Water Management Plan Final 12-31-09

Project Data - FCRPS (Federal Columbia River Power System)

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| Project | Unit Number | Number of units | Sustained Capacity (MW) | Total Plant (MW) | Normal Full (ft) | Normal Minimum (ft) | Minimum Discharge (kcfs) | Hydraulic Capacity (kcfs) | Ramp Rates |
| Albeni Falls | 1 - 3 | 3 | 16.3 | 49.0 | 2062.5 | 2051 | 4 | 33 | Normal 60 min limit 5 kcfs/hr  Max 60 minute increase or decrease 1 ft/hr Max daily increase 10 kcfs/day  Max daily reduction below 50 kcfs 10 kcfs/day Min daily reduction 50 to 75 kcfs 2 ft/day  Min daily reduction above 75 1 ft/day |
| Bonneville | 1 - 10 | 10 | 60.0 | 1,195.2 | 76.5 | 71.5 | \*\*\*80 instantaneous 100  daily average | 136  152 |  |
| 11 - 18 | 8 | 76.5 |
| 2-F | 2 | 13.1 | 26.2 |
| Chief Joseph | 1 - 4 | 4 | 88.3 | 2,614.0 | 956 | 950 | Min daily 35 | 219 |  |
| 5 - 14 | 10 | 88.3 |
| 15 - 16 | 2 | 88.3 |
| 17 - 27 | 11 | 109.0 |
| Dworshak | 1 - 2 | 2 | 103.0 | 465.0 | 1600 | 1445 | 1 | 10.5 | At peck 1 ft/hr  At peck 40% of previous weekly average outflow |
| 3 | 1 | 259.0 |
| Grand Coulee | 1 - 18 | 18 | 125.0 | 7,079.0 | 1290 | 1208 |  | 280 | Max. forebay (drawdown) change 1.5 ft/day, under most conditions |
| 19 - 21 | 3 | 690.0 |
| 22 - 24 | 3 | 805.0 |
| 3-S | 3 | 10.0 |
| 2-PG | 2 | 50.0 |
| 4-PG | 4 | 53.5 |
| Hungry Horse | 1 - 4 | 4 | 107.0 | 428.0 | 3560 | 3336 | 0.4 | 8.9 | \* |
| Ice Harbor | 1 - 3 | 3 | 103.0 | 693.0 | 440 | 437 | Dec – Feb 0 Mar – Jul 9.5 Aug – Nov 7.5 | 106 | Max. rate of change 20 kcfs/hr |
| 4 - 6 | 3 | 128.0 |
| John Day | 1 - 16 | 16 | 155.0 | 2,480.0 | 265 | 262.5  April - Sept  Operate within  lowest 1.5' range to allow for irrigation | Dec – Feb 12.5 Mar – Nov 50 kcfs | 322 | Max. rate of change 200 kcfs/hr |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project | Unit Number | Number of units | Sustained Capacity (MW) | Total Plant (MW) | Normal Full (ft) | Normal Minimum (ft) | Minimum Discharge (kcfs) | Hydraulic Capacity (kcfs) | Ramp Rates |
| Libby | 1 - 5 | 5 | 121.0 | 605.0 | 2459 | 2287 | 1. instantaneous 2. daily average 3. preferred | 24.1 | \* |
| Little Goose | 1 - 3 | 3 | 155.0 | 930.0 | 638 | \*633 | Dec – Feb 0 Mar – Nov 11.5 | 130 | Max. rate of change 70 kcfs/hr |
| 4 - 6 | 3 | 155.0 |
| Lower Granite | 1 - 3 | 3 | 155.0 | 930.0 | 738 | \*733 | Dec – Feb 0 Mar – Nov 11.5 | 130 | Max. rate of change 70 kcfs/hr |
| 4 - 6 | 3 | 155.0 |
| Lower Monumental | 1 - 3 | 3 | 155.0 | 930.0 | 540 | \*537 | Dec – Feb 0 Mar – Nov 11.5 | 130 | Max. rate of change 70 kcfs/hr |
| 4 - 6 | 3 | 155.0 |
| McNary | 1 - 14 | 14 | 80.0 | 1,120.0 | 340 | 335 | Dec – Feb 12.5 Mar – Nov 50 | 232 | Max. rate of change 150 kcfs/hr |
| The Dalles | 1 - 14 | 14 | 90.0 | 2,052.0 | 160 | 155 | Dec – Feb 12.5 Mar – Nov 50 | 375 | Max. rate of change 150 kcfs/hr |
| 15 - 22 | 8 | 99.0 |
| 2-F | 2 | 14.0 | 28.0 |

\* - Project ramp rates specified in BiOps (see Water Management Plan)

\*\* - When average weekly inflow is below 125 kcfs, the minimum instantaneous outflow limit is 70 kcfs and the minimum daily average discharge limit is 80% of the weekly average inflow.

\*\*\* - For Lower Snake River Dams: subject to minimum operating pool (MOP) Apr – Aug. See Water Management Plan.