

**Assumptions:**

- \* Streamflows are from the 28 Mar ESP run, which uses current basin conditions combined with 44 historical weather patterns (temperatures and precipitation) to produce 44 ESP hydrographs for 2006.
- \* Flood control is varied each year to correspond to the runoff volume in ESP.
- \* Grand Coulee operates to flood control April 15. Coulee tries to meet 135,000 cfs April 16 through June 30. In June the project refills to 1290 ft in all years. Summer lake targets are 1285.0 ft in July and 1280 ft in August.
- \* Hungry Horse operates April - May for a controlled refill by 30 June and meets minimum flow of 3,500 cfs at Columbia Falls. The project drafts to 3540 ft by 31 Aug.
- \* Brownlee operates to flood control elevations in April refills in June (2077 ft) and drafts some in July - August.
- \* Dworshak operates for flood control in April, targeting full in June and drafting to 1534 ft by 31 Aug.
- \* Libby operates on minimum flow or VARQ flood control Apr - May, targets full in June with while meeting the sturgeon pulse volume appropriate for each ESP year. Libby drafts to 2439 ft by 31 Aug, while meeting bull trout minimum flows (which vary each year).

**Results:**

Priest Rapids Meets the Following Flow Objectives:

| Month  | Occurrences out of 44 Years | Average Flow for 44 Years (kcfs) | Flow Objective (kcfs) |
|--------|-----------------------------|----------------------------------|-----------------------|
| Apr 15 | 44                          | 123                              | 70                    |
| Apr 30 | 35                          | 166                              | 135                   |
| May    | 44                          | 205                              | 135                   |
| Jun    | 43                          | 181                              | 135                   |

Lower Granite Meets the Following Flow Objectives:

| Month  | Occurrences out of 44 Years | Average Flow for 44 Years (kcfs) | Flow Objective (kcfs) |
|--------|-----------------------------|----------------------------------|-----------------------|
| Apr 15 | 3                           | 89                               | 101                   |
| Apr 30 | 23                          | 107                              | 101                   |
| May    | 37                          | 117                              | 101                   |
| Jun    | 41                          | 119                              | 85                    |
| Jul    | 28                          | 60                               | 54                    |
| Aug 15 | 0                           | 37                               | 54                    |
| Aug 31 | 0                           | 34                               | 54                    |

Bonneville Meets Flow Objectives of 125 kcfs in Apr:

| Month  | Occurrences out of 44 Years | Average Flow for 44 Years (kcfs) |
|--------|-----------------------------|----------------------------------|
| Apr 15 | 44                          | 235                              |
| Apr 30 | 44                          | 296                              |

McNary Meets the Following Flow Objectives:

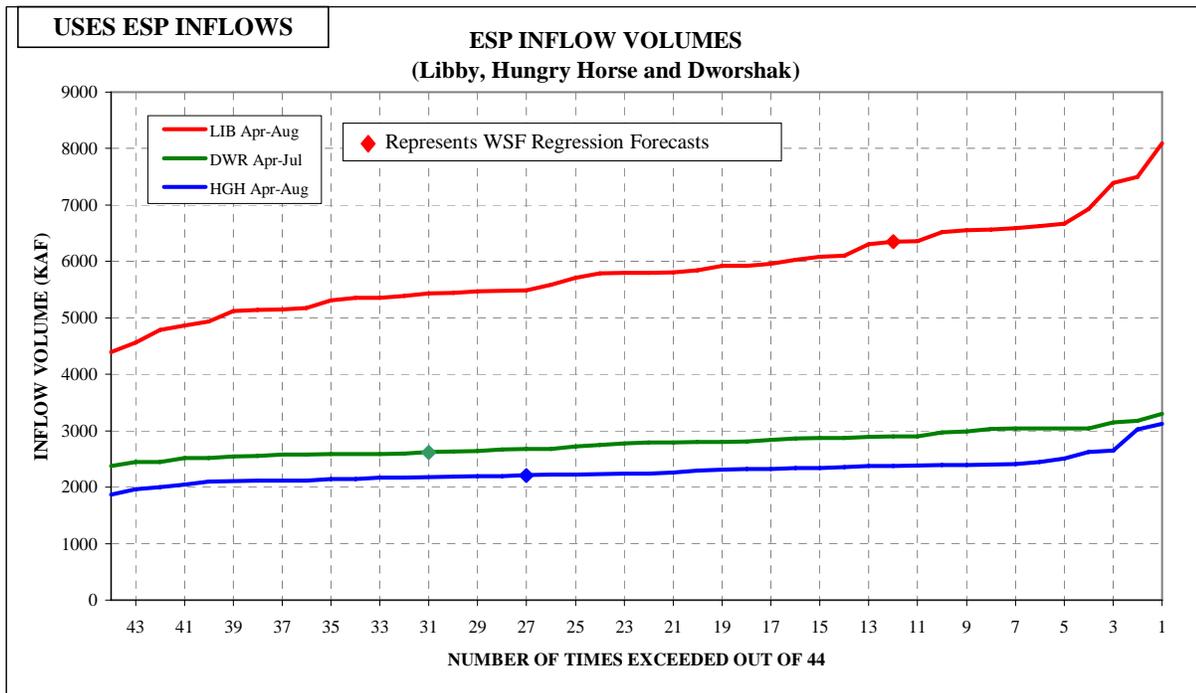
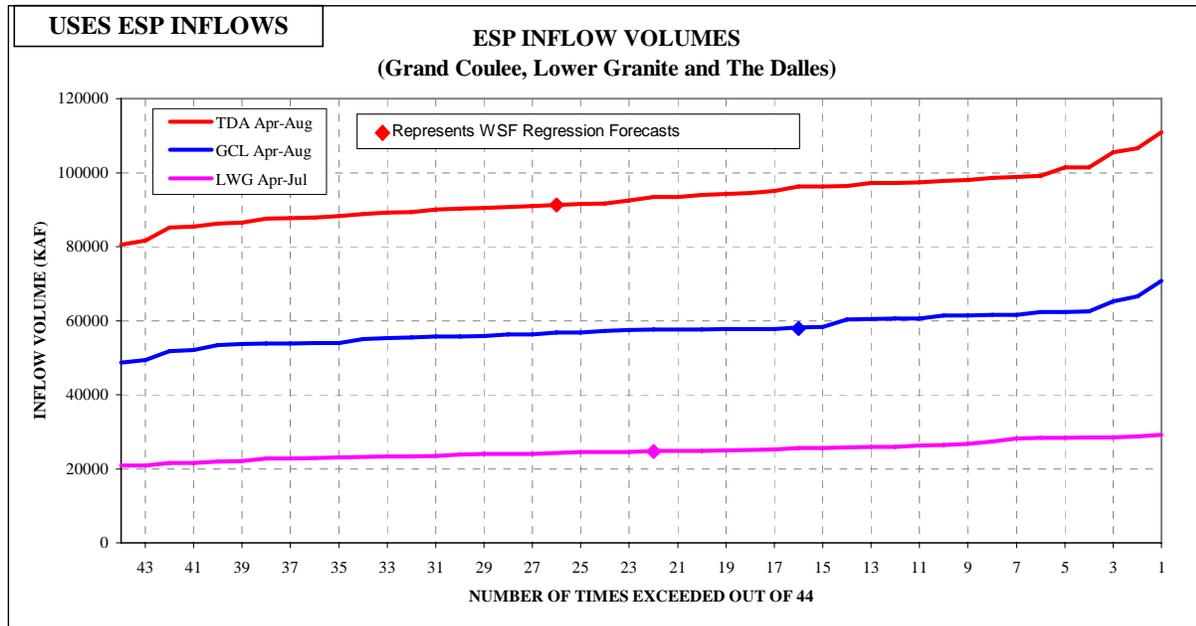
| Month  | Occurrences out of 44 Years | Average Flow for 44 Years (kcfs) | Flow Objective (kcfs) |
|--------|-----------------------------|----------------------------------|-----------------------|
| Apr 30 | 25                          | 274                              | 257                   |
| May    | 41                          | 324                              | 257                   |
| Jun    | 37                          | 309                              | 257                   |
| Jul    | 32                          | 225                              | 200                   |
| Aug 15 | 1                           | 151                              | 200                   |
| Aug 31 | 0                           | 136                              | 200                   |

Projects Refill to within 1 foot of full by 30 June:

| Month        | Occurrences out of 44 Years | Average Elevation on 30 Jun for 44 Years |
|--------------|-----------------------------|--|
| Libby        | 27                          | 2457                                     |
| Hungry Horse | 44                          | 3560                                     |
| Grand Coulee | 44                          | 1290                                     |
| Dworshak     | 44                          | 1600                                     |

Period Average Flows (kcfs):

|     | FEB 1-28 | MAR 1-31 | APR 1-15 | APR 16-30 | MAY 1-31 | JUN 1-30 | JUL 1-31 | AUG 1-15 | AUG 16-31 |
|-----|----------|----------|----------|-----------|----------|----------|----------|----------|-----------|
| LIB | 4.0      | 7.6      | 4.6      | 5.9       | 13.9     | 13.3     | 25.4     | 16.1     | 15.2      |
| HGH | 5.4      | 2.0      | 9.9      | 9.2       | 4.2      | 6.3      | 6.3      | 4.9      | 8.1       |
| GCL | 103      | 84       | 118      | 155       | 182      | 154      | 145      | 104      | 94        |
| PRD | 112      | 95       | 123      | 166       | 205      | 181      | 159      | 111      | 99        |
| DWR | 6.7      | 3.7      | 13.0     | 16.3      | 8.2      | 2.0      | 11.0     | 11.0     | 11.0      |
| BRN | 29       | 32       | 39       | 40        | 29       | 27       | 16       | 14       | 14        |
| LWG | 45       | 51       | 89       | 107       | 117      | 119      | 60       | 37       | 34        |
| MCN | 162      | 149      | 219      | 274       | 324      | 309      | 225      | 151      | 136       |
| TDA | 170      | 156      | 232      | 291       | 338      | 320      | 229      | 154      | 140       |
| BON | 177      | 165      | 235      | 296       | 343      | 325      | 232      | 157      | 142       |



Volume Comparison Table (ESP versus Regression) - March Final:

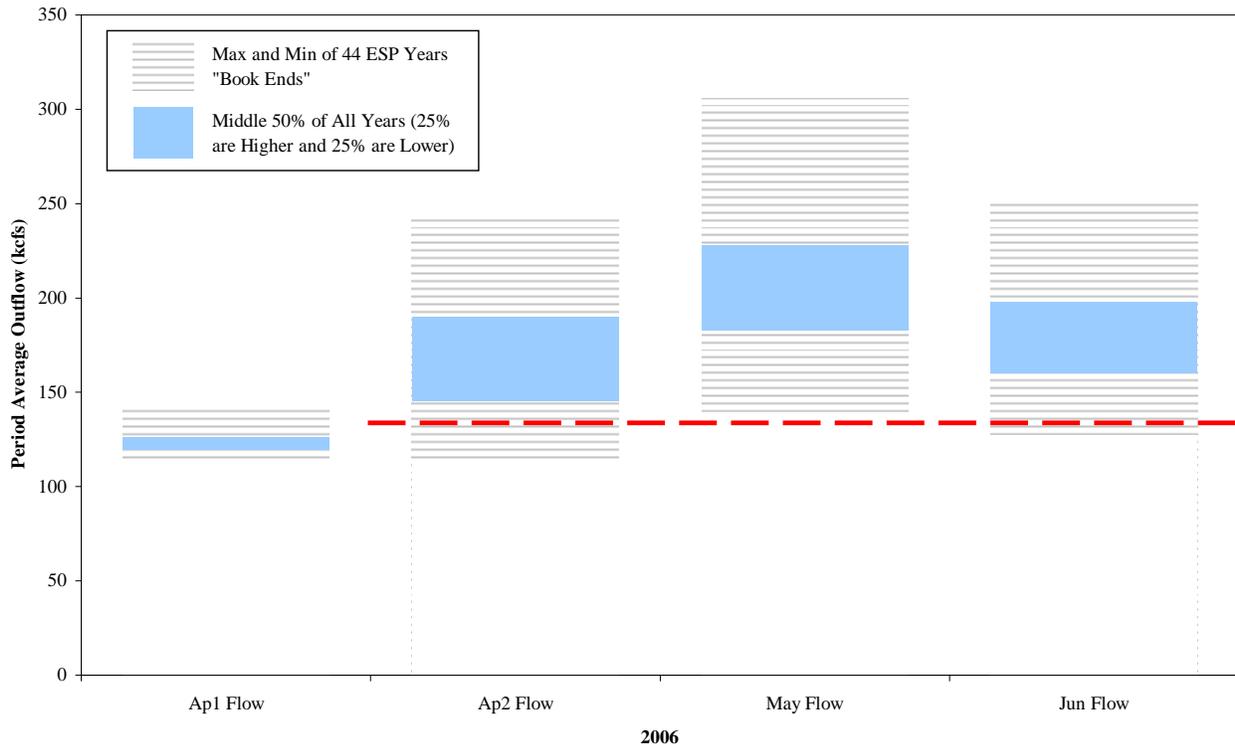
| Forecast Period | Official WSF (Regression) |                    |                       | ESP Volumes                |                            |                            |                            |                            |
|-----------------|---------------------------|--------------------|-----------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                 | Volume (kaf)              | Percent of Average | 30 year Average (kaf) | 10% Exceedance Probability | 30% Exceedance Probability | 50% Exceedance Probability | 70% Exceedance Probability | 90% Exceedance Probability |
| Grand Coulee    | 57900                     | 96%                | 60290                 | 62300                      | 60300                      | 57600                      | 55700                      | 53500                      |
| Lower Granite   | 24700                     | 115%               | 21550                 | 28400                      | 25700                      | 24700                      | 23500                      | 22100                      |
| The Dalles      | 91200                     | 98%                | 93090                 | 100700                     | 96500                      | 93000                      | 90000                      | 86300                      |
| Hungry Horse *  | 2209                      | 107%               | 2070                  | 2490                       | 2360                       | 2240                       | 2180                       | 2100                       |
| Libby **        | 6350                      | 102%               | 6248                  | 6620                       | 6090                       | 5800                       | 5420                       | 4980                       |
| Dworshak **     | 2612                      | 99%                | 2645                  | 3040                       | 2870                       | 2780                       | 2610                       | 2530                       |

\* USBR Official Forecast

\*\* Corps Official Forecast

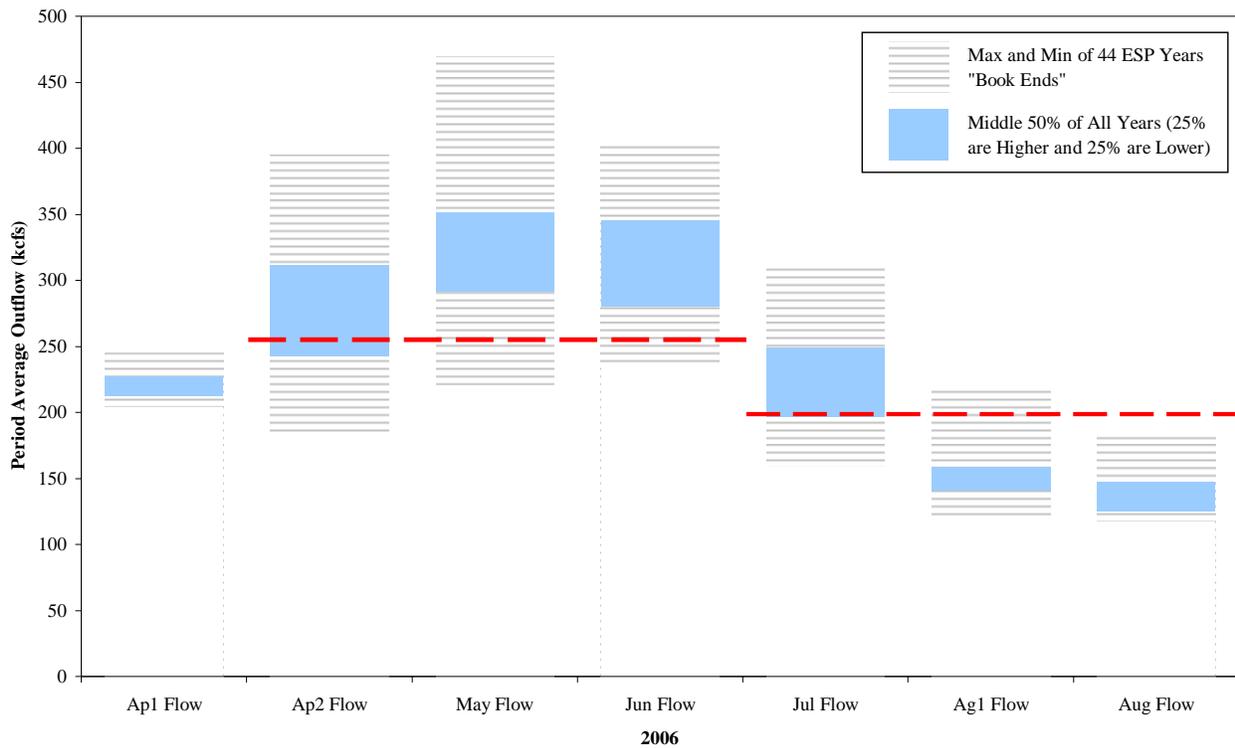
**USES ESP INFLOWS**

**PRIEST RAPIDS ESP HYSSR RESULTS  
MONTHLY OUTFLOW PROJECTIONS**



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MONTHLY OUTFLOW PROJECTIONS**



# USES ESP INFLOWS

## LOWER GRANITE ESP HYSSR RESULTS MONTHLY OUTFLOW PROJECTIONS

