

RECLAMATION

Managing Water in the West

June 1, 2009

Dear Customer:

Attached is the monthly water supply outlook and projected reservoir and river operating plans prepared in June. Streamflows into Canyon Ferry were 113 percent of average during May, a 10 percent improvement above that experienced during April. Due to the cool weather this spring delaying the mountain snowmelt, the mountain snowpack above Canyon Ferry was 98 percent of average on June 1. The June 1 forecast indicates the June-July runoff into Canyon Ferry is expected to be about 98 percent of average. With storage in Canyon Ferry at 102 percent of average for this time of year, plans are to maintain releases above full powerplant capacity through most of June to control the snowmelt runoff into Canyon Ferry. If you have any questions or concerns or need further information, please call me during the day at (406) 247-7318.

Tim H. Felchle
Reservoir and River Operations



U. S. Department of the Interior
Bureau of Reclamation
Montana Area Office
River and Reservoir Operations

CANYON FERRY RESERVOIR OPERATIONS
Water Supply Forecasts and Reservoir Operations
June 1, 2009

Present Elevation & Storage: 3790.00 & 1,663,620 acre-feet (102 percent of normal)

Actual Inflows (1,000 Acre-Feet):

| <u>Month</u> | <u>Inflow</u> | <u>Percent of Normal</u> |
|-------------------------|----------------|--------------------------|
| April | 220.5 | 63 |
| May | 581.0 | 101 |
| June | 967.1 | 126 |
| July | 430.6 | 127 |
| April-July, 2008 | 2,199.2 | 108 |
| August | 111.2 | 65 |
| September | 244.7 | 115 |
| WY-2008 Total | 3,627.5 | 92 |
| October | 195.8 | 68 |
| November | 233.3 | 79 |
| December | 176.0 | 73 |
| January | 204.1 | 92 |
| February | 203.2 | 92 |
| March | 239.8 | 89 |
| April | 359.2 | 103 |
| May | 650.0 | 113 |

June 1 Runoff Forecast – June-July Inflow (1,000 Acre-Feet):

| <u>Agency</u> | <u>Inflow</u> | <u>Percent of Normal</u> |
|----------------|---------------|--------------------------|
| USBR | 1,062 | 96 |
| NRCS | 1,081 | 98 |
| <u>CORPS</u> | <u>N.A.</u> | <u>N.A.</u> |
| Average | 1,072 | 97 |

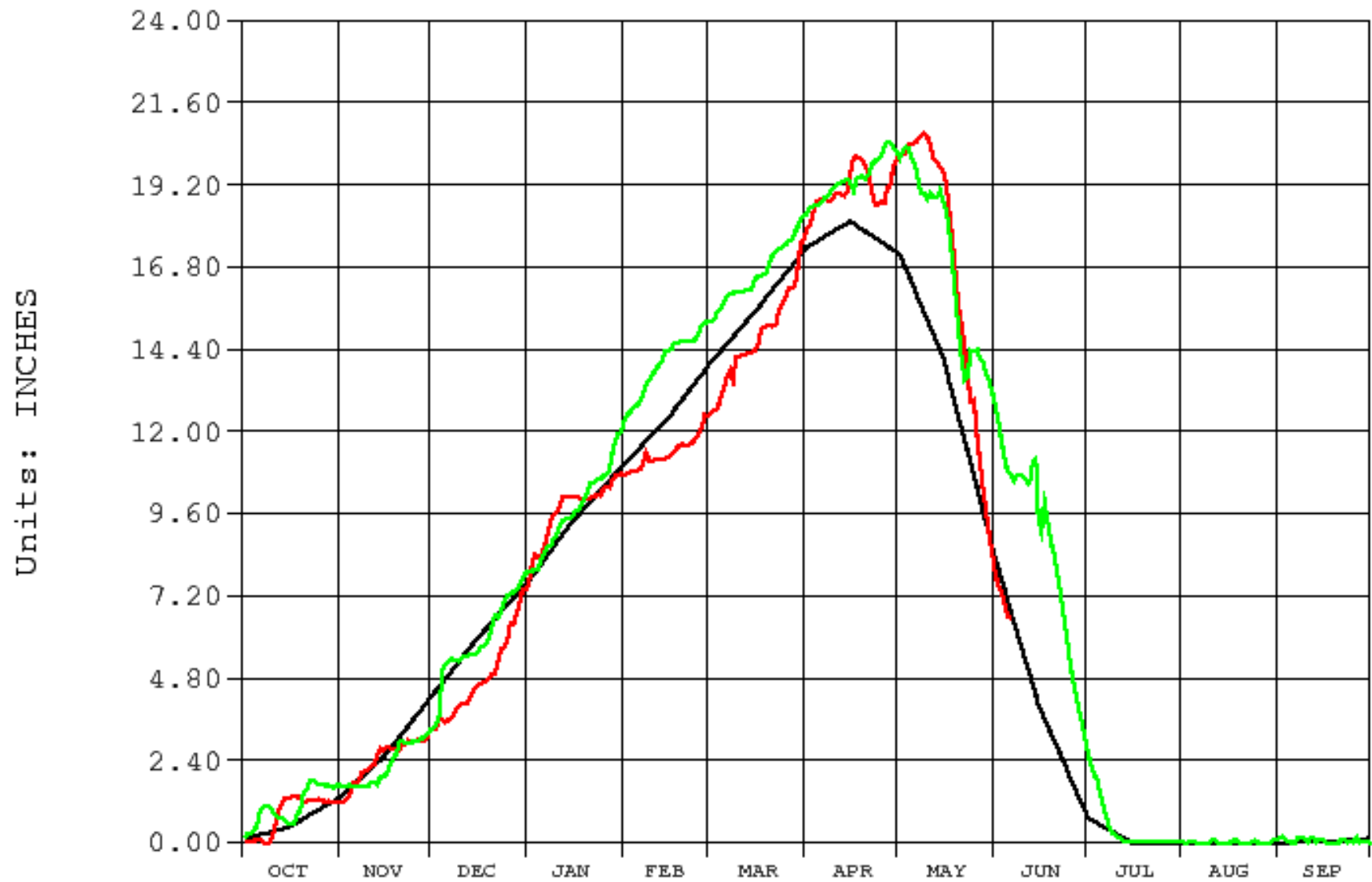
Snowpack Conditions:

S N O W - P R E C I P I T A T I O N U P D A T E
Based on Mountain Data from NRCS SNOTEL Sites
As of MONDAY: JUNE 1 , 2009

| BASIN Data Site Name | ELEV. (Ft) | SNOW WATER EQUIVALENT | | | TOTAL PRECIPITATION | | |
|-------------------------|---------------|-----------------------|---------|-------|---------------------|---------|-------|
| | | Current | Average | Avg % | Current | Average | Avg % |
| ----- | | | | | | | |
| JEFFERSON RIVER BASIN | | | | | | | |
| ALBRO LAKE | 8300 | 15.0 | 14.0 | 107 | 33.2 | 30.5 | 109 |
| BARKER LAKES | 8250 | 15.2 | 9.9 | 154 | 29.6 | 25.2 | 117 |
| BASIN CREEK | 7180 | .0 | 4.3 | 0 | 17.3 | 16.4 | 105 |
| BEAGLE SPRINGS | 8850 | .0 | 1.6 | 0 | 17.9 | 17.8 | 101 |
| BLOODY DICK | 7600 | .0 | 1.2 | 0 | 23.6 | 21.8 | 108 |
| CALVERT CREEK | 6430 | .0 | .0 | 100 | 15.8 | 14.0 | 113 |
| CLOVER MEADOW | 8600 | 7.6 | 11.7 | 65 | 24.2 | 26.1 | 93 |
| DARKHORSE LAKE | 8600 | 28.7 | 26.6 | 108 | 40.1 | 41.4 | 97 |
| DIVIDE | 7800 | .0 | 3.0 | 0 | 17.6 | 18.3 | 96 |
| FROHNER MEADOW | 6480 | .0 | .9 | 0 | 18.0 | 16.7 | 108 |
| LAKEVIEW RIDGE | 7400 | .0 | .4 | 0 | 21.3 | 20.9 | 102 |
| LEMHI RIDGE | 8100 | .0 | 1.6 | 0 | 22.2 | 20.8 | 107 |

| | | | | | | | |
|-------------------------------|------|------|------|-----|------|------|-----|
| LOWER TWIN | 7900 | 15.0 | 13.3 | 113 | 32.1 | 30.9 | 104 |
| MOOSE CREEK | 6200 | .0 | 1.1 | 0 | 28.0 | 25.3 | 111 |
| MULE CREEK | 8300 | 9.4 | 9.6 | 98 | 24.6 | 22.7 | 108 |
| ROCKER PEAK | 8000 | 14.1 | 12.1 | 117 | 25.8 | 22.6 | 114 |
| SADDLE MTN. | 7940 | 16.7 | 16.8 | 99 | 32.3 | 34.3 | 94 |
| SHORT CREEK | 7000 | .0 | .1 | 0 | 11.5 | 11.4 | 101 |
| WHITE ELEPHANT | 7710 | 1.0 | 12.3 | 8 | 35.1 | 38.5 | 91 |
| Basin wide percent of average | | | | 87 | | | 103 |
| MADISON RIVER BASIN | | | | | | | |
| ALBRO LAKE | 8300 | 15.0 | 14.0 | 107 | 33.2 | 30.5 | 109 |
| BEAVER CREEK | 7850 | 9.8 | 9.1 | 108 | 29.8 | 28.0 | 106 |
| BLACK BEAR | 8170 | 24.0 | 26.9 | 89 | 46.0 | 50.2 | 92 |
| CARROT BASIN | 9000 | 22.1 | 24.6 | 90 | 40.5 | 37.5 | 108 |
| CLOVER MEADOW | 8600 | 7.6 | 11.7 | 65 | 24.2 | 26.1 | 93 |
| LONE MOUNTAIN | 8880 | 9.3 | 12.4 | 75 | 24.7 | 28.0 | 88 |
| LOWER TWIN | 7900 | 15.0 | 13.3 | 113 | 32.1 | 30.9 | 104 |
| MADISON PLATEAU | 7750 | 7.6 | 9.6 | 79 | 32.6 | 34.2 | 95 |
| TEPEE CREEK | 8000 | .0 | 5.8 | 0 | 21.0 | 21.0 | 100 |
| WEST YELLOWSTONE | 6700 | .0 | .0 | 100 | 19.6 | 17.6 | 111 |
| WHISKEY CREEK | 6800 | .0 | 1.5 | 0 | 27.2 | 27.2 | 100 |
| Basin wide percent of average | | | | 86 | | | 100 |
| GALLATIN RIVER BASIN | | | | | | | |
| BEAVER CREEK | 7850 | 9.8 | 9.1 | 108 | 29.8 | 28.0 | 106 |
| BRACKETT CREEK | 7320 | 5.3 | 5.5 | 96 | 38.1 | 36.7 | 104 |
| CARROT BASIN | 9000 | 22.1 | 24.6 | 90 | 40.5 | 37.5 | 108 |
| LICK CREEK | 6860 | .0 | .6 | 0 | 23.1 | 23.9 | 97 |
| LONE MOUNTAIN | 8880 | 9.3 | 12.4 | 75 | 24.7 | 28.0 | 88 |
| SACAJAWEA | 6550 | .0 | .0 | 100 | 35.4 | 33.0 | 107 |
| SHOWER FALLS | 8100 | 24.5 | 20.9 | 117 | 38.4 | 36.6 | 105 |
| Basin wide percent of average | | | | 97 | | | 103 |
| MISSOURI HEADWATERS | | | | | | | |
| ALBRO LAKE | 8300 | 15.0 | 14.0 | 107 | 33.2 | 30.5 | 109 |
| BARKER LAKES | 8250 | 15.2 | 9.9 | 154 | 29.6 | 25.2 | 117 |
| BASIN CREEK | 7180 | .0 | 4.3 | 0 | 17.3 | 16.4 | 105 |
| BEAGLE SPRINGS | 8850 | .0 | 1.6 | 0 | 17.9 | 17.8 | 101 |
| BEAVER CREEK | 7850 | 9.8 | 9.1 | 108 | 29.8 | 28.0 | 106 |
| BLACK BEAR | 8170 | 24.0 | 26.9 | 89 | 46.0 | 50.2 | 92 |
| BLOODY DICK | 7600 | .0 | 1.2 | 0 | 23.6 | 21.8 | 108 |
| BRACKETT CREEK | 7320 | 5.3 | 5.5 | 96 | 38.1 | 36.7 | 104 |
| CALVERT CREEK | 6430 | .0 | .0 | 100 | 15.8 | 14.0 | 113 |
| CARROT BASIN | 9000 | 22.1 | 24.6 | 90 | 40.5 | 37.5 | 108 |
| CLOVER MEADOW | 8600 | 7.6 | 11.7 | 65 | 24.2 | 26.1 | 93 |
| DARKHORSE LAKE | 8600 | 28.7 | 26.6 | 108 | 40.1 | 41.4 | 97 |
| DIVIDE | 7800 | .0 | 3.0 | 0 | 17.6 | 18.3 | 96 |
| FROHNER MEADOW | 6480 | .0 | .9 | 0 | 18.0 | 16.7 | 108 |
| LAKEVIEW RIDGE | 7400 | .0 | .4 | 0 | 21.3 | 20.9 | 102 |
| LEMHI RIDGE | 8100 | .0 | 1.6 | 0 | 22.2 | 20.8 | 107 |
| LICK CREEK | 6860 | .0 | .6 | 0 | 23.1 | 23.9 | 97 |
| LONE MOUNTAIN | 8880 | 9.3 | 12.4 | 75 | 24.7 | 28.0 | 88 |
| LOWER TWIN | 7900 | 15.0 | 13.3 | 113 | 32.1 | 30.9 | 104 |
| MADISON PLATEAU | 7750 | 7.6 | 9.6 | 79 | 32.6 | 34.2 | 95 |
| MOOSE CREEK | 6200 | .0 | 1.1 | 0 | 28.0 | 25.3 | 111 |
| MULE CREEK | 8300 | 9.4 | 9.6 | 98 | 24.6 | 22.7 | 108 |
| ROCKER PEAK | 8000 | 14.1 | 12.1 | 117 | 25.8 | 22.6 | 114 |
| SACAJAWEA | 6550 | .0 | .0 | 100 | 35.4 | 33.0 | 107 |
| SADDLE MTN. | 7940 | 16.7 | 16.8 | 99 | 32.3 | 34.3 | 94 |
| SHORT CREEK | 7000 | .0 | .1 | 0 | 11.5 | 11.4 | 101 |
| SHOWER FALLS | 8100 | 24.5 | 20.9 | 117 | 38.4 | 36.6 | 105 |
| TEPEE CREEK | 8000 | .0 | 5.8 | 0 | 21.0 | 21.0 | 100 |
| WEST YELLOWSTONE | 6700 | .0 | .0 | 100 | 19.6 | 17.6 | 111 |
| WHISKEY CREEK | 6800 | .0 | 1.5 | 0 | 27.2 | 27.2 | 100 |
| WHITE ELEPHANT | 7710 | 1.0 | 12.3 | 8 | 35.1 | 38.5 | 91 |
| Basin wide percent of average | | | | 88 | | | 102 |

Archive Data From 1-OCT Through 30-SEP
Plotted 06/06/2009 18:36



CFR Canyon Ferry Lake, Missouri River near Helena, MT
SE_AVG Snow Water Equivalent Average (inches)
SE Snow Water Equivalent (inches)

2009
2009 2008

CANYON FERRY LAKE MONTHLY OPERATIONS

| Canyon Ferry Reservoir | | Initial Cont 1663.6 kaf Elev 3790.00 ft | | | | Maximum Cont 1993.0 kaf Elev 3800.00 ft | | | | Minimum Cont 445.5 kaf Elev 3732.31 ft | | | | Total |
|------------------------|------|--|--------|--------|--------|--|--------|--------|--------|---|--------|--------|--------|---------|
| | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Reservoir Inflow | kaf | 777.8 | 293.7 | 150.4 | 205.7 | 273.4 | 292.7 | 247.8 | 210.2 | 214.9 | 260.0 | 330.6 | 554.4 | 3811.6 |
| Evaporation Loss | kaf | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HV Canal Diversions | kaf | 17.0 | 21.0 | 21.0 | 12.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 11.0 | 22.0 | 108.0 |
| HV Pump Turbines | kaf | 18.0 | 20.9 | 21.5 | 12.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.1 | 14.6 | 27.9 | 120.9 |
| Turbine Release | kaf | 320.3 | 252.7 | 222.9 | 221.8 | 240.9 | 298.2 | 311.5 | 315.3 | 289.0 | 322.2 | 336.0 | 356.9 | 3487.7 |
| Turbine Release | cfs | 5382 | 4110 | 3625 | 3727 | 3918 | 5011 | 5066 | 5128 | 5204 | 5240 | 5647 | 5804 | |
| Spill/Waste | kaf | 194.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 194.2 |
| River Release | kaf | 532.5 | 273.6 | 244.4 | 234.7 | 240.9 | 298.2 | 311.5 | 315.3 | 289.0 | 327.3 | 350.6 | 384.8 | 3802.8 |
| River Release | cfs | 8949 | 4450 | 3975 | 3944 | 3918 | 5011 | 5066 | 5128 | 5204 | 5323 | 5892 | 6258 | |
| Min Release | cfs | 3707 | 3981 | 3975 | 3944 | 3918 | 3936 | 3939 | 3928 | 3893 | 3880 | 3911 | 3959 | |
| Total Dam Release | kaf | 549.5 | 294.6 | 265.4 | 246.7 | 240.9 | 298.2 | 311.5 | 315.3 | 289.0 | 331.3 | 361.6 | 406.8 | 3910.8 |
| Total Dam Release | cfs | 9235 | 4791 | 4316 | 4146 | 3918 | 5011 | 5066 | 5128 | 5204 | 5388 | 6077 | 6616 | |
| End-Month Content | kaf | 1891.9 | 1891.0 | 1776.0 | 1735.0 | 1767.5 | 1762.0 | 1698.3 | 1593.2 | 1519.1 | 1447.8 | 1416.8 | 1564.4 | |
| End-Month Elevation | ft | 3797.0 | 3797.0 | 3793.5 | 3792.2 | 3793.2 | 3793.1 | 3791.1 | 3787.8 | 3785.4 | 3783.1 | 3782.0 | 3786.9 | |
| Net Change | kaf | 228.3 | -0.9 | -115.0 | -41.0 | 32.5 | -5.5 | -63.7 | -105.1 | -74.1 | -71.3 | -31.0 | 147.6 | -99.2 |
| Canyon Ferry Power | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Turbine Release | cfs | 5382 | 4110 | 3625 | 3727 | 3918 | 5011 | 5066 | 5128 | 5204 | 5240 | 5647 | 5804 | |
| Tailwater Elev | ft | 3651.5 | 3650.9 | 3650.8 | 3650.8 | 3650.8 | 3650.9 | 3651.0 | 3651.0 | 3651.0 | 3651.0 | 3651.1 | 3651.1 | |
| Average Head | ft | 142.0 | 146.1 | 144.4 | 142.0 | 141.9 | 142.2 | 141.1 | 138.4 | 135.6 | 133.2 | 131.4 | 133.4 | |
| Average Power | mw | 60.0 | 46.7 | 40.0 | 40.8 | 43.2 | 56.3 | 56.5 | 56.1 | 55.7 | 55.1 | 57.6 | 59.6 | |
| Average Kwh/Af | | 135 | 137 | 133 | 132 | 133 | 136 | 135 | 132 | 130 | 127 | 123 | 124 | 131 |
| Generation | gwh | 43.200 | 34.737 | 29.723 | 29.340 | 32.126 | 40.529 | 41.999 | 41.731 | 37.430 | 40.957 | 41.450 | 44.372 | 457.594 |
| End-Month Power Cap | mw | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | |
| Hauser | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Missouri Gain | kaf | 13.1 | 1.3 | 3.3 | 5.2 | 9.1 | 8.4 | 8.8 | 9.0 | 9.3 | 10.2 | 9.0 | 5.4 | 92.1 |
| End-Month Content | kaf | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | |
| Release | kaf | 545.6 | 274.9 | 247.7 | 239.9 | 250.0 | 306.6 | 320.3 | 324.3 | 298.3 | 337.5 | 359.6 | 390.2 | 3894.9 |
| Release | cfs | 9169 | 4471 | 4028 | 4032 | 4066 | 5153 | 5209 | 5274 | 5371 | 5489 | 6043 | 6346 | |
| Turbine Release | cfs | 4740 | 4471 | 4028 | 4032 | 4066 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | |
| Turbine Bypass | cfs | 4429 | 0 | 0 | 0 | 0 | 413 | 469 | 534 | 631 | 749 | 1303 | 1606 | |
| Generation | gwh | 11.877 | 11.576 | 10.429 | 10.103 | 10.527 | 11.877 | 12.272 | 12.272 | 11.085 | 12.272 | 11.877 | 12.272 | 138.439 |
| Holter | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Missouri Gain | kaf | 10.3 | 6.0 | 4.4 | 4.1 | 2.1 | 1.4 | 1.1 | 1.6 | 2.2 | 3.3 | 2.3 | 3.3 | 42.1 |
| End-Month Content | kaf | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | |
| Release | kaf | 555.9 | 280.9 | 252.1 | 244.0 | 252.1 | 308.0 | 321.4 | 325.9 | 300.5 | 340.8 | 361.9 | 393.5 | 3937.0 |
| Release | cfs | 9342 | 4568 | 4100 | 4101 | 4100 | 5176 | 5227 | 5300 | 5411 | 5543 | 6082 | 6400 | |
| Min Release | cfs | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | |
| Turbine Release | cfs | 7100 | 4568 | 4100 | 4101 | 4100 | 5176 | 5227 | 5300 | 5411 | 5543 | 6082 | 6400 | |
| Turbine Bypass | cfs | 2242 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Generation | gwh | 35.988 | 23.926 | 21.475 | 20.787 | 21.475 | 26.236 | 27.378 | 27.760 | 25.599 | 29.033 | 30.828 | 33.522 | 324.007 |

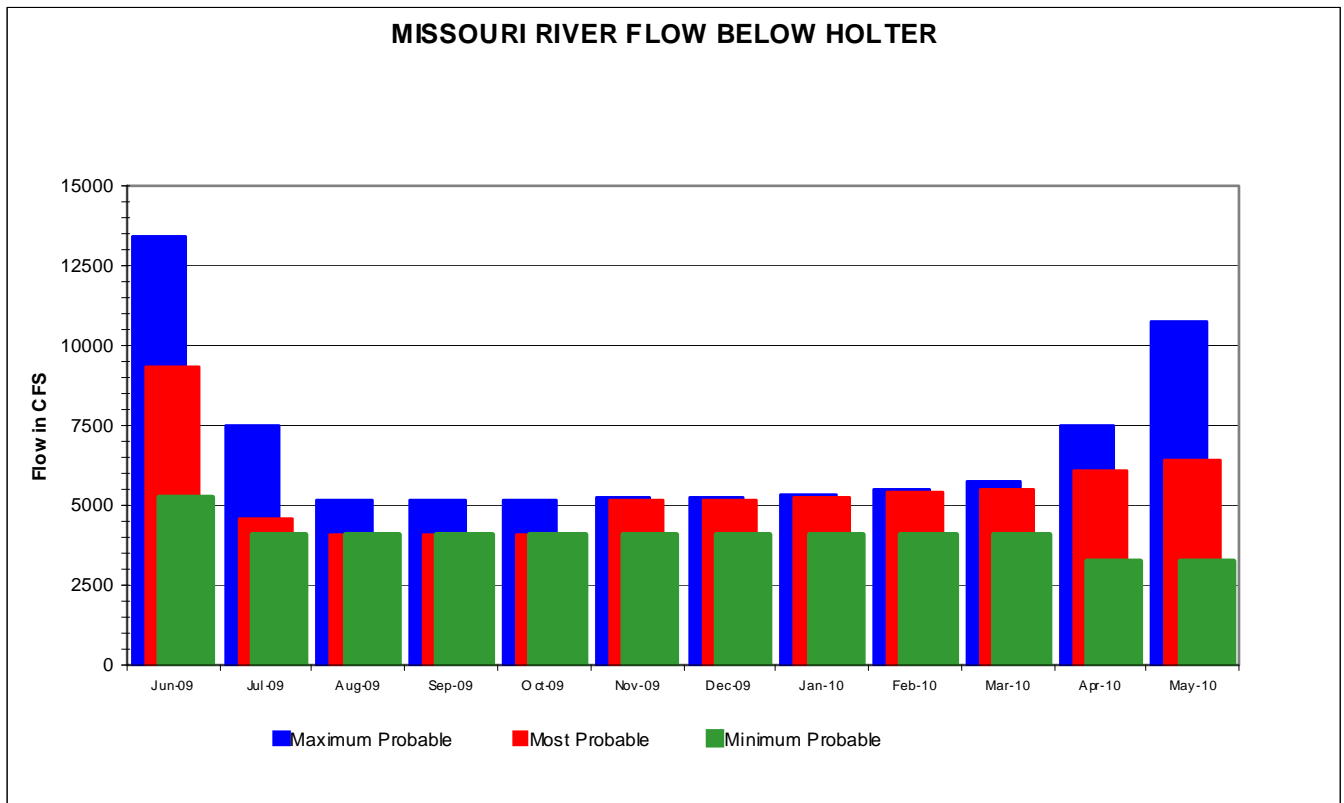
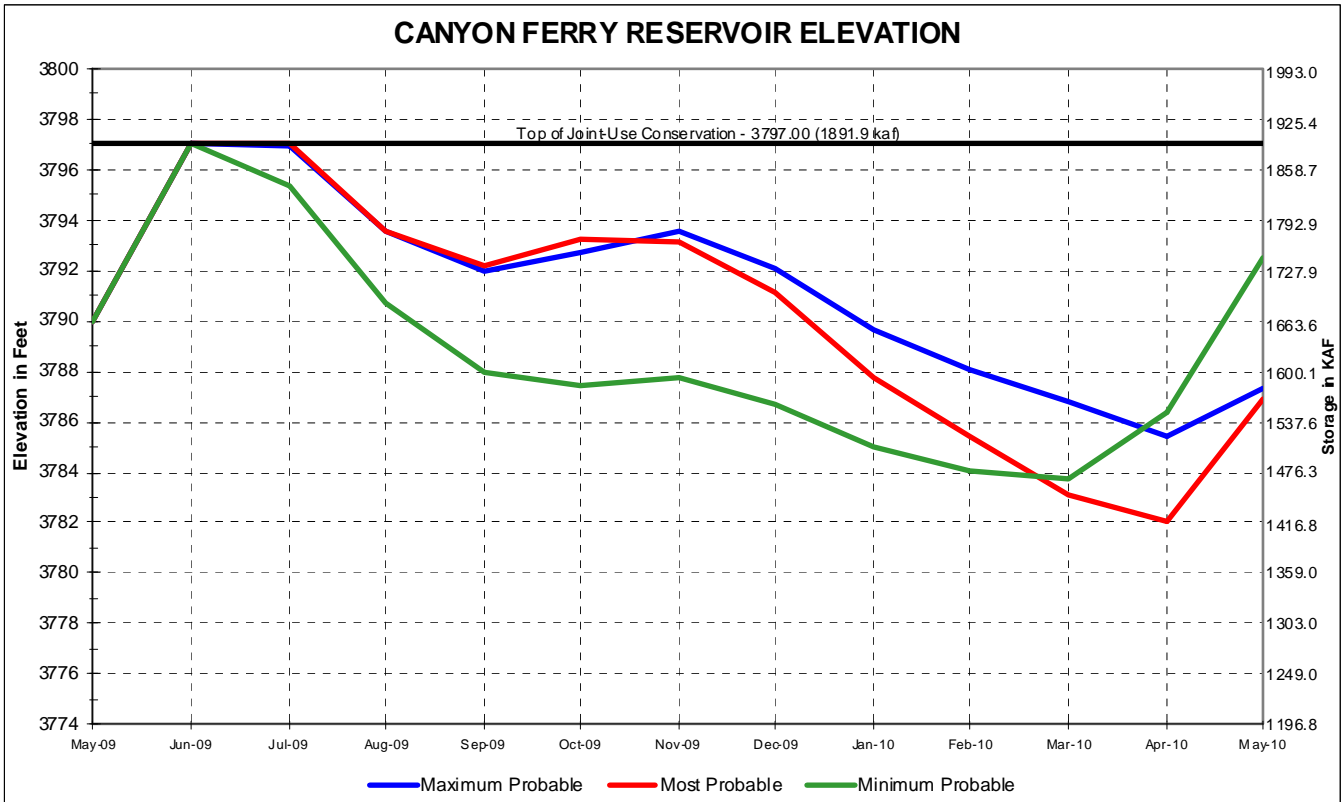
CANYON FERRY LAKE MONTHLY OPERATIONS

| Canyon Ferry Reservoir | | Initial Cont 1663.6 kaf Elev 3790.00 ft | | | | Maximum Cont 1993.0 kaf Elev 3800.00 ft | | | | Minimum Cont 445.5 kaf Elev 3732.31 ft | | | | Total |
|------------------------|------|--|--------|--------|--------|--|--------|--------|--------|---|--------|--------|--------|---------|
| | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | |
| Reservoir Inflow | kaf | 549.4 | 211.5 | 119.2 | 163.7 | 232.0 | 249.8 | 210.8 | 195.8 | 192.3 | 231.9 | 281.1 | 417.7 | 3055.2 |
| Evaporation Loss | kaf | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HV Canal Diversions | kaf | 17.0 | 21.0 | 21.0 | 12.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 11.0 | 22.0 | 112.0 |
| HV Pump Turbines | kaf | 18.0 | 21.2 | 22.4 | 13.8 | 4.7 | 0.0 | 0.0 | 0.0 | 0.0 | 5.1 | 13.8 | 25.2 | 124.2 |
| Turbine Release | kaf | 286.1 | 224.3 | 225.7 | 226.0 | 241.9 | 237.9 | 244.4 | 247.5 | 219.4 | 236.5 | 173.7 | 176.1 | 2739.5 |
| Turbine Release | cfs | 4808 | 3648 | 3671 | 3798 | 3934 | 3998 | 3975 | 4025 | 3951 | 3846 | 2919 | 2864 | |
| Spill/Waste | kaf | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| River Release | kaf | 304.1 | 245.5 | 248.1 | 239.8 | 246.6 | 237.9 | 244.4 | 247.5 | 219.4 | 241.6 | 187.5 | 201.3 | 2863.7 |
| River Release | cfs | 5111 | 3993 | 4035 | 4030 | 4011 | 3998 | 3975 | 4025 | 3951 | 3929 | 3151 | 3274 | |
| Min Release | cfs | 3138 | 3993 | 4035 | 4030 | 4011 | 3998 | 3975 | 4025 | 3951 | 3929 | 3151 | 3274 | |
| Total Dam Release | kaf | 321.1 | 266.5 | 269.1 | 251.8 | 250.6 | 237.9 | 244.4 | 247.5 | 219.4 | 245.6 | 198.5 | 223.3 | 2975.7 |
| Total Dam Release | cfs | 5396 | 4334 | 4376 | 4232 | 4076 | 3998 | 3975 | 4025 | 3951 | 3994 | 3336 | 3632 | |
| End-Month Content | kaf | 1891.9 | 1836.9 | 1687.0 | 1598.9 | 1580.3 | 1592.2 | 1558.6 | 1506.9 | 1479.8 | 1466.1 | 1548.7 | 1743.1 | |
| End-Month Elevation | ft | 3797.0 | 3795.3 | 3790.7 | 3788.0 | 3787.4 | 3787.8 | 3786.7 | 3785.0 | 3784.1 | 3783.7 | 3786.4 | 3792.5 | |
| Net Change | kaf | 228.3 | -55.0 | -149.9 | -88.1 | -18.6 | 11.9 | -33.6 | -51.7 | -27.1 | -13.7 | 82.6 | 194.4 | 79.5 |
| Canyon Ferry Power | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Turbine Release | cfs | 4808 | 3648 | 3671 | 3798 | 3934 | 3998 | 3975 | 4025 | 3951 | 3846 | 2919 | 2864 | |
| Tailwater Elev | ft | 3651.0 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | 3650.8 | |
| Average Head | ft | 142.5 | 145.4 | 142.3 | 138.5 | 136.9 | 136.8 | 136.4 | 135.0 | 133.8 | 133.1 | 134.2 | 138.6 | |
| Average Power | mw | 54.2 | 40.5 | 40.1 | 40.8 | 42.1 | 42.9 | 42.5 | 42.7 | 41.5 | 40.0 | 28.9 | 28.9 | |
| Average Kwh/Af | | 136 | 134 | 132 | 130 | 129 | 130 | 129 | 128 | 127 | 126 | 120 | 122 | 129 |
| Generation | gwh | 38.995 | 30.095 | 29.812 | 29.398 | 31.322 | 30.852 | 31.605 | 31.776 | 27.875 | 29.790 | 20.779 | 21.502 | 353.801 |
| End-Month Power Cap | mw | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | |
| Hauser | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Missouri Gain | kaf | 1.9 | 1.9 | 0.9 | 1.8 | 4.0 | 4.8 | 7.1 | 4.5 | 7.2 | 8.6 | 7.8 | 0.4 | 50.9 |
| End-Month Content | kaf | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | |
| Release | kaf | 306.0 | 247.4 | 249.0 | 241.6 | 250.6 | 242.7 | 251.5 | 252.0 | 226.6 | 250.2 | 195.3 | 201.7 | 2914.6 |
| Release | cfs | 5143 | 4024 | 4050 | 4060 | 4076 | 4079 | 4090 | 4098 | 4080 | 4069 | 3282 | 3280 | |
| Turbine Release | cfs | 4740 | 4024 | 4050 | 4060 | 4076 | 4079 | 4090 | 4098 | 4080 | 4069 | 3282 | 3280 | |
| Turbine Bypass | cfs | 403 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Generation | gwh | 11.877 | 10.419 | 10.486 | 10.173 | 10.553 | 10.220 | 10.590 | 10.610 | 9.541 | 10.535 | 8.223 | 8.492 | 121.719 |
| Holter | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Missouri Gain | kaf | 7.8 | 4.7 | 3.1 | 2.4 | 1.5 | 1.3 | 0.6 | 0.1 | 1.1 | 1.9 | 1.1 | 1.2 | 26.8 |
| End-Month Content | kaf | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | |
| Release | kaf | 313.8 | 252.1 | 252.1 | 244.0 | 252.1 | 244.0 | 252.1 | 252.1 | 227.7 | 252.1 | 196.4 | 202.9 | 2941.4 |
| Release | cfs | 5274 | 4100 | 4100 | 4101 | 4100 | 4101 | 4100 | 4100 | 4100 | 4100 | 3301 | 3300 | |
| Min Release | cfs | 3300 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | 3300 | 3300 | |
| Turbine Release | cfs | 5274 | 4100 | 4100 | 4101 | 4100 | 4101 | 4100 | 4100 | 4100 | 4100 | 3301 | 3300 | |
| Turbine Bypass | cfs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Generation | gwh | 26.733 | 21.475 | 21.475 | 20.787 | 21.475 | 20.787 | 21.475 | 21.475 | 19.397 | 21.475 | 16.732 | 17.285 | 250.571 |

CANYON FERRY LAKE MONTHLY OPERATIONS

| Canyon Ferry Reservoir | | Initial Cont 1663.6 kaf Elev 3790.00 ft | | | | Maximum Cont 1993.0 kaf Elev 3800.00 ft | | | | Minimum Cont 445.5 kaf Elev 3732.31 ft | | | | Total |
|------------------------|------|--|--------|--------|--------|--|--------|--------|--------|---|--------|--------|--------|---------|
| | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | |
| Reservoir Inflow | kaf | 993.5 | 454.9 | 215.5 | 253.9 | 327.8 | 331.9 | 267.9 | 239.5 | 244.2 | 298.8 | 404.5 | 720.1 | 4752.5 |
| Evaporation Loss | kaf | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| HV Canal Diversions | kaf | 17.0 | 21.0 | 21.0 | 12.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 11.0 | 22.0 | 112.0 |
| HV Pump Turbines | kaf | 18.0 | 20.9 | 21.5 | 12.9 | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 4.8 | 13.5 | 26.8 | 122.7 |
| Turbine Release | kaf | 322.0 | 322.1 | 280.1 | 280.8 | 298.6 | 303.4 | 314.6 | 319.2 | 294.1 | 331.2 | 342.3 | 354.5 | 3762.9 |
| Turbine Release | cfs | 5411 | 5239 | 4555 | 4719 | 4856 | 5099 | 5116 | 5191 | 5296 | 5386 | 5752 | 5766 | |
| Spill/Waste | kaf | 408.2 | 94.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 79.0 | 257.7 | 839.8 |
| River Release | kaf | 748.2 | 437.9 | 301.6 | 293.7 | 302.9 | 303.4 | 314.6 | 319.2 | 294.1 | 336.0 | 434.8 | 639.0 | 4725.4 |
| River Release | cfs | 12574 | 7122 | 4905 | 4936 | 4926 | 5099 | 5116 | 5191 | 5296 | 5465 | 7307 | 10392 | |
| Min Release | cfs | 3284 | 3731 | 3807 | 3838 | 3828 | 5099 | 3915 | 3915 | 3833 | 3825 | 3850 | 3711 | |
| Total Dam Release | kaf | 765.2 | 458.9 | 322.6 | 305.7 | 306.9 | 303.4 | 314.6 | 319.2 | 294.1 | 340.0 | 445.8 | 661.0 | 4837.4 |
| Total Dam Release | cfs | 12860 | 7463 | 5247 | 5137 | 4991 | 5099 | 5116 | 5191 | 5296 | 5530 | 7492 | 10750 | |
| End-Month Content | kaf | 1891.9 | 1887.9 | 1780.8 | 1729.0 | 1749.9 | 1778.4 | 1731.7 | 1652.0 | 1602.1 | 1560.9 | 1519.6 | 1578.7 | |
| End-Month Elevation | ft | 3797.0 | 3796.9 | 3793.6 | 3792.0 | 3792.7 | 3793.6 | 3792.1 | 3789.6 | 3788.1 | 3786.8 | 3785.4 | 3787.3 | |
| Net Change | kaf | 228.3 | -4.0 | -107.1 | -51.8 | 20.9 | 28.5 | -46.7 | -79.7 | -49.9 | -41.2 | -41.3 | 59.1 | -84.9 |
| Canyon Ferry Power | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Turbine Release | cfs | 5411 | 5239 | 4555 | 4719 | 4856 | 5099 | 5116 | 5191 | 5296 | 5386 | 5752 | 5766 | |
| Tailwater Elev | ft | 3652.2 | 3651.2 | 3650.9 | 3650.9 | 3650.9 | 3651.0 | 3651.0 | 3651.0 | 3651.0 | 3651.0 | 3651.2 | 3651.7 | |
| Average Head | ft | 141.3 | 145.7 | 144.4 | 141.9 | 141.5 | 142.1 | 141.8 | 139.9 | 137.8 | 136.4 | 134.9 | 134.7 | |
| Average Power | mw | 60.0 | 60.0 | 51.8 | 52.9 | 54.3 | 57.2 | 57.3 | 57.3 | 57.5 | 57.7 | 60.0 | 60.0 | |
| Average Kwh/Af | | 134 | 139 | 138 | 136 | 135 | 136 | 135 | 134 | 131 | 130 | 126 | 126 | 133 |
| Generation | gwh | 43.200 | 44.640 | 38.524 | 38.117 | 40.422 | 41.177 | 42.601 | 42.616 | 38.627 | 42.929 | 43.200 | 44.640 | 500.693 |
| End-Month Power Cap | mw | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | |
| Hauser | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Missouri Gain | kaf | 34.1 | 13.3 | 10.8 | 10.0 | 13.0 | 9.3 | 9.4 | 8.9 | 11.9 | 13.3 | 11.8 | 17.2 | 163.0 |
| End-Month Content | kaf | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | 64.2 | |
| Release | kaf | 782.3 | 451.2 | 312.4 | 303.7 | 315.9 | 312.7 | 324.0 | 328.1 | 306.0 | 349.3 | 446.6 | 656.2 | 4888.4 |
| Release | cfs | 13147 | 7338 | 5081 | 5104 | 5138 | 5255 | 5269 | 5336 | 5510 | 5681 | 7505 | 10672 | |
| Turbine Release | cfs | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | 4740 | |
| Turbine Bypass | cfs | 8407 | 2598 | 341 | 364 | 398 | 515 | 529 | 596 | 770 | 941 | 2765 | 5932 | |
| Generation | gwh | 11.877 | 12.272 | 12.272 | 11.877 | 12.272 | 11.877 | 12.272 | 12.272 | 11.085 | 12.272 | 11.877 | 12.272 | 144.497 |
| Holter | 2009 | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Total |
| Missouri Gain | kaf | 14.5 | 9.4 | 7.2 | 5.6 | 3.7 | 2.0 | 2.0 | 2.5 | 2.9 | 3.6 | 3.1 | 6.7 | 63.2 |
| End-Month Content | kaf | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | 81.9 | |
| Release | kaf | 796.8 | 460.6 | 319.6 | 309.3 | 319.6 | 314.7 | 326.0 | 330.6 | 308.9 | 352.9 | 449.7 | 662.9 | 4951.6 |
| Release | cfs | 13391 | 7491 | 5198 | 5198 | 5198 | 5289 | 5302 | 5377 | 5562 | 5739 | 7557 | 10781 | |
| Min Release | cfs | 4100 | 4100 | 4100 | 4100 | 4100 | 5289 | 4100 | 4100 | 4100 | 4100 | 4100 | 4100 | |
| Turbine Release | cfs | 7100 | 7100 | 5198 | 5198 | 5198 | 5289 | 5302 | 5377 | 5562 | 5739 | 7100 | 7100 | |
| Turbine Bypass | cfs | 6291 | 391 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 457 | 3681 | |
| Generation | gwh | 35.988 | 37.188 | 27.226 | 26.348 | 27.226 | 26.809 | 27.771 | 28.163 | 26.313 | 30.060 | 35.988 | 37.188 | 366.268 |

CANYON FERRY RESERVOIR



WATER YEAR 2009