NRCS
Natural Resources Conservation Service

Utah Water Supply Outlook Report

May 1, 2012 - Update

Snowpacks disappearing fast. Photo by Amy Burke.

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
Kerry Goodrich, 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. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. 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 in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

STATE OF UTAH GENERAL OUTLOOK
May 1, 2012

SUMMARY

Thank goodness for reservoir storage! Snowpacks across the state are being thumped like the 64th seed in a tournament and streamflows will follow without a whimper. The southeast area has been melted for several weeks and streamflows there are in the 10% to 24% of average range. Many areas across the state will soon follow as meager snowpacks simply cannot sustain any higher flows. Summer looks to be extra long this year – and one can only hope that it's not hot and dry as well. Snowpacks are basically melted out on Price, Dirty Devil, Escalante and southeast Utah with the remainder of the state in the 10% to 30% range and this snowpack only at the high elevations. All the low and mid elevations snow have melted off. Streamflow response to melting 65% to 100% of snowpack has been at best anemic and at worst, nearly non-existent. April precipitation was much below to near average (59%-92%) over northern Utah and much below to near average over southern Utah (62%-90%), which brings the year to date precipitation to below normal statewide at 79%. Current soil moisture saturation levels in runoff producing areas are: Bear – 78%, Weber – 72%, Provo – 68%, Uintah Basin – 77%, SE Utah – 69%, Sevier – 66% and SW Utah – 60% of saturation. These are average to high values for northern Utah and very low values for southern Utah. Low or no snow combined with low soil moisture portends decreased runoff efficiency – something already seen in southern Utah. Reservoir storage is currently at 91% of capacity statewide which is16% more than last year at this time. General runoff conditions are extremely poor across the state for the remainder of the season. Water supply conditions are balanced by excellent reservoir storage. May-July streamflow 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 7% on Ferron Creek to 67% for the Lower Sevier. Surface water supply indexes below 25% include: Ferron Creek, Moab, Virgin, east Uintah Basin and West Uintah basin. Those with reservoir storage should have adequate supplies this year, those reliant on direct streamflow will experience shortages.

SNOWPACK

May first snowpacks as measured by the NRCS SNOTEL system are as follows: Bear - 32%, Weber - 30%, Provo - 22%, Uintahs - 22%, southeast Utah - 3%, Sevier - 27%, southwest Utah - 29% and the statewide figure is 25% of average. Utah watersheds have melted 65% to 100% of existing snowpacks leaving very little to sustain streamflow over the next couple of months.

PRECIPITATION

Mountain precipitation as measured by the NRCS SNOTEL system during April was: Bear – 81%, Weber – 92%, Provo – 81%, Uintahs – 59%, SE Utah – 62%, Sevier – 79%, SW Utah – 90% and the statewide figure is 77% of average. This brings the seasonal accumulation (Oct-April) to 79% of average statewide.

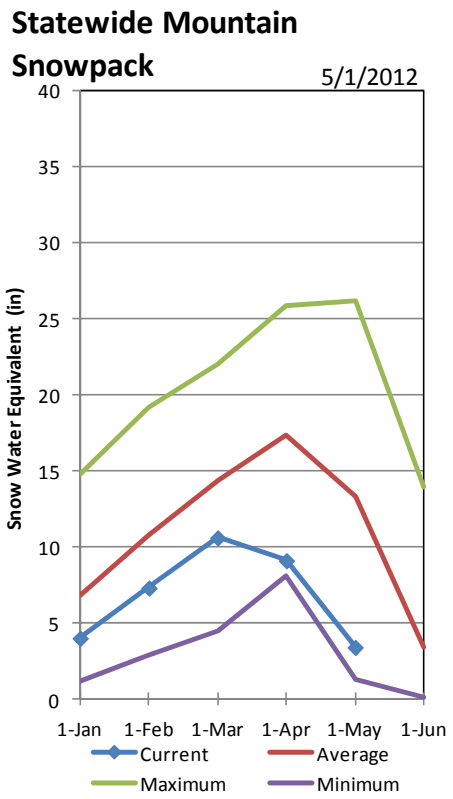
RESERVOIRS

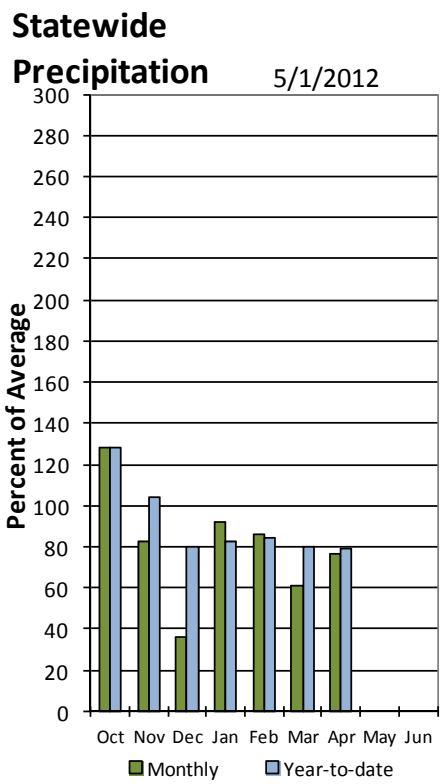
Storage in 41 of Utah's key irrigation reservoirs is at 91% of capacity, 16% more than last year. Reservoir storage by Basin: Bear – 83%, Weber – 96%, Provo – 94%, Uintah Basin – 89%, SE Utah – 83%, Sevier – 94%, SW Utah – 85% of capacity.

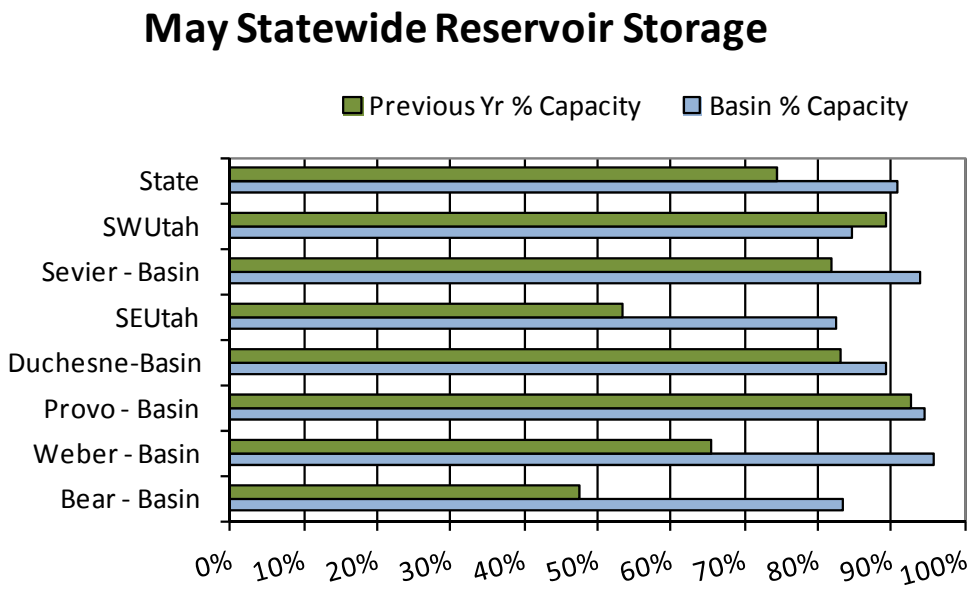
STREAMFLOW

Snowmelt streamflows are expected to be much below average across the state this year. Forecast streamflows range from 11% on the White below Tabbyune Creek to 59% on the Lakefork above Moon Lake. Most flows are forecast to be in the 25% to 50% range. Streamflows are being negatively impacted by low soil moisture.

Much of southeast Utah are currently or will soon be experiencing very low streamflows with the remainder of the state soon to follow.

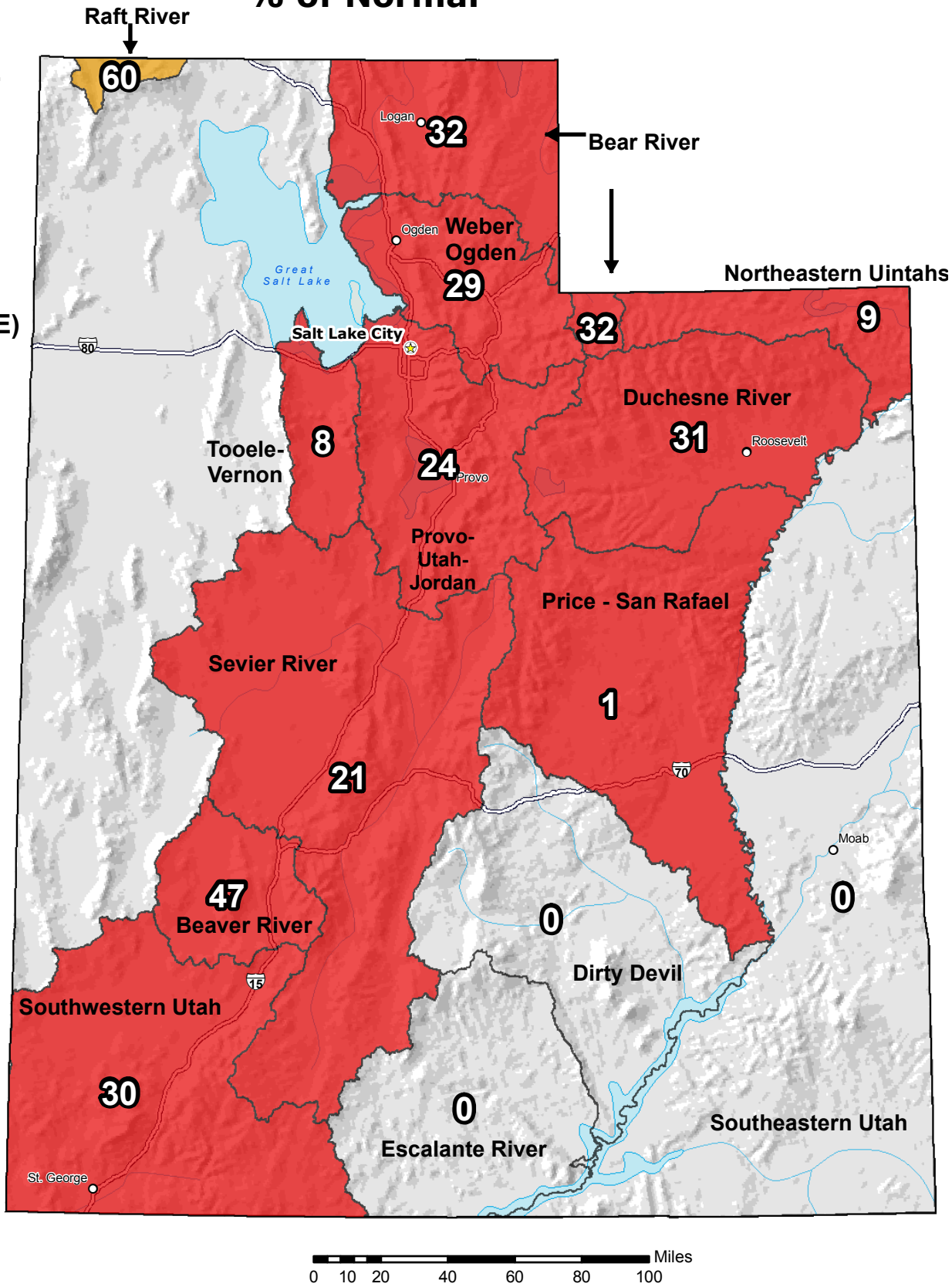






Utah
SNOTEL Current Snow Water Equivalent (SWE) % of Normal

May 01, 2012



Snow Water Equivalent (SWE) Basin-wide Percent of 1971-2000 Normal

- 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 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

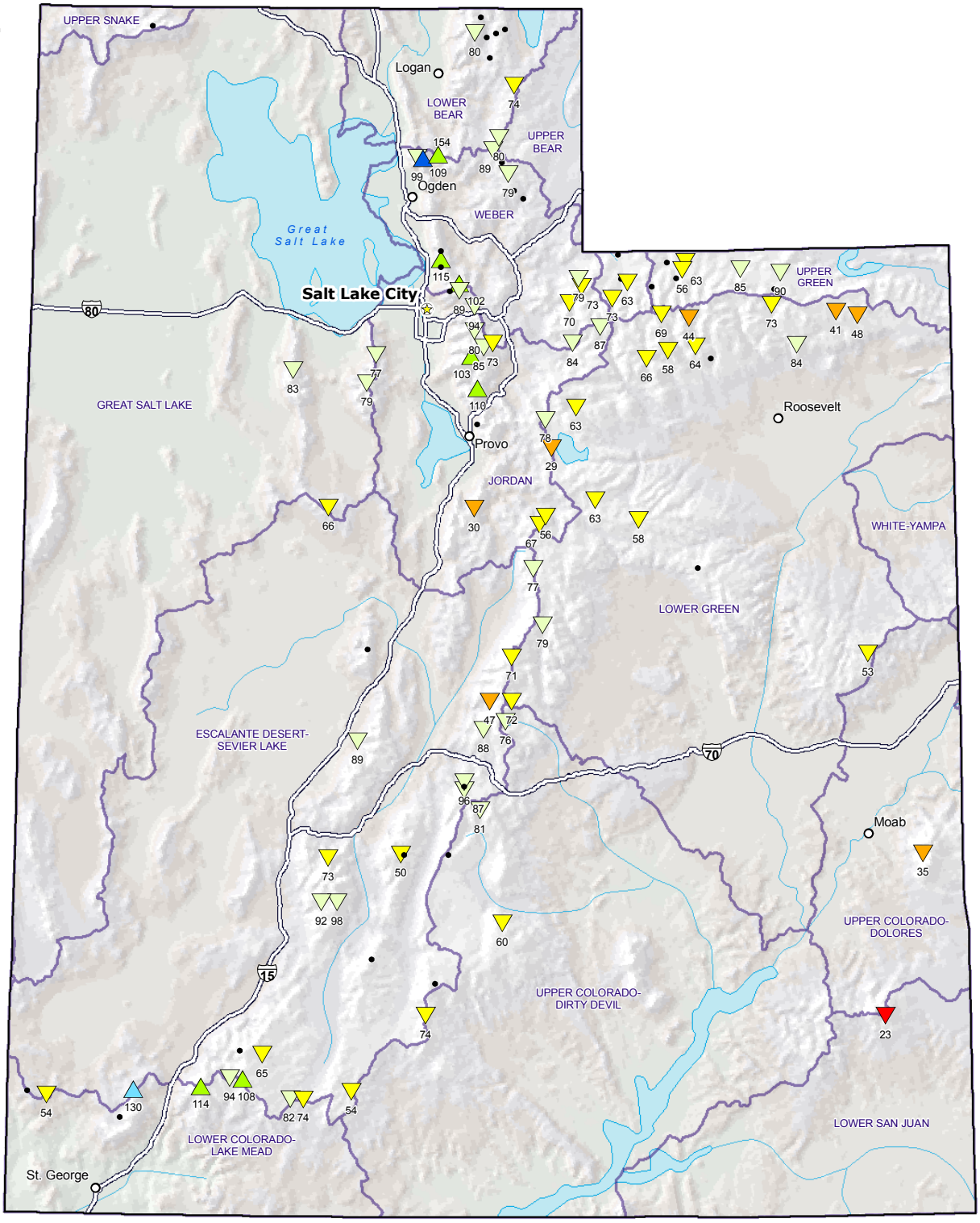
Utah
SNOTEL Month to Date (MTD) Precipitation
% of Normal

May 01, 2012

Current MTD Precip. % of Normal

- > 200%
- 150-200%
- 125-149%
- 100-124%
- 75-99%
- 50-74%
- 25-49%
- 1-24%
- 0%
- Unavailable*

Provisional Data Subject to Revision



Miles
0 10 20 40 60 80 100

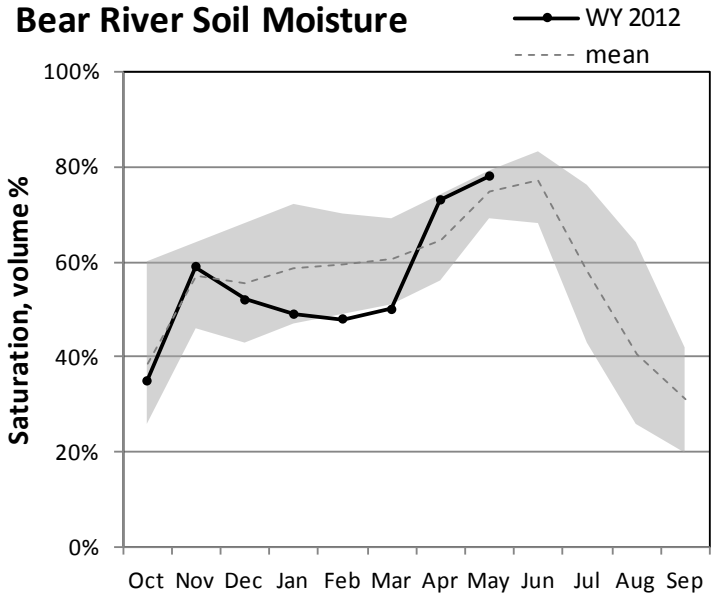
USDA NRCS

Prepared by the
USDA/NRCS National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov/gis/

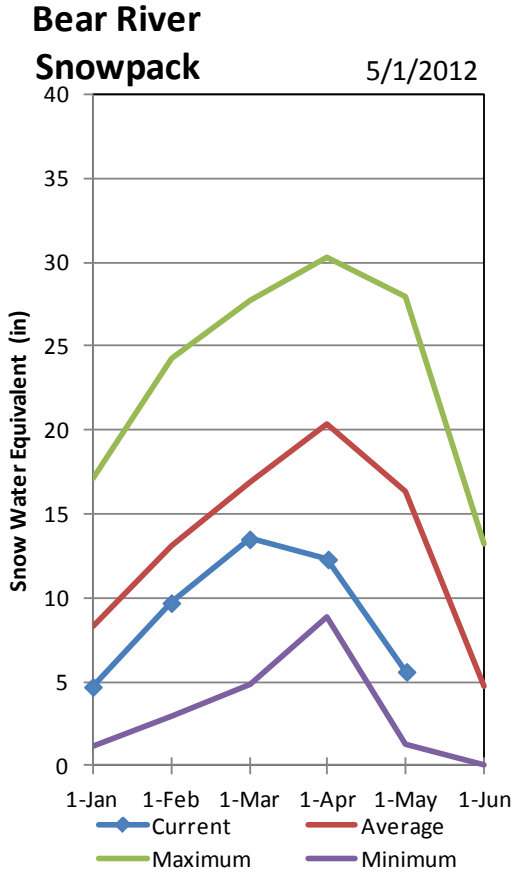
** Data unavailable at time of posting or unavailable long-term normal.*

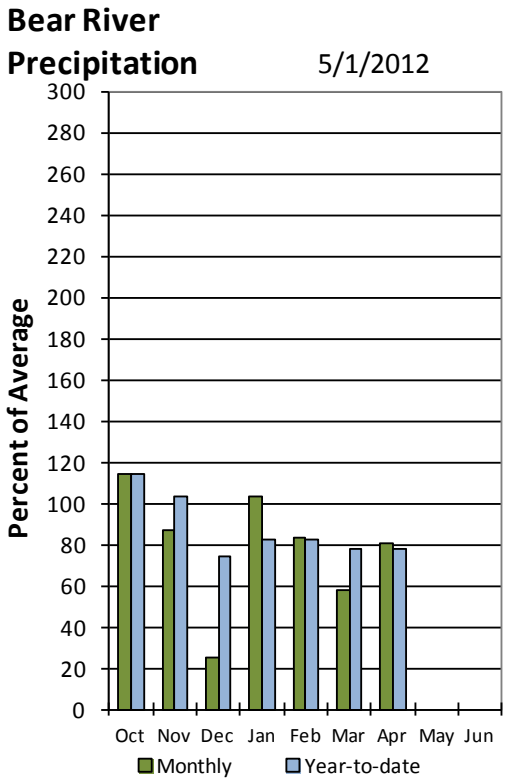
Bear River Basin
May 1, 2012

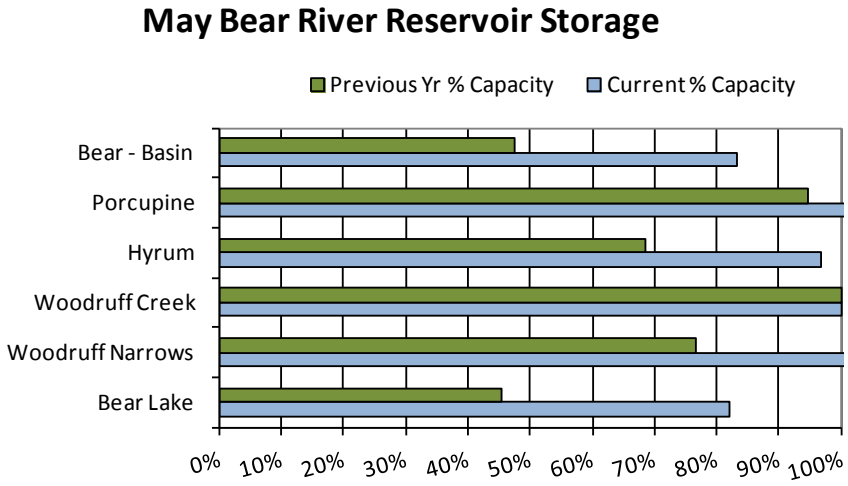
Snowpacks on the Bear River Basin are much below average at 27% of normal, and 13% of last year. Individual sites range from bare to 60% of average at Howell Canyon SNOTEL. April precipitation was below average at 81%, which brings the seasonal accumulation (Oct-Apr) to 78% of average. Soil moisture levels in runoff producing areas are at 78% of saturation in the upper 2 feet of soil compared to 75% last year. Forecast streamflows (May-July) are much below average (19%-49%) volumes for this spring and summer. Reservoir storage is at 83% of capacity, which is 36% higher than this time last year. The Surface Water Supply Index is at 63% for the Bear River, in other words, 37% of years have had more total water available. Overall water supply conditions are above average.



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





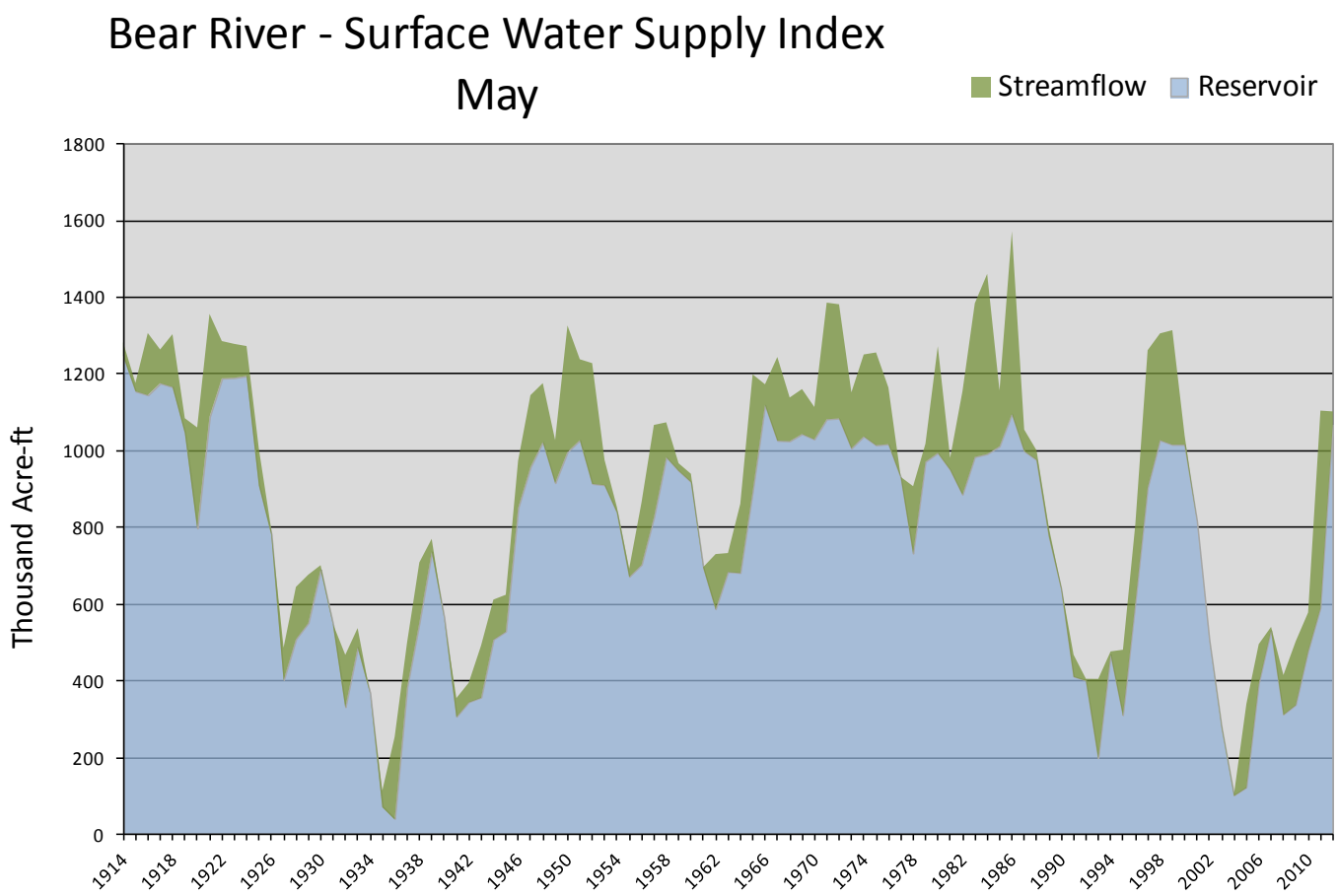


May 1, 2012

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	**1068**	**35**	**1103**	**1.08**	**63**	**58,19,11,70**

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



BEAR RIVER BASIN as of May 1, 2012

BEAR RIVER BASIN
Streamflow Forecasts - May 1, 2012

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	40	54	63	56	72	86	113
	MAY-JUL	29	42	50	47	58	71	107
Bear R ab Res nr Woodruff	APR-JUL	25	43	56	41	69	87	136
	MAY-JUL	13.0	30	42	36	54	71	116
Big Ck nr Randolph	APR-JUL	1.57	2.40	3.00	61	3.60	4.40	4.90
	MAY-JUL	0.65	1.48	2.10	49	2.70	3.50	4.30
Smiths Fk nr Border	APR-JUL	38	46	51	50	56	64	103
	MAY-JUL	27	35	40	42	45	53	95
Bear R bl Stewart Dam	APR-JUL	5.0	28	63	27	98	150	234
	MAY-JUL	4.0	15.0	35	19	63	104	186
Little Bear R at Paradise	APR-JUL	4.5	13.7	20	44	26	36	46
	MAY-JUL	0.6	5.1	11.0	34	16.9	26	32
Logan R nr Logan	APR-JUL	41	55	64	51	73	87	126
	MAY-JUL	24	38	47	44	56	70	108
Blacksmith Fork nr Hyrum	APR-JUL	0.5	13.3	22	46	31	44	48
	MAY-JUL	0.4	6.1	14.0	35	22	34	40
Dunn Ck nr Park Valley	APR-JUL	0.06	0.37	1.10	36	2.50	4.40	3.10
	MAY-JUL	0.08	0.36	0.80	29	1.65	2.20	2.80

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1302	1068	590	---
HYRUM	15.3	14.8	10.5	13.2
PORCUPINE	11.3	11.5	10.7	9.5
WOODRUFF NARROWS	57.3	58.9	44.0	38.5
WOODRUFF CREEK	4.0	4.0	4.0	---

BEAR RIVER BASIN
Watershed Snowpack Analysis - May 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BEAR RIVER, UPPER	8	19	37
BEAR RIVER, LOWER	9	14	27
LOGAN RIVER	4	17	40
RAFT RIVER	1	32	60
BEAR RIVER BASIN	17	14	32

* 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 1971-2000 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.

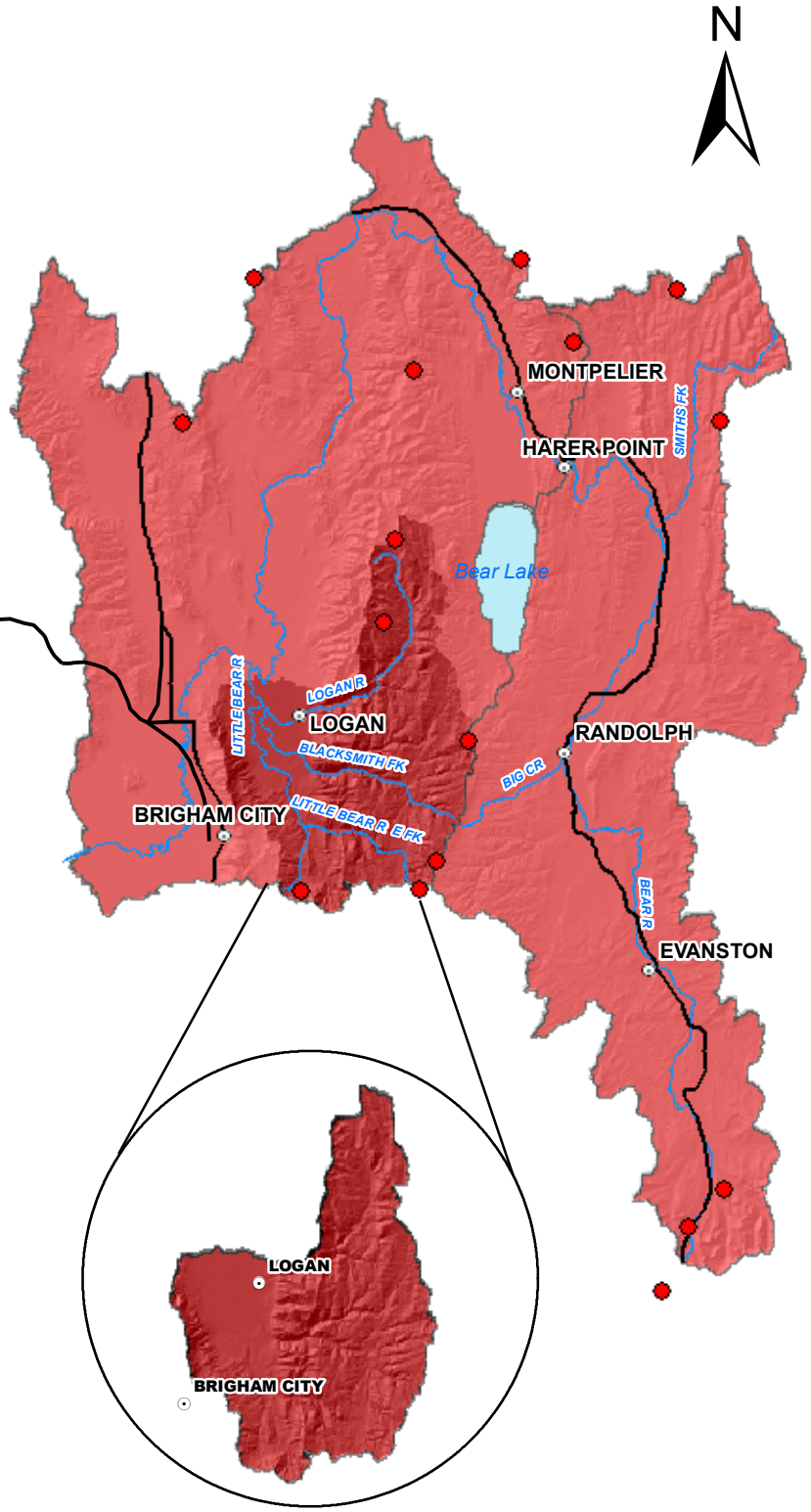
Bear River & Raft River Basins

Basinwide Average

32 %

Snotel % of Average

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



Watershed % of Average

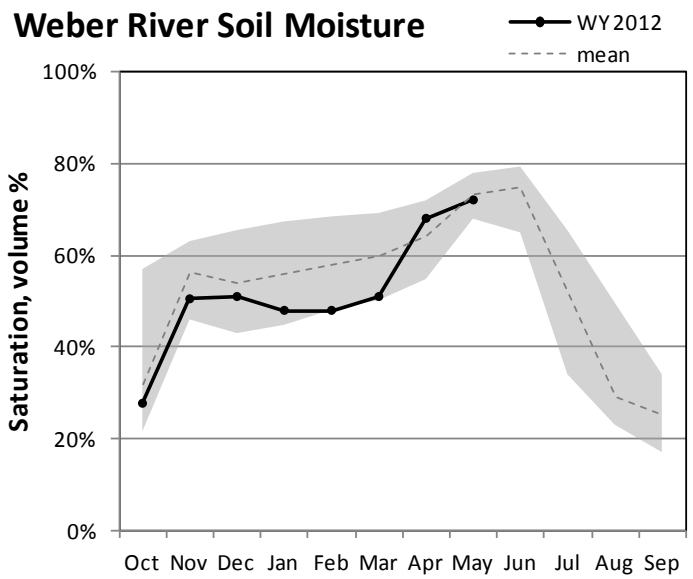
- 0
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%

Provisional Data Subject to Revision

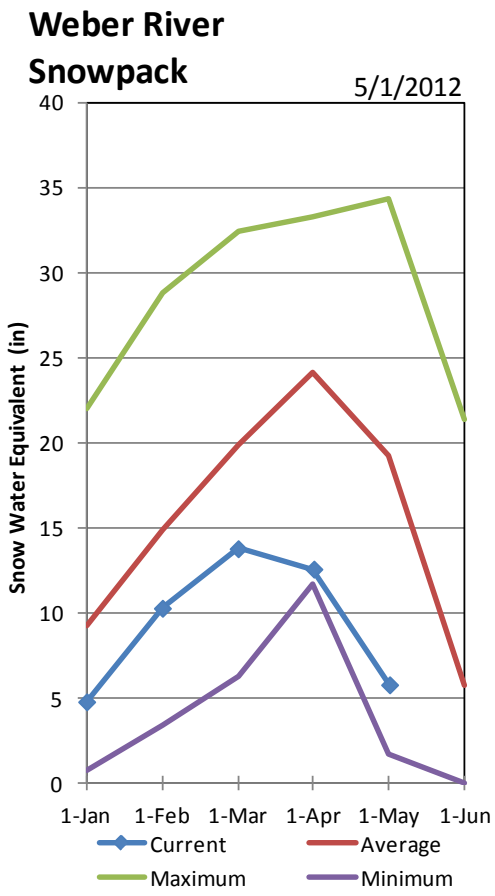
Miles
0 5 10 20 30 40 50

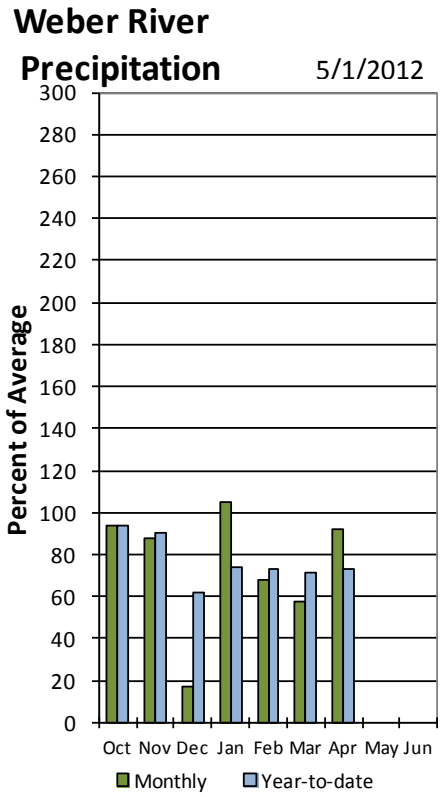
Weber and Ogden River Basins
May 1, 2012

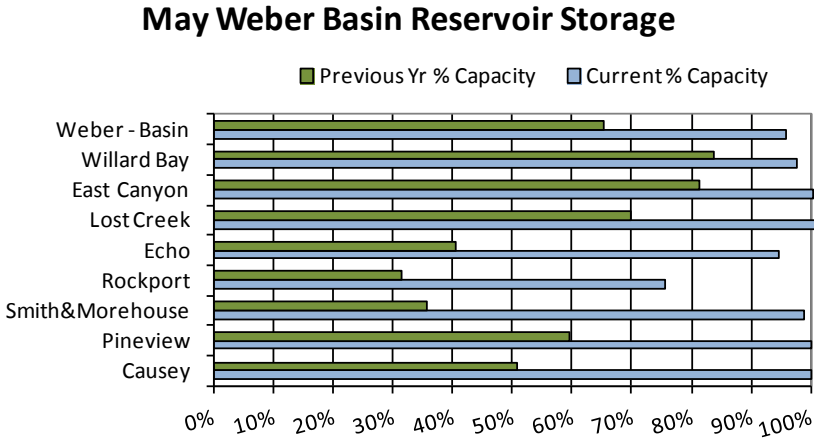
Snowpacks on the Weber and Ogden Watersheds are much below average at 28%, and 12% of last year. Individual sites range from bare to 52% of average at Trail Lake SNOTEL. April precipitation was near average at 92% bringing the seasonal accumulation (Oct-Apr) to 73% of average. Soil moisture levels in runoff producing areas are at 72% of saturation in the upper 2 feet of soil compared to the same last year. Streamflow forecasts (May-July) range from 26% to 49% of average. Reservoir storage is at 96% of capacity, 31% higher than last year. The Surface Water Supply Index is at 41% for the Weber River and 33% for the Ogden River indicating that overall water supply conditions are below average.



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





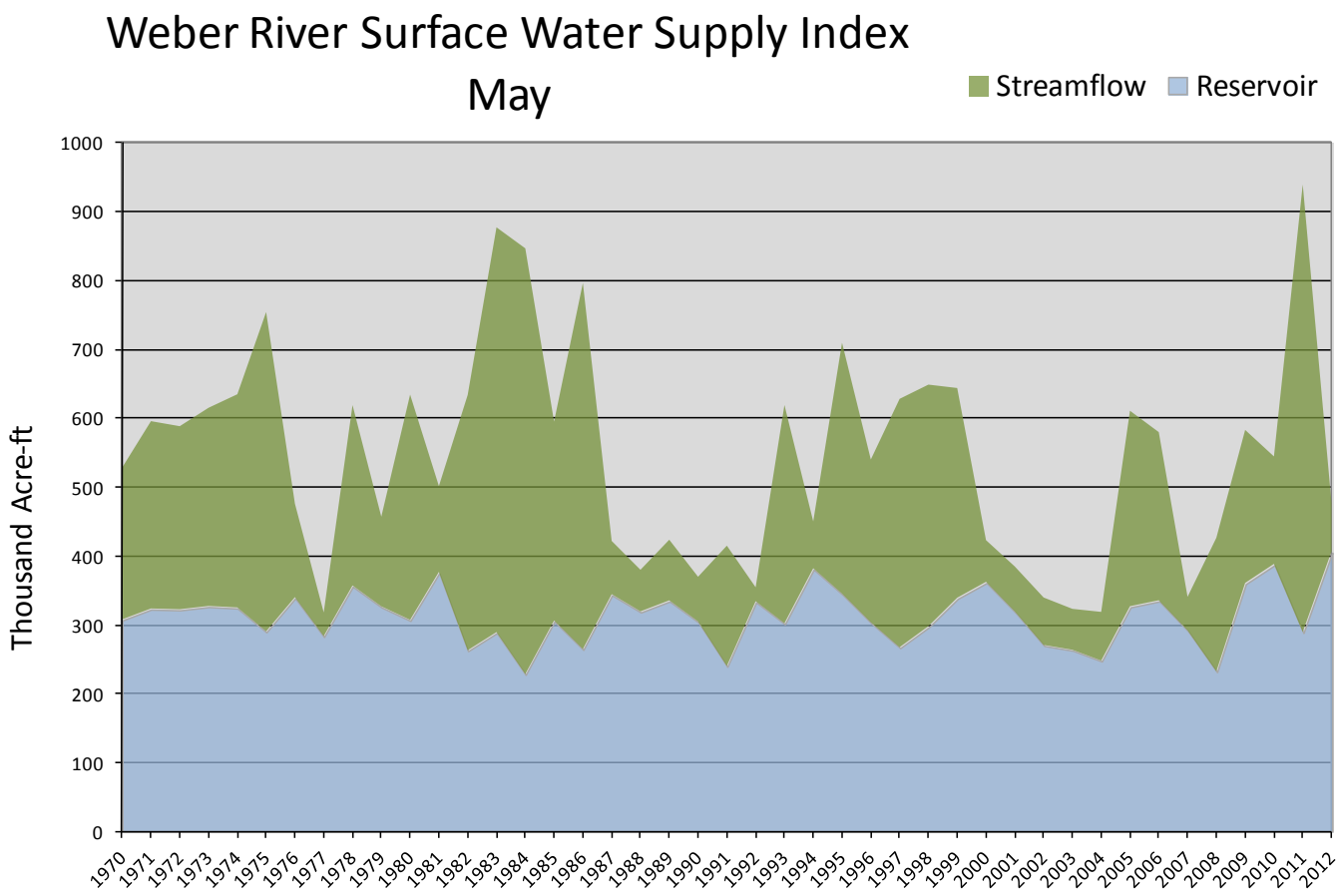


May 1, 2012

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
	*KAF^*	*KAF*	*KAF*		*%*	
Weber River	**406**	**70**	**476**	**-0.76**	**41**	**79,76,81,70**

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

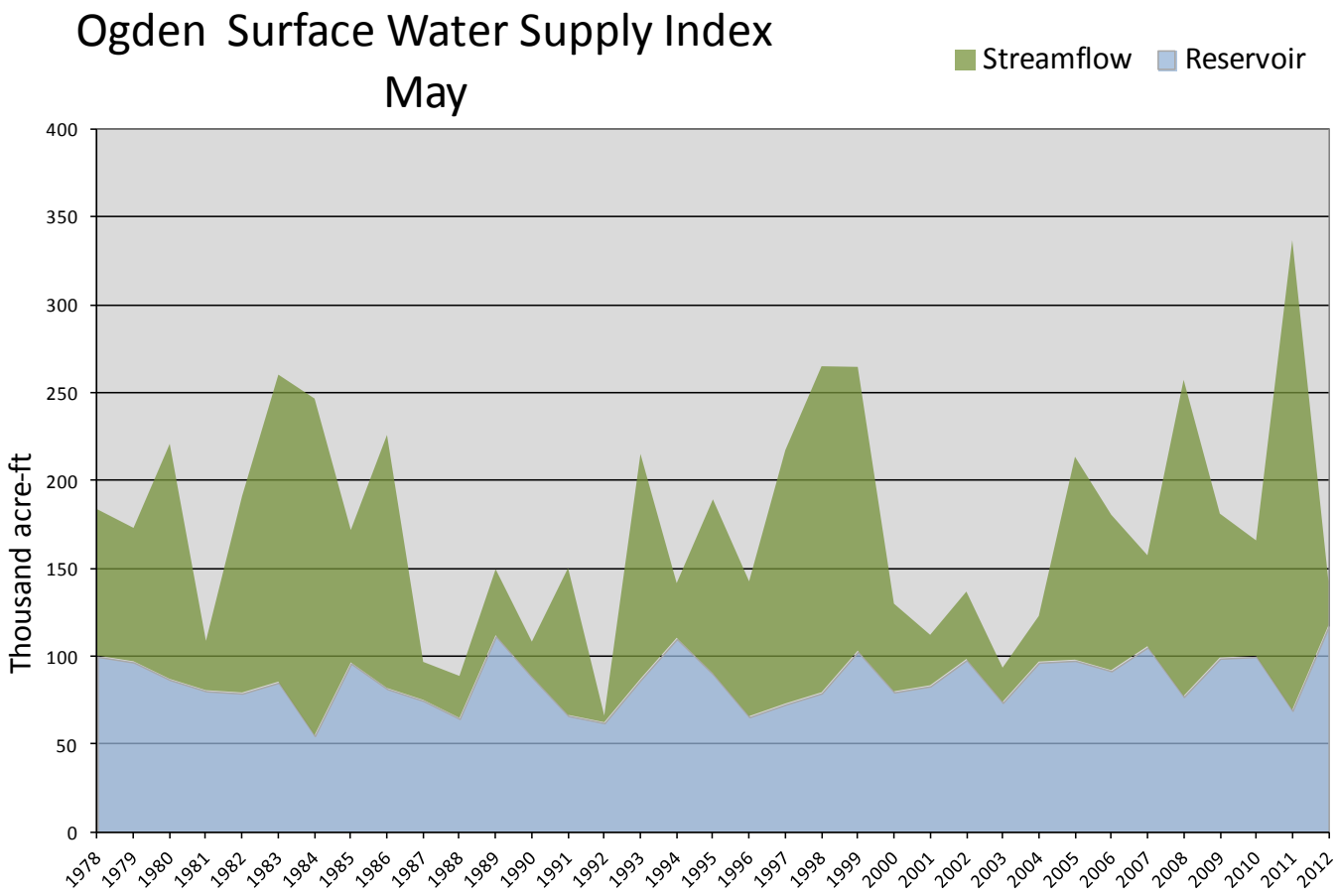


May 1, 2012

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	**117.0**	**25**	**142**	**-1.39**	**33**	**02,94,96,89**

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



WEBER & OGDEN WATERSHEDS in Utah as of May 1, 2012

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - May 1, 2012

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	12.9	15.3	17.0	50	18.7	21	34
	MAY-JUL	10.5	12.9	14.6	47	16.3	18.7	31
Weber R nr Oakley	APR-JUL	45	58	66	54	74	87	123
	MAY-JUL	33	46	55	49	64	77	113
Rockport Res	APR-JUL	36	52	63	47	74	90	134
	MAY-JUL	24	40	50	42	60	76	120
Weber R nr Coalville	APR-JUL	13.0	32	45	33	58	77	137
	MAY-JUL	31	48	59	52	70	87	114
Chalk Ck at Coalville	APR-JUL	0.9	9.0	16.8	37	25	36	45
	MAY-JUL	0.4	3.5	11.0	30	18.5	30	37
Echo Res Inflow	APR-JUL	2.0	42	69	39	96	136	179
	MAY-JUL	5.0	26	50	33	74	109	152
Lost Ck Resv Inflow	APR-JUL	0.4	2.4	5.4	31	8.4	12.8	17.6
	MAY-JUL	0.1	1.4	3.3	26	5.9	9.8	12.9
East Canyon Ck nr Jeremy Ranch	APR-JUL	0.4	2.7	5.0	35	7.3	10.6	14.2
	MAY-JUL	0.28	1.79	3.00	32	6.20	8.00	9.40
East Canyon Ck nr Morgan	APR-JUL	0.6	5.7	9.7	31	13.7	19.6	31
	MAY-JUL	0.4	3.5	6.5	30	9.5	13.9	22
Weber R at Gateway	APR-JUL	11.0	53	113	32	173	260	355
	MAY-JUL	5.0	33	70	26	118	190	273
SF Ogden R nr Huntsville	APR-JUL	11.2	19.1	24	38	30	38	64
	MAY-JUL	4.2	10.6	15.0	32	19.4	26	47
Pineview Res Inflow	APR-JUL	4.0	28	48	36	68	99	133
	MAY-JUL	0.9	9.5	25	28	41	63	89
Wheeler Ck nr Huntsville	APR-JUL	0.13	0.76	2.00	32	3.10	5.20	6.30
	MAY-JUL	0.09	0.52	1.20	28	2.10	3.50	4.30
Centerville Ck	APR-JUL	0.12	0.29	0.40	31	0.51	0.68	1.28
	MAY-JUL	0.02	0.16	0.30	29	0.44	0.64	1.03

WEBER & OGDEN WATERSHEDS in Utah
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CAUSEY	7.1	7.1	3.6	4.0
EAST CANYON	49.5	49.7	40.2	40.5
ECHO	73.9	69.9	29.9	52.9
LOST CREEK	22.5	22.7	15.7	15.6
PINEVIEW	110.1	110.3	65.6	77.7
ROCKPORT	60.9	46.1	19.2	38.6
WILLARD BAY	215.0	200.0	180.1	168.0

WEBER & OGDEN WATERSHEDS in Utah
Watershed Snowpack Analysis - May 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
OGDEN RIVER	4	13	27
WEBER RIVER	9	13	30
WEBER & OGDEN WATERSHEDS	13	13	29

* 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 1971-2000 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.

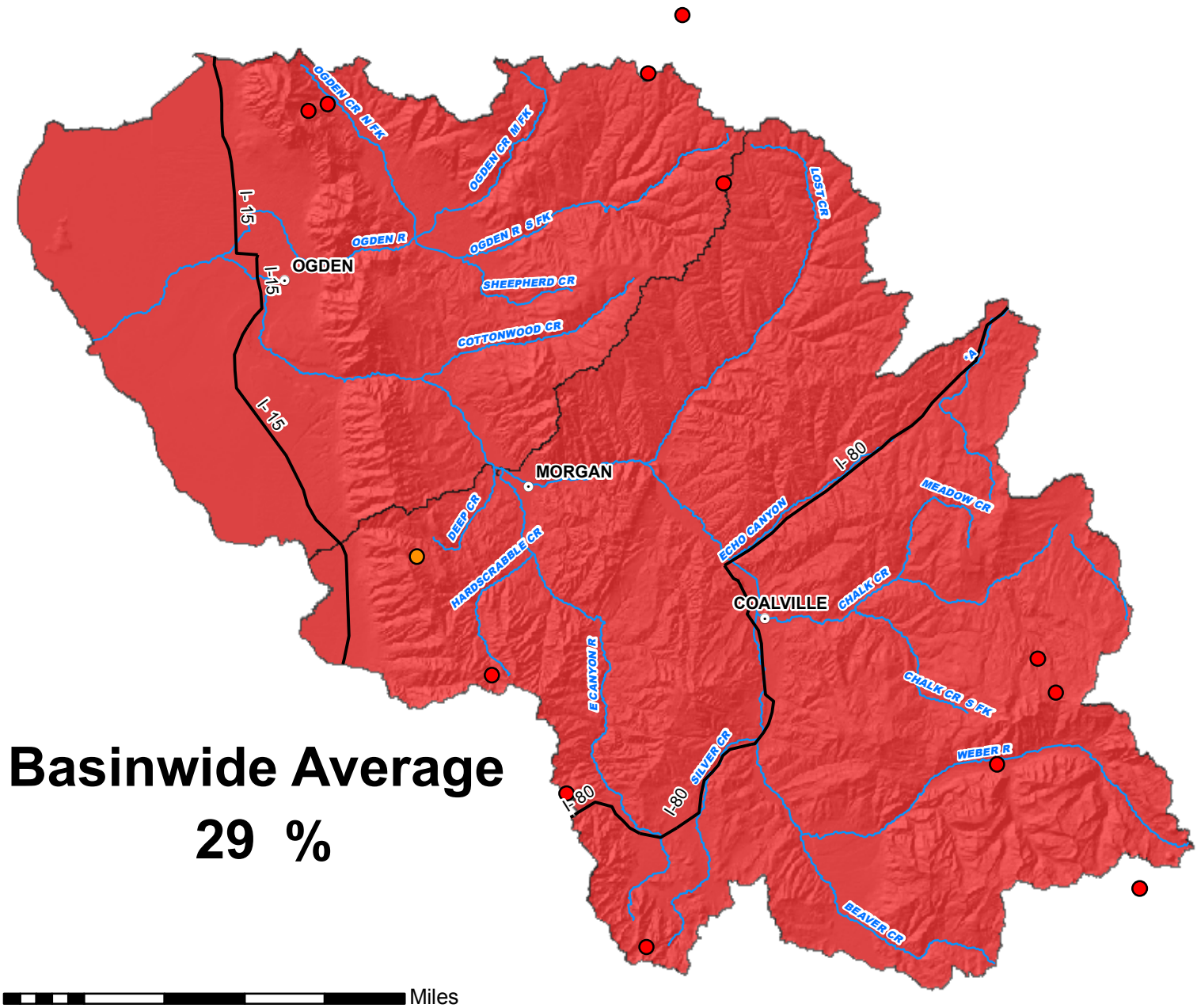
Weber & Ogden Basins

Watershed % of Average

- 0
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%

Snotel % of Average

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



Basinwide Average

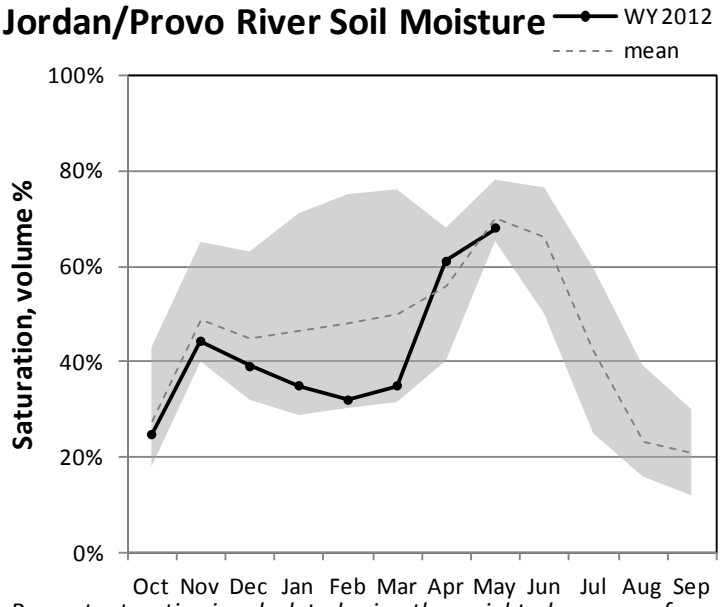
29 %

Provisional Data
Subject to Revision

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

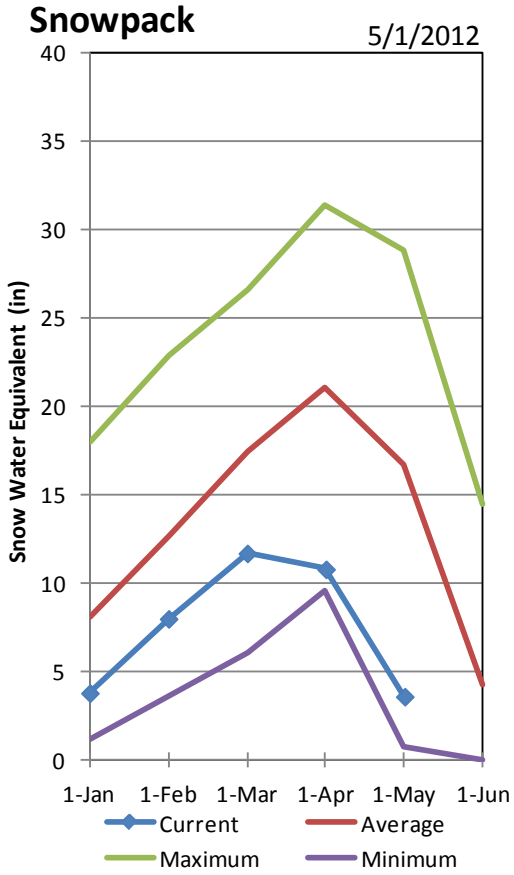
Snowpack over these basins are much below average at 26%, which is 12% of last year. Individual sites range from bare to 67% of average at Snowbird Snotel. March precipitation was below average at 82%, bringing the seasonal accumulation (Oct-April) to 75% of average. Average soil moisture in runoff producing areas is estimated at 68% of saturation in the upper 2 feet of soil compared to 69% at this time last year. Reservoir storage is at 94% of capacity, 1% lower than last year. Streamflow forecasts (May-July) range from 20% to 54% of average. The Surface Water Supply Index below Deer Creek reservoir is 47%, indicating general water supply conditions are near average.

Jordan/Provo River Soil Moisture

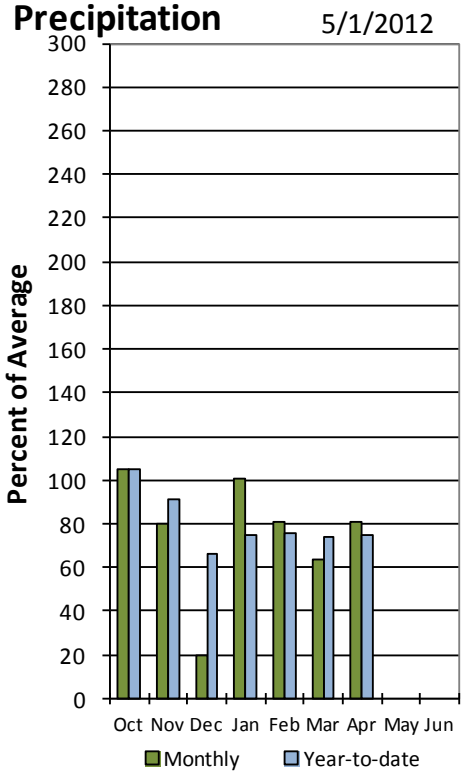


Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

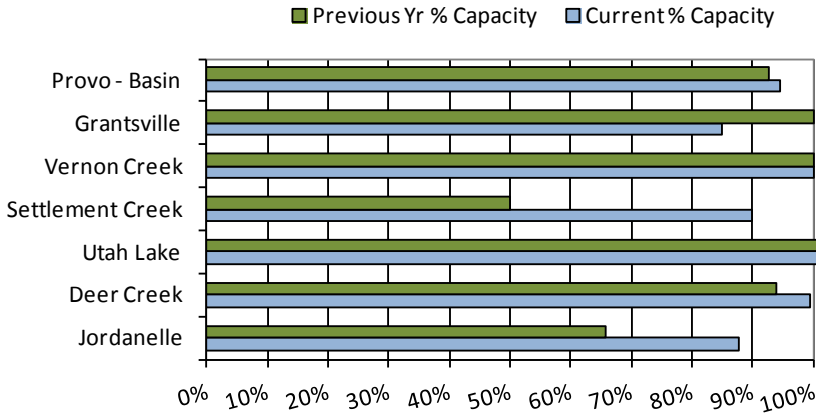
Jordan/Provo River Snowpack



Jordan/Provo River Precipitation

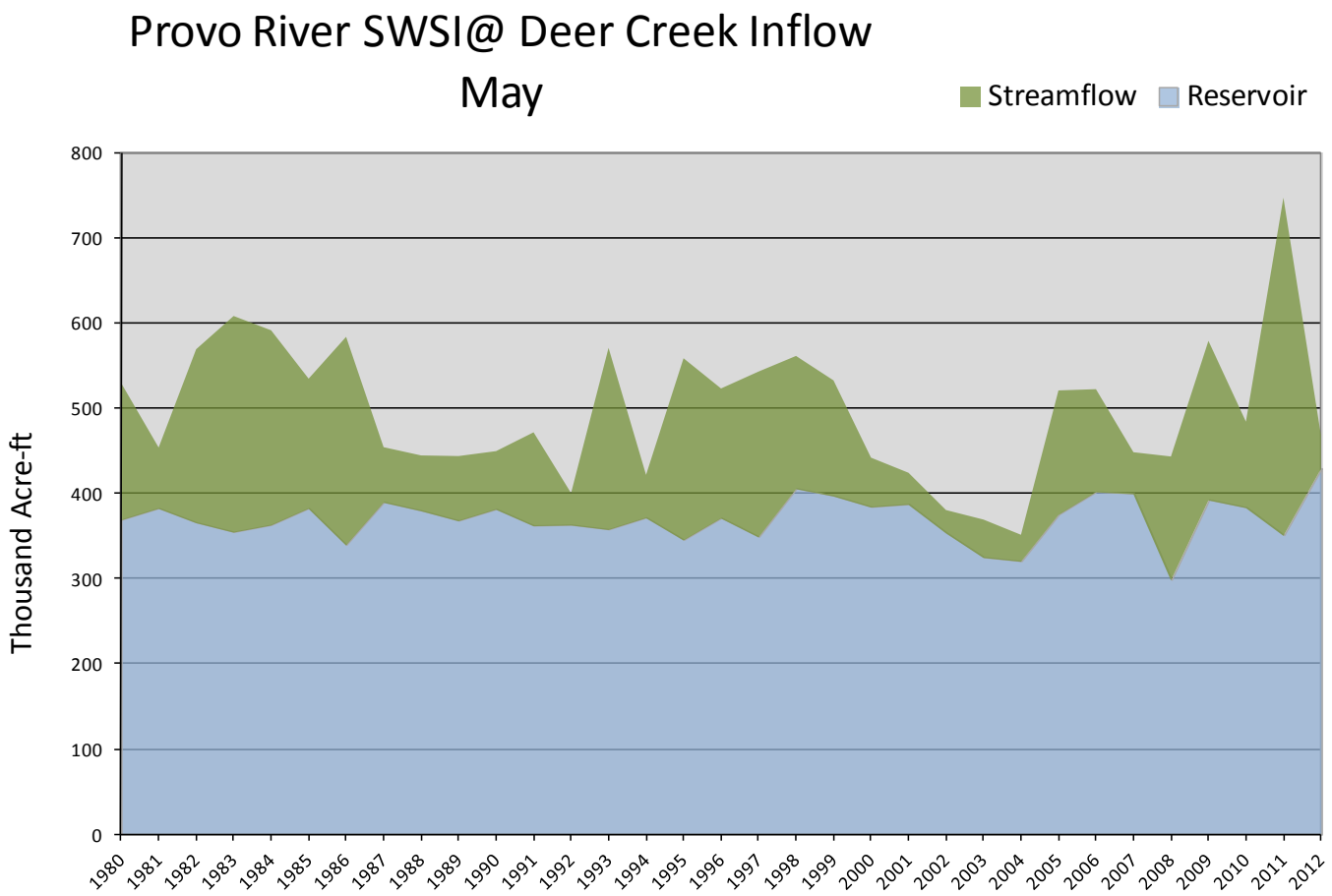


May Provo River Reservoir Storage



May 1, 2012	**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	**429**	**40**	**469**	**-0.25**	**47**	**81,87,91,05**

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



UTAH LAKE, JORDAN RIVER & TOOELE VALLEY as of May 1, 2012

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - May 1, 2012

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	0.09	0.86	2.20	23	3.50	5.50	9.40
	MAY-JUL	0.18	0.71	1.80	20	2.90	4.50	9.20
Spanish Fk at Castilla	APR-JUL	1.5	7.7	21	27	42	77	77
	MAY-JUL	0.6	5.4	15.0	25	35	50	60
Provo R nr Woodland	APR-JUL	39	51	60	58	70	86	103
	MAY-JUL	23	37	46	50	55	69	92
Provo R nr Hailstone	APR-JUL	35	48	58	53	69	87	109
	MAY-JUL	27	37	44	46	52	65	95
Provo R bl Deer Ck Dam	APR-JUL	28	46	59	47	72	90	126
	MAY-JUL	12.0	29	40	39	51	68	102
American Fk ab Upper Powerplant	APR-JUL	1.5	7.0	10.8	34	14.6	20	32
	MAY-JUL	0.9	4.5	8.0	27	11.5	16.7	30
Utah Lake Inflow	APR-JUL	10.0	62	133	41	260	358	325
	MAY-JUL	7.0	31	90	38	215	390	239
W Canyon Ck nr Cedar Fort	APR-JUL	0.02	0.22	0.56	23	0.90	1.40	2.40
	MAY-JUL	0.02	0.18	0.50	24	0.82	1.29	2.10
L Cottonwood Ck nr SLC	APR-JUL	14.0	18.0	21	53	24	29	40
	MAY-JUL	14.4	17.6	20	54	23	26	37
Big Cottonwood Ck nr SLC	APR-JUL	7.0	13.0	17.0	45	21	27	38
	MAY-JUL	7.8	13.0	16.5	50	20	25	33
Mill Ck nr SLC	APR-JUL	0.14	1.41	2.80	40	4.20	6.20	7.00
	MAY-JUL	0.12	1.22	2.40	41	3.60	5.30	5.90
Parley's Ck nr SLC	APR-JUL	0.3	1.7	3.2	19	5.8	9.6	16.7
	MAY-JUL	0.3	1.5	3.0	23	5.2	8.5	12.8
Dell Fk nr SLC	APR-JUL	0.20	0.88	1.85	27	3.50	5.90	6.80
	MAY-JUL	0.10	0.50	1.30	26	2.80	4.40	5.00
Emigration Ck nr SLC	APR-JUL	0.14	0.40	0.88	20	1.96	3.60	4.50
	MAY-JUL	0.03	0.40	0.70	23	1.46	2.70	3.10
City Ck nr SLC	APR-JUL	0.17	1.53	3.00	35	4.50	6.60	8.70
	MAY-JUL	0.22	1.56	2.90	40	4.20	6.20	7.30
Vernon Ck nr Vernon	APR-JUL	0.01	0.10	0.30	20	0.55	1.14	1.48
	MAY-JUL	0.03	0.23	0.53	50	0.83	1.28	1.07
S Willow Ck nr Grantsville	APR-JUL	0.45	1.01	1.40	43	1.79	2.40	3.23
	MAY-JUL	0.15	0.66	1.00	36	1.34	1.85	2.80

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DEER CREEK	149.7	148.9	140.4	119.4
GRANTSVILLE	3.3	2.8	3.3	2.8
SETTLEMENT CREEK	1.0	0.9	0.5	0.7
STRAWBERRY-ENLARGED	1105.9	993.3	976.3	663.7
UTAH LAKE	870.9	886.6	936.5	872.6
VERNON CREEK	0.6	0.6	0.6	---

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Watershed Snowpack Analysis - May 1, 2012

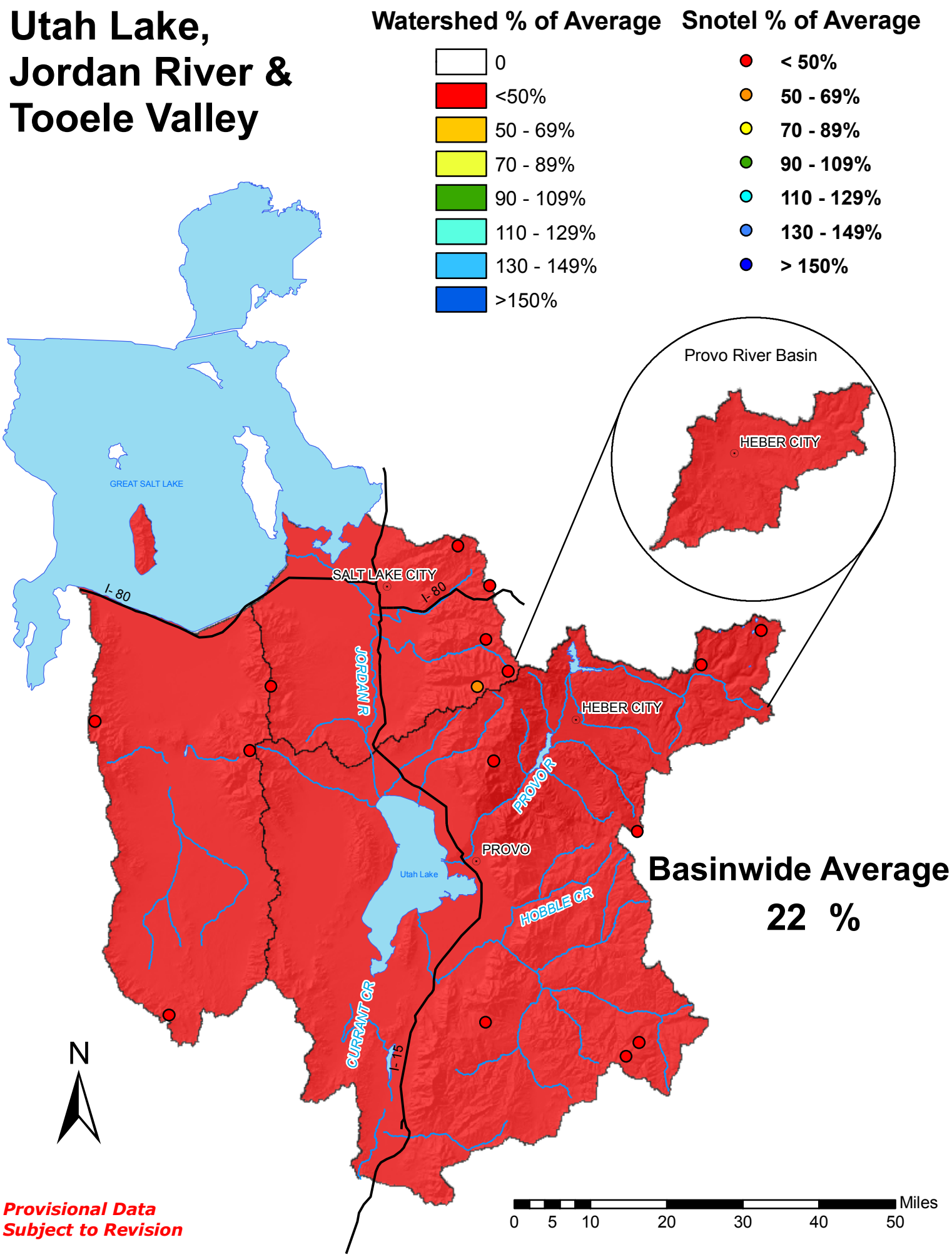
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
PROVO RIVER & UTAH LAKE	7	6	14
PROVO RIVER	4	8	23
JORDAN RIVER & GSL	6	14	32
TOOELE & RUSH VALLEY WATE	3	4	8
UTAH LAKE/JORDAN R./TOOEL	16	10	22

* 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 1971-2000 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.

Utah Lake, Jordan River & Tooele Valley

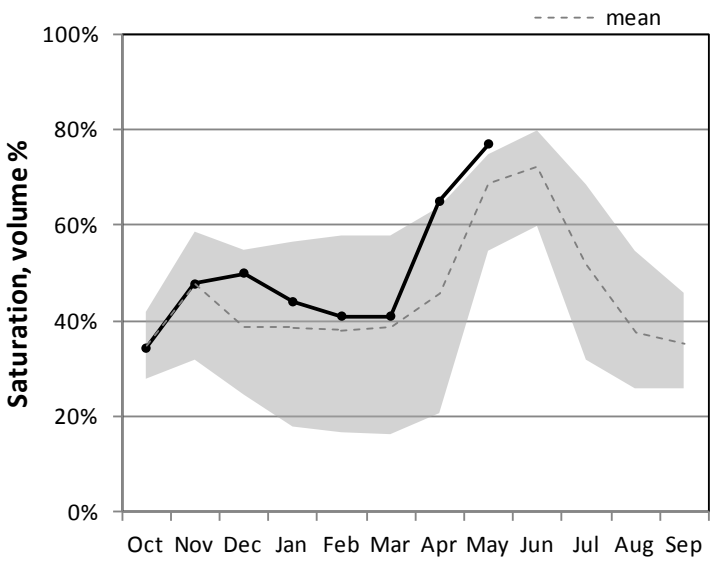


Provisional Data Subject to Revision

Uintah Basin and Dagget SCDs
May 1, 2012

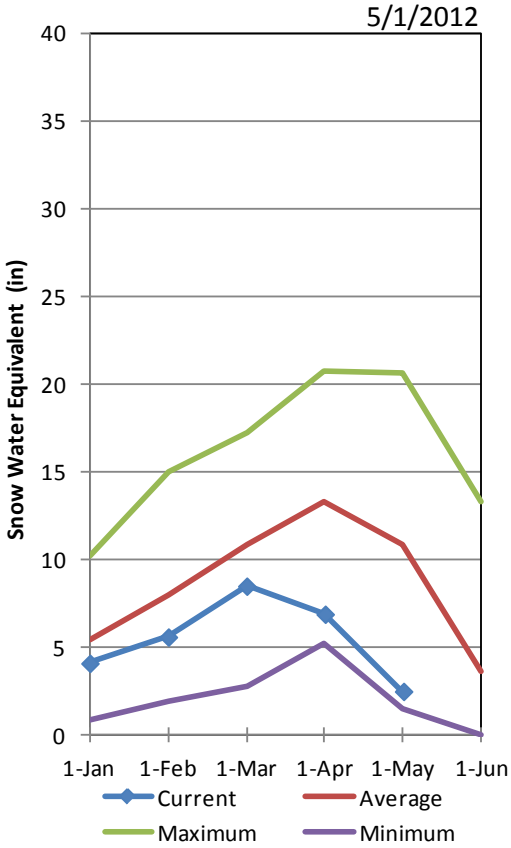
Snowpack across the Uintas is much below average at 20% which is 10% of last year. Percent of average snowpack for individual sites range from 0% to 25% on the North Slope and from 0% to 61% on the South Slope. Precipitation during April was much below average at 62% bringing the seasonal accumulation (Oct-Apr) to 83%. Soil moisture values in runoff producing area are at 77% of saturation in the upper 2 feet of soil compared to 64% last year. Reservoir storage is at 89% of capacity, 6% higher at this time last year. Streamflow forecasts (May-July) range from 13% to 59% of average. The Surface Water Supply Index for the western area is 23% and for the eastern area it is 24% indicating much below normal conditions on the western and eastern side of the Uintahs. General water supply conditions are much below average.

Uintah Basin Soil Moisture

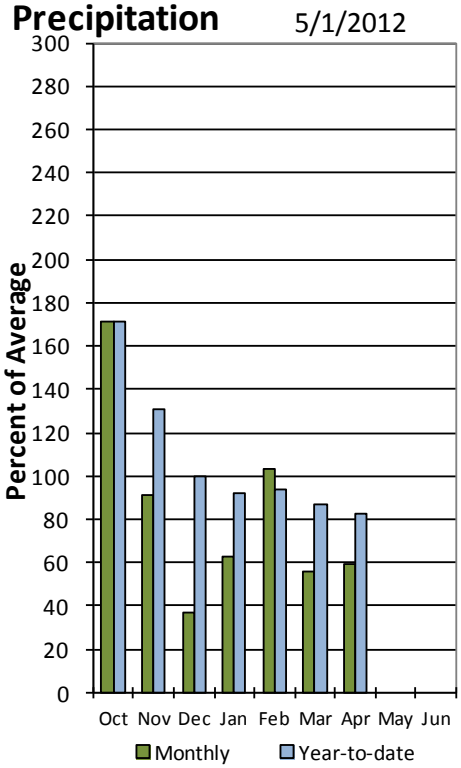


Percent saturation is calculated using the weighted average of volumetric soil moisture content at 2, 8, and 20-inch depths. Saturation is estimated as 40% volumetric water content. The gray area represents the range in saturation values since 2005.

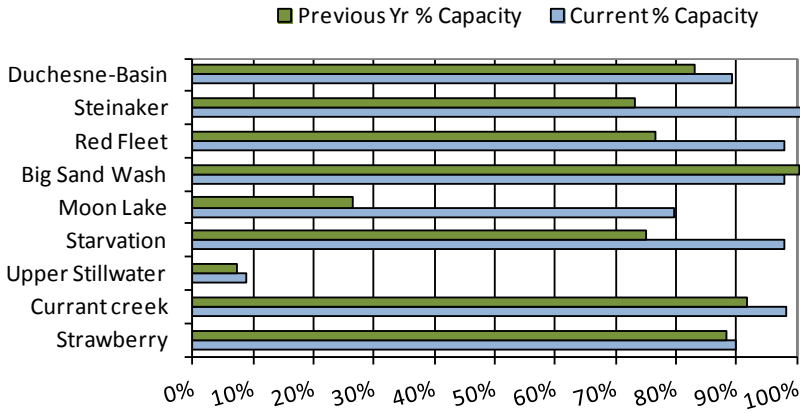
Uinta Snowpack



Uinta Precipitation

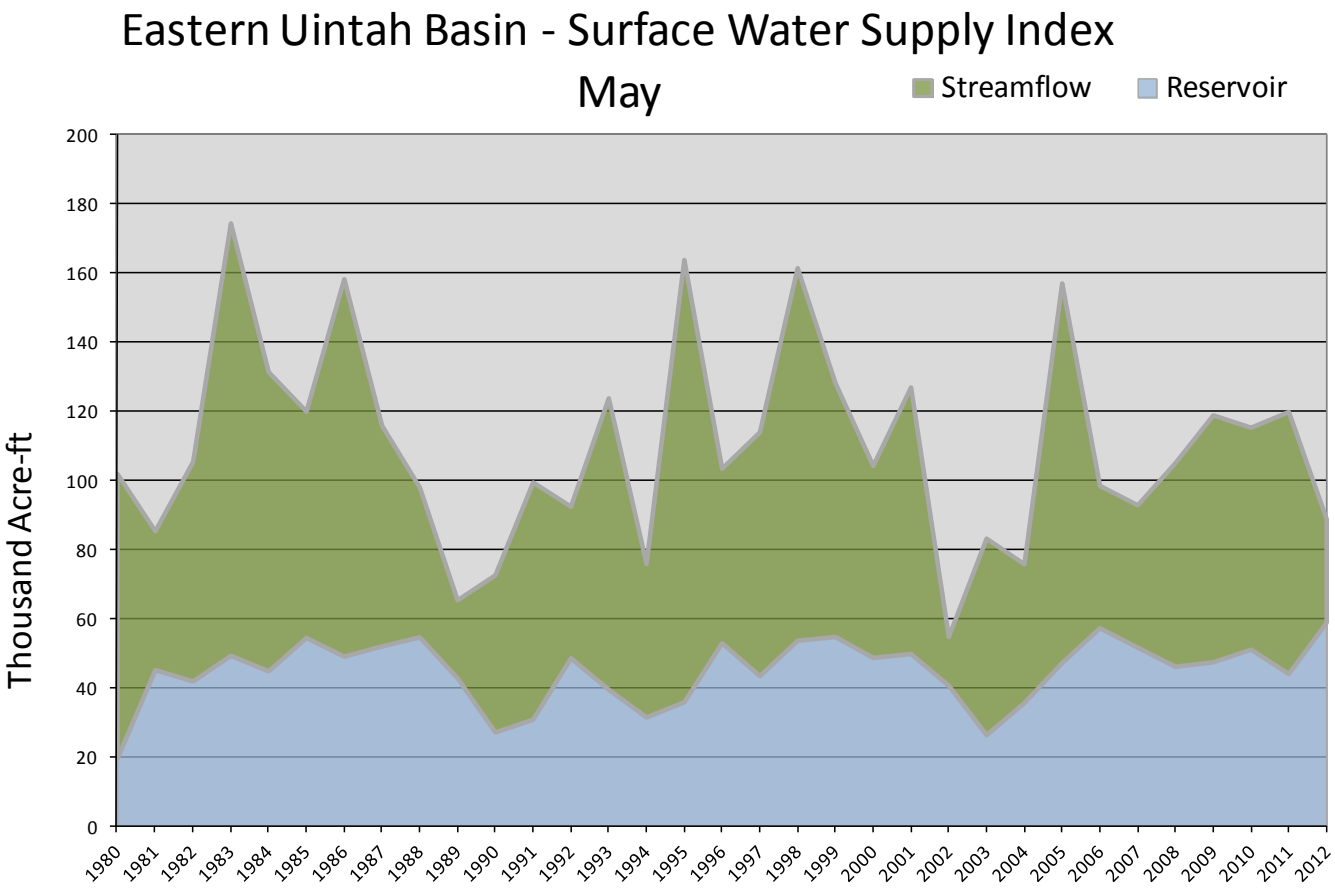


May Uintah Basin Reservoir Storage



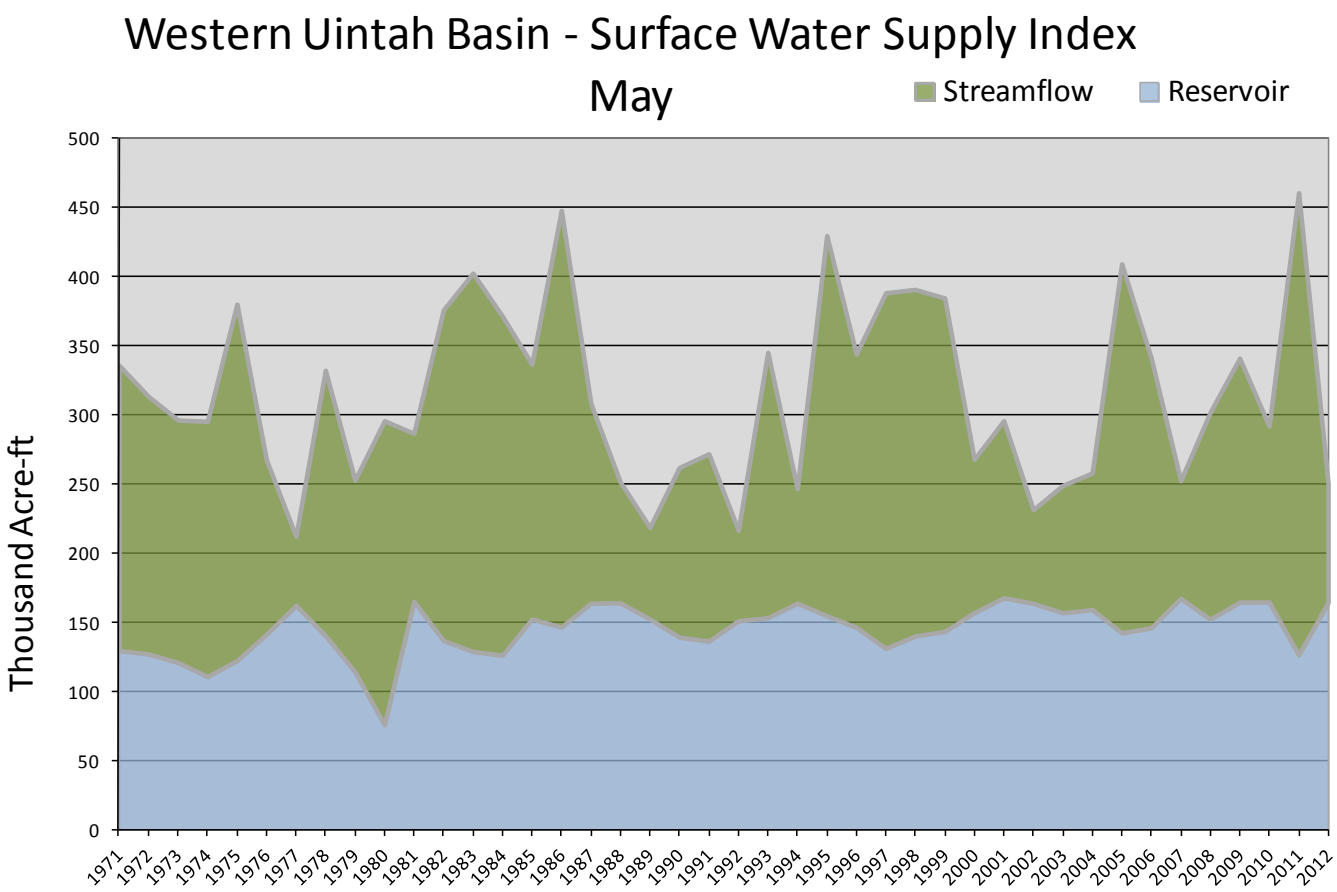
May 1, 2012	**Surface Water Supply Index**					
Basin or Region	April EOM* Red Fleet & Steinaker	May-July Forecast Big Brush & Ashley Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Eastern Uintah	**59.0**	**28.0**	**87**	**-2.21**	**24**	**03, 81, 92, 87**

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



May 1, 2012	**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
	*KAF^*	*KAF*	*KAF*		*%*	
Western Uintah	**165**	**91.0**	**256**	**-2.23**	**23**	**07, 79, 04, 90**

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



UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - May 1, 2012

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	35	42	48	51	54	64	95
	MAY-JUL	22	29	35	38	41	51	92
EF of Smiths Fork nr Robertson (2)	APR-JUL	10.7	13.4	15.5	53	17.8	22	29
	MAY-JUL	7.2	9.9	12.0	43	14.3	18.0	28
Flaming Gorge Reservoir Inflow (2)	APR-JUL	435	545	630	53	720	870	1190
	MAY-JUL	300	410	495	48	585	735	1035
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	9.1	10.7	11.9	57	13.2	15.3	21
	MAY-JUL	5.2	6.8	8.0	43	9.3	11.4	18.8
Ashley Ck nr Vernal	APR-JUL	17.6	21	24	46	27	32	52
	MAY-JUL	13.3	17.1	20	40	23	28	50
WF Duchesne R at VAT Diversion	APR-JUL	5.8	7.5	8.8	47	10.3	12.7	18.7
	MAY-JUL	4.0	5.7	7.0	40	8.5	10.9	17.4
Duchesne R nr Tabiona (2)	APR-JUL	39	50	58	55	67	82	105
	MAY-JUL	26	37	45	47	54	69	96
Upper Stillwater Reservoir Inflow (2	APR-JUL	37	42	46	56	50	56	82
	MAY-JUL	31	36	40	51	44	50	79
Rock Ck nr Mountain Home (2)	APR-JUL	42	48	53	60	58	66	89
	MAY-JUL	35	41	46	54	51	59	85
Duchesne R ab Knight Diversion (2)	APR-JUL	83	99	111	59	124	145	188
	MAY-JUL	62	78	90	52	103	124	173
Strawberry R nr Soldier Springs (2)	APR-JUL	6.2	8.7	11.2	19	14.4	20	59
	MAY-JUL	1.0	3.5	6.0	13	9.2	15.1	46
Currant Ck Reservoir Inflow (2)	APR-JUL	3.2	4.4	5.7	23	7.3	10.5	25
	MAY-JUL	0.5	1.7	3.0	14	4.6	7.8	22
Strawberry R nr Duchesne (2)	APR-JUL	16.0	22	28	23	34	48	121
	MAY-JUL	3.0	9.0	15.0	14	22	36	108
Lake Fork R ab Moon Lake Reservoir	APR-JUL	35	40	44	65	48	55	68
	MAY-JUL	29	34	38	59	42	49	65
Yellowstone R nr Altonah	APR-JUL	33	38	42	68	46	53	62
	MAY-JUL	26	31	35	59	39	46	59
Duchesne R at Myton (2)	APR-JUL	74	96	114	44	134	168	260
	MAY-JUL	40	62	80	35	100	134	230
Uinta R bl Powerplant Diversion nr N	APR-JUL	35	42	48	61	54	64	79
	MAY-JUL	29	36	42	55	48	58	77
Whiterocks R nr Whiterocks	APR-JUL	26	32	36	64	41	48	56
	MAY-JUL	20	26	30	57	35	42	53
Duchesne R Nr Randlett, Ut	APR-JUL	81	95	121	37	152	191	324
Duchesne R nr Randlett (2)	MAY-JUL	45	59	85	29	116	155	289

UINTAH BASIN & DAGGET SCD'S
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
FLAMING GORGE	3749.0	3205.0	3156.0	2952.0
MOON LAKE	49.5	28.5	9.5	30.8
RED FLEET	25.7	25.2	19.7	19.9
STEINAKER	33.4	33.8	24.4	25.0
STARVATION	165.3	161.6	124.1	139.7
STRAWBERRY-ENLARGED	1105.9	993.3	976.3	663.7

UINTAH BASIN & DAGGET SCD'S
Watershed Snowpack Analysis - May 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GREEN RIVER in UTAH	6	5	9
ASHLEY CREEK	2	0	1
BLACK'S FORK RIVER	2	11	16
SHEEP CREEK	1	3	0
DUCHESNE RIVER	11	14	27
LAKE FORK-YELLOWSTONE CRE	4	25	46
STRAWBERRY RIVER	4	0	0
UINTAH-WHITEROCKS RIVERS	2	4	6
UINTAH BASIN & DAGGET SCD	17	11	22

* 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 1971-2000 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.

Uintah Basin & Dagget SCD's

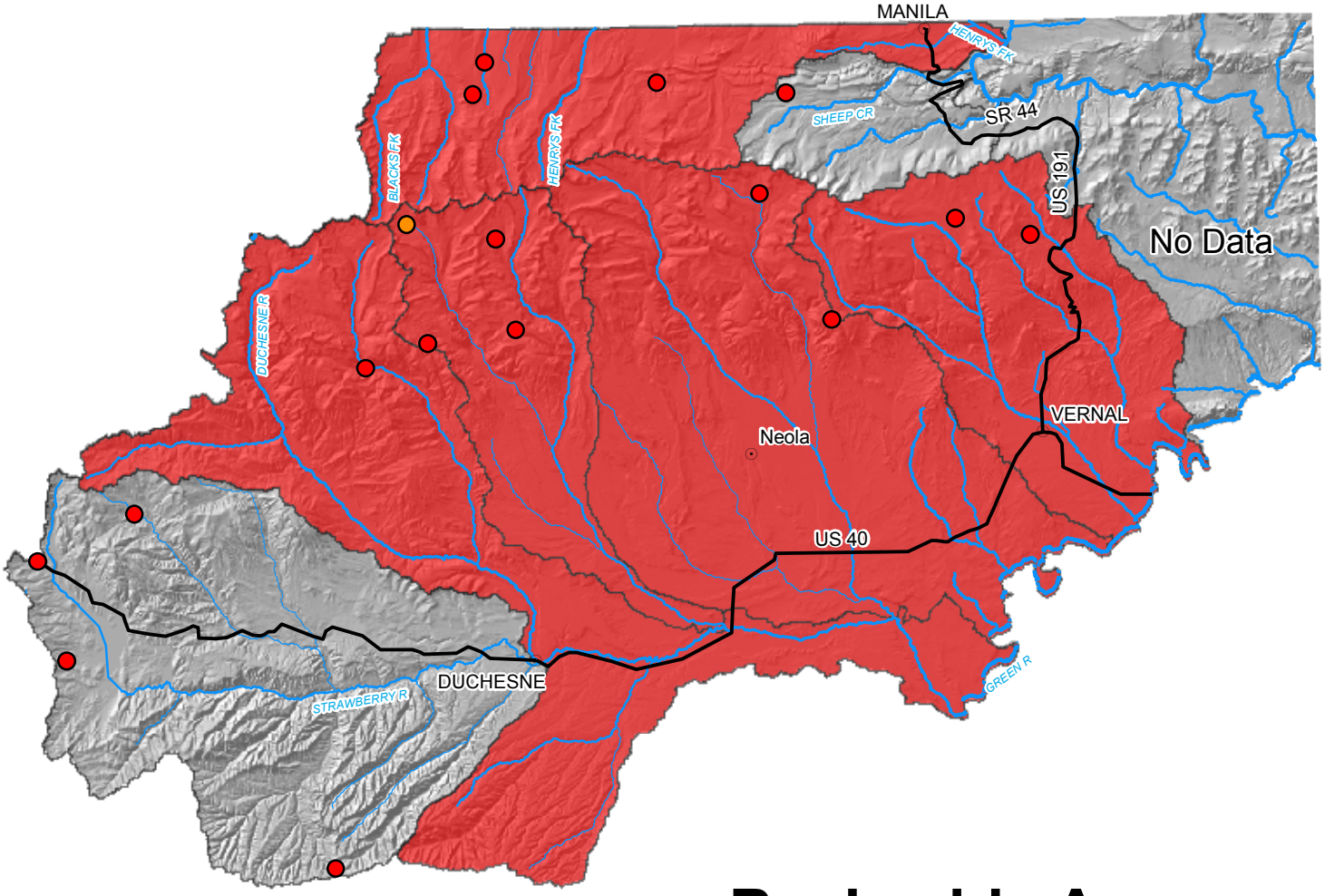
Watershed % of Average

- 0
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%

Snotel % of Average

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

N



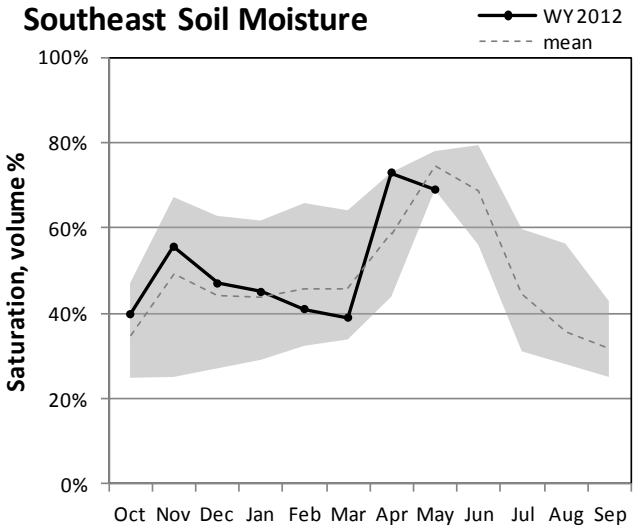
Basinwide Average
22 %

Provisional Data
Subject to Revision

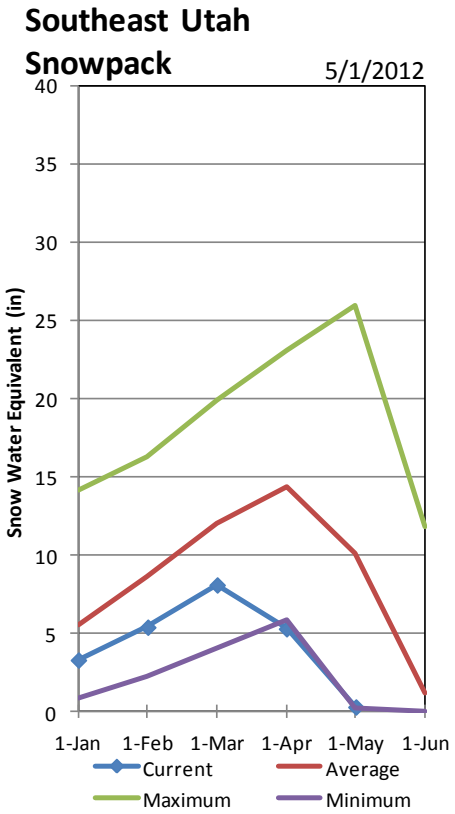
0 5 10 20 30 40 50 Miles

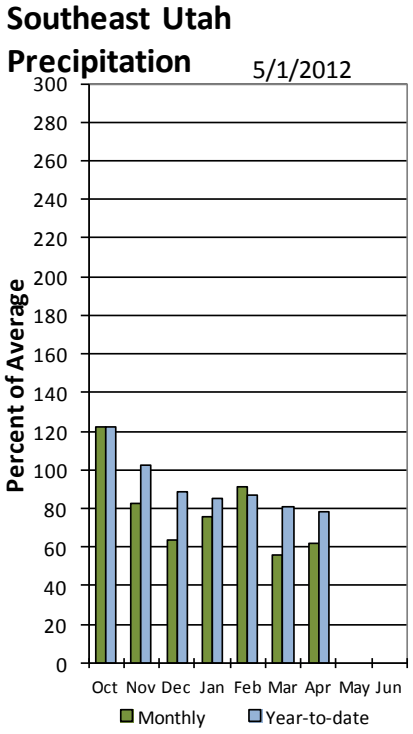
Southeast - Carbon, Emery, Wayne, Grand and San Juan Counties
May 1, 2012

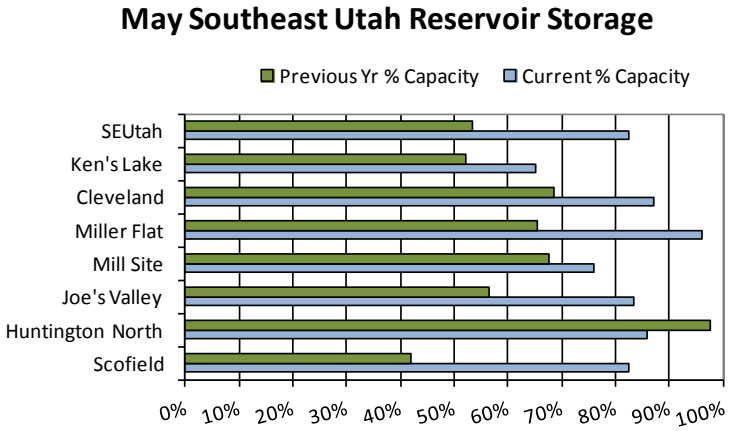
Snowpacks in this region are much below normal at 7% of average, about 5% of last year. Percent of average snowpack for individual sites range from 0% at most sites to 43% at Huntington-Horseshoe. Precipitation during April was much below average at 63%, bringing the seasonal accumulation (Oct-Apr) to 79% of normal. Soil moisture estimates in runoff producing areas are at 69% of saturation in the upper 2 feet of soil, compared to 77% last year at this time. Forecast streamflows (May-July) range from 11% to 39% of average. Reservoir storage is at 83% of capacity, 30% higher than last year at this time. Surface Water Supply Indices for the area are: Price 33%, Joe's Valley 32%, Ferron Creek 12%, and Moab 15%. General runoff and water supply conditions are below average in the Price and Joe's Valley area, and much below average in the Ferron Creek and Moab areas.



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





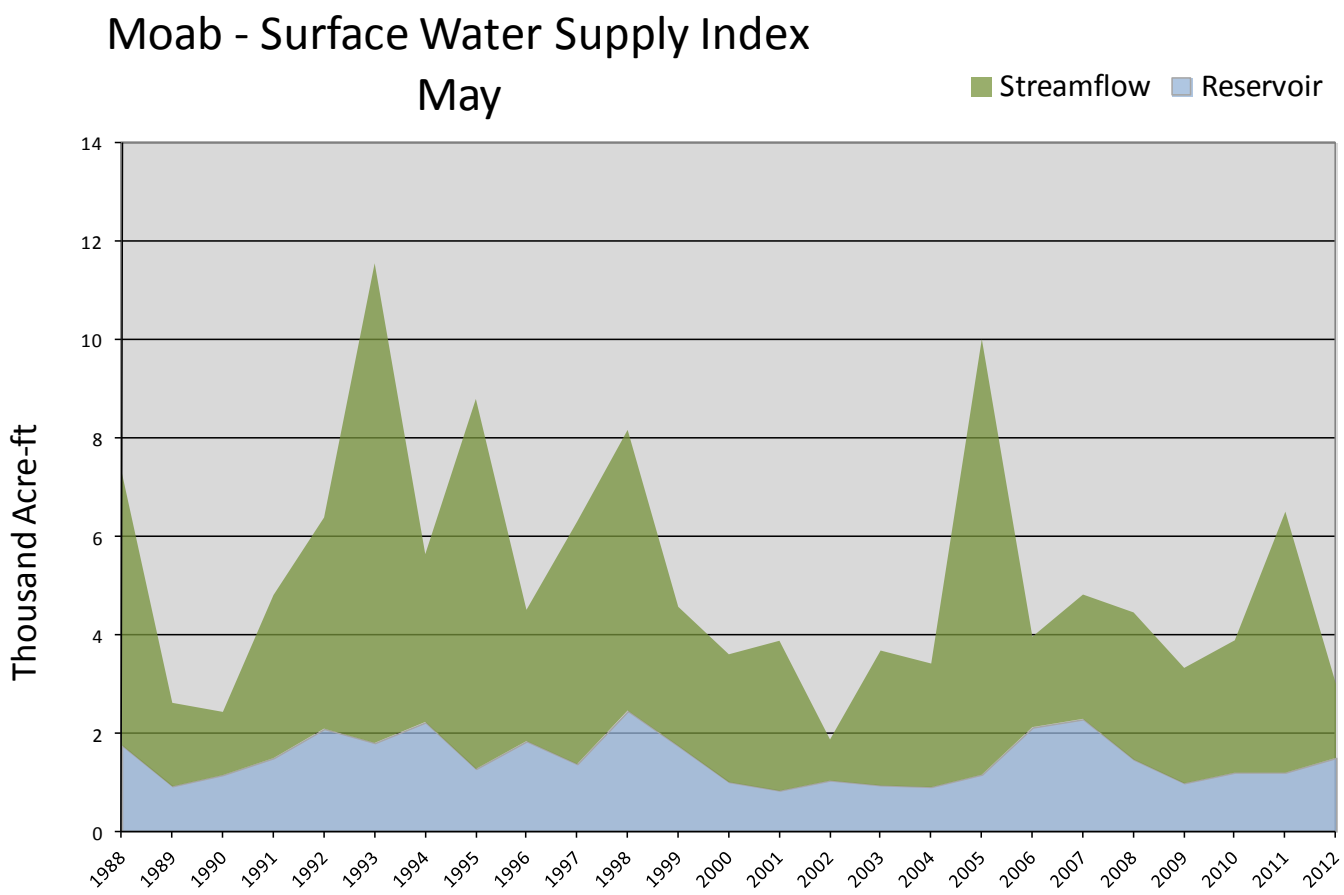


May 1, 2012

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	**1.5**	**1.5**	**3.0**	**-2.88**	**15**	**90, 89, 09, 04**

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

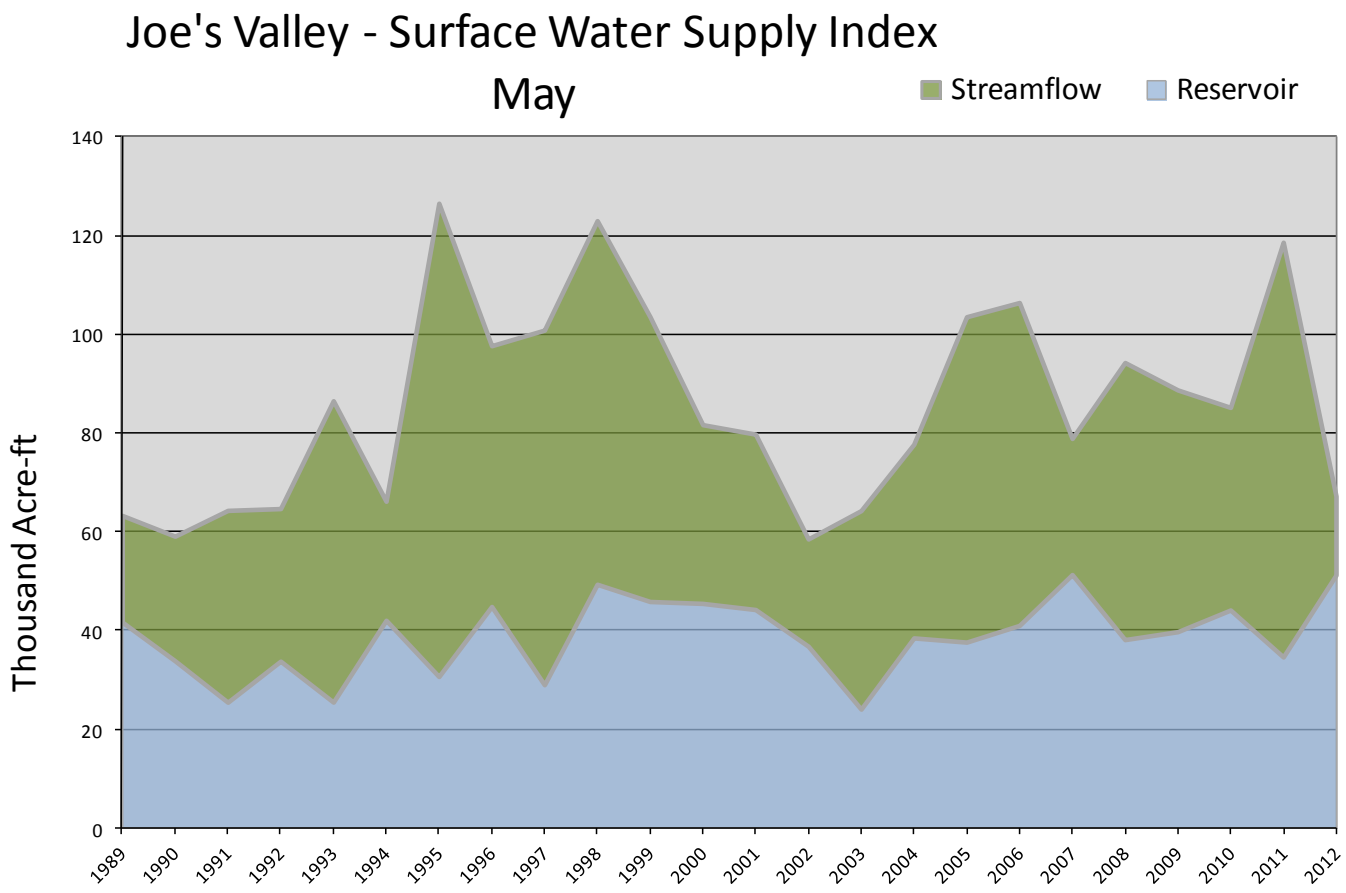


May 1, 2012

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	**51.4**	**16.0**	**67.4**	**-1.50**	**32**	**92, 94, 04, 07**

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

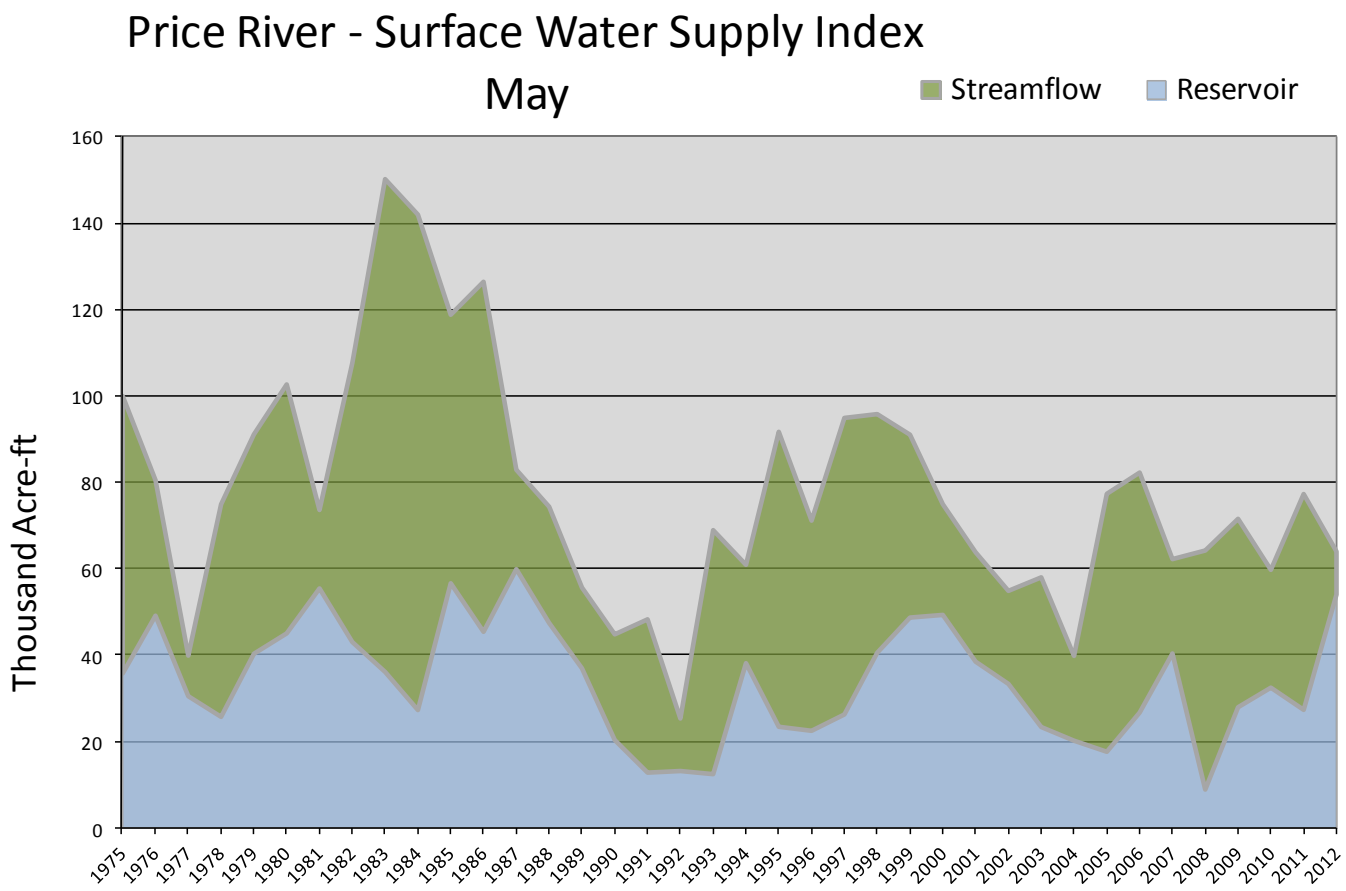


May 1, 2012

Surface Water Supply Index

Basin or Region	April EOM* Scofield Reservoir	May-July Forecast Scofield	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Price River	**54.2**	**10.0**	**64.2**	**-1.39**	**33**	**07, 01, 08, 93**

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

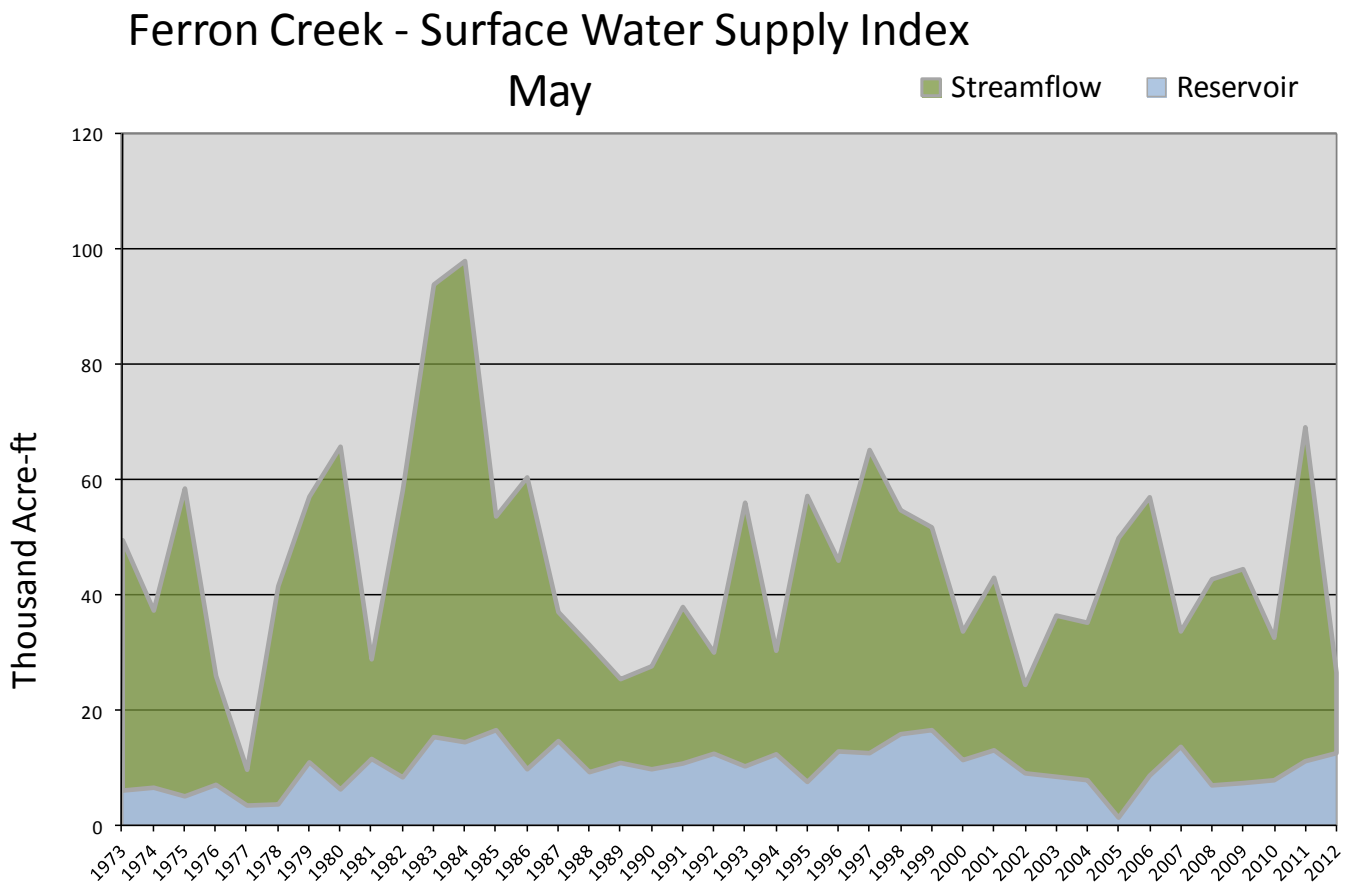


May 1, 2012

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	**12.7**	**14.0**	**26.7**	**-3.15**	**12**	**89, 76, 90, 81**

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



CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - May 1, 2012

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	9.4	11.4	13.0	41	14.7	17.5	32
	MAY-JUL	5.4	7.4	9.0	32	10.7	13.5	29
Price R nr Scofield Reservoir (2)	APR-JUL	11.5	13.5	15.1	34	16.9	19.8	45
	MAY-JUL	6.4	8.4	10.0	25	11.8	14.7	40
White R bl Tabbyune Ck	APR-JUL	1.4	2.0	2.5	15	3.2	4.3	17.3
	MAY-JUL	0.4	1.0	1.5	11	2.2	3.3	13.6
Green R at Green River, UT (2)	APR-JUL	970	1220	1400	44	1620	1960	3170
	MAY-JUL	565	810	1000	37	1210	1560	2740
Electric Lake Inflow (2)	MAY-JUL	2.0	3.1	4.0	29	5.0	6.6	14.0
Huntington Ck nr Huntington (2)	APR-JUL	12.8	16.3	18.9	39	22	27	49
	MAY-JUL	8.9	12.4	15.0	33	17.9	23	45
Joe's Valley Reservoir Inflow (2)	APR-JUL	12.6	17.2	21	36	25	32	58
	MAY-JUL	7.6	12.2	16.0	30	20	27	53
Ferron Ck (Upper Station) nr Ferron	APR-JUL	13.3	15.9	17.9	46	20	23	39
	MAY-JUL	9.4	12.0	14.0	39	16.1	19.5	36
Seven Mile Ck nr Fish Lake	APR-JUL	3.50	3.90	4.20	60	4.60	5.20	7.00
	MAY-JUL	1.25	1.68	2.00	33	2.40	2.90	6.10
Colorado R nr Cisco (2)	APR-JUL	1220	1480	1680	36	1900	2250	4650
	MAY-JUL	740	1000	1200	29	1420	1770	4080
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	1.38	1.70	1.96	39	2.20	2.80	5.00
	MAY-JUL	0.92	1.24	1.50	35	1.79	2.30	4.30
Muddy Ck nr Emery	APR-JUL	4.3	6.0	7.4	37	9.0	11.6	19.9
	MAY-JUL	2.9	4.6	6.0	33	7.6	10.2	18.0
Pine Ck nr Escalante	APR-JUL	1.03	1.25	1.44	60	1.65	2.00	2.40
	MAY-JUL	0.34	0.56	0.75	38	0.96	1.32	1.96
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.17	0.23	0.28	20	0.35	0.49	1.38
	MAY-JUL	0.04	0.10	0.15	15	0.22	0.36	1.01
San Juan R nr Bluff (2)	APR-JUL	340	400	450	37	505	595	1230
	MAY-JUL	138	200	250	26	305	395	975

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNTINGTON NORTH	4.2	3.6	4.1	4.1
JOE'S VALLEY	61.6	51.4	34.8	41.9
KEN'S LAKE	2.3	1.5	1.2	1.6
MILL SITE	16.7	12.3	11.3	9.9
SCOFIELD	65.8	54.2	26.7	37.4

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Watershed Snowpack Analysis - May 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
PRICE RIVER	3	0	0
SAN RAFAEL RIVER	3	1	2
MUDDY CREEK	1	0	0
FREMONT RIVER	3	0	0
LASAL MOUNTAINS	1	0	0
BLUE MOUNTAINS	1	0	0
WILLOW CREEK	1	0	0
SOUTHEASTERN UTAH	13	0	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 1971-2000 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.

Carbon, Emery, Wayne Grand & San Juan Basins

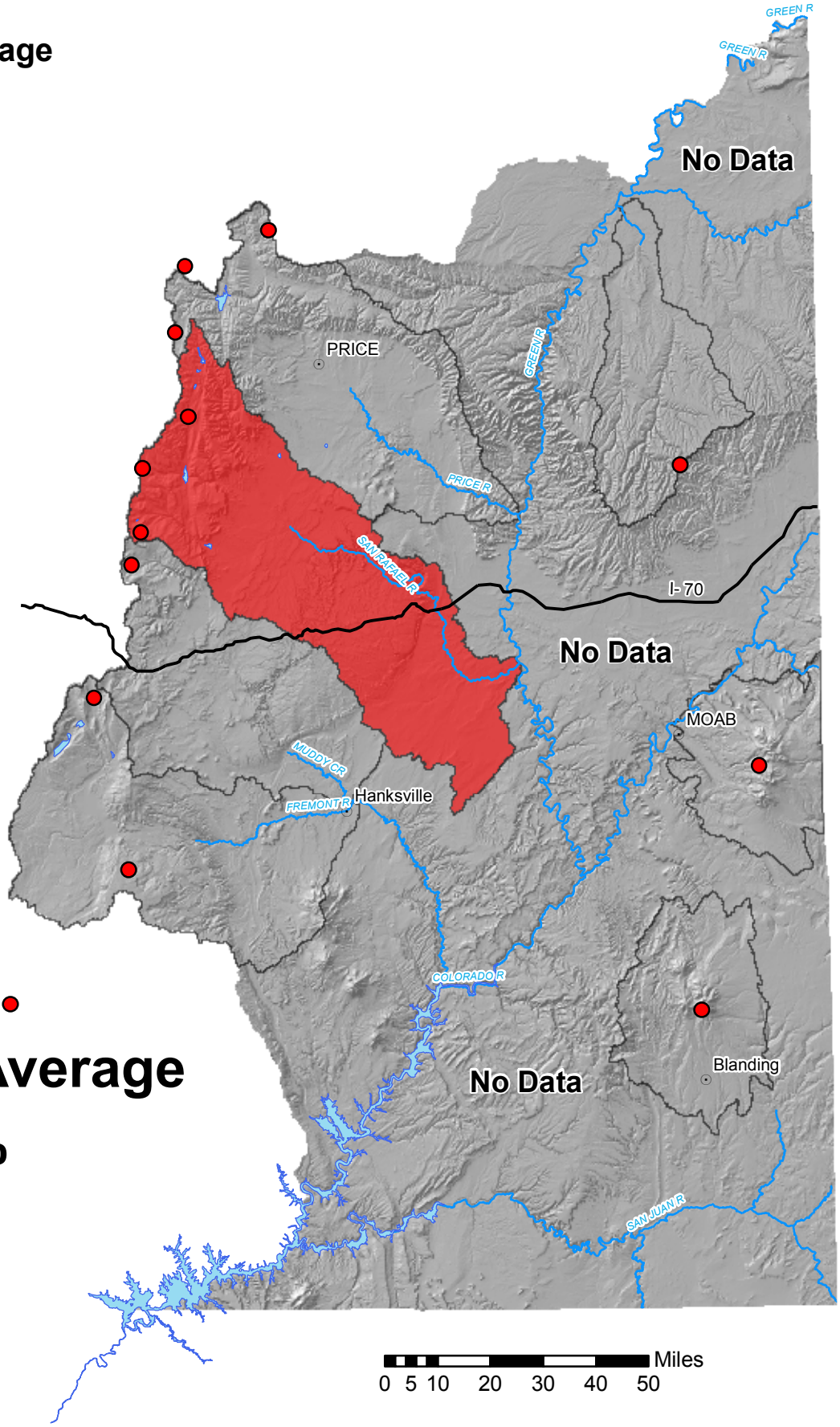
N

Watershed % of Average

- 0
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%

Snotel % of Average

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



Basinwide Average

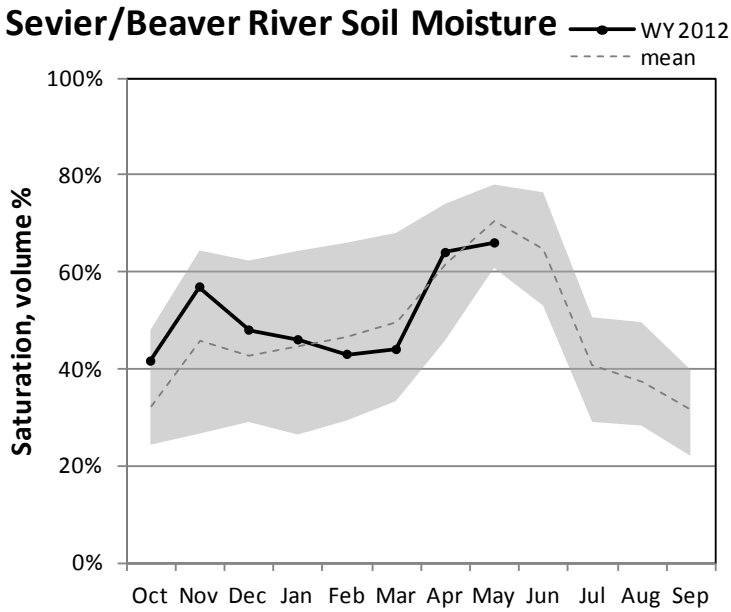
1 %

Provisional Data Subject to Revision

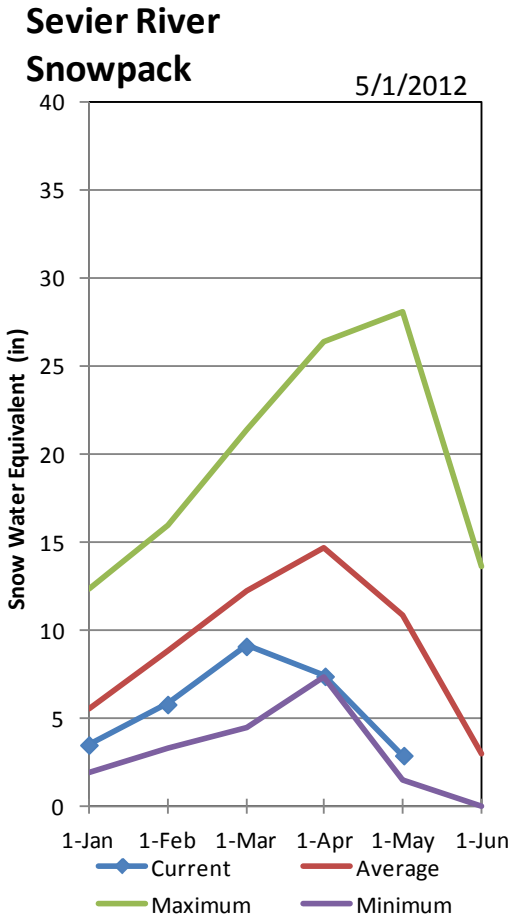
Miles
0 5 10 20 30 40 50

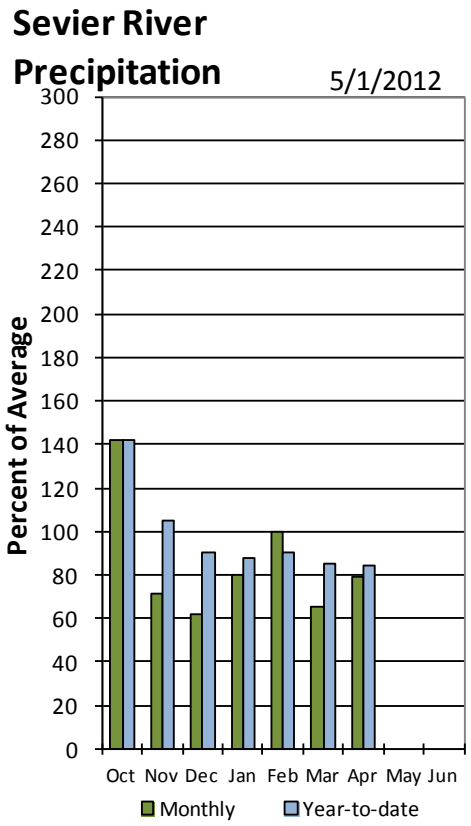
Sevier and Beaver River Basins
May 1, 2012

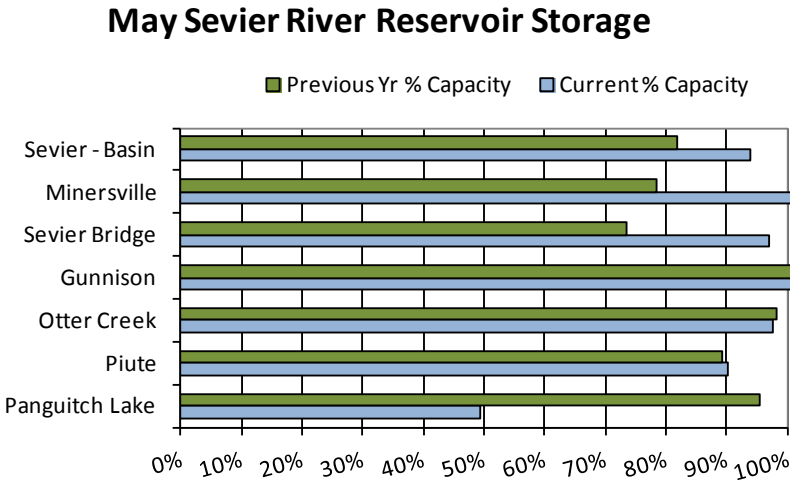
Snowpack on the Sevier River Basin is much below normal at 26% of average, 28% less than last month and 15% of last year. Individual sites range from 0% at Harris Flat to 72% of average at Farnsworth Lake. Precipitation during April was below average at 80% of normal, bringing the seasonal accumulation (Oct-April) to 84% of average. Soil moisture estimates in runoff producing areas are at 66% of saturation in the upper 2 feet of soil compared to 74% last year. Streamflow forecasts range from 15% to 52% of average. Reservoir storage is at 94% of capacity, 12% more than last year. Surface Water Supply Indices are: Upper Sevier 29%, Lower Sevier 67% and Beaver 40%. Water supply conditions are much below to above average on the Sevier, and near average on the Beaver River watersheds.



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

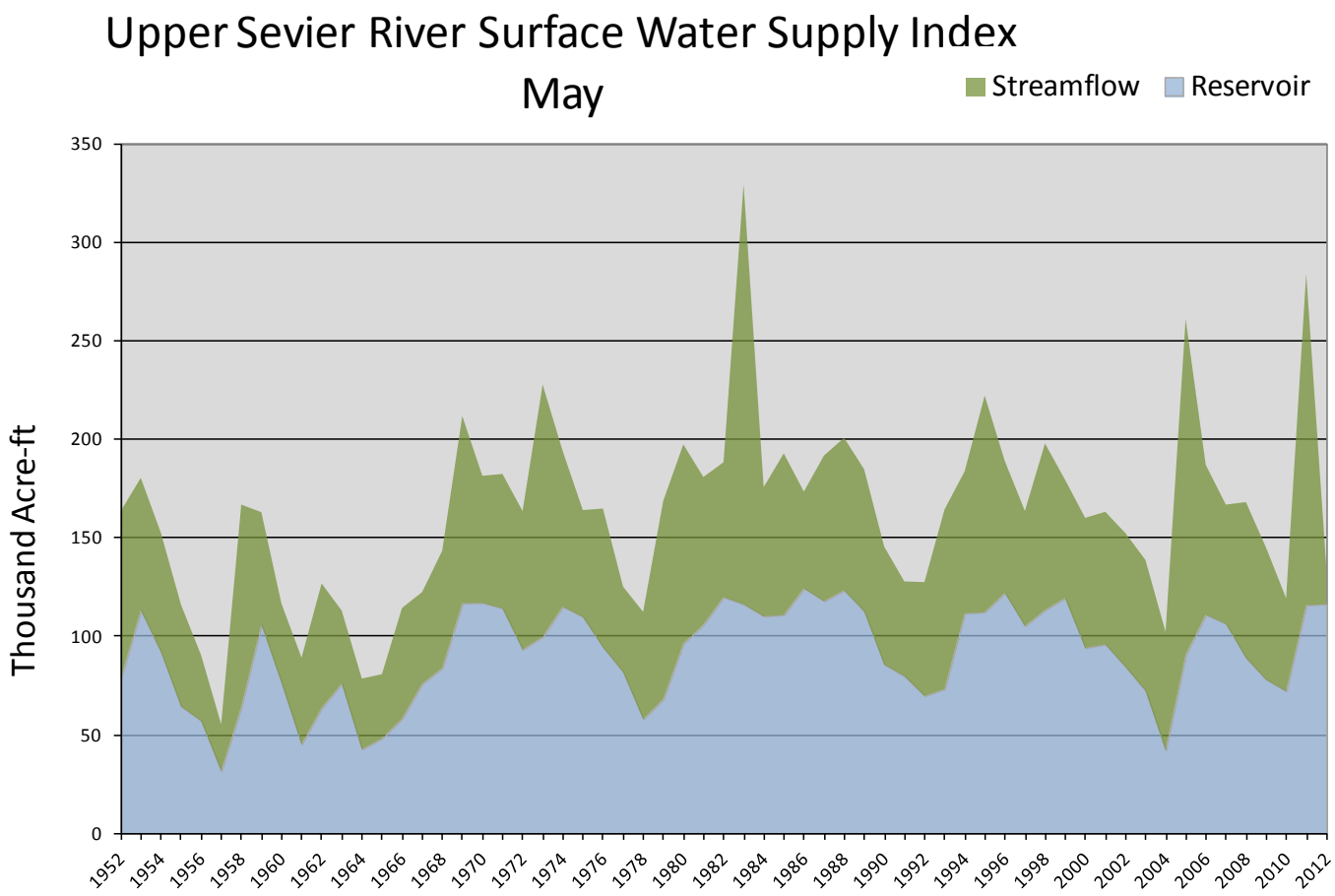






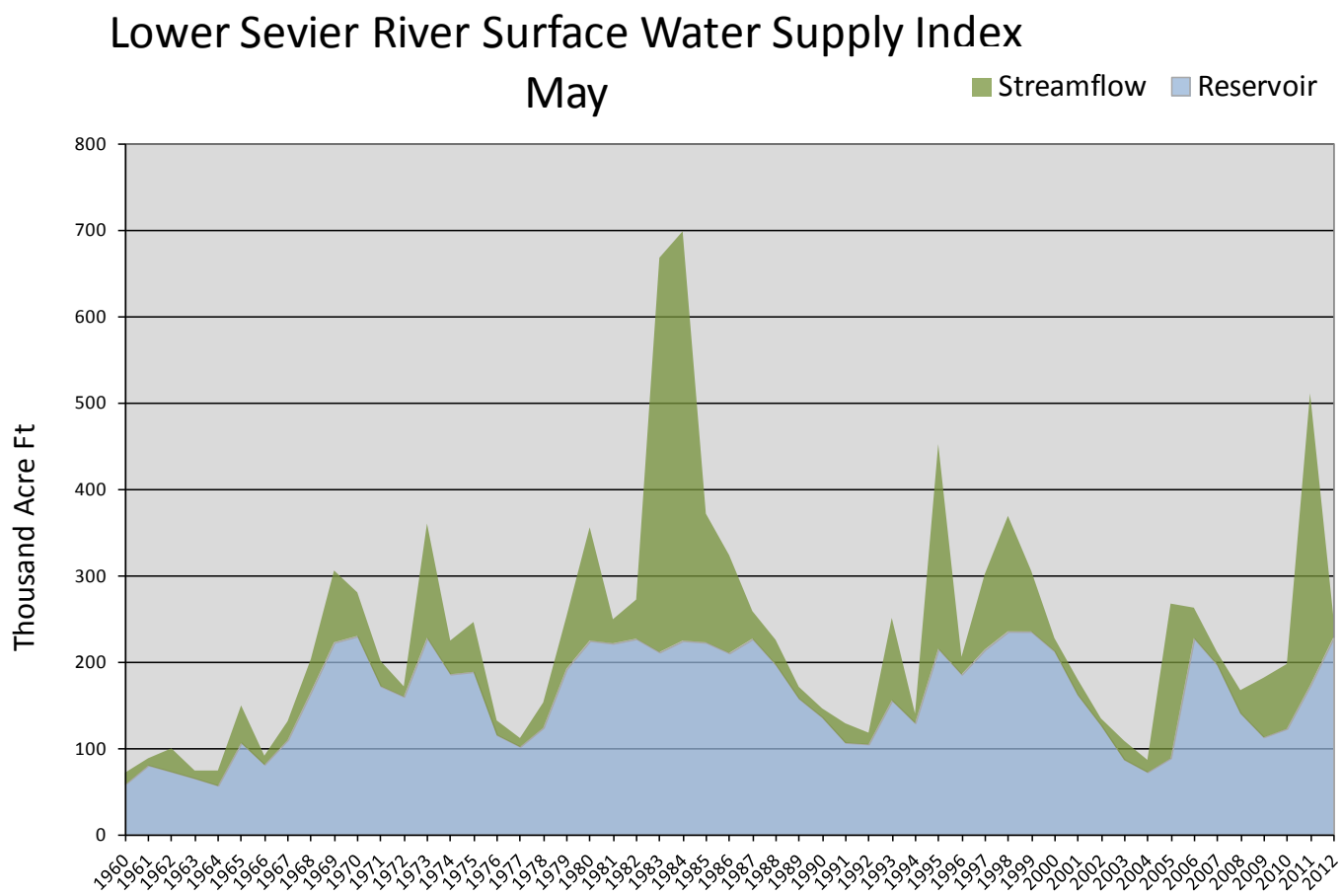
May 1, 2012	**Upper Sevier Surface Water Supply Index**					
Basin or Region	April EOM* Piute & Otter Creek Reservoir	May-July Forecast Inflow to Piute Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Upper Sevier	**116**	**19.0**	**135**	**-1.75**	**29**	**92, 91, 03, 68**

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



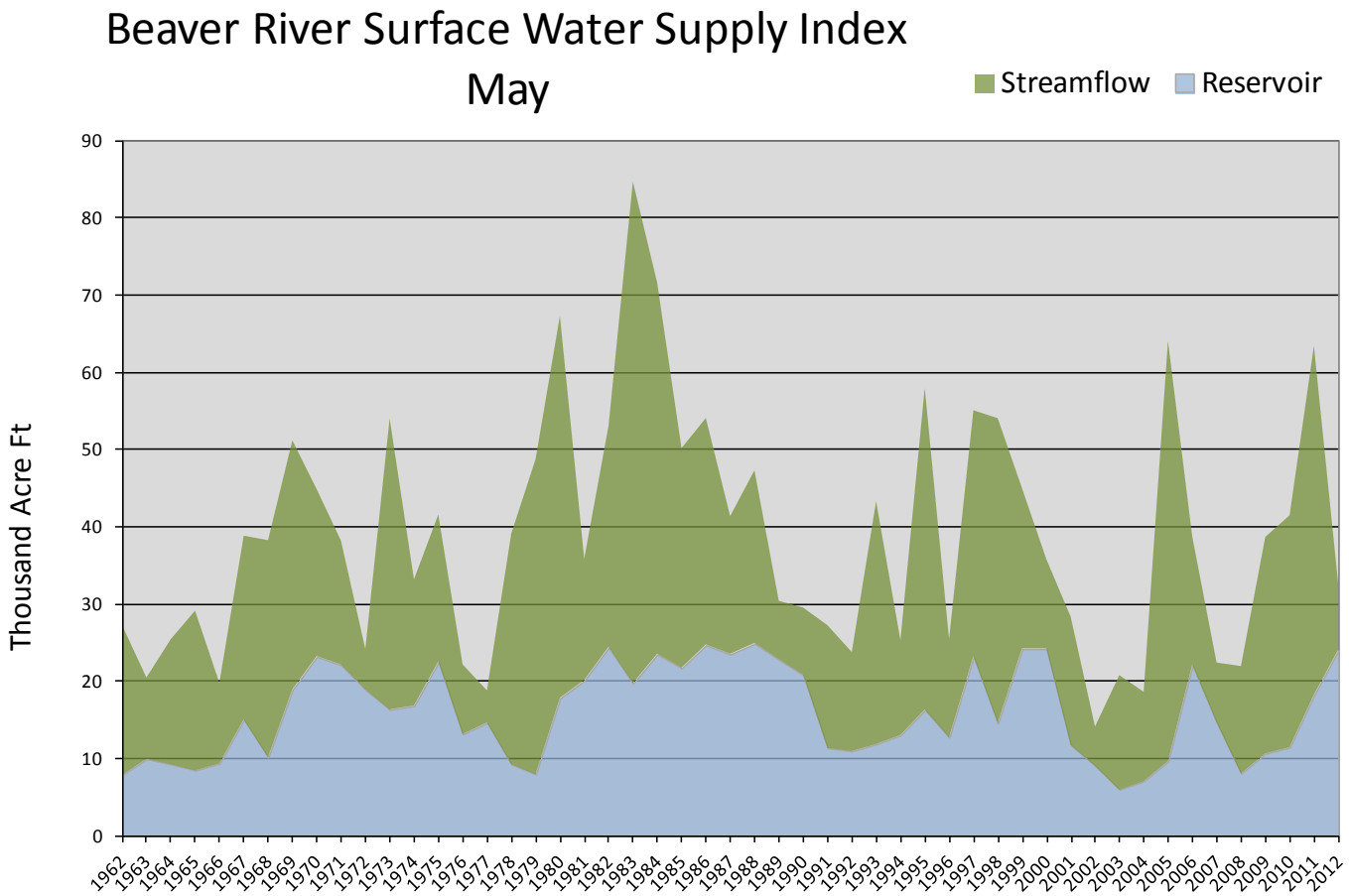
May 1, 2012	**Lower Sevier Surface Water Supply Index**					
Basin or Region	April EOM* Sevier Bridge Reservoir	May-July Forecast Inflow to Sevier Bridge Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Lower Sevier	**229**	**25.0**	**254**	**1.39**	**67**	**93, 79, 87, 06**

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



May 1, 2012	**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	**24.1**	**8.5**	**32.6**	**-0.80**	**40**	**90,89,74,00**

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



SEVIER & BEAVER RIVER BASINS as of May 1, 2012

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - May 1, 2012

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	0.5	4.1	10.0	39	20	33	26
	MAY-JUL	0.2	2.6	8.4	35	17.0	22	24
Sevier R at Hatch	APR-JUL	9.0	17.7	24	44	30	38	55
	MAY-JUL	3.8	10.5	15.0	31	19.5	26	48
Sevier R nr Kingston	APR-JUL	0.7	4.6	13.2	40	22	35	33
	MAY-JUL	0.3	2.3	9.0	35	17.2	29	26
EF Sevier R nr Kingston	APR-JUL	3.0	13.7	21	60	28	39	35
	MAY-JUL	0.6	6.1	14.0	47	22	34	30
Sevier R bl Piute Dam	APR-JUL	2.0	10.3	29	44	48	75	66
	MAY-JUL	1.6	9.6	19.0	35	32	56	55
Clear Ck ab Diversions nr Sevier	APR-JUL	0.4	1.8	4.0	18	7.0	11.4	22
	MAY-JUL	5.7	7.7	9.3	52	11.0	13.8	17.9
Salina Ck nr Emery	APR-JUL	0.18	2.20	3.80	42	5.40	7.80	9.00
	MAY-JUL	0.24	1.03	2.50	31	4.00	6.10	8.00
Salina Ck at Salina	APR-JUL	1.8	4.7	7.5	38	10.9	17.0	19.7
	MAY-JUL	1.1	3.2	5.2	30	7.7	12.2	17.4
Manti Ck Blw Dugway Ck Nr Manti	APR-JUL	4.9	6.6	7.8	43	9.2	11.4	18.3
	MAY-JUL	3.7	5.2	6.3	37	7.5	9.5	17.1
Sevier R nr Gunnison	APR-JUL	2.0	24	44	42	64	95	106
	MAY-JUL	2.6	9.5	25	29	41	63	86
Chicken Ck nr Levan	APR-JUL	0.61	0.83	1.00	22	1.20	1.53	4.50
	MAY-JUL	0.02	0.23	0.50	15	0.87	1.61	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
Beaver R nr Beaver	APR-JUL	0.5	6.4	11.2	42	16.0	23	27
	MAY-JUL	0.7	3.1	8.5	35	13.9	22	24
Minersville Res Inflow	APR-JUL	2.1	4.2	6.1	37	8.6	13.3	16.6
	MAY-JUL	0.7	2.6	4.5	31	7.0	11.7	14.5

SEVIER & BEAVER RIVER BASINS
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GUNNISON	20.3	20.5	20.5	15.7
MINERSVILLE (RkyFd)	23.3	24.1	18.3	18.0
OTTER CREEK	52.5	51.3	51.6	46.0
PIUTE	71.8	64.8	64.1	55.5
SEVIER BRIDGE	236.0	228.9	173.6	183.6
PANGUITCH LAKE	22.3	11.0	21.3	164.6

SEVIER & BEAVER RIVER BASINS
Watershed Snowpack Analysis - May 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER SEVIER RIVER	8	13	20
EAST FORK SEVIER RIVER	3	9	0
SOUTH FORK SEVIER RIVER	5	16	30
LOWER SEVIER RIVER	6	16	22
BEAVER RIVER	2	27	47
SEVIER & BEAVER RIVER BAS	16	16	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 1971-2000 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.

Sevier & Beaver Basins

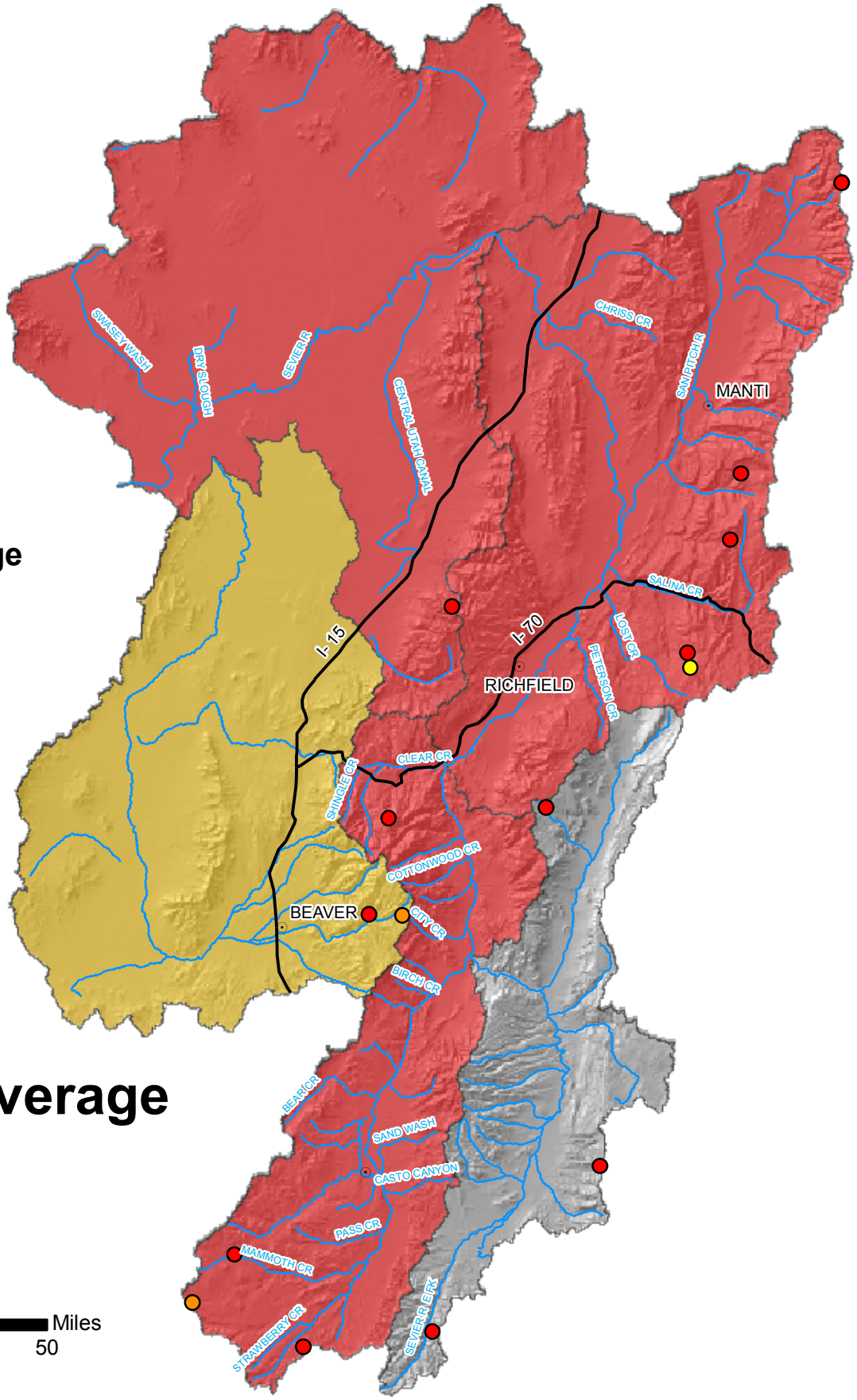
N

Snotel % of Average

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

Watershed % of Average

- 0
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%



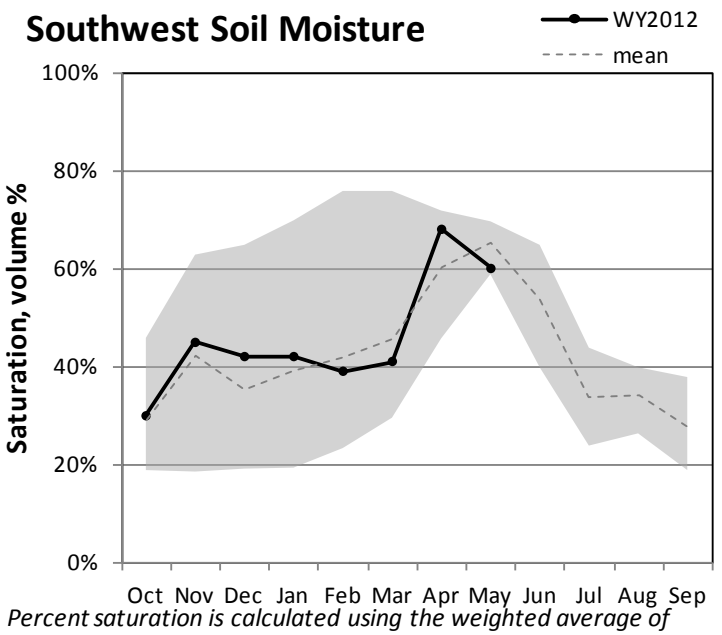
Basinwide Average
26 %

Miles
0 5 10 20 30 40 50

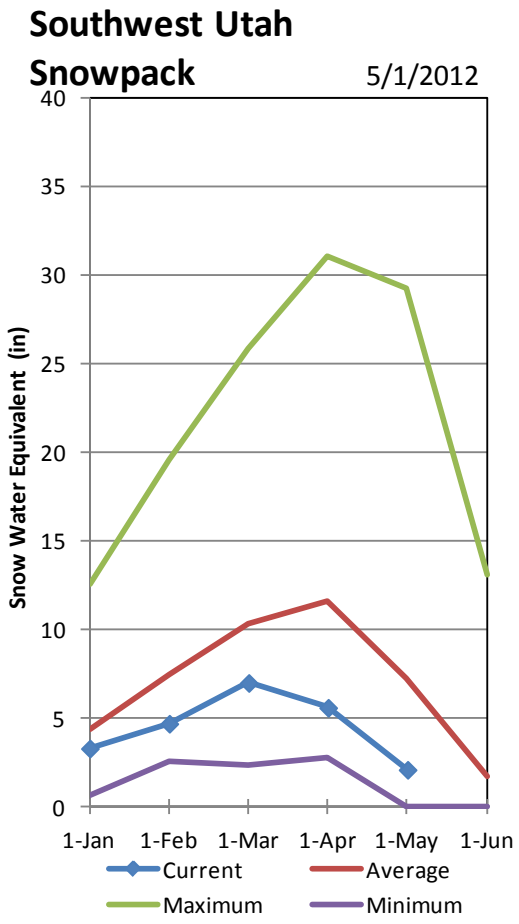
Provisional Data
Subject to Revision

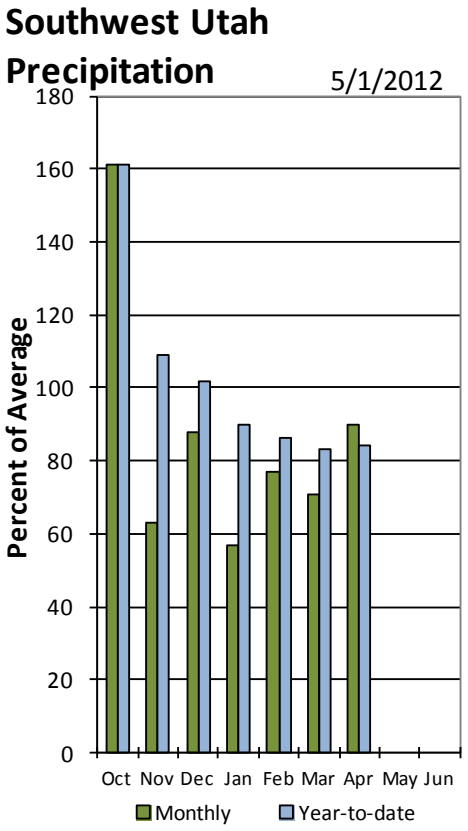
E. Garfield, Kane, Washington, & Iron Co.
May 1, 2012

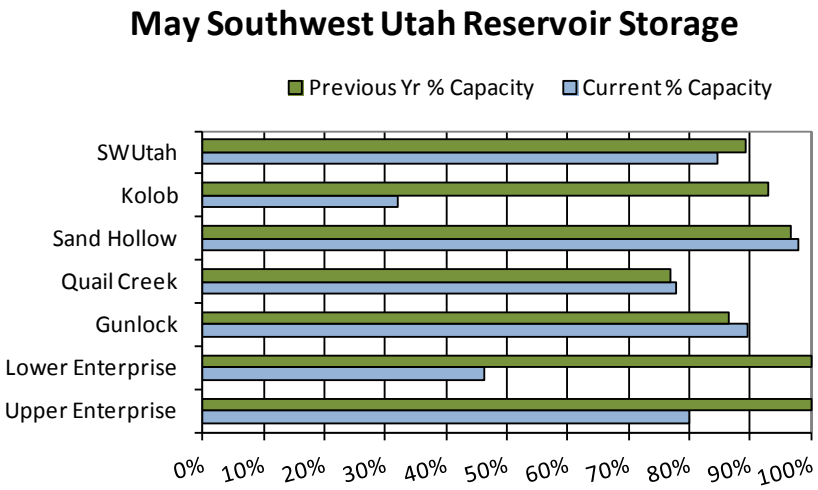
Snowpacks in this region are much below normal at 25% of average, which is 14% of last year. Individual sites range from bare to 56% of average at Midway Valley Snotel. April precipitation was near average at 92%, bringing the seasonal accumulation (Oct-April) to 84% of average. The average soil moisture estimate in runoff producing areas is at 60% of saturation within the upper 2 feet of soil, compared to 69% last year. Forecast streamflows (May–July) range from 23% to 33% of average. Reservoir storage is at 85% of capacity, 4% lower than last year at this time. The Surface Water Supply Index is at 22%, indicating much below average water supply conditions.



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

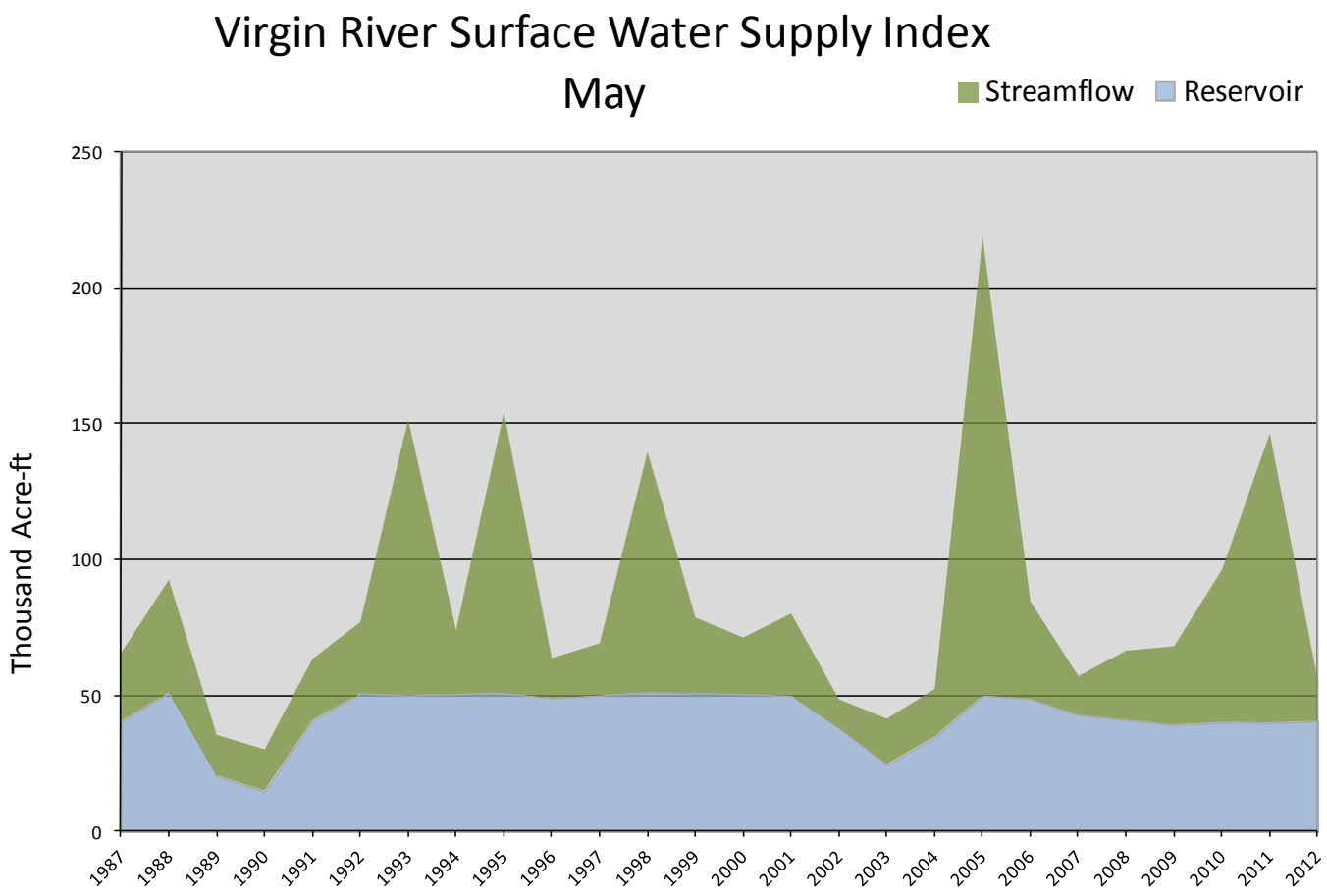






May 1, 2012	**Surface Water Supply Index**					
Basin or Region	April EOM* Quail Creek and Gunlock Reservoirs	May-July forecast Virgin and Santa Clara Rivers	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Virgin River	**40.4**	**15**	**56**	**-2.31**	**22**	**02,04,07,91**

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



E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - May 1, 2012

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	1760	1980	2360	30	2790	3260	7930
	MAY-JUL	1000	1220	1600	23	2030	2500	6940
Virgin R at Virgin	APR-JUL	21	24	26	41	28	31	64
	MAY-JUL	9.6	12.1	14.0	33	16.0	19.2	42
Virgin R nr Hurricane	APR-JUL	14.7	18.3	21	30	24	29	69
	MAY-JUL	7.6	11.2	14.0	30	17.2	22	46
Santa Clara R nr Pine Valley	APR-JUL	1.52	1.80	2.00	36	2.30	2.70	5.50
	MAY-JUL	0.60	0.88	1.10	24	1.35	1.75	4.50
Coal Ck nr Cedar City	APR-JUL	6.7	8.5	9.8	51	11.1	12.9	19.3
	MAY-JUL	0.8	3.3	5.0	31	6.7	9.2	15.9

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Reservoir Storage (1000 AF) - End of April

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GUNLOCK	10.4	9.3	9.0	4.3
LAKE POWELL	24322.0	15507.0	12926.0	---
QUAIL CREEK	40.0	31.1	30.8	31.6
UPPER ENTERPRISE	10.0	8.0	10.0	---
LOWER ENTERPRISE	2.6	1.3	2.6	115.5

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Watershed Snowpack Analysis - May 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
VIRGIN RIVER	5	15	35
PAROWAN	2	21	43
ENTERPRISE TO NEW HARMONY	2	200	11
COAL CREEK	2	19	44
ESCALANTE RIVER	2	0	0
SOUTHWESTERN UTAH	9	12	27

* 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 1971-2000 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.

E. Garfield, Kane, Washington & Iron County

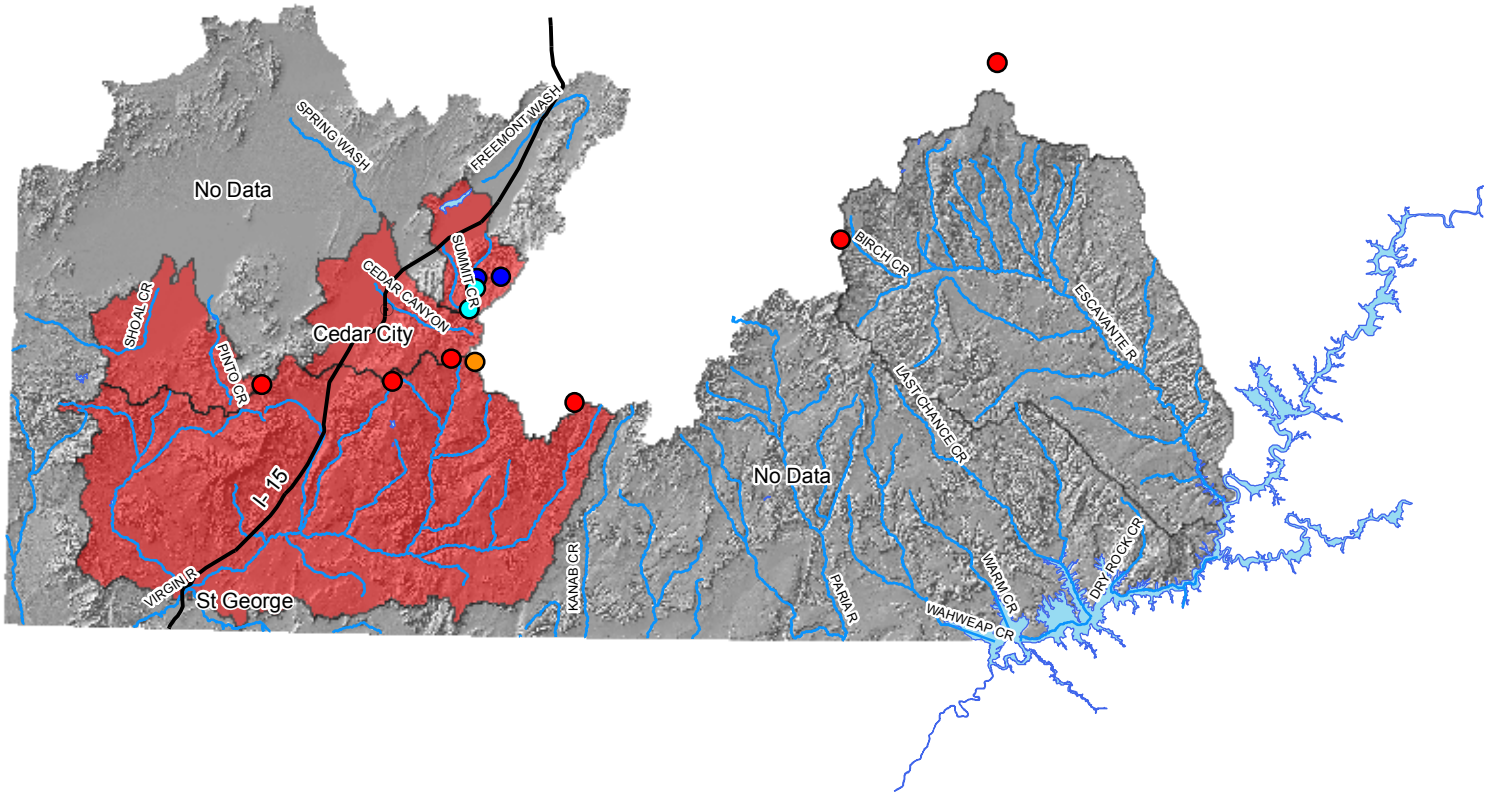
Watershed % of Average

- 0
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%

Snotel % of Average

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

N



Basin Average
24 %

Provisional Data
Subject to Revision

Miles
0 5 10 20 30 40 50

May 1, 2012

Surface Water Supply Index

Basin or Region	April EOM* Reservoirs	May-July Stream Forecast	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Bear River	**1068**	**35**	**1103**	**1.08**	**63**	**58,19,11,70**
Ogden River	**117**	**25**	**142**	**-1.39**	**33**	**02,94,96,89**
Weber River	**406**	**70**	**476**	**-0.76**	**41**	**79,76,81,70**
Provo River	**429**	**17**	**446**	**-0.25**	**47**	**81,87,91,05**
West Uintah Basin	**165**	**91**	**256**	**-2.23**	**23**	**07, 79, 04, 90**
East Uintah Basin	**59.0**	**28.0**	**87**	**-2.21**	**24**	**03, 81, 92, 87**
Price River	**54.2**	**10.0**	**64.2**	**-1.39**	**33**	**07, 01, 08, 93**
Joe's Valley	**51.4**	**16.0**	**67.4**	**-1.50**	**32**	**92, 94, 04, 07**
Ferron Creek	**12.7**	**14.0**	**26.7**	**-3.15**	**12**	**89, 76, 90, 81**
Moab	**1.5**	**1.5**	**3.0**	**-2.88**	**15**	**90, 89, 09, 04**
Upper Sevier River	**116**	**19**	**135**	**-1.75**	**29**	**92, 91, 03, 68**
Lower Sevier River	**229**	**25**	**254**	**1.39**	**67**	**93, 79, 87, 06**
Beaver River	**24.1**	**8.5**	**32.6**	**-0.80**	**40**	**90, 89, 74, 00**
Virgin River	**40.4**	**15**	**56**	**-2.31**	**22**	**02,04,07,91**

**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.

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

David White
Chief
Natural Resources Conservation Service
U.S. Department of Agriculture

Released by

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

Prepared by
Snow Survey Staff
Randall Julander, Supervisor
Troy Brosten, Assistant Supervisor
Beau Uriona, Hydrologist
Amy Burke, Hydrologist
Jordan Clayton, Hydrologist
Bob Nault, Electronics Technician

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

tural Resources Conservation Service
Salt Lake City, UT