Project Data - FCRPS (Federal Columbia River Power System)

| Project            | Unit<br>Number | Number<br>of units | Sustained<br>Capacity<br>(MW) | Total Plant<br>(MW) | Normal Full<br>(ft) | Normal<br>Minimum (ft) | Minimum<br>Discharge (kcfs)              | Hydraulic<br>Capacity<br>(kcfs) | Ramp Rates  |
|--------------------|----------------|--------------------|-------------------------------|---------------------|---------------------|------------------------|--|---------------------------------|---|
| Albeni Falls       | 1 - 3          | 3                  | 16.3                          | 49.0                | 2062.5              | 2051                   | 4  |                                 | Normal 60 min limit 5 kcfs/hr<br>Max 60 minute increase or decrease 1 ft/hr<br>Max daily increase 10 kcfs/day<br>Max daily reduction below 50 kcfs 10 kcfs/day<br>Min daily reduction 50 to 75 kcfs 2 ft/day<br>Min daily reduction above 75 1 ft/day |
| Bonneville         | 1 - 10         | 10                 | 60.0                          | 1,195.2             | 76.5                | 71.5                   | **80                                     | 136                             |   |
|                    | 11 - 18        | 8                  | 76.5                          | 26.2                |                     |                        | instantaneous                            | 152                             |   |
| 2                  | 2-F            | 2                  | 13.1                          |                     |                     |                        | 100<br>daily average                     |                                 |   |
| Chief Joseph 1 - 4 | 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                            | From Oct 1 to Sept 30 - At peck 1 ft/hr<br>From Oct 1 to Nov 15 – The 7-day average release   |
|                    | 3              | 1                  | 259.0                         |                     |                     |                        |  |                                 | cannot exceed inflow by more than 1,300cfs, except<br>during freshets or emergency power operations.<br>Maximum change in any day shall not exceed 40% of<br>the previous 7-day average release. (WCM 7-05.a.2)                                       |
| 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           |                    | 53.5                          |                     |                     |                        |  |                                 |   |
|                    | 1 - 4          | 4                  | 107.0                         | 428.0               | 3560                | 3336                   | 0.4                                      | 8.9                             | *   |
| Ice Harbor         | 1 - 3          | 3                  |                               | 693.0               | 440                 | ***437                 | 15 Oct – end                             | 106                             | Max. rate of change 20 kcfs/hr  |
|                    | 4 - 6          | 3                  | 128.0                         |                     |                     |                        | of Feb<br>Mar – Jul 9.5<br>Aug – Nov 7.5 |                                 |   |

## Appendix 2

| John Day | 1 - 16 | 16 | 155.0 | 2,480.0 |                            | Dec – Feb 12.5<br>Mar – Nov 50 | 322 | Max. rate of change 200 kcfs/hr |
|----------|--------|----|-------|---------|----------------------------|--------------------------------|-----|---------------------------------|
|          |        |    |       |         | 262.0 (16 Nov<br>– 14 Mar) | kcfs                           |     |                                 |
|          |        |    |       |         |                            |                                |     |                                 |
|          |        |    |       |         |                            |                                |     |                                 |

The Dalles

1 - 14

2-F

15 - 22

| Project       | Unit<br>Number | Number<br>of units | Sustained<br>Capacity<br>(MW) | Total Plant<br>(MW) | Normal Full<br>(ft) | Normal<br>Minimum (ft) | Minimum<br>Discharge (kcfs) | Hydraulic<br>Capacity<br>(kcfs) | Ramp Rates                      |
|---------------|----------------|--------------------|-------------------------------|---------------------|---------------------|------------------------|-----------------------------|---------------------------------|---------------------------------|
| Libby         | 1 - 5          | 5                  | 121.0                         | 605.0               | 2459                | 2287                   | 2 instantaneous             | 24.1                            | *                               |
|               |                |                    |                               |                     |                     |                        | 3 daily average             |                                 |                                 |
|               |                |                    |                               |                     |                     |                        | 4 preferred                 |                                 |                                 |
| Little Goose  | 1 - 3          | 3                  | 155.0                         | 930.0               | 638                 | ***633                 | 15 Oct – End                | 130                             | Max. rate of change 70 kcfs/hr  |
|               | 4 - 6          | 3                  | 155.0                         |                     |                     |                        | of Feb                      |                                 |                                 |
|               |                |                    |                               |                     |                     |                        | Mar – Nov 11.5              |                                 |                                 |
|               |                |                    |                               |                     |                     |                        |                             |                                 |                                 |
| Lower Granite | 1 - 3          | 3                  | 155.0                         | 930.0               | 738                 | ***733                 | 15 Oct – End                | 130                             | Max. rate of change 70 kcfs/hr  |
|               | 4 - 6          | 3                  | 155.0                         |                     |                     |                        | of Feb                      |                                 |                                 |
|               |                |                    |                               |                     |                     |                        | Mar – Nov 11.5              |                                 |                                 |
|               |                |                    |                               |                     |                     |                        |                             |                                 |                                 |
| Lower         | 1 - 3          | 3                  | 155.0                         | 930.0               | 540                 | ***537                 | 15 Oct – End                | 130                             | Max. rate of change 70 kcfs/hr  |
| Monumental    | 4 - 6          | 3                  | 155.0                         | 1                   |                     |                        | of Feb                      |                                 | -                               |
|               |                |                    |                               |                     |                     |                        | Mar – Nov 11.5              |                                 |                                 |
| McNary        | 1 - 14         | 14                 | 80.0                          | 1,120.0             | 340                 | 337                    | Dec – Feb 12.5              | 232                             | Max. rate of change 150 kcfs/hr |

Mar – Nov 50

Mar – Nov 50

Dec - Feb 12.5 375

Max. rate of change 150 kcfs/hr

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

14

8

2

90.0

99.0

14.0

\*\* - 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.

\*\*\*\*158

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

2,052.0

28.0

160

\*\*\*\* - The Dalles Dam minimum is 155 feet but as noted above the normal minimum has been increase to 158 feet in order to ensure adequate depth at the John Day Dam fishway entrance (minimum depth requirement of 8 feet) criteria as described in the Fish Passage Plan.