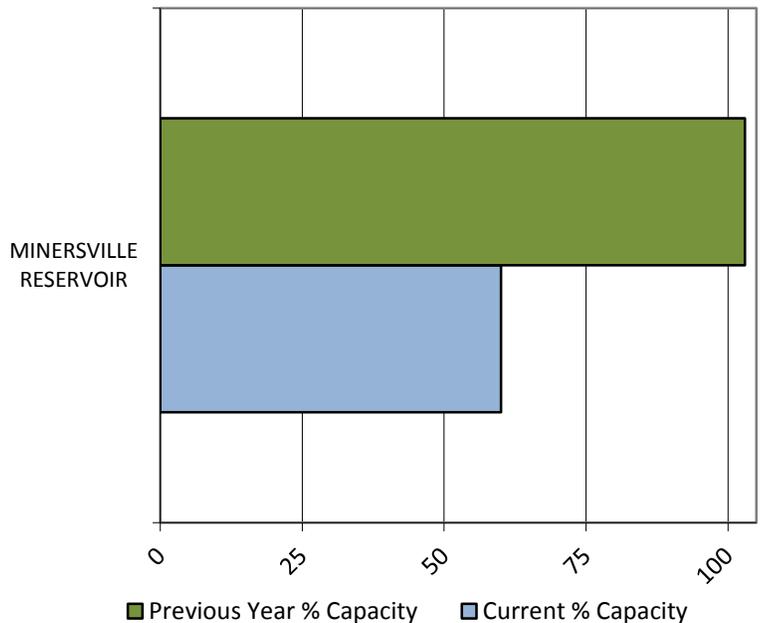
Soil Moisture



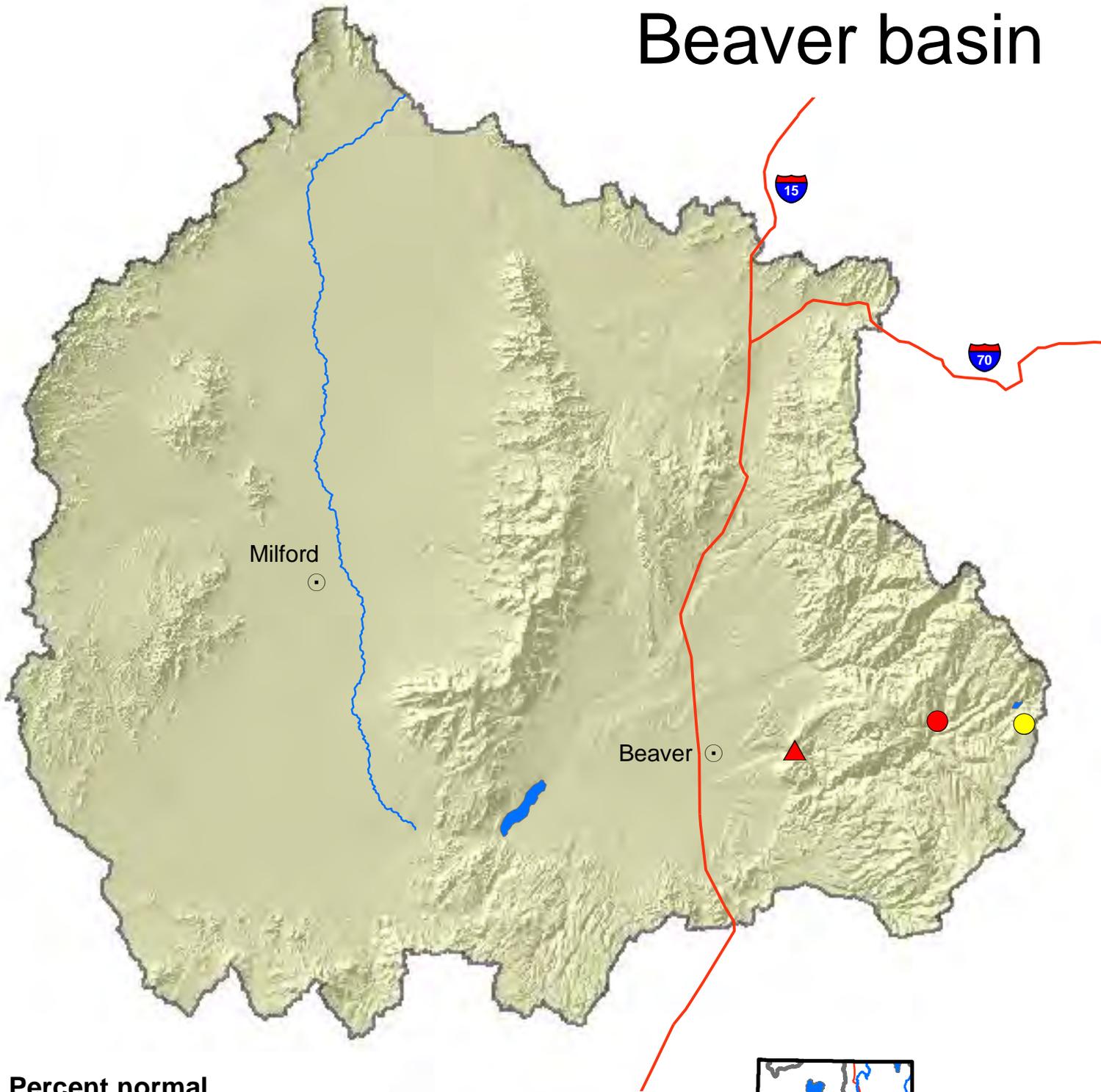
Precipitation



Reservoir Storage

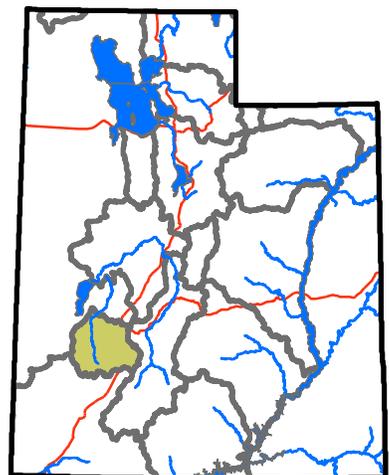
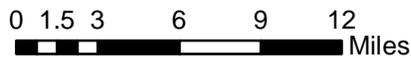


Beaver basin



Percent normal

- | | |
|--|---|
| ■ < 50% | SNOTEL sites |
| ■ 50 - 69% | Forecast points |
| ■ 70 - 89% | — Rivers |
| ■ 90 - 109% | — Highways |
| ■ 110 - 129% | Cities |
| ■ 130 - 149% | |
| ■ > 150% | |
| no % avail. | |



BEAVER RIVER BASIN as of May 1, 2013

```

=====
                        BEAVER RIVER BASIN
                        Streamflow Forecasts - May 1, 2013
=====
Forecast Point          | <<===== Drier ===== Future Conditions ===== Wetter =====>> |
                        |=====|
Forecast Point          | Forecast Period | 90%      70%      | Chance Of Exceeding * | 30%      10%      | 30-Yr Avg. |
                        | (1000AF) (1000AF) | (1000AF) (% AVG.) | (1000AF) (1000AF) | (1000AF) |
=====|=====|=====|=====|=====|=====|=====|
Beaver R nr Beaver     | APR-JUL        | 0.2      7.2      | 12.0      46      | 16.8      24      | 26      |
                        | MAY-JUL        | 0.5      4.6      | 10.0      44      | 15.4      23      | 23      |
=====|=====|=====|=====|=====|=====|=====

```

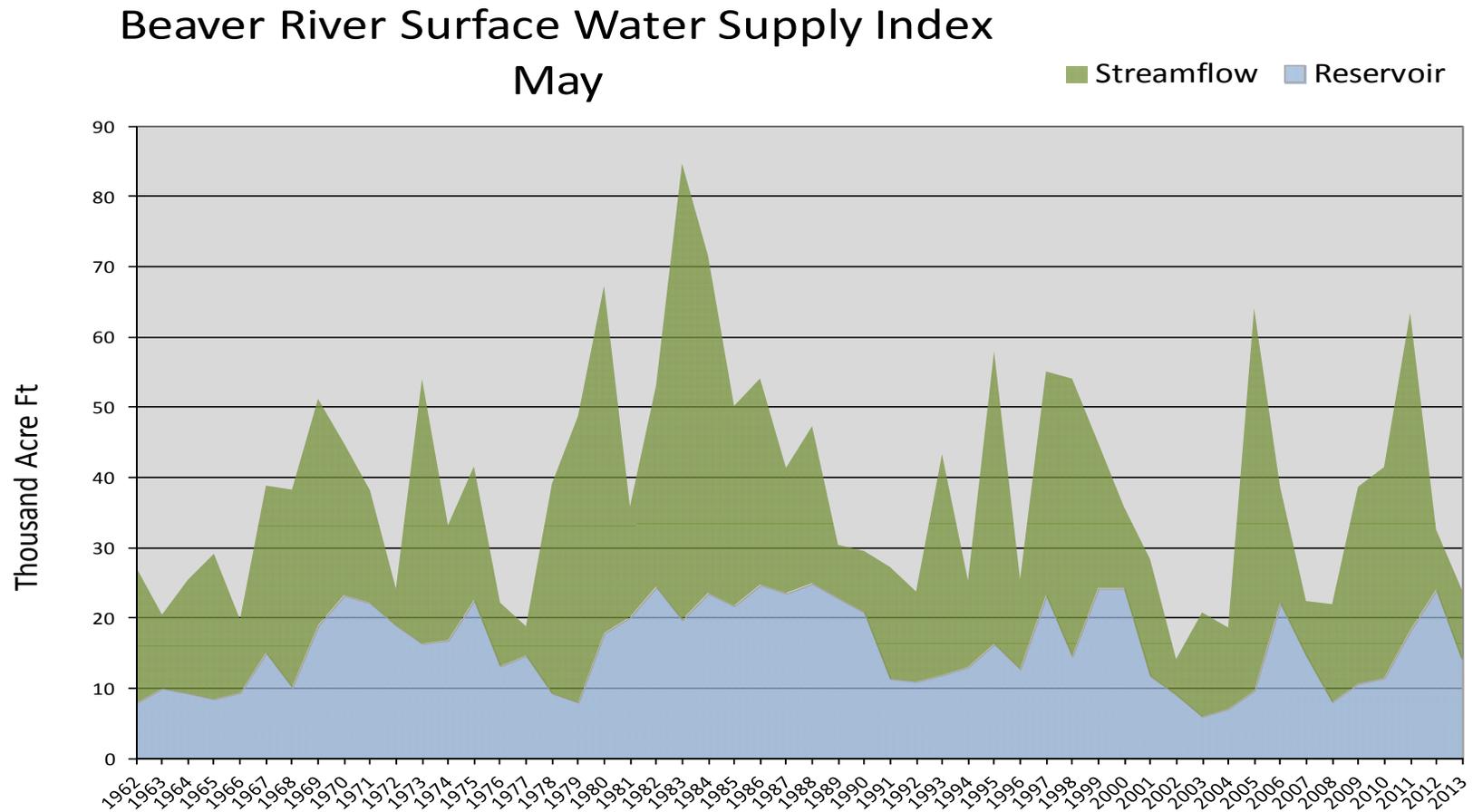
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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.

May 1, 2013		Beaver Surface Water Supply Index				
Basin or Region	April EOM* Minersville Reservoir	May-July forecast Beaver River at Beaver	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	KAF^	KAF	KAF		%	
Beaver	14.0	10.0	24.0	-2.44	21	07,92,72,94

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

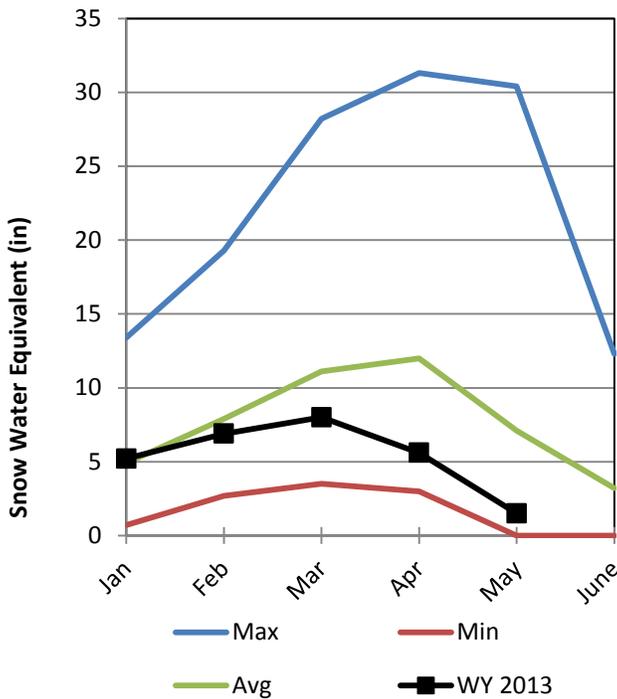


Southwestern Utah Basin

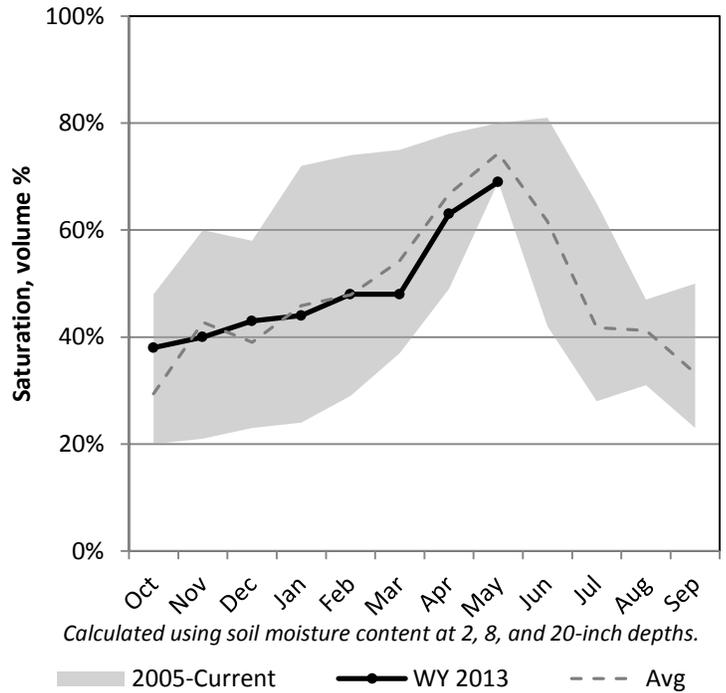
5/1/2013

Snowpack in the Southwestern Utah Basin is much below average at 39% of normal, compared to 45% last year. Precipitation in April was much below average at 63%, which brings the seasonal accumulation (Oct-Apr) to 70% of average. Soil moisture is at 69% compared to 72% last year. Reservoir storage is at 47% of capacity, compared to 64% last year. Forecast streamflow volumes range from 25% to 45% of average. The surface water supply index is 18% for the Virgin River.

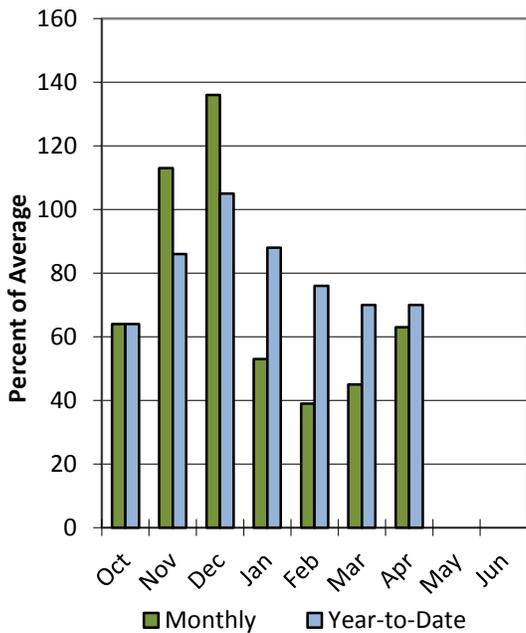
Snowpack



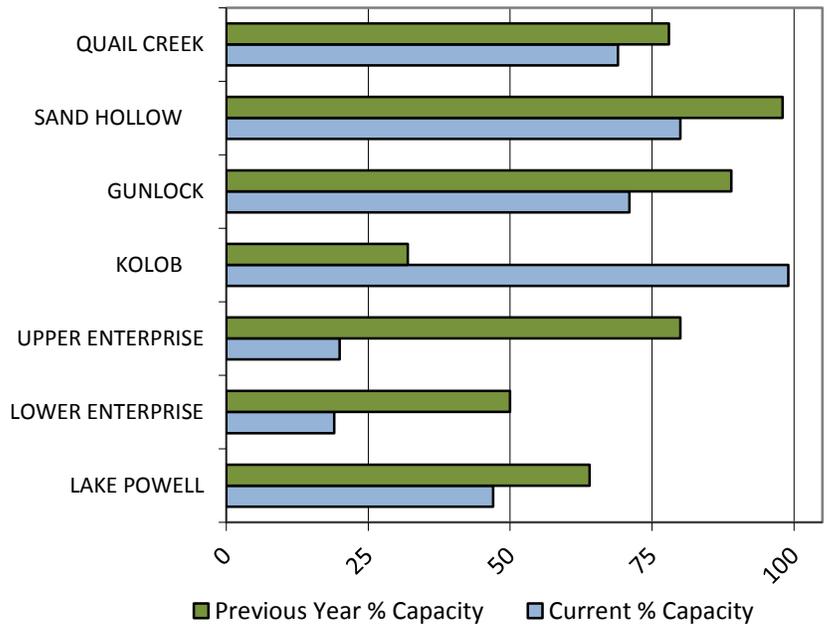
Soil Moisture



Precipitation



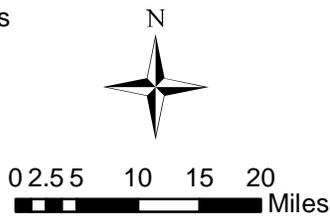
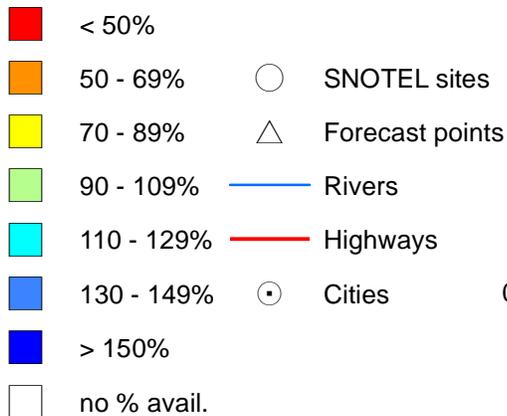
Reservoir Storage



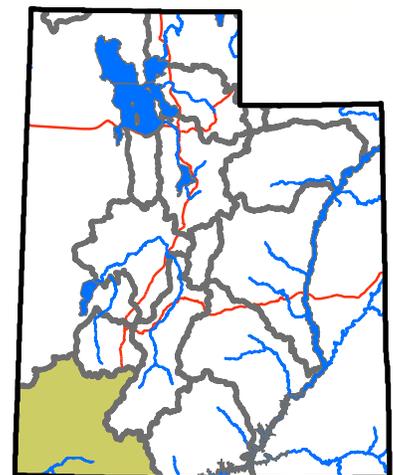
Southwestern Utah



Percent normal



United States Department of Agriculture
 Natural Resources Conservation Service



SOUTH WEST UTAH
Streamflow Forecasts - May 1, 2013

Forecast Point	Forecast Period	Future Conditions						30-Yr Avg. (1000AF)
		<<==== Drier ====		==== Wetter =====>>				
		90%	70%	Chance Of Exceeding *		30%	10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
Lake Powell Inflow (2)	APR-JUL	2090	2640	3050	43	3500	4220	7160
	MAY-JUL	1740	2290	2700	44	3150	3870	6100
Virgin R at Virgin	APR-JUL	19.3	23	25	43	28	33	58
	MAY-JUL	9.9	13.3	16.0	42	18.9	24	38
Virgin R nr Hurricane	APR-JUL	9.0	12.9	16.2	26	20	27	63
	MAY-JUL	5.5	9.4	12.7	31	16.5	23	41
Santa Clara R nr Pine Valley	APR-JUL	1.21	1.51	1.76	35	2.00	2.50	5.00
	MAY-JUL	0.45	0.75	1.00	25	1.28	1.76	4.00
Coal Ck nr Cedar City	APR-JUL	6.9	8.7	10.0	54	11.3	13.1	18.6
	MAY-JUL	2.5	5.0	6.7	45	8.4	10.9	14.9

* 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.

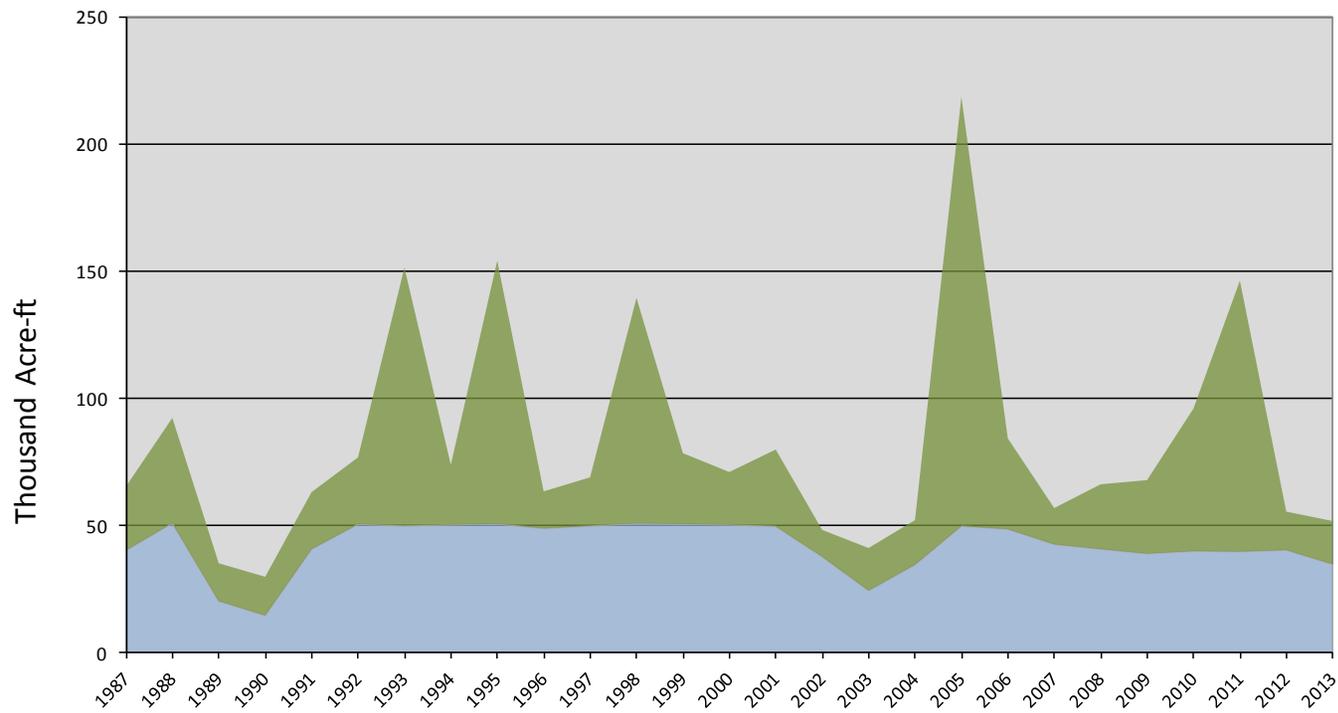
5/1/2013						
Surface Water Supply Index						
Basin or Region	April EOM* Quail Creek and Gunlock Reservoirs	May-July forecast Virgin and Santa Clara Rivers	Reservoir + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	<i>KAF</i> [^]	<i>KAF</i>	<i>KAF</i>		%	
Virgin River	34.8	17	52	-2.38	21	03,02,04,12

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

Virgin River Surface Water Supply Index

May

■ Streamflow ■ Reservoir



5/1/2013

Surface Water Supply Index

Basin or Region	April EOM* Reservoirs	April-July Stream Forecast	Reservoir + Streamflow	SWSI [#]	Percentile	Years with similar SWSI
	KAF [^]	KAF	KAF		%	
Bear River	841	28	869	-0.37	46	64, 56, 78, 77
Ogden River	76	20	96	-3.27	11	88, 03, 87, 90
Weber River	268	115	383	-2.50	20	90, 88, 01, 91
Provo	324	53	377	-3.45	9	04,03,02,92
West Uintah Basin	171	126	297	0.00	50	01, 73, 08, 87
East Uintah Basin	30.9	49.6	80.5	-2.74	17	04, 94, 03, 12
Price River	31.8	18.0	49.8	-2.92	15	90, 91, 02, 89
Joe's Valley	33.6	23.0	56.6	-3.85	4	02, 90
Ferron Creek	4.2	17.0	21.2	-3.77	5	77, 02, 89
Moab	0.5	1.3	1.8	-3.86	4	02, 90
Upper Sevier River	102	18	120	-2.45	21	60,10,67,77
Lower Sevier River	175	41	216	0.23	53	96,07,74,88
Beaver River	14.0	10.0	24.0	-2.44	21	07,92,72,94
Virgin River	32.3	30	62	-2.68	18	03,02,04,07

*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 value as well 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 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.

For more information on the SWSI go to: www.ut.nrcs.usda.gov/snow/ on the water supply page. The entire period of historical record for reservoir storage and streamflow is available.

Issued by

Jason Weller
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Prepared by

Snow Survey Staff
Randall Julander, Supervisor
Troy Brosten, Assistant Supervisor
Beau Uriona, Hydrologist
Jordan Clayton, Hydrologist
Bob Nault, Electronics Technician
Kent Sutcliffe, Soil Scientist

Released by

David Brown
State Conservationist
Natural Resources Conservation Service
Salt Lake City, Utah



YOU MAY OBTAIN THIS PRODUCT AS WELL AS CURENT SNOW, PRECIPITATION, TEMPERATURE AND SOIL MOISTURE, RESERVOIR, SURFACE WATER SUPPLY INDEX, AND OTHER DATA BY VISITING OUR WEB SITE @: <http://www.ut.nrcs.usda.gov/snow/>

Snow Survey, NRCS, USDA
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

