# PEAK FLOW FORECASTS

FLOW EXTREMES, NOT SUPPLY

Peak flow forecasts are fundamentally different than water supply volume forecasts. Although the watershed snowpack is a principal component in both analyses, peak flows are not a supply question at all. Rather, peak flows characterize runoff extremes by predicting maximum mean daily flow at a single point during the spring snowmelt season. This extreme is related to the water supply volume, but the relationship is not direct or constant from year to year. As such, peak flow forecasts contain much more uncertainty than water supply volume forecasts.

REGULATED VS. NATURAL FLOWS

An even more fundamental limitation is that peak forecasts describe regulated (actual or observed) in-stream flow well into the future, something difficult to do considering the quantity and changing nature of diversions in the Colorado River and Great Basin watersheds. (Note: supply forecasts deal with hypothetical "natural" flow - that which would have resulted in the absence of regulation). The Colorado Basin River Forecast Center routinely forecasts regulated streamflow, but only for several days into the future. Further into the future the ability to forecast reservoir regulation becomes more limited.

DIFFERENT USES AND USERS

Peak flow forecasts are used for different purposes than water supply volume forecasts. Users of these forecasts would include river recreationists, flood control agencies, emergency service directors, wildlife managers and anyone interested in the combined effect of watershed yield and human regulation on the actual (observed) in-stream maximum mean daily flows at a site.

FLOOD FLOWS

The National Weather Service defines flood flow as the flow at which damage to structures begins to occur. Over-bank flow may occur but still be below the defined flood flow. Flood flows contained in this document change from year to year due to such channel processes as deposition and scouring. Therefore, the flood flows that follow should only be applied to the current runoff season. It should also be noted that they are instantaneous flows and not maximum mean daily flows. Forecast mean daily flows above the instantaneous flood flow will be highlighted in red.

**IMPORTANT NOTE**:

**Please note that the following peak flow forecasts will be updated during the first week in April and again the first week in May. The updated forecasts can be accessed through the CBRFC homepage (http://www.cbrfc.gov) or by calling the appropriate Service Hydrologist (see page 16 and 17).**

# INTERPRETIVE NOTES

PEAK FLOW DEFINED

The peak flow forecast represents the maximum mean daily flow (the highest average flow for an entire day during the runoff season) at a point during the April through July period, unless otherwise noted. It does not represent the instantaneous peak (the maximum flow at a single moment). In the case of smooth snowmelt regimes (hydrographs), it may be acceptable to approximate one with the other. In Arizona, the normal snowmelt period is from February to May. Occasionally, heavy rainfall events can produce higher peak flows than the snowmelt peak flows. For verification and calibration purposes, the maximum mean daily flow during the February through May period was used regardless of the runoff source. The Average Peak and Normal Time of Peak (defined as the average date of peak plus/minus one standard deviation which should include approximately 70% of the peaks) for a given gage are all derived from 1971 through 2000 data whereas the Historic Peak is derived from the period of record, including the most recent years, after reservoir regulation began.

FORECAST PROBABILITIES

Peak flow forecasts are presented in terms of probabilities or, more specifically, exceedance probabilities. The forecast labeled "most probable" is actually the 50% exceedance level meaning there are equal chances of being below the value or above the value (i.e., 50 chances out of 100 of being exceeded). The other exceedance probabilities associate the likelihood of exceeding other levels. In general, a close bunching of the exceedance forecasts indicates low variability and that the user can have a high degree of confidence in the forecast information. Conversely, a large spread in the exceedance forecasts indicates high variability.

MODELLING TECHNIQUES

The peak flow forecasts that follow have been derived using a combination of (1) physically-based conceptual models and (2) statistical regression models. The conceptual model is the National Weather Service River Forecasting System in the Ensemble Streamflow Prediction (ESP) mode. Since the conceptual model requires reservoir operation plans for up to five months into the future, ESP application is limited to basins where regulation is minimal (mostly in the headwater areas).
The farther downstream a forecast point is, the more likely it is that a statistical regression was used between natural snowmelt runoff volume and the observed maximum mean daily flow to generate the forecast. Such an approach performs better when the correlation between regulated and unregulated flow is strong and is constant from year to year.

# UPPER COLORADO PEAK FLOW FORECASTS

Mean daily flows in cubic feet per second (cfs)

| STATION NAME | Historic Peak | Average Peak | Flood* Flow | 2005 Peak | 2005 Date | 2006 Forecast Exceedance Probability 90% | 75% | **50%** | 25% | 10% | Normal time of peak |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COLORADO - KREMMLING, NR | 12,700 | 3,900 | 10,100 | 2,510 | 6/25 | N/A | N/A | **N/A** | N/A | N/A | 5/15 - 6/27 |
| EAGLE - GYPSUM, BLO | 6,580 | 3,600 | 6,600 | 3,400 | 5/23 | 3,500 | 4,000 | **5,000** | 6,000 | 6,500 | 6/1 - 6/21 |
| ROARING FORK - GLENWOOD SPRINGS | 11,200 | 6,150 | 16,800 | 5,720 | 6/24 | 4,000 | 5,300 | **6,500** | 7,700 | 9,000 | 6/3 - 6/18 |
| COLORADO - CAMEO, NR | 38,000 | 17,500 | 23,500 | 16,800 | 5/25 | 13,000 | 17,000 | **21,000** | 25,000 | 30,000 | 5/29 - 6/18 |
| PLATEAU CK - CAMEO, NR | 4,100 | 1,460 | 3,260 | 2,310 | 5/24 | 300 | 700 | **1,000** | 1,400 | 2,000 | 5/9 - 6/11 |
| EAST - ALMONT, NR | 5,000 | 2,080 | 3,100 | 2,070 | 5/25 | 1,500 | 1,810 | **2,100** | 2,500 | 3,000 | 5/28 - 6/17 |
| NF GUNNISON - SOMERSET, NR | 7,080 | 3,310 | 12,400 | 4,730 | 5/21 | 1,500 | 1,800 | **2,500** | 3,300 | 4,200 | 5/11 - 6/2 |
| SURFACE CK - CEDAREDGE | 640 | 210 | 1,400 | 685 | 5/24 | 40 | 80 | **120** | 200 | 250 | 5/3 - 6/8 |
| UNCOMPAHGRE - COLONA | 1,900 | 1,390 | 3,100 | 1,130 | 6/25 | N/A | N/A | **N/A** | N/A | N/A | 5/20 - 6/27 |
| COLORADO - CO-UT STATELINE, NR | 68,300 | 26,150 | 47,800 | 30,300 | 5/25 | 20,000 | 25,000 | **29,000** | 33,000 | 38,000 | 5/22 - 6/16 |
| DOLORES - DOLORES | 6,950 | 2,980 | 8,700 | 4,890 | 5/23 | 1,000 | 1,300 | **1,750** | 2,200 | 2,800 | 5/9 - 6/4 |
| SAN MIGUEL - PLACERVILLE, NR | 2,740 | 1,310 | 2,650 | 1,380 | 5/23 | 500 | 700 | **950** | 1,200 | 1,400 | 5/26 - 6/23 |
| DOLORES - CISCO, NR (see note1 below) | 12,900 | 6,050 | N/A | 9,030 | 5/26 | N/A | N/A | **N/A** | N/A | N/A | 4/26 - 6/5 |
| COLORADO - CISCO, NR | 69,500 | 28,800 | 61,300 | 39,500 | 5/25 | 22,000 | 27,000 | **31,000** | 35,000 | 40,000 | 5/20 - 6/15 |
| GREEN - DANIEL, NR, WARREN BRIDGE, AT | 5,620 | 2,975 | N/A | 2,850 | 6/25 | 2,100 | 2,500 | **2,900** | 3,100 | 3,400 | 5/30 - 6/30 |
| NEW FORK - BIG PINEY, NR | 9,110 | 5,285 | N/A | 5,330 | 6/23 | 3,000 | 4,200 | **5,000** | 5,500 | 7,000 | 5/31 - 6/24 |
| GREEN - LABARGE, NR | 18,800 | 9,270 | 14,600 | 8,590 | 6/25 | N/A | N/A | **N/A** | N/A | N/A | 5/30 - 6/24 |
| BIG SANDY - FARSON, NR | 1,690 | 820 | 1,300 | 926 | 6/22 | N/A | N/A | **N/A** | N/A | N/A | 5/28 - 6/23 |
| GREEN - GREEN RVR WY, NR | 15,400 | 7,110 | 15,500 | 6,510 | 6/03 | N/A | N/A | **N/A** | N/A | N/A | 5/23 - 7/11 |
| HAMS FORK - FRONTIER, NR, POLE CK, BLO | 2,000 | 825 | 1,600 | 1,030 | 6/21 | 700 | 810 | **900** | 1,050 | 1,400 | 5/10 - 6/9 |
| BLACKS FORK - LITTLE AMERICA, NR | 6,970 | 2,440 | 5,500 | 5,500 | 5/19 | 1,500 | 2,000 | **2,400** | 3,900 | 5,000 | 5/2 - 6/27 |

*N/A - NOT AVAILABLE (NOT A FLOOD FORECAST POINT OR NO FORECAST PROCEDURE EXISTS)*

*note1 - for releases below McPhee Reservoir call 970-565-7562*

** Flood flow is for current year only and is an instantaneous value*

# UPPER COLORADO PEAK FLOW FORECASTS (continued)

| STATION NAME | Historic Peak | Average Peak | Flood* Flow | 2005 Peak | 2005 Date | 2006 Forecast Exceedance Probability 90% | 75% | **50%** | 25% | 10% | Normal time of peak |
|---|---|---|---|---|---|---|---|---|---|---|---|
| YAMPA - STEAMBOAT SPRINGS | 5,870 | 3,240 | 4,500 | 3,000 | 6/23 | 2,650 | 3,200 | **3,800** | 4,400 | 5,200 | 5/19 - 6/12 |
| YAMPA - MAYBELL, NR | 24,400 | 10,475 | 26,900 | 12,500 | 5/24 | 8,850 | 10,500 | **12,500** | 14,200 | 17,000 | 5/13 - 6/10 |
| LITTLE SNAKE - LILY, NR | 13,400 | 4,745 | 19,400 | 3,830 | 5/24 | 3,000 | 4,300 | **5,400** | 6,500 | 8,000 | 5/5 - 6/12 |
| YAMPA - DEERLODGE PARK | 32,300 | 13,955 | 17,500 | 15,200 | 5/24 | 9,300 | 12,000 | **16,000** | 18,000 | 20,000 | 5/11 - 6/6 |
| GREEN - JENSEN, NR (see note1 below) | 38,500 | 17,600 | 23,600 | 19,500 | 5/26 | 16,300 | 17,000 | **18,600** | 19,300 | 23,000 | 5/14 - 6/11 |
| ROCK CK - UPR STILLWATER RES | 2,080 | 1,350 | N/A | 1,325 | 5/26 | 900 | 1,100 | **1,350** | 1,450 | 1,700 | 5/25 - 6/20 |
| DUCHESNE - TABIONA, NR | 2,320 | 765 | 4,040 | 1,900 | 5/26 | 700 | 800 | **1,000** | 1,200 | 1,600 | 5/15 - 6/15 |
| DUCHESNE - RANDLETT, NR | 11,500 | 2,755 | 7,400 | 3,350 | 5/26 | 1,000 | 1,300 | **2,500** | 3,300 | 4,500 | 4/27 - 7/5 |
| WHITE - MEEKER, NR | 6,320 | 3,200 | 6,500 | 2,890 | 5/24 | 1,900 | 2,400 | **3,200** | 4,200 | 5,200 | 5/21 - 6/14 |
| GREEN - GREEN RIVER, UT (see note1 below) | 47,200 | 22,560 | 48,500 | 34,900 | 5/29 | 12,000 | 16,000 | **28,000** | 32,000 | 37,000 | 5/18 - 6/16 |
| SAN RAFAEL - GREEN RIVER, NR | 3,600 | 910 | N/A | 2,010 | 6/05 | 450 | 600 | **900** | 1,100 | 1,800 | 5/17 - 7/16 |
| MUDDY CK - EMERY, NR | 515 | 205 | N/A | 456 | 6/03 | 100 | 160 | **200** | 280 | 350 | 5/19 - 6/18 |
| DIRTY DEVIL - HANKSVILLE, NR, POISON SPGS ** | 1,310 | 445 | N/A | N/A | N/A | N/A | N/A | **N/A** | N/A | N/A | 3/12 - 5/31 |
| ESCALANTE - ESCALANTE, NR *** | 227 | 72 | N/A | N/A | N/A | 30 | 45 | **60** | 80 | 130 | 3/24 - 6/2 |
| CATARACT CANYON (estimated) | 116,700 | 51,350 | N/A | 69,900 | 5/26 | 34,000 | 43,000 | **54,000** | 64,000 | 85,000 | 5/20 - 6/16 |
| SAN JUAN - PAGOSA SPRINGS | 4,640 | 2,485 | 6,760 | 4,420 | 5/23 | 710 | 1,050 | **1,470** | 1,800 | 2,100 | 5/15 - 6/12 |
| ANIMAS - DURANGO | 10,700 | 4,675 | 10,300 | 8,070 | 5/25 | 2,000 | 2,450 | **3,150** | 3,900 | 4,500 | 5/28 - 6/14 |
| SAN JUAN - BLUFF, NR (see note2 below) | 15,600 | 7,340 | 40,700 | 12,100 | 5/28 | 3,750 | 4,900 | **6,600** | 8,900 | 11,650 | 5/21 - 7/4 |

*N/A - NOT AVAILABLE (NOT A FLOOD FORECAST POINT OR NO FORECAST PROCEDURE EXISTS)*

*NOTE1 - Peak flow forecasts on the Green River below Flaming Gorge Reservoir are based on USBR planned regulation.*

*NOTE2 - Peak flow forecasts on the San Juan below Navajo Reservoir are based on USBR planned regulation.*

** Flood flow is for current year only and is an instantaneous value* *** Runoff period March - June*

**** Runoff Period March - June does not include contribution from Boulder Creek*

# LOWER COLORADO PEAK FLOW FORECASTS

Mean daily flows in cubic feet per second (cfs)

| STATION NAME | Historic Peak | Average Peak | Flood* Flow | 2005 Peak | 2005 Date | 2006 Forecast Exceedance Probability 90% | 75% | **50%** | 25% | 10% | Normal time of peak |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VIRGIN - LITTLEFIELD, NR | 17,000 | 1,915 | 20,855 | 2,510 | 5/22 | 330 | 520 | **1,300** | 1,900 | 4,100 | 3/15 - 5/6 |
| VIRGIN - HURRICANE, NR | 9,620 | 1,520 | 5,295 | 2,270 | 5/22 | 310 | 520 | **860** | 1,200 | 2,500 | 3/14 - 5/9 |
| SANTA CLARA - PINE VALLEY, NR | 393 | 65 | N/A | 184 | 5/24 | 10 | 15 | **20** | 30 | 40 | 4/25 - 5/25 |
| STATION NAME | Historic Peak | Average Peak | Flood* Flow | | | | | | | | Normal time of peak |
| SALT - ROOSEVELT, NR | 77,200 | 9,610 | 142,295 | 30,700 | 2/12 | - | 320 | **760** | 1,820 | 2,790 | 3/6 - 4/9 |
| TONTO CK - ROOSEVELT, NR, GUN CK, ABV | 32,200 | 4,090 | 53,100 | 19,100 | 2/12 | - | | **265** | 900 | 2,000 | 3/3 - 4/4 |
| OAK CREEK - SEDONA, NR | 8,600 | 1,550 | 14,050 | 5,750 | 2/12 | - | - | **180** | 470 | 675 | 3/6 - 4/9 |
| VERDE - HORSESHOE DAM, ABV, TANGLE CK | 65,100 | 8,530 | 129,230 | Gage Problems | | - | - | **610** | 2,150 | 3,800 | 3/6 - 4/9 |
| AGUA FRIA - ROCK SPRINGS, NR | 23,600 | 2,565 | 10,895 | 17,300 | 2/12 | - | - | **-** | 225 | 695 | 2/28 - 4/3 |

*N/A - NOT AVAILABLE (NOT A FLOOD FORECAST POINT OR NO FORECAST PROCEDURE EXISTS)*

** Flood flow is for current year only and is an instantaneous value*

# GREAT BASIN PEAK FLOW FORECASTS

Mean daily flows in cubic feet per second (cfs)

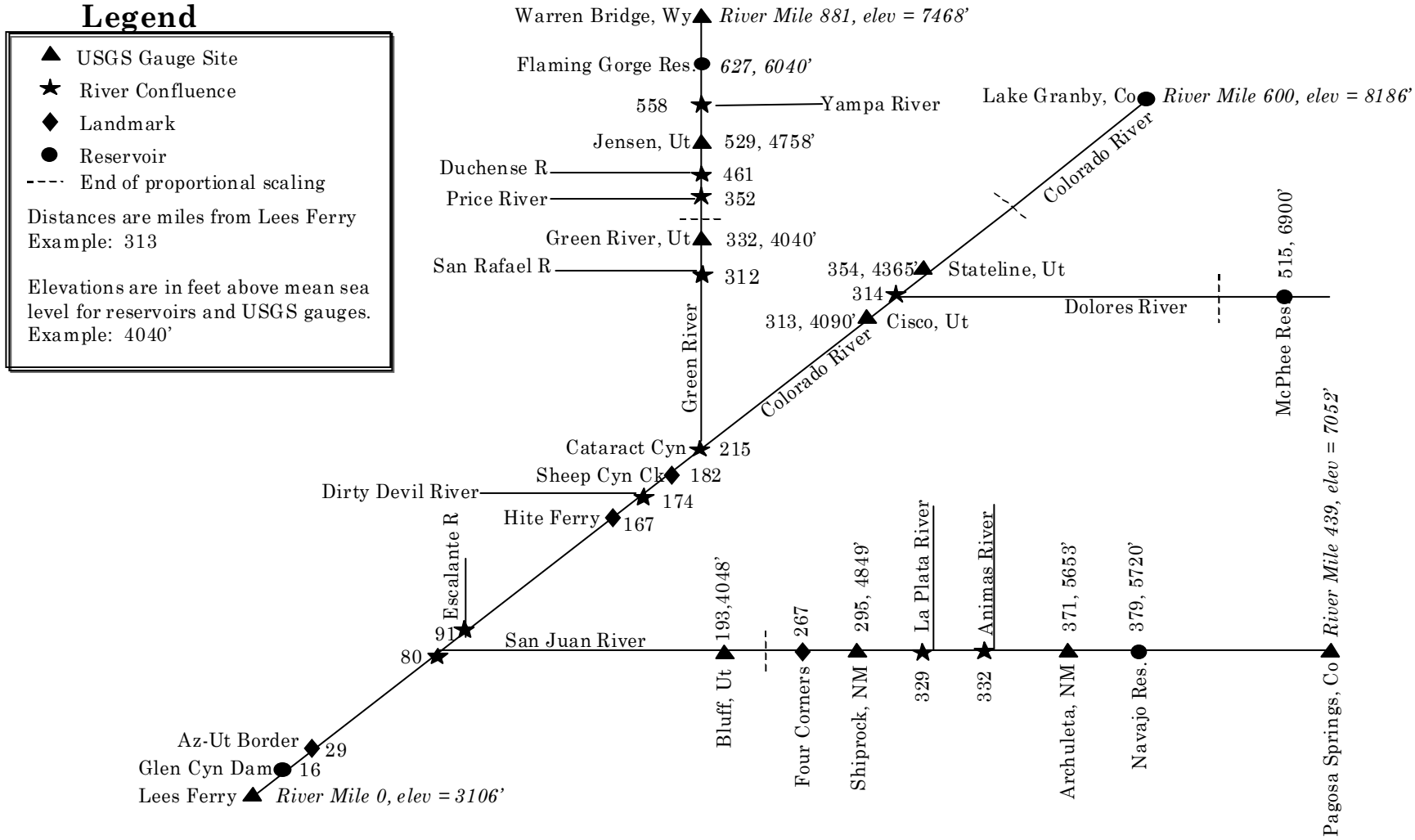
| STATION NAME | Historic Peak | Average Peak | Flood* Flow | 2005 Peak | 2005 Date | 2006 Forecast Exceedance Probability 90% | 75% | **50%** | 25% | 10% | Normal time of peak |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEAR - UTAH-WYOMING STATELINE, NR | 2,680 | 1,610 | 4,400 | 1,820 | 5/04 | 1,280 | 1,440 | **1,650** | 1,850 | 2,100 | 5/22 - 6/14 |
| LOGAN - LOGAN, NR, STATE DAM, ABV | 1,870 | 985 | 1,360 | 1,230 | 5/25 | 980 | 1,080 | **1,200** | 1,300 | 1,450 | 5/18 - 6/10 |
| BLACKSMITH FORK - HYRUM, NR, UP&L DAM | 1,530 | 490 | 850 | 980 | 4/28 | 300 | 400 | **500** | 650 | 850 | 4/24 - 5/20 |
| WEBER - OAKLEY, NR | 4,170 | 1,625 | 2,400 | 1,620 | 6/18 | 1,400 | 1,550 | **1,700** | 1,900 | 2,200 | 5/24 - 6/16 |
| CHALK CK - COALVILLE | 1,420 | 600 | 1,900 | 720 | 5/21 | 280 | 400 | **500** | 760 | 1,000 | 5/5 - 5/31 |
| PROVO - WOODLAND, NR | 2,530 | 1,685 | 3,150 | 1,750 | 6/01 | 1,300 | 1,400 | **1,600** | 1,800 | 2,100 | 5/11 - 6/6 |
| LITTLE COTTONWOOD CK - SALT LAKE CITY, NR | 762 | 470 | 700 | 451 | 6/24 | 370 | 440 | **500** | 580 | 640 | 5/23 - 6/20 |
| BIG COTTONWOOD CK - SALT LAKE CITY, NR | 980 | 430 | 700 | 607 | 6/22 | 390 | 440 | **480** | 550 | 600 | 5/18 - 6/9 |
| MILL CK - SALT LAKE CITY, NR | 153 | 65 | 180 | 80 | 5/21 | 40 | 50 | **60** | 75 | 90 | 5/18 - 6/10 |
| PARLEYS CK - SALT LAKE CITY, NR | 605 | 180 | 350 | 187 | 5/21 | 50 | 100 | **160** | 300 | 400 | 4/23 - 5/22 |
| EMIGRATION CK - SALT LAKE CITY, NR | 164 | 55 | 135 | 42 | 5/18 | 20 | 30 | **45** | 70 | 100 | 4/11 - 5/19 |
| CITY CK - SALT LAKE CITY, NR | 322 | 90 | 150 | 120 | 5/24 | 70 | 90 | **120** | 180 | 220 | 5/12 - 6/1 |
| SEVIER - HATCH | 1,740 | 495 | 1,200 | 1,740 | 6/03 | 140 | 200 | **270** | 330 | 500 | 5/6 - 6/2 |

*N/A - NOT AVAILABLE (NOT A FLOOD FORECAST POINT OR NO FORECAST PROCEDURE EXISTS)*

** Flood flow is for current year only and is an instantaneous value*

# RECREATIONAL INFORMATION

# RECREATIONAL RIVER REACHES



# HIGHLIGHTED RIVER RECREATIONAL SITES

## HISTORICAL PERSPECTIVE...

River recreationists often ask questions such as - “What were the big years at this river site and how big were they?...or conversely, what were the low years?”. Ranked for each highlighted river site below are the five highest and lowest annual peak mean daily flows and the years in which they occurred for the April - July flow period window. Since reservoir regulation plays a major role in determining observed peak flows, the highest flows have been analyzed over two different historical periods: the post regulation period alone (after upstream regulatory reservoirs were in-place) and the entire period of record (including both pre- and post-regulatory data). As would be expected, higher (but more short-lived) peaks were generally observed in the pre-regulatory era.

## A PEAK AMONG PEAKS...

Streamflow varies dramatically over the course of the snowmelt season. To characterize the magnitude of a year with a single seasonal peak sometimes can be an oversimplification. Illustrating that point are the hydrographs (or graphs of mean daily flow versus time) for several years shown below. Included are plots for a sample low year (1977), sample high year (1983), and last year (2005).

## RIVER VELOCITIES...

To help river runners approximate their travel times, information on average river velocities at various flow levels is presented for the highlighted river sites. When utilized with the river reach (distance) information displayed earlier, recreationists can make a ballpark calculation (time = distance/velocity). River velocity actually varies with depth and proximity to the channel boundary, but if considered collectively at all points in a cross-section, it can be expressed as an average. These data, as much of the information in this report, were obtained from the U. S. Geological Survey.

# Green near Green River, UT

Highest 5 Peak Flows
1896-1899 and 1905-2005

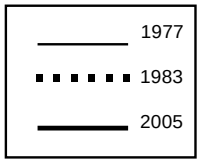
| cfs | date |
|---|---|
| 68100 | 6/27/17 |
| 64100 | 6/16/21 |
| 63000 | 5/29/1897 |
| 62200 | 6/13/09 |
| 54600 | 6/12/12 |

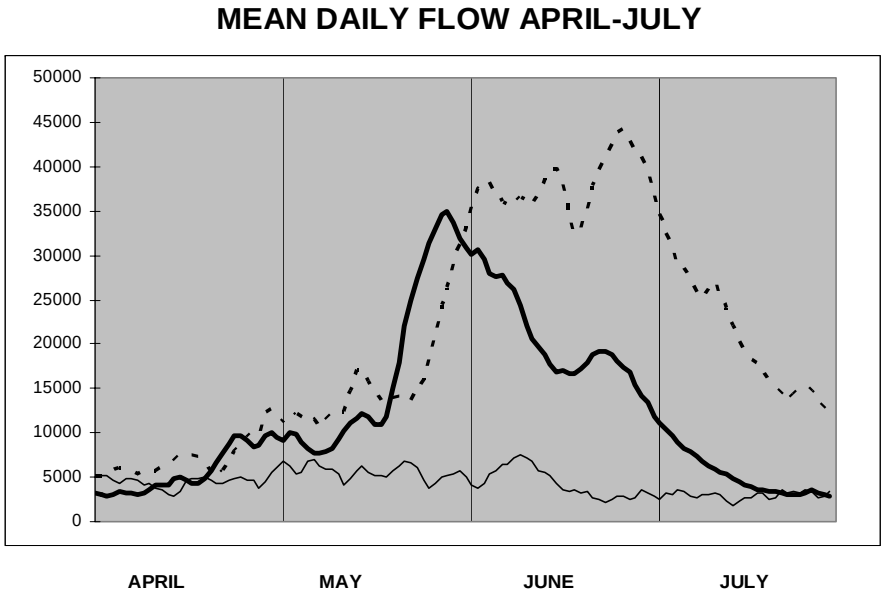
Highest 5 Peak Flows
Post Regulation 1961-2005

| cfs | date |
|---|---|
| 47200 | 5/20/84 |
| 44200 | 6/27/83 |
| 35400 | 6/8/86 |
| 31900 | 6/9/97 |
| 30300 | 5/24/73 |

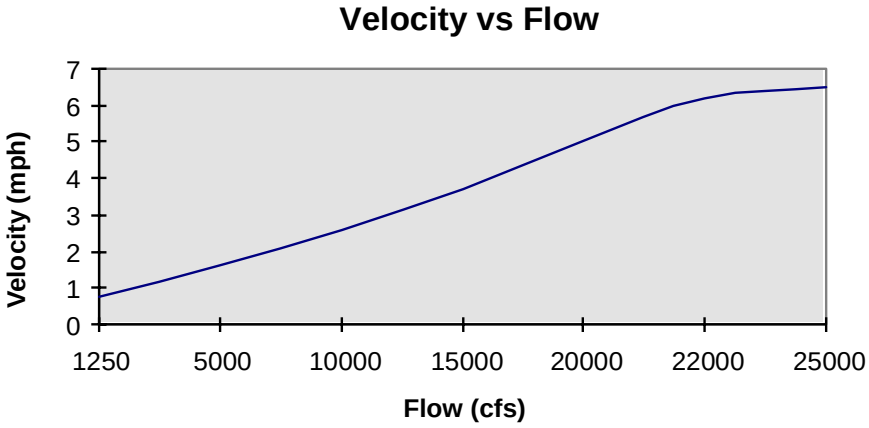
Lowest 5 Peak Flows
1896-1899 and 1905-2005

| cfs | date |
|---|---|
| 7570 | 5/26/02 |
| 7600 | 6/10/77 |
| 7840 | 5/16/89 |
| 9370 | 5/15/63 |
| 10700 | 5/14/92 |




In general, the higher the flow, the higher the velocity. The velocity reaches a maximum, for the most extreme events, between 5 and 7 mph.



# Colorado near Cisco, UT

Highest 5 Peak Flows
1914-1917 and 1923-2005

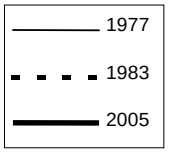
| cfs | date |
|---|---|
| 76800 | 6/19/17 |
| 69500 | 5/27/84 |
| 65600 | 6/3/14 |
| 63400 | 5/15/41 |
| 63400 | 6/10/57 |

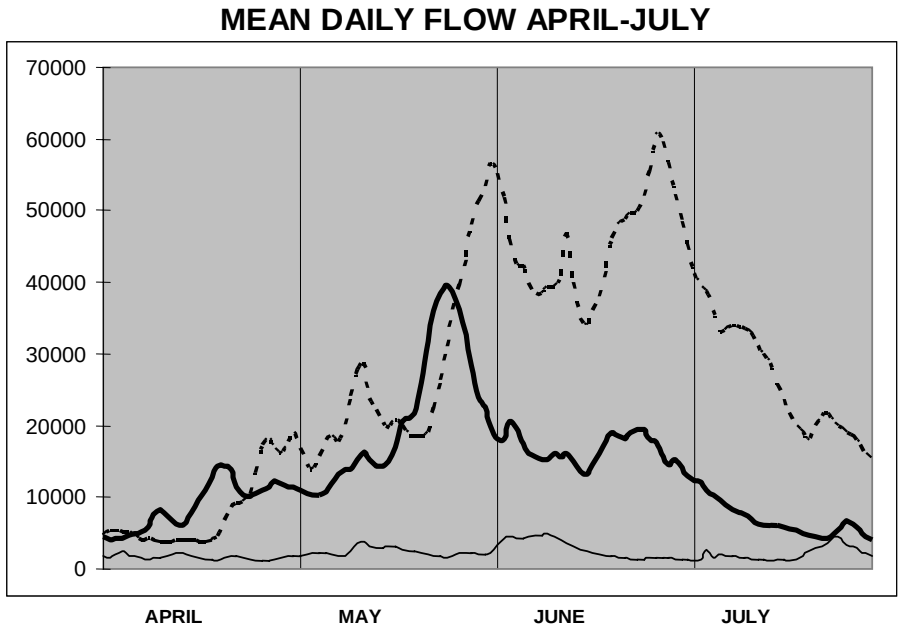
Highest 5 Peak Flows
Post Regulation 1961-2005

| cfs | date |
|---|---|
| 69500 | 5/27/84 |
| 60500 | 6/27/83 |
| 51400 | 6/19/95 |
| 47600 | 5/23/93 |
| 44600 | 5/29/79 |

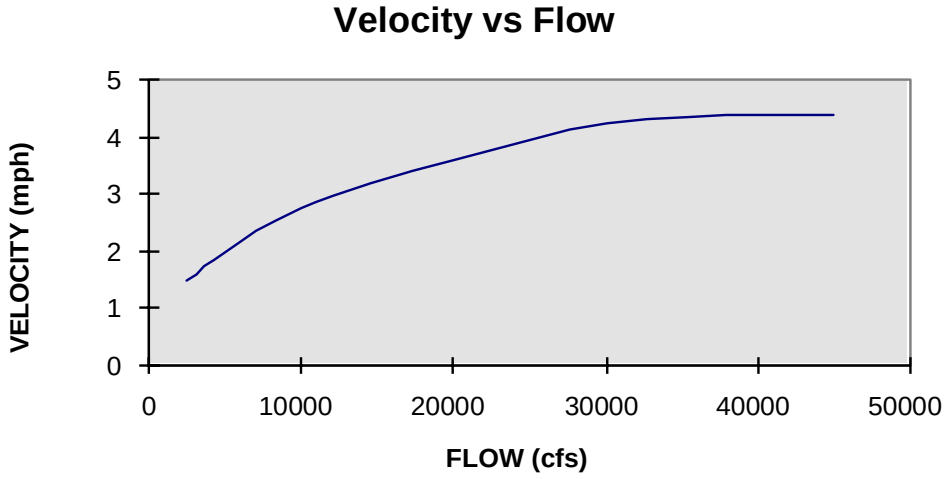
Lowest 5 Peak Flows
1914-1917 and 1923-2005

| cfs | date |
|---|---|
| 4580 | 6/3/02 |
| 4970 | 7/24/77 |
| 9600 | 5/31/89 |
| 10400 | 5/12/04 |
| 11800 | 6/9/81 |




In general, the higher the flow, the higher the velocity. The velocity reaches a maximum, for the most extreme events, between 5 and 7 mph.

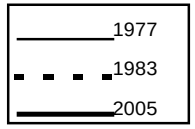


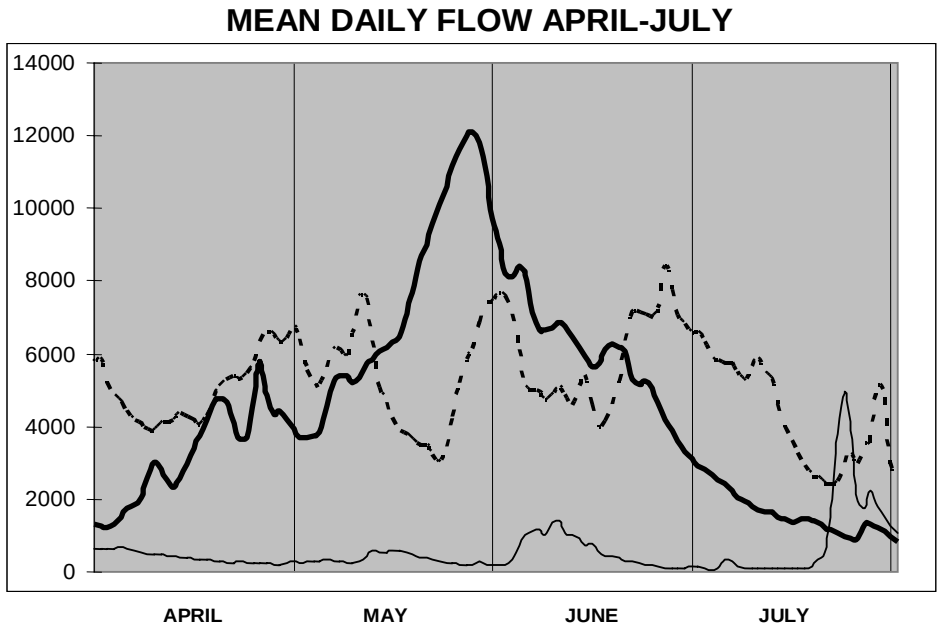
# San Juan near Bluff, UT

| 5 Highest Flows 1915-1917 and 1927-2005 | |
|---|---|
| in cfs | date |
| 52000 | 6/30/27 |
| 33800 | 5/14/41 |
| 25400 | 6/20/49 |
| 18700 | 6/17/17 |
| 18500 | 6/17/35 |

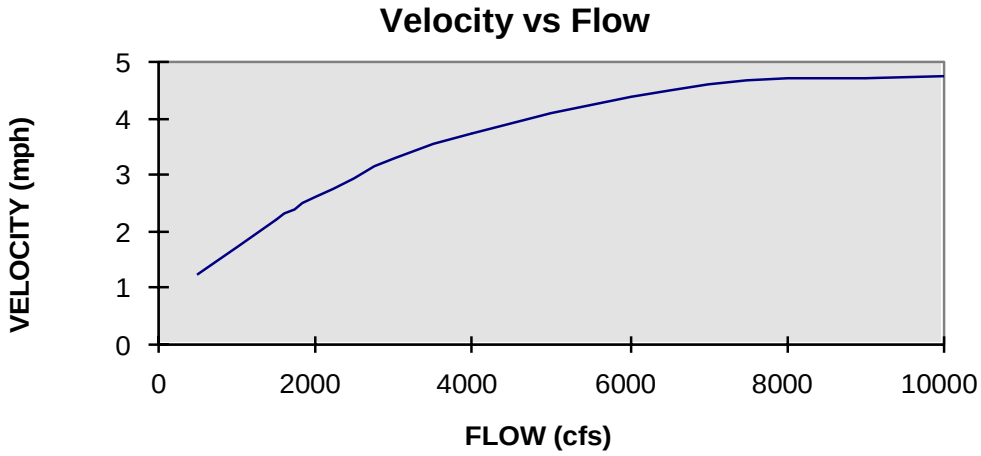
| 5 Highest Flows Post Regulation 1961-2005 | |
|---|---|
| in cfs | date |
| 15200 | 5/29/79 |
| 12200 | 4/30/85 |
| 12100 | 5/28/05 |
| 11600 | 6/19/95 |
| 11300 | 6/12/87 |

| 5 Lowest Flows 1915-1917 and 1927-2005 | |
|---|---|
| in cfs | date |
| 847 | 5/24/02 |
| 2570 | 5/19/74 |
| 2660 | 5/10/63 |
| 2750 | 6/23/71 |
| 2820 | 7/29/89 |

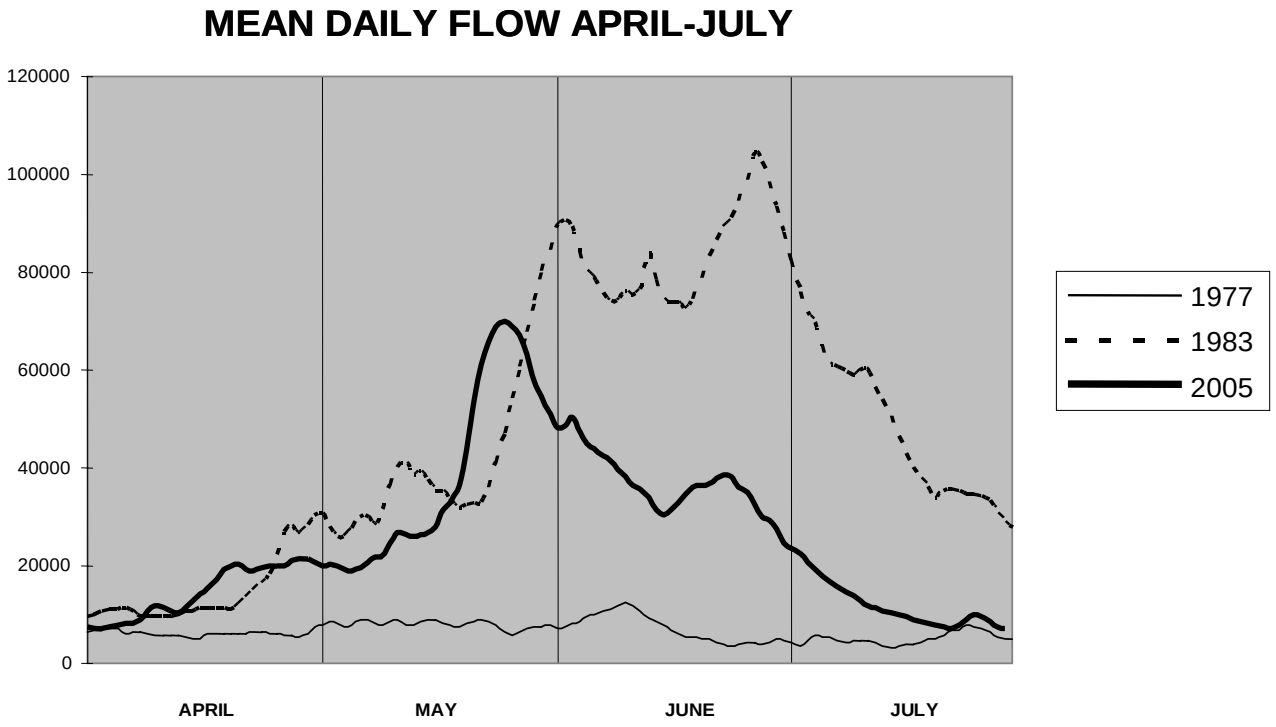



In general, the higher the flow, the higher the velocity. The velocity reaches a maximum, for the most extreme events, between 5 and 7 mph.



# Cataract Canyon




The data above for Cataract Canyon have been synthesized from the Green River near Green River, Utah and the Colorado River near Cisco, Utah gages. The flows from these observed upstream points were routed (lagged in time) to Cataract Canyon and added. Information on the distances between river points and assumed average velocities used to make such calculations are shown earlier in this report.

# PHONE NUMBERS OF INTEREST

| FOR WEATHER INFORMATION: | |
|---|---|
| NEW MEXICO | 505-243-0702 |
| ARIZONA | 602-275-0073 |
| NORTHERN ARIZONA | 928-774-3301 |
| UTAH | 801-524-5133 |
| WYOMING | 307-635-9901 |
| SOUTHWEST WYOMING | 307-857-3898 |
| WESTERN COLORADO | 970-243-0914 |
| SOUTHERN NEVADA | 702-736-3854 |
| SOUTHEASTERN IDAHO | 208-233-0137 |

| FOR RIVER RUNNING CONDITIONS, PERMITS, ETC. | | | |
|---|---|---|---|
| Rive | Reach | Organization | Number |
| COLORADO | Above Westwater Canyon | BLM Grnd Jnctn | 970-244-3000 |
| | Westwater Canyon | BLM | 435-259-6111 |
| | Cisco thru Cataract Canyon | Canyonlands NP | 435-259-7164 |
| | Grand Canyon | Grand Canyon NP | 928-638-7888 |
| DIRTY DEVIL | | BLM Hanksville | 435-542-3461 |
| ESCALANTE | | BLM Escalante | 435-826-5499 |
| GREEN | Ledore to US40 | Dinosaur NM | 970-374-2468 |
| | Desolation Cyn to Green Rvr | BLM Price | 435-636-3622 |
| MUDDY CREEK | | BLM Price | 435-636-3622 |
| SAN JUAN | Below Bluff | BLM Monticello | 435-587-1500 |
| VIRGIN | Zion NP | Zion NP | 435-772-3256 |
| | St. George to Littlefield | BLM Arizona Strip | 435-688-3200 |
| YAMPA | Deerlodge to confluence | Dinosaur NM | 970-374-2468 |


# FLOOD POTENTIAL INFORMATION

# SERVICE HYDROLOGISTS

The graphic on the following page depicts the areas of responsibility of the various Service Hydrologists or Hydro Focal Points. The following list links these individuals and their corresponding areas of responsibility. **A Service Hydrologist/Hydro Focal Point is the National Weather Service hydrologic coordinator and spokesperson for a given hydrologic service area and is the person to contact for current flood potential, streamflows, snowpack information and updates to peak flow forecasts**. Following their phone number is a URL to their homepage.

| | | | |
|---|---|---|---|
| 1) Albuquerque, NM | Ed Polasko | 505-244-9147x228 | http://www.srh.noaa.gov/abq/ |
| 2) Cheyenne, WY | Melissa Goering | 307-772-2468x493 | http://www.crh.noaa.gov/cys/ |
| 3) Boulder, CO | Treste Huse | 303-494-3210x493 | http://www.crh.noaa.gov/den/ |
| 4) El Paso, TX | Tim Brice | 505-589-4088x308 | http://www.srh.noaa.gov/elp/ |
| 5) Flagstaff, AZ | Tom Clemmons | 928-556-9161x229 | http://www.wrh.noaa.gov/fgz/ |
| 6) Grand Junction, CO | Brian Avery | 970-243-7007x493 | http://www.crh.noaa.gov/gjt/ |
| 7) Las Vegas, NV | Barry Pierce | 702-263-9750 | http://www.wrh.noaa.gov/vef/ |
| 8) Phoenix, AZ | Tom Zickus | 602-275-8881x228 | http://www.wrh.noaa.gov/psr/ |
| 9) Pocatello, ID | Sherrie Hebert | 208-233-0834 | http://www.wrh.noaa.gov/pih/ |
| 10) Pueblo, CO | Larry Walrod | 719-948-3838 | http://www.crh.noaa.gov/pub/ |
| 11) Riverton, WY | Jim Fahey | 307-857-3898x493 | http://www.crh.noaa.gov/riw |
| 12) Salt Lake City, UT | Brian McInerney | 801-524-5142x228 | http://www.wrh.noaa.gov/slc/ |
| 13) Tucson, AZ | Mike Schaffner | 520-670-5156x228 | http://www.wrh.noaa.gov/twc/ |

**NATIONAL WEATHER SERVICE HYDROLOGIC SERVICE AREAS**

IN THE CBRFC AREA OF RESPONSIBILITY