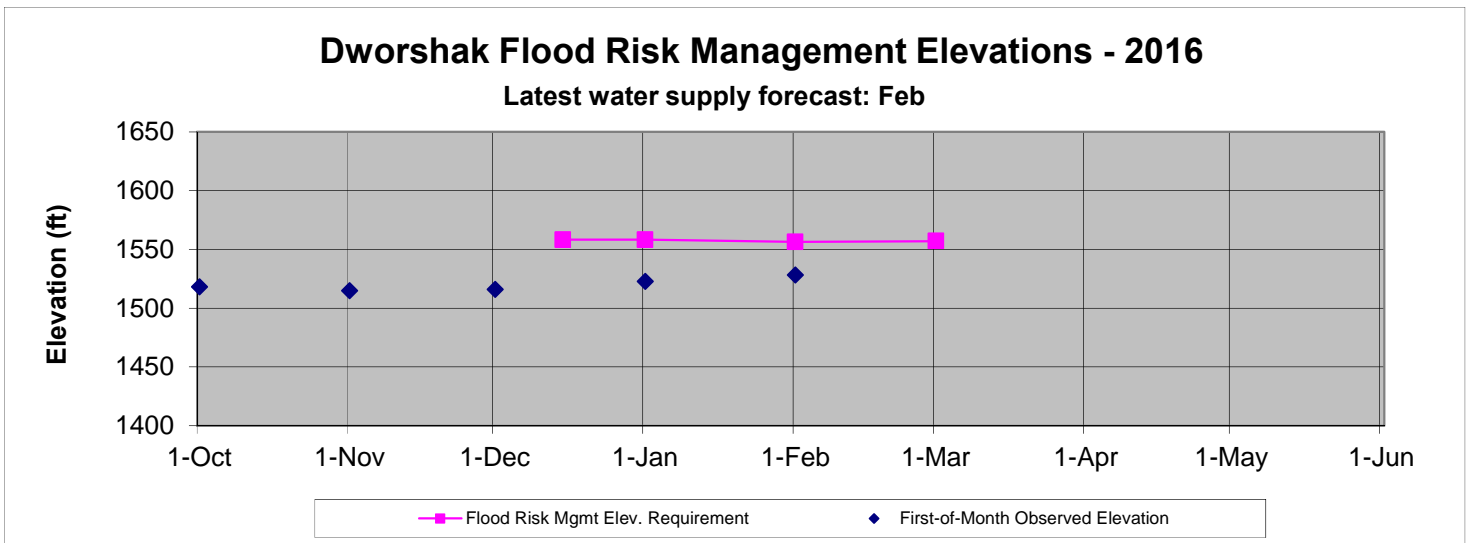
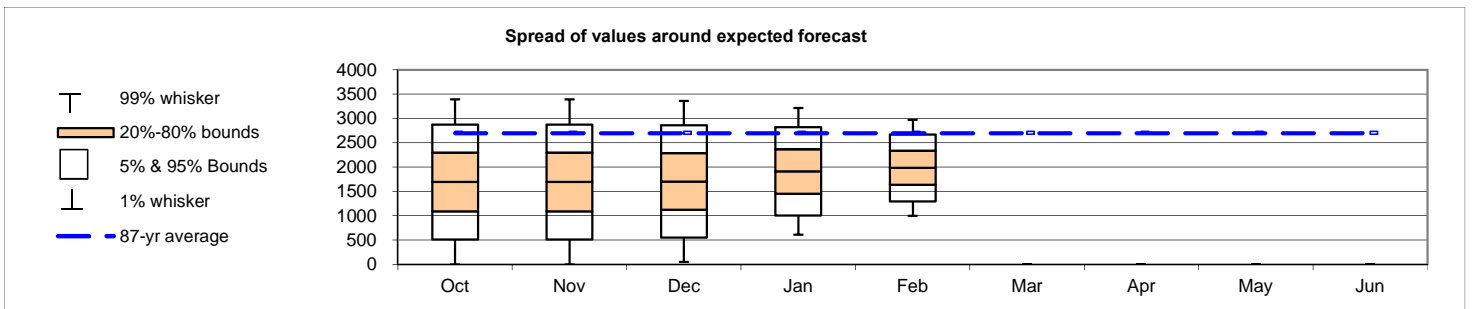


| Runoff Forecast and Flood Risk Management (FRM)  |         |        |        | 1981-2010 Average | Percent of 30yr Average | 1929-2008 Average | Percent of Average |        |     |
|--|---------|--------|--------|-------------------|-------------------------|-------------------|--------------------|--------|-----|
| Most Probable Runoff Volume  | Apr-Jul | 1986   | KAF    | 2418              | 82%                     | 2696              | 74%                |        |     |
|  | May-Jul | 1452   | KAF    | 1771              | 82%                     | 1972              | 74%                |        |     |
| 28/29-Feb Flood Risk Management Space  |         | 718    | KAF    |                   |                         |                   |                    |        |     |
| 28/29-Feb Flood Risk Management Elevation  |         | 1557.0 | ft     |                   |                         |                   |                    |        |     |
| Seasonal Flood Risk Management (assumes no shift of flood risk management space to Grand Coulee) |         |        |        |                   |                         |                   |                    |        |     |
| Forecast Date>>  | Oct     | Nov    | Dec    | Jan               | Feb                     | Mar               | Apr                | May    | Jun |
| Apr-Jul Runoff Forecast  | 1676    | 1676   | 1708   | 1913              | 1986                    |                   |                    |        |     |
| First-of-Month Elev  | 1518.2  | 1515.0 | 1516.1 | 1522.7            | 1528.2                  |                   |                    |        |     |
| Date >>  |         | 15-Dec | 31-Dec | 31-Jan            | 28-Feb                  | 31-Mar            | 15-Apr             | 30-Apr |     |
| FRM Space  | --      | 700    | 700    | 727               | 718                     |                   |                    |        |     |
| FRM Elevation  | --      | 1558.2 | 1558.2 | 1556.4            | 1557.0                  |                   |                    |        |     |



## Dworshak : February Runoff Forecast & Flood Risk Management Calculation

| Apr-Jul Runoff Forecast Calculation |          |                |              |                        |                       |
|-------------------------------------|----------|----------------|--------------|------------------------|-----------------------|
| Variable                            | Month    | Observed Value | % of Average | Regression Coefficient | Marginal Runoff (KAF) |
|                                     |          | A              |              | B                      | =A*B                  |
| SOI                                 | Sep      | -1.60          |              | 264.27                 | -422.8                |
| HQSI Cumulative Precip              | Oct-Date | 19.30          | 99%          | 27.04                  | 521.9                 |
| Elk Butte SWE                       | 1-Feb    | 25.8           | 111%         | 12.06                  | 311.1                 |
| Cool Creek SWE                      | 1-Feb    | 26.5           | 92%          | 11.35                  | 300.8                 |
| Hoodoo Basin SWE                    | 1-Feb    | 22.6           | 88%          | 10.97                  | 247.9                 |
| Sherwin SWE                         | 1-Feb    | 7.3            | 95%          | 29.17                  | 212.9                 |
| Lost Lake SWE                       | 1-Feb    | 31.7           | 92%          | 7.60                   | 240.9                 |
| Intercept                           |          | 1              |              | 572.93                 | 572.9                 |
| 1-Feb Forecast (KAF)                |          |                |              | $\Sigma$               | 1985.7                |

| Data Station   | Sept  | Nov  | Dec   | 1-Jan | 1-Feb | 1-Mar | 1-Apr | 1-May | 1-Jun |
|--|-------|------|-------|-------|-------|-------|-------|-------|-------|
| <b>Climate (Stdzd SOI)</b>                           |       |      |       |       |       |       |       |       |       |
| September SOI  | -1.60 |      |       |       |       |       |       |       |       |
| <b>Precipitation (in)</b>                            |       |      |       |       |       |       |       |       |       |
| Headquarters, ID                                     | 2.80  | 3.80 | 6.40  | 6.30  | 0.00  | 0.00  | 0.00  |       |       |
| Cumulative HQSI Data                                 | 2.80  | 6.60 | 13.00 | 19.30 | 19.30 | 19.30 | 19.30 |       |       |
| <b>Snow Water Equiv (First of Month values) (in)</b> |       |      |       |       |       |       |       |       |       |
| Elk Butte, ID  |       |      |       | 14.6  | 25.8  | 0.0   | 0.0   |       |       |
| Cool Creek, ID                                       |       |      |       | 17.2  | 26.5  |       |       |       |       |
| Hoodoo Basin, MT                                     |       |      |       | 15.1  | 22.6  | 0.0   | 0.0   | 0.0   | 0.0   |
| Sherwin, ID  |       |      |       | 4.6   | 7.3   | 0.0   | 0.0   |       |       |
| Shanghi Summit, ID                                   |       |      |       |       |       |       |       | 0.0   | 0.0   |
| Lost Lake, ID  |       |      |       | 19.9  | 31.7  | 0.0   | 0.0   | 0.0   | 0.0   |
| Hemlock, ID  |       |      |       |       |       |       |       | 0.0   | 0.0   |
| Crater Meadows Mar                                   |       |      |       |       |       | 0.0   | 0.0   |       |       |
| <b>Streamflow (End of Month) (kaf)</b>               |       |      |       | Jan   | Feb   | Mar   | Apr   | May   | Jun   |
| Dworshak Inflow                                      |       |      |       | 171   | --    | --    | --    | --    | --    |

Notes:

1. The given forecast is the official Corps of Engineers forecast for Dworshak. If you have any questions please contact Steve Hall (509 527 7550), Wayne Jousma (509-527-7606), or Alfredo Rodriguez (509-527-7532 ).
2. Due to updated values for precipitation, snow or streamflow, subsequent forecasts may be different from the forecast published herein.
3. 15-Dec and 31-Dec Flood Management Space is fixed at 700 KAF.

Approval:

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