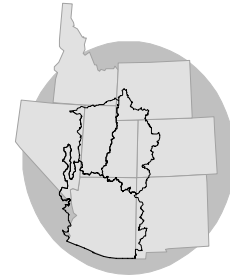


# WATER SUPPLY OUTLOOK

## for the LOWER COLORADO COLORADO BASIN RIVER FORECAST CENTER

NATIONAL WEATHER SERVICE, SALT LAKE CITY, UT

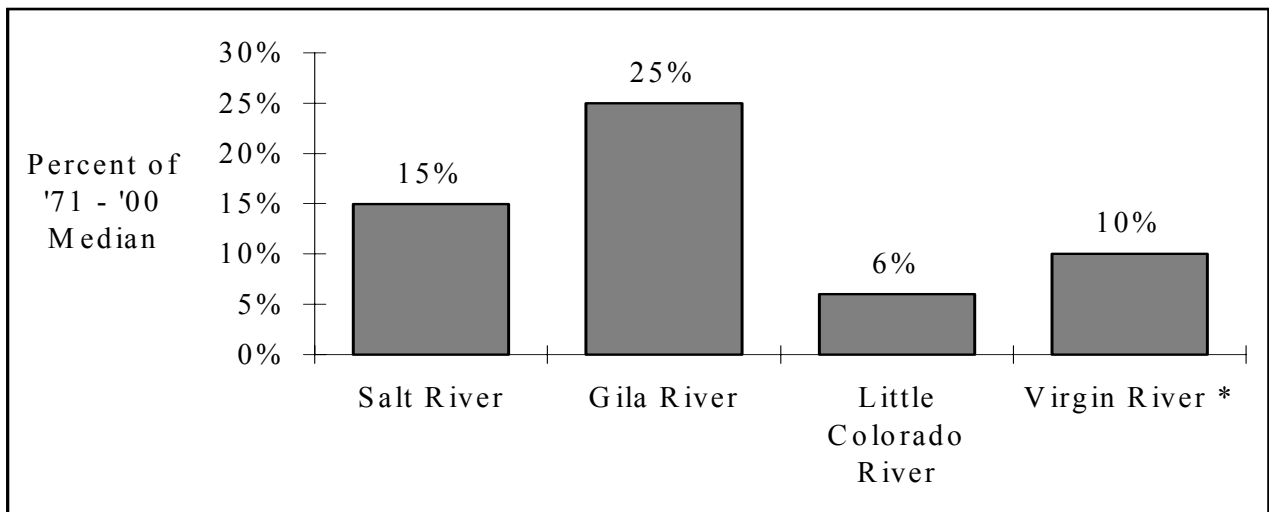


**APRIL 1, 2002**

### SUMMARY

The forecast runoff volumes for April through May are much below median in the Salt, Gila and Little Colorado River Basins. The forecast volumes for April through July are much below average in the Virgin River Basin. An oddity is that the San Pedro River runoff volume for April through May is in the below median category. Several rivers in the Lower Colorado Basin are currently flowing below historical minimums.

### APRIL - MAY VOLUME FORECASTS



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\* Virgin River Basin forecasts are for the April through July period and expressed in percent of average.

## SALT RIVER

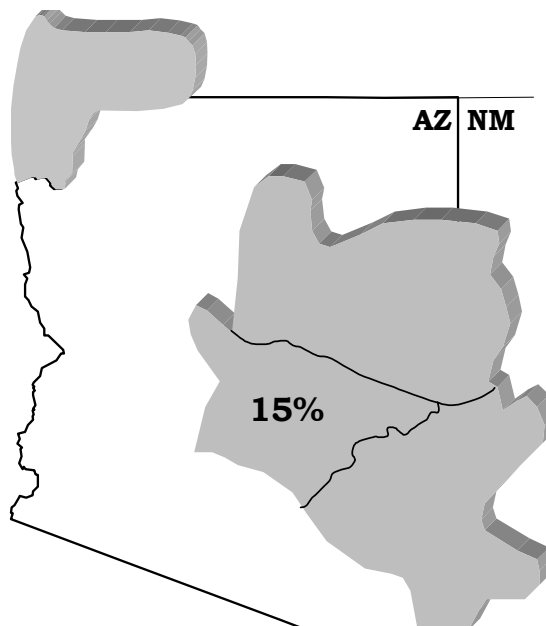
The 2002 Water Year in the Salt and Verde watersheds continues to be dry. The April-May forecasts for the Verde River (64 years of record), the Tonto River (64 years of record), and the Salt River (88 years of record) are all below historical minimums.

April-May stream flow forecasts for the Salt River are as follows:

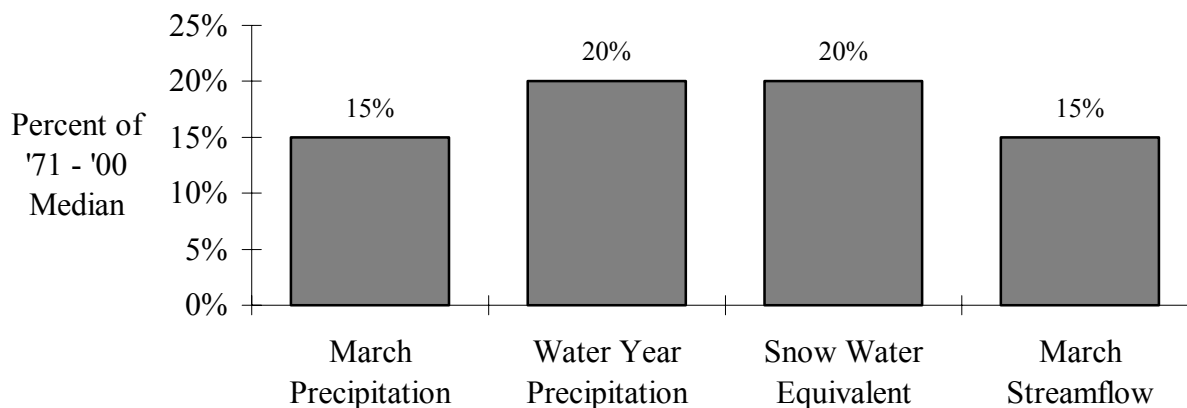
Verde River:  
Much Below Median

Tonto Creek:  
Much Below Median

Salt River:  
Much Below Median



## BASIN CONDITIONS - APRIL 1, 2002



Specific site forecasts are listed on page 6.

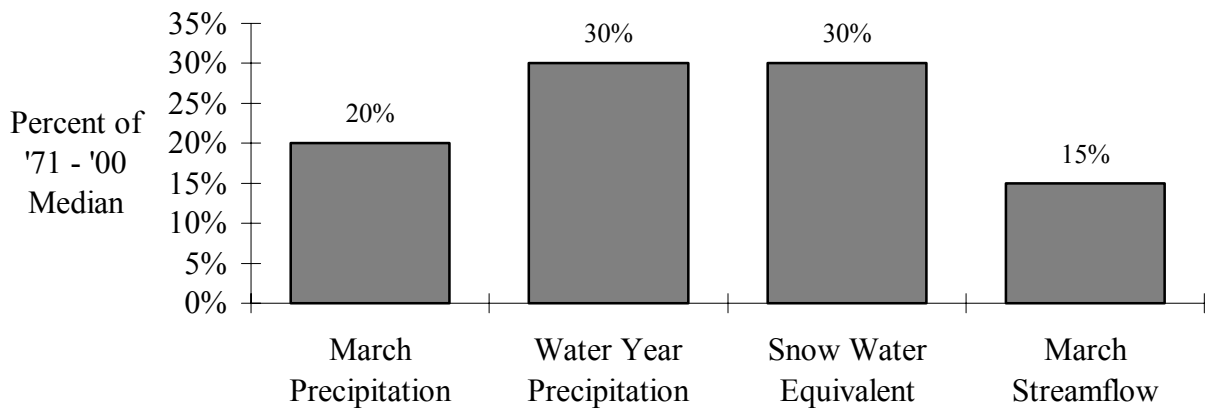
## GILA RIVER

The 2002 Water Year in the Gila watershed continues to be dry. The forecasted stream flows all remain much below median, and if these flows verify, they will be among the lowest flows on record.

April-May stream flow forecasts for the Gila River are as follows:



## BASIN CONDITIONS - APRIL 1, 2002



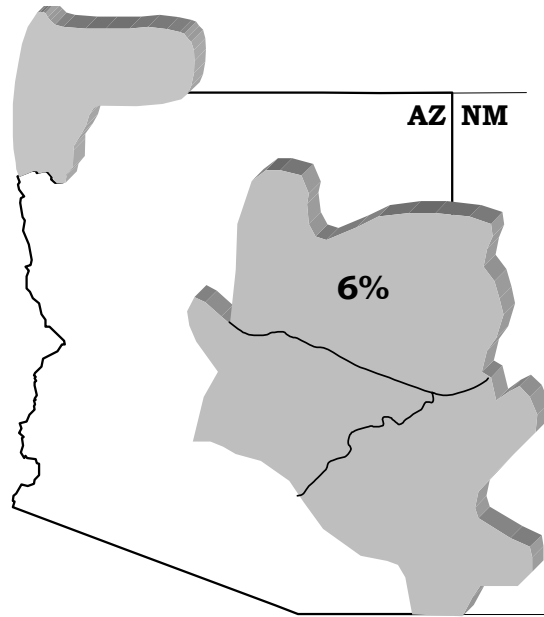
Specific site forecasts are listed on page 6.

## LITTLE COLORADO RIVER

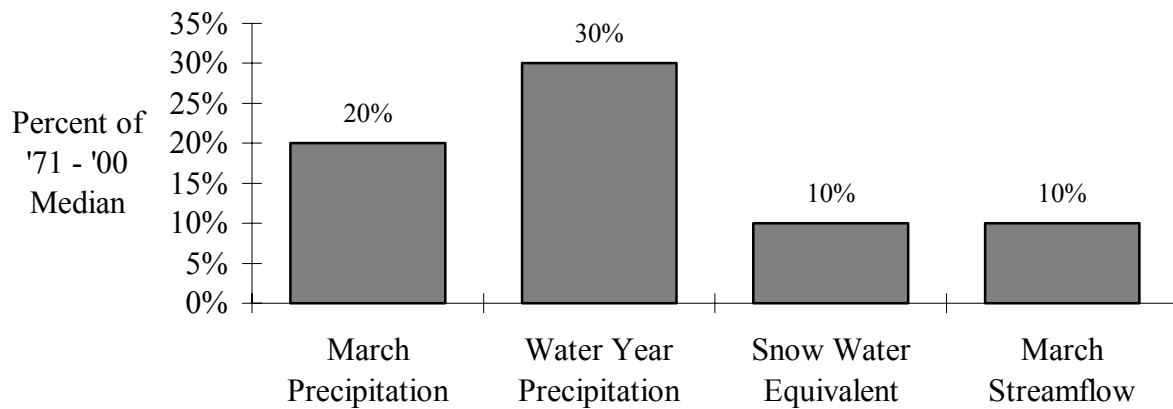
The snow pack within the Little Colorado watershed has dropped from 15% to 10% since March 1st. Forecast runoff now ranges from 3% to 8% of median. If these April-May flows verify, they will be among the lowest flows on record.

April-May stream flow forecasts for the Little Colorado River are as follows:

Little Colorado River:  
Much Below Median



## BASIN CONDITIONS - APRIL 1, 2002

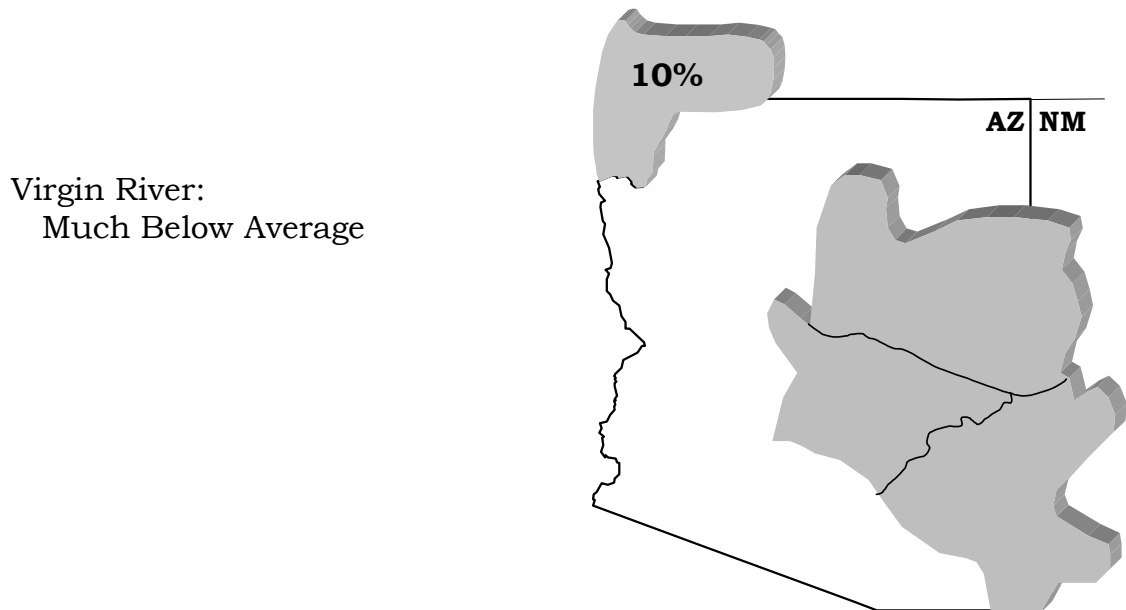


Specific site forecasts are listed on page 6.

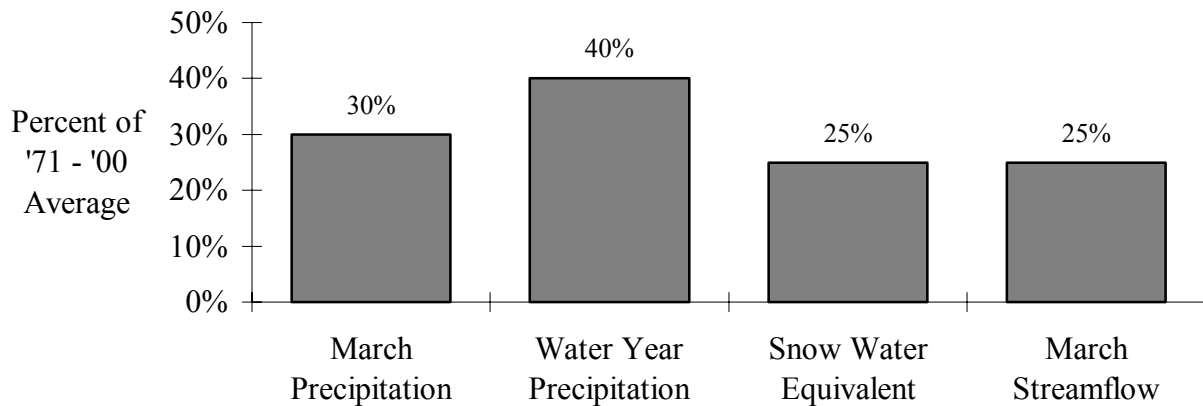
## VIRGIN RIVER

Within the Virgin River watershed, April 1st snow pack is much below average. Therefore, stream flow forecasts are much below average, ranging from 6 to 16% of average. If the April-July forecast for the Virgin River at Virgin, Utah verifies, it will be the lowest runoff in 94 years of record.

April-July stream flow forecasts for the Virgin River are as follows:



## BASIN CONDITIONS - APRIL 1, 2002



Specific site forecasts are listed on page 6.

## SPECIFIC SITE FORECASTS—WATER YEAR 2002

April through May volume (kaf) forecasts (except where noted).

Stream	Station	Most Probable	Percent Med.	Reas. Max	Reas. Min
LITTLE COLORADO	◆ LYMAN LK, ABV, ST. JOHNS, NR	0.17	4	0.96	0.09
	WOODRUFF	0.05	6	0.41	0.01
RIO NUTRIA	RAMAH, NR	0.03	6	0.25	0.01
ZUNI	BLACK ROCK RES, ABV	0.04	6	0.31	0.01
CEBOLLA CK	RAMAH RES	0.02	7	0.14	0
EAST CLEAR CK	BLUE RIDGE RES, PINE, NR	0.28	6	1.31	0.1
CLEAR CK	WINSLOW, NR	1.13	6	5.4	0.4
CHEVELON CK	WINSLOW, NR, WILDCAT CYN, BLO	0.12	8	0.41	0.03
WALNUT CK	LAKE MARY	0.05	3	0.34	0
SANTA CLARA	✂ PINE VALLEY, NR	0.51	9	1.58	0.03
VIRGIN	✂ VIRGIN	10.4	16	22	3.1
	✂ HURRICANE, NR	7.6	11	25	5.4
	✂ LITTLEFIELD	4.4	6	21	2.9
GILA	GILA, NR	4.6	27	8.6	2.1
	VIRDEN, NR, BLUE CK, BLO	3.7	15	10.1	1
	SOLOMON, NR, HEAD OF SAFFORD V	8.2	20	25	5.1
	SAN CARLOS RES, COOLIDGE DAM,	4.9	20	14.2	2.9
SAN FRANCISCO	GLENWOOD, NR	2.5	32	5.8	0.76
	CLIFTON	5.7	31	13	2.4
SAN PEDRO	CHARLESTON	0.85	73	1.22	0.43
SALT	ROOSEVELT, NR	15	10	30	6
TONTO CK	ROOSEVELT, NR, GUN CK, ABV	0.6	7	2.2	0.06
VERDE	HORSESHOE DAM, ABV, TANGLE CK,	13	30	25	5.8
COLORADO	✂ LAKE POWELL, GLEN CYN DAM, AT	3000	38		

◆ = April-June forecast period.

✂ = April-July forecast period.

NA = Not Available.

### Special Notes:

Lake Powell, Virgin and Santa Clara River forecasts use a 30 year percent of average (1971-2000).

## MARCH 2002 END OF MONTH RESERVOIR CONTENTS

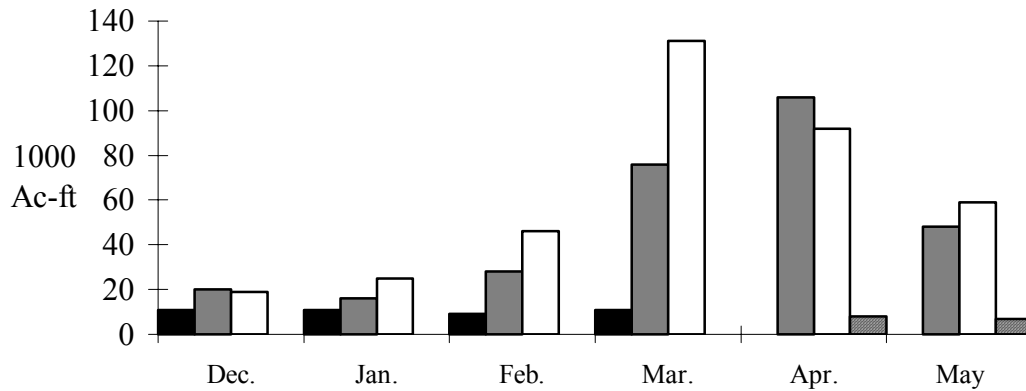
RESERVOIR (vol. in 1000 ac-ft)	Usable Capacity	EOM Usable Contents	Percent Usable Capacity (%)
Roosevelt	1653.0	368.0	22%
Horse Mesa	245.0	235.0	96%
Mormon Flat	58.0	55.0	95%
Stewart Mountain	70.0	64.0	91%
Horseshoe	131.0	1.0	1%
Bartlett	178.0	80.0	45%
Total SRP Reservoirs	2335.0	803.0	34%
San Carlos	867.0	NA	NA
Waddell	1145.0	768.0	67%
Painted Rock	2476.0	0.0	0%
Alamo	1045.0	93.0	9%
Lyman	31.0	5.0	16%
Lake Powell	24322.0	16917.0	70%
Mead	27380.0	19116.0	70%
Mohave	1810.0	1709.0	94%
Havasu	619.0	590.0	95%

NA = Not Available.

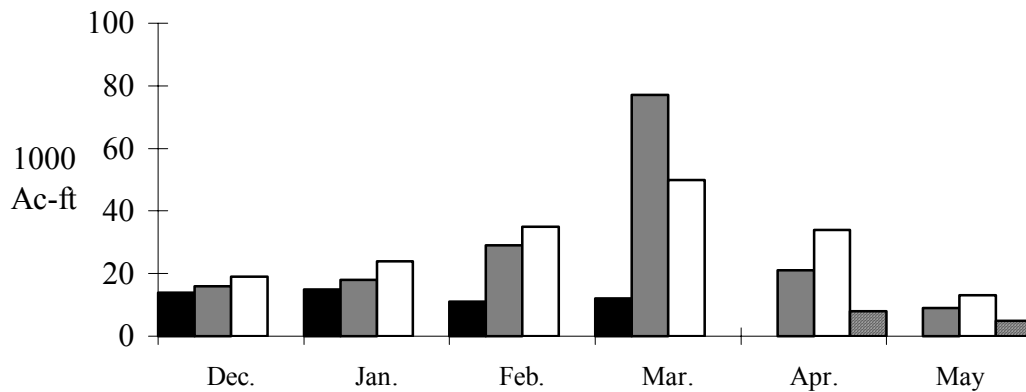
# MONTHLY STREAMFLOWS



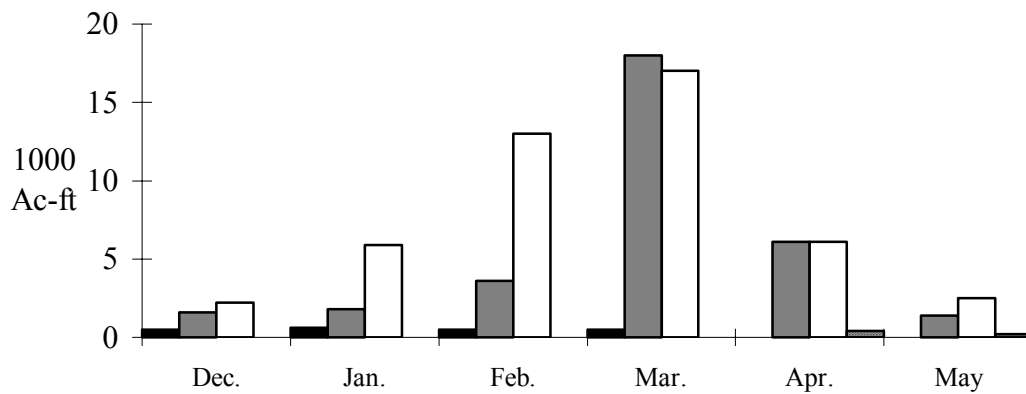
## Salt - Roosevelt:



## Verde - Horseshoe Dam, abv, Tangle Ck, blo:



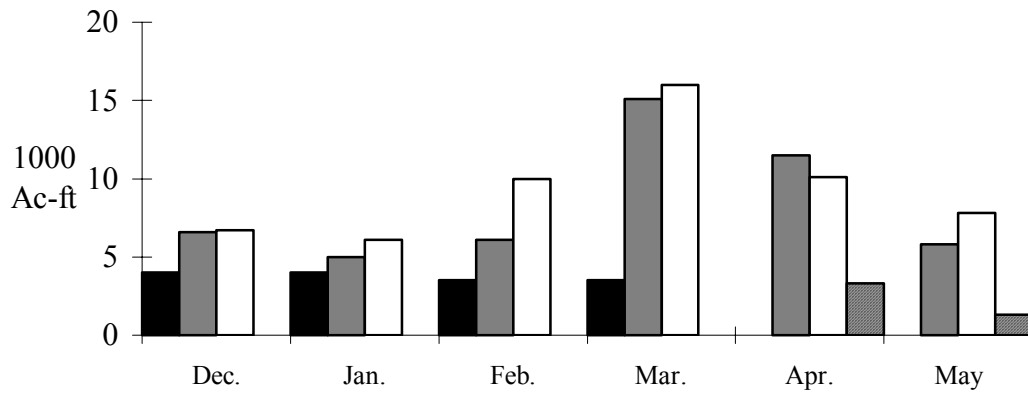
## Tonto Ck - Roosevelt, nr, Gun Ck, abv:



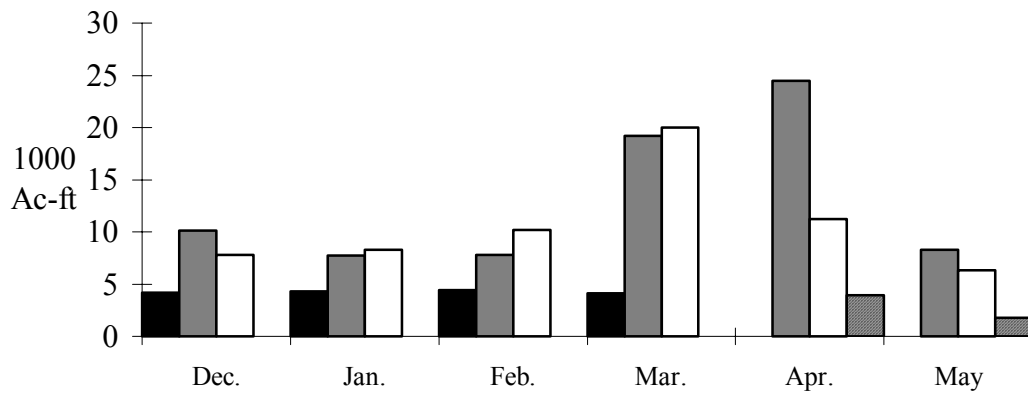




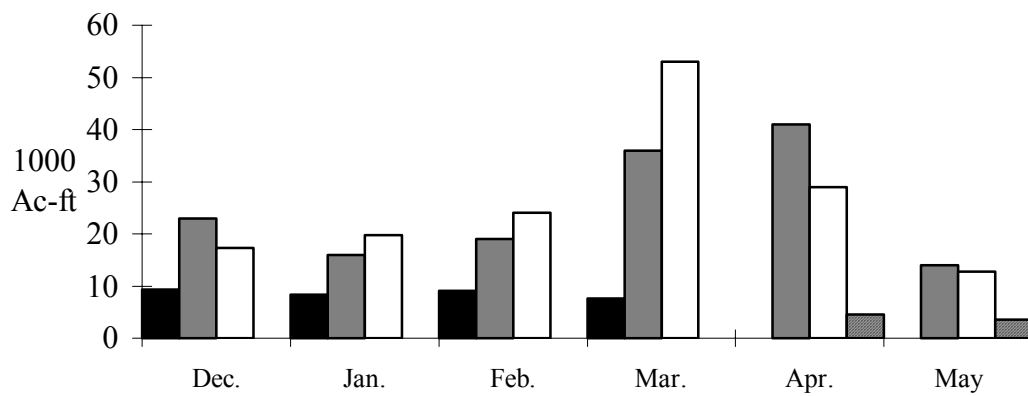
**Gila - Gila, nr:**



**San Francisco - Clifton:**



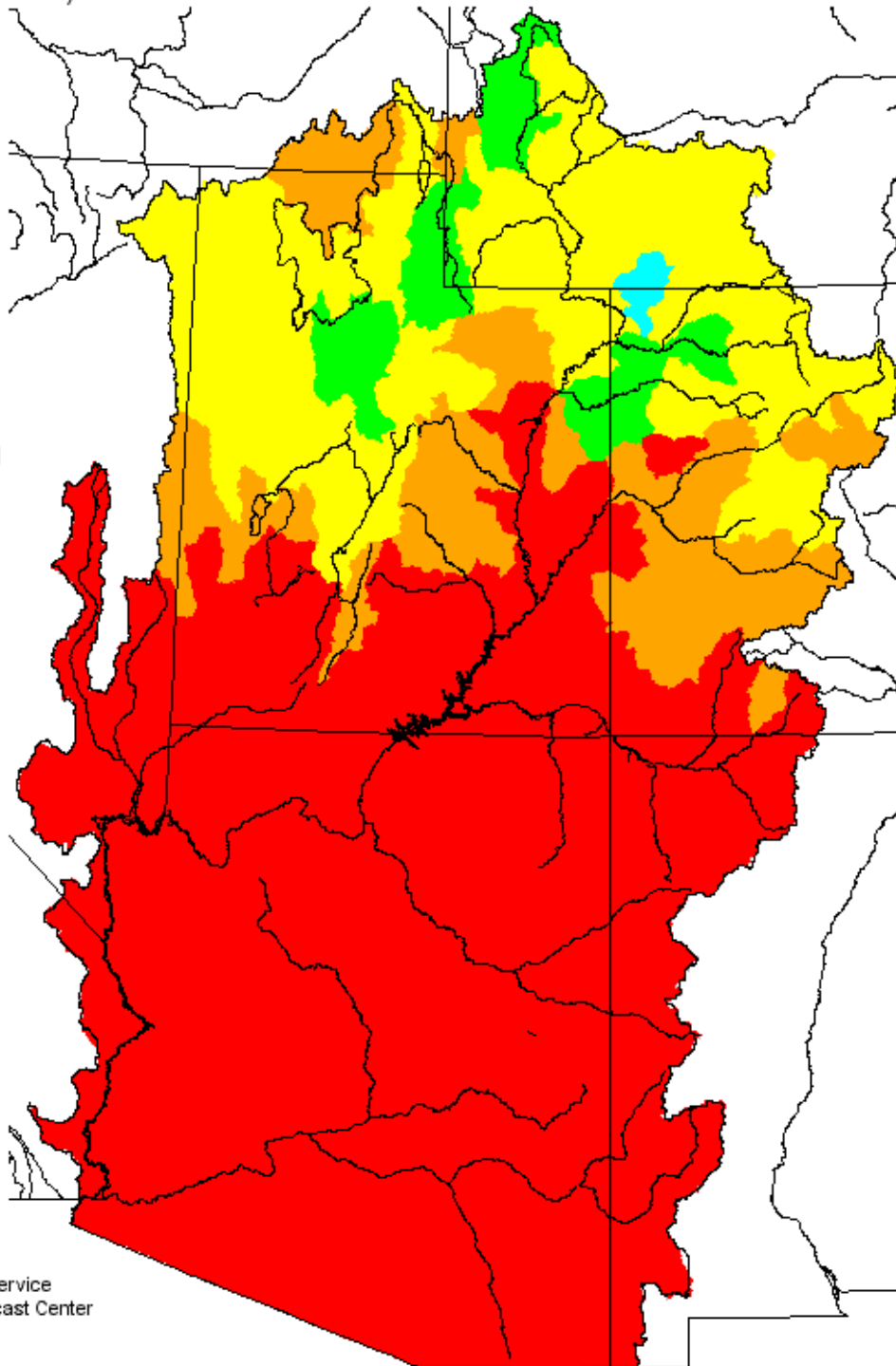
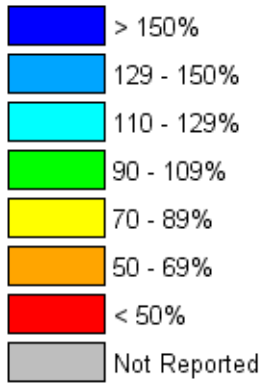
**Gila - Solomon:**



# Monthly Precipitation for March 2002

(Averaged by Hydrologic Unit)

## % Average



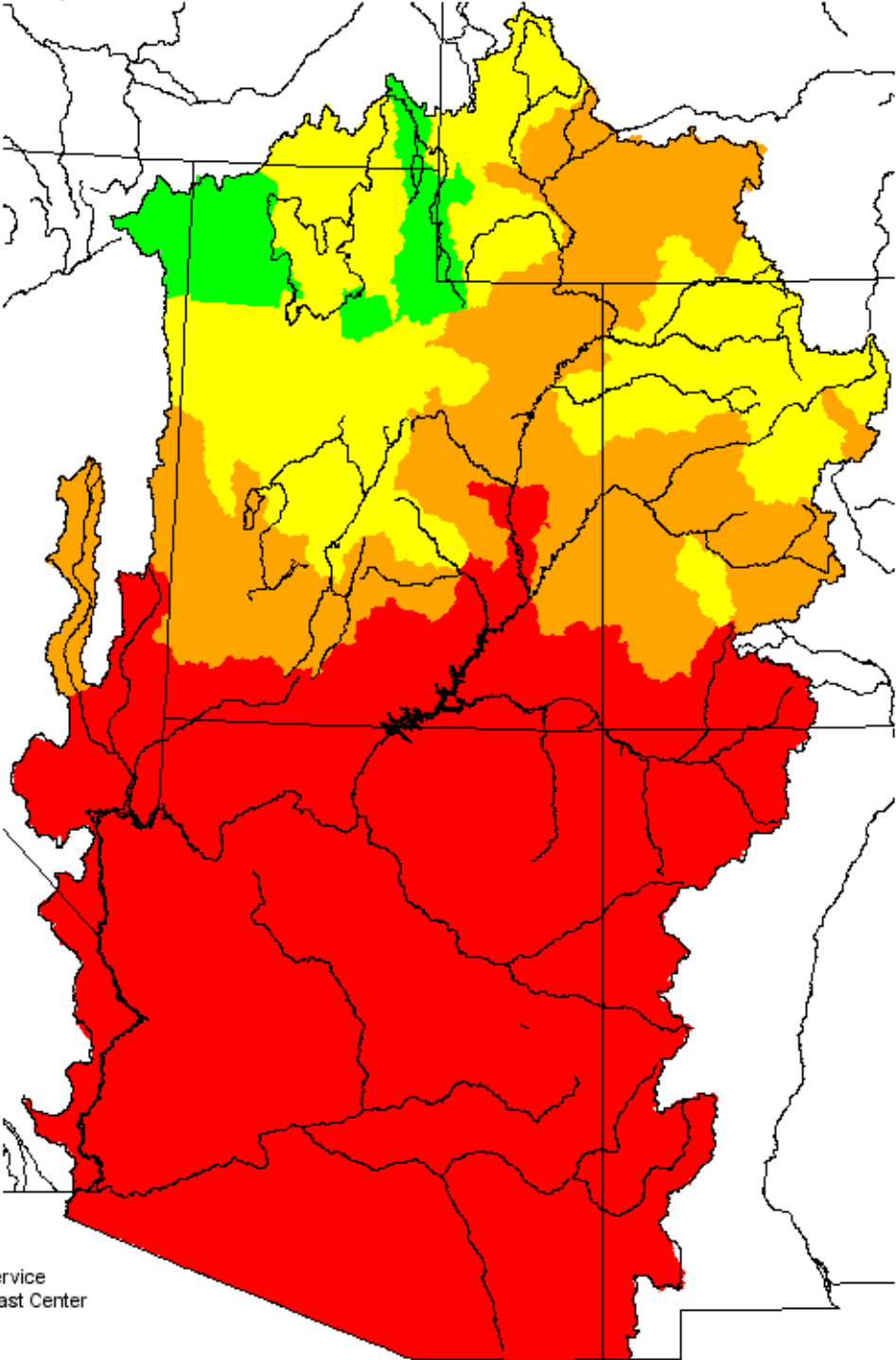
Prepared by  
NOAA, National Weather Service  
Colorado Basin River Forecast Center  
Salt Lake City, Utah  
[www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

# Seasonal Precipitation, October 2001 - March 2002

(Averaged by Hydrologic Unit)

## % Average

- > 150%
- 129 - 150%
- 110 - 129%
- 90 - 109%
- 70 - 89%
- 50 - 69%
- < 50%
- Not Reported



Prepared by  
NOAA, National Weather Service  
Colorado Basin River Forecast Center  
Salt Lake City, Utah  
[www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)

## ADDITIONAL INFORMATION

Water supply forecasts take into consideration present hydrometeorological conditions and use average basin temperatures and precipitation for the forecast period. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty becomes known and monthly forecasts become more accurate.

Volume forecasts represent adjusted flows; that is, observed flows with upstream water use taken into account. Adjusted flows will closely approximate natural or unimpaired flows. However, not all upstream diversions or impoundments are measured or quantifiable. For specific adjustments used with each forecast point, consult the Guide to Water Supply Forecasting.

The Water Supply Outlook is issued monthly January through April by the Colorado Basin River Forecast Center, National Weather Service. It represents a coordinated effort between the National Weather Service, Natural Resources Conservation Service, Bureau of Reclamation, Salt River Project, U.S. Geological Survey and local water district managers.

### **DEFINITIONS:**

**Acre-Foot:**

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

**Average:**

The arithmetic mean. The sum of the values divided by the number of values.

**Categories:**

Much above Median	Above Median	Near Median	Below Median	Much below Median
Greater than 130%	111-130%	90-110%	70-89%	Less than 70%

**Forecast Period:**

Variable. Current month through May 31.

**Median:**

The middle value. One half of the observed values are higher and half of the values are lower than this.

**Most Probable Forecast:**

Given the current hydrometeorological conditions to date, this is the best estimate of what the runoff volume will be this season.

**Reasonable Maximum Forecast:**

Given the current hydrometeorological conditions, the seasonal runoff that has a ten percent (10%) chance of being exceeded.

**Reasonable Minimum Forecast:**

Given the current hydrometeorological conditions, the seasonal runoff that has a ninety percent (90%) chance of being exceeded.

**Water Year:**

The period from October 1 through September 30.

NOTE: Data used in this report are provisional and are subject to revision.

For more information, or to be included on the mailing list, please contact:

Colorado Basin River Forecast Center, National Weather Service

2242 W. North Temple · Salt Lake City, UT 84116 · (801) 524-5130 · <http://www.cbrfc.gov>