

# WATER SUPPLY OUTLOOK for the UPPER COLORADO

# COLORADO BASIN RIVER FORECAST CENTER

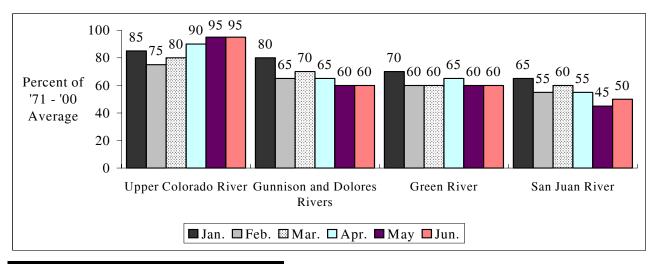




# June 1, 2003

Near record heat the last two weeks of May had the greatest influence on observed streamflow and current forecasts. Most areas experienced rapid snowmelt and subsequent high magnitude streamflow. Snowpack remains at only the highest elevations. April\_July volume forecasts were adjusted slightly to take into account current snowpack and observed April-May streamflow.

# **APRIL - JULY VOLUME FORECASTS**

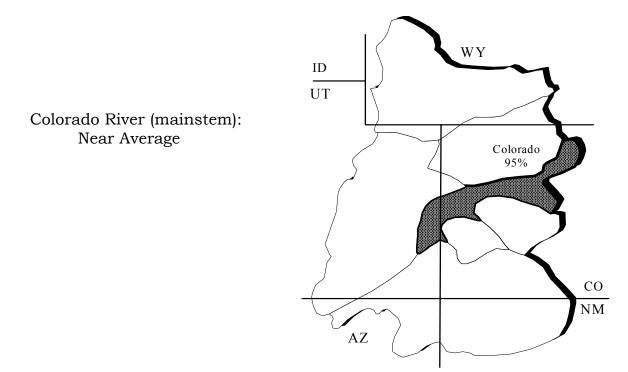


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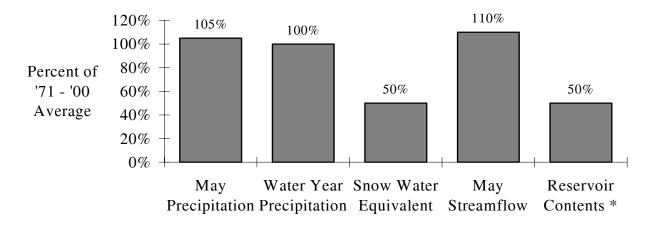
### UPPER COLORADO MAINSTEM

Precipitation was near average overall during the month of May, but temperatures during the last 2 weeks of May were much above average. This brought streamflow up near seasonal peaks at the end of May and left little but upper elevation snow to melt. April-July runoff forecasts either changed little or were adjusted down slightly to account for current conditions.

April-July streamflow forecasts for the Upper Colorado Mainstem are as follows:



# Basin Conditions - June 1, 2003



<sup>\*</sup> Percent usable capacity, not percent average contents.

Specific site forecasts are listed beginning on page 6.

#### GUNNISON AND DOLORES RIVERS

A very hot last half of May depleted the snowpack and brought river flows up significantly in the Gunnison and Dolores river basins. June 1 snow water equivalent was 30% of average in the Gunnison River Basin and less than 15% in the Dolores River Basin. The April-July streamflow forecasts changed little from last month and now range between 35% and 75% of average.

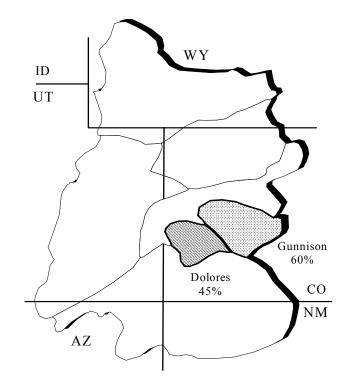
April-July streamflow forecasts for the Gunnison and Dolores Rivers are as follows:

Gunnison River:

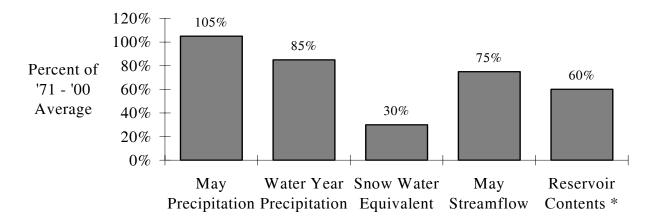
Much Below Average

Dolores River:

Much Below Average



# Basin Conditions - June 1, 2003



<sup>\*</sup> Percent usable capacity, not percent average contents.

Specific site forecasts are listed beginning on page 7.

#### GREEN RIVER

Wet cool weather in early May gave way to record heat later in the month. Much of the snowpack was depleted with a significant response in the streamflow, especially in the Yampa Drainage. Remaining snowpack is limited to areas above 10,000 feet mainly in the Yampa and Upper Green basins. Overall April-July volume forecasts changed only slightly from last month.

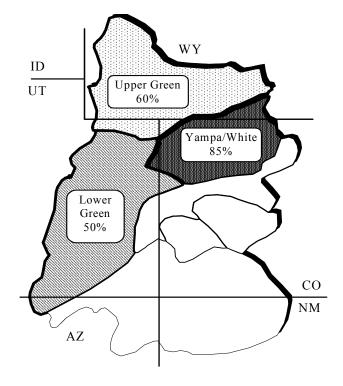
April-July streamflow forecasts for the Green River are as follows:

Upper Green River: Much Below Average

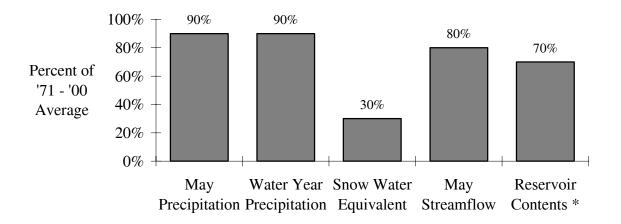
Yampa/White Rivers: Below Average

Lower Green River (blo Flaming Gorge):

Much Below Average



# Basin Conditions - June 1, 2003



<sup>\*</sup> Percent usable capacity, not percent average contents.

Specific site forecasts are listed beginning on page 8.

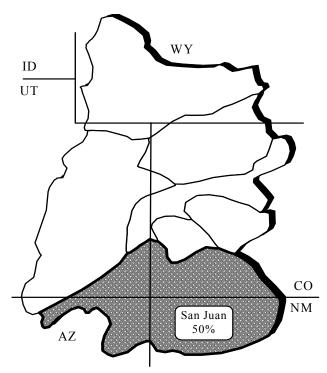
# San Juan River

Monthly precipitation in the San Juan Basin was much below average for the month of May. Streamflow edged up to 70% of average in response to the unseasonably high temperatures during the last 2 weeks in May. Snowpack melt was rapid and as of June 5th, the San Juan snotels were dry. April-July runoff is expected to range from 29% to 56% of average.

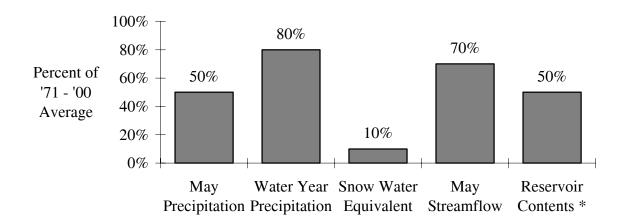
April-July streamflow forecasts for the San Juan Basin are as follows:

San Juan River:

Much Below Average



# BASIN CONDITIONS - JUNE 1, 2003



<sup>\*</sup> Percent usable capacity, not percent average contents.

Specific site forecasts are listed beginning on page 10.

# SPECIFIC SITE FORECASTS

**Upper Colorado Mainstem:** April through July volume (kaf) forecasts (except where noted).

Stream	Station	Most	Percent	Reas.	Reas.
		Probable	Avg.	Max	Min
COLORADO	LAKE GRANBY, GRANBY, NR	250	111	285	220
	DOTSERO, NR	1400	97	1690	1110
	GLENWOOD SPRINGS, BLO	1950	90	2290	1610
	CAMEO, NR	2150	89	2690	1610
	CISCO, NR	3300	71	4270	2330
WILLOW CK	WILLOW CK RES, GRANBY, NR	60	118	77	45
FRASER	WINTER PARK	21	105	25	17.2
WILLIAMS FORK	WILLIAMS FORK RES, PARSHALL, N	100	105	118	84
MUDDY CK	WOLFORD MIN RES, BLO	47	78	59	37
BLUE	DILLON RES	165	99	193	137
	GREEN MIN RES	285	102	330	245
EAGLE	GYPSUM, BLO	325	97	400	265
FRYING PAN	RUEDI RES, BASALT, NR	115	82	157	84
ROARING FORK	GLENWOOD SPRINGS	550	77	735	395
PLATEAU CK	CAMEO, NR	70	61	132	8
MILLCK	MOAB, NR, SHELEY TUN, AT	2.8	56	4.7	2

# SPECIFIC SITE FORECASTS

Gunnison and Dolores Basins: April through July volume (kaf) forecasts (except where noted).

Stream	Station	Most	Percent	Reas.	Reas.
		Probable	Avg.	Max	Min
TAYLOR	TAYLOR PARK RES	68	66	93	43
	ALMONT	103	62	135	72
EAST	ALMONT	140	73	175	105
GUNNISON	GUNNISON, NR	250	64	320	180
TOMICHI CK	GUNNISON	40	49	66	21
LAKE FORK	GATEVIEW	84	67	114	54
GUNNISON	MORROW POINT RES	485	62	660	310
	CRYSTAL RES	540	59	740	340
MUDDY CK	PAONIA RES, BARDINE, NR	59	59	79	48
NF GUNNISON	SOMERSET, NR	210	69	268	159
SURFACE CK	CEDAREDGE	12	70	17.3	8.3
UNCOMPAHGRE	RIDGWAY RES	70	69	88	56
	COLONA	83	60	113	58
	DELTA	63	54	91	35
GUNNISON	GRAND JUNCTION, NR	900	58	1250	555
DOLORES	DOLORES	140	53	172	108
	MCPHEE RES	155	48	195	117
	CISCO, NR	190	34	365	150
SAN MIGUEL	PLACERVILLE, NR	88	67	108	68

<sup>• =</sup> March - June forecast period.

Green River Basin: April through July volume (kaf) forecasts (except where noted).

Stream	Station	Most	Percent	Reas.	Reas.
		Probable	Avg.	Max	Min
GREEN	DANIEL, NR, WARREN BRIDGE, AT	190	72	225	155
	GREEN RIVER, WY, NR	460	53	600	320
	GREEN RIVER, UT	1950	62	2700	1200
PINE CK	FREMONT LK, ABV	89	86	102	76
NEW FORK	BIG PINEY, NR	240	61	305	175
BIG SANDY	FARSON, NR	38	66	46	30
BLACKS FORK	ROBERTSON, NR	56	59	68	44
EF SMITHS FORK	ROBERTSON, NR	17.2	55	19.5	15.2
HAMS FORK	FRONTIER, NR, POLE CK, BLO	32	49	43	23
	VIVA NAUGHTON RES	39	44	58	20
YAMPA	STAGECOACH RSVR, ABV	26	90	38	14.5
	STEAMBOAT SPRINGS	260	93	295	225
	MAYBELL, NR	880	89	1040	720
ELK	MILNER, NR	300	92	360	245
ELKHEAD CK	ELKHEAD, NR	35	90	50	24
	MAYNARD GULCH, BLO	56	95	73	39
FORTIFICATION CK	• FORTIFICATION, NR	7.7	103	10.3	5.1
LITTLE SNAKE	SLATER, NR	126	79	173	87
	DIXON, NR	260	79	365	156
	LILY, NR	285	78	395	176

<sup>• =</sup> March - June forecast period.

Green River Basin continued: April through July volume (kaf) forecasts (except where noted).

Stream	Station	Most	Percent	Reas.	Reas.
		Probable	Avg.	Max	Min
BIG BRUSH CK	VERNAL, NR, RED FLEET RES, ABV	14.3	68	21	8.4
ASHLEY CK	VERNAL, NR	32	62	44	20
WF DUCHESNE	HANNA, NR	9	38	15.5	4.2
ROCK CK	UPPER STILLWATER RES	45	55	66	24
	MOUNTAIN HOME, NR	49	55	66	32
DUCHESNE	TABIONA, NR	50	48	66	34
	DUCHESNE, NR, KNIGHT DIV, ABV	92	49	135	49
	MYTON	67	26	158	26
	RANDLETT, NR	75	23	300	33
STRAWBERRY	SOLDIER SPRINGS, NR	17.5	30	27	9.8
	DUCHESNE, NR	40	33	66	14
CURRANT CK	CURRANT CK RES	6.8	27	12.3	1.3
LAKE FORK	MOON LAKE RES, MTN HOME, NR	44	65	56	32
YELLOWSTONE	ALTONAH, NR	43	69	61	25
WHITEROCKS	WHITEROCKS, NR	36	64	48	24
WHITE MEEKER, NR		245	84	326	184
	WATSON, NR	250	82	400	120
GOOSEBERRY CK	SCOFIELD, NR	8.5	71	11.3	5.7
PRICE	SCOFIELD RES, SCOFIELD, NR	32	70	39	25
WHITE	BLO TABBYUNE CK, SOLDIER SUMMI	8.4	48	13.2	4.7
HUNTINGTON CK	ELECTRIC LAKE	9	57	12.5	6.2
	HUNTINGTON, NR	32	64	40	24
SEELEY CK	JOES VLY RES, ORANGEVILLE, NR	29	50	44	13.7
FERRON CK	FERRON, NR	22	56	26	18
SEVEN MILE CK	FISH LAKE, NR	5.7	81	7.9	3.5
MUDDY CK	EMERY, NR	13	65	18	8

San Juan River Basin: April through July volume (kaf) forecasts (except where noted).

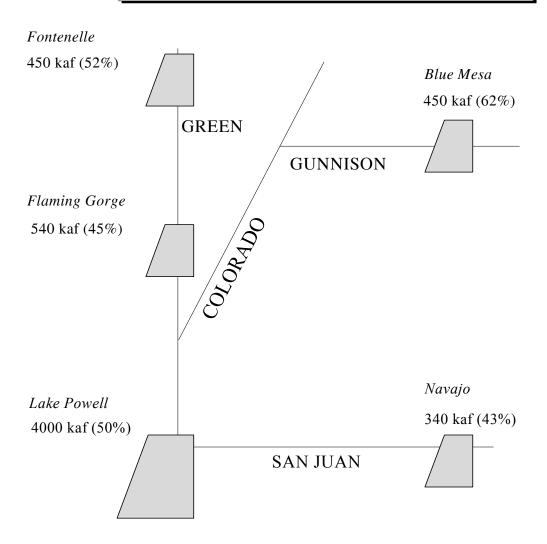
Stream	Station	Most	Percent	Reas.	Reas.
		Probable	Avg.	Max	Min
SAN JUAN	PAGOSA SPRINGS	110	49	138	62
	CARRACAS, NR	200	49	295	125
	FARMINGTON	470	39	705	330
	BLUFF, NR	460	37	690	310
RIO BLANCO	PAGOSA SPRINGS, NR, BLANCO DAM	29	55	42	16
NAVAJO	CHROMO, NR, OSO DIV DAM, BLO	35	51	52	18
PIEDRA	ARBOLES, NR	105	46	131	79
LOS PINOS	VALLECITO RES, BAYFIELD, NR	110	54	125	95
ANIMAS	DURANGO	230	52	320	139
FLORIDA	LEMON RES, DURANGO, NR	30	52	43	17.2
LA PLATA	HESPERUS	14	56	19.9	8.1
MANCOS	MANCOS, NR	20	50	34	5.7
SOUTH CK	◆ LLOYD'S RSVR NR MONTICELLO, AB	0.42	32	1.04	0.13
RECAPTURE CK	♦ BLANDING, NR, JOHNSON CK, BLO	1.75	29	4.7	0.61

 $<sup>\</sup>blacklozenge$  = March - July forecast period.

# FLOOD CONTROL FORECASTS

#### MOST PROBABLE FORECASTS 2003 APRIL - JULY INFLOW VOLUMES

(% OF '71 - '00 AVERAGE)

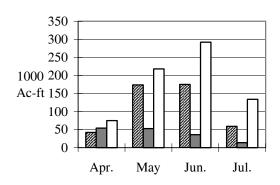


NOTE: Colorado River flood control forecasts account for a smaller set of upstream adjustments than water supply forecast points.

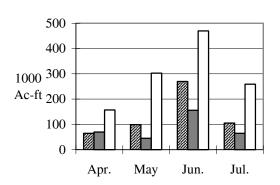
# RESERVOIR MONTHLY INFLOW FORECASTS

2003 Forecast 2002 Observed 30 Year Average

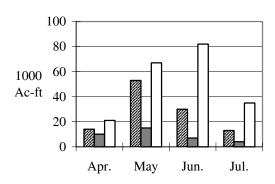
#### Blue Mesa Reservoir Inflow



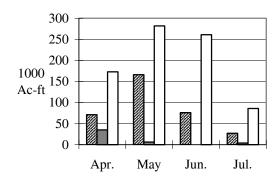
#### Flaming Gorge Reservoir Inflow



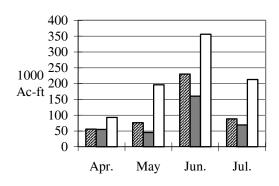
#### Vallecito Reservoir Inflow



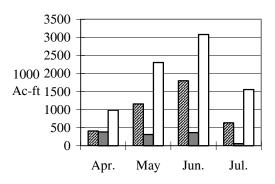
Navajo Reservoir Inflow



#### **Fontenelle Reservoir Inflow**

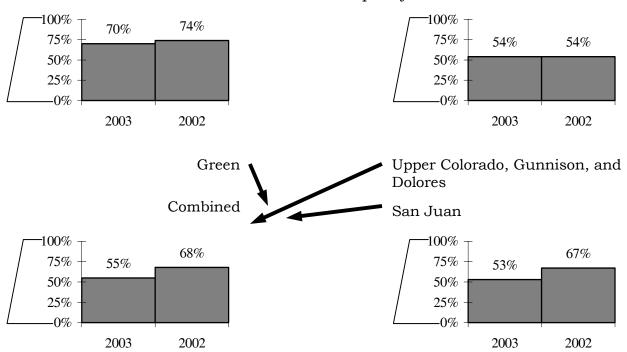


#### Lake Powell Inflow



# END OF MONTH RESERVOIR CONTENTS

## Percent of Usable Capacity



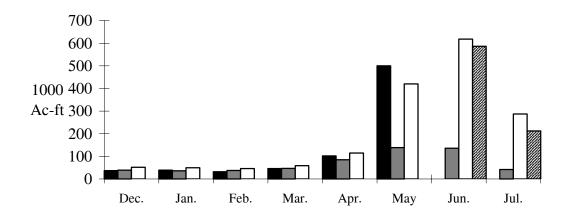
RESERVOIR	Reservoir	Usable	EOM Usable	Percent Usable
(vol. in 1000 ac-ft)	status	Capacity	Contents	Capacity
Fontenelle	1,4	344.8	142.3	41
Flaming Gorge	1,4	3749	2646.7	71
Strawberry	1,4	1105.9	837	76
Starvation	1,4	165.3	151.6	92
Lake Granby	2,4	490.3	181.1	37
Dillon	2,4	254	173.1	68
Green Mountain	2,4	146.9	84.3	57
Taylor Park	2,4	106.2	63.1	59
Blue Mesa	2,4	829.5	410.5	49
Ridgway	2,4	83.2	83.4	100
McPhee	2,4	381.1	245	64
Vallecito	3,4	125.4	79.1	63
Navajo	3,4	1696	883.8	52
Lake Powell	4	24322	12756.5	52

- 1 = Green River reservoir status
- 2 = Upper Colorado River reservoir status
- 3 = San Juan River reservoir status
- 4 = Combined reservoir status

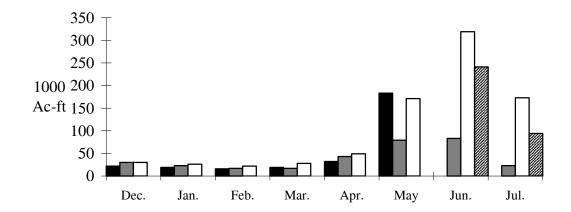
# MONTHLY STREAMFLOWS

■ 2003 Water Year ■ 2002 Water Year □ 30 Year Average ■ 2003 Forecast

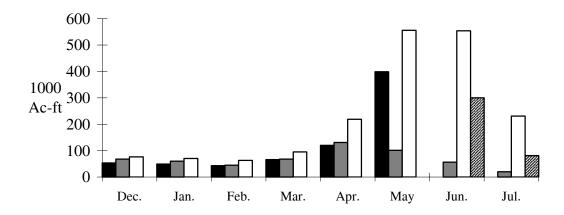
# Colorado - Dotsero, nr:



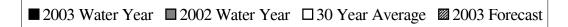
# Roaring Fork - Glenwood Springs:



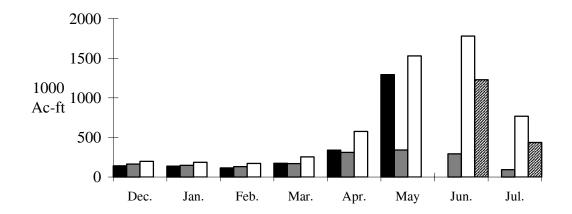
# Gunnison - Grand Junction, nr:



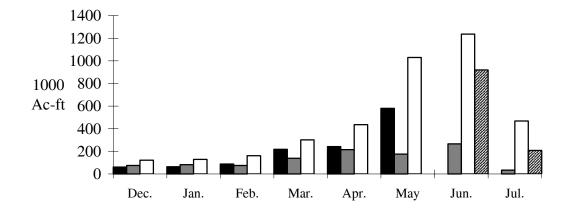
<sup>\*</sup> Data Not Available



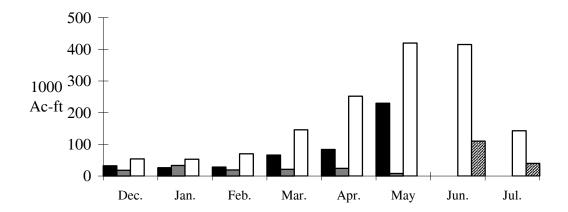
# Colorado - Cisco, nr:



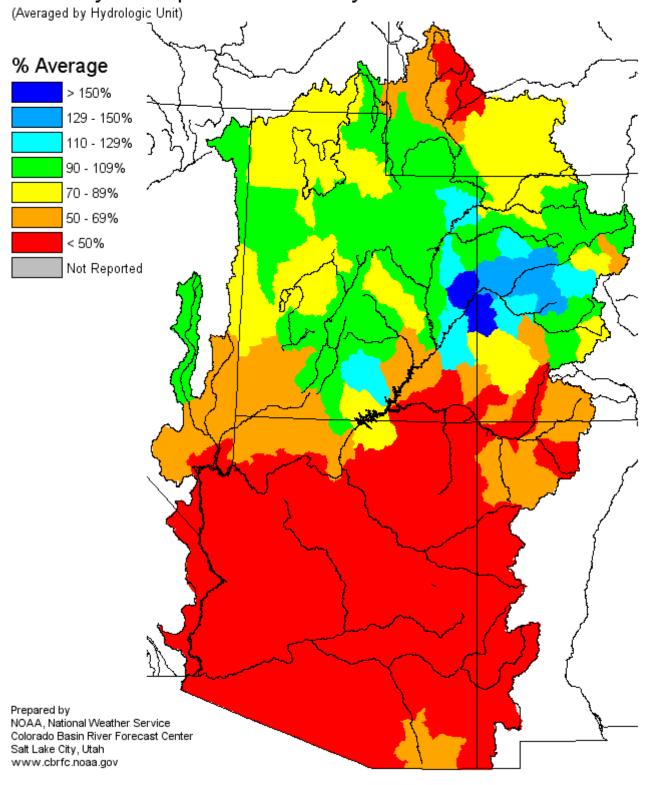
# Green - Green River, UT:



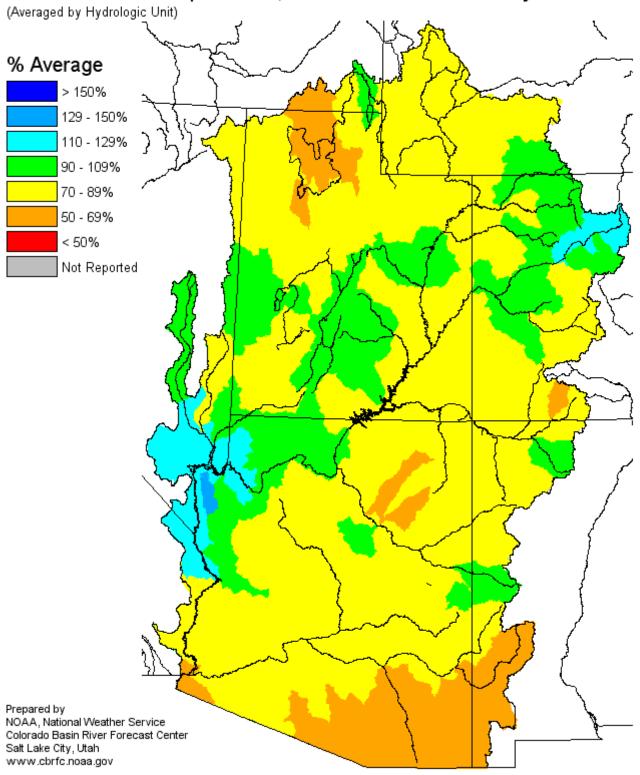
## San Juan - Bluff, nr:



# Monthly Precipitation for May 2003



# Seasonal Precipitation, October 2002 - May 2003



#### 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 May 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, 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 Average Above Average Near Average Below Average Much Below Average-Greater than 130% 111-130% 90-110% 70-89% Less than 70%

Forecast Period:

The period from April 1 through July 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

2442 West North Temple, Salt Lake City, UT 84116