

WATER SUPPLY OUTLOOK



CALIFORNIA AND NORTHERN NEVADA

FEBRUARY
2007



California Nevada River Forecast Center
NOAA - National Weather Service
Sacramento, California

DEFINITIONS:

Acre-Feet: The volume equal to one acre covered one foot deep (43,560 cubic feet).

Forecast Period: Generally, April 1st through July 31st, unless otherwise noted.

April-High Forecast Period: For the Lake Tahoe Stage Rise, the period from April 1st to the highest recorded lake stage level.

April 1st Average: The April 1st snowpack average is used as a reference point because it is normally the end of the winter snowfall season and the beginning of the spring runoff season.

Residual Period: The forecast period from the first of the current month through September 30th.

Probability Forecasts: Precipitation and snowfall accumulation of known probability as determined by analysis of past records are utilized in the preparation of probability runoff forecasts. The forecasts include an evaluation of the standard error of the prediction model. The forecasts are presented at three levels of probability as follows:

- **Most Probable Volume:** Given the current hydrometeorological conditions to date, this is the best estimate of what the actual runoff volume will be this season.
- **Most Probable Volume (% Normal):** Most probable volume in percent of the 1961-1990 average.
- **Reasonable Maximum Volume:** Given current hydrometeorological conditions, the seasonal runoff that has a 10 percent chance of being exceeded.
- **Reasonable Minimum Volume:** Given current hydrometeorological conditions, the seasonal runoff that has a 90 percent chance of being exceeded.

SNOTEL: Acronym for SNOW TELemetry. This is a automated snow measurement system operated by the USDA - Natural Resources Conservation Service. These sites use meteor burst communications technology to transmit hydrometeorological information such as snow water equivalent from snow pillows, accumulated precipitation and maximum, minimum and average air temperature.

Water equivalent: The depth of water that would result from melting the snowpack at a point.

Water Year: The period from October 1st through September 30th.

General Outlook

February 1, 2007

January ended at a disappointing note as upper level ridging was the dominant feature during most of the month and helped steer storm systems away from California. This has resulted in much below monthly precipitation and seasonal snow pack averages for the region. Chances are good for below normal spring runoff this year unless there is substantial accumulation to the existing snow pack during the next two months.

Much of the significant precipitation in California and Nevada fell during the first week of the month. Dry conditions then prevailed to the end of January for most of the watersheds in the region. The Klamath River basin recorded the highest monthly average at about 40 percent. Watersheds in the Sierra Nevada averaged 15 to 25 percent of the January average. In Nevada, the Humboldt River basin received about 35 percent of the monthly average. The Klamath basin has the highest seasonal (October through January) average so far at 90 percent. Seasonal averages are below to much below average in the Sierra Nevada and below average for the Humboldt basin in Nevada.

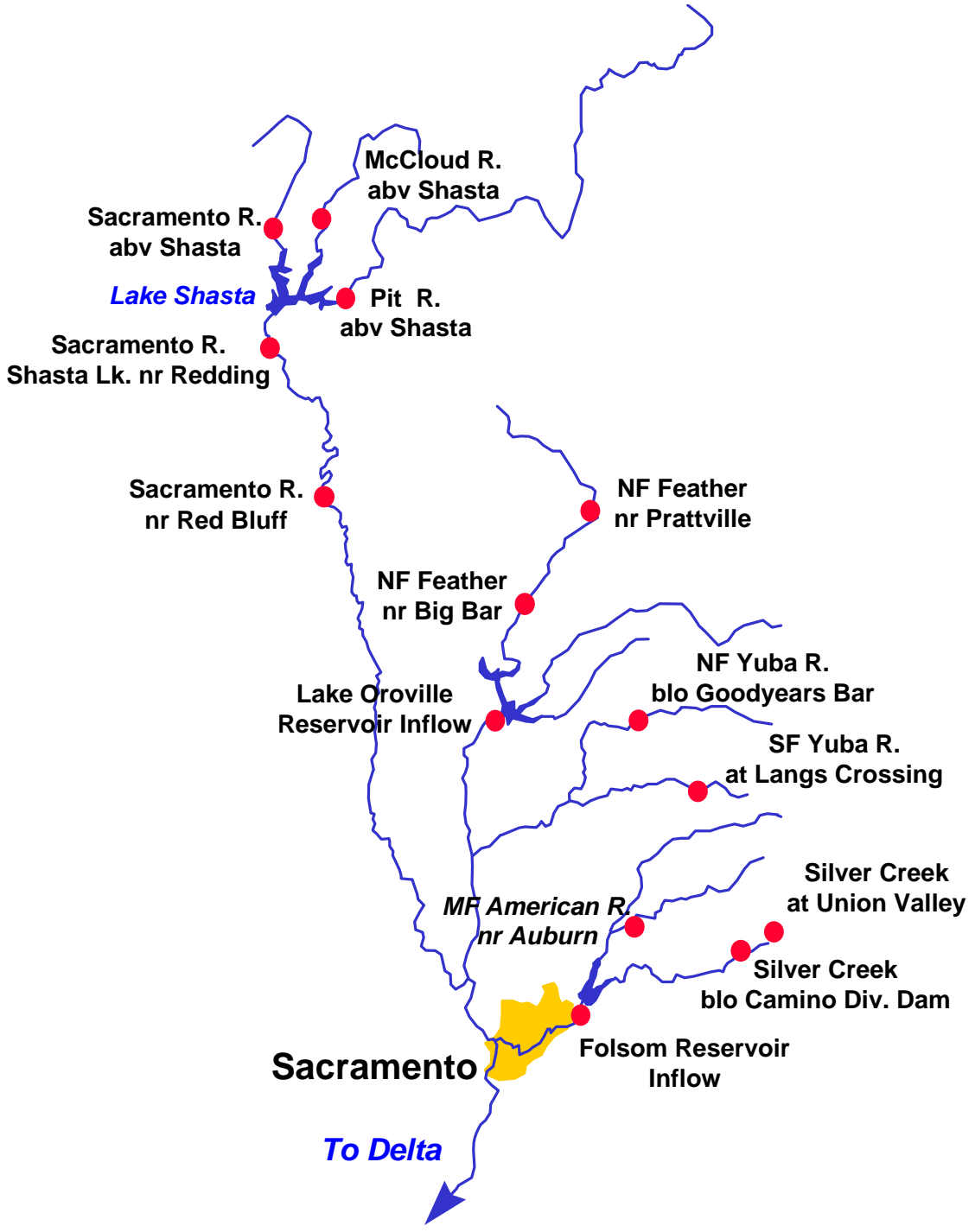
There was little snow pack accumulation during January and the cold conditions that occurred during much of the month kept melt at a minimum. However, snow pack percent of average declined from January 1st to February 1st. Preliminary reports from the California Department of Water Resources indicate that snow packs are about 38 percent of the February 1st average in the Sacramento River region, 43 percent in the San Joaquin and 34 percent in the Tulare Lake region. The April 1st average stands at 24, 27 and 21 percent, respectively. Snow packs in the Tahoe-Truckee are at 40 percent of the average-to-date, the Carson-Walker at 36 percent and the Humboldt basin at 52 percent. The Upper Klamath Lake basin snow pack stands at 77 percent of the average-to-date.

As expected for a dry January, runoff was much below average. Monthly averages range from 40 percent for the Shasta Inflow to about 16 percent for the Merced. Most of the Sierra Nevada was in the 20 to 30 percent range. East side Sierra inflows varied from 34 percent for the Truckee River basin to 68 percent for the East Walker River basin. The Upper Klamath Lake basin received 65 percent of the January average runoff while the Humboldt River at Palisade recorded about 42 percent.

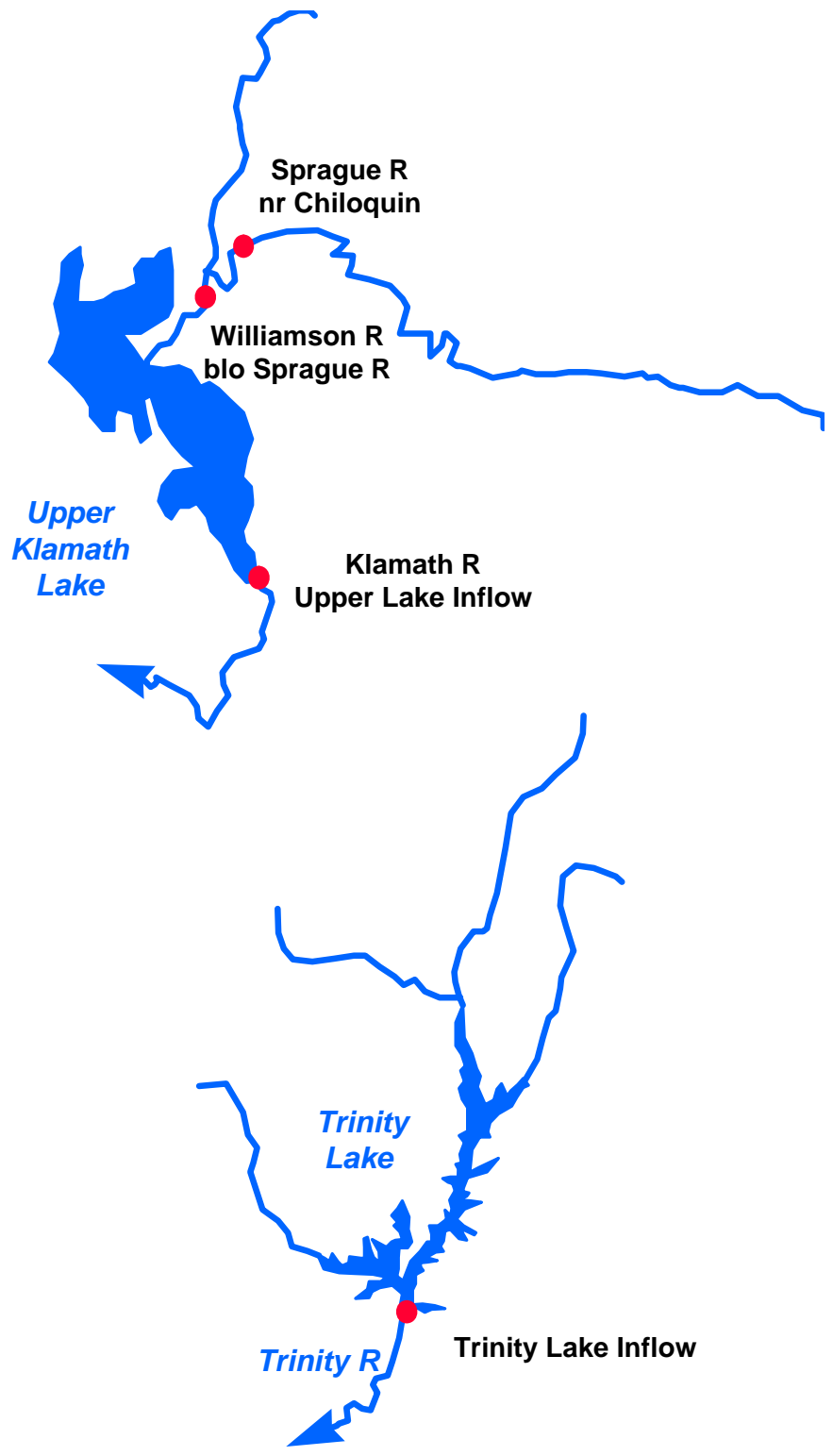
Overall reservoir storage continues to be above average, one of the bright spots in this year's water supply picture. Stored water in the Sacramento River region was at 109 percent of average for the date, the San Joaquin at 122 percent, and the Tulare Lake region at 105 percent. East-side Sierra reservoirs were at 129 percent of average. The lake level at Lake Tahoe stood at 6226.83 feet as of January 31st and usable storage was 466,100 acre feet or 128 percent of average. Storage at Lahontan Reservoir in Nevada stands at 99 percent while Rye Patch Reservoir is at 153 percent of the average-to-date. Storage at Upper Klamath Lake is about 96 percent of average.

Below to much below average spring runoff is projected for watersheds in the region. The April through July runoff forecasts vary from 73 percent for the upper Sacramento River drainages to 42 percent for the Tule and Kern River basins. Forecasts range from 34 to 48 percent for east side Sierra forecast points and 31 to 36 percent for those on the mainstem Humboldt River. The March through September forecast for the Upper Klamath Lake inflow is 76 percent.

Sacramento River Basin



Upper Klamath and Trinity River Basins



Water Supply Forecasts

Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
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COASTAL BASINS

Williamson River Sprague, blo	Mar-Sep	345	68	495	194	505
Sprague River Chiloquin, nr	Mar-Sep	220	72	345	95	305
Upper Klamath Falls River Inflow	Mar-Sep	545	76	794	290	715
Lost River Gerber Reservoir Inflow	Feb-Jul	26	55	44	7.5	47
Clear Lake Reservoir Inflow	Feb-Jul	54	51	93	13.7	105
Scott River Fort Jones, nr	Apr-Jul	120	66	225	65	181
Trinity River Trinity Lake Inflow	Apr-Jul	380	60	740	200	635

Trinity River - Inflow at Lewiston Lake Distribution (kAF)

Exceedence											
Probability	Oct-Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Apr-Jul	Water Yr
90%	218	45	70	85	80	20	15	10	5	200	548
50%	218	80	130	160	150	45	25	15	10	380	833
10%	218	155	250	310	290	90	50	20	15	740	1398

Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
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SACRAMENTO RIVER BASIN

SACRAMENTO RIVER ABOVE BEND BRIDGE

Pit River Montgomery Ck, nr	Apr-Jul	780	73	1310	520	1070
Mccloud River Shasta Lk, abv	Apr-Jul	270	73	455	180	370
Sacramento River Delta	Apr-Jul	210	72	350	140	290
Shasta Dam	Apr-Jul	1300	73	2160	900	1790
Bend Bridge, abv, Red Bluff, nr	Apr-Jul	1700	70	2900	1050	2440

FEATHER RIVER ABOVE OROVILLE RESERVOIR

NF Feather River Prattville, nr	Apr-Jul	155	47	335	55	333*
Big Bar	Apr-Jul	440	46	970	165	962*
Feather River Oroville Reservoir Inflow	Apr-Jul	820	47	1800	290	1760

Water Supply Forecasts

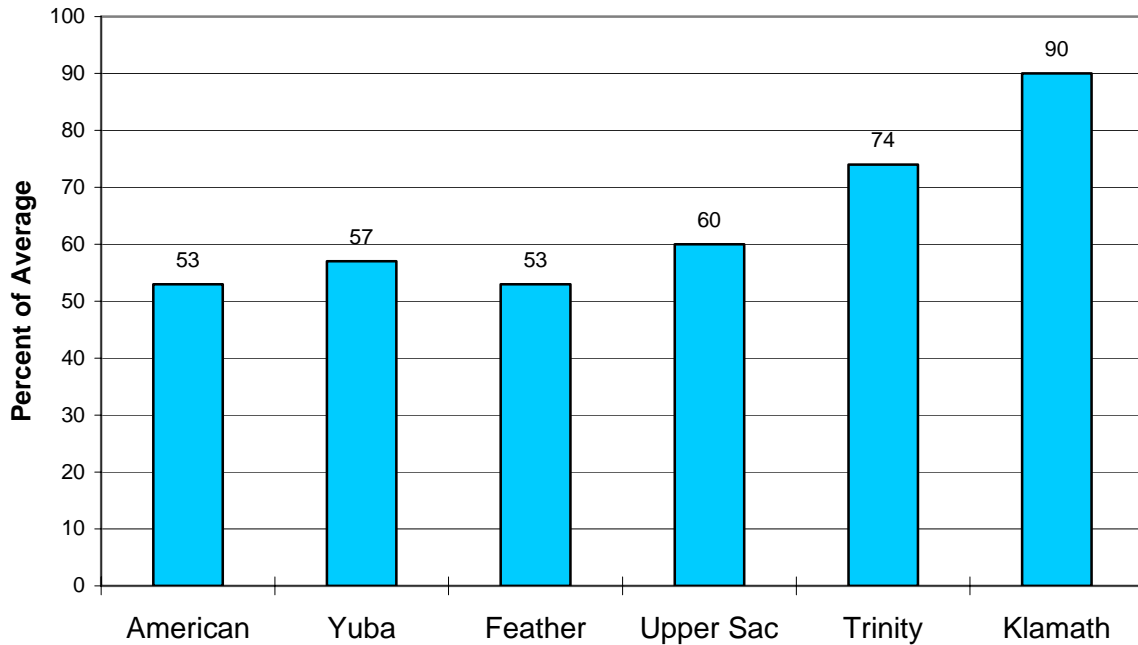
		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
YUBA RIVER ABOVE SMARTVILLE						
North Yuba River						
Goodyears Bar, blo	Apr-Jul	135	49	285	55	273*
South Yuba River						
Langs Crossing	Apr-Jul	115	51	245	45	225*
Yuba River						
Smartville, nr	Apr-Jul	510	51	1100	190	995
AMERICAN RIVER ABOVE FOLSOM RESERVOIR						
MF American River						
Auburn, nr	Apr-Jul	250	51	540	100	490*
Silver Ck						
Union Valley	Apr-Jul	51	52	110	20	98*
Camino Dam, blo	Apr-Jul	80	51	175	31	158*
American River						
Folsom Reservoir Inflow	Apr-Jul	640	52	1400	220	1230

***30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterisk have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this report when the complete data sets become available.**

Sacramento/Trinity/Klamath River Basins

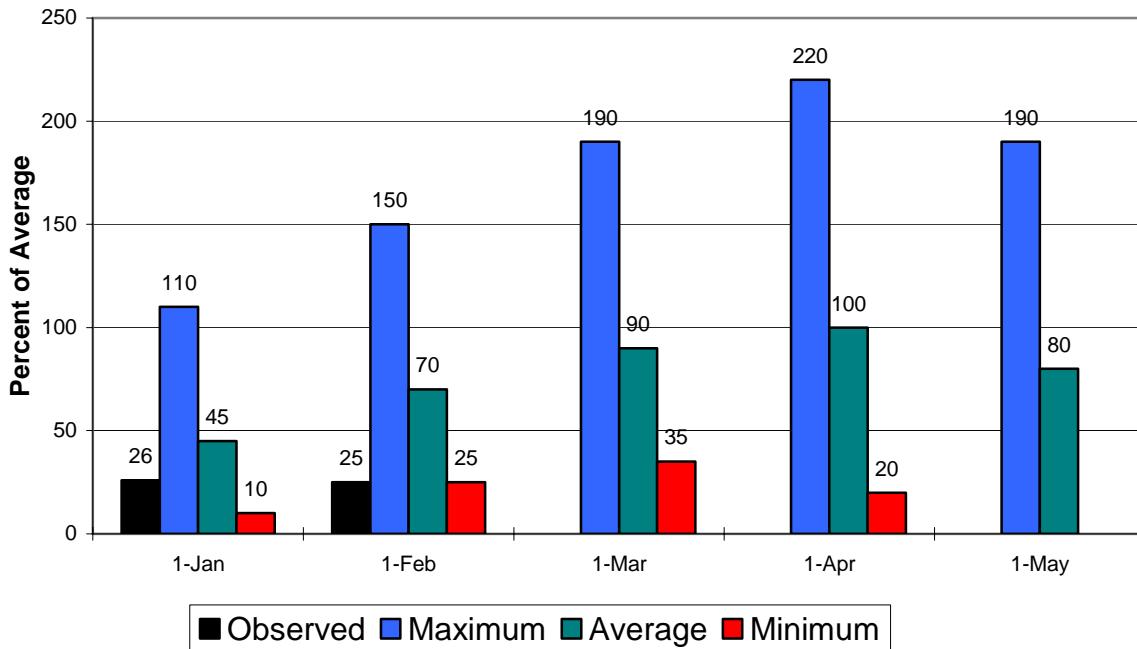
Seasonal Basin Precipitation

October 1 to Date



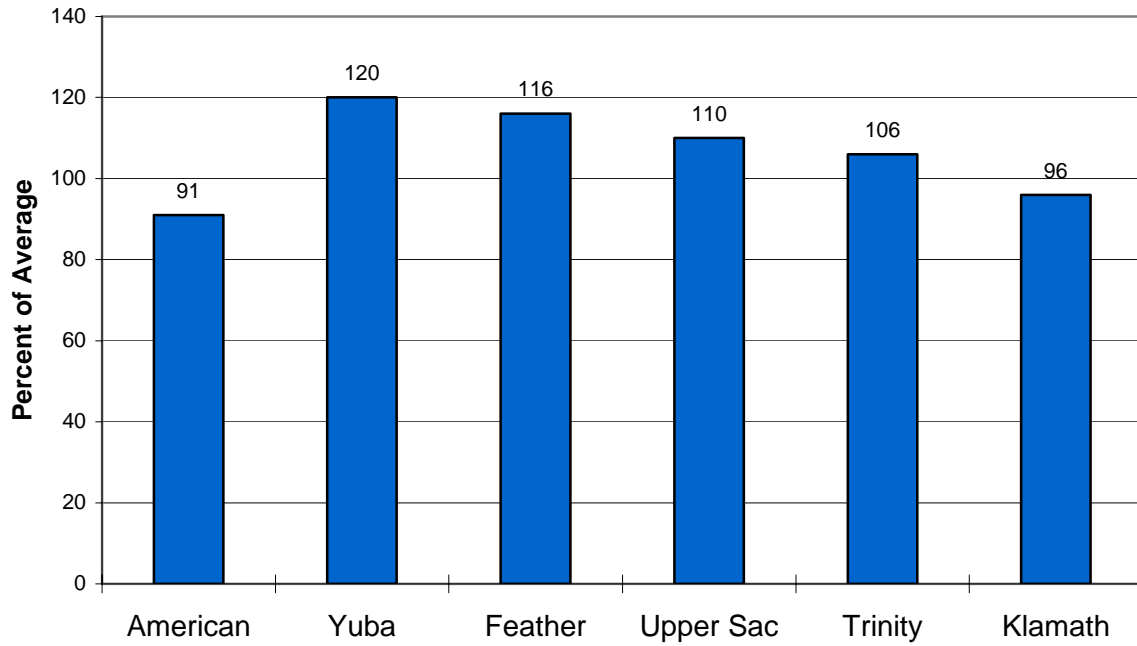
Seasonal Basin Snowpack

Water Content in % of April 1 Average

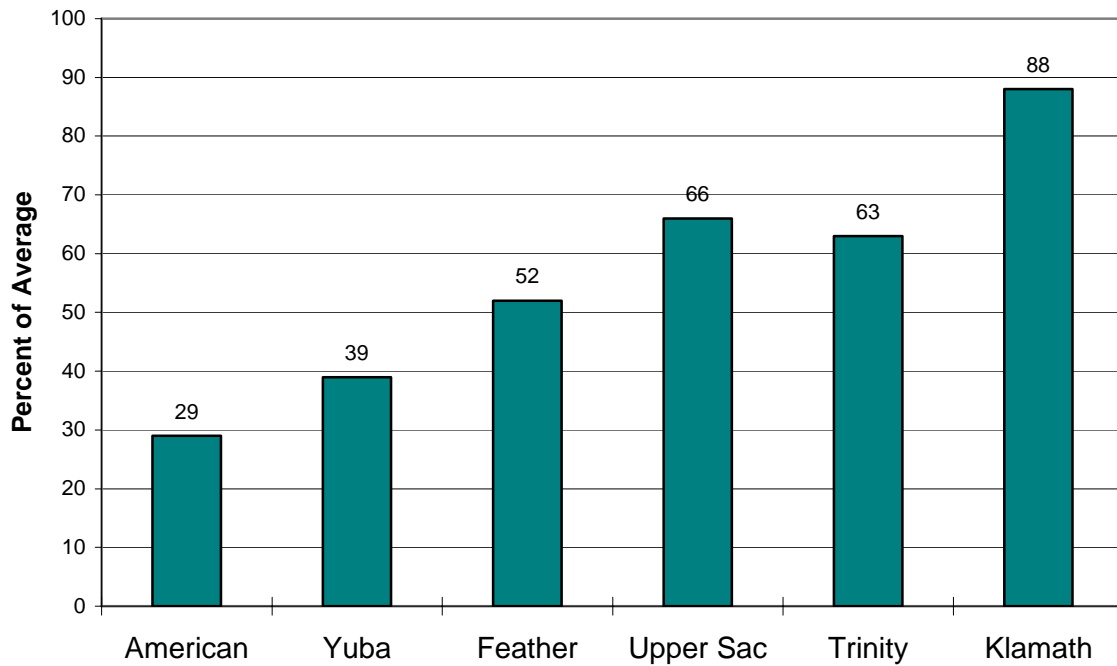


Sacramento/Trinity/Klamath River Basins

Basin Reservoir Storage Contents of Major Reservoirs in % of Average



Seasonal Basin Runoff October 1 to Date



San Joaquin Basin



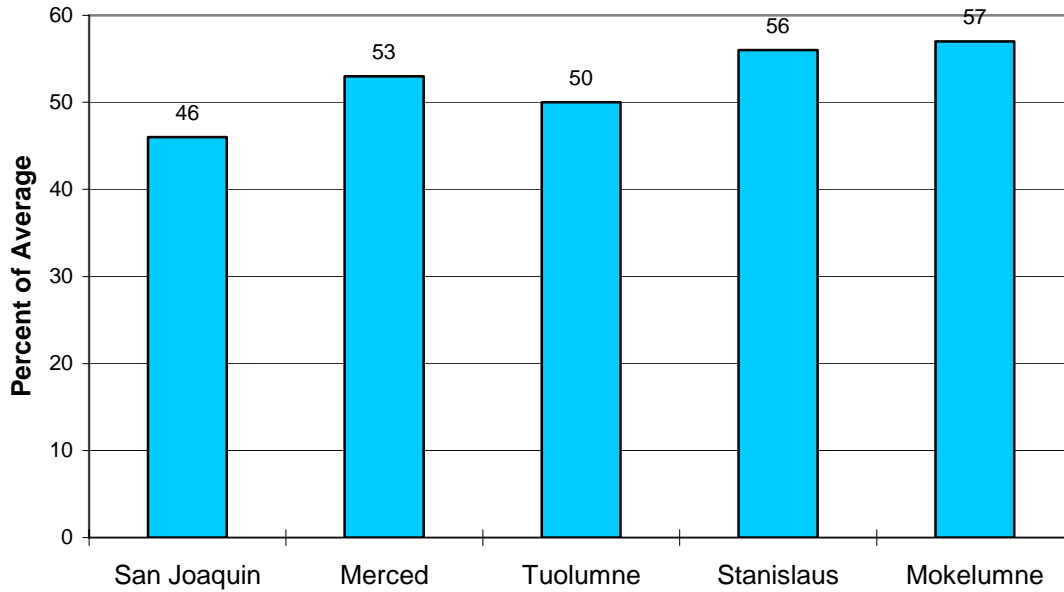
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
SF San Joaquin River						
Hooper Ck, blo, Florence Lk, nr	Apr-Jul	110	57	192	60	192*
San Joaquin River						
Millerton Lk	Apr-Jul	665	52	1190	310	1270
Merced River						
Pohono Bridge, at, Yosemite, nr	Apr-Jul	200	56	360	80	360*
Merced Falls, blo	Apr-Jul	330	51	670	160	645
Tuolumne River						
Hetch Hetchy, nr	Apr-Jul	350	59	545	160	596*
La Grange, nr	Apr-Jul	660	54	950	320	1230
MF Stanislaus River						
Beardsley Dam, blo	Apr-Jul	165	52	310	65	320*
Stanislaus River						
Goodwin Dam, blo, Knights Ferry	Apr-Jul	350	50	760	120	695
NF Mokelumne River						
West Point	Apr-Jul	225	54	500	90	416*
Mokelumne River						
Mokelumne Hill	Apr-Jul	245	53	520	110	460
Cosumnes River						
Michigan Bar	Apr-Jul	50	41	180	10.0	123

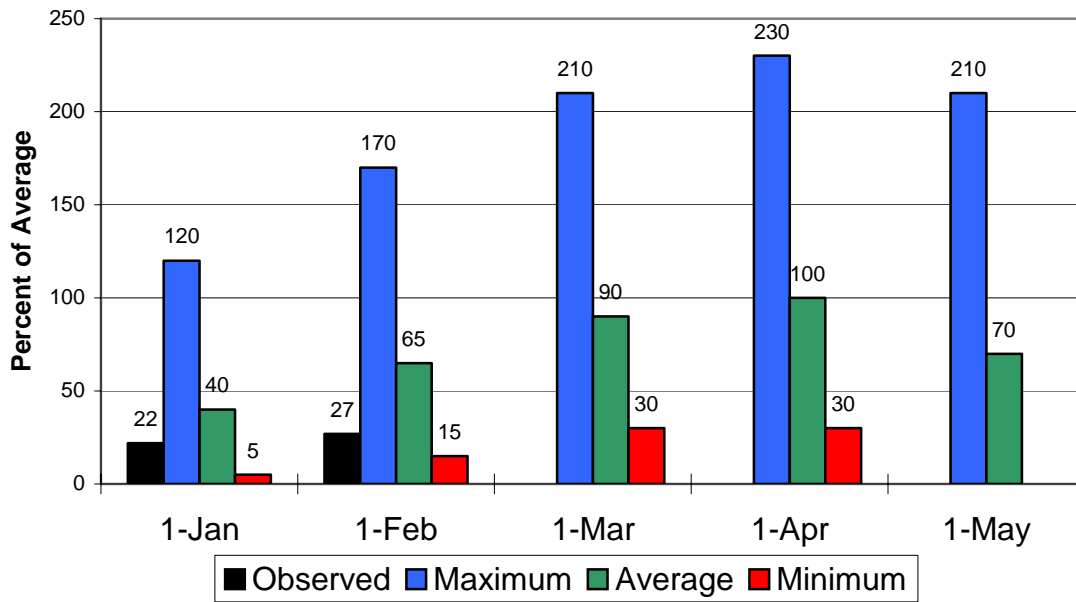
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San Joaquin Basin

Seasonal Basin Precipitation October 1 to Date



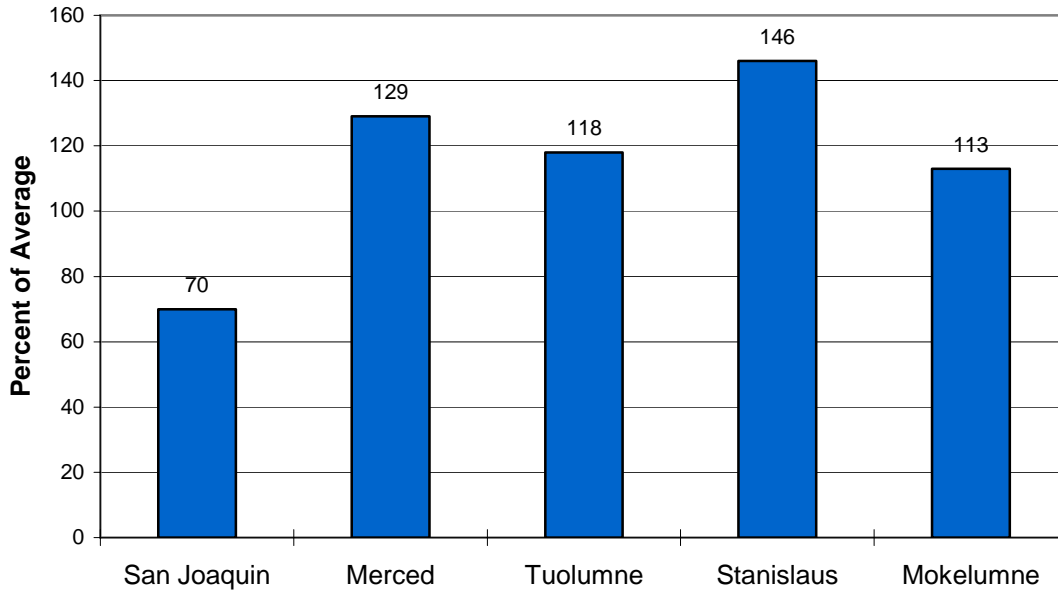
Seasonal Basin Snowpack Water Content in % of April 1 Average



San Joaquin Basin

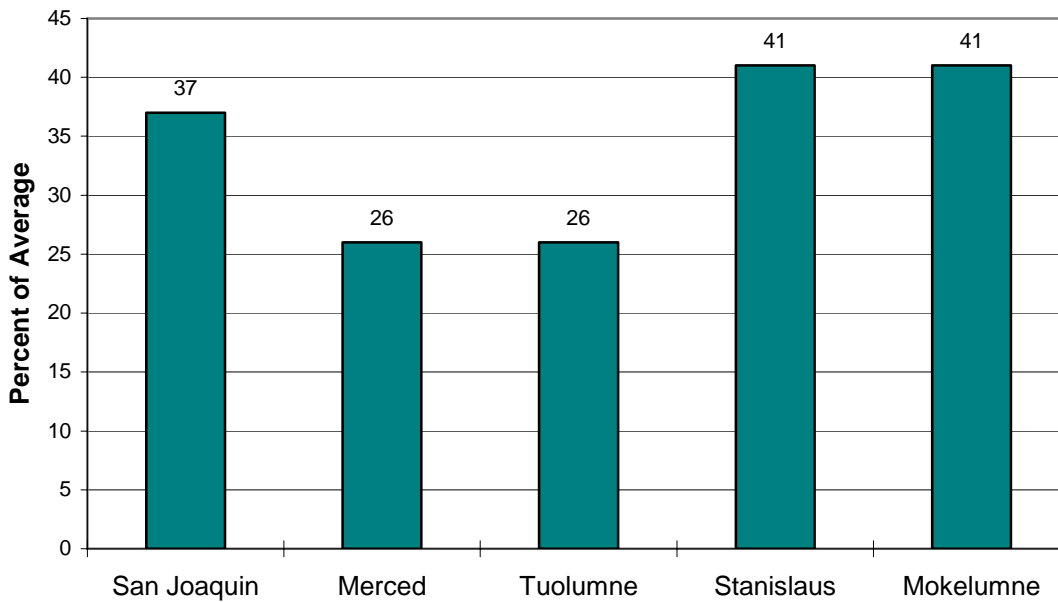
Basin Reservoir Storage

Contents of Major Reservoirs in % of Average

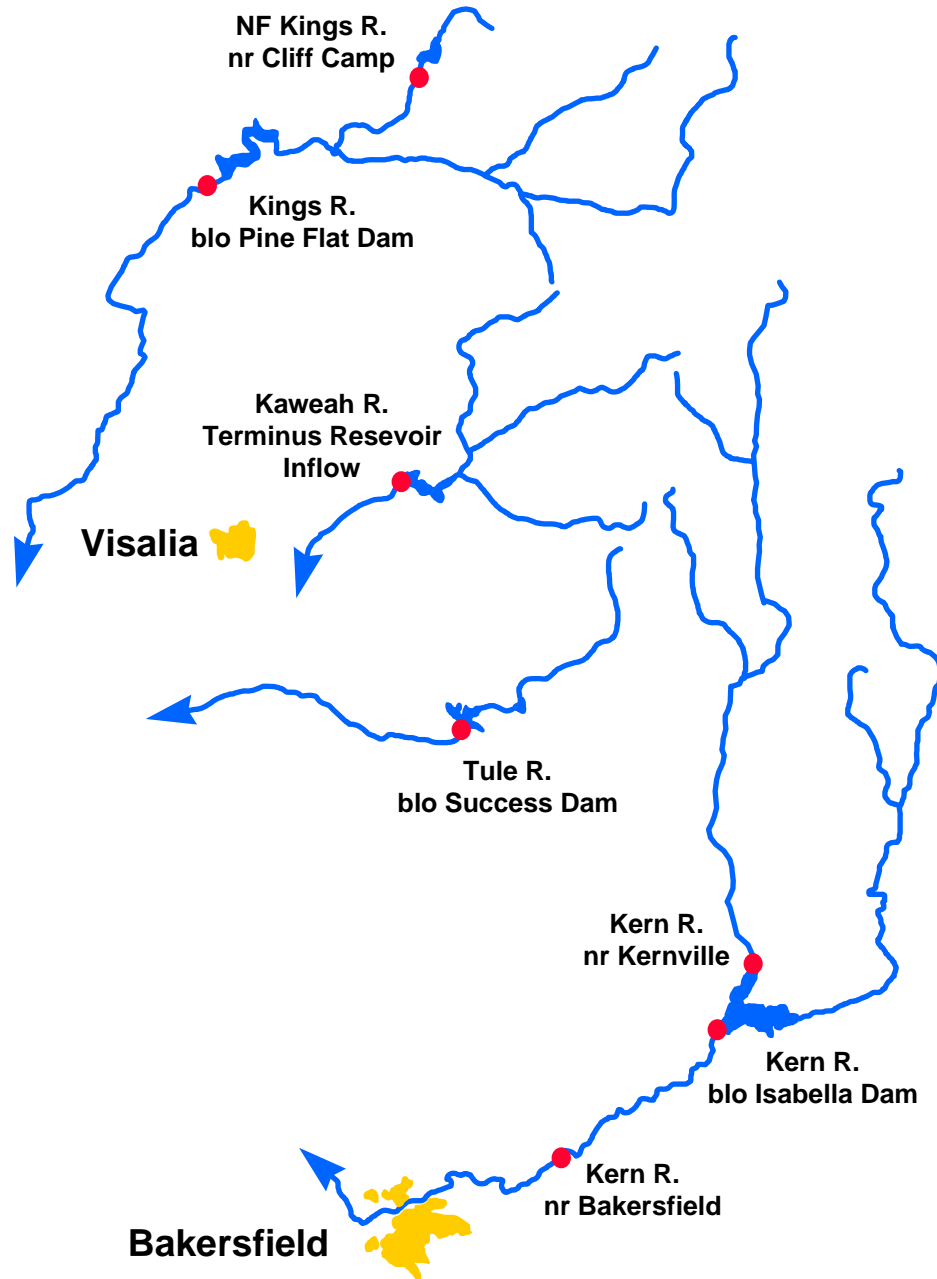


Season Basin Runoff

October 1 to Date



Tulare Basin



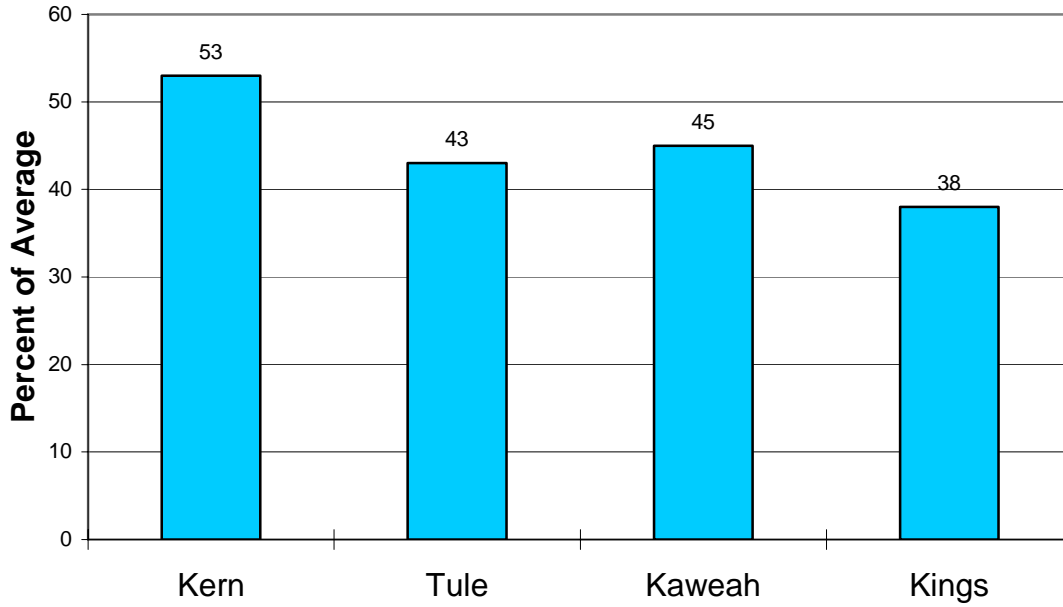
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
Kern River						
Kernville, nr	Apr-Jul	185	46	500	25	398*
Isabella Dam, blo	Apr-Jul	200	42	570	30	480
Bakersfield, nr	Apr-Jul	210	43	580	40	490
Tule River						
Success Dam	Apr-Jul	28	42	88	4.0	66
Kaweah River						
Terminus Dam	Apr-Jul	130	45	310	30	290
NF Kings River						
Cliff Camp, nr	Apr-Jul	145	60	260	29	240*
Kings River						
Pine Flat Dam, blo	Apr-Jul	640	51	1250	210	1250

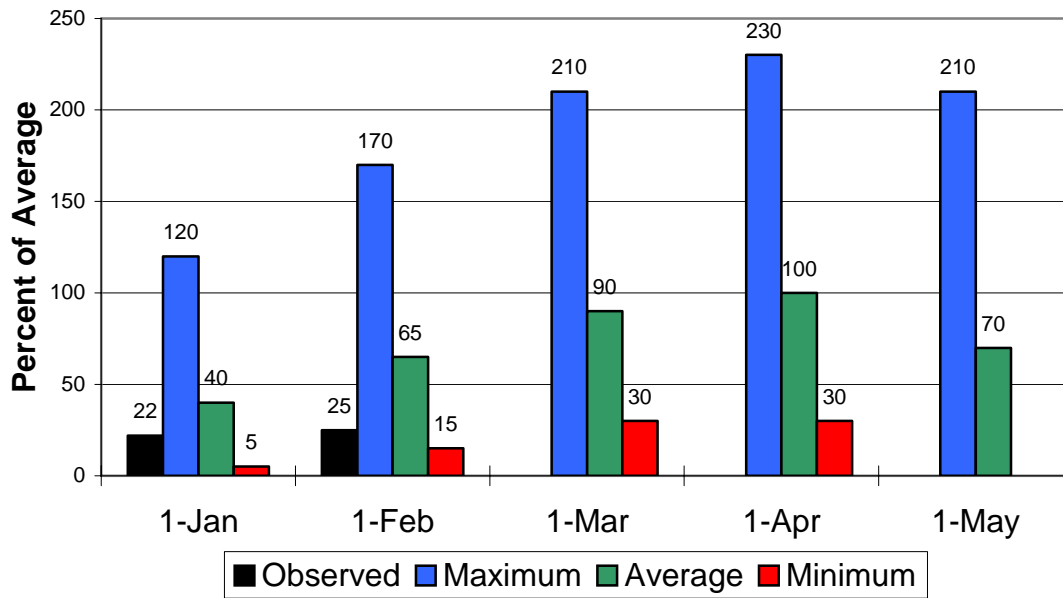
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Tulare Lake Basin

Seasonal Precipitation October 1 to Date



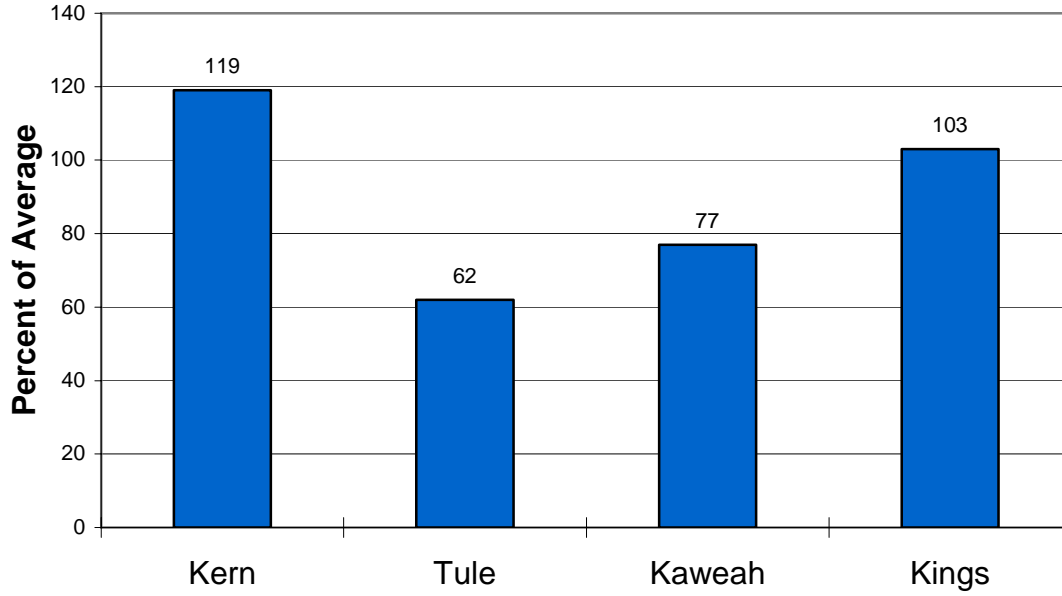
Seasonal Basin Snowpack Water Content in % of April 1 Average



Tulare Lake Basin

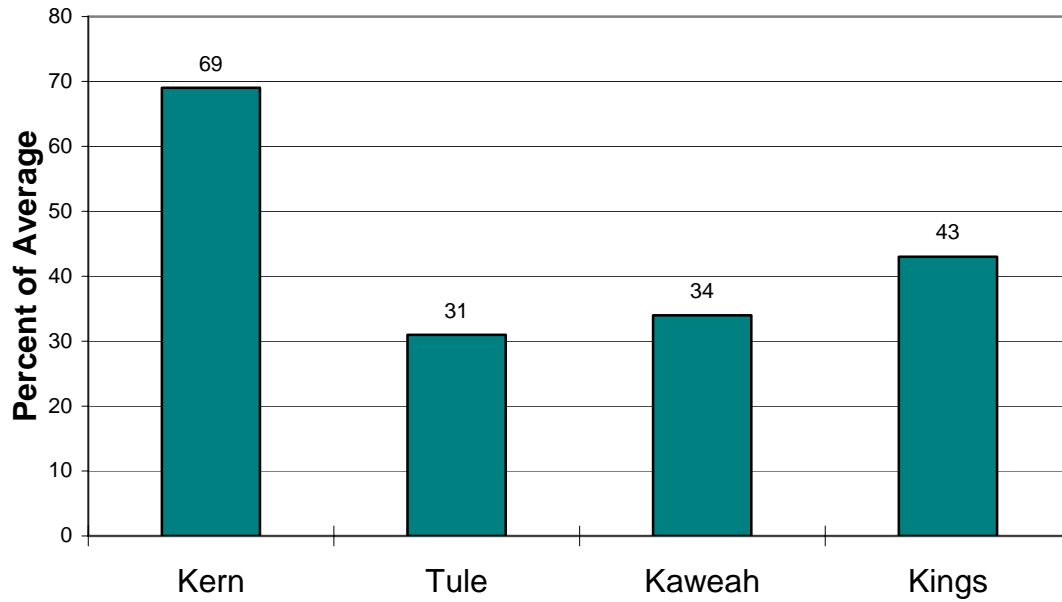
Basin Reservoir Storage

Contents of Major Reservoirs in % of Average

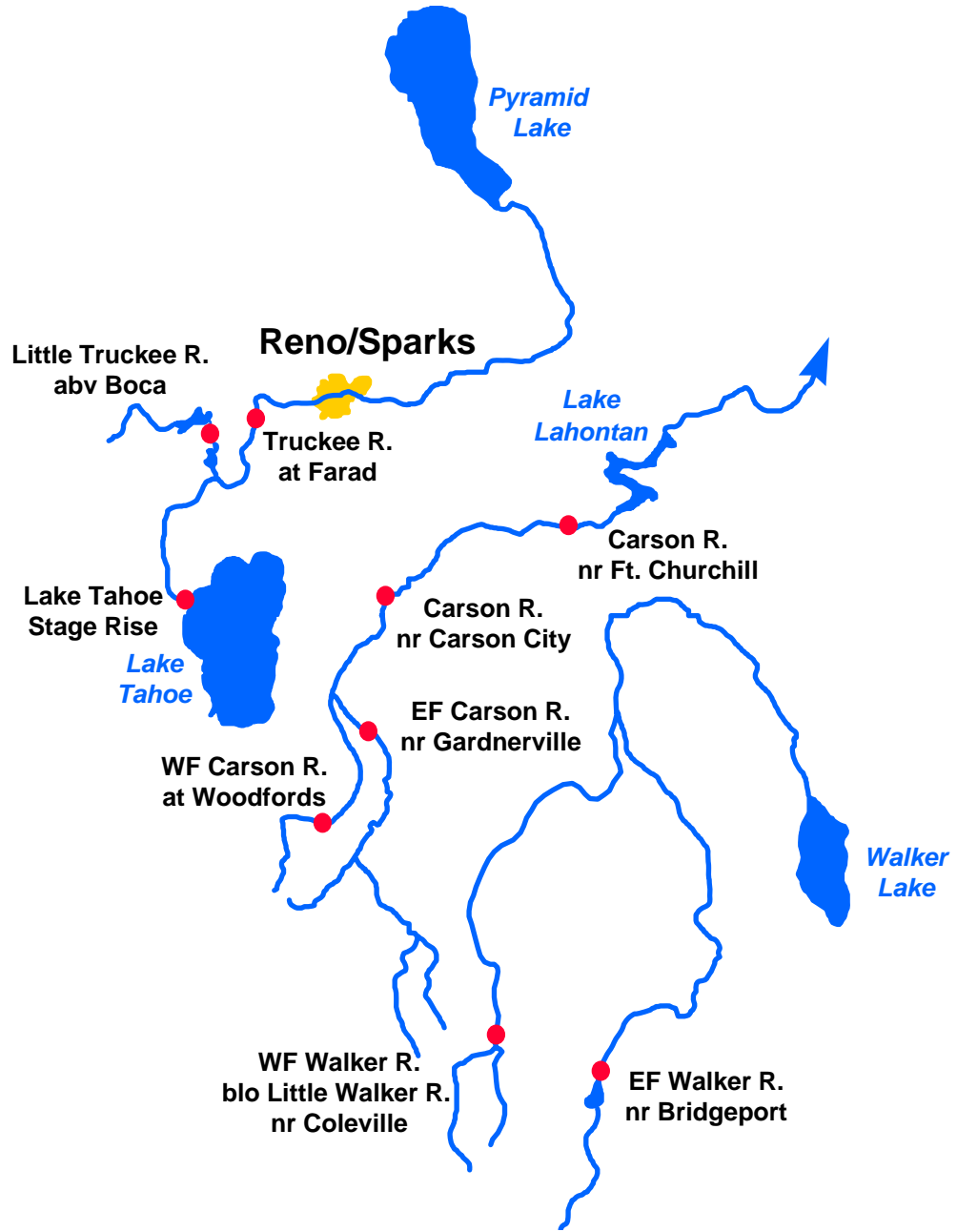


Seasonal Basin Runoff

October 1 to Date



East Side Sierra Nevada Basins



Water Supply Forecasts

Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
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Truckee River

Truckee River Lake Tahoe Stage Rise	Apr-High	0.50	36	1.59	0.18	1.38
Ltl Truckee River Boca Res, abv, Truckee, nr	Apr-Jul	27	34	92	13.6	80
Truckee River Farad	Apr-Jul	105	40	235	42	260

Carson River

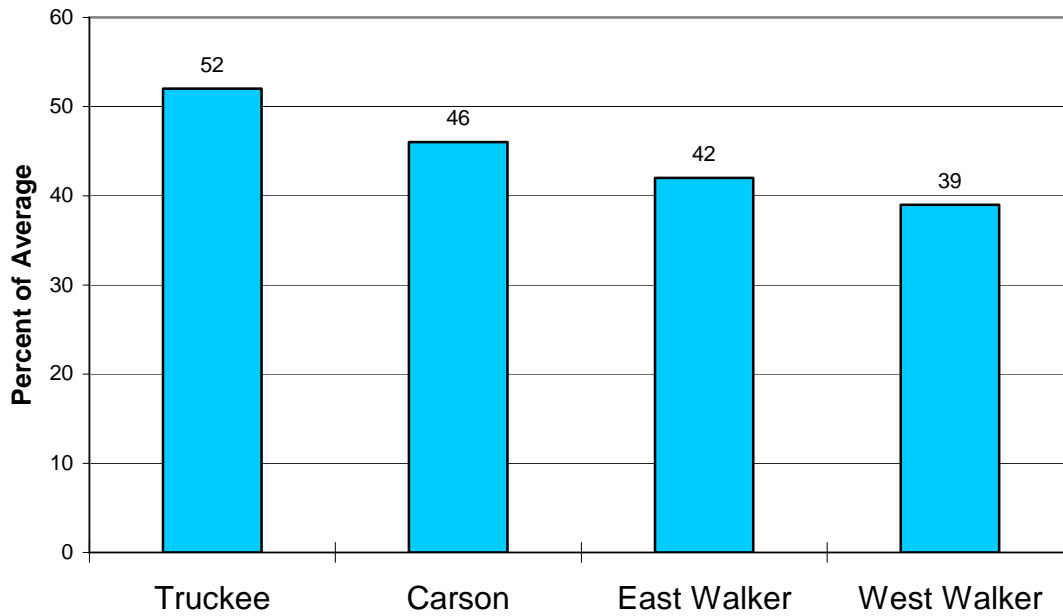
EF Carson River Gardnerville, nr	Apr-Jul	87	46	174	21	189
WF Carson River Woodfords	Apr-Jul	27	48	50	6.2	56
Carson River Carson City, nr	Apr-Jul	55	29	162	13.2	188
Fort Churchill, nr	Apr-Jul	45	25	154	12.5	178

Walker River

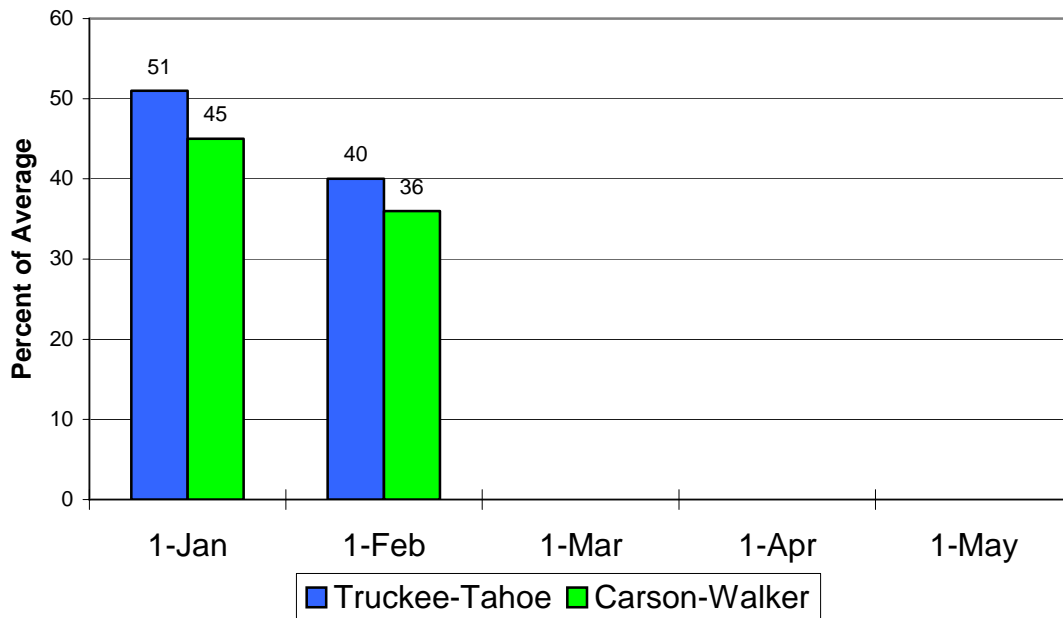
East Walker River Bridgeport, nr	Apr-Aug	25	37	67	6.7	67
West Walker River Ltl Walker, blo, Coleville, nr	Apr-Jul	60	38	150	31	156

East Side Sierra Nevada Basins

Seasonal Basin Precipitation October 1 to Date



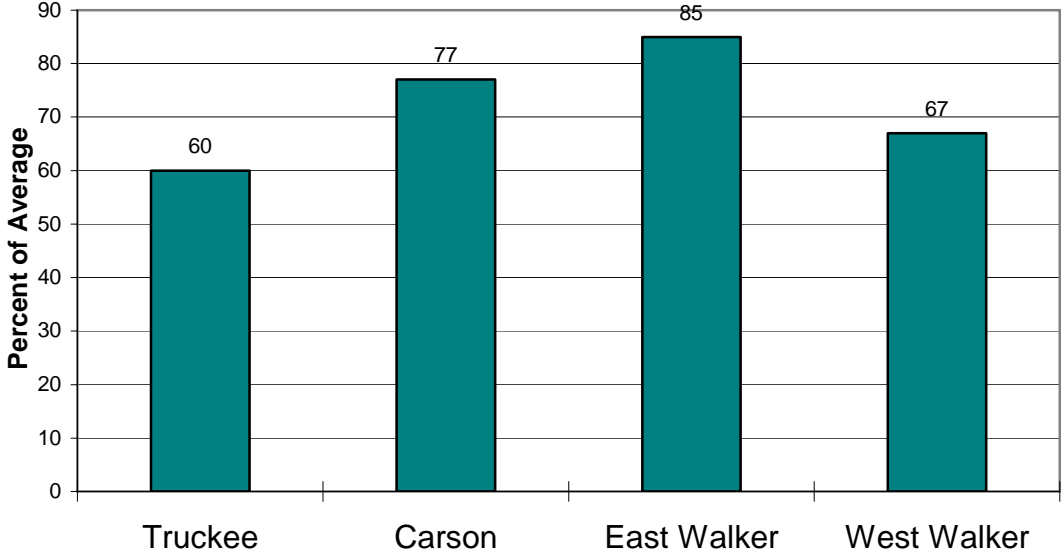
Basin Snowpack % of Average SWE to Date



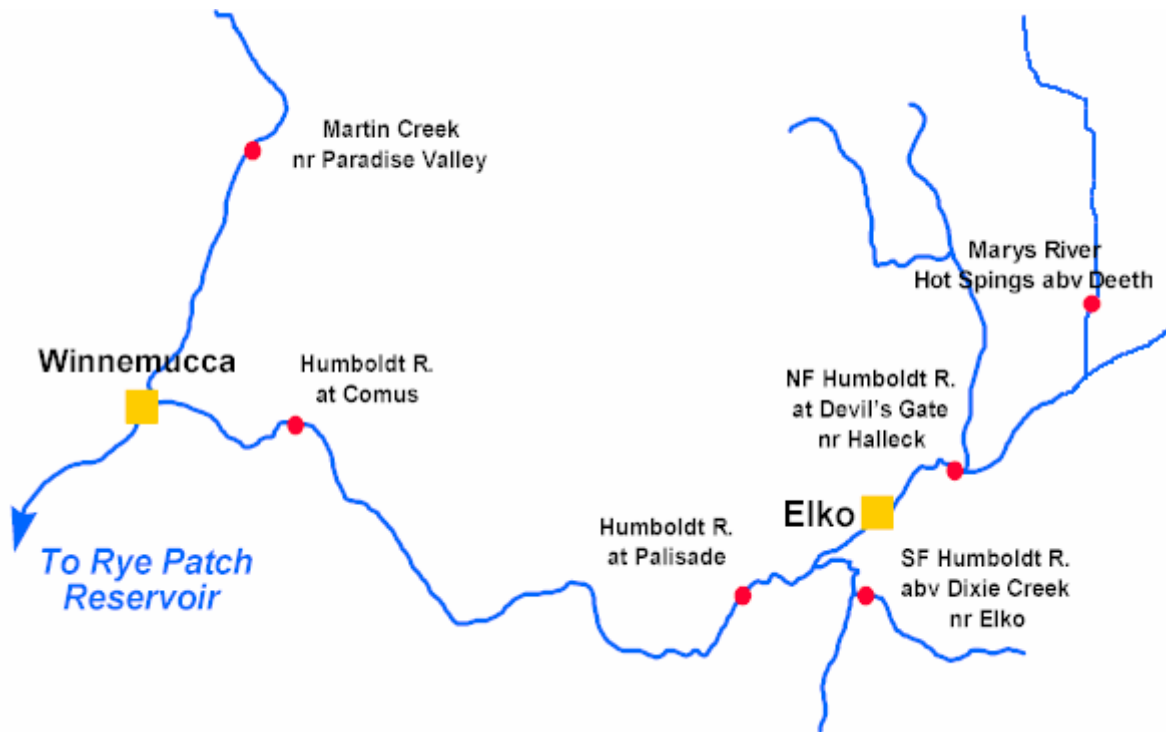
East Side Sierra Nevada Basins

Seasonal Basin Runoff

October 1 to Date



Humboldt River Basin



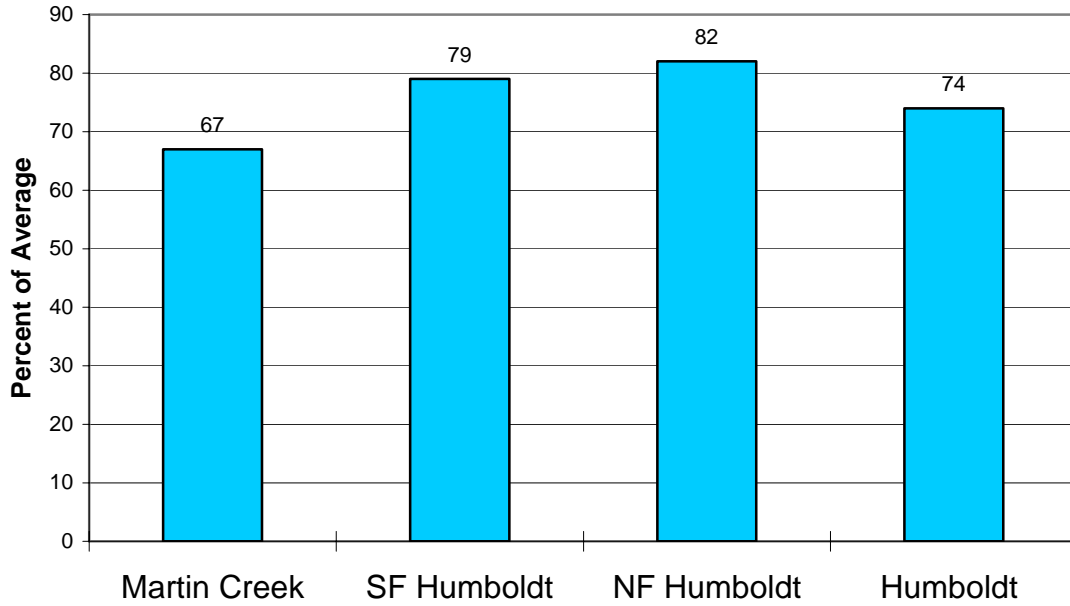
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
NF Humboldt River						
Devlis Gate, at, Halleck, nr	Apr-Jul	17.0	50	37	5.0	34*
SF Humboldt River						
Dixie Ck, abv, Elko, nr	Apr-Jul	42	55	74	12.0	76
Marys River						
Hot Springs, abv, Deeth, nr	Apr-Jul	20	51	42	9.0	39
Humboldt River						
Elko, nr	Apr-Jul	55	36	162	8.0	154
Palisade	Apr-Jul	90	36	255	5.0	250
Comus	Apr-Jul	70	31	275	5.0	225
Martin Ck						
Paradise Vly, nr	Apr-Jul	7.5	40	17.0	3.0	18.7

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Humboldt River Basin

Seasonal Basin Precipitation October 1 to Date



Basin Snowpack % of Average SWE to Date

