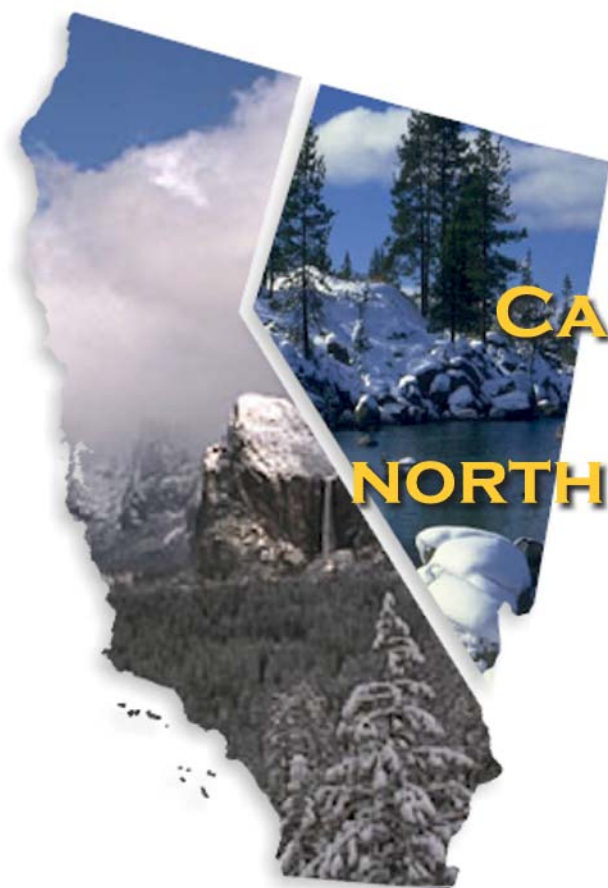


WATER SUPPLY OUTLOOK



CALIFORNIA AND NORTHERN NEVADA

**MAY
2006**



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

May 1, 2006

The persistent precipitation that occurred during the entire month of March continued into the first half of April in California and Nevada. Many rivers ran high resulting in some instances of flooding in northern and central California. A few river forecast points on the Humboldt River in Nevada have been at flood stage for several weeks. The water supply outlook this spring is excellent due to the much above average snow pack and reservoir storage. However, there is concern about potential flooding in some areas as the snow pack melts this spring.

Many stations in California and Nevada reported 200 to 400 percent of the monthly average precipitation in April. Monthly averages range from 200 percent for the Trinity River basin to about 485 percent for the San Joaquin and Kings River basins. The Walker River basin received 205 percent, the Carson 245 percent and the Truckee 285 percent. About 145 percent of the monthly average fell in the upper Humboldt basin and 210 percent in the lower Humboldt. The Upper Klamath Lake basin received 85 percent of the April average.

Snow pack accumulation peaked in April and some melt began during the latter portion of the month. The May 1st average ranges from 180 percent for the Sacramento region, 185 percent for the San Joaquin, and 180 percent for the Tulare Lake region. Snow water content stands at about 170 percent of the average-to-date in the Tahoe-Truckee basin and 180 percent in the Carson-Walker basins. The Humboldt basin is at about 135 percent. The snow pack in the Upper Klamath Lake basin stands at 175 percent of the average-to-date; it was only 50 percent at this time last year.

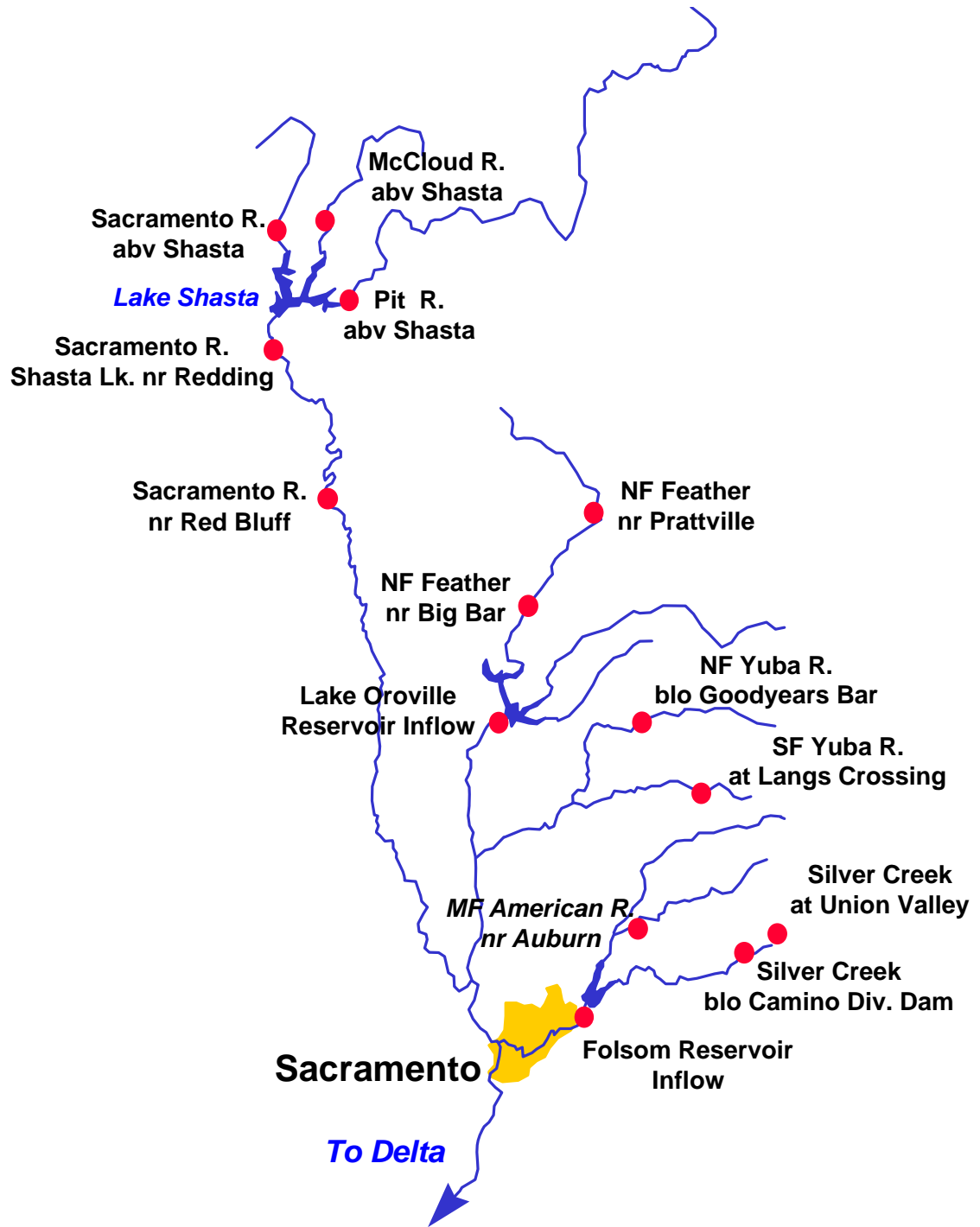
April runoff ranged from 185 to 305 percent in the Trinity-Sacramento drainage, 208 to 257 percent in the San Joaquin, and 147 to 274 percent in the Tulare Lake drainage. Runoff for the east-side Sierra varied from 124 to 197 percent. Significant runoff occurred in the Humboldt basin during April, with peak flows recorded at the Palisade river gage over a month earlier than last year's event. Much above average runoff is expected again during May as the snow pack melts off. The Humboldt River at Palisade received 450 percent of the April average while the Upper Klamath Lake basin recorded 156 percent.

Large controlled releases have been in progress for some time for many reservoirs in California's central valley region to make room for this year's snowmelt runoff. Reservoir storage in the Sacramento drainage was at 112 percent of average for the date, the San Joaquin at 126 percent and the Tulare Lake drainage at 141 percent. East-side Sierra reservoirs are about 139 percent of average. The lake level at Lake Tahoe stood at 6227.52 feet on April 30th and usable storage was 550,500 acre feet or 137 percent of the average-to-date. It was only 24 percent at this time last year. Storage at Lahontan Reservoir in Nevada is at 105 percent while Rye Patch Reservoir stands at 172 percent of the average-to-date. The Upper Klamath Lake is at 99 percent of the average-to-date.

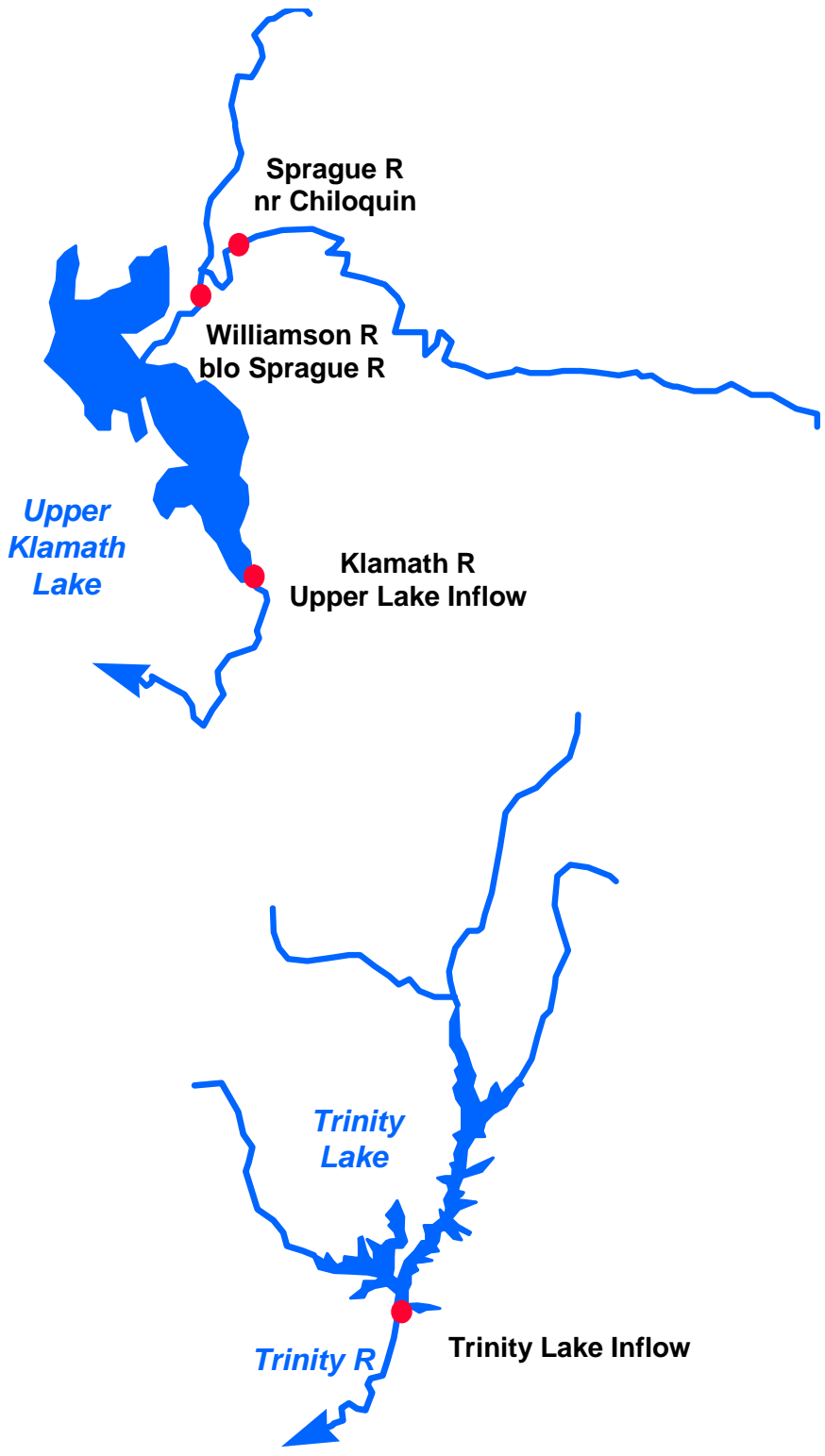
Spring runoff forecasts for the major watersheds in California's central valley range from 159 percent for the Pit River near Montgomery Creek to 208 percent for the Folsom Reservoir inflow. Streamflow forecasts for the east side Sierra basins vary from 156 to 205 percent of the April through July average. Forecasts for the Humboldt basin range from 155 to 253 percent. The May through September forecast for the Upper Klamath Lake inflow is 165 percent.

Mid-month updates are scheduled for selected east side Sierra forecast points and the Upper Klamath Lake inflow. These will be posted on the CNRFC web page. This will be the last Water Supply Outlook for Water Year 2006.

Sacramento River Basin



Upper Klamath and Trinity River Basins



Water Supply Forecasts

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

COASTAL BASINS

Williamson River Sprague, blo	Mar-Sep	730	145	825	635	505
Sprague River Chiloquin, nr	Mar-Sep	445	146	535	355	305
Upper Klamath Falls River Inflow	Mar-Sep	985	138	1130	840	715
Lost River Gerber Reservoir Inflow	May-Jul	9.5	148	12.7	6.3	6.4
Clear Lake Reservoir Inflow	May-Jul	30	155	45	15.0	19.3
Scott River Fort Jones, nr	Apr-Jul	320	177	355	295	181
Trinity River Trinity Lake Inflow	Apr-Jul	1200	189	1330	1100	635

Trinity River - Inflow at Lewiston Lake Distribution (kAF)

Exceedence														
<u>Probability</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Apr-Jul</u>	<u>Water Yr</u>
90%	12	36	349	279	195	199	365	455	215	65	25	15	1100	2210
50%	12	36	349	279	195	199	365	510	250	75	30	20	1200	2320
10%	12	36	349	279	195	199	365	585	295	85	35	25	1330	2460

SACRAMENTO RIVER BASIN

SACRAMENTO RIVER ABOVE BEND BRIDGE

Pit River Montgomery Ck, nr	Apr-Jul	1700	159	1940	1530	1070
Mccloud River Shasta Lk, abv	Apr-Jul	710	192	795	645	370
Sacramento River Delta	Apr-Jul	600	207	665	555	290
Shasta Dam	Apr-Jul	3470	194	3860	3160	1790
Bend Bridge, abv, Red Bluff, nr	Apr-Jul	4900	201	5350	4600	2440

FEATHER RIVER ABOVE OROVILLE RESERVOIR

North Fork Feather River Prattville, nr	Apr-Jul	560	168	630	515	333*
Big Bar	Apr-Jul	1910	199	2110	1770	962*
Feather River Oroville Reservoir Inflow	Apr-Jul	3500	199	3870	3250	1760

Water Supply Forecasts

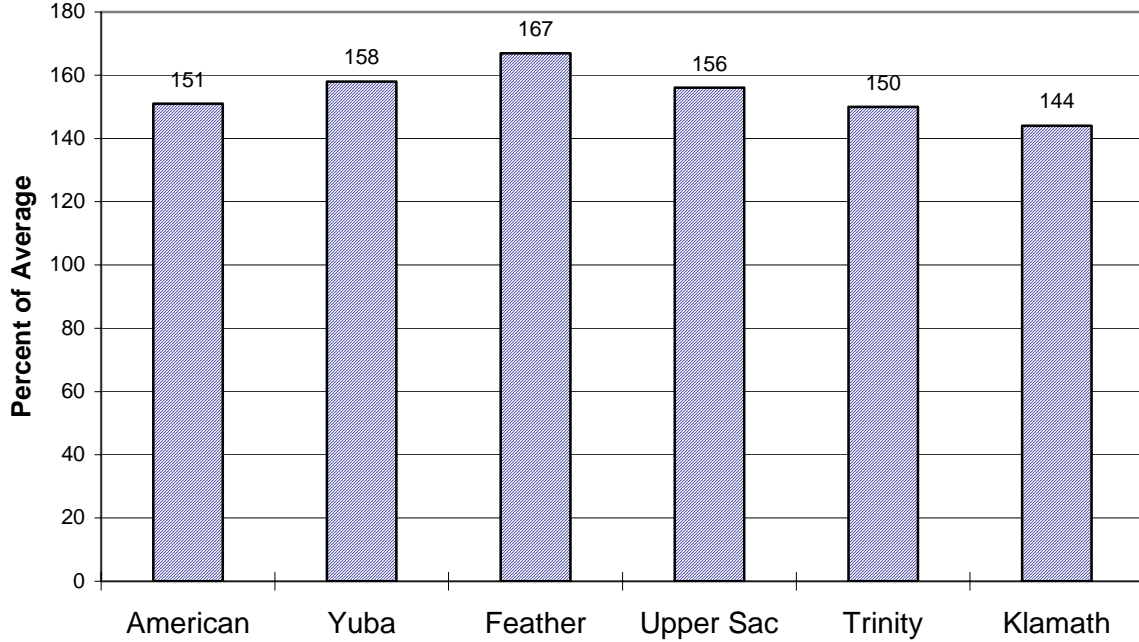
		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
YUBA RIVER ABOVE SMARTVILLE						
North Yuba River						
Goodyears Bar, blo	Apr-Jul	500	183	560	460	273*
South Yuba River						
Langs Crossing	Apr-Jul	400	178	450	365	225*
Yuba River						
Smartville, nr	Apr-Jul	1760	177	1980	1610	995
AMERICAN RIVER ABOVE FOLSOM RESERVOIR						
Middle Fork American River						
Auburn, nr	Apr-Jul	1010	206	1130	925	490*
Silver Creek						
Union Valley	Apr-Jul	205	209	230	190	98*
Camino Dam, blo	Apr-Jul	330	209	370	305	158*
American River						
Folsom Reservoir Inflow	Apr-Jul	2560	208	2850	2340	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

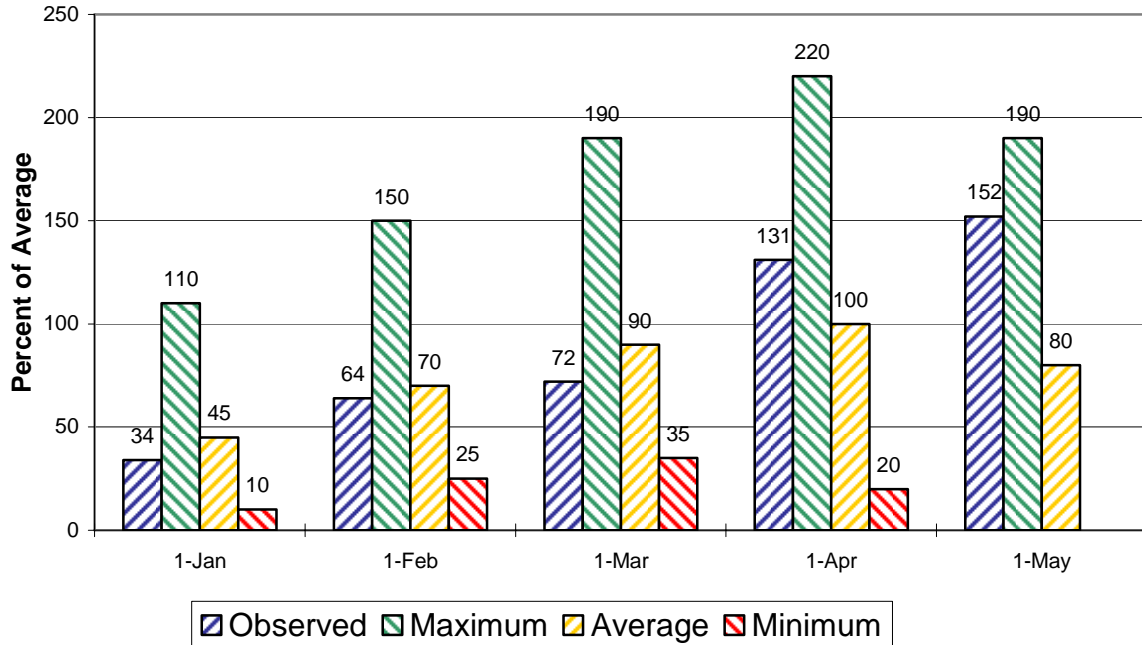
Seasonal Basin Precipitation

October 1 to Date



Seasonal Basin Snowpack

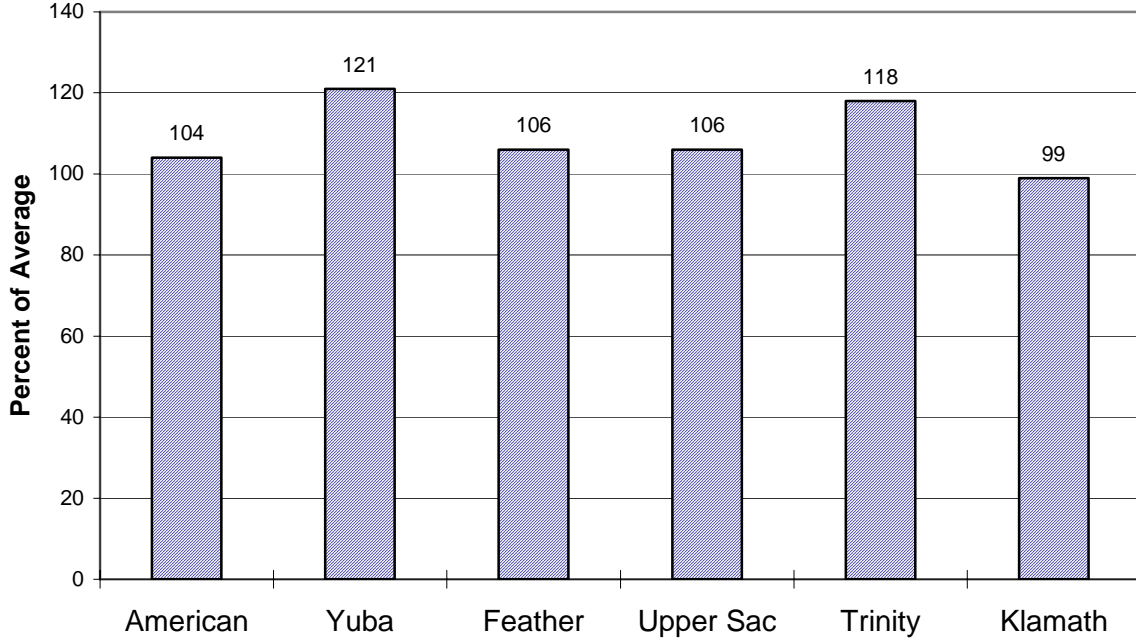
Water Content in % of April 1 Average



Sacramento/Trinity/Klamath River Basins

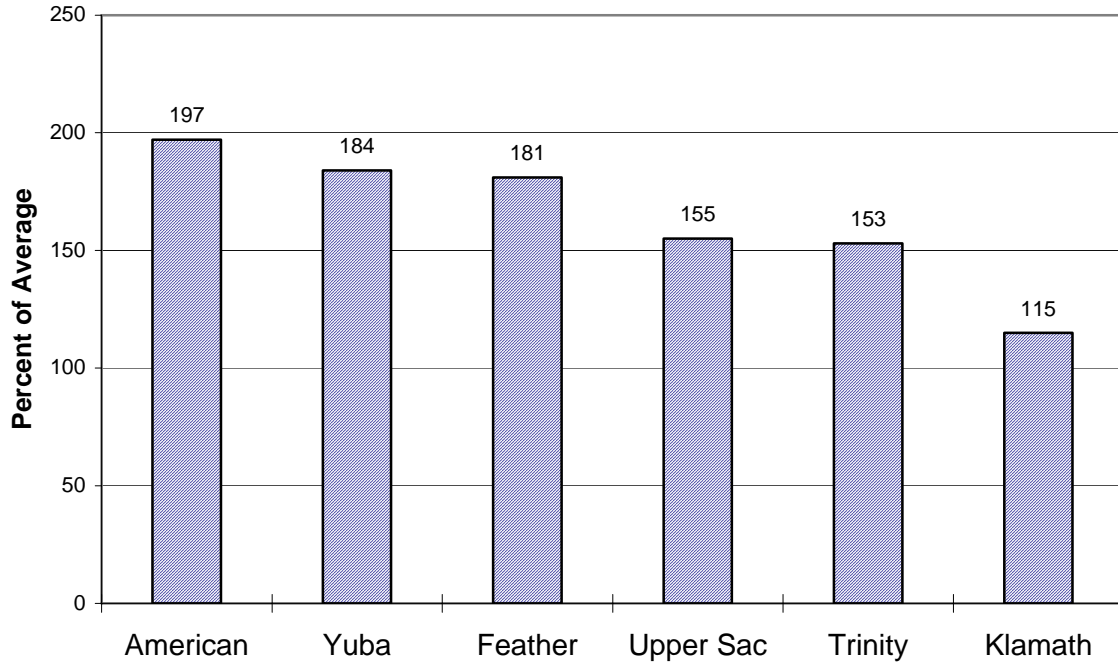
Basin Reservoir Storage

Contents of Major Reservoirs in % of Average



Seasonal Basin Runoff

October 1 to Date



San Joaquin Basin



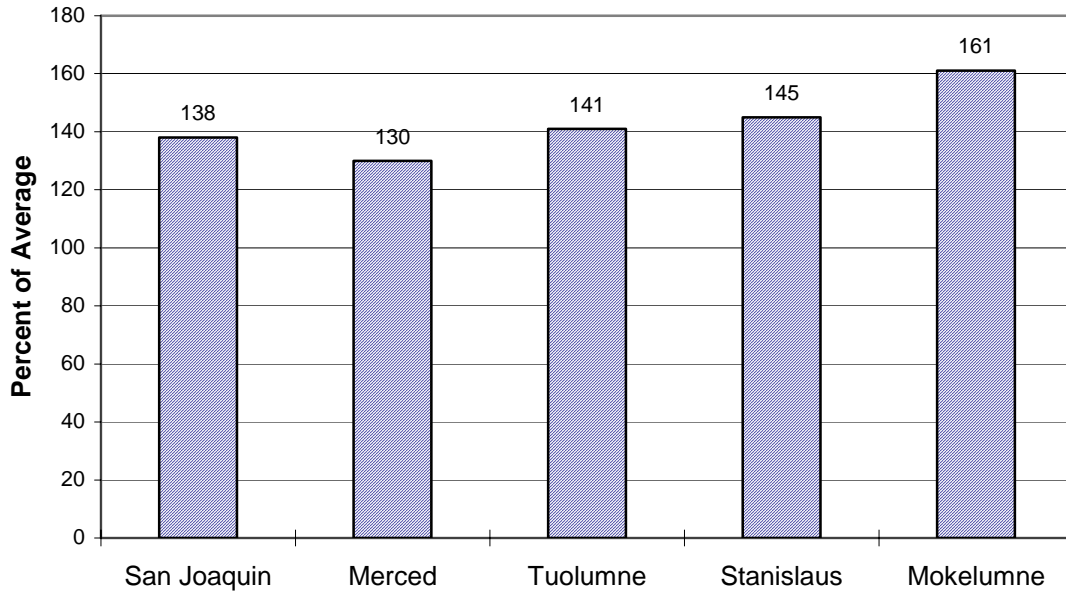
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
South Fork San Joaquin River						
Hooper Ck, blo, Florence Lk, nr	Apr-Jul	330	172	395	265	192*
San Joaquin River						
Millerton Lk	Apr-Jul	2200	173	2400	2000	1270
Merced River						
Pohono Bridge, at, Yosemite, nr	Apr-Jul	640	178	685	595	360*
Merced Falls, blo	Apr-Jul	1150	178	1300	1000	645
Tuolumne River						
Hetch Hetchy, nr	Apr-Jul	1030	173	1090	975	596*
La Grange, nr	Apr-Jul	2200	179	2400	2000	1230
Middle Fork Stanislaus River						
Beardsley Dam, blo	Apr-Jul	600	188	655	545	320*
Stanislaus River						
Goodwin Dam, blo, Knights Ferry	Apr-Jul	1330	191	1460	1200	695
North Fork Mokelumne River						
West Point	Apr-Jul	700	168	760	640	416*
Mokelumne River						
Mokelumne Hill	Apr-Jul	820	178	900	740	460
Cosumnes River						
Michigan Bar	Apr-Jul	430	350	470	390	123

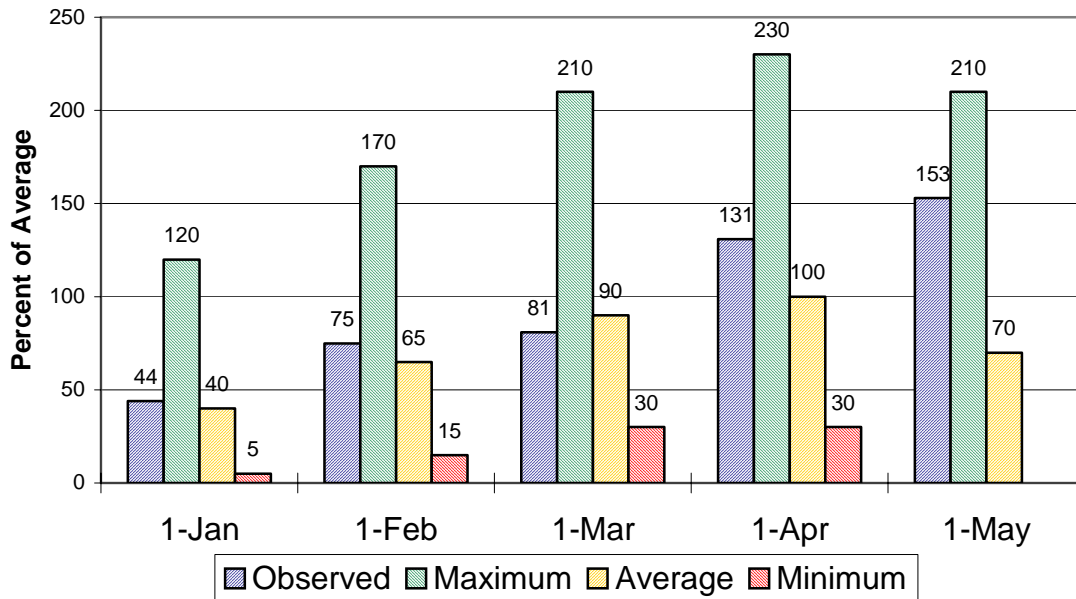
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San Joaquin Basin

Seasonal Basin Precipitation October 1 to Date

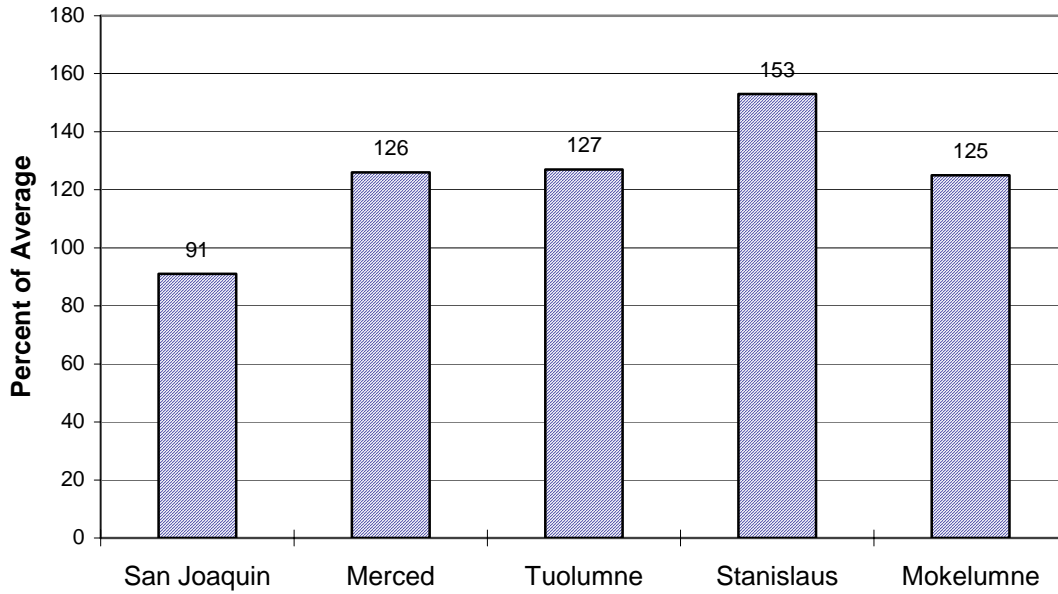


Seasonal Basin Snowpack Water Content in % of April 1 Average

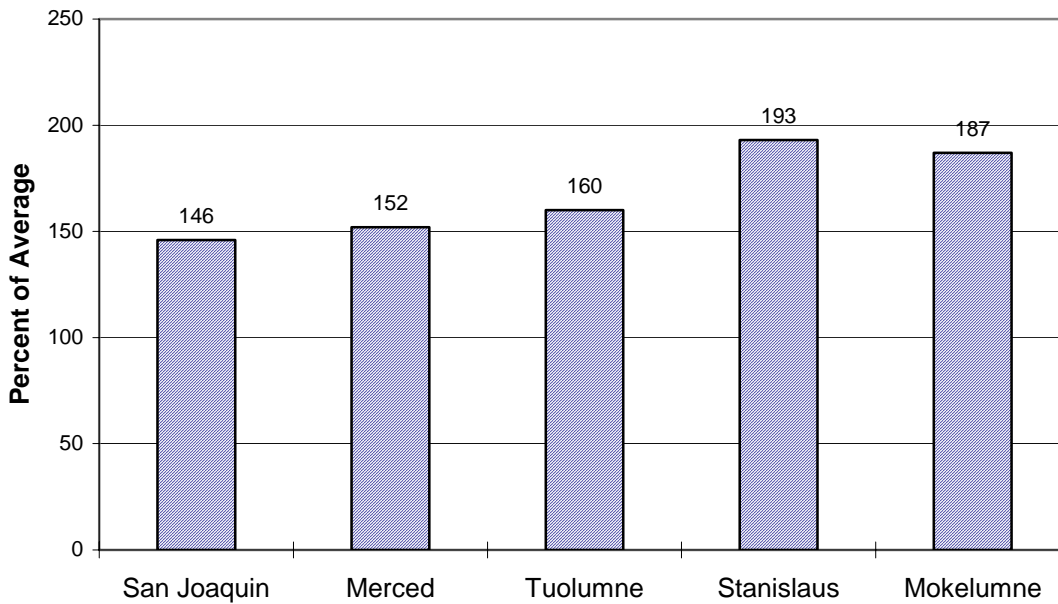


San Joaquin Basin

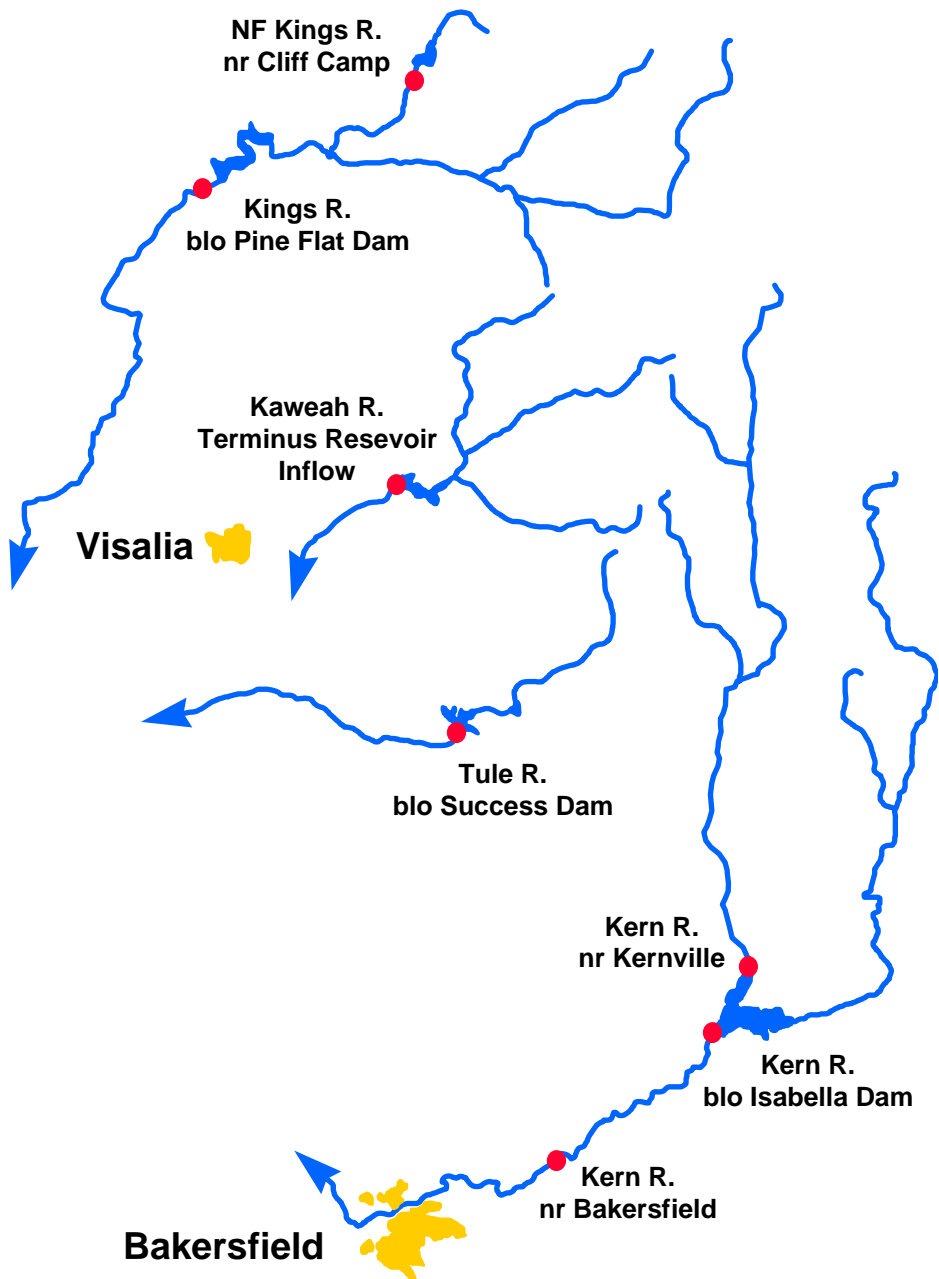
Basin Reservoir Storage Contents of Major Reservoirs in % of Average



Season Basin Runoff October 1 to Date



Tulare Basin

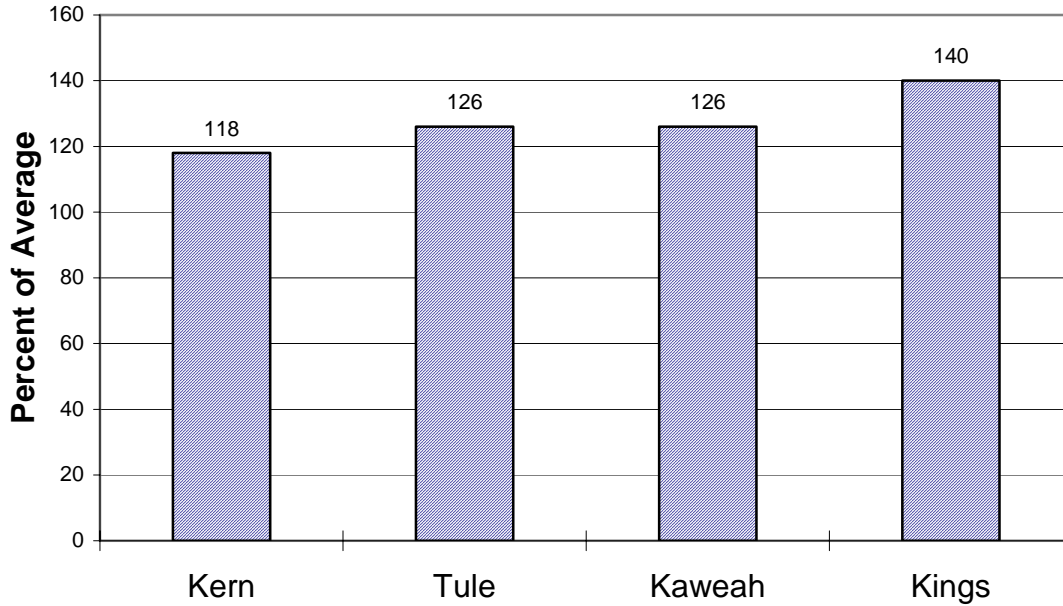


Water Supply Forecasts

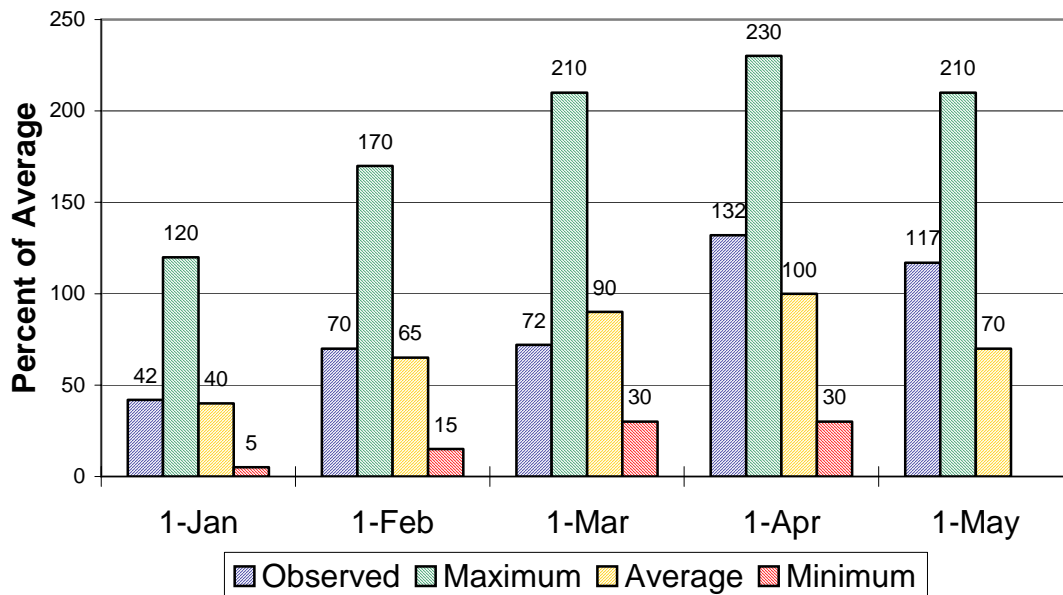
		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
Kern River						
Kernville, nr	Apr-Jul	600	151	675	525	398*
Isabella Dam, blo	Apr-Jul	760	158	895	625	480
Bakersfield, nr	Apr-Jul	780	159	925	635	490
Tule River						
Success Dam	Apr-Jul	135	205	160	110	66
Kaweah River						
Terminus Dam	Apr-Jul	525	181	600	450	290
North Fork Kings River						
Cliff Camp, nr	Apr-Jul	400	167	460	340	240*
Kings River						
Pine Flat Dam, blo	Apr-Jul	2080	166	2190	1970	1250

***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.**

Tulare Lake Basin Seasonal Precipitation October 1 to Date



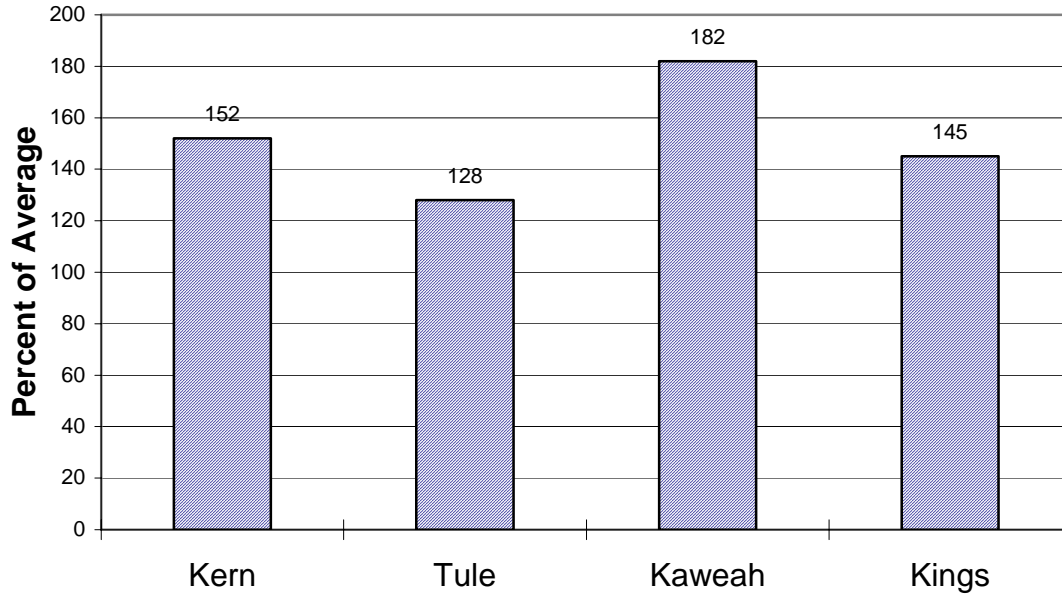
Seasonal Basin Snowpack Water Content in % of April 1 Average



Tulare Lake Basin

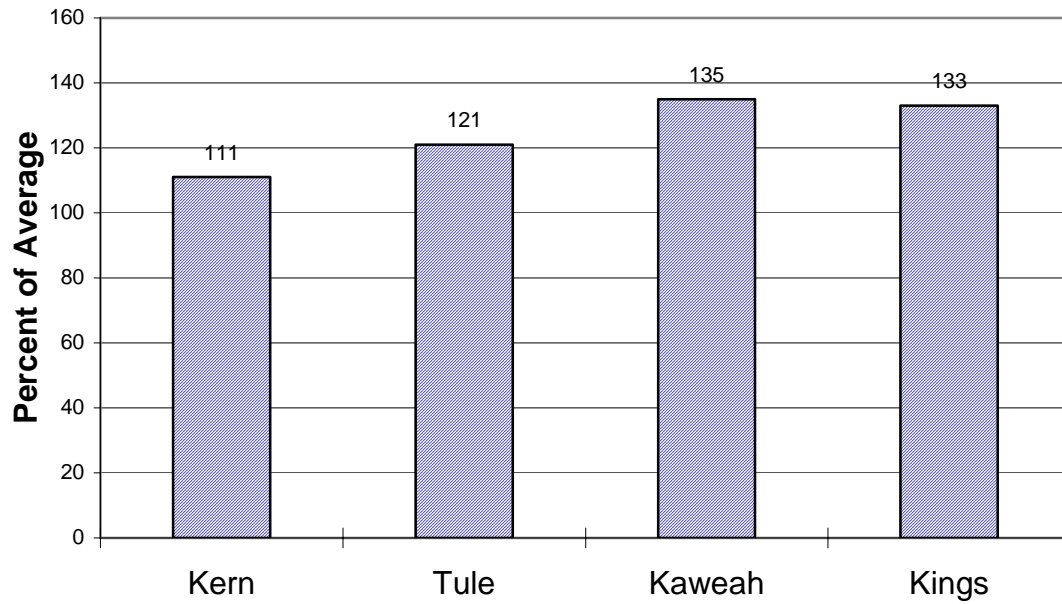
Basin Reservoir Storage

Contents of Major Reservoirs in % of Average

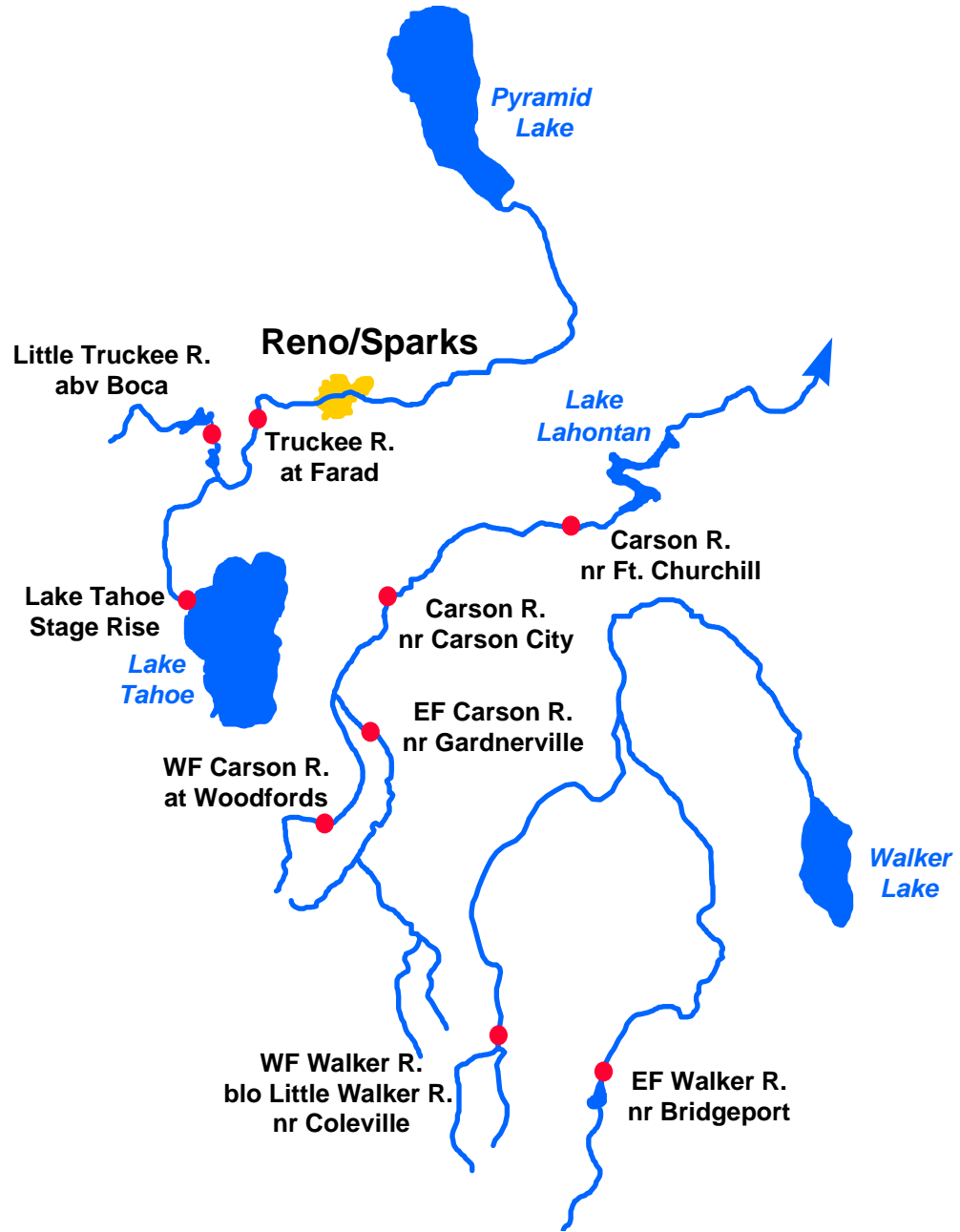


Seasonal Basin Runoff

October 1 to Date



East Side Sierra Nevada Basins



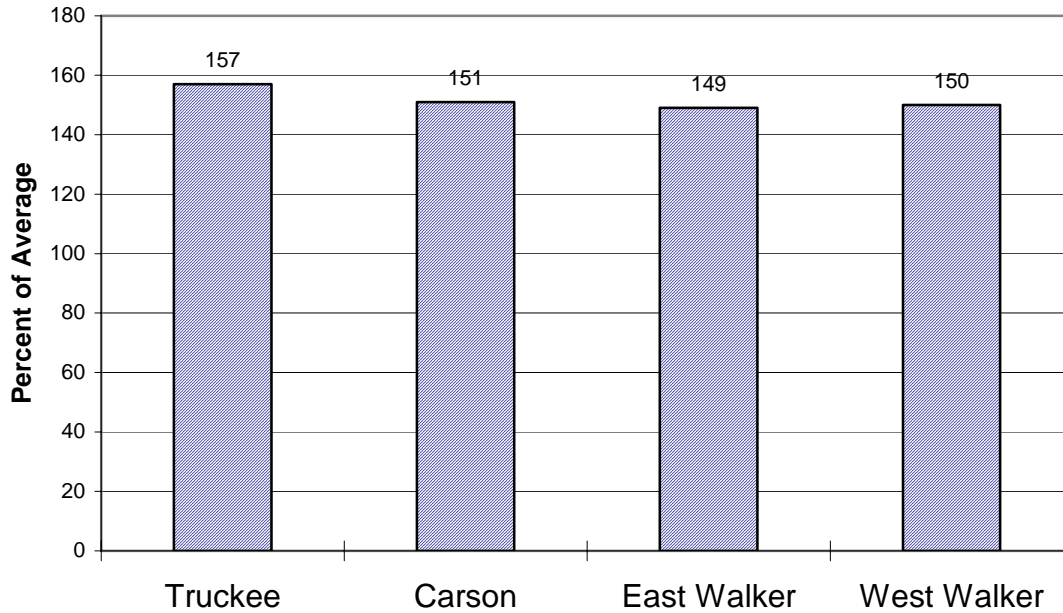
Water Supply Forecasts

		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
Truckee River						
Truckee River						
Lake Tahoe Stage Rise	Apr-High	2.3	167	2.5	2.1	1.38
Little Truckee River						
Boca Res, abv, Truckee, nr	Apr-Jul	125	156	145	105	80
Truckee River						
Farad	Apr-Jul	420	162	450	390	260
Carson River						
East Fork Carson River						
Gardnerville, nr	Apr-Jul	320	169	335	305	189
West Fork Carson River						
Woodfords	Apr-Jul	94	168	100	88	56
Carson River						
Carson City, nr	Apr-Jul	350	186	380	320	188
Fort Churchill, nr	Apr-Jul	365	205	400	330	178
Walker River						
East Walker River						
Bridgeport, nr	Apr-Aug	145	216	161	129	67
West Walker River						
Ltl Walker, blo, Coleville, nr	Apr-Jul	290	186	300	280	156

East Side Sierra Nevada Basins

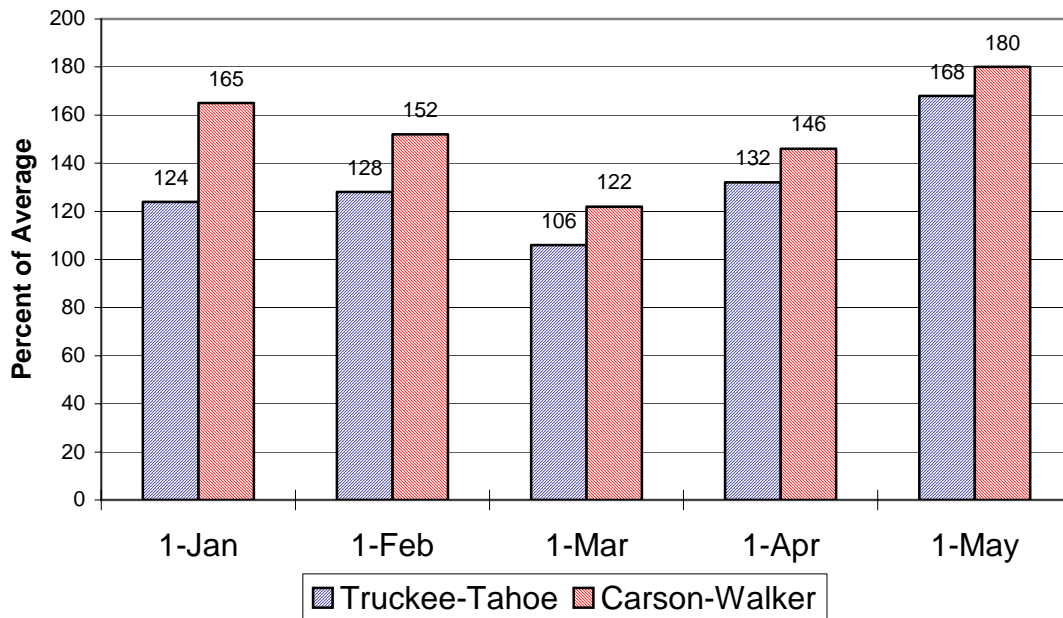
Seasonal Basin Precipitation

October 1 to Date



Basin Snowpack

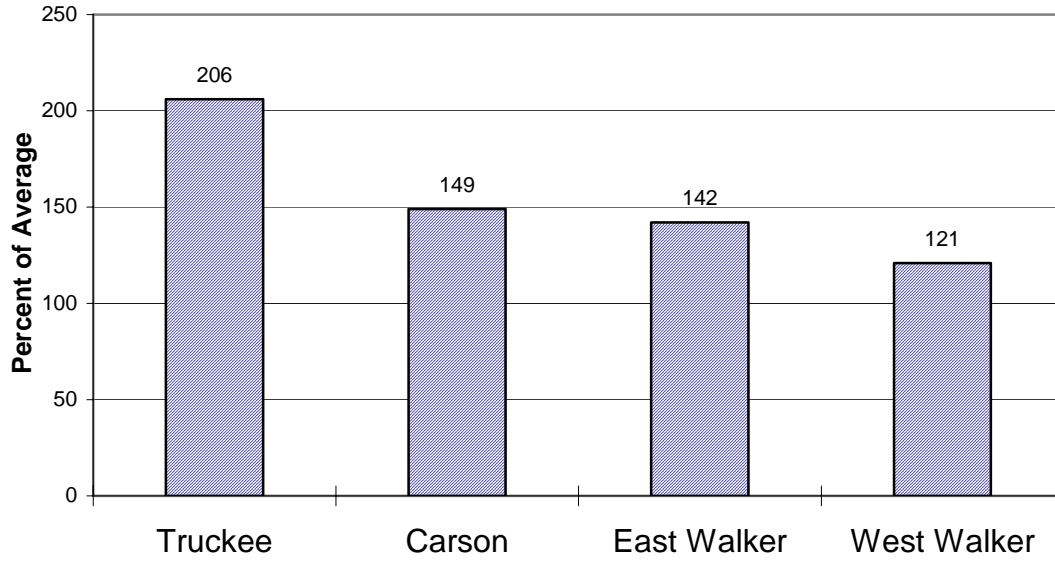
% of Average SWE to Date



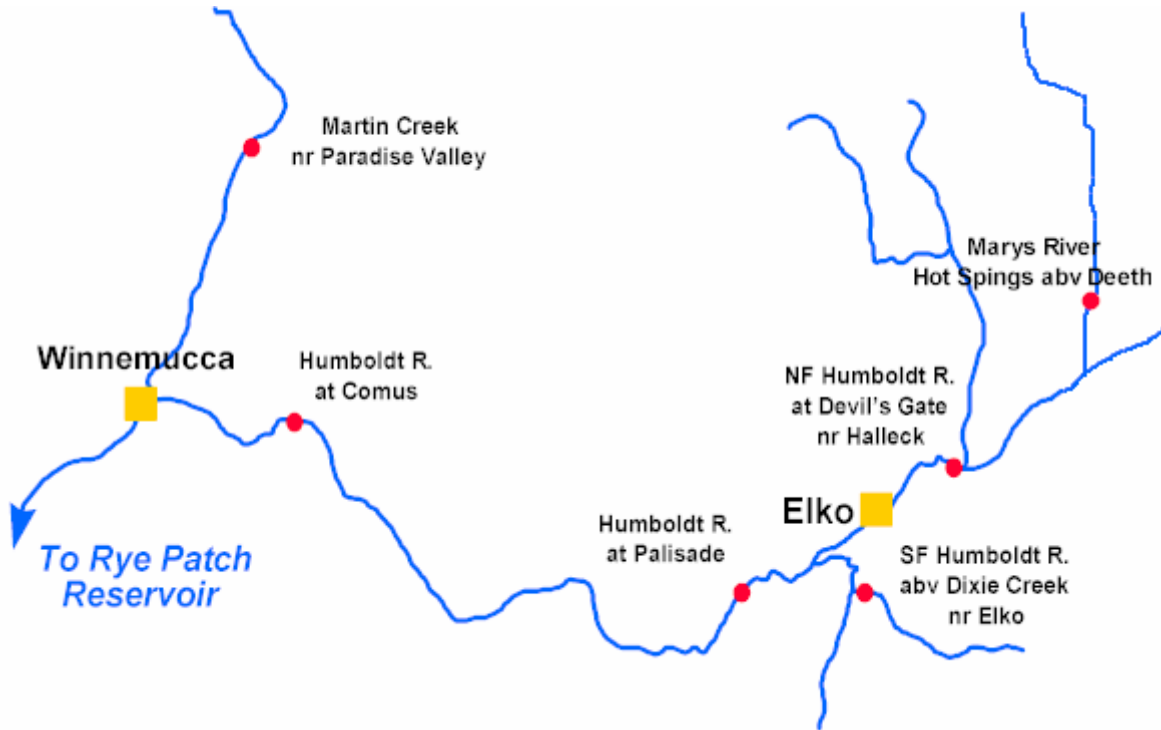
East Side Sierra Nevada Basins

Seasonal Basin Runoff

October 1 to Date



Humboldt River Basin



Water Supply Forecasts

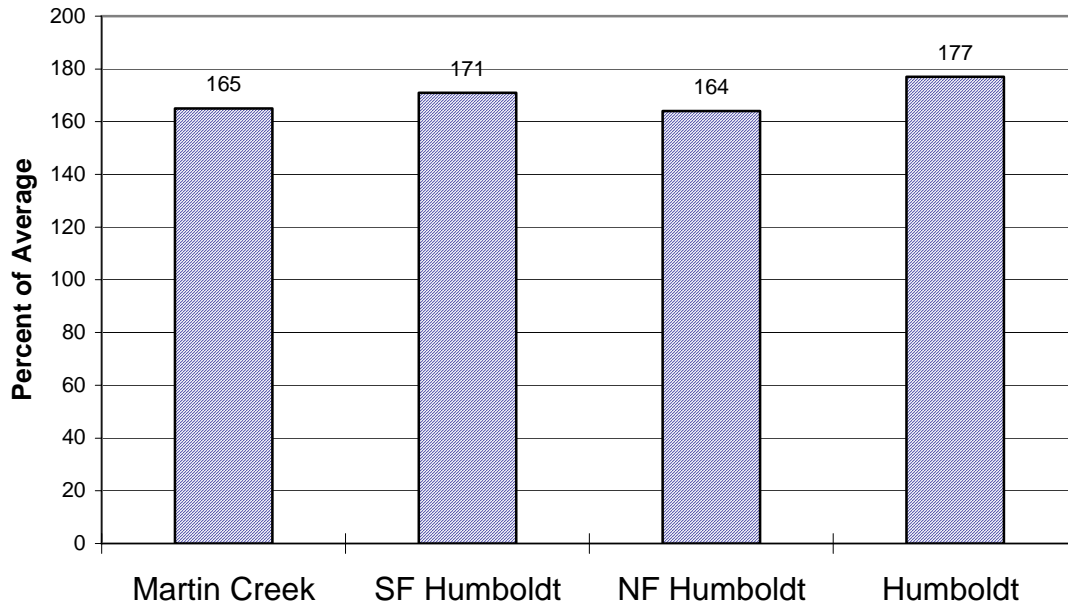
		Most Prob Vol KAF	Most Prob Vol %Norm	Reas Max Vol KAF	Reas Min Vol KAF	30 Year Avg KAF
North Fork Humboldt River						
Devils Gate, at, Halleck, nr	Apr-Jul	70	206	90	50	34*
South Fork Humboldt River						
Dixie Ck, abv, Elko, nr	Apr-Jul	160	211	195	125	76
Marys River						
Hot Springs, abv, Deeth, nr	Apr-Jul	75	192	90	60	39
Humboldt River						
Elko, nr	Apr-Jul	330	214	410	250	154
Palisade	Apr-Jul	560	224	700	420	250
Comus	Apr-Jul	570	253	715	425	225
Martin Ck						
Paradise Vly, nr	Apr-Jul	29	155	36	22	18.7

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Humboldt River Basin

Seasonal Basin Precipitation

October 1 to Date



Basin Snowpack

% of Average SWE to Date

