

Water Supply Outlook



CALIFORNIA AND NORTHERN NEVADA

March
2002

(revised March 11)



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

March 1, 2002

Most water supply basins experienced their second consecutive month of dry conditions. Monthly precipitation amounts were 45 percent of average in the Sacramento basin, 40 percent in the San Joaquin, and only about 20 percent in the Tulare Lake basins. The east-side Sierra Nevada basins were at 35 percent of the February average and the Humboldt basin received 80 percent for the month.

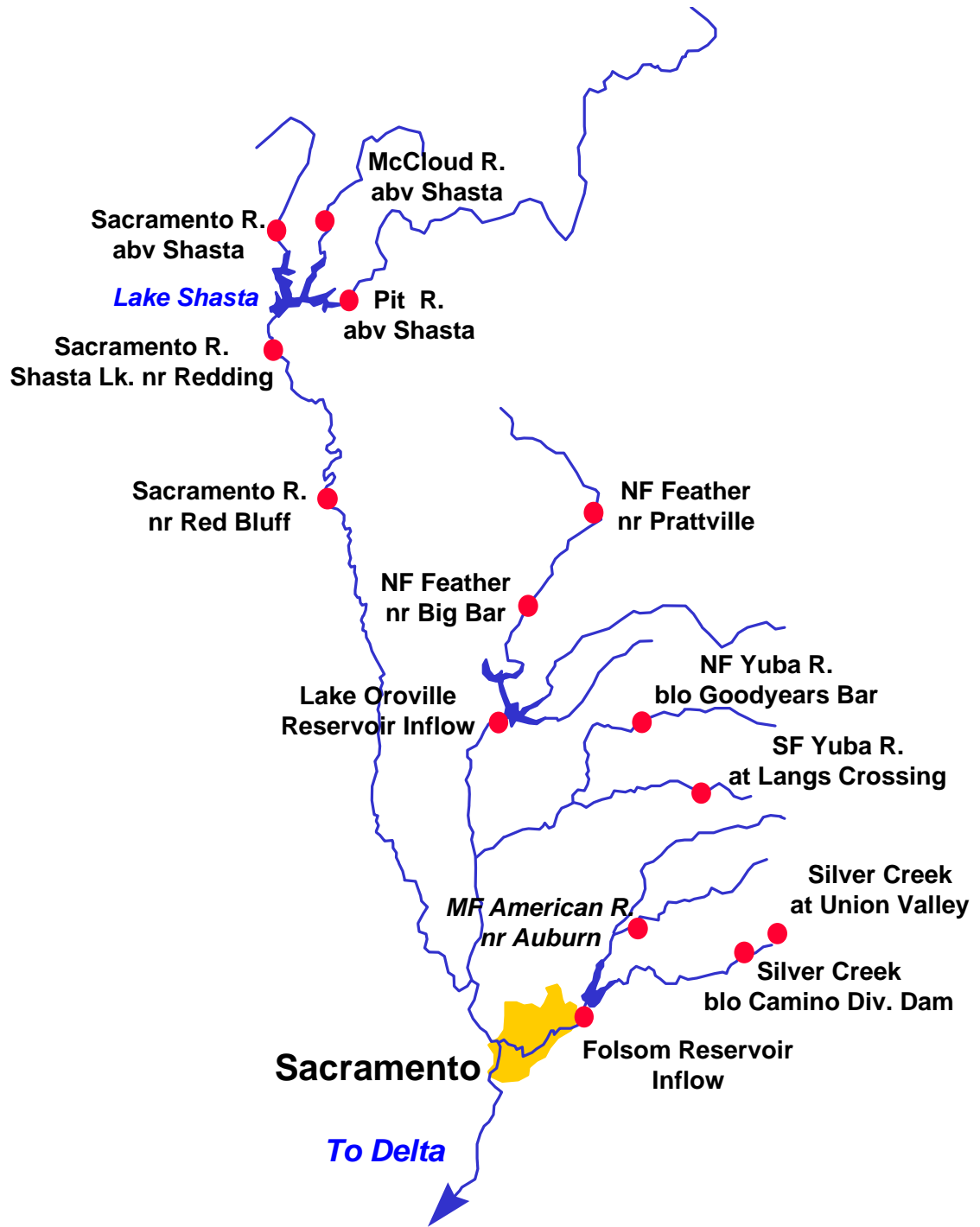
The Sierra Nevada snowpack experienced some melt due to episodes of warm weather during February. The snowpack is 86 percent of average for the date and 76 percent of the April 1st average. Snowpack in the upper Klamath basin remains slightly above average at 115 percent, however, the basins along the east slope of the Sierra Nevada and the Humboldt have now fallen below average.

Runoff during February ranged from 56 percent in the Trinity basin to 48 percent in the Tulare Lake basin.

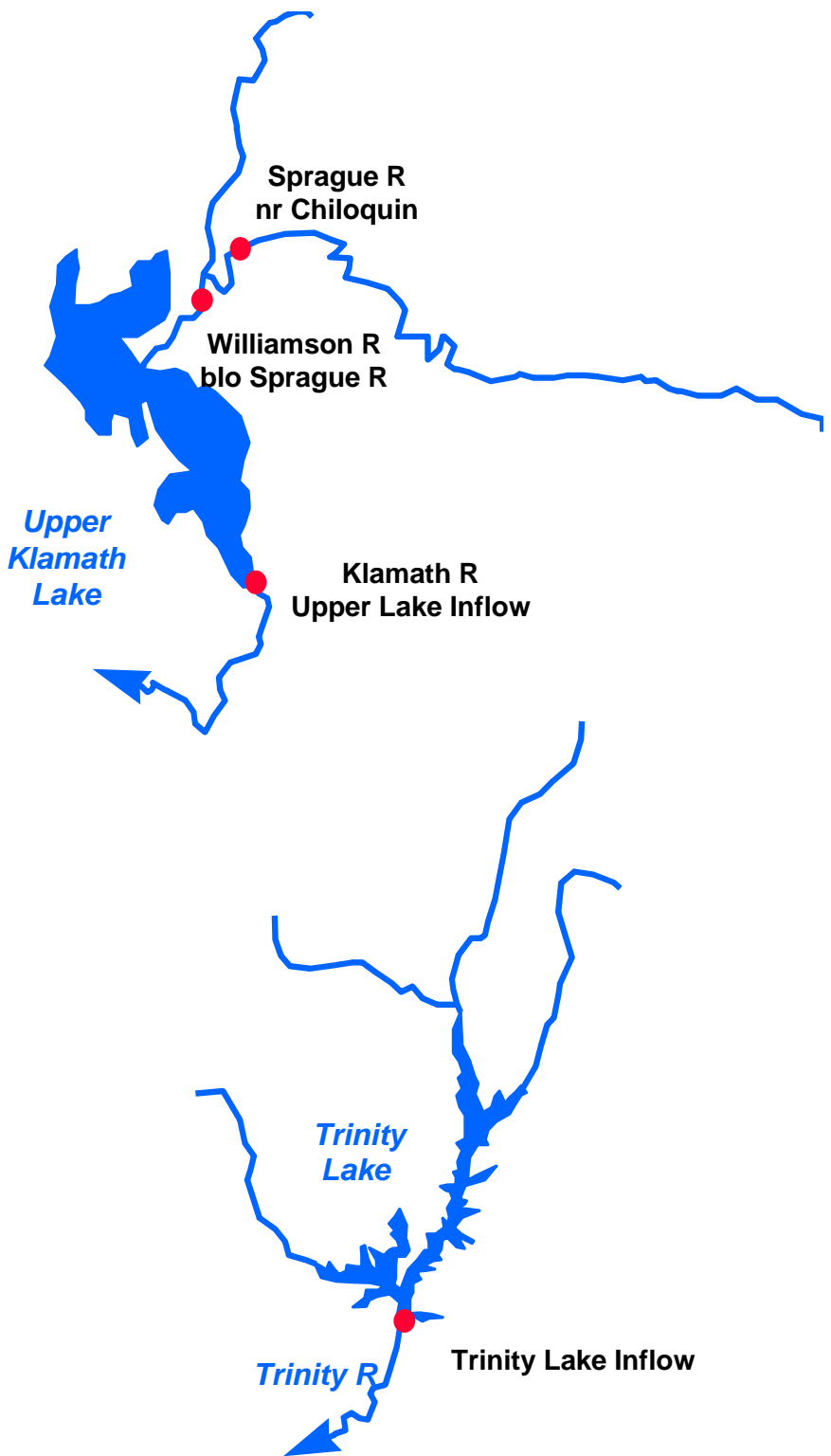
Reservoir storage in the Sacramento basin was at 92 percent of average, the San Joaquin at 103 percent, and the Tulare Lake basin at 78 percent. East-side Sierra Nevada reservoirs were at 58 percent of average storage.

The April through July runoff forecasts have been revised downward due to the relatively dry conditions experienced during the past two months. The forecasts range from 102 percent in the Trinity to about 76 percent for the Merced basin. However, forecasts are drier in portions of the Tulare Lake basins, ranging from 81 percent in the Kings basin to 62 percent in the Kern basin. Forecasts range from 62 to 80 percent for the east-side basins of the Sierra Nevada, and 60 to 86 percent in the Humboldt basin of northern Nevada. The March through September forecast for the upper Klamath basin is 85 percent.

Sacramento River Basin



Upper Klamath and Trinity River Basins



Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Nrml	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
COASTAL BASINS						
Williamson River Sprague, blo	Mar-Sep	445	88	565	325	505
Sprague River Chiloquin, nr	Mar-Sep	245	80	320	98	305
Upper Klamath Falls River Inflow	Mar-Sep	610	85	780	440	715
Trinity River Clair Engle Inflow	Apr-Jul	645	102	875	415	635
SACRAMENTO RIVER BASIN						
SACRAMENTO RIVER ABOVE BEND BRIDGE						
Pit River Montgomery Creek, nr	Apr-Jul	970	91	1260	725	1070
Mccloud River Shasta Lake, abv	Apr-Jul	355	96	480	230	370
Sacramento River Delta	Apr-Jul	265	91	415	114	290
Shasta Lake, Redding, nr	Apr-Jul	1650	92	2320	1010	1790
Bend Bridge, abv, Red Bluff	Apr-Jul	2250	92	3250	1290	2440
FEATHER RIVER ABOVE OROVILLE RESERVOIR						
NF Feather River Prattville, nr	Apr-Jul	290	87	440	142	333*
Big Bar	Apr-Jul	800	83	1250	355	962*
Feather River Oroville Reservoir Inflow	Apr-Jul	1490	85	2270	715	1760

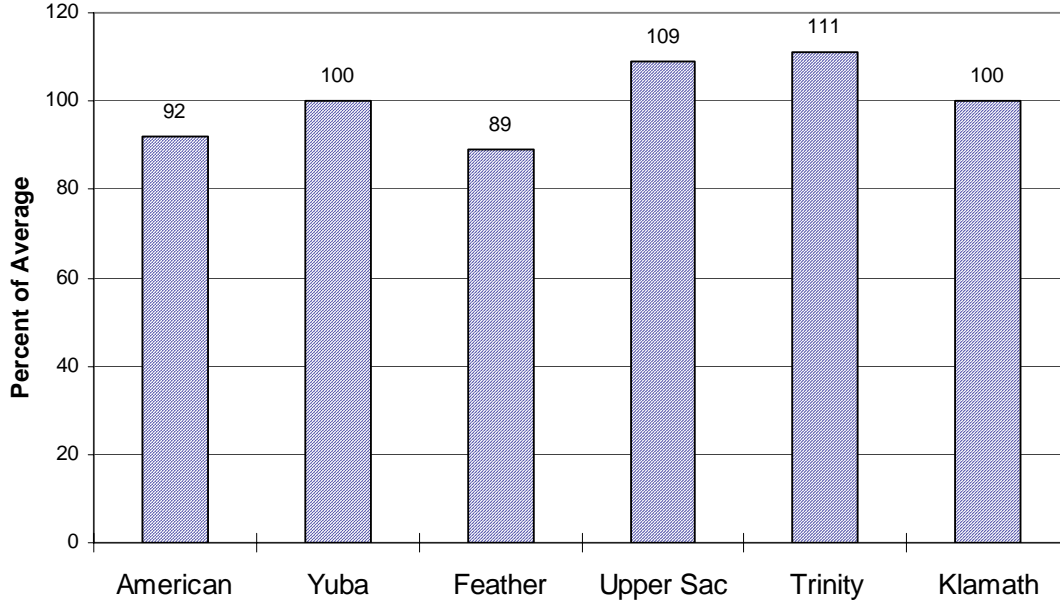
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Nrml	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
Yuba River above Smartville						
North Yuba River Goodyears Bar, blo	Apr-Jul	245	90	355	137	273*
South Yuba River Langs Crossing	Apr-Jul	205	91	300	111	225*
Yuba River Smartville, nr	Apr-Jul	905	91	1300	510	995
American River above Folsom Reservoir						
MF American River Auburn, nr	Apr-Jul	425	87	650	200	490*
Silver Ck Union Valley	Apr-Jul	85	87	127	63	98*
Camino Dam, blo	Apr-Jul	135	85	205	67	158*
American River Folsom Reservoir Inflow	Apr-Jul	1070	87	1620	520	1230

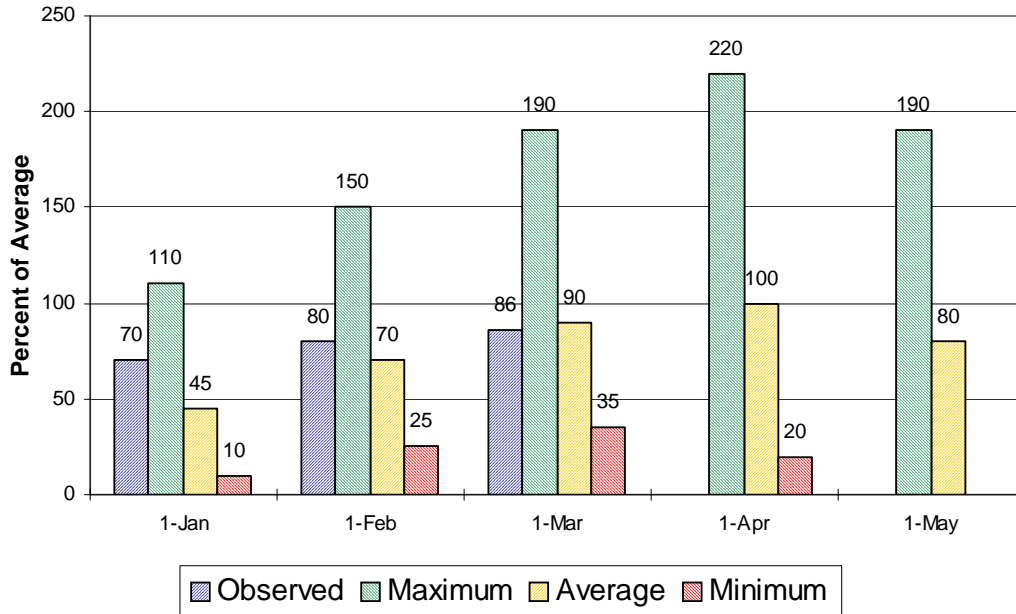
*30 Year Averages for 1971-2000 are incomplete. Those forecast points with an asterisk have incomplete averages, so 1961-1990 averages are listed. The new averages will be incorporated into this report when the complete data sets become available.

Sacramento/Trinity/Klamath River Basins

Seasonal Basin Precipitation October 1 to Date

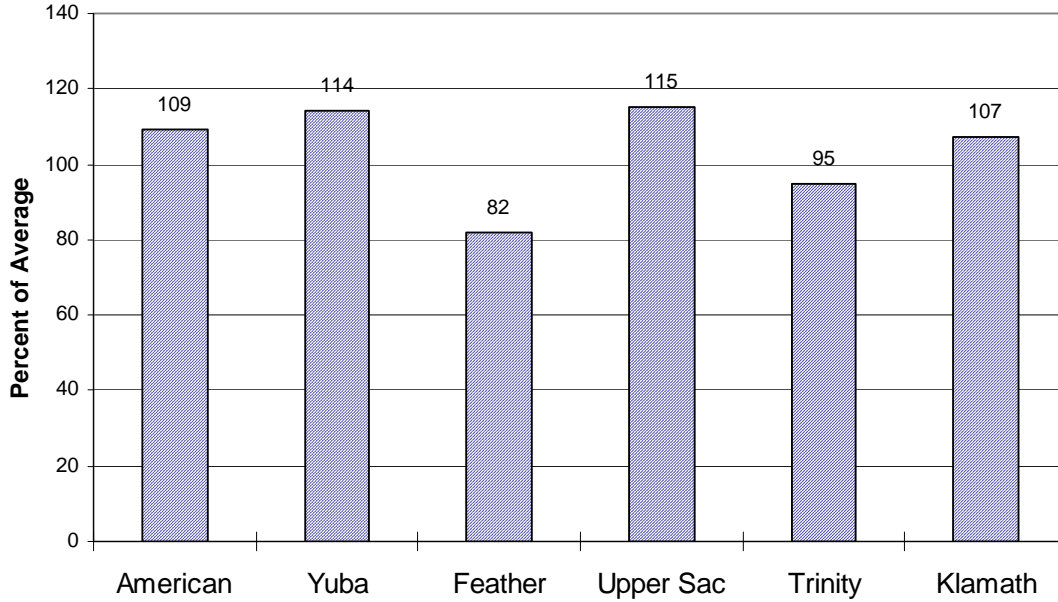


Seasonal Basin Snowpack Water Content in % of April 1 Average

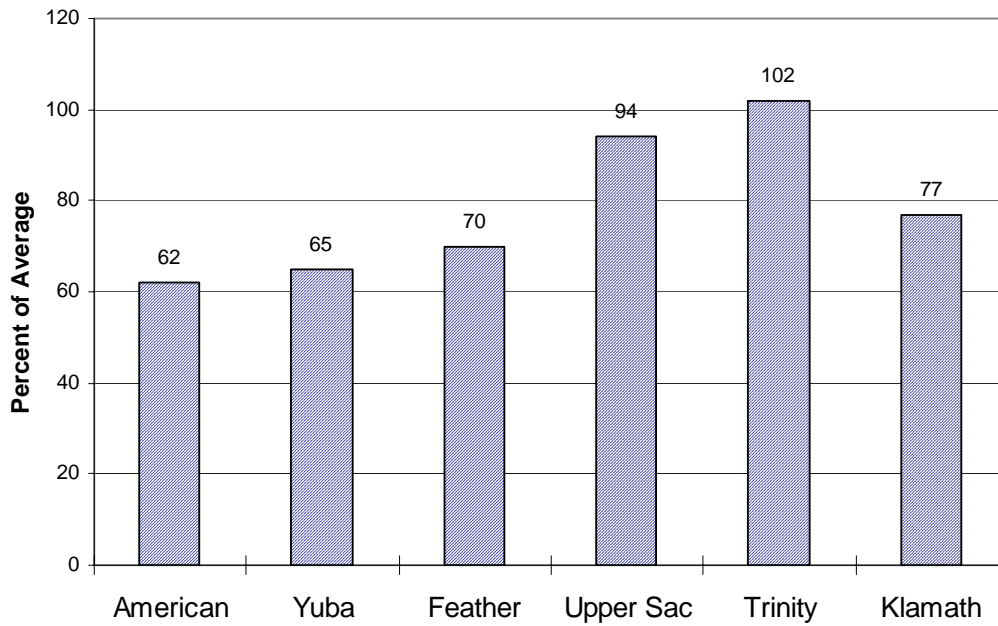


Sacramento/Trinity/Klamath River Basins

Basin Reservoir Storage Contents of Major Reservoirs in % of Average



Seasonal Basin Runoff October 1 to Date



San Joaquin Basin



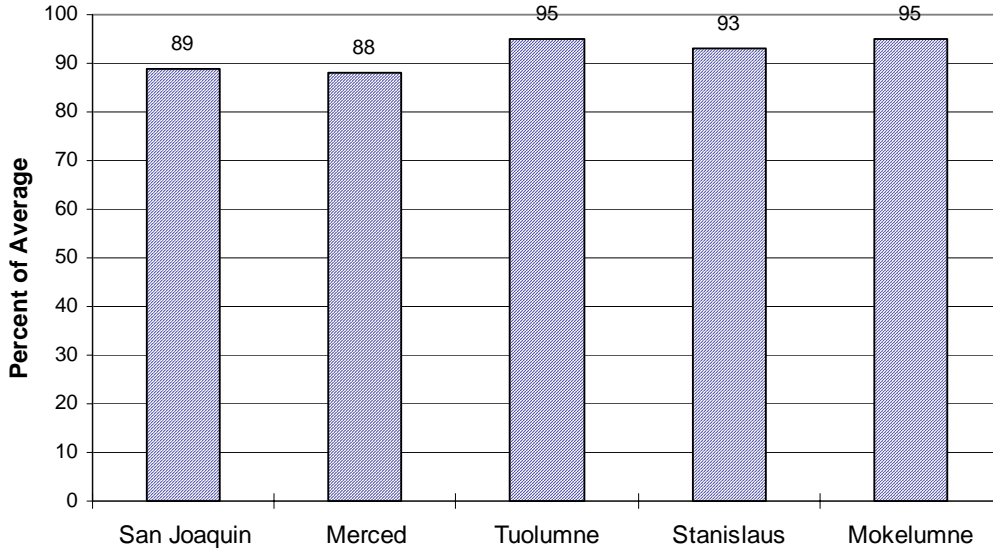
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Nrml	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
—						
SF San Joaquin River						
Hooper Ck, blo, Florence Lake	Apr-Jul	150	78	235	67	192*
San Joaquin River						
Millerton Lk	Apr-Jul	980	77	1500	480	1270
Merced River						
Pohono Bridge, at, Yosemite	Apr-Jul	295	82	450	140	360*
Merced Falls, blo	Apr-Jul	490	76	760	220	645
Tuolumne River						
Hetch Hetchy, nr	Apr-Jul	505	85	750	250	596*
La Grange, nr	Apr-Jul	985	80	1480	475	1230
MF Stanislaus River						
Beardsley Dam, blo	Apr-Jul	270	84	400	130	320*
Stanislaus River						
Goodwin Dam, blo, Knights Ferry	Apr-Jul	570	82	835	305	695
NF Mokelumne River						
West Point	Apr-Jul	360	87	550	172	416*
Mokelumne River						
Mokelumne Hill	Apr-Jul	390	85	560	220	460
Cosumnes River						
Michigan Bar	Apr-Jul	105	85	160	50	123

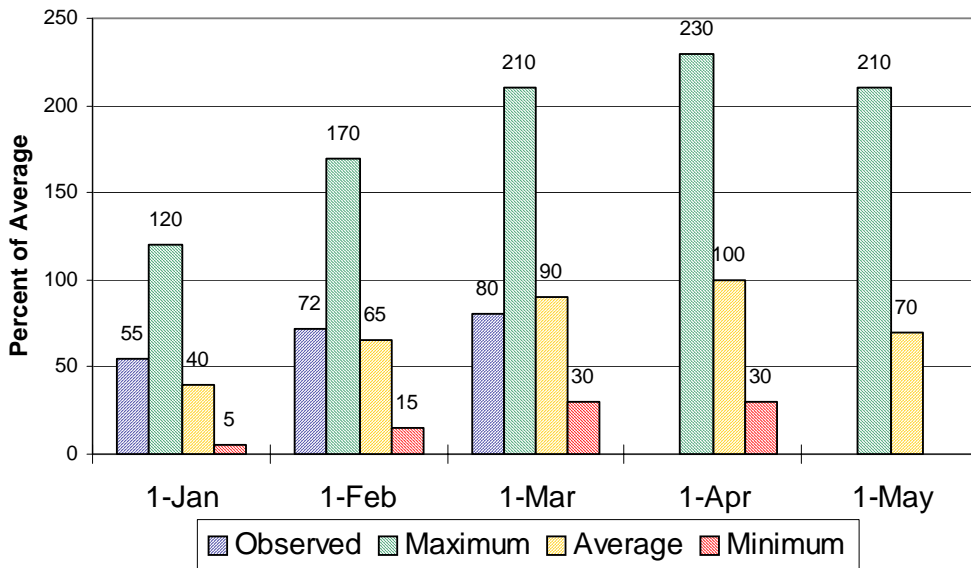
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San Joaquin Basin

Seasonal Basin Precipitation October 1 to Date

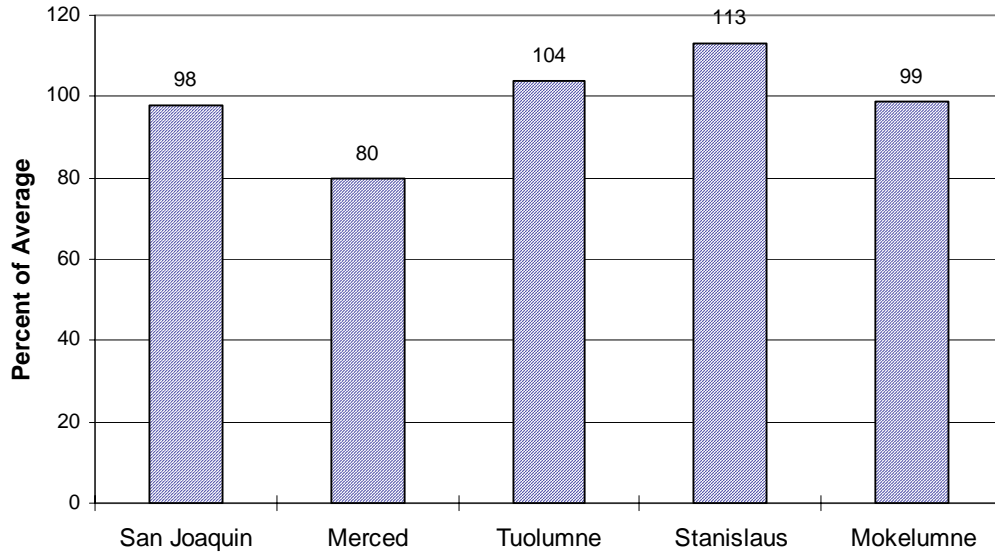


Seasonal Basin Snowpack Water Content in % of April 1 Average

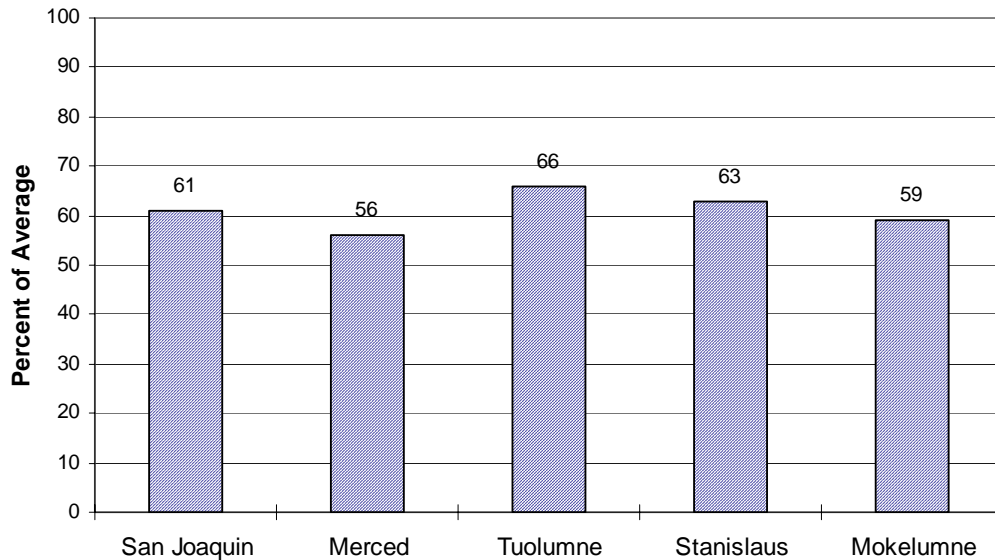


San Joaquin Basin

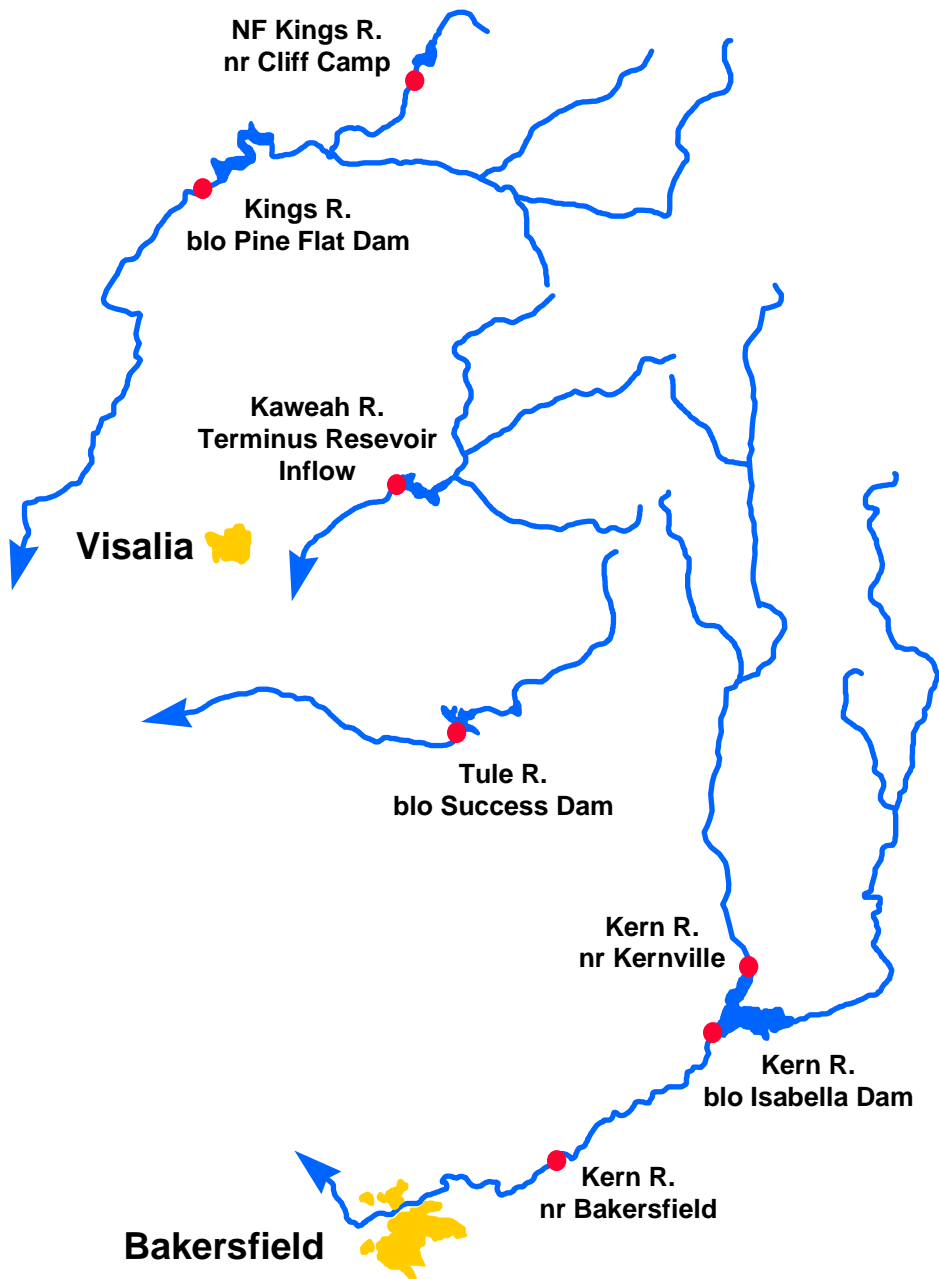
Basin Reservoir Storage Contents of Major Reservoirs in % of Average



Season Basin Runoff October 1 to Date



Tulare Basin



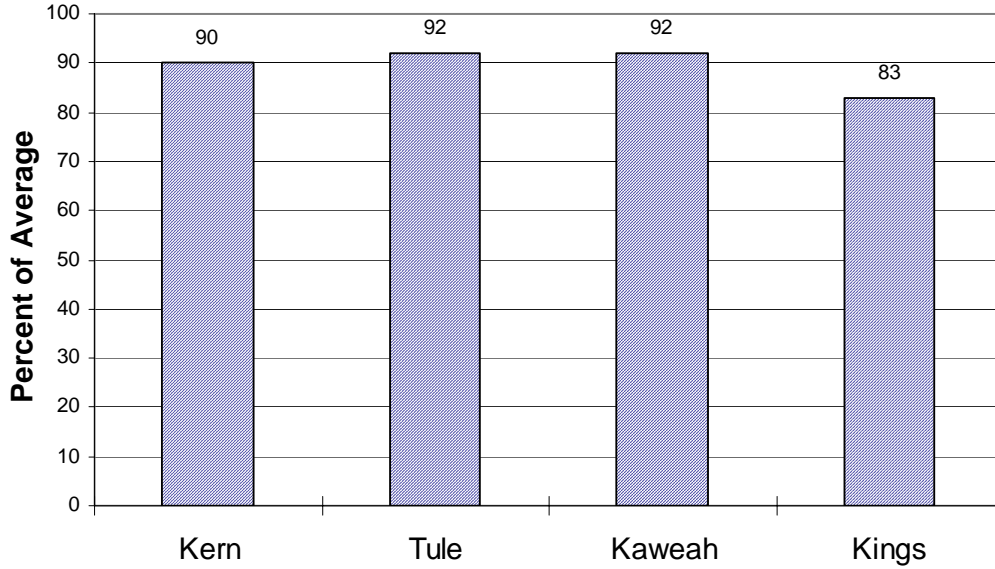
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Nrml	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
<hr/>						
Kern River						
Kernville, nr	Apr-Jul	260	65	400	130	398*
Isabella Dam, blo	Apr-Jul	300	62	465	135	480
Bakersfield, nr	Apr-Jul	310	63	485	137	490
Tule River						
Success Dam	Apr-Jul	43	65	88	20	66
Kaweah River						
Terminus Dam	Apr-Jul	230	79	350	110	290
NF Kings River						
Cliff Camp, nr	Apr-Jul	195	81	300	95	240*
Kings River						
Pine Flat Dam, blo	Apr-Jul	965	77	1310	480	1250

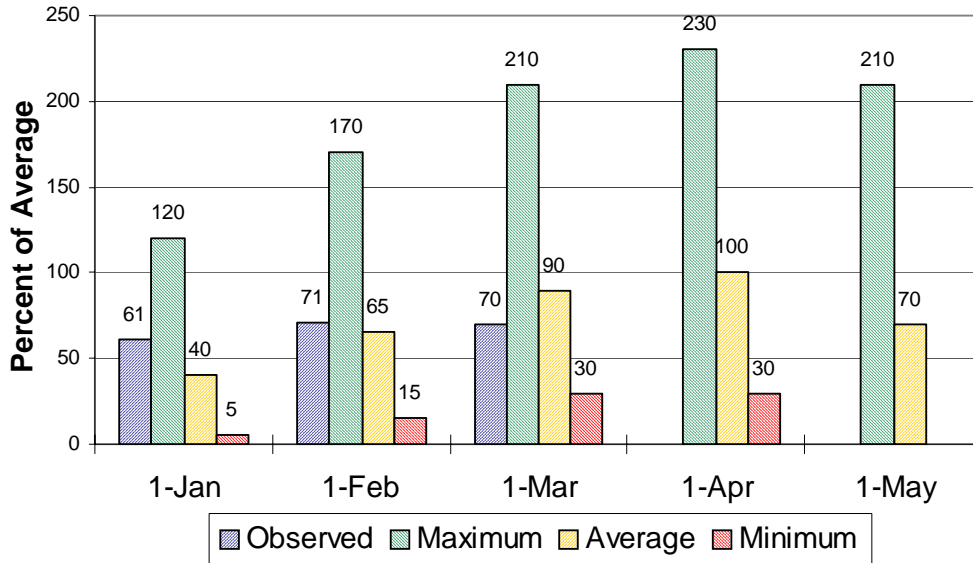
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Tulare Lake Basin

Seasonal Precipitation October 1 to Date

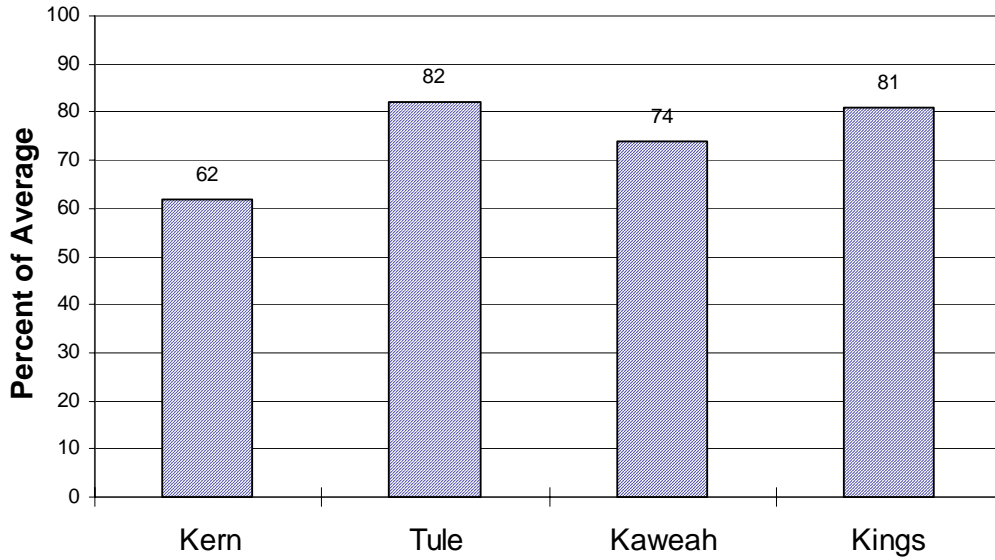


Seasonal Basin Snowpack Water Content in % of April 1 Average

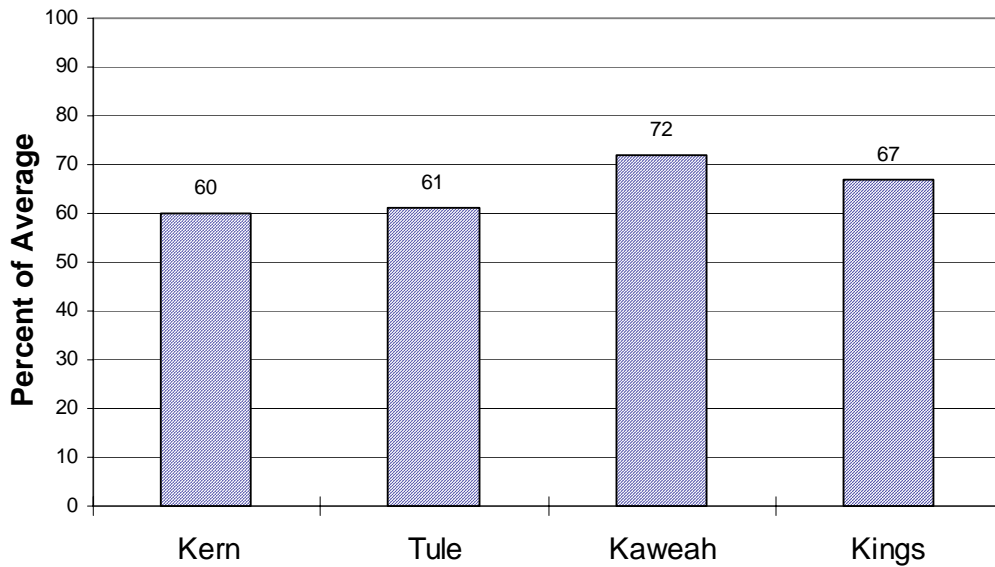


Tulare Lake Basin

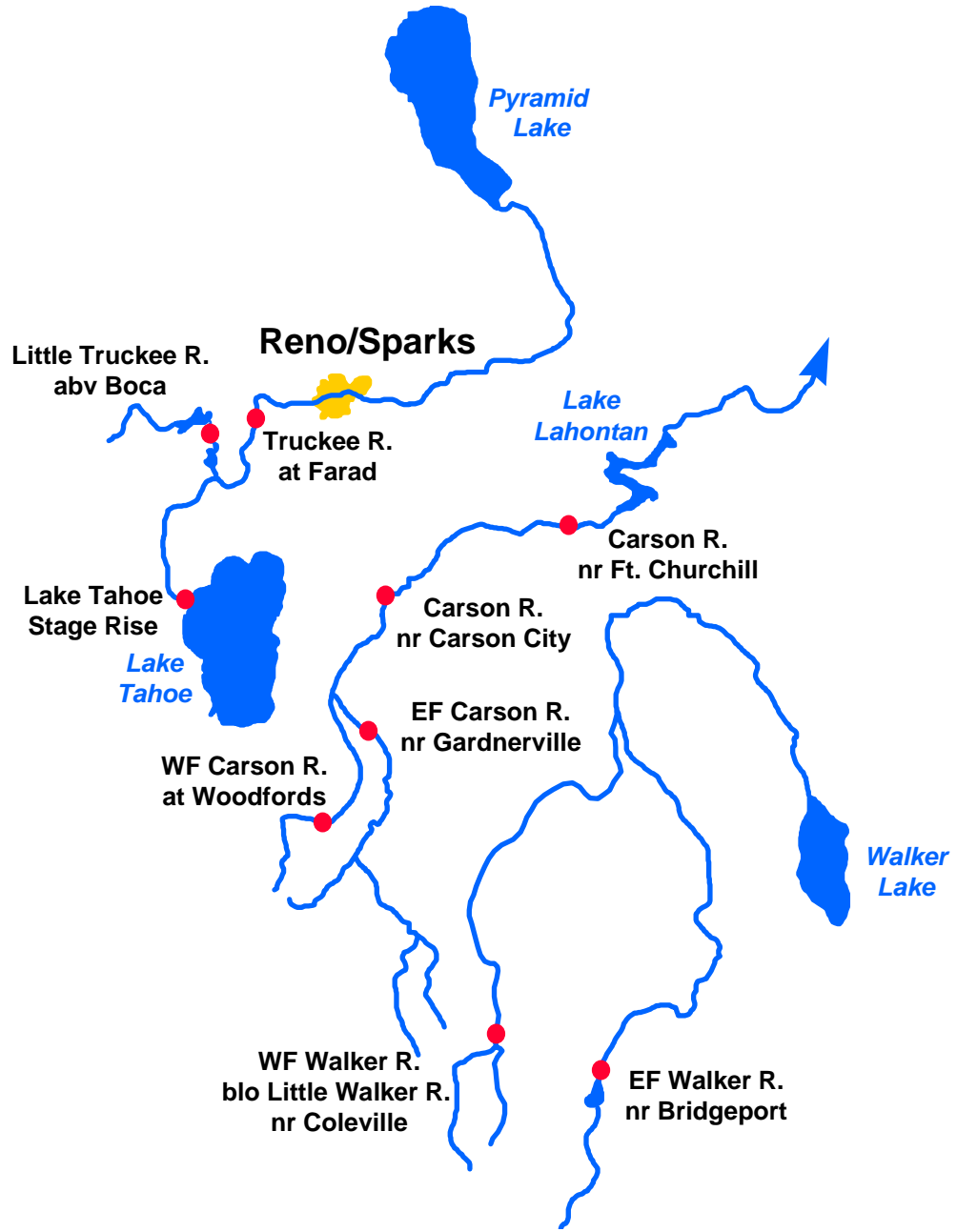
Basin Reservoir Storage Contents of Major Reservoirs in % of Average



Seasonal Basin Runoff October 1 to Date



East Side Sierra Nevada Basins

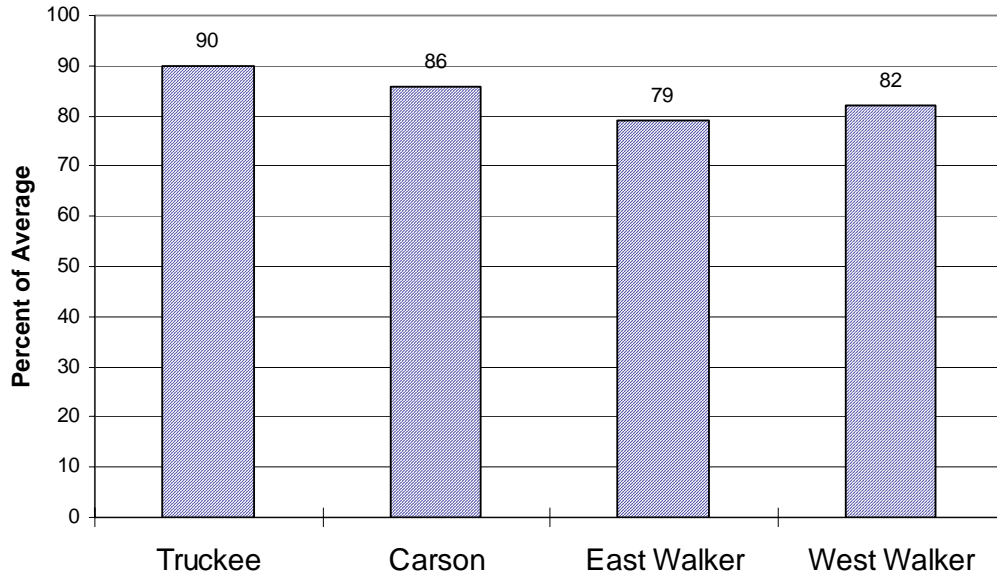


Water Supply Forecasts

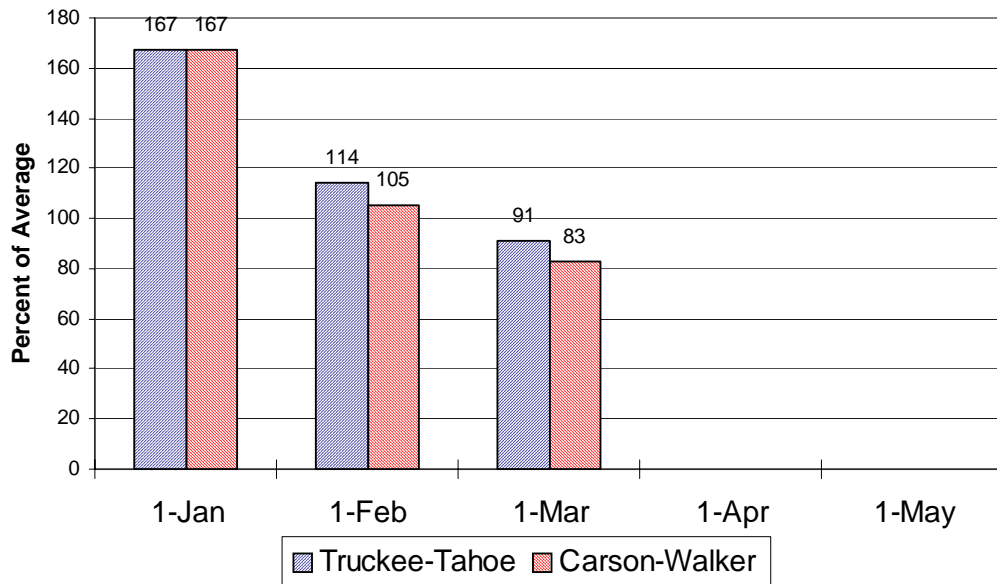
		Most Prob Vol KAF	Most Prob Vol %Nrml	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
Truckee River						
Truckee River						
Lake Tahoe Stage Rise	Apr-High	1.0	72	1.5	0.5	1.4
Farad	Apr-Jul	195	75	300	89	260
Carson River						
EF Carson River						
Gardnerville, nr	Apr-Jul	140	74	190	100	189
WF Carson River						
Woodfords	Apr-Jul	40	71	59	29	56
Carson River						
Carson City, nr	Apr-Jul	120	64	187	53	188
Fort Churchill, nr	Apr-Jul	110	62	180	40	178
Walker River						
East Walker River						
Bridgeport, nr	Apr-Aug	48	72	72	24	67
West Walker River						
Ltl Walker, blo, Coleville	Apr-Jul	125	80	157	93	156

East Side Sierra Nevada Basins

Seasonal Basin Precipitation October 1 to Date



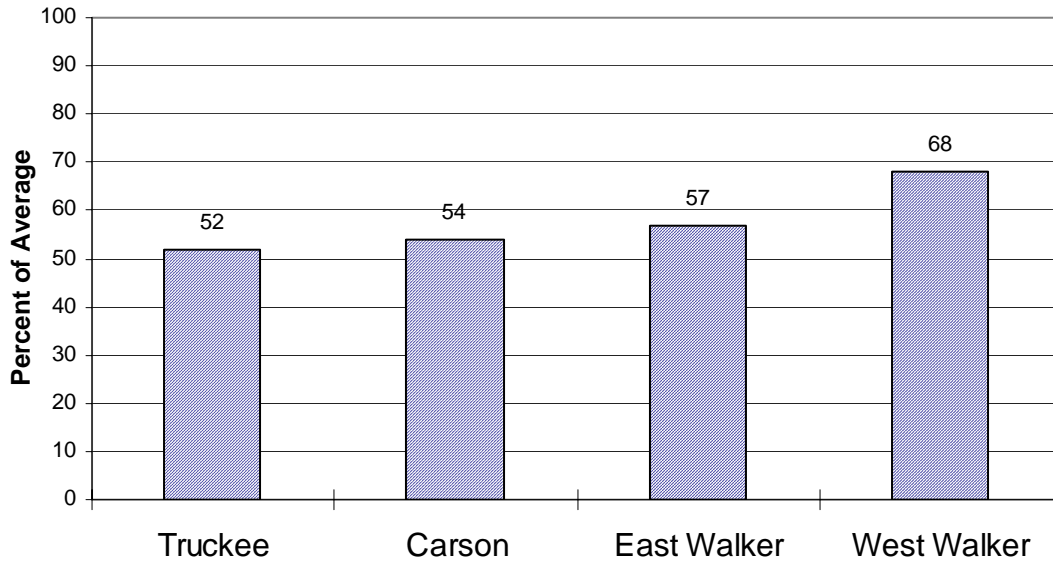
Basin Snowpack % of Average SWE to Date



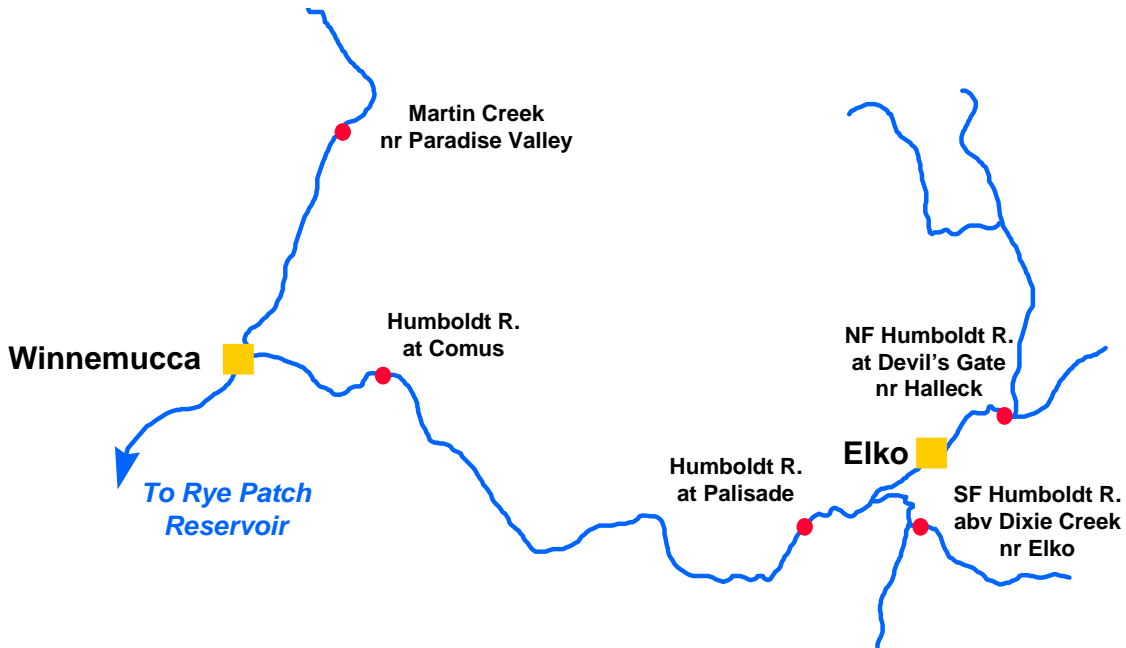
East Side Sierra Nevada Basins

Seasonal Basin Runoff

October 1 to Date



Humboldt River Basin



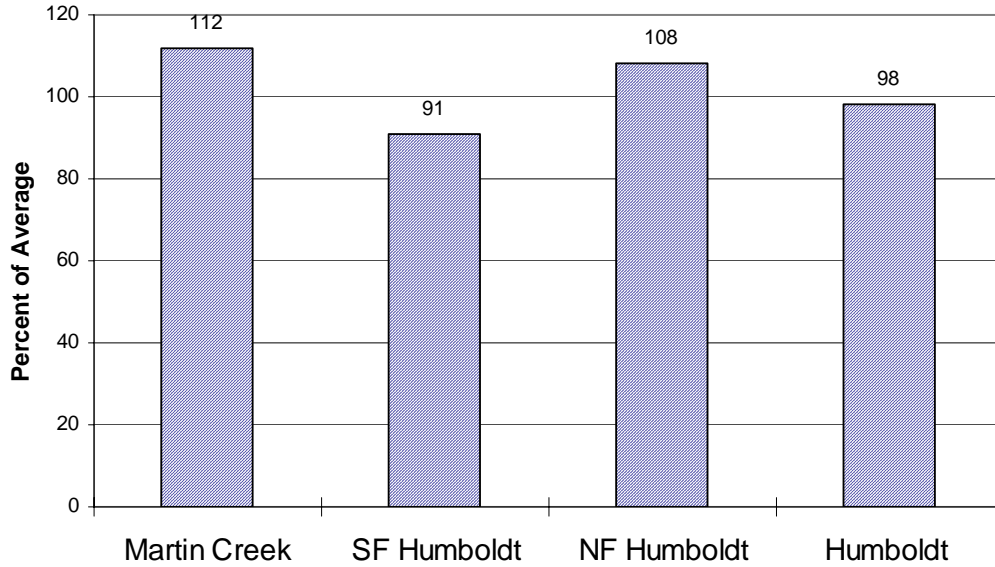
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Nrml	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
—						
NF Humboldt River						
Devils Gate, at, Halleck, nr	Apr-Jul	23	68	40	9.0	34*
SF Humboldt River						
Dixie Ck, abv, Elko, nr	Apr-Jul	60	79	91	29	76
Humboldt River						
Palisade	Apr-Jul	160	64	310	65	250
Comus	Apr-Jul	135	60	310	60	225
Martin Ck						
Paradise Valley, nr	Apr-Jul	16	86	24	7.8	18.7

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Humboldt River Basin

Seasonal Basin Precipitation October 1 to Date



Basin Snowpack % of Average SWE to Date

