

**USDA** United States  
Department of  
Agriculture

**Natural  
Resources  
Conservation  
Service**

# Arizona

## Basin Outlook Report

### February 1, 2006



# ARIZONA

## Water Supply Outlook Report as of February 1, 2006

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

### 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 officials of the USDA’s Agricultural Statistic Service and University of Arizona.

## SUMMARY

Snow data reported by cooperative surveyors show that very little snow exists across the mountain watersheds of north-central Arizona as of February 1. Additionally, high elevation monitoring stations recorded very low precipitation catch for the month of January, while cumulative precipitation since October 1 is less than one-third the normal amount for this time of year. As a result of these poor winter conditions, seasonal runoff is expected to be much below median levels for those Arizona streams covered in this report.

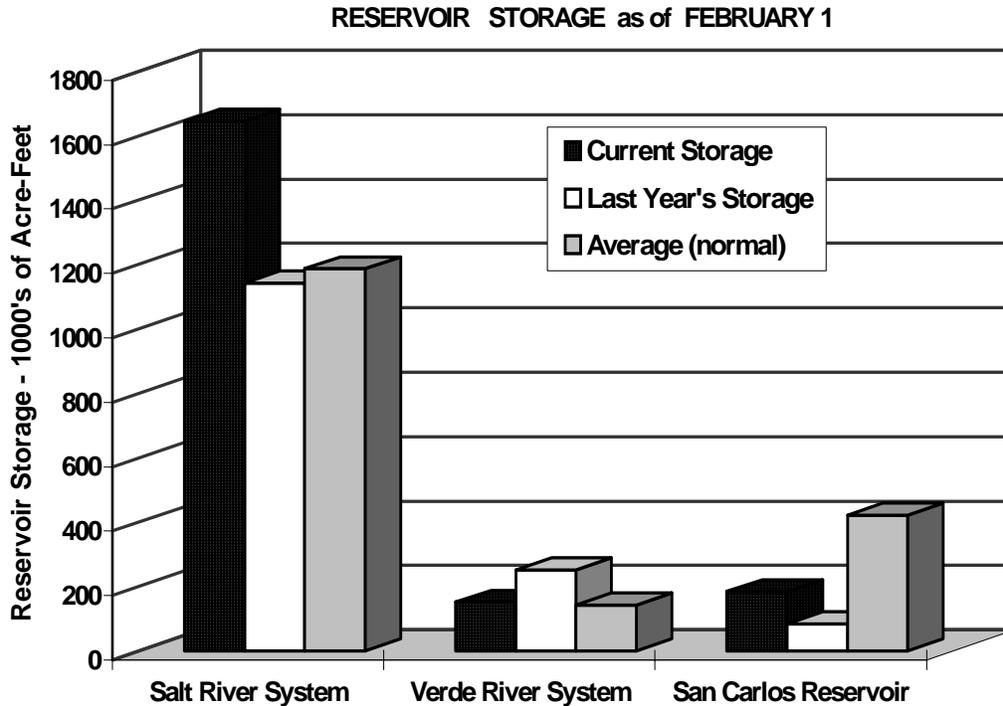
## SNOWPACK

Key Watersheds	Percent (%) of 30-Yr. Average Snowpack Levels as of February 1
Salt River Basin	12%
Verde River Basin	4%
Little Colorado River Basin	6%
San Francisco-Upper Gila River Basin	18%
<b>Other Points of Interest</b>	
Chuska Mountains	21%
Central Mogollon Rim	1%
Grand Canyon	5%
San Francisco Peaks	17%
Statewide Snowpack	13%

## PRECIPITATION

River basin precipitation totals for the month of January varied from 10 percent to 20 percent of average, while cumulative precipitation since October 1 ranged from 23 percent to 34 percent of average. Please refer to the basin precipitation bar graphs found in this report for more information.

## RESERVOIR

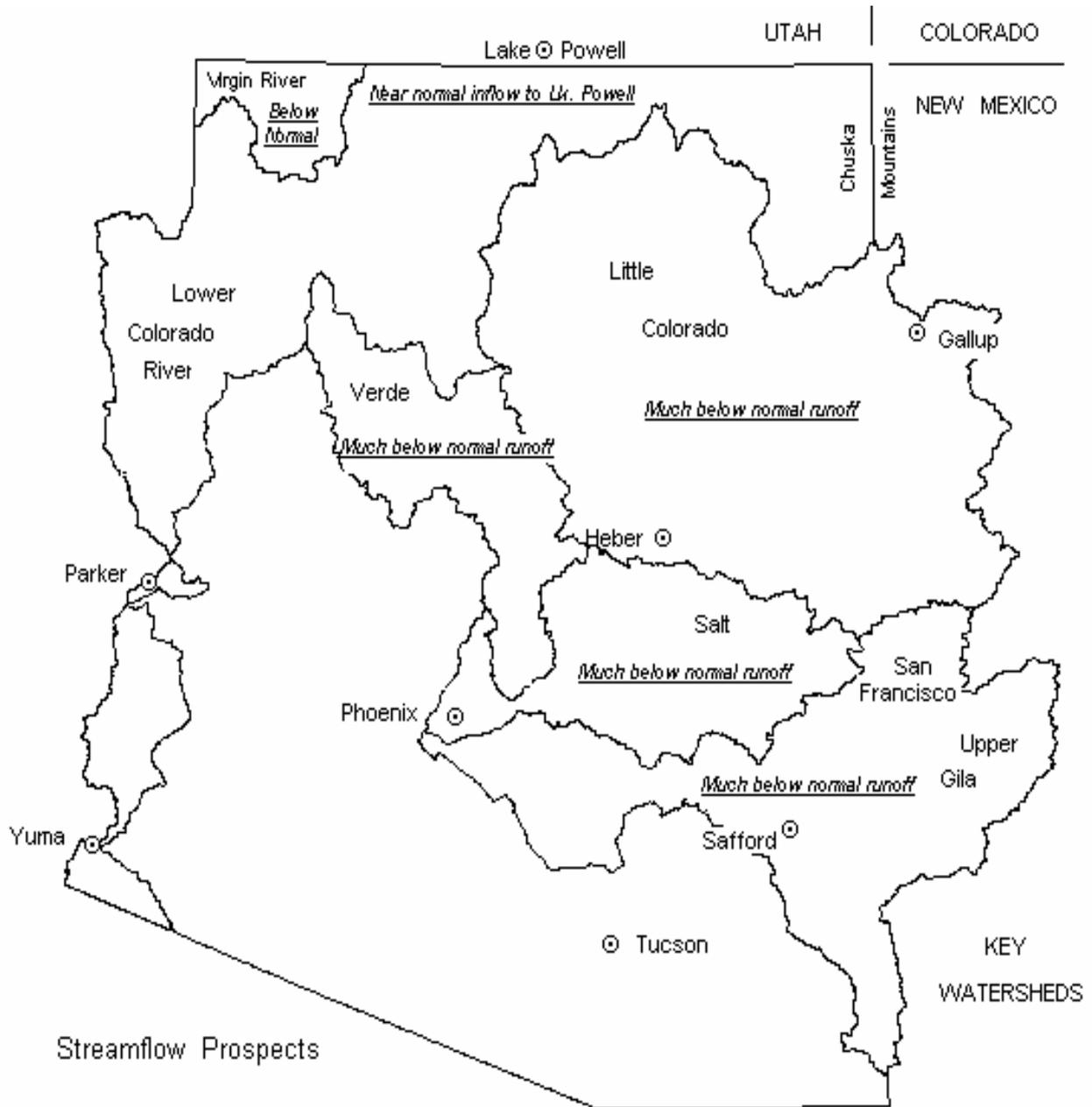


Key storage volumes displayed in thousands of acre-feet(1000x):

RESERVOIR	CURRENT STORAGE	LAST YEAR STORAGE	30-YEAR AVERAGE
-----	-----	-----	-----
Salt River System	1644.6	1141.9	1187.0
Verde River System	151.0	251.6	142.2
San Carlos Reservoir	183.7	83.0	421.8
Lyman Lake	8.0	3.8	14.7
Show Low Lake	5.1	4.6	2.9
Lake Pleasant	699.7	658.3	----
Lake Havasu	561.9	558.5	551.8
Lake Mohave	1631.5	1658.7	1672.3
Lake Mead	15335.0	15119.0	21992.0
Lake Powell	11206.0	8481.0	18463.0

# STREAMFLOW

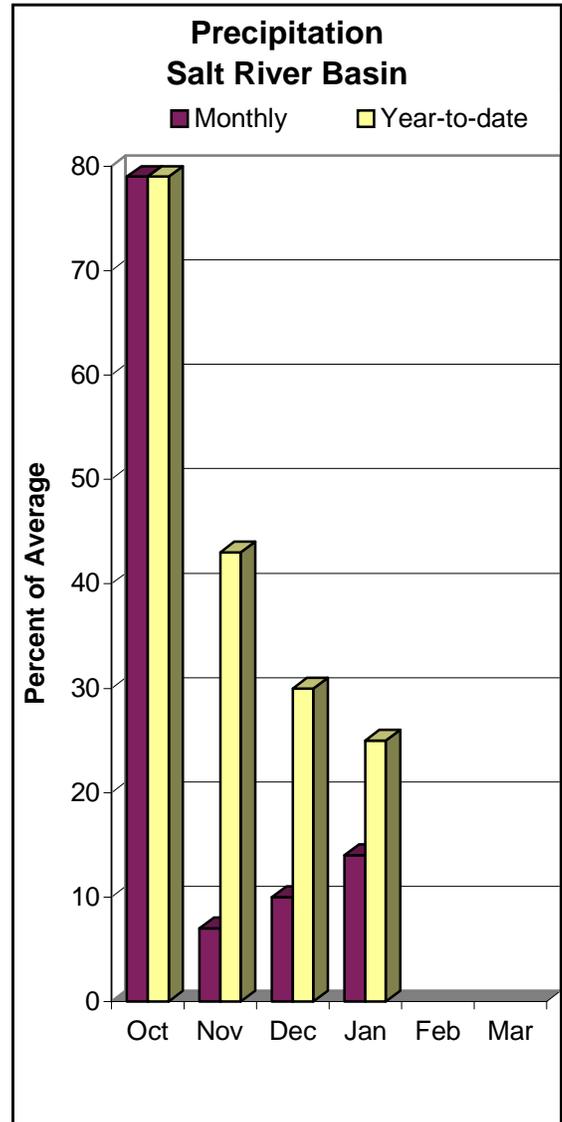
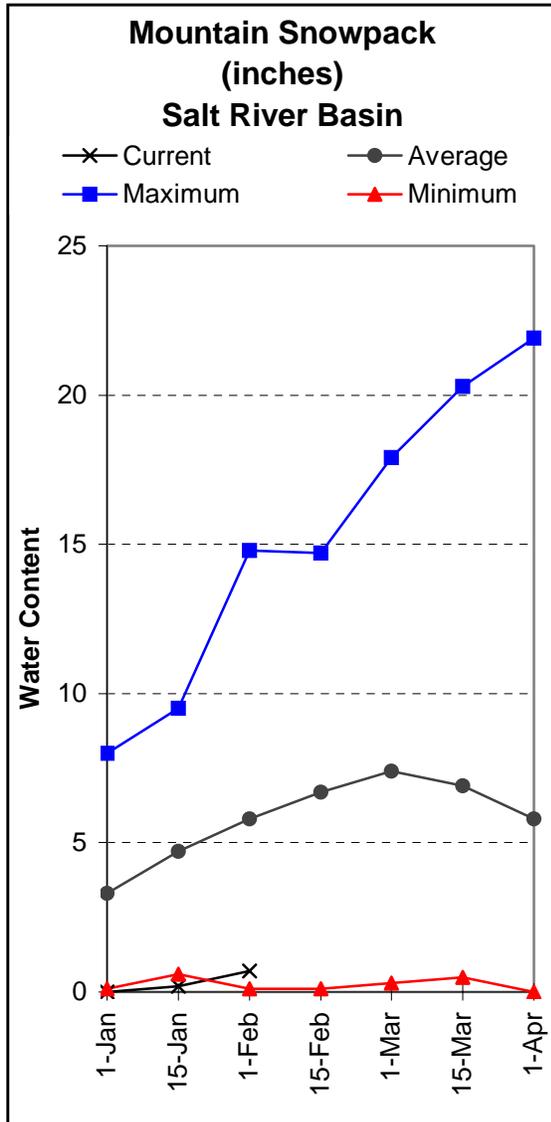
Stream flow volumes are predicted to be only 14 percent to 28 percent of median levels for Arizona streams monitored in this report. Please refer to the river basin forecast tables found in the report for more information regarding seasonal surface water supplies for Arizona.



## SALT RIVER BASIN as of February 1, 2006

Much below median runoff is forecast for the basin. In the Salt River, near Roosevelt, the forecast calls for 14 % of median stream flow volume through MAY, while in Tonto Creek, the forecast calls for 8 % of median stream flow volume through MAY.

February 1 snow survey measurements show the Salt snowpack to be 12 % of the 30-year average, while combined reservoir storage for the Salt River system is reported at 1,644,630 acre-feet.



SALT RIVER BASIN  
Streamflow Forecasts - February 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							
FEB-MAY	36	43	50	14	89	178	355
FEBRUARY	7.4	8.3	9.0	20	15.8	31	46
Tonto Creek ab Gun Creek nr Roosevelt							
FEB-MAY	1.5	2.5	4.0	8	15.0	40	50
FEBRUARY	0.4	0.5	0.6	5	3.3	11.3	12.6

\* 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 January

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
SALT RIVER RES SYSTEM	2025.8	1644.6	1141.9	1187.0

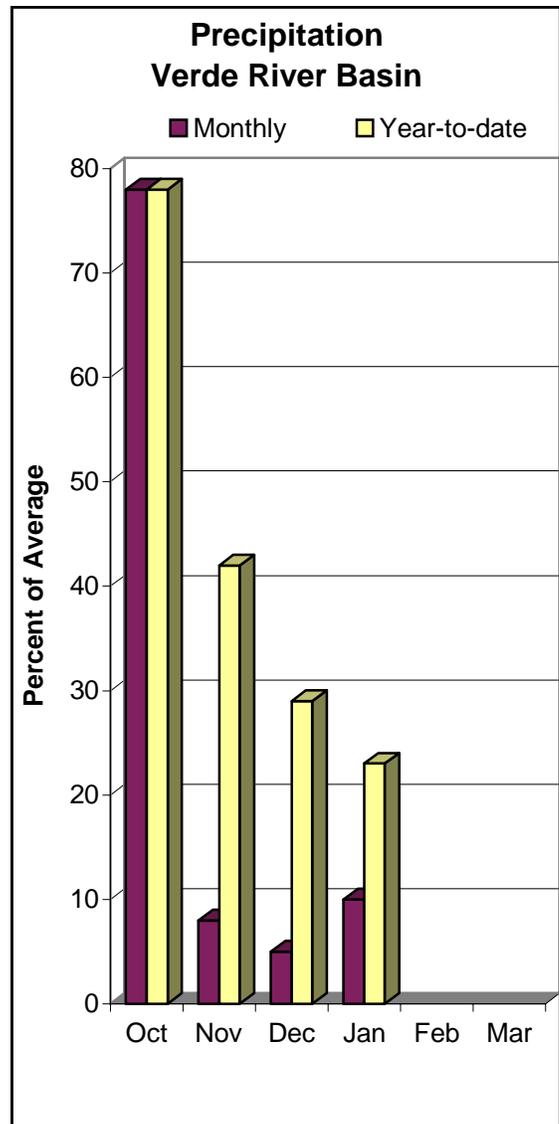
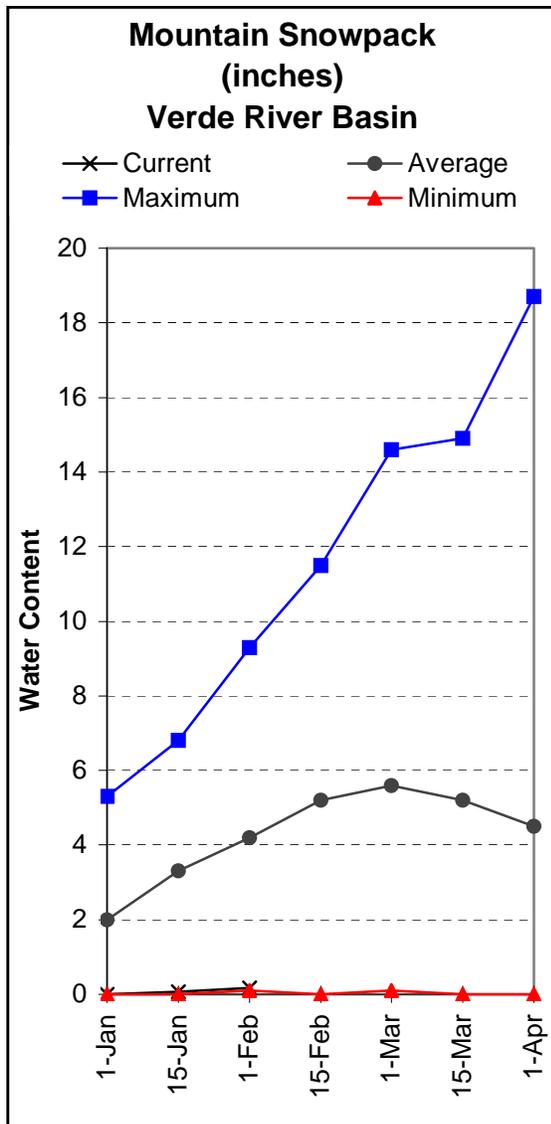
SALT RIVER BASIN  
Watershed Snowpack Analysis - February 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
SALT RIVER BASIN	8	10	12

## VERDE RIVER BASIN as of February 1, 2006

Much below median runoff is forecast for the basin. In the Verde River, at Horseshoe Dam, the forecast calls for 28 % of median stream flow volume through MAY.

February 1 snow survey measurements show the Verde snowpack to be 4 % of the 30-year average, while combined reservoir storage on the Verde River system is reported to be 150,956 acre-feet.



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VERDE RIVER BASIN  
Streamflow Forecasts - February 1, 2006

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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)
Verde River abv Horseshoe Dam							
FEB-MAY	40	48	55	28	100	186	200
FEBRUARY	11.9	14.0	15.0	43	25	47	35

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

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Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
VERDE RIVER RES SYSTEM	287.4	151.0	251.6	142.2

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VERDE RIVER BASIN  
Watershed Snowpack Analysis - February 1, 2006

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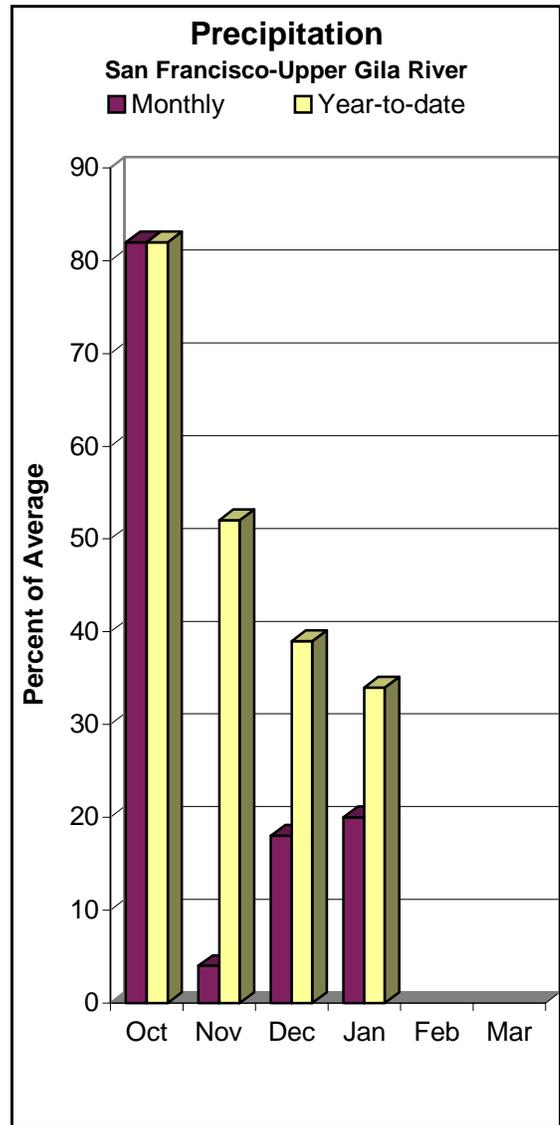
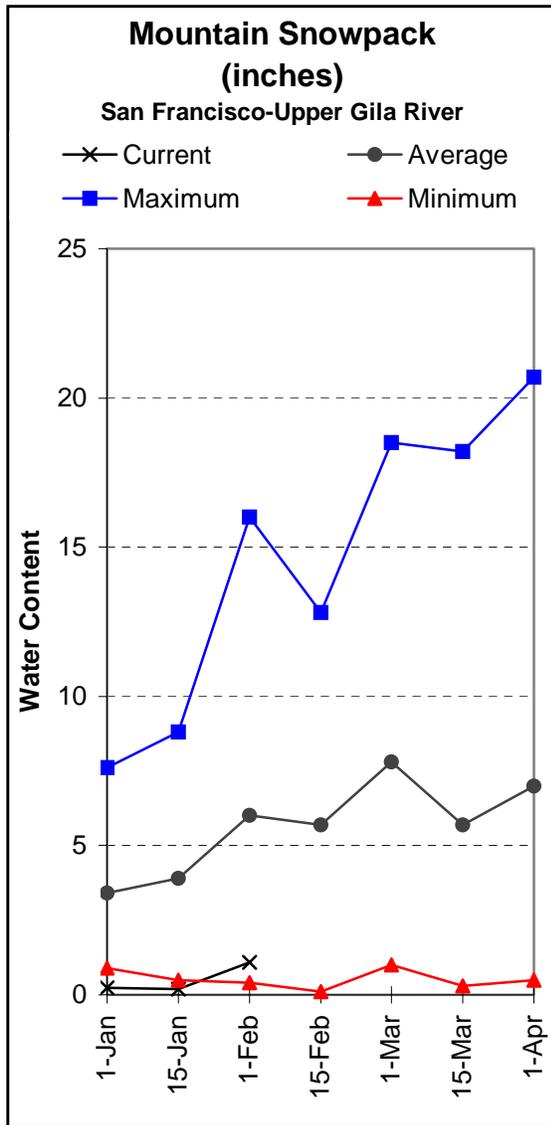
Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
VERDE RIVER BASIN	10	2	4
SAN FRANCISCO PEAKS	3	7	17

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

Much below median runoff is forecast for the basin. In the San Francisco River, at Clifton, the forecast calls for 23 % of median stream flow volume through MAY, while in the Gila River, near Solomon, the forecast calls for 24 % of median stream flow volume through MAY. At San Carlos Reservoir, inflow volume to the lake is forecast at 16 % of median through MAY.

At San Carlos, reservoir storage stands at 183,700 acre-feet, while snow survey measurements show snowpack levels to be very low at 18 % of the 30-year average.



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

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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							
FEB-MAY	10.1	11.7	13.0	25	21	33	53
Gila River nr Virden							
FEB-MAY	7.5	11.3	16.3	22	23	45	75
San Francisco River at Glenwood							
FEB-MAY	3.1	4.0	5.7	24	7.9	11.9	24
San Francisco River at Clifton							
FEB-MAY	7.1	9.4	13.7	23	17.7	35	59
Gila River nr Solomon							
FEB-MAY	16.0	23	34	24	50	79	144
FEBRUARY			9.0	38			24
San Carlos Reservoir inflow							
FEB-MAY	3.4	6.7	13.0	16	34	76	84

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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.

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

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Reservoir	Usable Capacity	***** Usable Storage *****		
		This Year	Last Year	Average
SAN CARLOS	875.0	183.7	83.0	421.8

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

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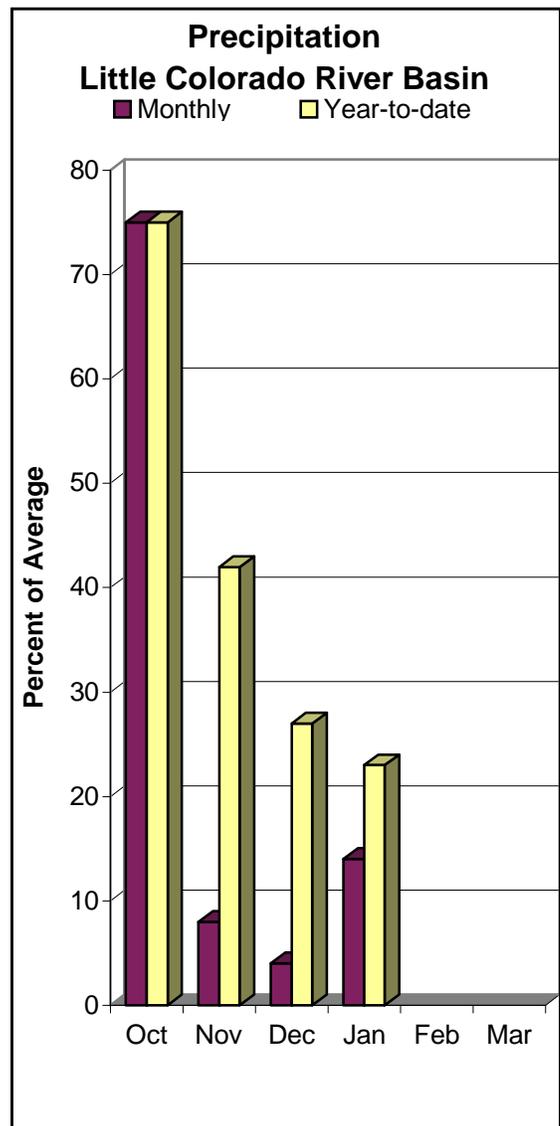
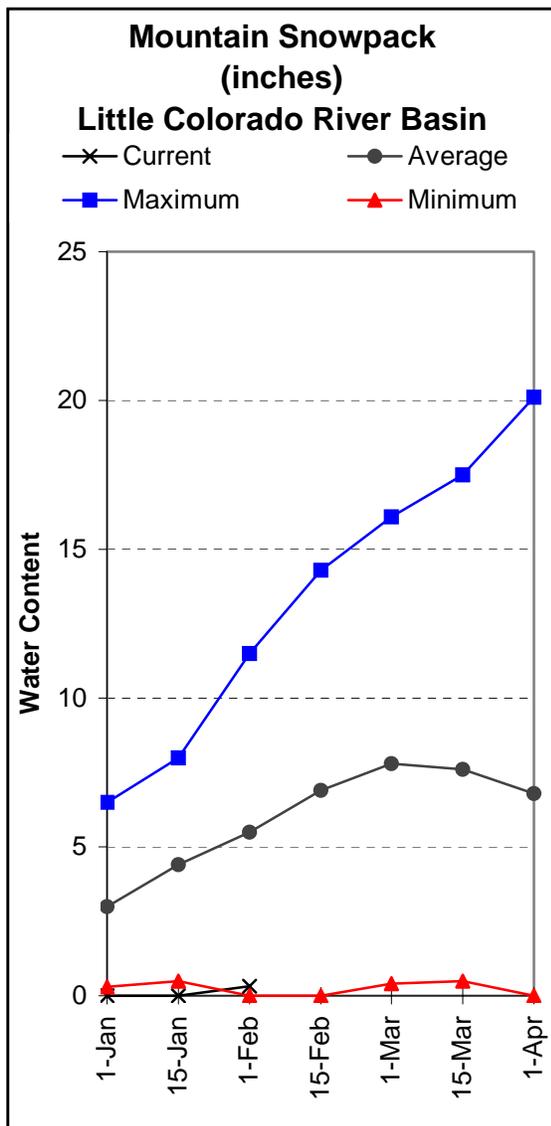
Watershed	Number of Data Sites	This Year as Percent of	
		Last Year	Average
SAN FRANCISCO - UPPER GILA R	11	16	18

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## LITTLE COLORADO RIVER BASIN as of February 1, 2006

Much below median runoff is forecast for the basin. In the Little Colorado River, at Lyman Lake, the forecast calls for 17 % of median stream flow volume through JUNE, while at Woodruff, the forecast calls for 8 % of median stream flow volume through MAY.

February 1 snow levels along the southern headwaters of the Little Colorado River, and along the central Mogollon Rim, was monitored at 6 % and 1 % of the 30-year average, respectively.



LITTLE COLORADO RIVER BASIN  
Streamflow Forecasts - February 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							
FEB-JUN	0.08	0.52	1.20	17	2.30	4.91	7.10
Rio Nutria nr Ramah							
FEB-MAY	0.00	0.06	0.15	5	0.75	1.50	3.00
Ramah Reservoir inflow							
FEB-MAY	0.00	0.05	0.13	8	0.66	1.16	1.66
Zuni River abv Black Rock Reservoir							
FEB-MAY	0.00	0.04	0.09	7	0.41	0.95	1.36
Little Colorado River at Woodruff							
FEB-MAY	0.08	0.14	0.22	8	0.42	1.01	2.80
Blue Ridge Reservoir inflow							
FEB-MAY	0.0	0.5	1.0	6	2.5	6.0	16.3
Lake Mary inflow							
FEB-MAY	0.05	0.19	0.77	16	1.44	3.40	4.80

\* 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.

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

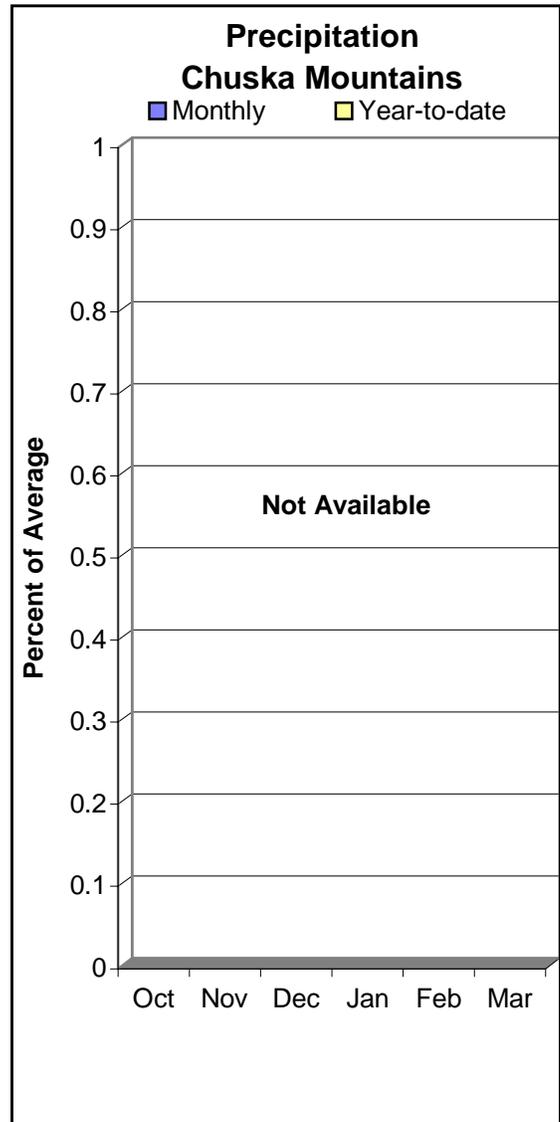
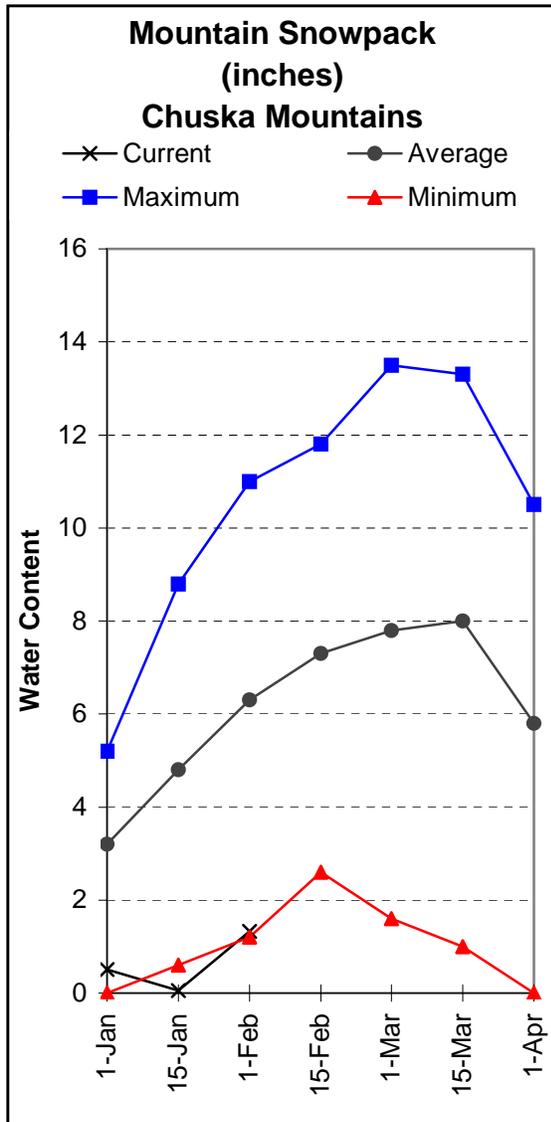
Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
LYMAN RESERVOIR	30.0	8.0	3.8	14.7
SHOW LOW LAKE	5.1	5.1	4.6	2.9

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

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
LITTLE COLORADO - SOUTHERN H	9	6	6
CENTRAL MOGOLLON RIM	4	1	1

## CHUSKA MOUNTAINS as of February 1, 2006

February 1 snow survey measurements conducted by staffs of the Navajo Tribe show the Chuska snowpack to be 21 % of average, while much below average stream flow volumes are forecast for Captain Tom Wash, Wheatfields Creek, and Bowl Canyon Creek through springtime.



CHUSKA MOUNTAINS  
Streamflow Forecasts - February 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	0.03	0.28	0.71	25	2.41	4.91
						2.83
Wheatfields Creek nr Wheatfields						
MAR-MAY	0.03	0.29	0.73	25	2.47	5.07
						2.90
Bowl Canyon Creek abv Assayi Lake						
MAR-MAY	0.01	0.10	0.25	25	0.85	1.74
						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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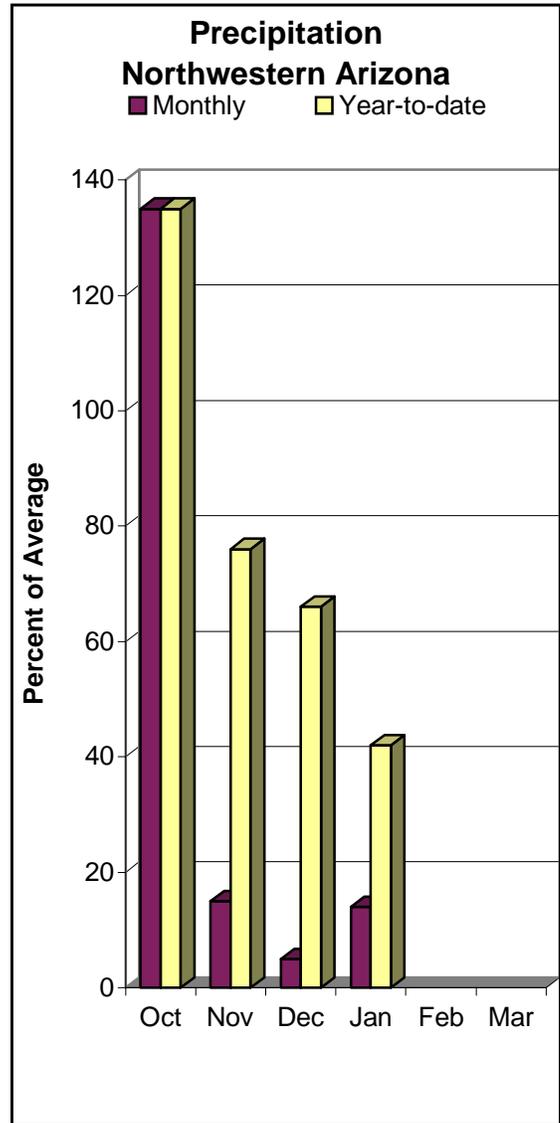
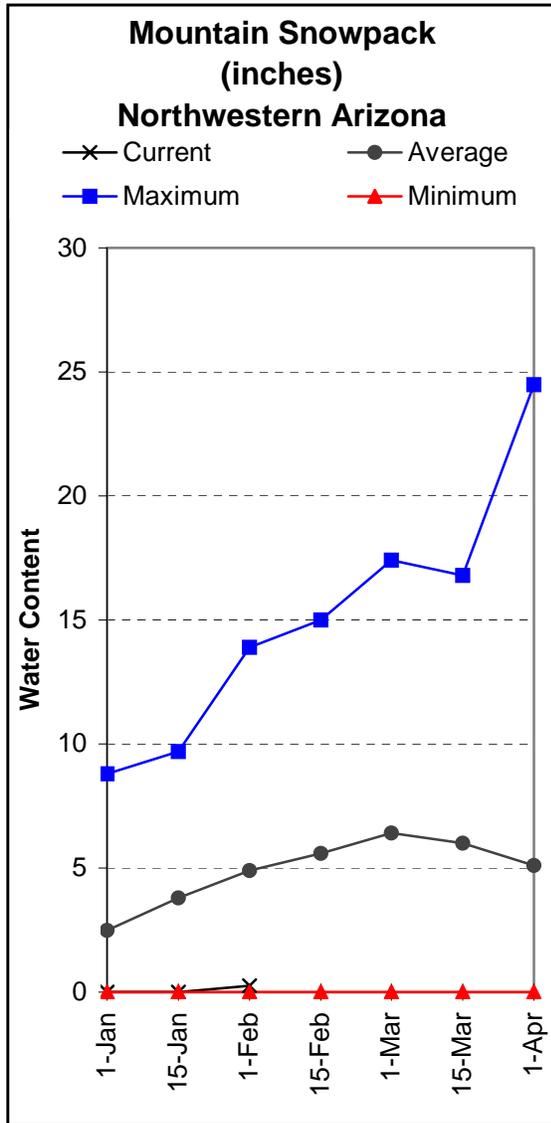
CHUSKA MOUNTAINS  
Watershed Snowpack Analysis - February 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
CHUSKA MOUNTAINS	7	23	21
DEFIANCE PLATEAU	2	62	18

## NORTHWESTERN ARIZONA as of February 1, 2006

On the Colorado River, inflow volume to Lake Powell is forecast at 105 % of the 30-year average for the forecast period APRIL-JULY, while at Littlefield, the Virgin River is forecast at 32 % of average APRIL-JULY.

At the Grand Canyon, snow survey measurements conducted by the National Park Service show the snowpack to be at 5 % of the 30-year average.



NORTHWESTERN ARIZONA  
Streamflow Forecasts - February 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	14.1	18.5	24	32	39	75	74
Lake Powell Inflow (2)							
APR-JUL	5160	7030	8300	105	9570	11440	7930

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NORTHWESTERN ARIZONA  
Reservoir Storage (1000AF) End of January

Reservoir	Usable Capacity	***** This Year	Usable Storage Last Year	***** Average
LAKE HAVASU	619.0	561.9	558.5	551.8
LAKE MOHAVE	1810.0	1631.5	1658.7	1672.3
LAKE MEAD	26159.0	15335.0	15119.0	21992.0
LAKE POWELL	24322.0	11206.0	8481.0	18463.0

NORTHWESTERN ARIZONA  
Watershed Snowpack Analysis - February 1, 2006

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
GRAND CANYON	2	4	5

## S N O W   S U R V E Y   D A T A

FEBRUARY 1, 2006

SNOW COURSE	ELEV.	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 71-00
ARBABS FOREST (AK)	7680	1/30	2	.6	.2	2.6
BAKER BUTTE SNOTEL	7330	2/01	0	.0	6.3	4.6
BAKER BUTTE #2	7700	1/30	1	0.4	12.1	8.2
BALDY SNOTEL	9220	2/01	3	1.1	6.9	5.7
BEAVER HEAD	8000	1/31	1	0.2	3.4	2.8
BEAVER HEAD SNOTEL	7990	2/01	2	.9	5.6	3.1
BEAVER SPRING	9220	2/03	9	1.9	8.1	7.5
BRIGHT ANGEL	8400	1/31	3	0.5	11.8	7.5
BUCK SPRING	7400	1/31	0	.0	1.2	4.8
CHALENDER	7100	1/31	0	.0	2.0	2.5
CHEESE SPRINGS	8600	1/31	5	0.7	3.6	4.3
CORONADO TRL SNOTEL	8400	2/01	2	1.1	5.8	3.2
CORONADO TRAIL	8350	1/31	2	0.5	5.0	2.6
FLUTED ROCK	7800	1/30	2	.4	1.4	3.1
FORT APACHE	9160	1/31	6	1.1	7.2	6.1
FORT VALLEY	7350	1/30	0	.0	3.8	2.4
FRY SNOTEL	7220	2/01	2	.5	11.6	4.9
GRAND CANYON	7500	1/31	0	.0	2.2	2.6
HANNAGAN MDWS SNOTEL	9020	2/01	-	.8	12.6	8.6
HAPPY JACK	7630	1/30	0	.0	5.4	3.8
HAPPY JACK SNOTEL	7630	2/01	-	.5	8.3	3.7
HEBER SNOTEL	7640	2/01	0	.0	4.9	4.8
LAKE MARY	6930	1/30	0	.0	3.3	2.7
MAVERICK FORK SNOTEL	9200	2/01	3	1.0	9.0	7.3
MORMON MTN SNOTEL	7500	2/01	0	.0	9.5	4.9
MORMON MT. SUMMIT #2	8470	1/30	2	0.7	14.3	9.0
NEWMAN PARK	6750	1/31	0	.0	3.4	2.5
NUTRIOSO	8500	1/31	1	0.2	1.2	1.7
PROMONTORY SNOTEL	7900	2/01	-	.0	12.3	9.7
SNOW BOWL #1 ALT.	10260	1/30	2	0.4	20.8	8.7
SNOW BOWL #2	11000	1/30	6	1.4	26.8	11.8
SNOWSLIDE CYN SNOTEL	9750	2/01	-	3.2	27.0	9.1
TSAILE CANYON #1	8160	1/31	8	1.2	4.9	5.3
TSAILE CANYON #3	8920	2/01	8	1.6	6.4	7.2
WHITE HORSE SNOTEL	7180	2/01	0	.0	4.4	3.8
WILDCAT SNOTEL	7850	2/01	0	.0	2.2	3.4
WILLIAMS SKI RUN	7720	1/31	0	.0	9.3	6.1
WORKMAN CREEK SNOTEL	6900	2/01	0	.0	4.0	4.8

Issued by

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