NRCS
Natural Resources Conservation Service

Utah Water Supply Outlook Report

April, 2012

A view of the Henry Mountains from Boulder Mountain; March 2012.

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

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How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snowcourses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. 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.

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STATE OF UTAH GENERAL OUTLOOK
April 1, 2012

SUMMARY

The pendulum swings the other way. Pendulum swings is such a gentle euphemism – others such as pinballing, demolition derby, hockey pucking and the like are more descriptive. Last year at this time water managers were sitting on pins and needles waiting for the inevitable torrent of flows from massive snowpacks. The scene is repeating itself but to the extreme on the other side – pins and needles again but no sense waiting on water that isn't coming. Already meager snowpacks are falling faster than a three year old in high heels. Steady high winds and record temperatures in late March both melted and sublimated snowpacks taking a big chunk of what little there was leaving even less for springtime runoff. March was simply put, not kind to us – instead of accumulating more snow as is typical for March, we got the proverbial lump of coal with melting snowpacks worsening an already poor runoff situation. It wasn't the worst March ever – but it wasn't far from it. Snowpacks across the state are pathetically low and in full retreat ranging from 37% in the southeast to 59% on the Bear. March precipitation was much below normal statewide ranging from 56% to 71% of average. This brings the year to date precipitation to below normal statewide at 80%. Current soil moisture saturation levels in runoff producing areas are: Bear – 73%, Weber – 68%, Provo – 61%, Uintah Basin – 65%, SE Utah – 73%, Sevier – 64% and SW Utah – 68% of saturation. These are similar to last year prior to any snowmelt, the current figures are due to early snowmelt and infiltration. Low snowpacks and the snowpack loss to bring soil moisture to near saturation will lead to lower runoff efficiency and less streamflow this season. Reservoir storage is the only ray of sunshine in the water supply picture and is currently at 88% of capacity statewide which is17% more than last year at this time. General runoff conditions are much below average across the state. Streamflow forecasts range from 27% on the Strawberry nr Soldier Springs to 75% of average for the Whiterocks River. Surface Water Supply Indices range from 23% for Moab to 64% for the Bear. Water managers should prepare for early streamflow, shorter duration, longer irrigation season, low volumes and low peak flows.

SNOWPACK

April first snowpacks as measured by the NRCS SNOTEL system are as follows: Bear - 59%, Weber - 52%, Provo - 51%, Uintahs - 52%, southeast Utah - 37%, Sevier - 50%, southwest Utah - 48% and the statewide figure is 52% of average. The southeast figure is a record low and the Sevier is close to a record low. Continued hot dry weather will accelerate the melt.

PRECIPITATION

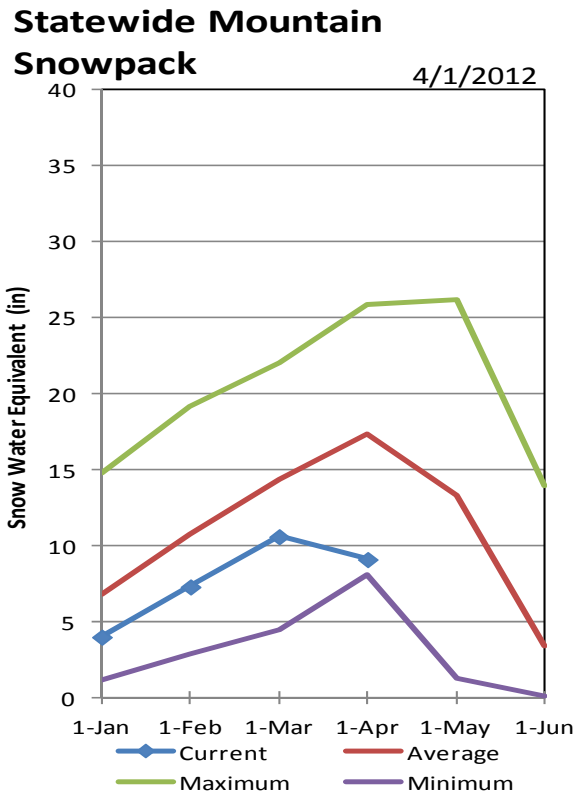
Mountain precipitation as measured by the NRCS SNOTEL system during March was: Bear – 58%, Weber – 58%, Provo – 64%, Uintahs – 56%, SE Utah – 56%, Sevier – 65%, SW Utah – 71% and the statewide figure is 61% of average. This brings the seasonal accumulation (Oct-Mar) to 80% of average statewide.

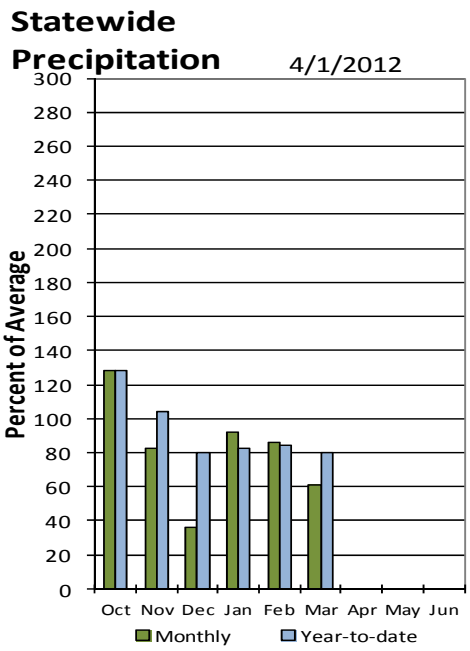
RESERVOIRS

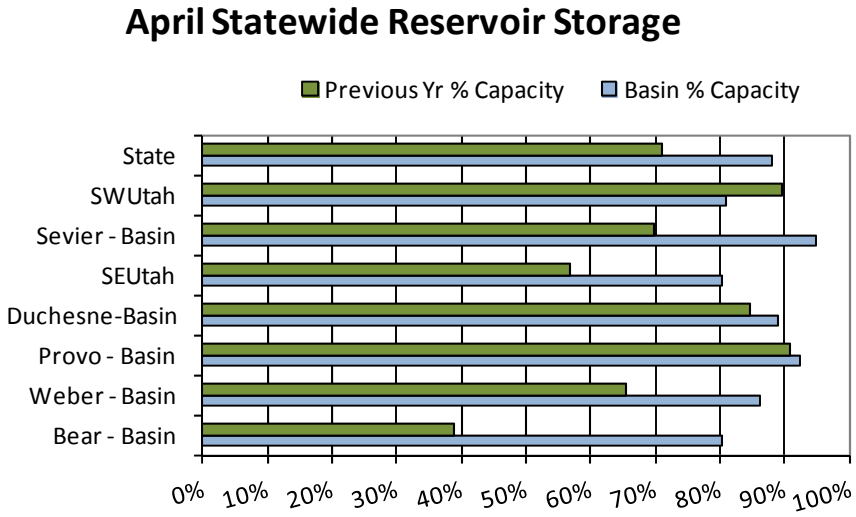
Storage in 41 of Utah's key irrigation reservoirs is at 88% of capacity, 17% more than last year. Reservoir storage by Basin: Bear – 80%, Weber – 86%, Provo – 92%, Uintah Basin – 89%, SE Utah – 90%, Sevier – 85%, SW Utah – 81% of capacity.

STREAMFLOW

Snowmelt streamflows are expected to be much below average across the state this year. Forecast streamflows range from 27% on the Strawberry to 75% on the Whiterocks River. Most flows are forecast to be in the 40% to 60% range.

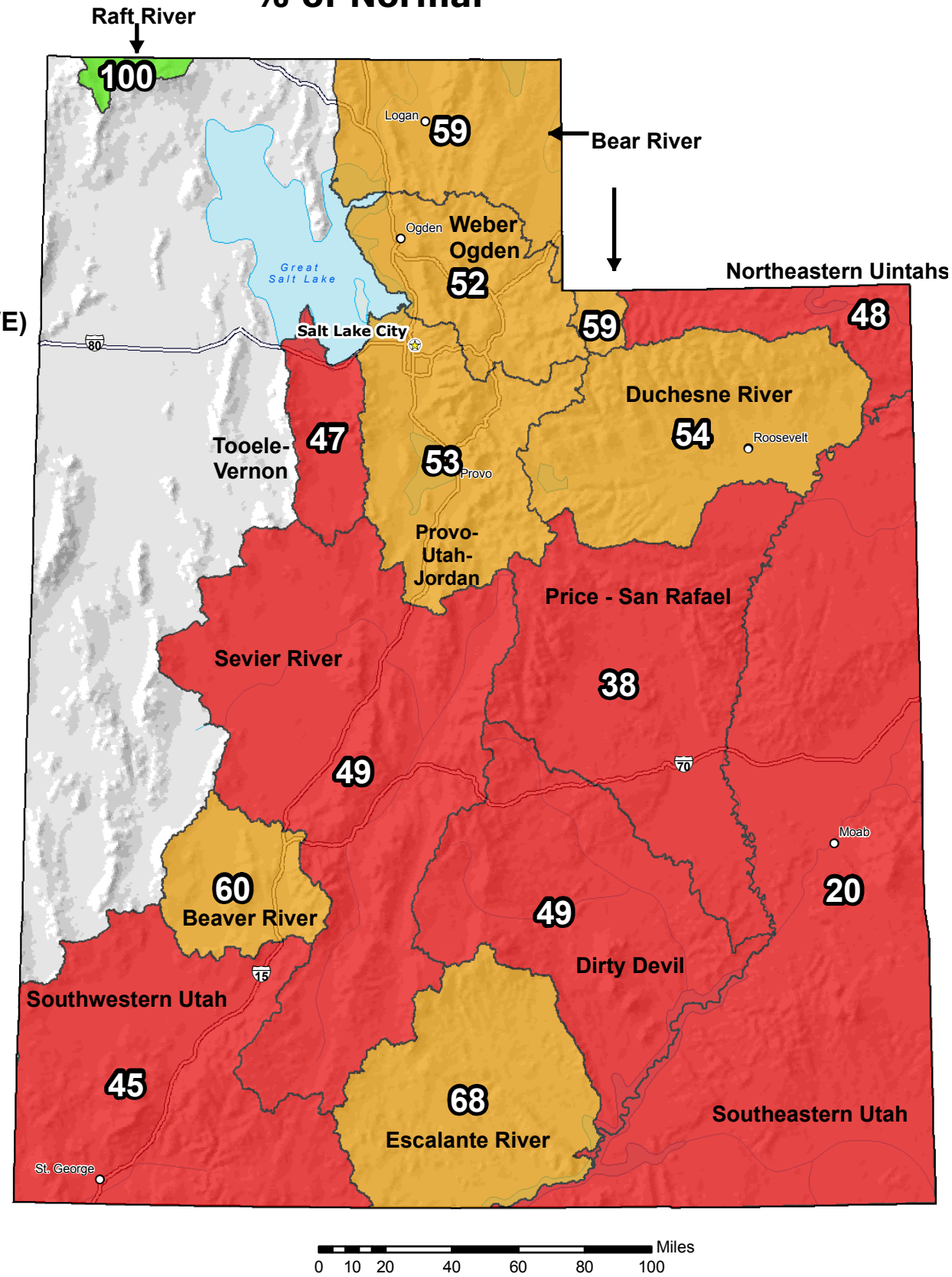






Utah
SNOTEL Current Snow Water Equivalent (SWE)
% of Normal

Apr 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*

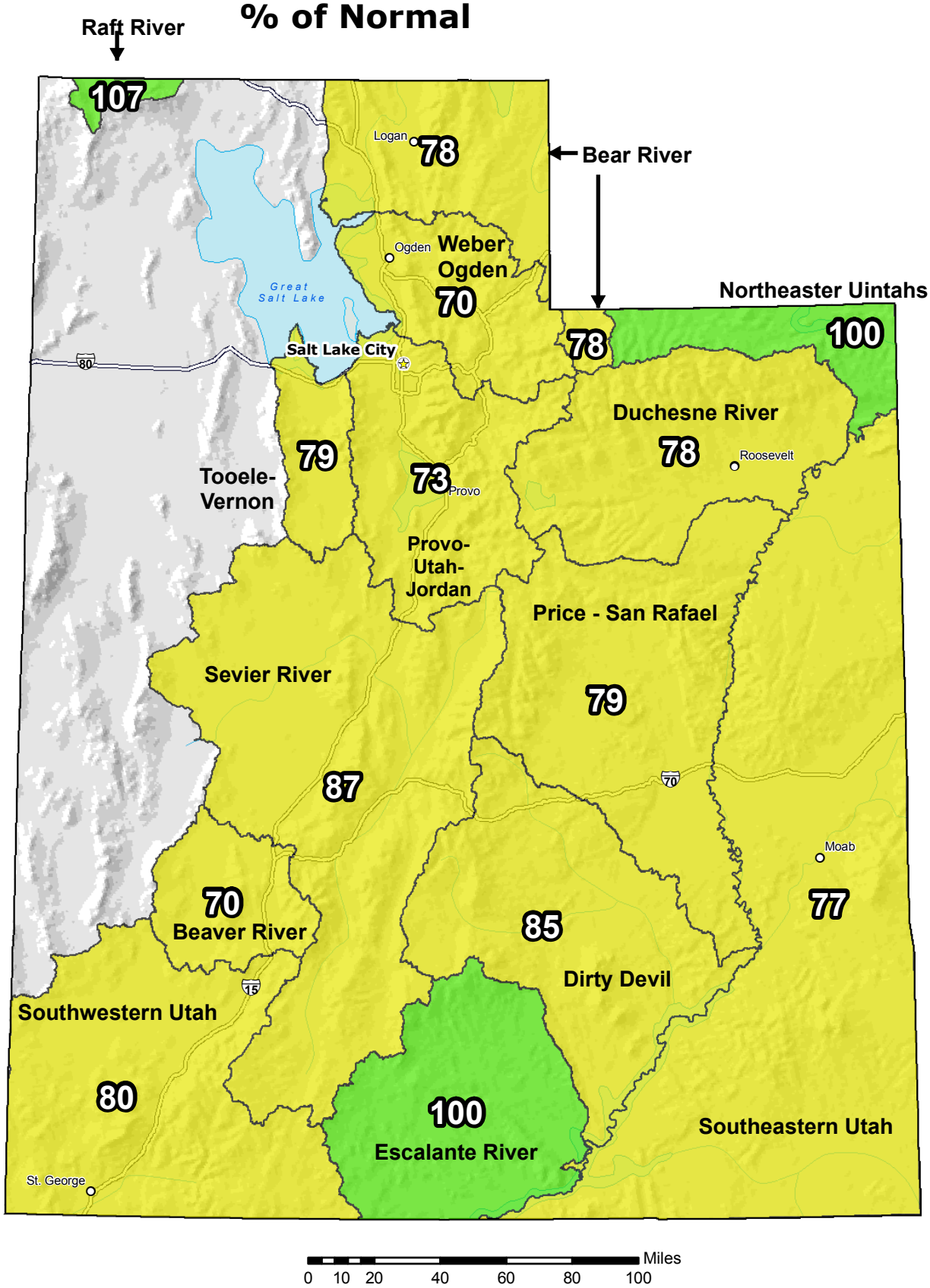
Provisional Data Subject to Revision

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

Apr 01, 2012



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

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

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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/
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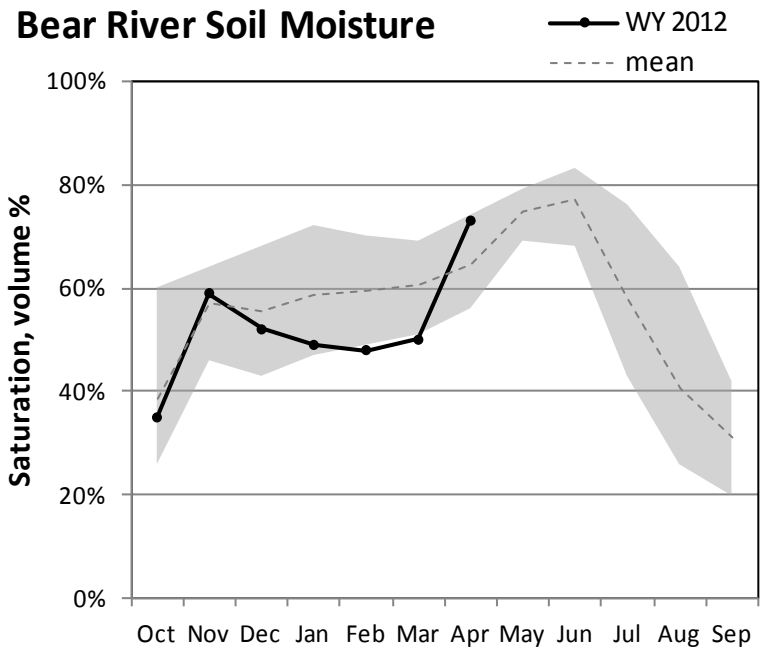
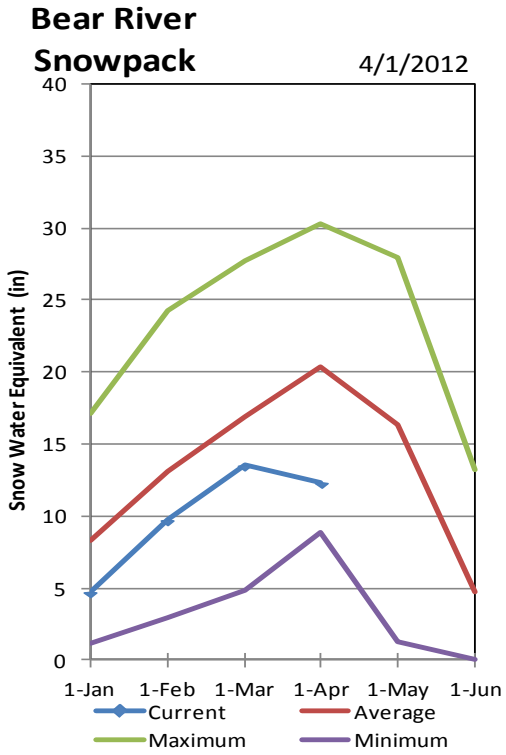
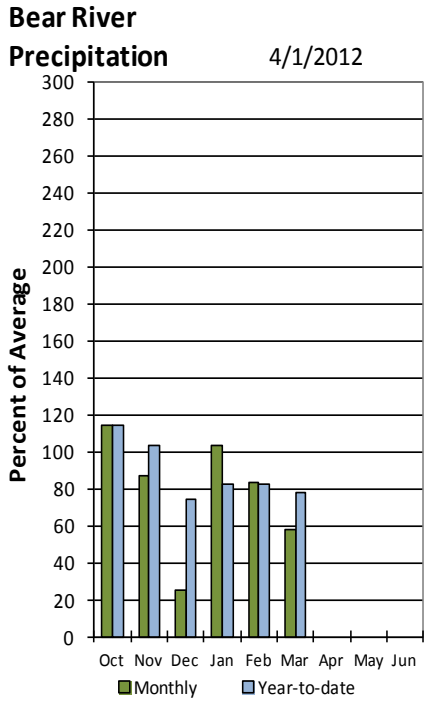
Bear River Basin
April 1, 2012

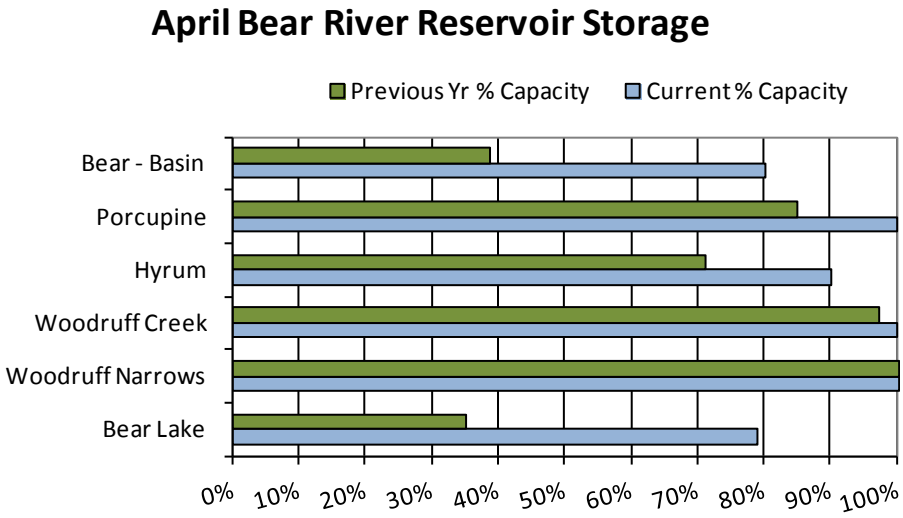
Snowpacks on the Bear River Basin are much below average at 61% of normal, about 43% of last year. Individual sites range from 8% of average at Little Bear SNOTEL to 100% at Howell Canyon. March precipitation was much below average at 58%, which brings the seasonal accumulation (Oct-Mar) to 78% of average. Soil moisture levels in runoff producing areas are at 73% of saturation in the upper 2 feet of soil compared to 71% last year. Forecast streamflows (April-July) are much below average (30-61%) volumes for this spring and summer. Reservoir storage is at 80% of capacity, which is 41% higher than this time last year. The Surface Water Supply Index is at 64% for the Bear River, in other words, 36% 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.





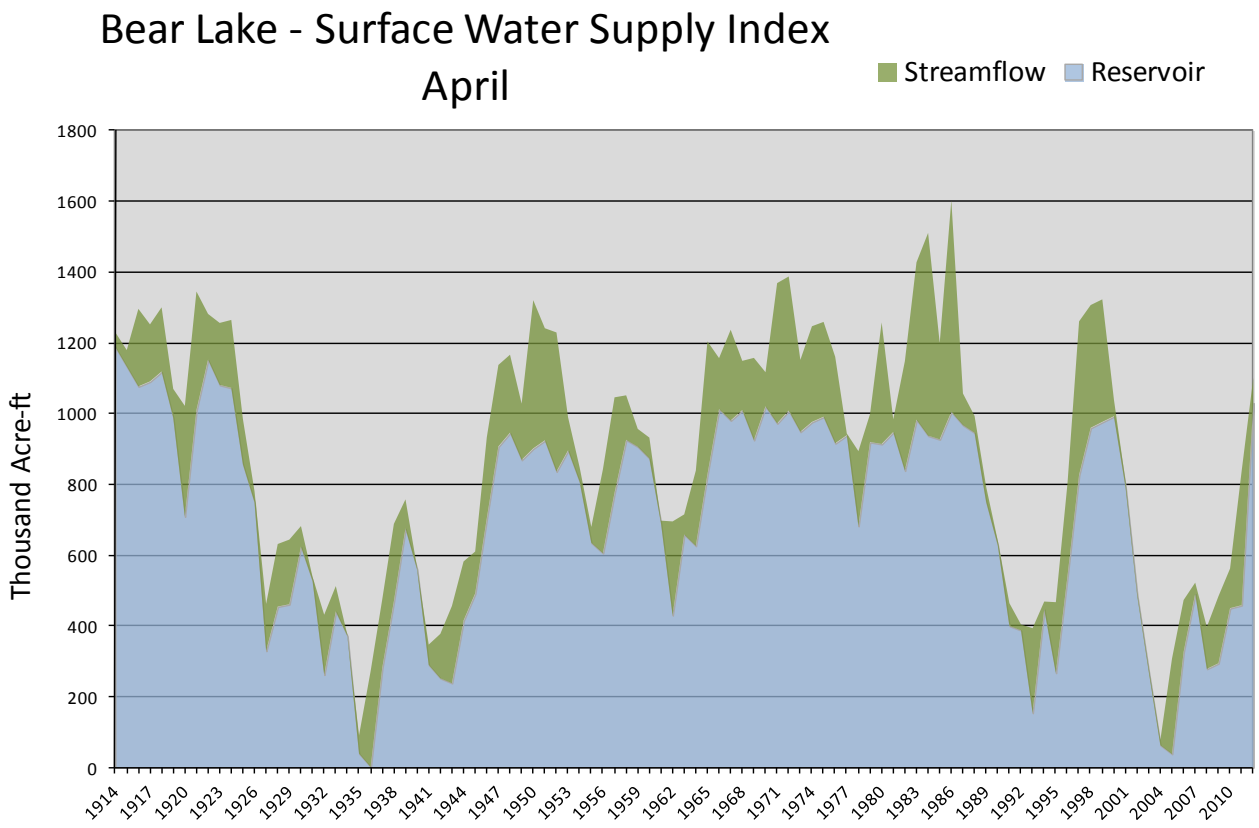


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Bear Lake	April-July Forecast below Stewart Dam	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Bear River	**1030**	**70**	**1101**	**1.17**	**64**	**87,19,70,47**

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



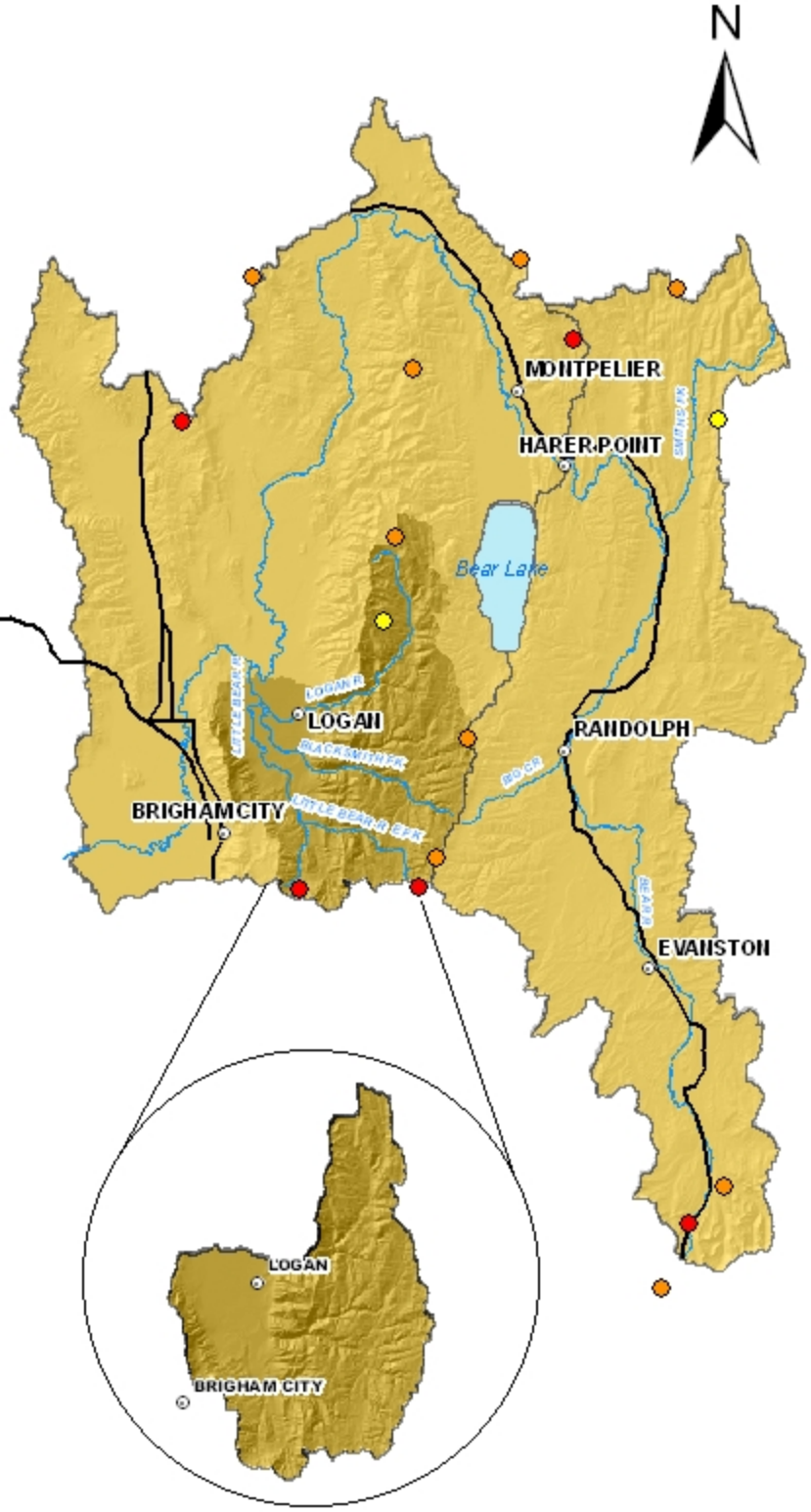
Bear River & Raft River Basins

Basinwide Average

59 %

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

BEAR RIVER BASIN as of April 1, 2012

BEAR RIVER BASIN
Streamflow Forecasts - April 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	33	50	62	55	74	91	113
Bear R ab Res nr Woodruff	APR-JUL	20	45	62	46	79	104	136
Big Ck nr Randolph	APR-JUL	0.90	2.20	3.00	61	3.80	5.10	4.90
Smiths Fk nr Border	APR-JUL	38	51	60	58	69	82	103
Bear R bl Stewart Dam	APR-JUL	7.0	25	70	30	115	181	234
Little Bear R at Paradise	APR-JUL	4.0	15.3	23	50	31	42	46
Logan R nr Logan	APR-JUL	37	54	65	52	76	93	126
Blacksmith Fork nr Hyrum	APR-JUL	1.9	13.5	24	50	35	50	48
Dunn Ck nr Park Valley	APR-JUL	0.12	0.68	1.60	52	2.70	3.90	3.10

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE		NO REPORT		
HYRUM	15.3	13.8	10.9	12.2
PORCUPINE	11.3	11.3	9.6	6.7
WOODRUFF NARROWS	57.3	57.5	57.0	32.7
WOODRUFF CREEK	4.0	4.0	3.9	---

BEAR RIVER BASIN
Watershed Snowpack Analysis - April 1, 2012

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BEAR RIVER, UPPER	8	43	61
BEAR RIVER, LOWER	9	42	57
LOGAN RIVER	4	42	59
RAFT RIVER	1	72	100
BEAR RIVER BASIN	17	42	59

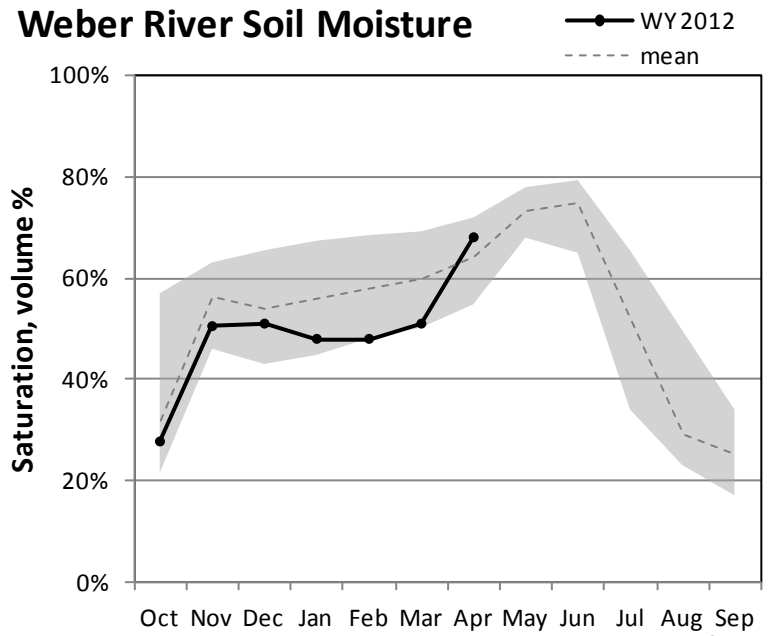
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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 and Ogden River Basins
April 1, 2012

Snowpacks on the Weber and Ogden Watersheds are much below average at 52%, about 36% of last year. Individual sites range from 30% of average at Parley's Canyon to 67% at Chalk Creek #2. March precipitation was much below average at 58% bringing the seasonal accumulation (Oct-Mar) to 71% of average. Soil moisture levels in runoff producing areas are at 68% of saturation in the upper 2 feet of soil compared to 69% last year. Streamflow forecasts (April-July) range from 34 to 56% of average. Reservoir storage is at 86% of capacity, 21% higher than last year. The Surface Water Supply Index is at 36% for the Weber River and 31% for the Ogden River indicating that overall water supply conditions are below average.



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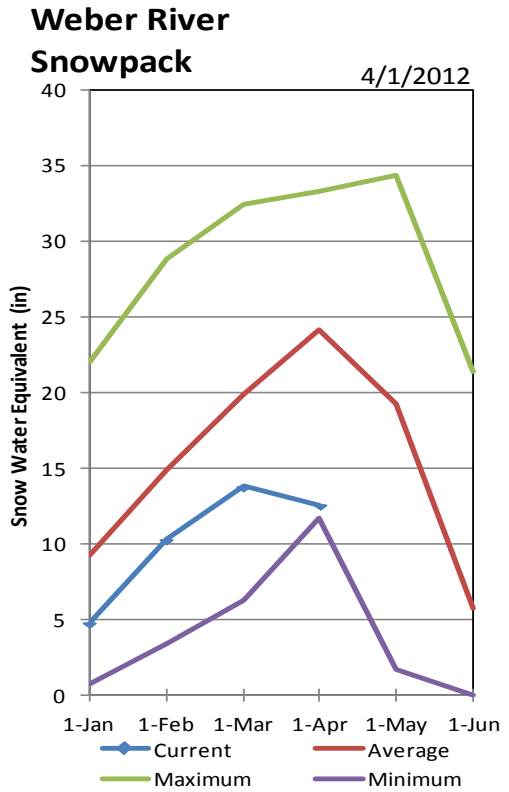
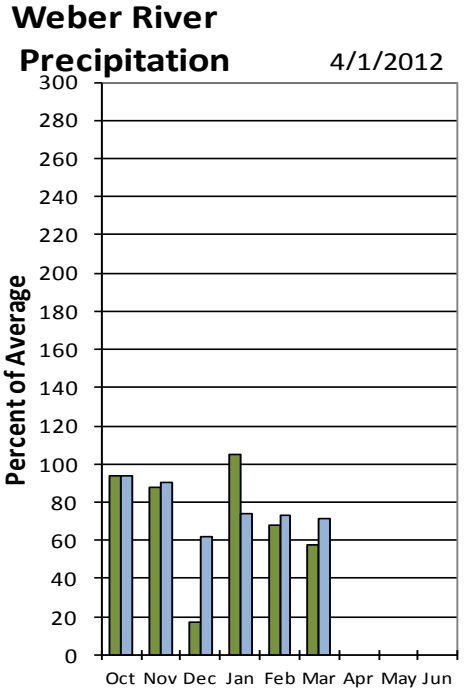
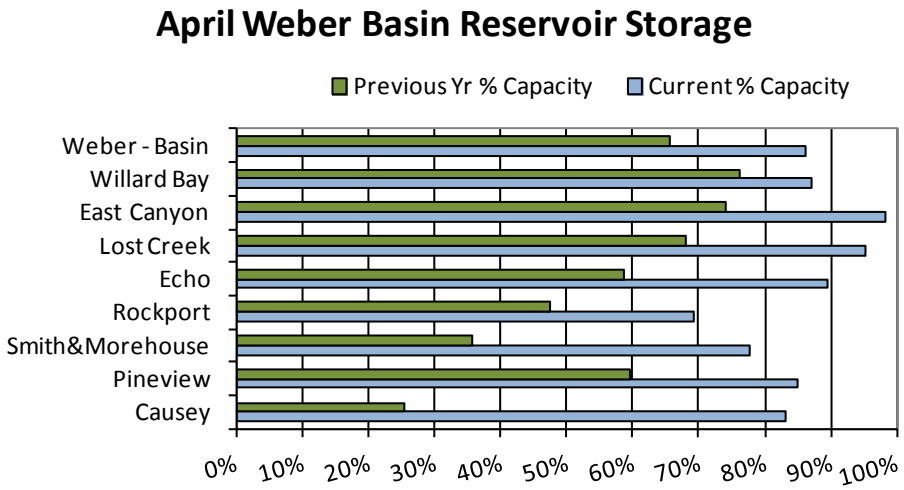




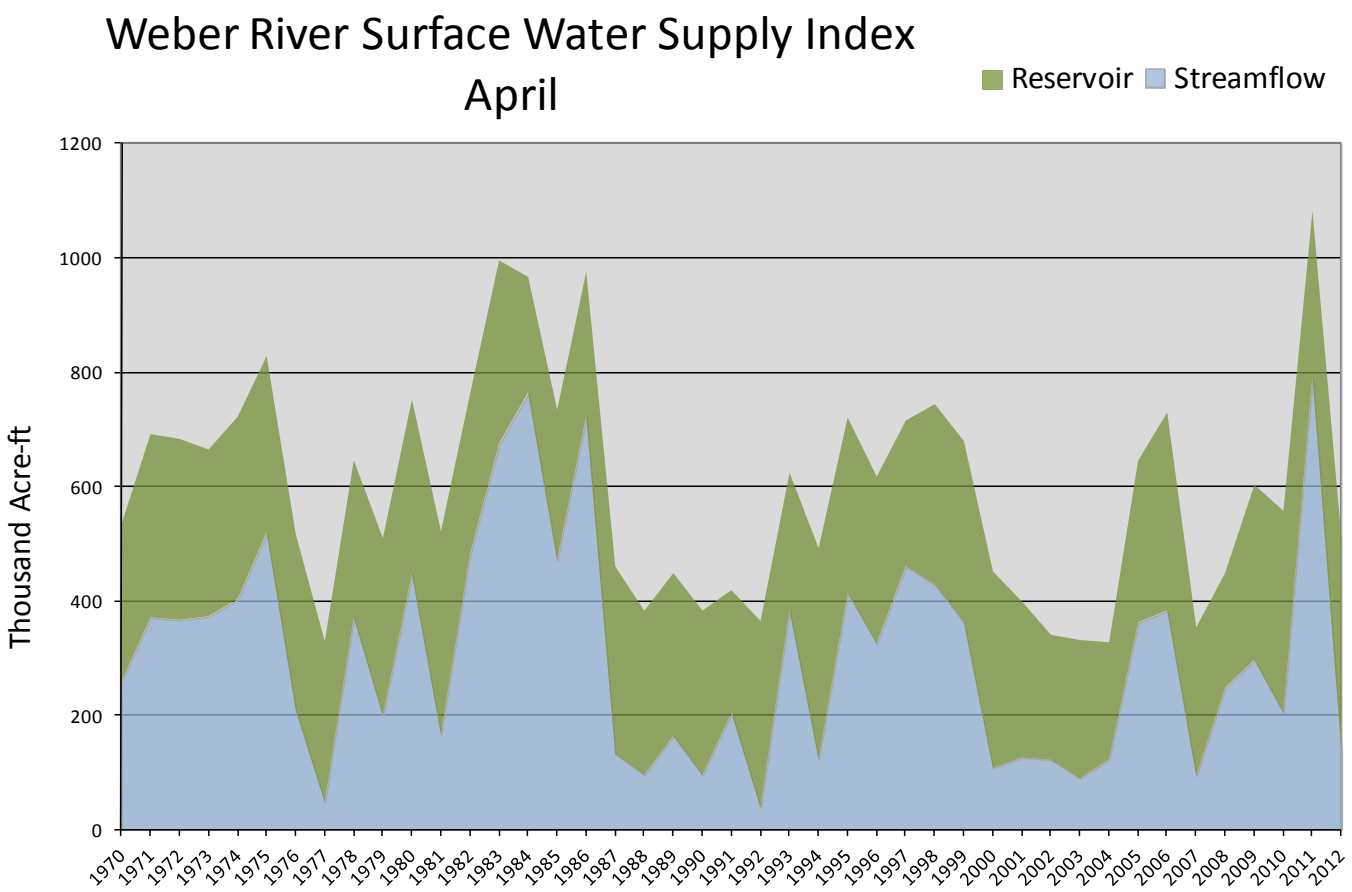


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Reservoirs	April-July Forecast Weber River at Gateway	Reservoirs + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Weber River	**372**	**135**	**507**	**-1.14**	**36**	**87,94,79,76**

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

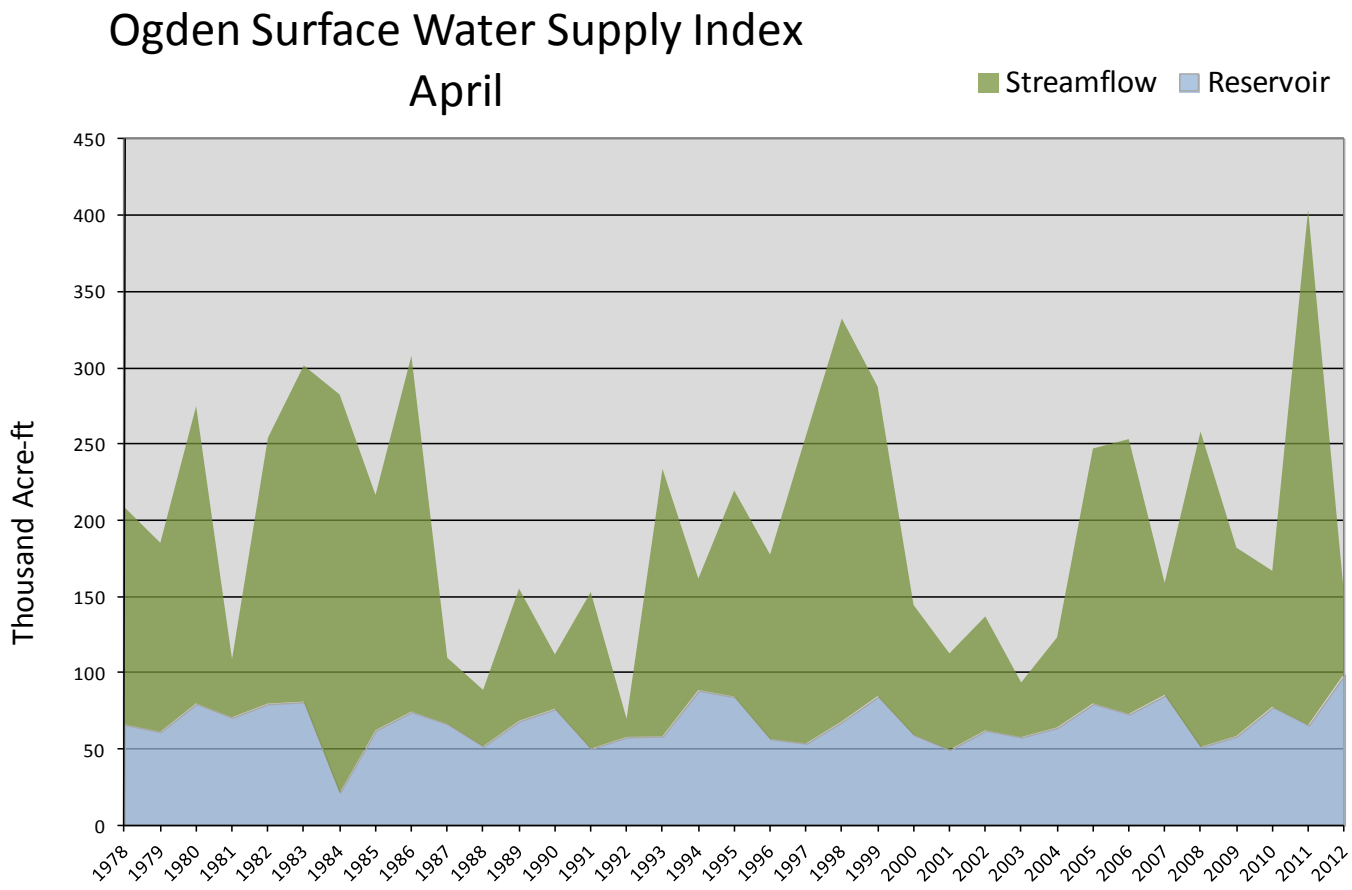


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Pine View & Causey	April-July Forecast Pineview Reservoir Inflow	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Ogden River	**99.4**	**52**	**151**	**-1.62**	**31**	**02,00,91,89**

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



Weber & Ogden Basins

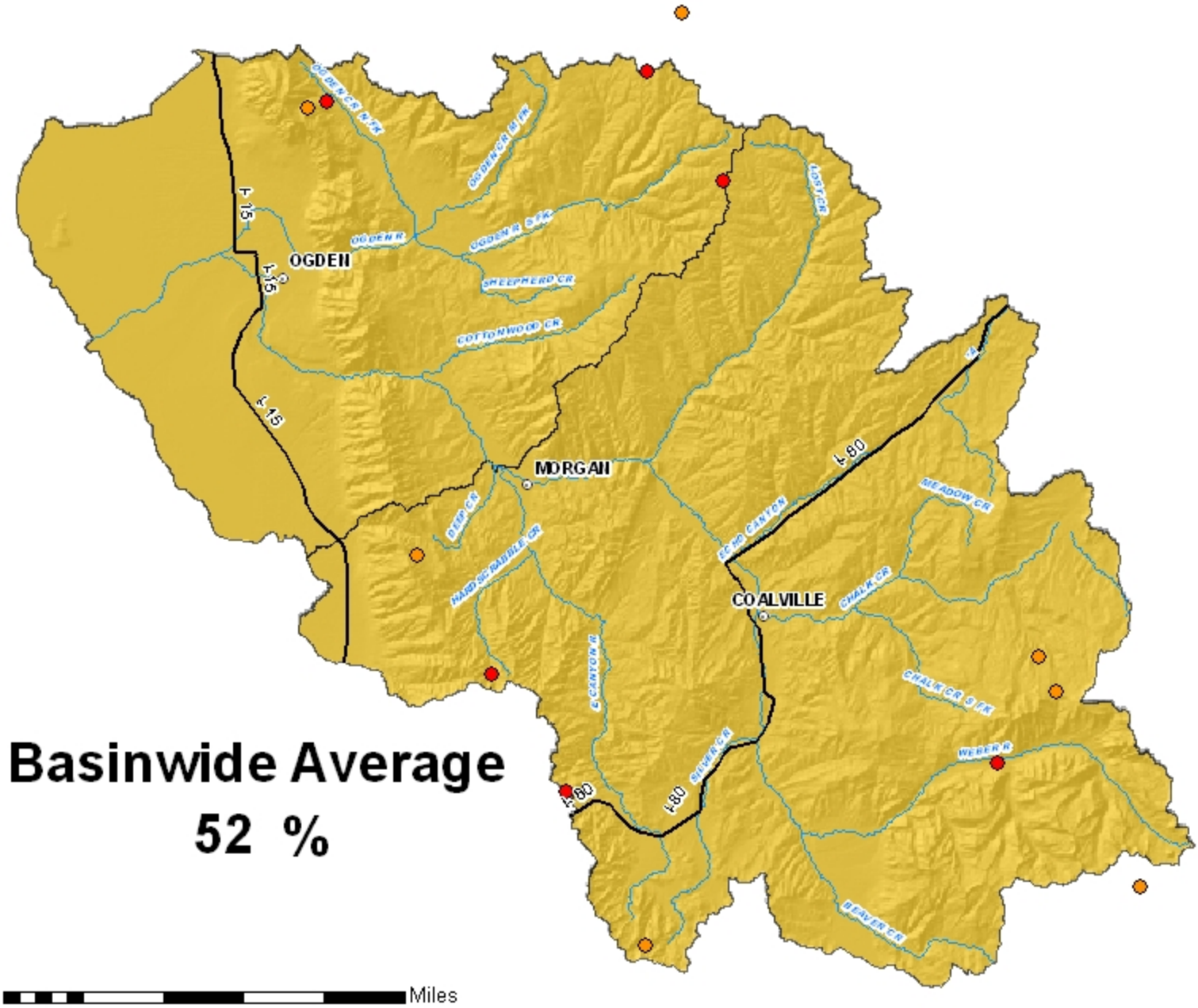
Watershed % of Average

- 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%

N



Basinwide Average

52 %

0 2.5 5 10 15 20 25 Miles

Provisional Data
Subject to Revision

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

WEBER & OGDEN WATERSHEDS in Utah
Streamflow Forecasts - April 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	11.8	16.1	19.0	56	22	26	34
Weber R nr Oakley	APR-JUL	35	53	65	53	77	95	123
Rockport Res	APR-JUL	26	49	64	48	79	102	134
Weber R nr Coalville	APR-JUL	20	44	60	44	76	100	137
Chalk Ck at Coalville	APR-JUL	1.8	11.6	20	44	28	41	45
Echo Res Inflow	APR-JUL	7.0	50	80	45	110	153	179
Lost Ck Resv Inflow	APR-JUL	0.3	2.4	6.0	34	9.6	14.8	17.6
East Canyon Ck nr Jeremy Ranch	APR-JUL	0.4	3.8	6.8	48	9.8	14.2	14.2
East Canyon Ck nr Morgan	APR-JUL	1.1	8.2	13.0	42	17.8	25	31
Weber R at Gateway	APR-JUL	14.0	65	135	38	205	310	355
SF Ogden R nr Huntsville	APR-JUL	8.1	19.4	27	42	35	46	64
Pineview Res Inflow	APR-JUL	3.0	32	52	39	72	102	133
Wheeler Ck nr Huntsville	APR-JUL	0.19	1.46	2.60	41	3.70	5.40	6.30
Centerville Ck	APR-JUL	0.04	0.31	0.50	39	0.69	0.96	1.28

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CAUSEY	7.1	5.9	1.8	2.6
EAST CANYON	49.5	48.7	36.7	36.5
ECHO	73.9	66.1	43.3	51.5
LOST CREEK	22.5	21.4	15.3	14.1
PINEVIEW	110.1	93.5	65.7	61.7
ROCKPORT	60.9	42.1	28.9	35.1
WILLARD BAY	215.0	187.0	163.7	160.9

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
OGDEN RIVER	4	38	52
WEBER RIVER	9	36	52
WEBER & OGDEN WATERSHEDS	13	37	52

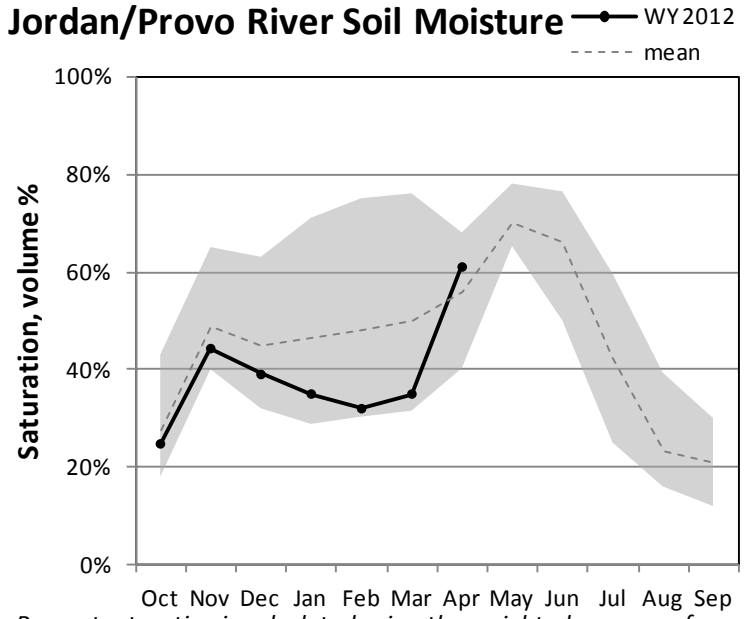
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

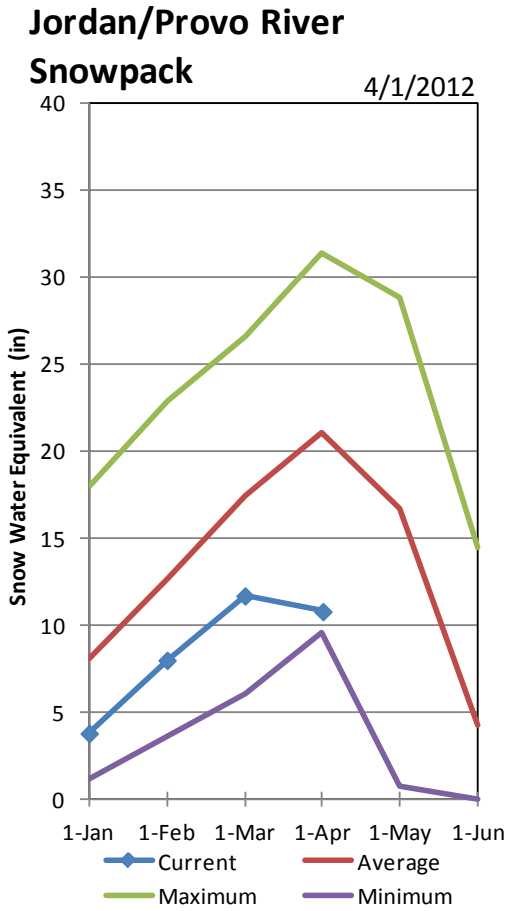
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

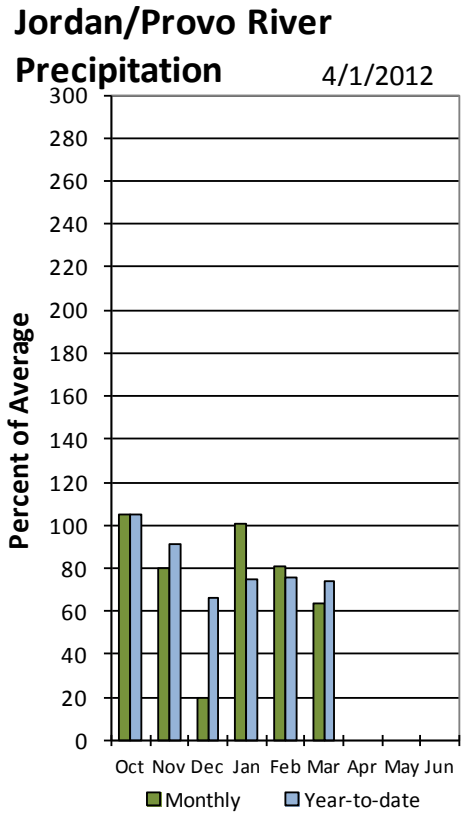
Utah Lake, Jordan River & Tooele Valley Basins
April 1, 2012

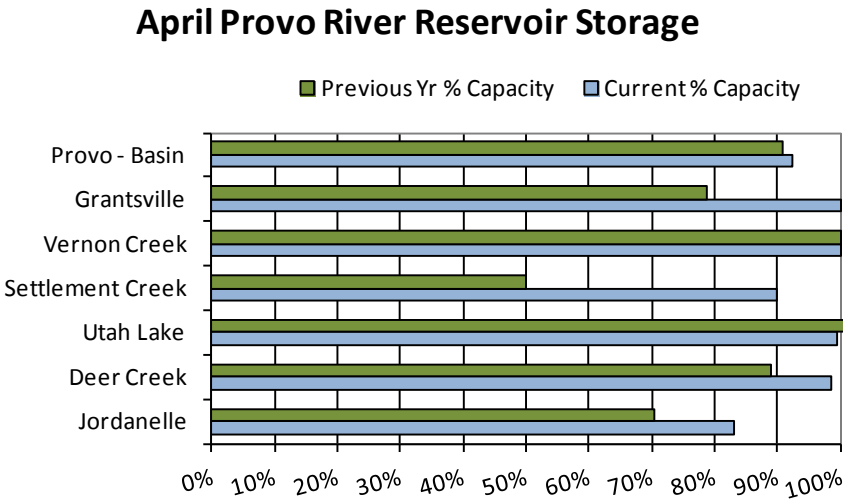
Snowpack over these basins are much below average at 53%, which is 38% of last year. Individual sites range from bare to 79% of average at Snowbird Snotel. March precipitation was much below average at 65%, bringing the seasonal accumulation (Oct-Mar) to 74% of average. Average soil moisture in runoff producing areas is estimated at 61% of saturation in the upper 2 feet of soil compared to 60% at this time last year. Reservoir storage is at 92% of capacity, 1% higher than last year. Streamflow forecasts (Apr-July) range from 25% to 63% of average. The Surface Water Supply Index below Deer Creek reservoir is 47%, indicating general water supply conditions are near 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.





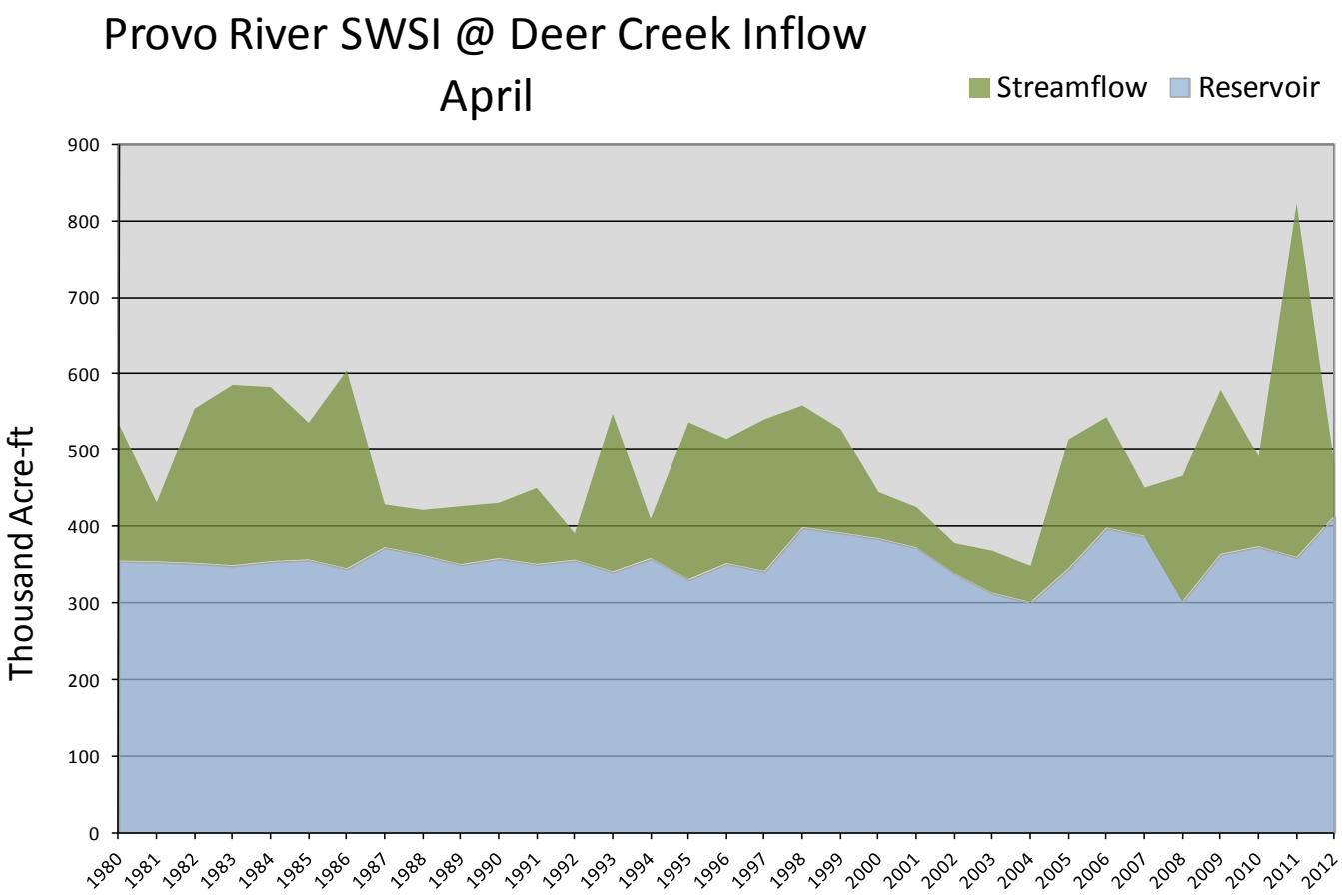


April 1, 2012

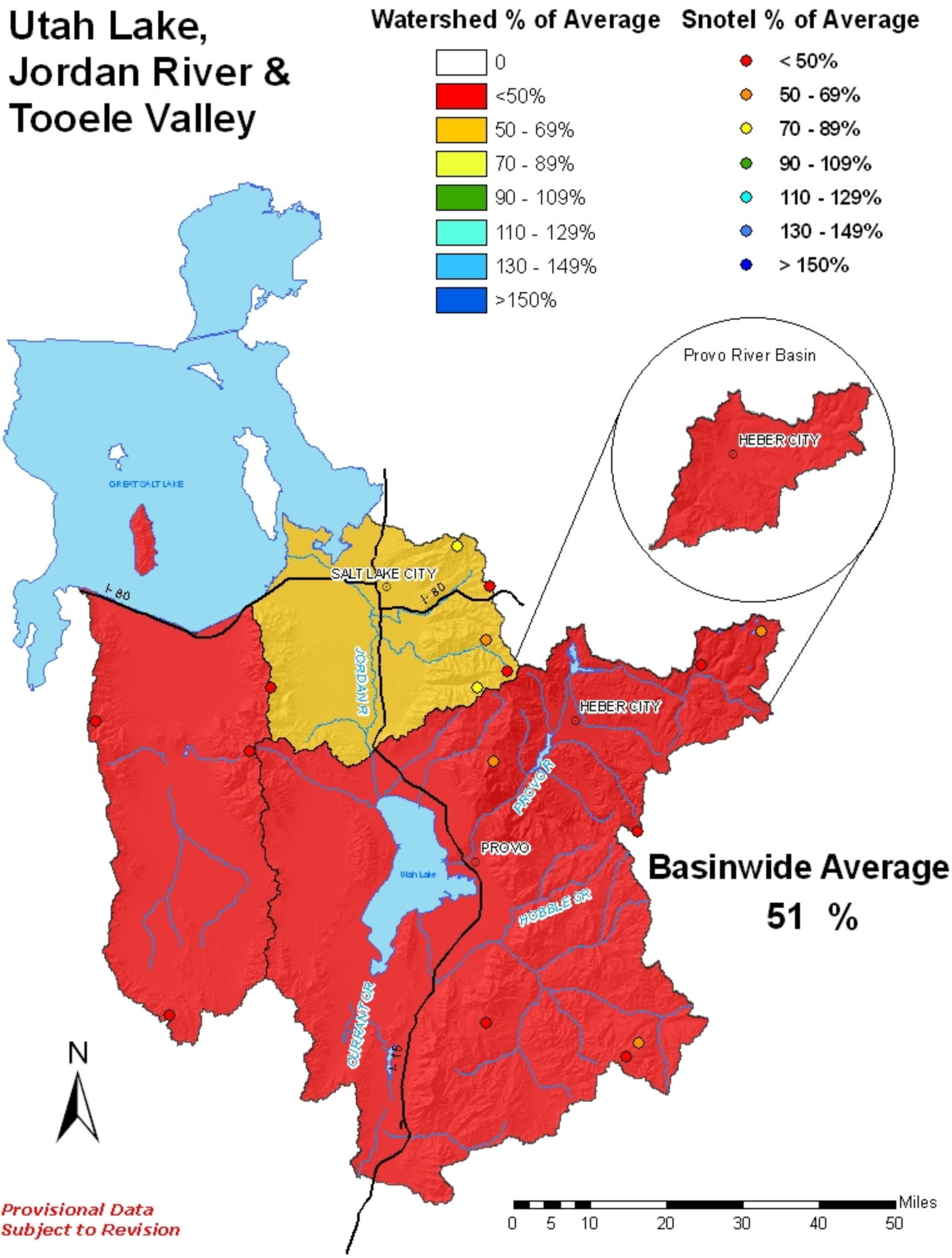
Surface Water Supply Index

Basin or Region	March EOM* Deer Creek, Jordanelle	April - July Forecast Provo River below Deer Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Provo River	**414**	**65**	**479**	**-0.25**	**47**	**07, 08, 10, 05**

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



Utah Lake, Jordan River & Tooele Valley



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

UTAH LAKE, JORDAN RIVER & TOOELE VALLEY
Streamflow Forecasts - April 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	0.38	1.29	4.00	43	6.70	10.70	9.40
Spanish Fk at Castilla	APR-JUL	0.8	8.5	30	39	53	91	77
Provo R nr Woodland	APR-JUL	36	49	60	58	72	90	103
Provo R nr Hailstone	APR-JUL	33	50	63	58	78	102	109
Provo R bl Deer Ck Dam	APR-JUL	25	49	65	52	81	105	126
American Fk ab Upper Powerplant	APR-JUL	5.2	12.8	18.0	56	23	31	32
Utah Lake Inflow	APR-JUL	6.0	49	165	51	315	530	325
W Canyon Ck nr Cedar Fort	APR-JUL	0.07	0.25	0.60	25	0.95	1.46	2.40
L Cottonwood Ck nr SLC	APR-JUL	17.7	22	25	63	28	34	40
Big Cottonwood Ck nr SLC	APR-JUL	9.6	15.8	20	53	24	30	38
Mill Ck nr SLC	APR-JUL	0.21	1.62	3.00	43	4.40	6.40	7.00
Parley's Ck nr SLC	APR-JUL	0.5	3.8	7.0	42	10.2	15.0	16.7
Dell Fk nr SLC	APR-JUL	0.20	0.88	2.40	35	4.50	7.20	6.80
Emigration Ck nr SLC	APR-JUL	0.18	1.17	2.00	44	2.80	4.70	4.50
City Ck nr SLC	APR-JUL	0.26	2.30	4.00	46	5.70	8.20	8.70
Vernon Ck nr Vernon	APR-JUL	0.06	0.24	0.50	34	0.91	1.50	1.48
S Willow Ck nr Grantsville	APR-JUL	0.29	0.95	1.40	43	1.85	2.50	3.23

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DEER CREEK	149.7	147.6	133.3	113.0
GRANTSVILLE	3.3	3.3	2.6	2.7
SETTLEMENT CREEK	1.0	0.9	0.5	0.7
STRAWBERRY-ENLARGED	1105.9	982.3	974.1	648.8
UTAH LAKE	870.9	866.0	890.0	855.8
VERNON CREEK	0.6	0.6	0.6	---

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
PROVO RIVER & UTAH LAKE	7	33	47
PROVO RIVER	4	31	49
JORDAN RIVER & GSL	6	38	57
TOOELE & RUSH VALLEY WATE	3	32	47
UTAH LAKE/JORDAN R./TOOEL	16	35	51

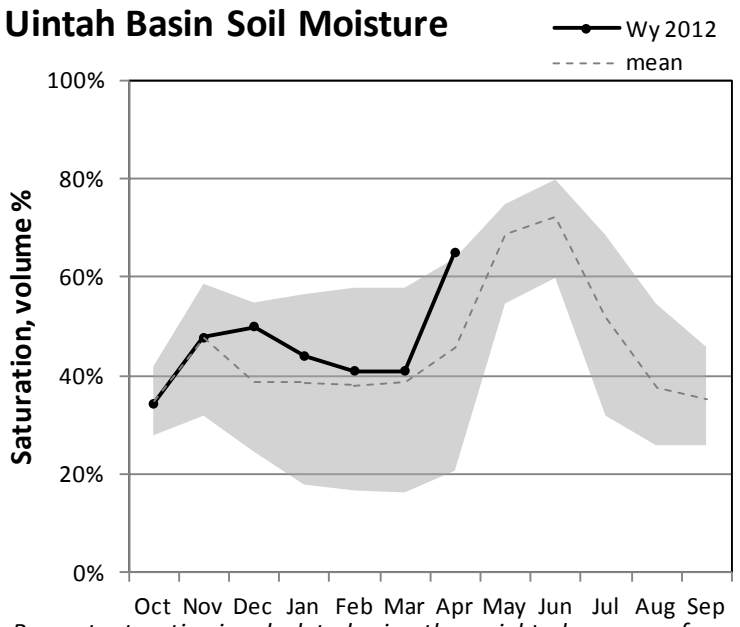
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

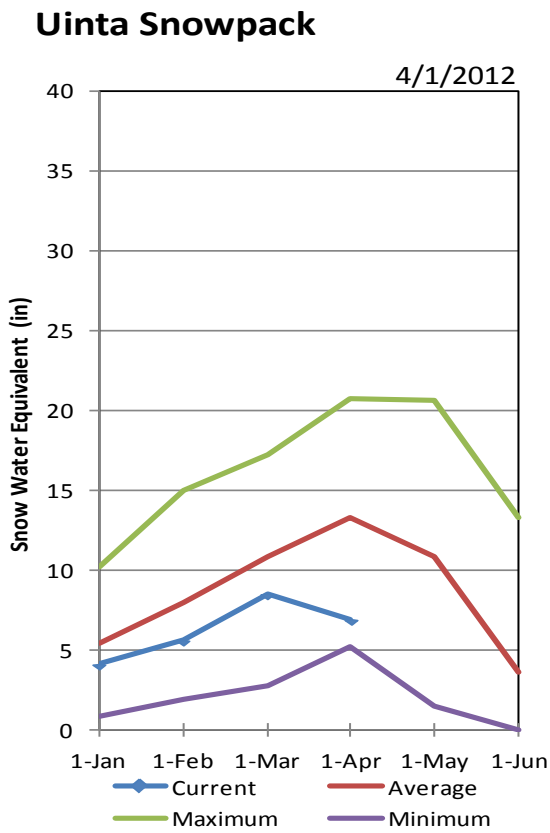
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

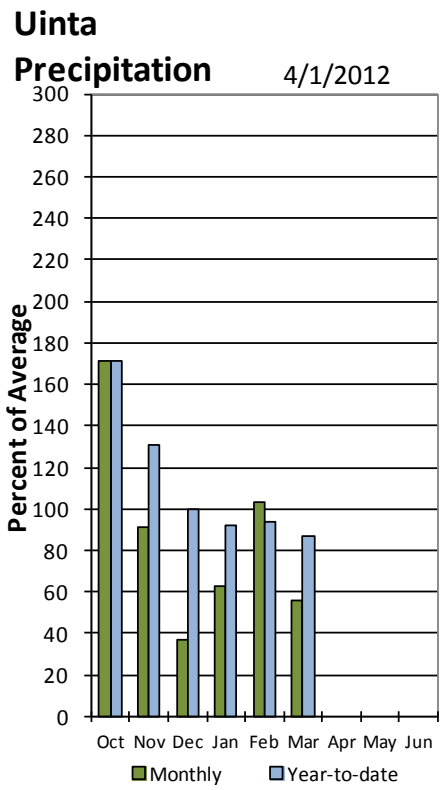
Uintah Basin and Dagget SCDs
April 1, 2012

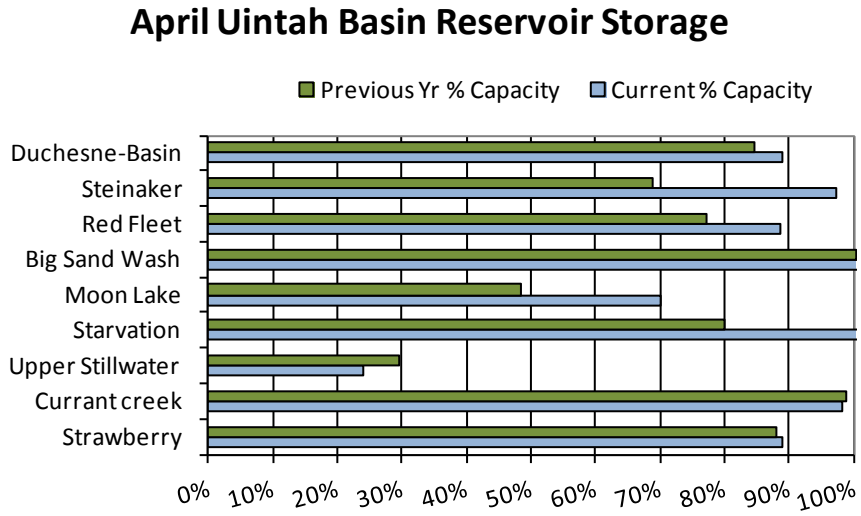
Snowpack across the Uintas is much below average at 38% which is 52% of last year. Percent of average snowpack for individual sites range from 21% to 74% on the North Slope and from 16% to 81% on the South Slope. Precipitation during March was much below average at 57% bringing the seasonal accumulation (Oct-Mar) to 87%. Soil moisture values in runoff producing area are at 65% of saturation in the upper 2 feet of soil compared to 56% last year. Reservoir storage is at 89% of capacity, 4% higher at this time last year. Streamflow forecasts (April-July) range from 27% to 76% of average. The Surface Water Supply Index for the western area is 42% and for the eastern area it is 24% indicating near normal conditions on the west side and much below average on the eastern side. General 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.





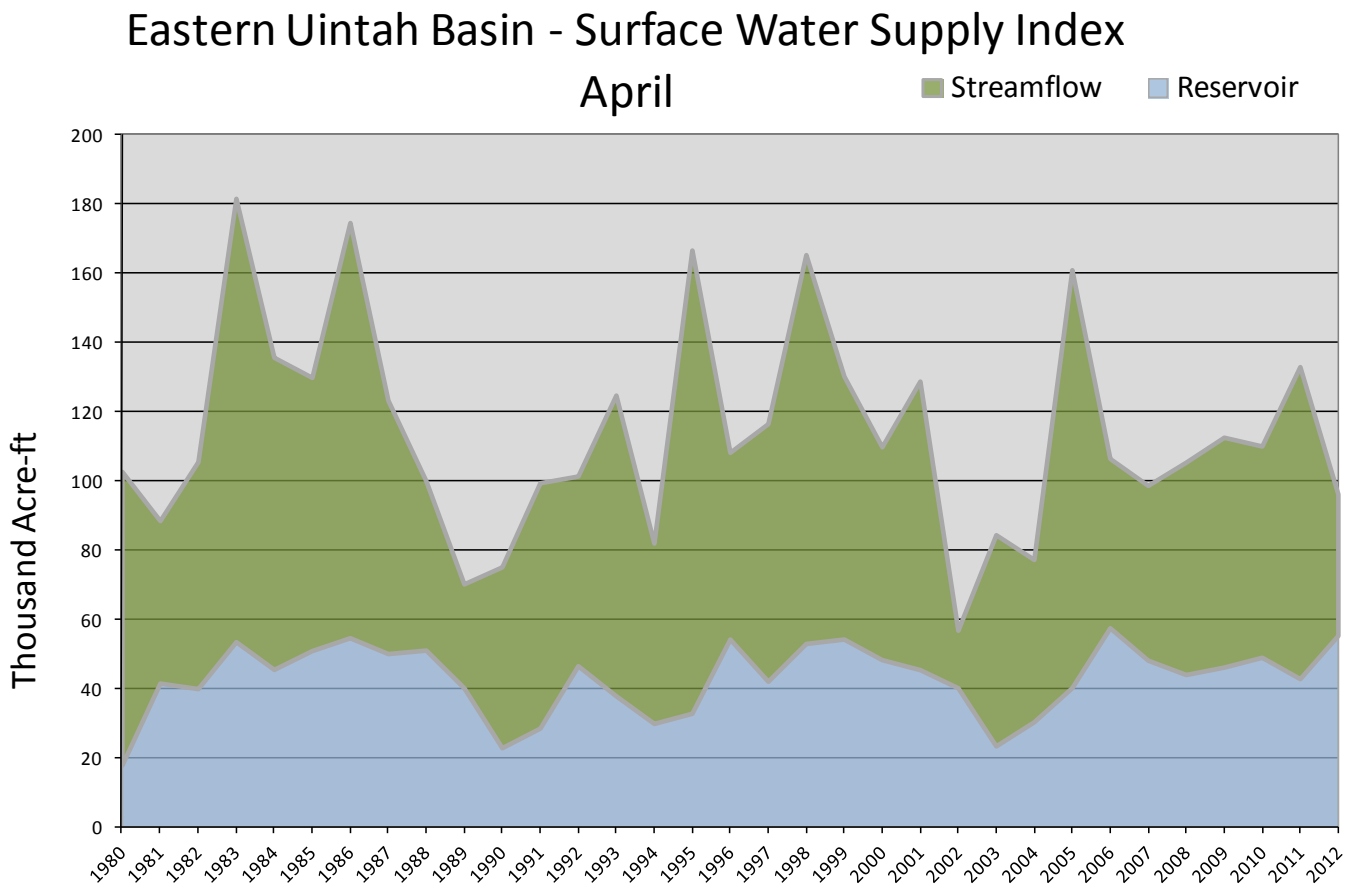


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Red Fleet & Steinaker	April-July Forecast Big Brush & Ashley Creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Eastern Uintah	**55.3**	**41.0**	**96.3**	**-2.21**	**24**	**03, 81, 07, 91**

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

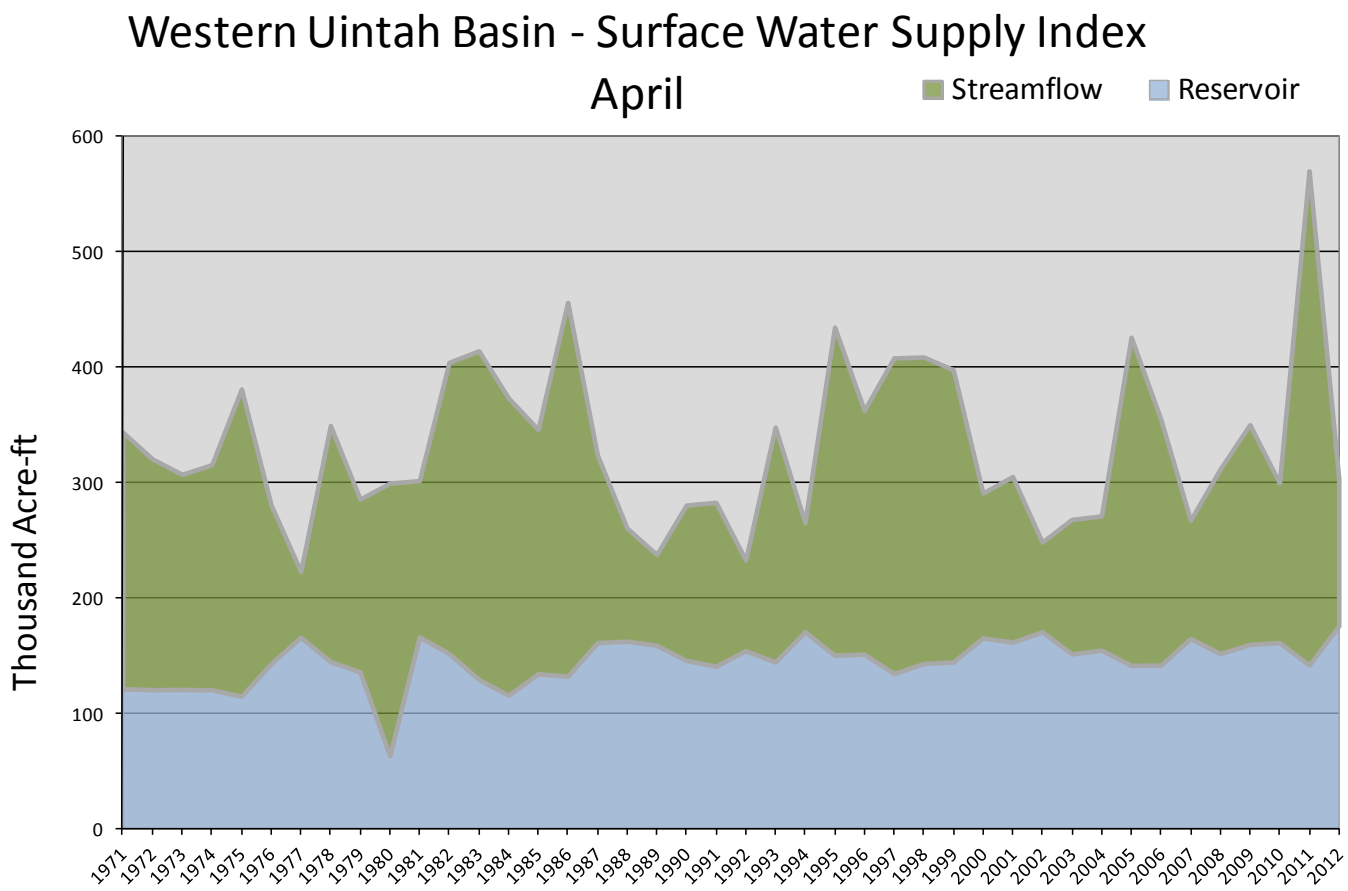


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Starvation & Upper Stillwater	April-July Forecast Rock Creek & Duchesne River	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Western Uintah	**176**	**128**	**304**	**-0.68**	**42**	**10, 81, 01, 73**

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



Uintah Basin & Dagget SCD's

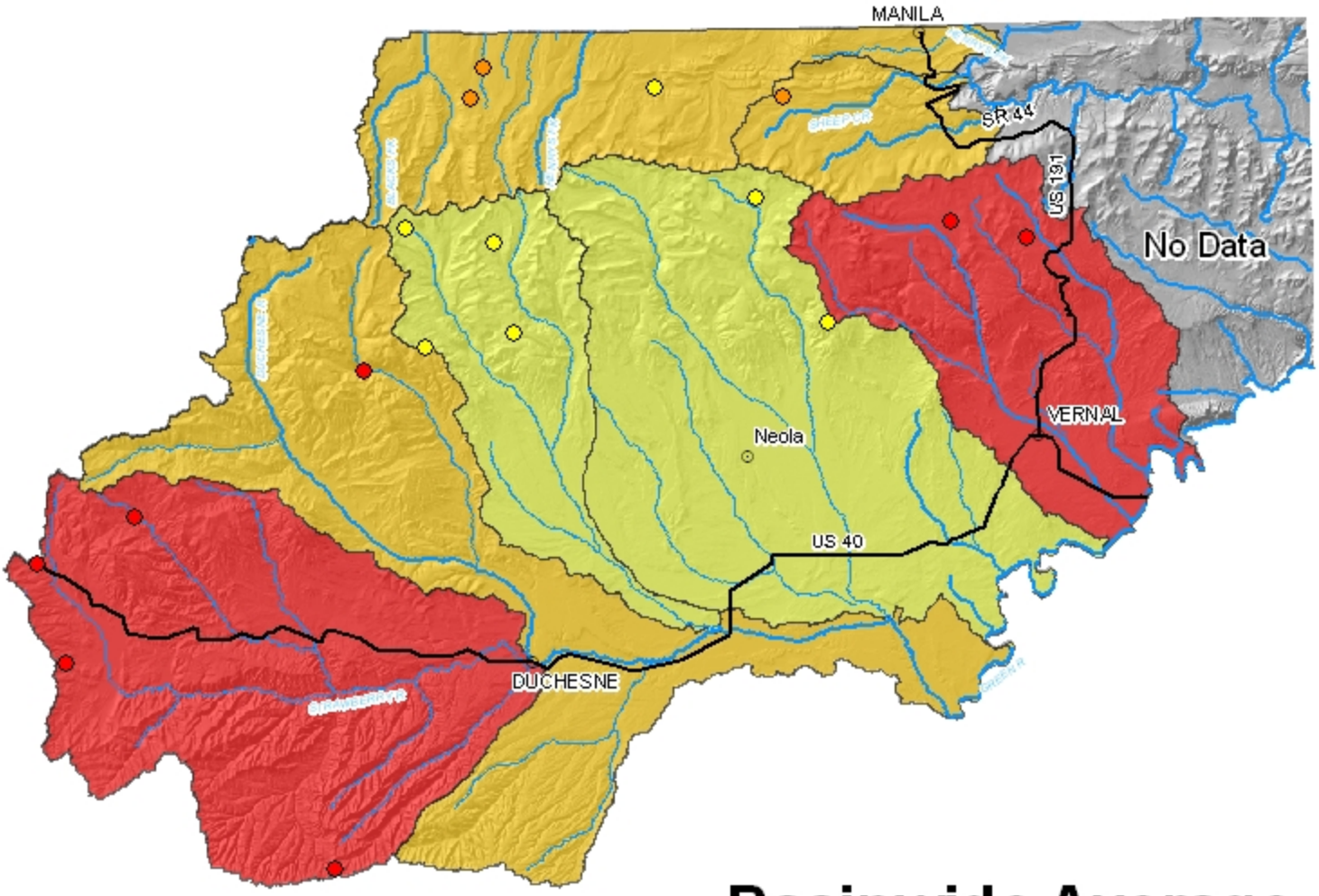
Watershed % of Average

- 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
52 %

Provisional Data
Subject to Revision

0 5 10 20 30 40 50 Miles

UINTAH BASIN & DAGGET SCD'S as of April 1, 2012

UINTAH BASIN & DAGGET SCD'S
Streamflow Forecasts - April 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	40	51	60	63	69	84	95
EF of Smiths Fork nr Robertson (2)	APR-JUL	11.9	16.5	20	69	24	30	29
Flaming Gorge Reservoir Inflow (2)	APR-JUL	490	670	810	68	960	1210	1190
Big Brush Ck ab Red Fleet Reservoir	APR-JUL	7.4	10.5	13.0	62	15.7	20	21
Ashley Ck nr Vernal	APR-JUL	14.4	22	28	54	35	46	52
WF Duchesne R at VAT Diversion	APR-JUL	6.1	8.3	10.0	54	11.8	14.8	18.7
Duchesne R nr Tabiona (2)	APR-JUL	44	58	68	65	79	97	105
Upper Stillwater Reservoir Inflow (2	APR-JUL	40	47	52	63	57	65	82
Rock Ck nr Mountain Home (2)	APR-JUL	46	54	60	67	66	76	89
Duchesne R ab Knight Diversion (2)	APR-JUL	86	108	125	67	143	171	188
Strawberry R nr Soldier Springs (2)	APR-JUL	4.7	10.6	16.0	27	22	34	59
Currant Ck Reservoir Inflow (2)	APR-JUL	2.0	4.6	7.0	41	9.9	15.1	17.3
Strawberry R nr Duchesne (2)	APR-JUL	12.0	24	35	29	48	70	121
Lake Fork R ab Moon Lake Reservoir	APR-JUL	38	45	50	74	55	63	68
Yellowstone R nr Altonah	APR-JUL	34	41	47	76	53	63	62
Duchesne R at Myton (2)	APR-JUL	90	120	160	50	205	280	320
Uinta R bl Powerplant Diversion nr N	APR-JUL	32	46	57	72	69	89	79
Whiterocks R nr Whiterocks	APR-JUL	25	35	42	75	50	63	56
Duchesne R nr Randlett (2)	APR-JUL	95	127	180	47	245	350	380

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
FLAMING GORGE	3749.0	3233.0	3158.0	2920.0
MOON LAKE	49.5	25.1	17.3	30.8
RED FLEET	25.7	22.8	19.6	18.8
STEINAKER	33.4	32.5	23.0	24.2
STARVATION	165.3	168.0	132.2	138.6
STRAWBERRY-ENLARGED	1105.9	982.3	974.1	648.8

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GREEN RIVER in UTAH	6	47	49
ASHLEY CREEK	2	23	27
BLACK'S FORK RIVER	2	52	57
SHEEP CREEK	1	61	57
DUCHESNE RIVER	11	35	54
LAKE FORK-YELLOWSTONE CRE	4	45	77
STRAWBERRY RIVER	4	15	23
UINTAH-WHITEROCKS RIVERS	2	55	72
UINTAH BASIN & DAGGET SCD	17	38	52

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

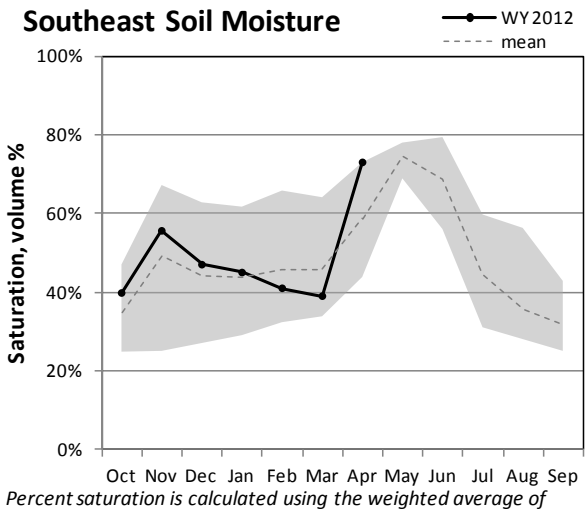
The average is computed for the 1971-2000 base period.

(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.

Southeast - Carbon, Emery, Wayne, Grand and San Juan Counties

April 1, 2012

Snowpacks in this region are much below normal at 38% of average, about 29% of last year. Percent of average snowpack for individual sites range from 0% at White River #3 to 84% at Donkey Reservoir. Precipitation during March was much below average at 56%, bringing the seasonal accumulation (Oct-Mar) to 81% of normal. Soil moisture estimates in runoff producing areas are at 73% of saturation in the upper 2 feet of soil, compared to 72% last year at this time. Forecast streamflows (April-July) range from 35% to 64% of average. Reservoir storage is at 80% of capacity, 15% higher than last year at this time. Surface Water Supply Indices for the area are: Price 69%, Joe's Valley 32%, Ferron Creek 24%, and Moab 23%. General runoff and water supply conditions are above average in the Price area, below average in the Joe's Valley area, and much below average in the Ferron Creek and Moab areas.



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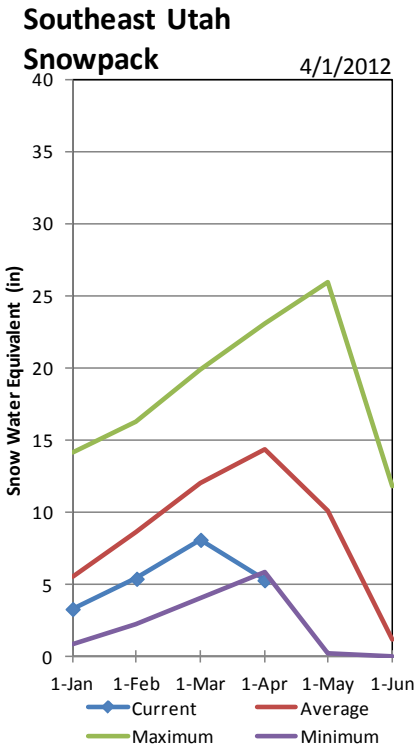
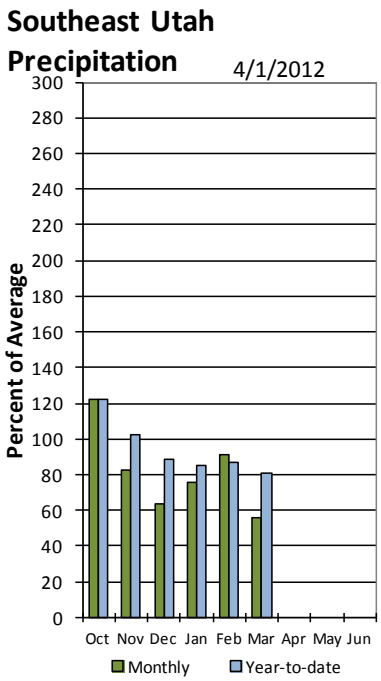
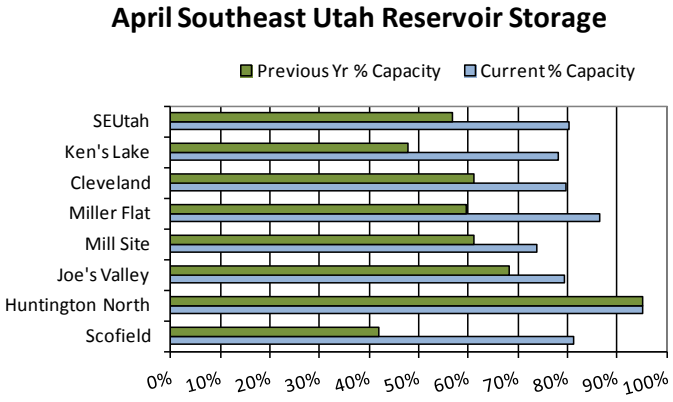




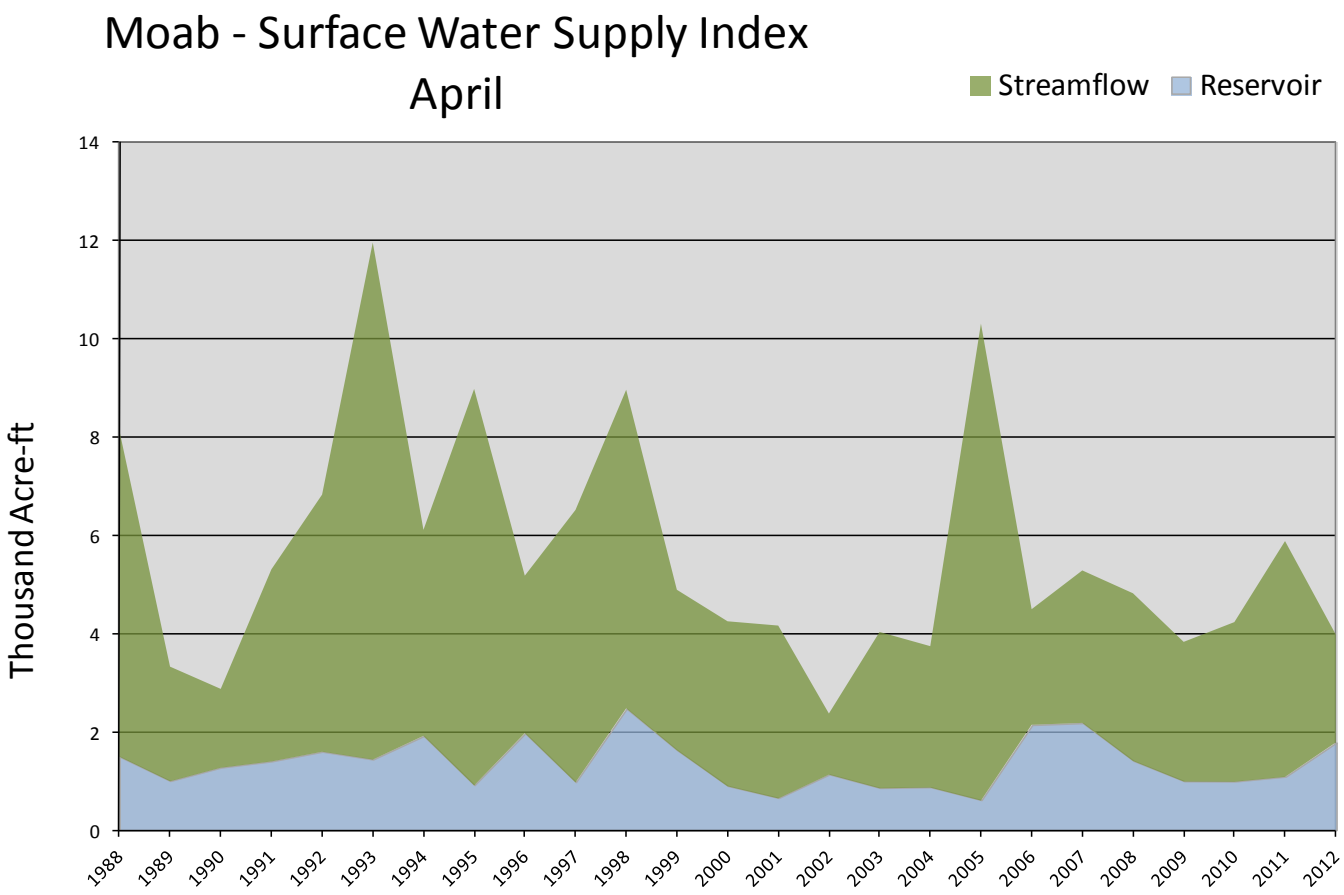


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Ken's Lake Reservoir	April-July Forecast Mill Creek at Sheley	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Moab	**1.8**	**2.2**	**4.0**	**-2.24**	**23**	**04, 09, 03, 01**

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

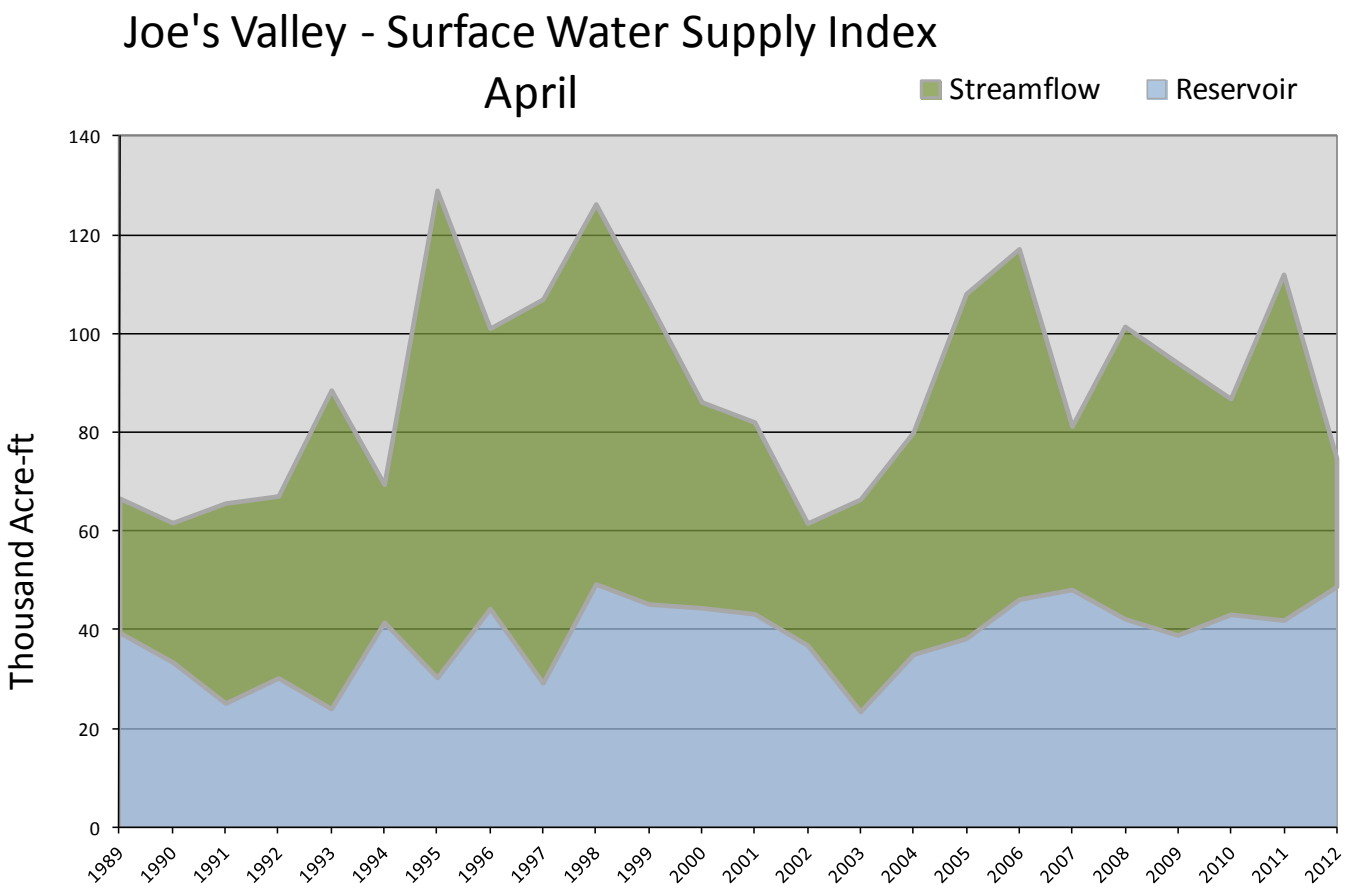


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Joe's Valley	April-July Forecast Inflow to Joe's Valley	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Joe's Valley	**48.9**	**26.0**	**74.9**	**-1.50**	**32**	**92, 94, 04, 07**

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

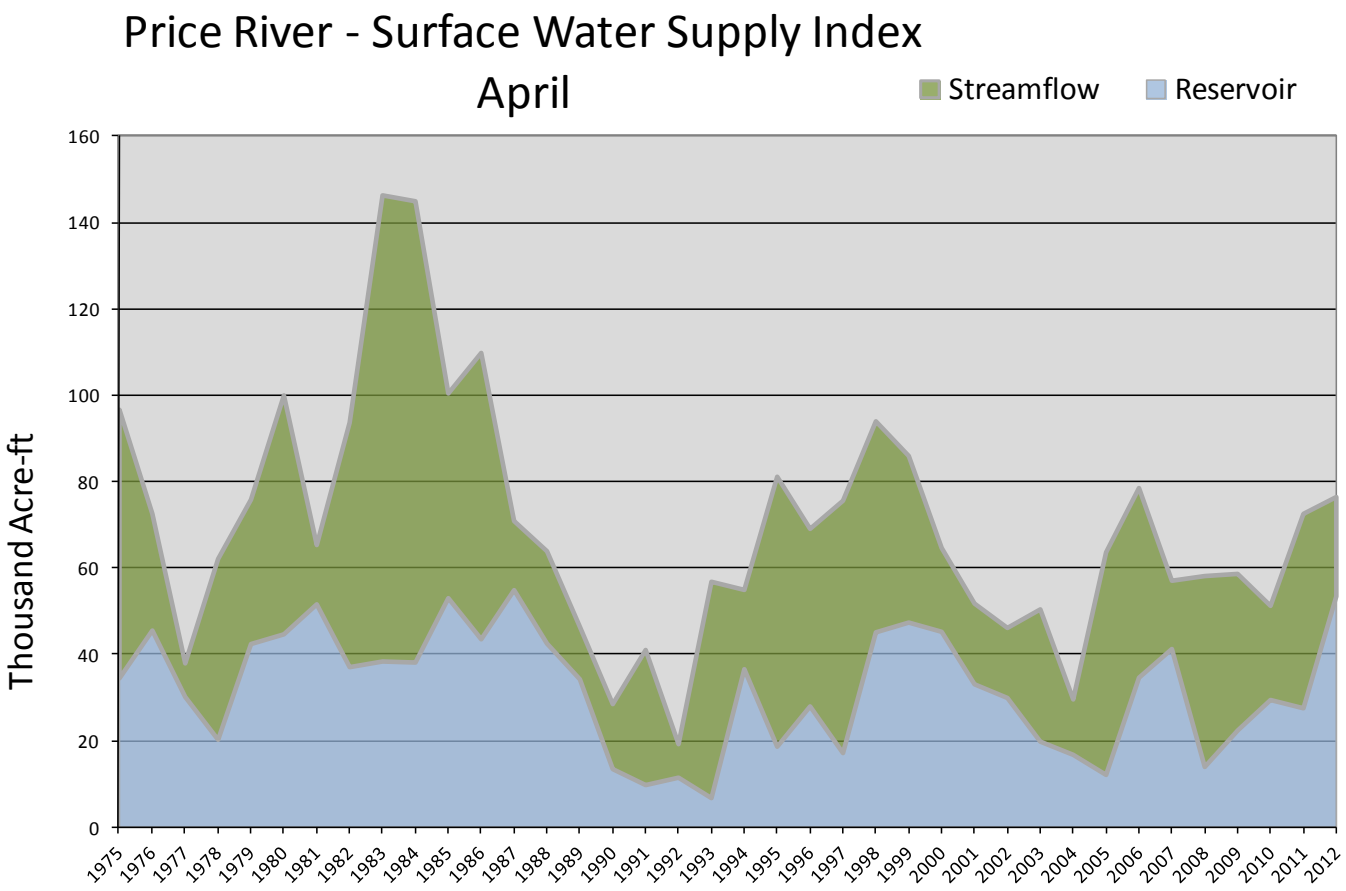


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Scofield Reservoir	April-July Forecast Scofield	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Price River	**53.5**	**23.0**	**76.5**	**1.60**	**69**	**97, 79, 06, 95**

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

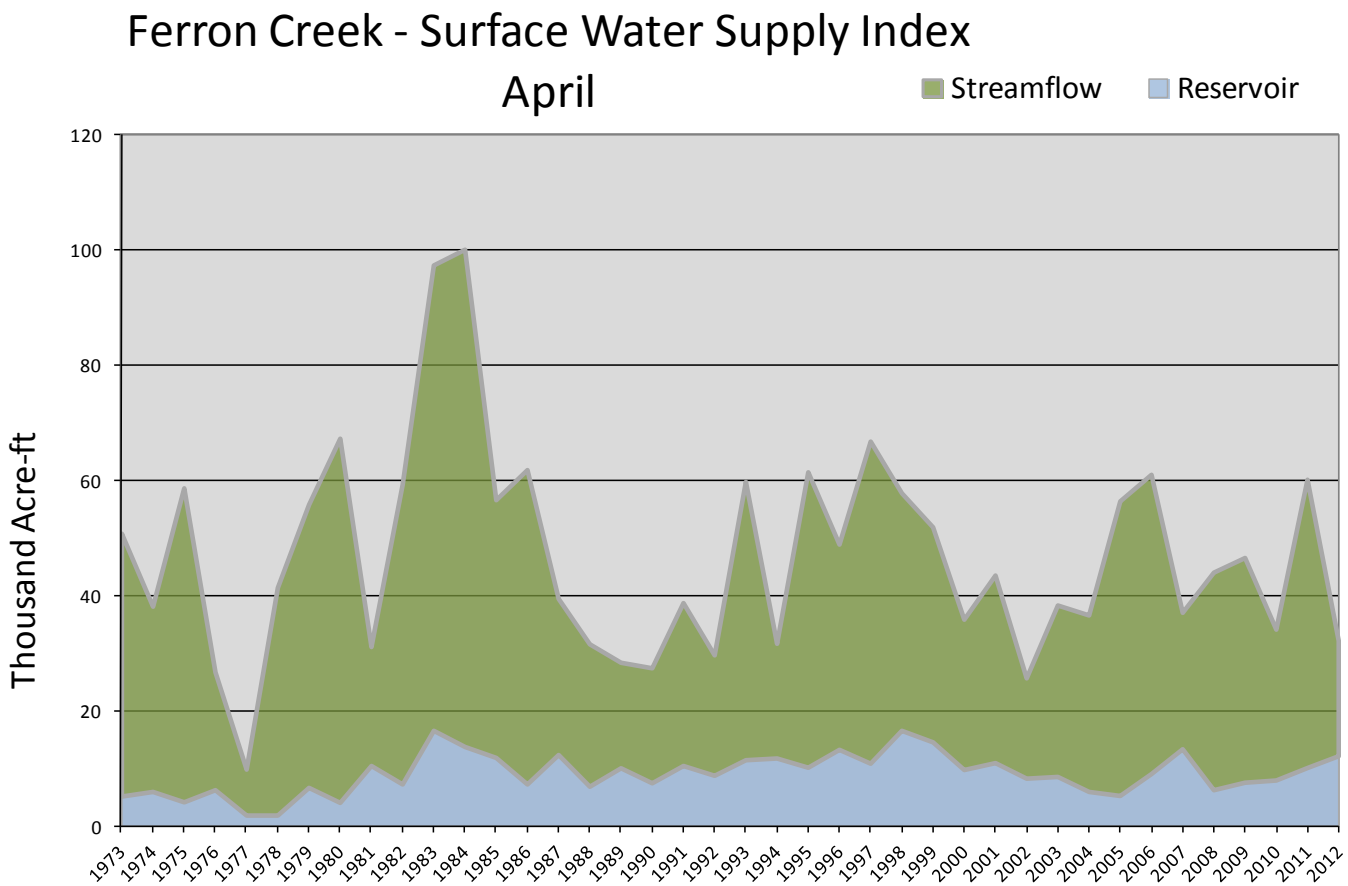


April 1, 2012

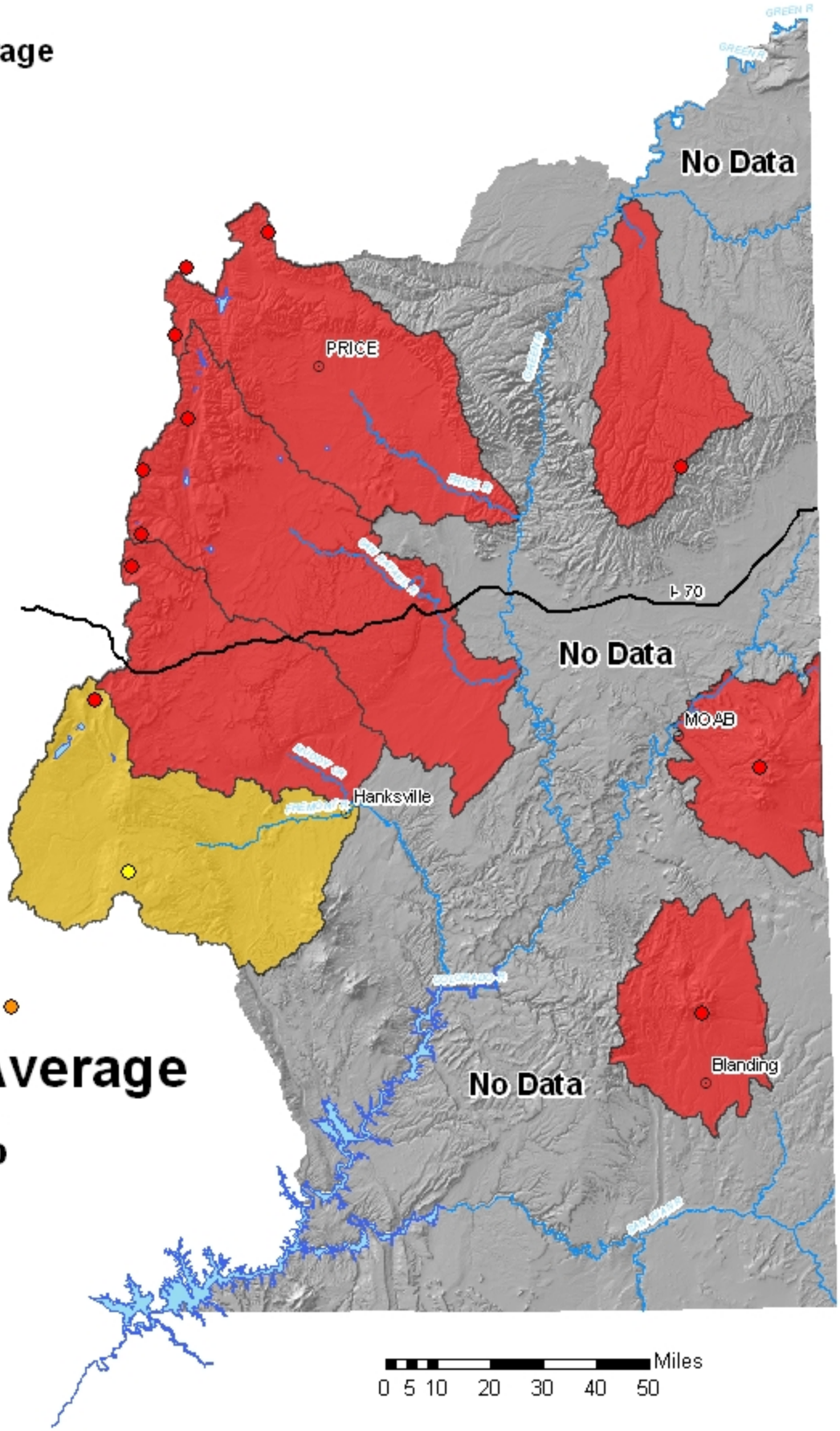
Surface Water Supply Index

Basin or Region	March EOM* Millsite Reservoir	April-July Forecast Ferron creek	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Ferron Creek	**12.3**	**20.0**	**32.3**	**-2.13**	**24**	**88, 94, 10, 00**

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



Carbon, Emery, Wayne Grand & San Juan 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

37 %

Provisional Data
Subject to Revision

CARBON, EMERY, WAYNE, GRAND, & SAN JUAN Co.
Streamflow Forecasts - April 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	10.2	14.0	17.0	53	20	26	32
Price R nr Scofield Reservoir (2)	APR-JUL	14.6	19.3	23	51	27	34	45
White R bl Tabbyune Ck	APR-JUL	3.3	4.8	6.0	35	7.3	9.4	17.3
Green R at Green River, UT (2)	APR-JUL	980	1410	1750	55	2120	2740	3170
Electric Lake Inflow (2)	APR-JUL	4.3	5.8	7.0	45	8.3	10.3	15.7
Huntington Ck nr Huntington (2)	APR-JUL	12.9	18.6	23	47	28	36	49
Joe's Valley Reservoir Inflow (2)	APR-JUL	14.4	21	26	45	32	41	58
Ferron Ck (Upper Station) nr Ferron	APR-JUL	13.2	17.1	20	51	23	28	39
Seven Mile Ck nr Fish Lake	APR-JUL	2.40	3.60	4.50	64	5.50	7.20	7.00
Colorado R nr Cisco (2)	APR-JUL	1440	1900	2250	48	2630	3240	4650
Mill Ck at Sheley Tunnel nr Moab	APR-JUL	1.24	1.77	2.20	44	2.70	3.60	5.00
Muddy Ck nr Emery	APR-JUL	4.8	7.1	9.0	45	11.1	14.5	19.9
Pine Ck nr Escalante	APR-JUL	0.38	0.78	1.13	47	1.55	2.30	2.40
South Ck ab Lloyd's Res nr Monticell	MAR-JUL	0.16	0.28	0.41	30	0.58	0.92	1.38
	APR-JUL	0.10	0.22	0.35	26	0.52	0.86	1.34
San Juan R nr Bluff (2)	APR-JUL	400	535	640	52	755	935	1230

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNTINGTON NORTH	4.2	4.0	4.0	3.9
JOE'S VALLEY	61.6	48.9	42.5	41.4
KEN'S LAKE	2.3	1.8	1.1	1.4
MILL SITE	16.7	10.2	10.2	8.6
SCOFIELD	65.8	53.5	27.7	34.7

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
PRICE RIVER	3	24	37
SAN RAFAEL RIVER	3	33	38
MUDDY CREEK	1	25	33
FREMONT RIVER	3	55	59
LASAL MOUNTAINS	1	14	13
BLUE MOUNTAINS	1	34	30
WILLOW CREEK	1	2	2
SOUTHEASTERN UTAH	13	29	37

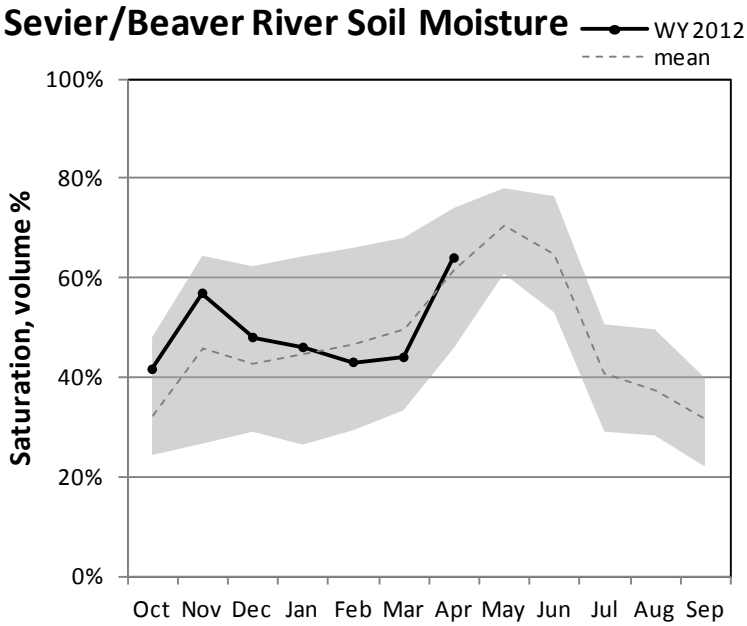
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

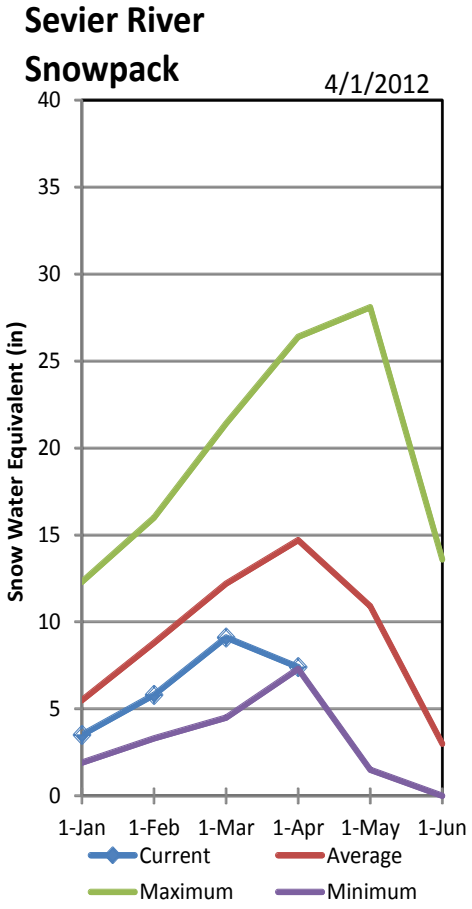
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

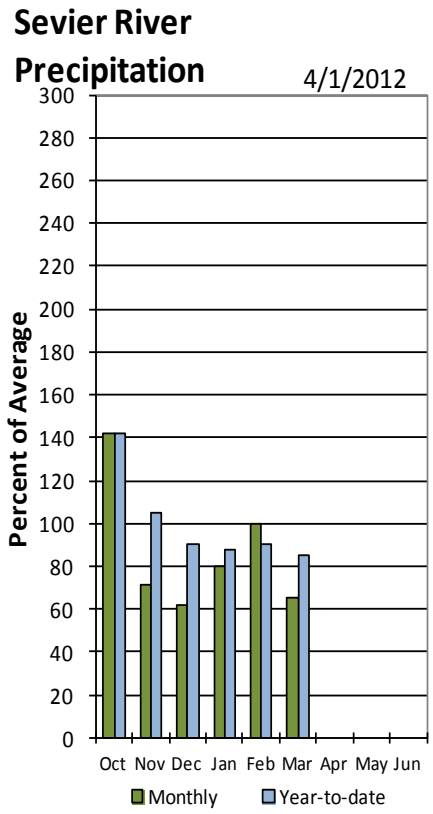
Sevier and Beaver River Basins
April 1, 2012

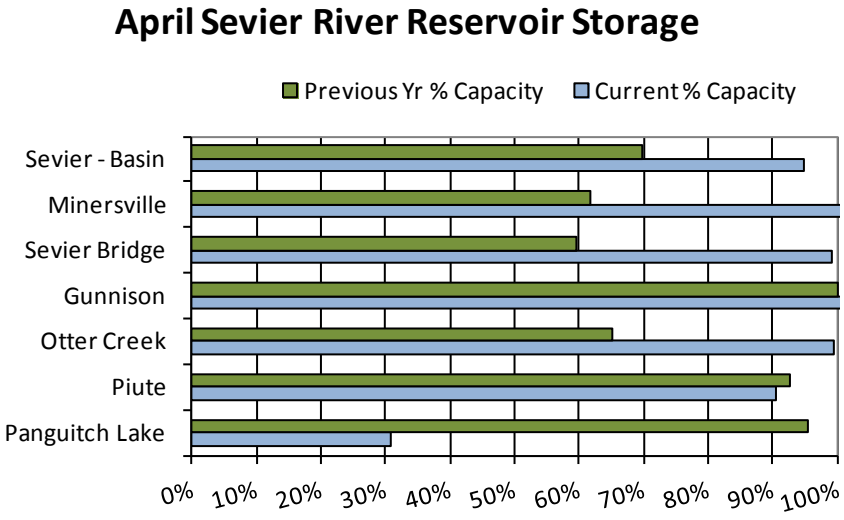
Snowpack on the Sevier River Basin is much below normal at 50% of average and only 37% of last year – near record lows. Individual sites range from 0% at Agua Canyon, Bryce Canyon, Long Valley and Panguitch to 95% at Farnsworth Lake. Precipitation during March was much below average at 65% of normal, bringing the seasonal accumulation (Oct-Mar) to 85% of average. Soil moisture estimates in runoff producing areas are at 64% of saturation in the upper 2 feet of soil compared to 68% last year. Streamflow forecasts range from 42% to 66% of average. Reservoir storage is at 95% of capacity, 25% more than last year. Surface Water Supply Indices are: Upper Sevier 27%, Lower Sevier 69% and Beaver 44%. Runoff conditions are much below average across all basins. Reservoir storage is in excellent condition.



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.





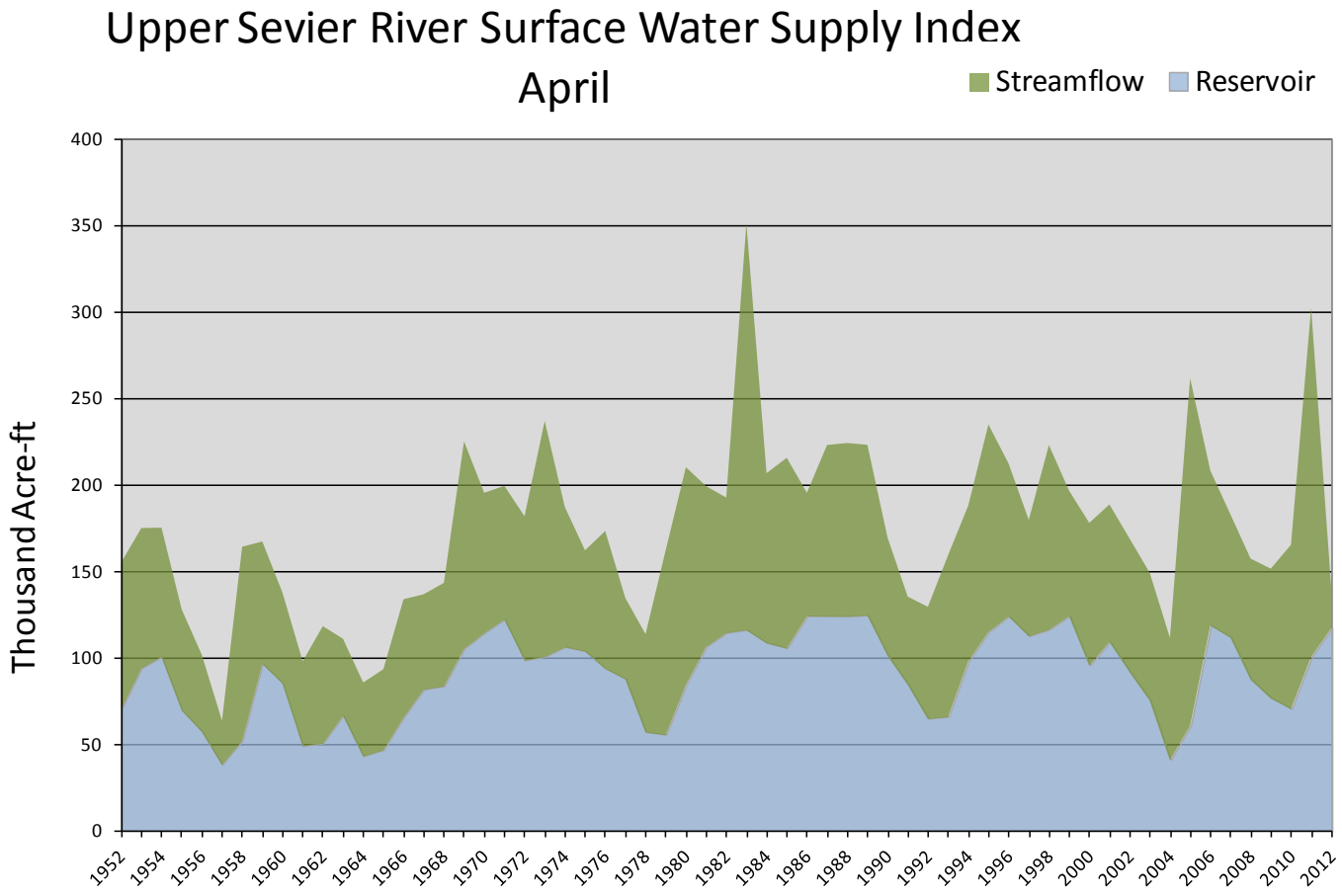


April 1, 2012

Upper Sevier Surface Water Supply Index

Basin or Region	March EOM* Piute & Otter Creek Reservoir	April-July Forecast Inflow to Piute Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Upper Sevier	**117.2**	**23**	**140**	**-1.88**	**27**	**67,60,68,03**

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

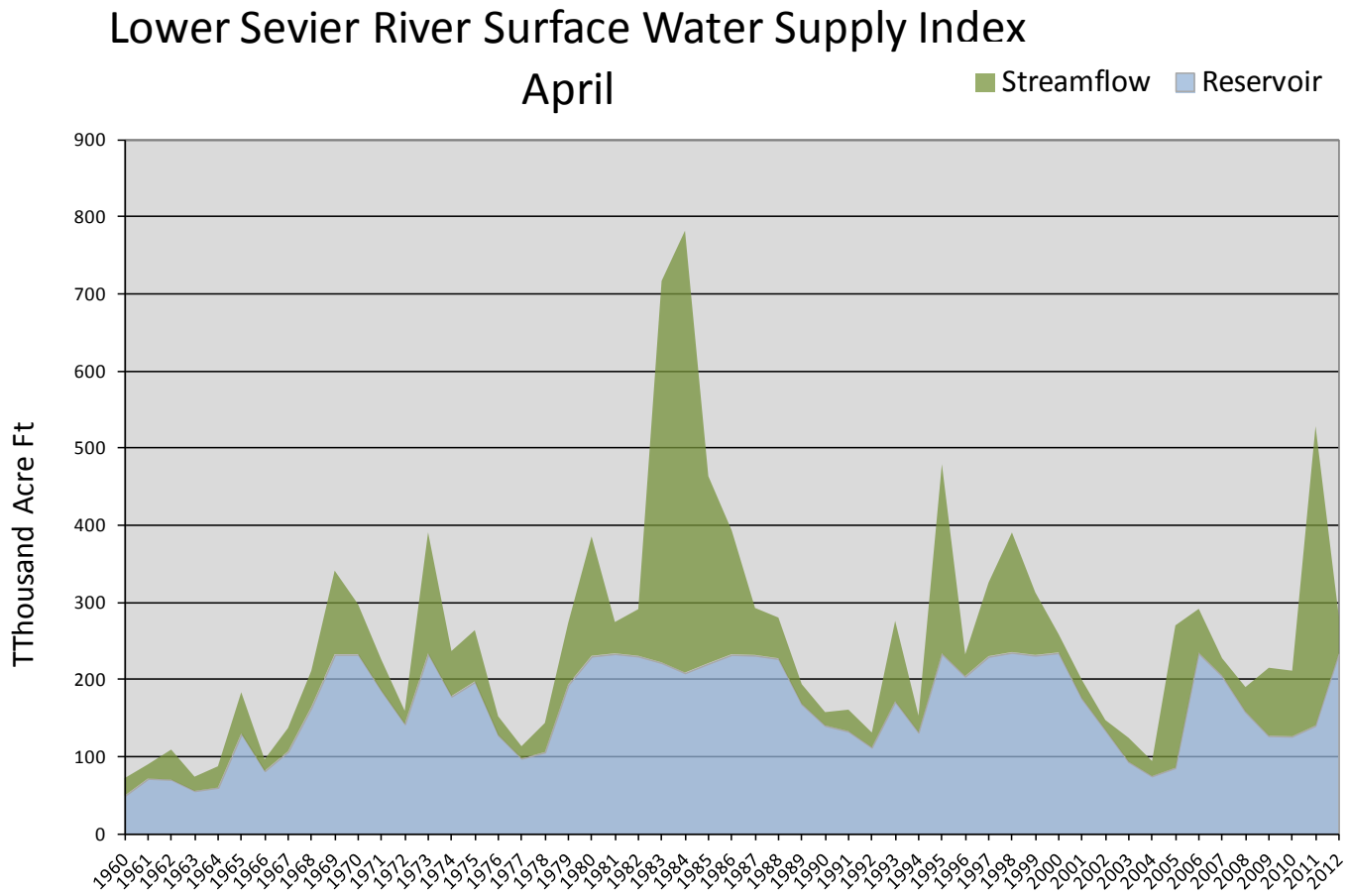


April 1, 2012

Lower Sevier Surface Water Supply Index

Basin or Region	March EOM* Sevier Bridge Reservoir	April-July Forecast Inflow to Sevier Bridge Reservoir	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Lower Sevier	**234.1**	**47**	**281**	**1.54**	**69**	**93,88,82,06**

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

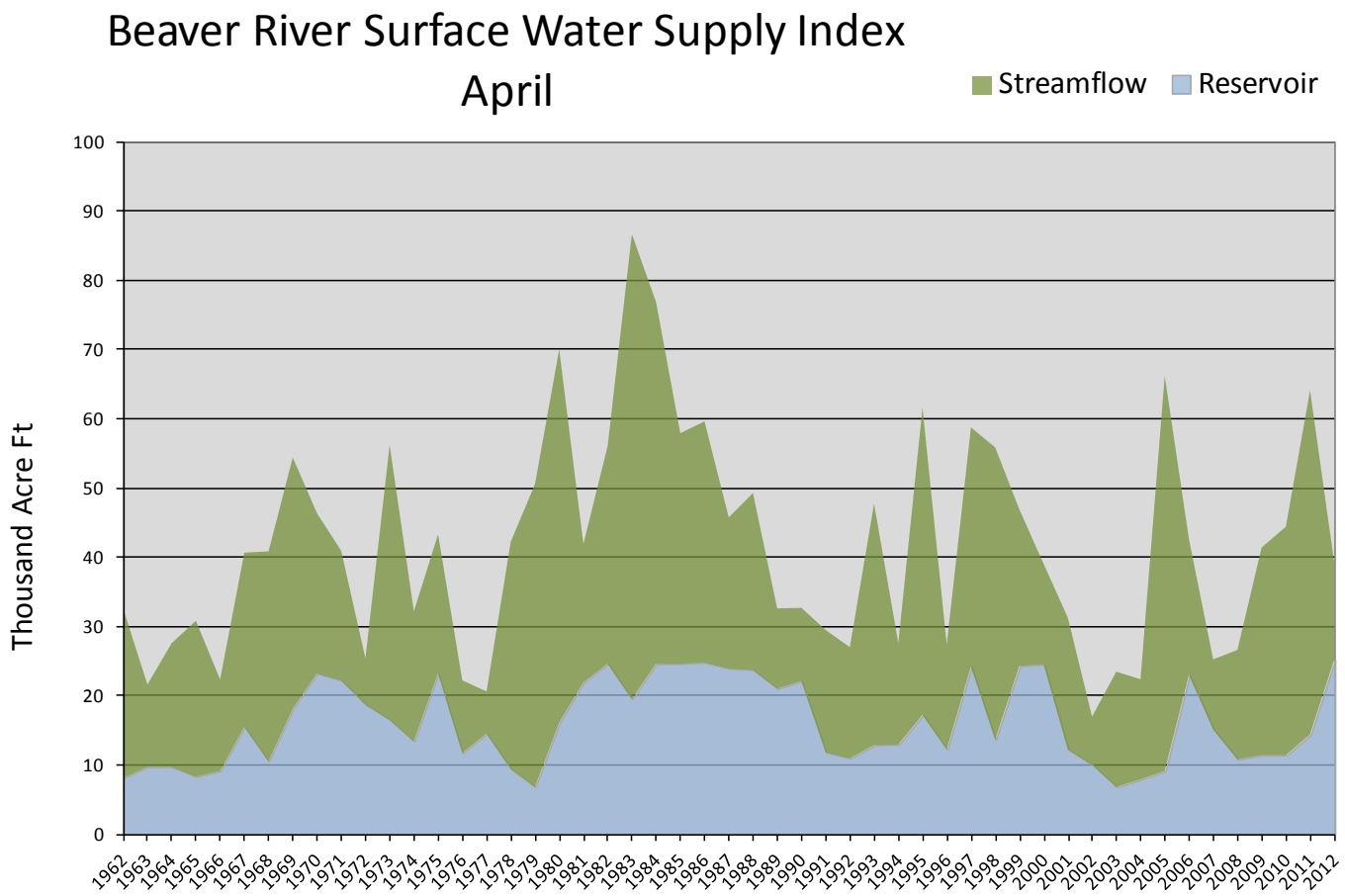


April 1, 2012

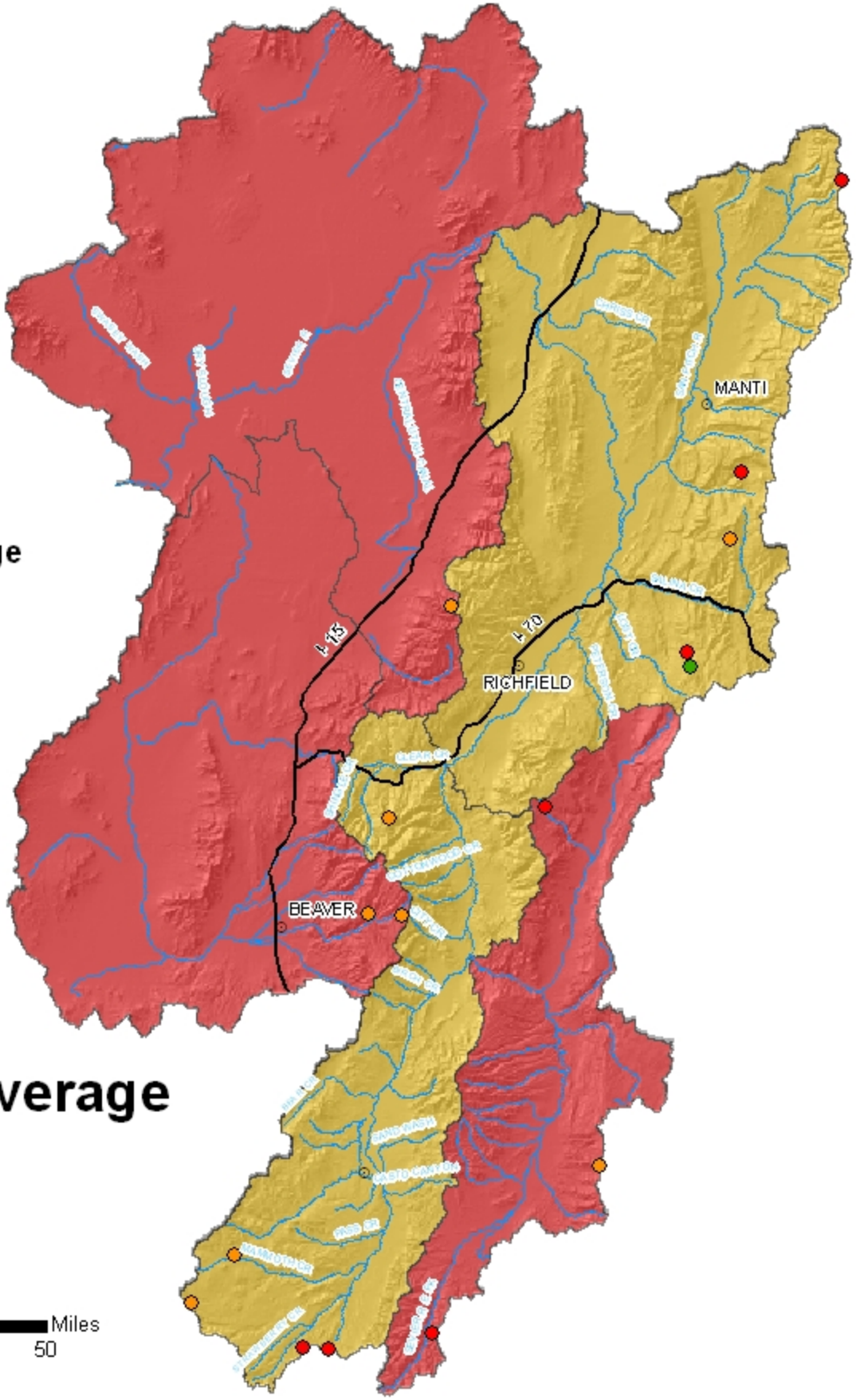
Beaver Surface Water Supply Index

Basin or Region	March EOM* Minersville Reservoir	April-July forecast Beaver River at Beaver	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Beaver	**25.2**	**14.0**	**39.2**	**-0.48**	**44**	**90,00,67,68**

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



Sevier & Beaver Basins



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
50 %

0 5 10 20 30 40 50 Miles

Provisional Data
Subject to Revision

SEVIER & BEAVER RIVER BASINS as of April 1, 2012

SEVIER & BEAVER RIVER BASINS
Streamflow Forecasts - April 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	3.6	13.0	51	23	37	26
Sevier R at Hatch	APR-JUL	7.6	18.0	25	46	32	42	55
Sevier R nr Kingston	APR-JUL	1.0	7.1	16.0	49	25	38	33
EF Sevier R nr Kingston	APR-JUL	3.7	15.2	23	66	31	42	35
Sevier R bl Piute Dam	APR-JUL	2.0	20	40	61	60	88	66
Clear Ck ab Diversions nr Sevier	APR-JUL	0.8	5.7	9.0	41	12.3	17.2	22
Salina Ck nr Emery	APR-JUL	0.36	2.20	4.20	47	6.20	9.00	9.00
Manti Ck Blw Dugway Ck Nr Manti	APR-JUL	6.0	8.2	10.0	55	11.9	15.0	18.3
Sevier R nr Gunnison	APR-JUL	3.0	29	47	44	65	93	106
Chicken Ck nr Levan	APR-JUL	0.95	1.51	2.00	44	2.60	3.60	4.50
Oak Creek nr Oak City	APR-JUL	0.42	0.63	0.80	48	0.99	1.31	1.66
Beaver R nr Beaver	APR-JUL	0.9	8.7	14.0	52	19.3	27	27
Minersville Res Inflow	APR-JUL	2.2	4.6	7.0	42	10.0	16.0	16.6

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GUNNISON	20.3	20.5	20.3	16.3
MINERSVILLE (RkyFd)	23.3	25.2	14.4	17.9
OTTER CREEK	52.5	52.2	34.2	43.5
PIUTE	71.8	65.0	66.5	58.5
SEVIER BRIDGE	236.0	234.1	140.5	189.7
PANGUITCH LAKE	22.3	6.9	21.3	152.9

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER SEVIER RIVER	8	34	46
EAST FORK SEVIER RIVER	3	39	40
SOUTH FORK SEVIER RIVER	5	30	50
LOWER SEVIER RIVER	6	45	51
BEAVER RIVER	2	43	60
SEVIER & BEAVER RIVER BAS	16	39	50

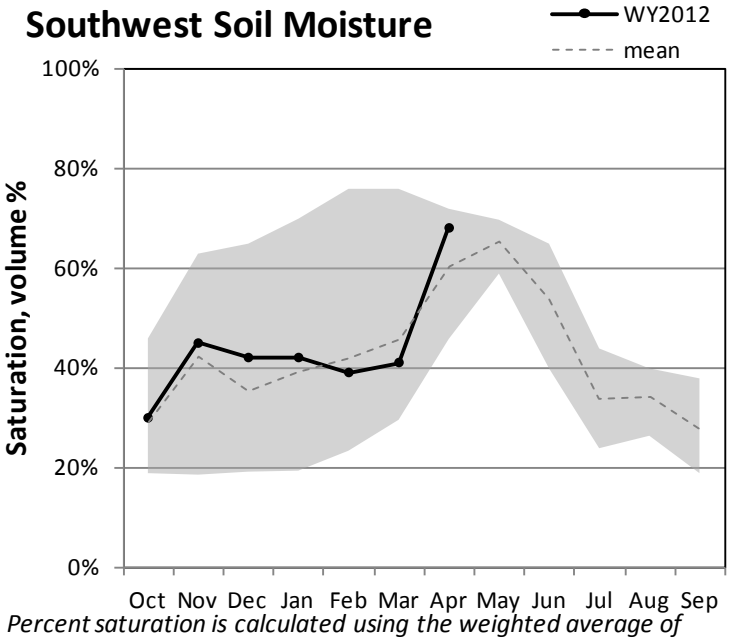
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

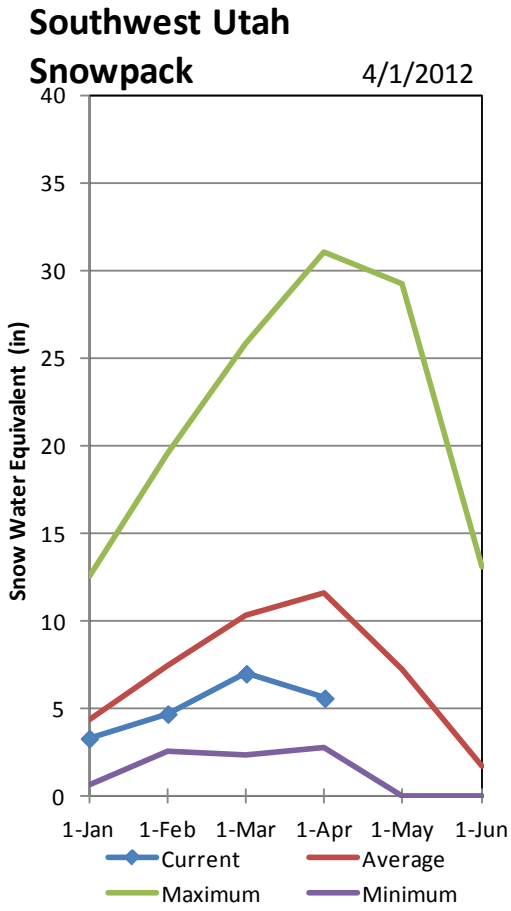
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.
(3) - Median value used in place of average.

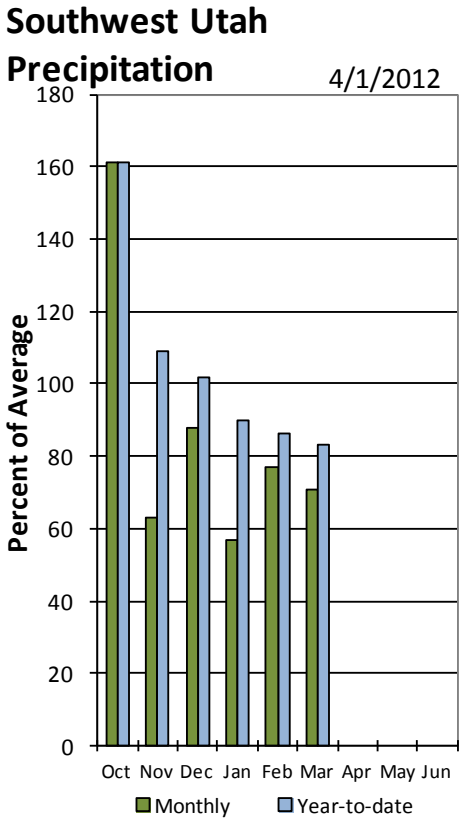
E. Garfield, Kane, Washington, & Iron Co.
April 1, 2012

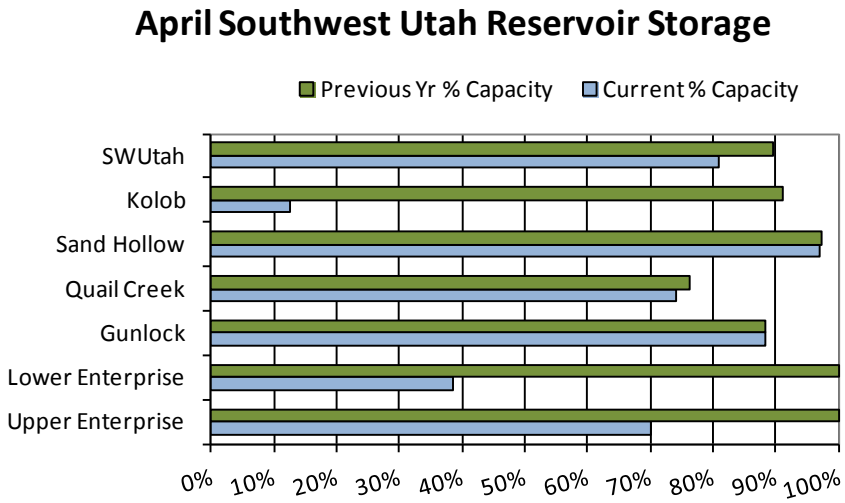
Snowpacks in this region are much below average at 54%, which is 36% of last year. Individual sites range from bare, to 84% of average at Donkey Reservoir Snotel. March precipitation was below average at 72%, bringing the seasonal accumulation (Oct-Mar) to 83% of average. The average soil moisture estimate in runoff producing areas is at 68% of saturation within the upper 2 feet of soil, compared to 69% last year. Forecast streamflows (Apr–July) range from 32% to 44% of average. Reservoir storage is at 81% of capacity, 8% lower than last year at this time. The Surface Water Supply Index is at 30%, 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.





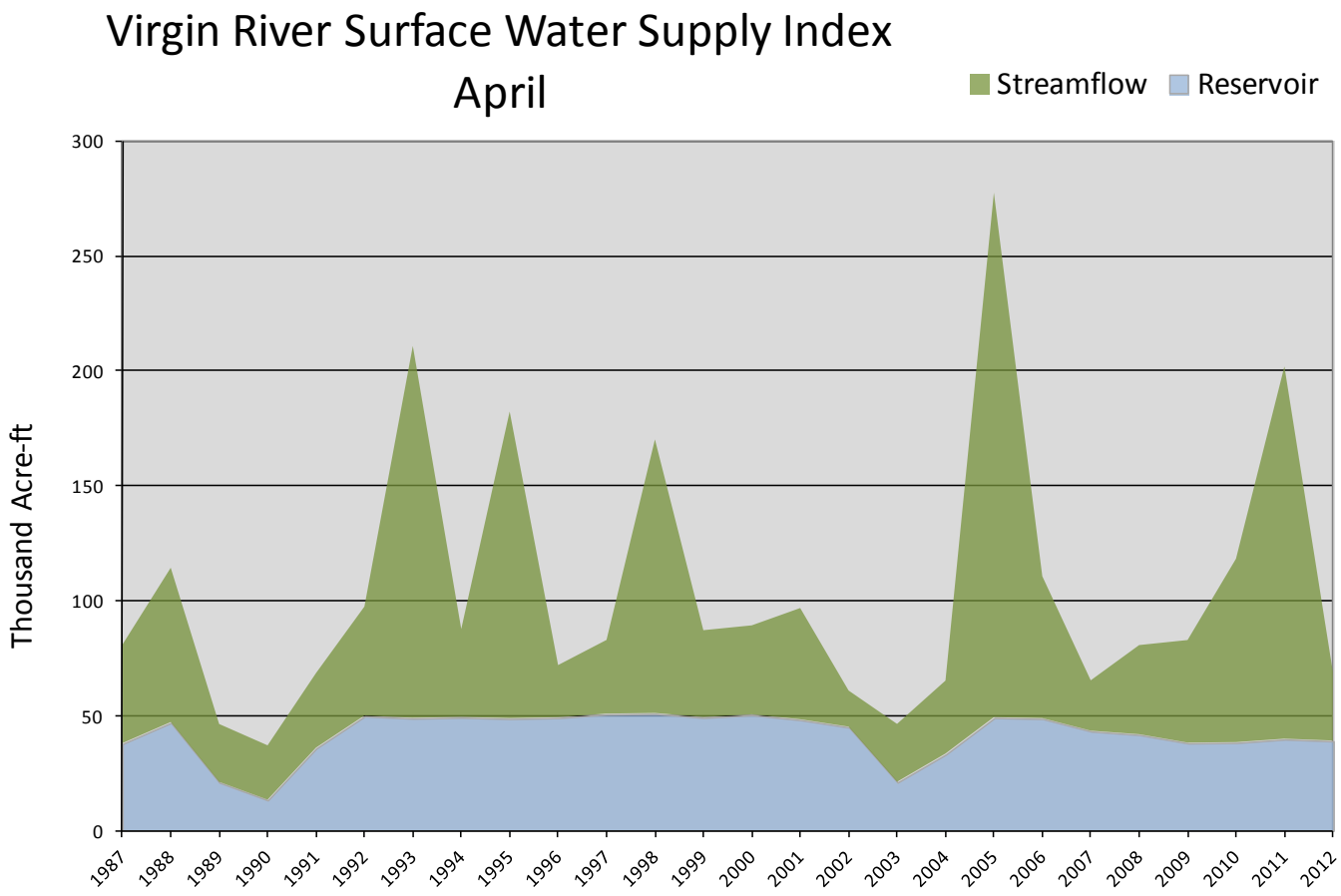


April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Quail Creek and Gunlock Reservoirs	April-July forecast Virgin and Santa Clara Rivers	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI
	*KAF^*	*KAF*	*KAF*		*%*	
Virgin River	**38.9**	**30.0**	**68.9**	**-1.70**	**30**	**07,91,96,08**

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



E. Garfield, Kane, Washington & Iron County

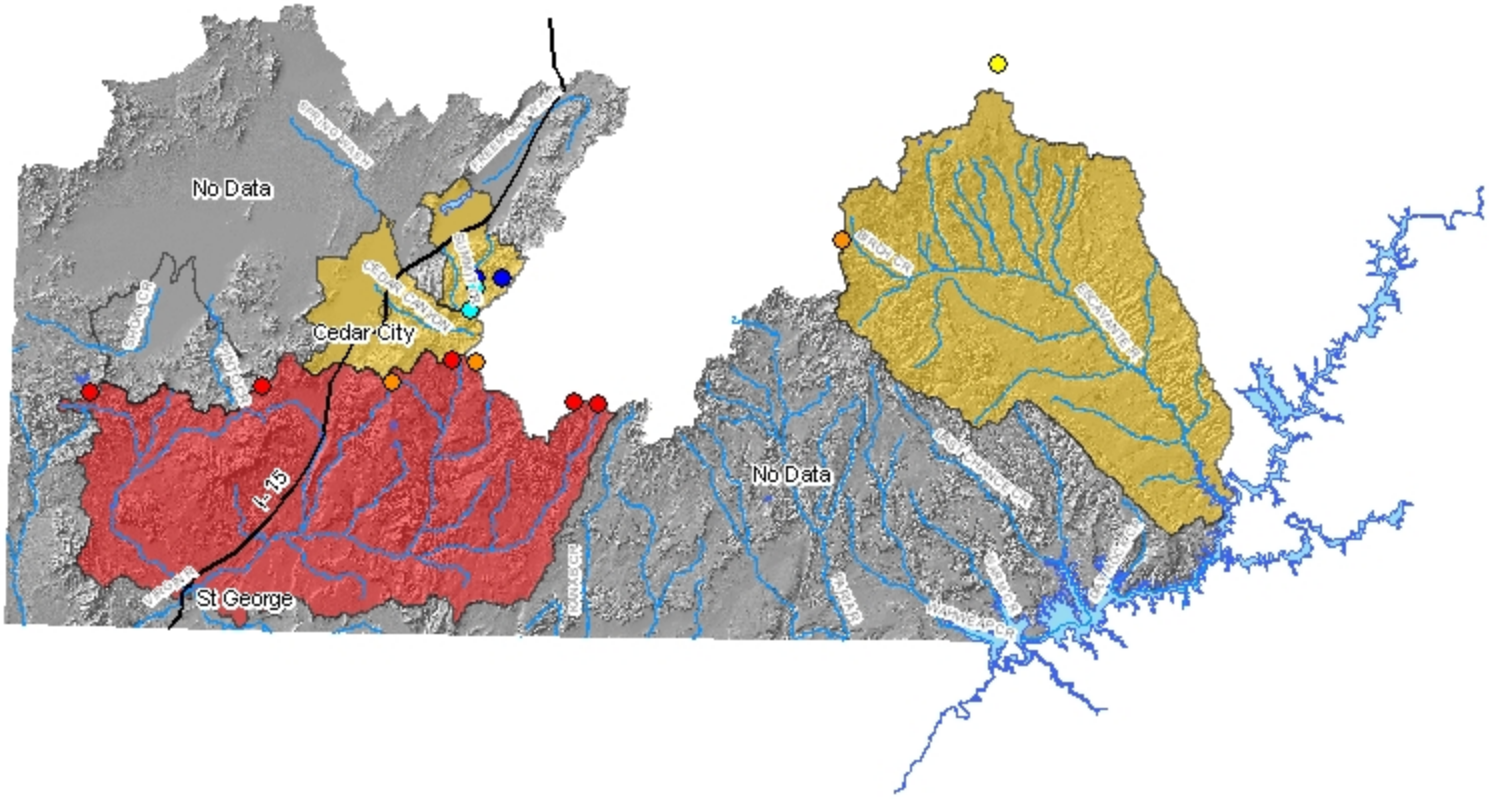
Watershed % of Average

- 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
48 %

Provisional Data
Subject to Revision

Miles
0 5 10 20 30 40 50

E. GARFIELD, KANE, WASHINGTON, & IRON Co. as of April 1, 2012

E. GARFIELD, KANE, WASHINGTON, & IRON Co.
Streamflow Forecasts - April 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	1840	2760	3500	44	4320	5690	7930
Virgin R at Virgin	APR-JUL	18.4	24	28	44	32	40	64
Virgin R nr Hurricane	APR-JUL	14.0	19.7	25	36	31	41	69
Santa Clara R nr Pine Valley	APR-JUL	1.02	1.56	2.00	36	2.50	3.30	5.50
Coal Ck nr Cedar City	APR-JUL	2.2	6.2	9.0	47	11.8	15.8	19.3

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

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GUNLOCK	10.4	9.2	9.2	4.5
LAKE POWELL	24322.0	15465.0	12837.0	---
QUAIL CREEK	40.0	29.7	30.5	31.0
UPPER ENTERPRISE	10.0	7.0	10.0	---
LOWER ENTERPRISE	2.6	1.0	2.6	137.1

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

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
VIRGIN RIVER	5	27	47
PAROWAN	2	36	59
ENTERPRISE TO NEW HARMONY	2	0	0
COAL CREEK	2	31	55
ESCALANTE RIVER	2	60	67
SOUTHWESTERN UTAH	9	32	48

* 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.

April 1, 2012

Surface Water Supply Index

Basin or Region	March EOM* Reservoirs	April-July Stream Forecast	Reservoir + Streamflow	SWSI#	Percentile	Years with similar SWSI	done
	*KAF^*	*KAF*	*KAF*		*%*		
Bear River	**994**	**130**	**1124**	**1.17**	**64**	**70,68,48,66**	x
Ogden River	**94**	**80**	**174**	**-1.62**	**31**	**09,10,79,96**	x
Weber River	**357**	**190**	**547**	**-1.14**	**36**	**76,10,09,93**	x
Provo River	**414**	**65**	**479**	**-0.25**	**47**	**07,08,10,05**	x
West Uintah Basin	**174**	**137**	**311**	**-0.68**	**42**	**01,08,73,74**	x
East Uintah Basin	**54.2**	**51.0**	**105**	**-2.21**	**24**	**82,06,96,00**	x
Price River	**53.5**	**23.0**	**76.5**	**1.60**	**69**	**97, 79, 06, 95**	x
Joe's Valley	**48.9**	**26.0**	**74.9**	**-1.50**	**32**	**92, 94, 04, 07**	x
Ferron Creek	**12.3**	**20.0**	**32.3**	**-2.13**	**24**	**88, 94, 10, 00**	x
Moab	**1.8**	**2.2**	**4.0**	**-2.24**	**23**	**04, 09, 03, 01**	x
Upper Sevier River	**117**	**23**	**140**	**-1.88**	**27**	**67,60,68,03**	x
Lower Sevier River	**234**	**47**	**281**	**1.54**	**69**	**93,88,82,06**	x
Beaver River	**25.2**	**14.0**	**39.2**	**-0.48**	**44**	**90,00,67,68**	x
Virgin River	**38.6**	**42**	**81.0**	**-1.70**	**30**	**08,97,09,99**	x

**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.

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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/**

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Utah Water Supply Outlook Report

tural Resources Conservation Service
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