

**BEAR RIVER BELOW GRACE DAM, NEAR GRACE, ID  
(10080000)**

**STREAMFLOW RECORDS FOR WATER YEAR 2010**

LOCATION.--Lat 42°35'11", long 111°43'51" referenced to North American Datum of 1927, in NE ¼ SE ¼ NW ¼ sec.1, T.10 S., R.40 E., Caribou County, Hydrologic Unit 16010202, on left bank 1,000 ft downstream from dam, and 1 mi north of Grace.

DRAINAGE AREA.--4,110 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2006 to current year published by PacifiCorp 1986 to September 2006 published by USGS. Pre-publication data: April 1922 to November 1923 (fragmentary): March 1924 to 1986. 1945 to 1950 published in reports on Bear River Hydrometric Data, water year 1946 published in WSP 1060.

GAGE.--Water-stage recorder. Elevation of gage is 5,550 ft above NGVD of 1929, from topographic map.

REMARKS.--This gage is in the bypass reach for the Grace Power Plant. Flows are heavily regulated. Recreational releases on April 18, May 23, July 10 and July 11. Lack of water resulted in flow below typical 65 cfs minimum flow in spring and fall. Flowline maintenance resulted in increased flow in the bypass reach from April 26 to May 4.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,390 ft<sup>3</sup>/s, Jun 10, 1986, gage height, 6.77 ft; minimum, 0.74 ft<sup>3</sup>/s, Feb 2, 1986.

DISCHARGE MEASUREMENT DATES.-- 8-26-09, 10-21-09, 12-16-09, 3-11-10, 5-1-10, 7-1-10, 7-9-10, 8-14-10, 10-28-10.

**Bear River Below Grace Dam, near Grace, ID (10080000)  
Water Year 2010 (October 2009 to September 2010)**

**Daily Mean Values**

| Day                       | Oct   | Nov   | Dec   | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   |               |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| 1                         | 150   | 82.9  | 85.5  | 81.9  | 71.9  | 73.9  | 74    | 132   | 71.5  | 74.1  | 67.6  | 75.1  |               |
| 2                         | 161   | 83    | 84.5  | 82.1  | 72.1  | 74    | 73.9  | 131   | 71.6  | 72.5  | 70.9  | 75.1  |               |
| 3                         | 155   | 84.1  | 84    | 82.2  | 72.2  | 74.2  | 74    | 130   | 70.8  | 71.1  | 91.2  | 75.9  |               |
| 4                         | 158   | 86    | 85    | 80.6  | 72.4  | 76.4  | 73.5  | 130   | 74.3  | 70.7  | 86.9  | 75.8  |               |
| 5                         | 156   | 86.2  | 84.3  | 80.4  | 72.5  | 75.5  | 73.8  | 88.5  | 94.9  | 71.4  | 68    | 74.7  |               |
| 6                         | 161   | 86.3  | 84.4  | 80.5  | 72.6  | 76.7  | 73.2  | 69.2  | 96.4  | 70.7  | 68.7  | 76    |               |
| 7                         | 128   | 86.2  | 85.6  | 80.7  | 72.8  | 76.8  | 73.1  | 69.3  | 95.8  | 71.7  | 67.6  | 75.8  |               |
| 8                         | 84.7  | 86.7  | 86.3  | 80.8  | 72.9  | 77    | 72.9  | 70.1  | 95.9  | 71.5  | 68.2  | 75.1  |               |
| 9                         | 84    | 85.9  | 84.9  | 81    | 73.1  | 77.1  | 72.2  | 69.8  | 80.5  | 70    | 68.5  | 72.6  |               |
| 10                        | 84.5  | 86.2  | 85.4  | 79.9  | 73.2  | 77.6  | 72.6  | 70.5  | 70    | 358   | 69.8  | 70.2  |               |
| 11                        | 93.8  | 135   | 86.8  | 79.1  | 73.1  | 75.9  | 72.4  | 71.4  | 69.4  | 317   | 71.4  | 70.9  |               |
| 12                        | 134   | 115   | 86.9  | 79.3  | 72    | 76.3  | 72.3  | 70.8  | 70.7  | 118   | 70.8  | 69.9  |               |
| 13                        | 131   | 111   | 84    | 78.2  | 71.6  | 77.1  | 72.1  | 71    | 70.1  | 301   | 71.3  | 68.8  |               |
| 14                        | 134   | 127   | 83.5  | 77.8  | 71.8  | 76.9  | 72    | 70.8  | 70.7  | 389   | 70.7  | 68.7  |               |
| 15                        | 99.5  | 122   | 83.7  | 77.6  | 72.4  | 75.6  | 71.8  | 70.6  | 70.5  | 379   | 72    | 76    |               |
| 16                        | 84.2  | 113   | 82.8  | 77.8  | 72.1  | 76.6  | 71.7  | 71.4  | 69.6  | 195   | 72.4  | 92.6  |               |
| 17                        | 84.3  | 113   | 80.4  | 77.9  | 72.4  | 74.7  | 71.5  | 70.7  | 70.1  | 65.5  | 72.1  | 89.5  |               |
| 18                        | 84.4  | 116   | 81.9  | 78.1  | 73.5  | 76    | 294   | 70.7  | 69.9  | 65.7  | 72.9  | 62.2  |               |
| 19                        | 84.4  | 114   | 82.1  | 77.4  | 74.1  | 75.5  | 71.3  | 70.9  | 72.6  | 67.4  | 71.6  | 45.9  |               |
| 20                        | 83.5  | 129   | 82.3  | 76.3  | 74.6  | 75.3  | 71.1  | 71.3  | 72.1  | 68.1  | 70.9  | 45.3  |               |
| 21                        | 83.8  | 135   | 82.4  | 78.4  | 74.8  | 75.8  | 71    | 71.4  | 69.4  | 73.2  | 70.5  | 45.1  |               |
| 22                        | 84    | 103   | 82.6  | 78.6  | 74.9  | 75.6  | 71.9  | 71.2  | 70.9  | 72.8  | 69.4  | 44    |               |
| 23                        | 84.2  | 93.6  | 82.7  | 77.7  | 75.1  | 75.4  | 70.6  | 294   | 50.8  | 67.2  | 69.9  | 43.5  |               |
| 24                        | 85    | 107   | 82.9  | 76.9  | 75.2  | 75.3  | 70.4  | 70.9  | 71.7  | 66.8  | 72.1  | 42.6  |               |
| 25                        | 84.4  | 85.2  | 83    | 77    | 73.9  | 75.8  | 71.1  | 70.6  | 88.5  | 65.9  | 72.1  | 46.8  |               |
| 26                        | 84.6  | 85.1  | 83.2  | 77.2  | 73.8  | 75.5  | 121   | 71.4  | 73.6  | 66    | 72.6  | 46.6  |               |
| 27                        | 84.8  | 85.2  | 82.6  | 76.2  | 73.6  | 75.7  | 132   | 71.6  | 69.8  | 66    | 73    | 46.8  |               |
| 28                        | 83.8  | 85.4  | 81.4  | 74.1  | 73.9  | 76.1  | 133   | 72    | 70.6  | 66.2  | 73.4  | 95.9  |               |
| 29                        | 82.9  | 85.6  | 81.5  | 71.5  |       | 74.9  | 133   | 71.8  | 71.5  | 65    | 74.4  | 127   |               |
| 30                        | 83    | 85.7  | 81.7  | 71.7  |       | 75.3  | 133   | 71.6  | 72.3  | 66.9  | 74.9  | 129   |               |
| 31                        | 83    |       | 82.3  | 71.8  |       | 74.5  |       | 71.4  |       | 67.7  | 75.1  |       |               |
| <b>Monthly Statistics</b> |       |       |       |       |       |       |       |       |       |       |       |       |               |
| Total                     | 3,259 | 2,999 | 2,591 | 2,421 | 2,049 | 2,349 | 2,680 | 2,678 | 2,237 | 3,711 | 2,241 | 2,103 | <b>31,317</b> |
| Mean                      | 105   | 100   | 84    | 78    | 73    | 76    | 89    | 86    | 75    | 120   | 72    | 70    | <b>86</b>     |
| Min                       | 83    | 83    | 80    | 72    | 72    | 74    | 70    | 69    | 51    | 65    | 68    | 43    | <b>43</b>     |
| Max                       | 161   | 135   | 87    | 82    | 75    | 78    | 294   | 294   | 96    | 389   | 91    | 129   | <b>389</b>    |
| Ins. Min                  | 81    | 81    | 80    | 71    | 71    | 74    | 69    | 68    | 11    | 61    | 65    | 39    | <b>11</b>     |
| Ins. Max                  | 180   | 190   | 90    | 82    | 76    | 79    | 877   | 891   | 104   | 1,080 | 121   | 134   | <b>1,080</b>  |
| Ac-ft                     | 6,460 | 5,950 | 5,140 | 4,800 | 4,060 | 4,660 | 5,320 | 5,310 | 4,440 | 7,360 | 4,440 | 4,170 | <b>62,110</b> |



# PacifiCorp Energy

Bear River Below Grace Dam, near Grace, ID (10080000)

## Rating Table

Gage Height in Feet - Discharge in Cubic Feet Per Second

| Gage Height | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |
|-------------|------|------|------|------|------|------|------|------|------|------|
| 1.4         | 0    | 0    | 0    | 0    | 0    | 0.1  | 0.16 | 0.22 | 0.28 | 0.34 |
| 1.5         | 0.4  | 0.47 | 0.53 | 0.59 | 0.65 | 0.71 | 0.77 | 0.82 | 0.87 | 0.92 |
| 1.6         | 0.97 | 1.02 | 1.06 | 1.1  | 1.14 | 1.17 | 1.2  | 1.23 | 1.25 | 1.27 |
| 1.7         | 1.53 | 1.49 | 1.47 | 1.48 | 1.51 | 1.57 | 1.65 | 1.76 | 1.89 | 2.04 |
| 1.8         | 2.21 | 2.4  | 2.61 | 2.84 | 3.09 | 3.35 | 3.64 | 3.93 | 4.25 | 4.57 |
| 1.9         | 4.91 | 5.26 | 5.63 | 6    | 6.38 | 6.78 | 7.18 | 7.59 | 8.01 | 8.43 |
| 2.0         | 8.86 | 9.29 | 9.73 | 10.2 | 10.6 | 11.1 | 11.5 | 11.9 | 12.4 | 12.8 |
| 2.1         | 13.3 | 13.7 | 14   | 14.5 | 15   | 15.5 | 16.1 | 16.7 | 17.3 | 17.9 |
| 2.2         | 18.6 | 19.3 | 20   | 20.7 | 21.5 | 22.3 | 23.1 | 23.9 | 24.8 | 25.7 |
| 2.3         | 26.7 | 27.6 | 28.6 | 29.6 | 30.7 | 31.8 | 32.9 | 34   | 35.2 | 36.4 |
| 2.4         | 37.6 | 38.9 | 40.2 | 41.5 | 42.9 | 44.3 | 45.7 | 47.2 | 48.7 | 50.2 |
| 2.5         | 51.8 | 53.4 | 55   | 56.7 | 58.4 | 60.1 | 61.9 | 63.7 | 65.5 | 67.4 |
| 2.6         | 69.3 | 71.3 | 73.3 | 75.3 | 77.4 | 79.5 | 81.6 | 83.8 | 86   | 88.3 |
| 2.7         | 90.6 | 92.9 | 95.3 | 97.7 | 100  | 103  | 105  | 108  | 110  | 113  |
| 2.8         | 116  | 118  | 121  | 124  | 127  | 130  | 132  | 135  | 138  | 141  |
| 2.9         | 145  | 148  | 151  | 154  | 157  | 160  | 164  | 167  | 170  | 174  |
| 3.0         | 177  | 181  | 184  | 188  | 192  | 195  | 199  | 203  | 207  | 210  |
| 3.1         | 214  | 218  | 222  | 226  | 230  | 234  | 238  | 242  | 247  | 251  |
| 3.2         | 255  | 259  | 264  | 268  | 273  | 277  | 282  | 286  | 291  | 295  |
| 3.3         | 300  | 305  | 309  | 314  | 319  | 324  | 329  | 334  | 339  | 344  |
| 3.4         | 349  | 354  | 359  | 364  | 369  | 374  | 380  | 385  | 390  | 396  |
| 3.5         | 401  | 406  | 412  | 418  | 423  | 429  | 434  | 440  | 446  | 451  |
| 3.6         | 457  | 463  | 469  | 475  | 481  | 487  | 493  | 499  | 505  | 511  |
| 3.7         | 517  | 523  | 529  | 535  | 542  | 548  | 554  | 561  | 567  | 573  |
| 3.8         | 580  | 586  | 593  | 599  | 606  | 613  | 619  | 626  | 632  | 639  |
| 3.9         | 646  | 653  | 660  | 666  | 673  | 680  | 687  | 694  | 701  | 708  |
| 4.0         | 715  | 722  | 729  | 736  | 744  | 751  | 758  | 765  | 773  | 780  |
| 4.1         | 787  | 795  | 802  | 809  | 817  | 824  | 832  | 839  | 847  | 854  |
| 4.2         | 862  | 869  | 877  | 885  | 892  | 900  | 908  | 915  | 923  | 931  |
| 4.3         | 939  | 947  | 954  | 962  | 970  | 978  | 986  | 994  | 1000 | 1010 |
| 4.4         | 1020 | 1030 | 1030 | 1040 | 1050 | 1060 | 1070 | 1070 | 1080 | 1090 |
| 4.5         | 1100 | 1110 | 1120 | 1120 | 1130 | 1140 | 1150 | 1160 | 1170 | 1170 |
| 4.6         | 1180 | 1190 | 1200 | 1210 | 1220 | 1220 | 1230 | 1240 | 1250 | 1260 |
| 4.7         | 1270 | 1280 | 1280 | 1290 | 1300 | 1310 | 1320 | 1330 | 1340 | 1340 |
| 4.8         | 1350 | 1360 | 1370 | 1380 | 1390 | 1400 | 1410 | 1410 | 1420 | 1430 |
| 4.9         | 1440 | 1450 | 1460 | 1470 | 1480 | 1480 | 1490 | 1500 | 1510 | 1520 |
| 5.0         | 1530 | 1540 | 1550 | 1560 | 1560 | 1570 | 1580 | 1590 | 1600 | 1610 |
| 5.1         | 1620 | 1630 | 1640 | 1640 | 1650 | 1660 | 1670 | 1680 | 1690 | 1700 |
| 5.2         | 1710 | 1720 | 1730 | 1740 | 1740 | 1750 | 1760 | 1770 | 1780 | 1790 |
| 5.3         | 1800 | 1810 | 1820 | 1830 | 1840 | 1850 | 1850 | 1860 | 1870 | 1880 |

| <b>Gage<br/>Height</b> | <b>0.00</b> | <b>0.01</b> | <b>0.02</b> | <b>0.03</b> | <b>0.04</b> | <b>0.05</b> | <b>0.06</b> | <b>0.07</b> | <b>0.08</b> | <b>0.09</b> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>5.4</b>             | 1890        | 1900        | 1910        | 1920        | 1930        | 1940        | 1950        | 1960        | 1970        | 1970        |
| <b>5.5</b>             | 1980        | 1990        | 2000        | 2010        | 2020        | 2030        | 2040        | 2050        | 2060        | 2070        |
| <b>5.6</b>             | 2080        | 2090        | 2100        | 2110        | 2110        | 2120        | 2130        | 2140        | 2150        | 2160        |
| <b>5.7</b>             | 2170        | 2180        | 2190        | 2200        | 2210        | 2220        | 2230        | 2240        | 2250        | 2260        |
| <b>5.8</b>             | 2270        | 2280        | 2290        | 2300        | 2300        | 2310        | 2320        | 2330        | 2340        | 2350        |
| <b>5.9</b>             | 2360        | 2370        | 2380        | 2390        | 2400        | 2410        | 2420        | 2430        | 2440        | 2450        |
| <b>6.0</b>             | 2460        | 2470        | 2480        | 2490        | 2500        | 2510        | 2520        | 2530        | 2540        | 2550        |