

**USDA** United States  
Department of  
Agriculture

**Natural  
Resources  
Conservation  
Service**

# Arizona

## Basin Outlook Report

### April 1, 2006



Issued by

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# Arizona Water Supply Outlook Report as of April 1, 2006

A full range of Snow Survey and Water Supply Forecasting products is available on the Arizona NRCS Home Page

## Arizona Snow Survey Program

<http://www.az.nrcs.usda.gov/snow/index.html>

### Helpful Internet Sites

#### Defending Against Drought – NRCS

<http://www.nrcs.usda.gov/feature/highlights/drought.html>

- Ideas on water, land, and crop management for you to consider while creating your drought plan.

#### Arizona Agri-Weekly

<http://www.nass.usda.gov/az/cur-agwk.pdf>

- Provides an overview of Arizona’s crop, livestock, range and pasture conditions as reported by local staffs of the USDA’s Agricultural Statistic Service and the University of Arizona.

## SUMMARY

Forecasts call for much below median stream flow levels during April and May. March precipitation was near average to above average across the river basins, while basin precipitation for the water year remains extremely low ranging from 35 to 48 percent of average according to SNOTEL readings. The remaining April 1 snowpacks are melting out and are much below the 30-year average in all basins. Reservoir storage is well below median at San Carlos lake, while combined reservoir storage in the Salt River Project system stands at 105 percent of median.

## SNOWPACK

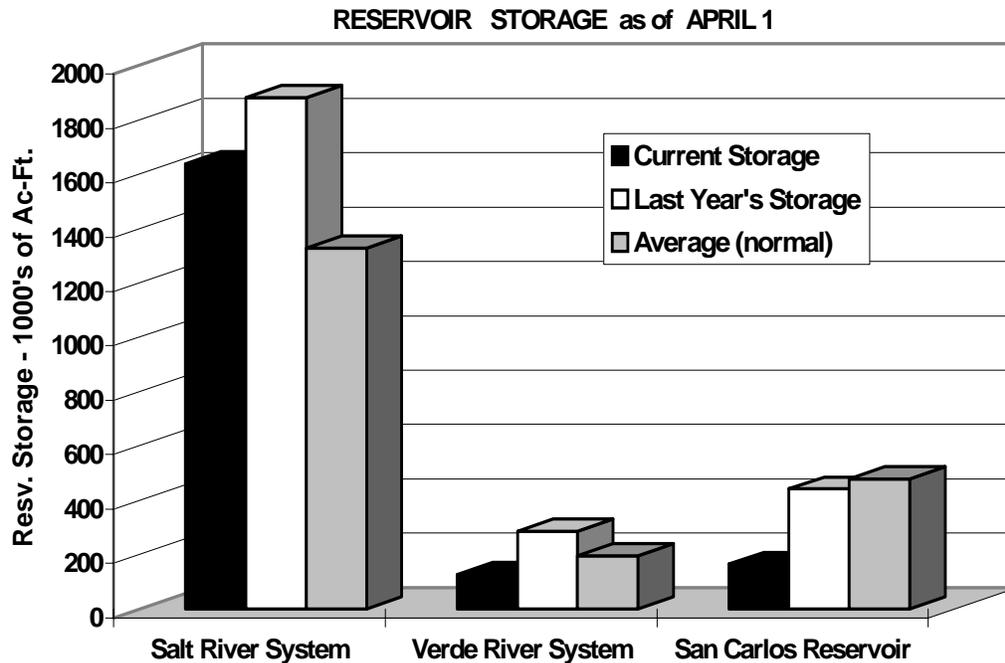
Watershed	Percent (%) of 30-Yr. Average Snowpack Levels as of April 1
Salt River Basin	18%
Verde River Basin	18%
Little Colorado River Basin	18%
San Francisco-Upper Gila River Basin	28%
<b>Other Points of Interest</b>	
Chuska Mountains	30%
Central Mogollon Rim	17%
Grand Canyon	50%
San Francisco Peaks	39%
Statewide Snowpack	28%

## PRECIPITATION

SNOTEL data shows that precipitation for March was 132 percent of average over the Salt River basin, 111 percent over the Verde River basin, and 99 percent of average over the San Francisco-Upper Gila River basin. The Little Colorado River basin received 131 percent of average precipitation in March. However, seasonal precipitation for the period October 1, 2005 to April 1 is extremely low in all basins ranging from 35 to 48 percent of average.

Please refer to the basin bar graphs found in this report for more information regarding seasonal precipitation amounts.

## RESERVOIR



Key storage volumes displayed in thousands of acre-feet (1000 x ):

RESERVOIR	CURRENT STORAGE	LAST YEAR STORAGE	30-YEAR AVERAGE
Lyman Lake	8.1	6.4	17.2
Show Low Lake	---	5.1	4.1
Lake Pleasant	746.1	768.7	----
Lake Havasu	563.9	551.0	562.3
Lake Mohave	1664.7	1688.9	1680.4
Lake Mead	15337.0	16220.0	21999.0
Lake Powell	10704.0	8015.0	18326.0
Salt River System	1636.3	1879.7	1327.4
Verde River System	124.3	285.2	195.7
San Carlos Reservoir	163.1	440.4	476.9

# STREAMFLOW

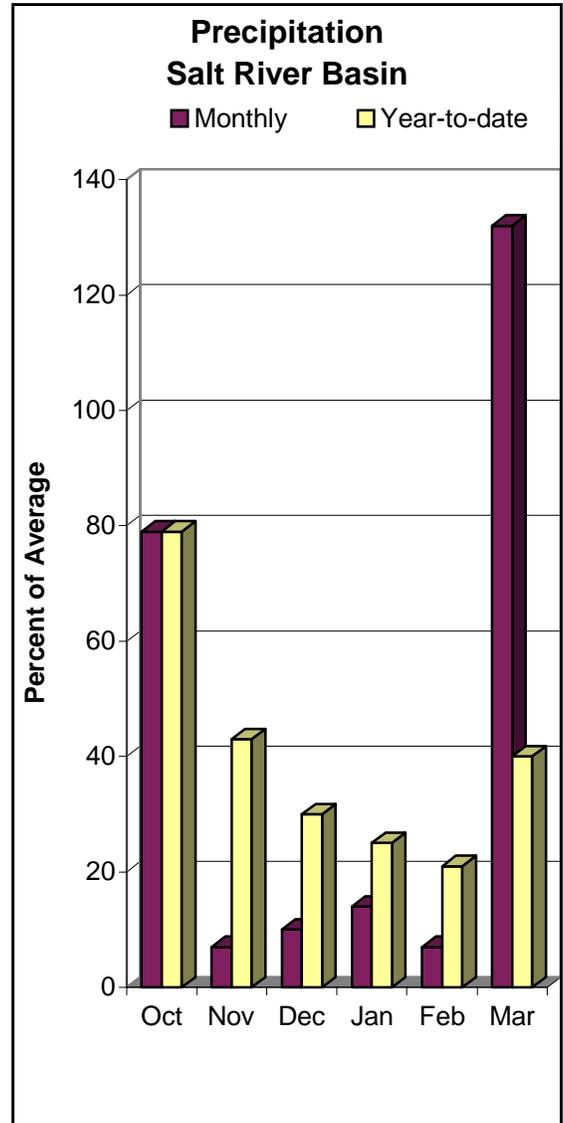
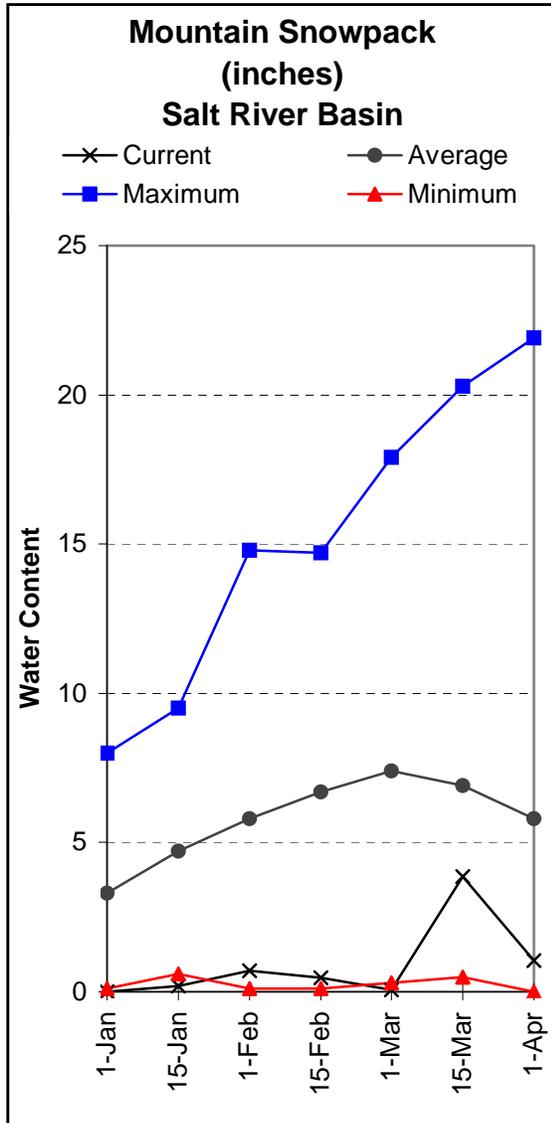
Forecasts call for much below median stream flow levels for all basins covered in this report. Please refer to the stream flow forecast tables for more information regarding seasonal water supplies.



## SALT RIVER BASIN as of April 1, 2006

Much below median stream flow is forecast for the basin. In the Salt River, near Roosevelt, the forecast calls for 21 % of median flows from April-May, while at Tonto Creek, the forecast calls for 19 % of median stream flow from April-May.

Snow survey measurements show basin snowpacks to be 18 % of the 30-year average, while combined reservoir storage in the Salt River system stands at 1,636,330 acre-feet on April 1.



SALT RIVER BASIN  
Streamflow Forecasts - April 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Med (1000AF)
	Chance of Exceeding *						
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% MED.)	30% (1000AF)	10% (1000AF)		
Salt River nr Roosevelt							
APR-MAY	17.0	24	30	21	46	63	143
APRIL	9.2	15.6	20	22	26	37	92
Tonto Creek ab Gun Creek nr Roosevelt							
APR-MAY	0.36	0.95	1.60	19	2.80	5.40	8.40
APRIL	0.31	0.49	1.20	20	2.40	5.50	6.10

\* 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 and median are 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.

SALT RIVER BASIN  
Reservoir Storage (1000AF) End of March

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
SALT RIVER RES SYSTEM	2025.8	1636.3	1879.7	1327.4

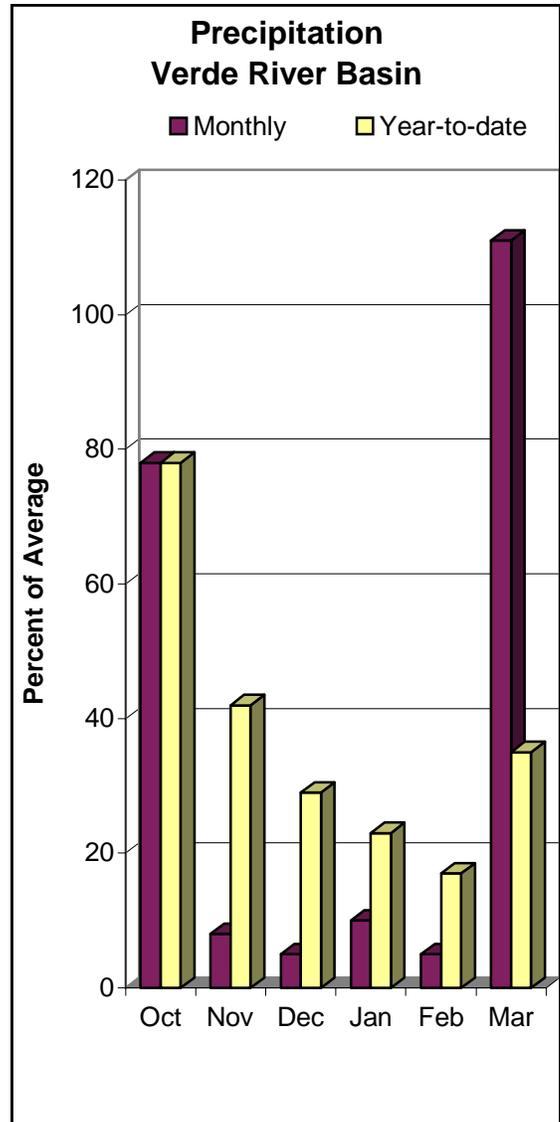
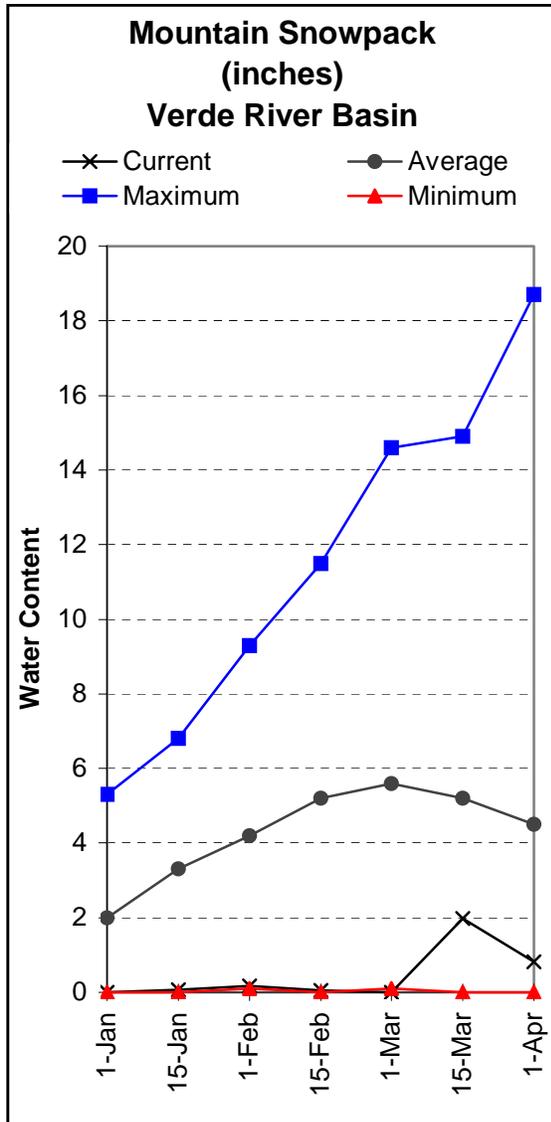
SALT RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
SALT RIVER BASIN	8	13	18

## VERDE RIVER BASIN as of April 1, 2006

Much below median stream flow is forecast for the basin. In the Verde River, above Horseshoe Dam, the forecast calls for 46 % of median stream flow from April-May.

Snow survey measurements show basin snowpacks to be 18 % of the 30-year average, while combined reservoir storage in the Verde River system was recorded at 124,320 acre-feet on April 1.



VERDE RIVER BASIN  
Streamflow Forecasts - April 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Med (1000AF)
	Chance of Exceeding * 90%      70%      50%      30%      10%						
	(1000AF)	(1000AF)	(1000AF) (% MED.)	(1000AF)	(1000AF)	(1000AF)	(1000AF)
Verde River abv Horseshoe Dam							
APR-MAY	13.2	15.8	20	46	25	35	44
APRIL	8.2	10.5	13.0	38	19.0	27	34

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

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- (2) - The value is natural volume - actual volume may be affected by upstream water management.

VERDE RIVER BASIN  
Reservoir Storage (1000AF) End of March

Reservoir	Usable Capacity	***** This Year	***** Usable Storage Last Year	***** Average
VERDE RIVER RES SYSTEM	287.4	124.3	285.2	195.7

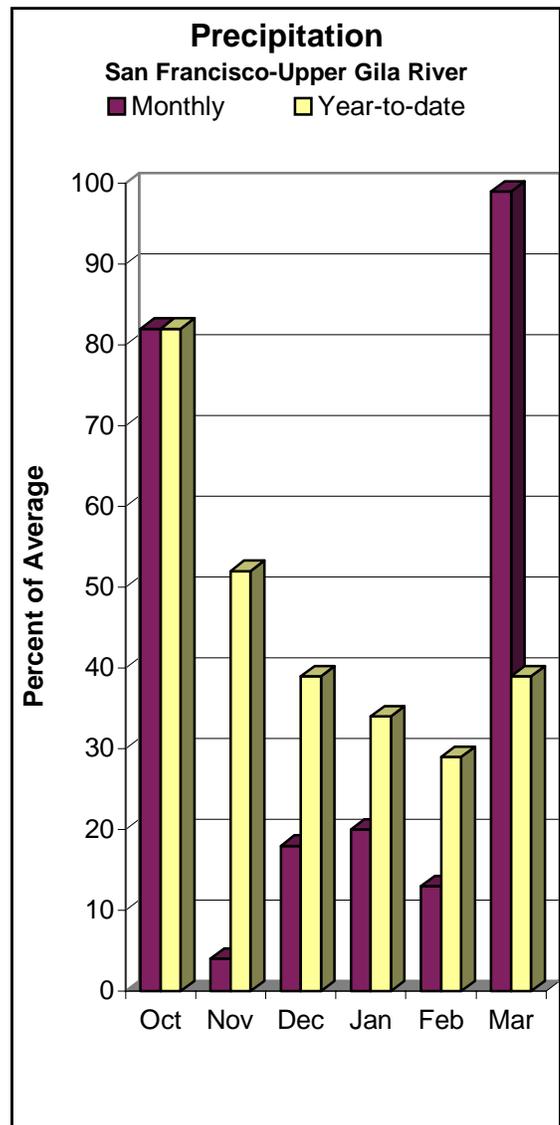
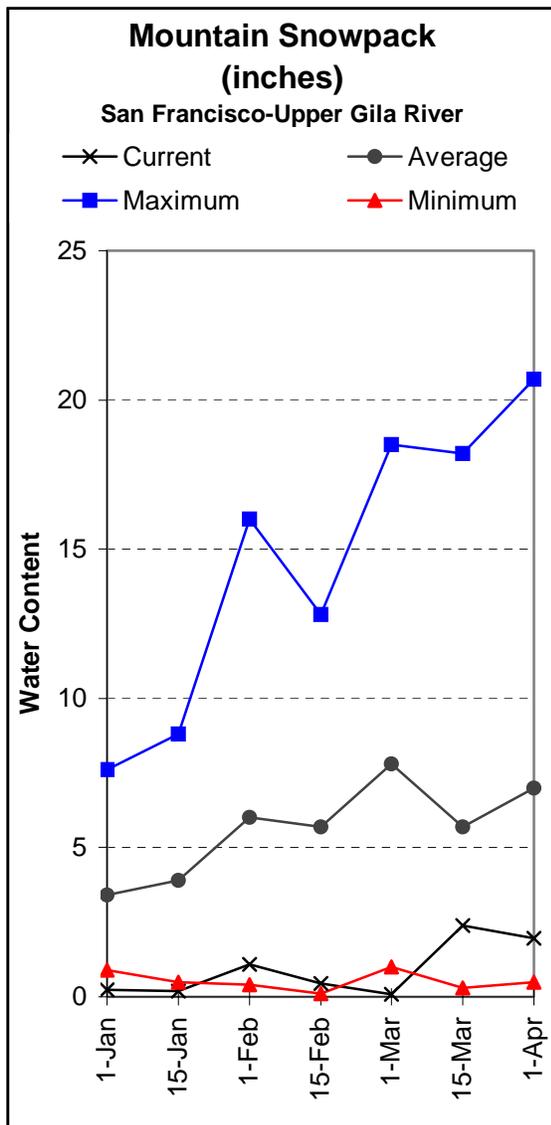
VERDE RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
VERDE RIVER BASIN	10	13	18
SAN FRANCISCO PEAKS	3	21	39

## SAN FRANCISCO-UPPER GILA RIVER BASIN as of April 1, 2006

Much below median stream flow is forecast for the basin. In the San Francisco River, at Clifton, the forecast calls for 29 % of median stream flow from April-May, while in the Gila River, near Solomon, the forecast calls for 29 % of median stream flow from April-May. At San Carlos reservoir, inflow to the lake is forecast at 26 % of median from April-May.

At San Carlos reservoir, storage was recorded at 163,100 acre-feet on April 1, while snow survey measurements show basin snowpacks to be 28 % of the 30-year average.



SAN FRANCISCO - UPPER GILA RIVER BASIN  
Streamflow Forecasts - April 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Med (1000AF)
	Chance of Exceeding *						
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% MED.)	30% (1000AF)	10% (1000AF)		
Gila River at Gila							
APR-MAY	4.5	5.2	6.3	36	8.0	11.1	17.3
Gila River nr Virden							
APR-MAY	2.4	4.3	6.0	25	7.9	12.0	24
San Francisco River at Glenwood							
APR-MAY	1.56	1.95	2.30	30	3.38	5.49	7.80
San Francisco River at Clifton							
APR-MAY	4.3	4.6	5.3	29	7.4	11.1	18.5
Gila River nr Solomon							
APR-MAY	6.3	8.4	12.0	29	16.8	21	42
APRIL			7.4	26			29
San Carlos Reservoir inflow							
APR-MAY	0.8	2.3	4.0	26	5.1	6.9	15.4

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

SAN FRANCISCO - UPPER GILA RIVER BASIN  
Reservoir Storage (1000AF) End of March

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
SAN CARLOS	875.0	163.1	440.4	476.9

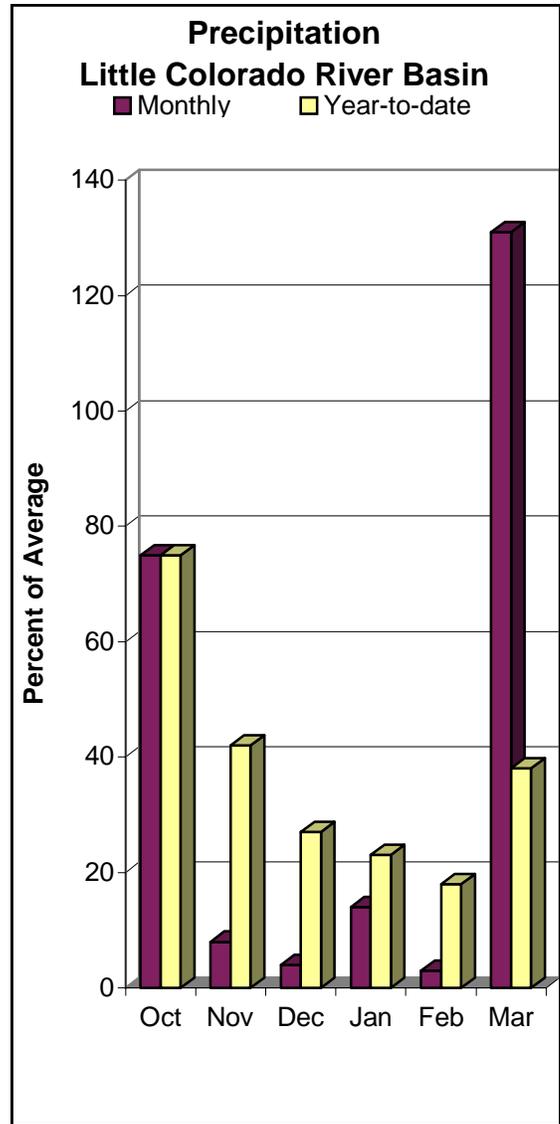
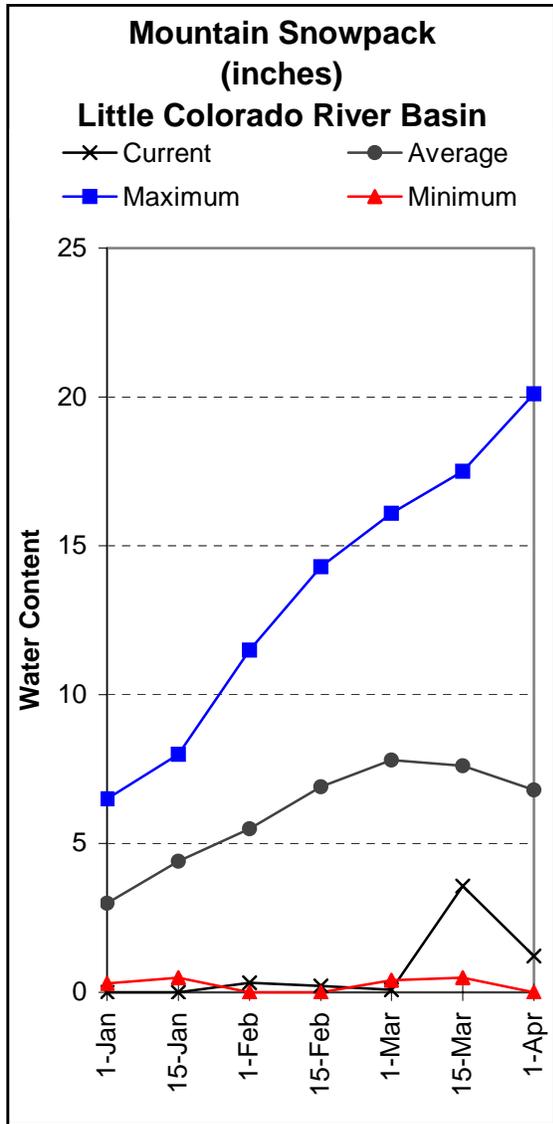
SAN FRANCISCO - UPPER GILA RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
SAN FRANCISCO - UPPER GILA R	11	17	28

# LITTLE COLORADO RIVER BASIN as of April 1, 2006

Much below median stream flow is forecast for the basin. In the Little Colorado River, above Lyman Lake, the forecast calls for 8 % of median stream flow from April-May, while at Woodruff, the forecast calls for 7 % of median stream flow from April-May.

Snow remaining along the southern headwaters of the Little Colorado River and the central Mogollon Rim was measured at 18 % and 17 % of the 30-year average, respectively.



LITTLE COLORADO RIVER BASIN  
Streamflow Forecasts - April 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Med (1000AF)
	Chance of Exceeding * 90% 70% 50% 30% 10% (1000AF) (1000AF) (1000AF) (% MED.) (1000AF) (1000AF)						
Little Colorado River abv Lyman Lake							
APR-JUN	0.13	0.22	0.33	8	0.65	1.42	4.30
Rio Nutria nr Ramah							
APR-MAY	0.01	0.01	0.01	2	0.04	0.16	0.52
Ramah Reservoir inflow							
APR-MAY	0.00	0.00	0.01	3	0.03	0.10	0.29
Zuni River abv Black Rock Reservoir							
APR-MAY	0.00	0.00	0.02	3	0.06	0.15	0.64
Little Colorado River at Woodruff							
APR-MAY	0.03	0.04	0.06	7	0.08	0.12	0.84
Blue Ridge Reservoir inflow							
APR-MAY	0.06	0.38	0.75	15	1.25	2.20	4.90
Lake Mary inflow							
APR-MAY	0.00	0.09	0.25	17	0.44	1.02	1.46

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LITTLE COLORADO RIVER BASIN  
Reservoir Storage (1000AF) End of March

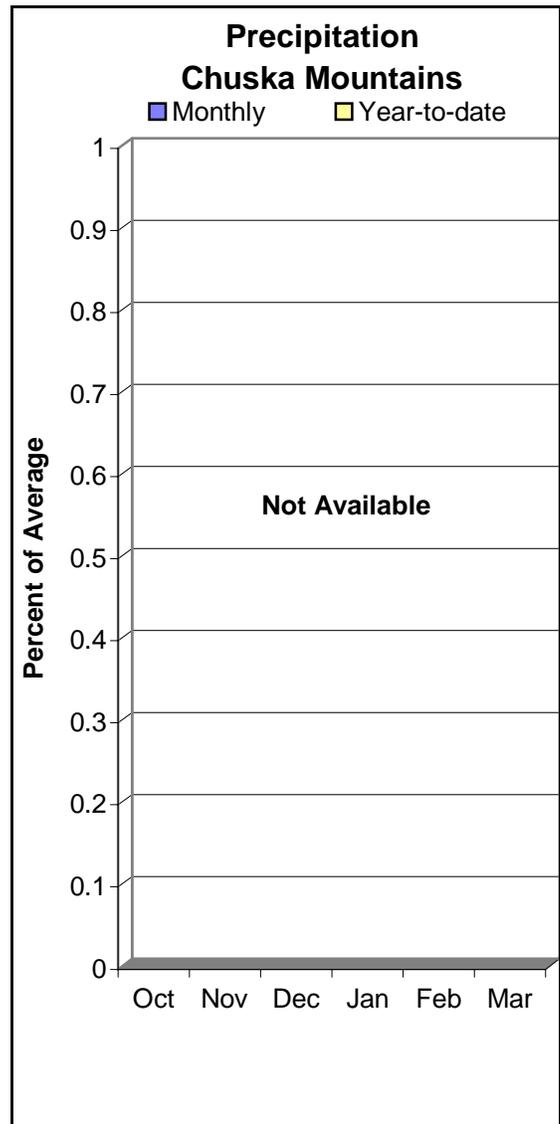
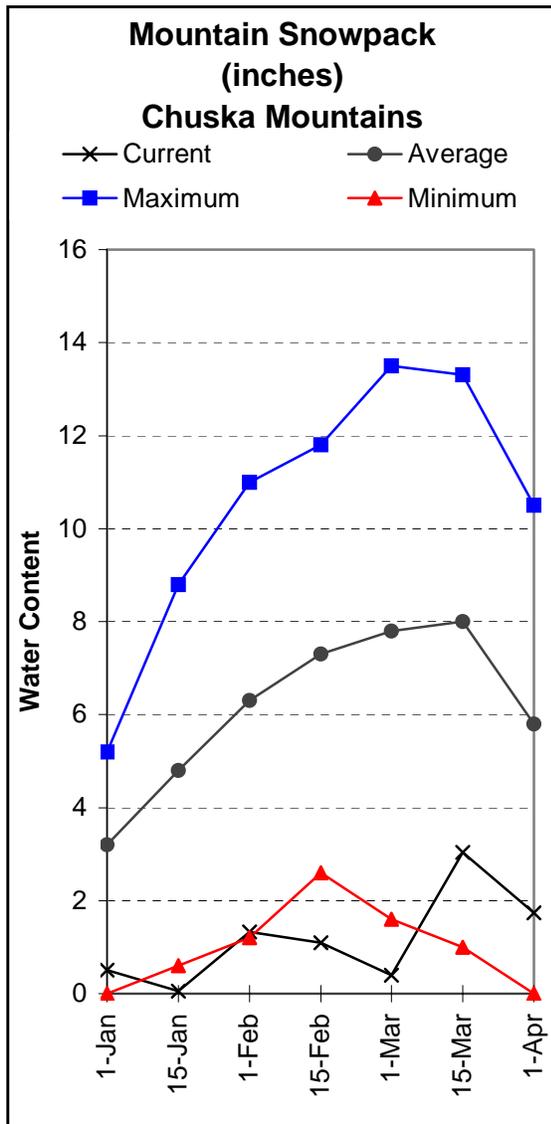
Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
LYMAN RESERVOIR	30.0	8.1	6.4	17.2
SHOW LOW LAKE		NO REPORT		

LITTLE COLORADO RIVER BASIN  
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
LITTLE COLORADO - SOUTHERN H	9	15	18
CENTRAL MOGOLLON RIM	4	14	17

## CHUSKA MOUNTAINS as of April 1, 2006

In the Chuska Mountains, snow survey measurements conducted by staff of the Navajo Nation show snowpack levels to be 30 % of average on April 1, while much below average stream flow is forecast for Captain Tom Wash, Wheatfields Creek, and Bowl Canyon Creek from March-May.



CHUSKA MOUNTAINS  
Streamflow Forecasts - April 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	Chance of Exceeding *						
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
Captain Tom Wash nr Two Gray Hills							
MAR-MAY	0.14	0.34	0.70	25	1.41	2.80	2.83
Wheatfields Creek nr Wheatfields							
MAR-MAY	0.15	0.35	0.70	24	1.45	2.90	2.90
Bowl Canyon Creek abv Assayi Lake							
MAR-MAY	0.05	0.12	0.26	26	0.50	1.00	1.00

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

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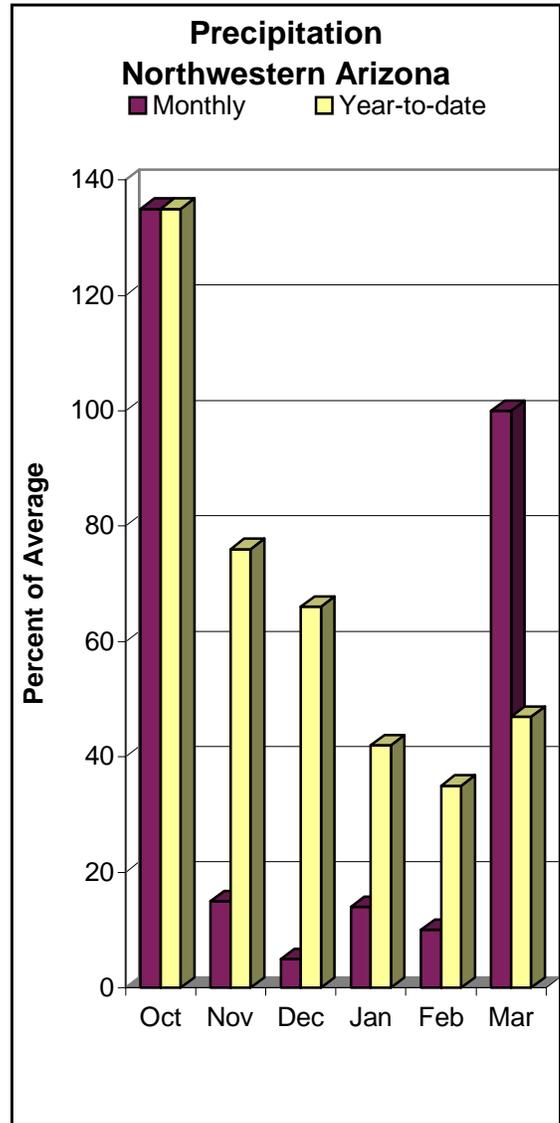
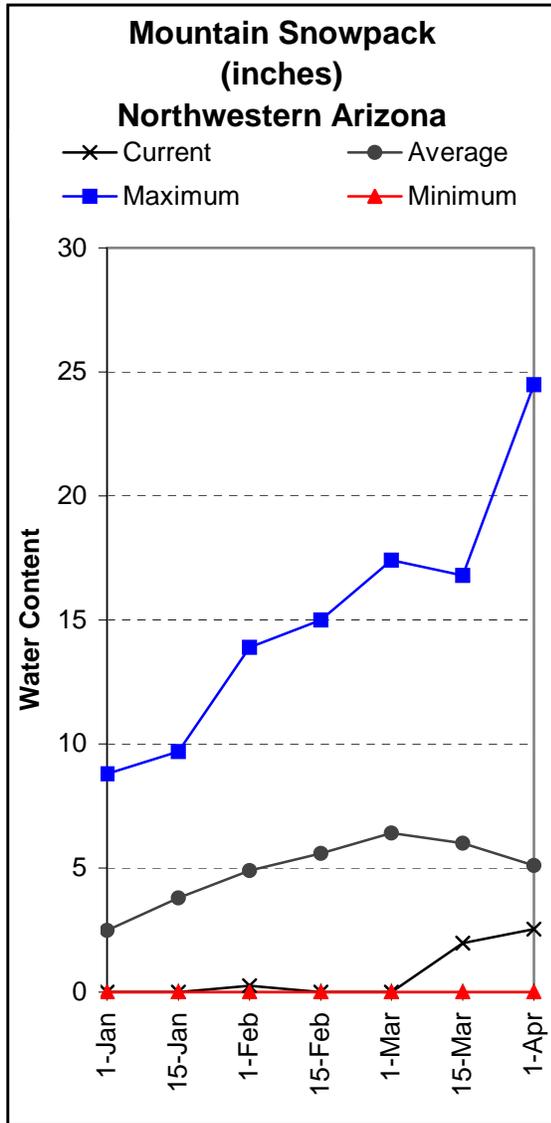
CHUSKA MOUNTAINS  
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
CHUSKA MOUNTAINS	7	15	30
DEFIANCE PLATEAU	2	0	0

## NORTHWESTERN ARIZONA as of April 1, 2006

In the Colorado River, inflow to Lake Powell is forecast at 97 % of average from April-July, while in the Virgin River at Littlefield, the forecast calls for 54 % of average stream flow from April-July.

At the Grand Canyon, snow survey measurements conducted by staff from the National Park Service show snowpack levels to be 50 % of average on April 1.



NORTHWESTERN ARIZONA  
Streamflow Forecasts - April 1, 2006

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===>						30 Yr Avg (1000AF)
	Chance of Exceeding *						
	90% (1000AF)	70% (1000AF)	50% (1000AF) (% AVG.)	30% (1000AF)	10% (1000AF)		
Virgin River at Littlefield							
APR-JUL	19.2	31	40	54	51	68	74
Lake Powell Inflow (2)							
APR-JUL	5150	6670	7700	97	8730	10250	7930

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NORTHWESTERN ARIZONA  
Reservoir Storage (1000AF) End of March

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
LAKE HAVASU	619.0	563.9	551.0	562.3
LAKE MOHAVE	1810.0	1664.7	1688.9	1680.4
LAKE MEAD	26159.0	15337.0	16220.0	21999.0
LAKE POWELL	24322.0	10704.0	8015.0	18326.0

NORTHWESTERN ARIZONA  
Watershed Snowpack Analysis - April 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
GRAND CANYON	2	34	50

S N O W   S U R V E Y   D A T A

APRIL 1, 2006

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
ARBABS FOREST (AK)	7680	3/27	0	.0	.0	.3
BAKER BUTTE SNOTEL	7330	4/01	0	.0	3.0	4.5
BAKER BUTTE #2	7700	03/30	8	3.1	18.0	13.9
BALDY SNOTEL	9220	4/01	-	.9	9.9	6.9
BEAVER HEAD	8000	03/27	0	.0	.0	1.3
BEAVER HEAD SNOTEL	7990	4/01	0	.0	3.4	1.5
BEAVER SPRING	9220	3/29	8	2.7	14.5	8.1
BRIGHT ANGEL	8400	03/30	17	5.3	15.7	9.9
BUCK SPRING	7400	03/31	1	0.4	.0	.7
CHALENDER	7100	03/31	1	0.4	.0	1.6
CHEESE SPRINGS	8600	03/30	5	1.0	7.1	3.8
CORONADO TRL SNOTEL	8400	4/01	0	.0	.0	.7
CORONADO TRAIL	8350	03/27	0	.0	.0	1.2
FLUTED ROCK	7800	3/27	0	.0	.8	.6
FORT APACHE	9160	3/30	7	1.8	11.0	7.2
FORT VALLEY	7350	03/31	1	0.3	0.9	1.0
FRY SNOTEL	7220	4/01	0	.0	6.6	3.2
GRAND CANYON	7500	4/01	0	.0	.0	.8
HANNAGAN MDWS SNOTEL	9020	4/01	-	1.5	18.5	10.8
HAPPY JACK	7630	03/30	0	.0	0.4	3.0
HAPPY JACK SNOTEL	7630	4/01	3	1.2	9.1	2.8
HEBER SNOTEL	7640	4/01	0	.0	.0	2.9
LAKE MARY	6930	03/30	0	.0	.0	.5
MAVERICK FORK SNOTEL	9200	4/01	-	1.7	14.8	9.0
MORMON MTN SNOTEL	7500	4/01	3	1.6	8.8	5.0
MORMON MT. SUMMIT #2	8470	03/30	15	4.6	22.3	15.1
NEWMAN PARK	6750	03/31	0	.0	.0	.9
NUTRIOSO	8500	03/27	0	.0	.0	.7
PROMONTORY SNOTEL	7900	4/01	6	2.3	16.3	11.4
SNOW BOWL #1 ALT.	10260	03/30	16	3.6	17.6	14.1
SNOW BOWL #2	11000	03/30	28	5.8	39.6	22.5
SNOWSLIDE CYN SNOTEL	9750	4/01	22	10.6	39.0	14.4
TSAILE CANYON #1	8160	3/31	3	.7	8.8	3.4
TSAILE CANYON #3	8920	3/31	8	2.2	14.3	7.0
WHITE HORSE SNOTEL	7180	4/01	0	.0	.0	3.0
WILDCAT SNOTEL	7850	4/01	0	.0	.0	2.0
WILLIAMS SKI RUN	7720	03/31	16	.5	14.0	9.5
WORKMAN CREEK SNOTEL	6900	4/01	-	.7	.0	2.7