

MARCH final WSF sets BiOp actions as defined in table below.

*Other projects provided for informational purposes only.*

| Forecast Point | Forecast Period                                        | Forecast                       | BiOp Actions to be Determined                                                                                                                        |
|----------------|--------------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hungry Horse   | April – August<br>Provided by Reclamation              | January, February, March Final | Sets min. flows at Hungry Horse and Columbia Falls                                                                                                   |
|                | May – September<br>Provided by Reclamation             | January, February, March Final | Sets VARQ FRM targets                                                                                                                                |
|                |                                                        | April Final                    | Sets VARQ FRM targets and VARQ refill flows                                                                                                          |
|                |                                                        | May, June Final                | Sets VARQ refill flows                                                                                                                               |
| The Dalles     | April – August<br>Provided by NWRFC                    | April Final                    | Sets spring flow objective at McNary Dam                                                                                                             |
|                |                                                        | May Final                      | Sets end of September draft limits at Hungry Horse and Libby                                                                                         |
|                |                                                        | July Final                     | Sets end of August draft limit at Grand Coulee                                                                                                       |
| Lower Granite  | April – July<br>Provided by NWRFC                      | April Final                    | Sets spring flow objective at Lower Granite                                                                                                          |
|                |                                                        | June Final                     | Sets summer flow objective at Lower Granite                                                                                                          |
| Libby          | April – August<br>Provided by Corps Seattle District   | December Final                 | Sets end of December variable draft target                                                                                                           |
|                |                                                        | January, February, March Final | Sets VARQ FRM targets                                                                                                                                |
|                |                                                        | April Final                    | Sets VARQ FRM targets and VARQ refill flows                                                                                                          |
|                |                                                        | May Final                      | Sets Libby min. sturgeon flow volume and min. bull trout flows for after sturgeon pulse through Sept.<br>Sets VARQ FRM targets and VARQ refill flows |
|                |                                                        | June Final                     | VARQ refill flows                                                                                                                                    |
| Dworshak       | April – July<br>Provided by Corps Walla Walla District | January through June Final     | Manage for reservoir FRM and refill                                                                                                                  |

March 3, 2015

## **Hungry Horse Dam**

Here are the volumes for the March final forecast for Hungry Horse Inflow:

Mar - Jul: 1,954 kaf (99%)

Apr - Aug: 1,916 kaf (99%)

May-Sep: 1,676 kaf (99%)

The March forecast for APR-AUG sets the minimum flows for Columbia Falls and below Hungry Horse for the rest of the calendar year. They are as follows:

Columbia Falls: 3,500 cfs

Hungry Horse: 900 cfs

**Mary Mellema**

River and Reservoir Operations

U.S. Bureau of Reclamation

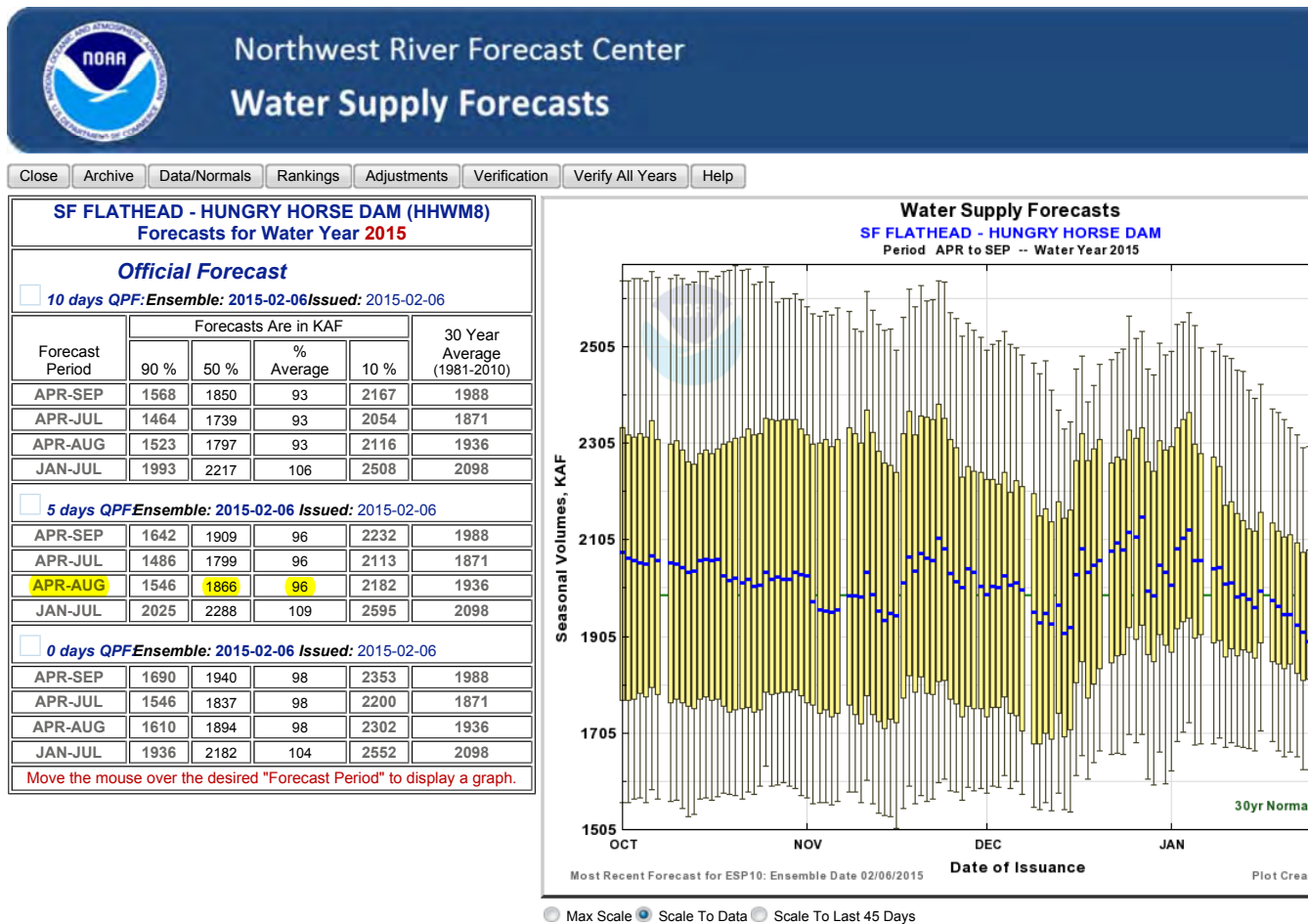
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Boise, ID 83706

\*Hungry Horse Dam official water supply forecasts computed by the Bureau of Reclamation (on previous page).

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### COLUMBIA - THE DALLES DAM (TDAO3) Forecasts for Water Year 2015

#### Official Forecast

☐ 10 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06

| Forecast Period | Forecasts Are in KAF |       |           |       | 30 Year Average (1981-2010) |
|-----------------|----------------------|-------|-----------|-------|-----------------------------|
|                 | 90 %                 | 50 %  | % Average | 10 %  |                             |
| APR-SEP         | 68150                | 75407 | 81        | 82962 | 92704                       |
| APR-JUL         | 56452                | 62893 | 79        | 71453 | 79855                       |
| APR-AUG         | 63136                | 69906 | 80        | 78001 | 87532                       |
| JAN-JUL         | 83504                | 90404 | 89        | 99758 | 101368                      |

☐ 5 days QPF Ensemble: 2015-03-06 Issued: 2015-03-06

|         |       |       |    |        |        |
|---------|-------|-------|----|--------|--------|
| APR-SEP | 69357 | 76882 | 83 | 85683  | 92704  |
| APR-JUL | 58024 | 64526 | 81 | 72736  | 79855  |
| APR-AUG | 64728 | 71784 | 82 | 79975  | 87532  |
| JAN-JUL | 84803 | 91678 | 90 | 100030 | 101368 |

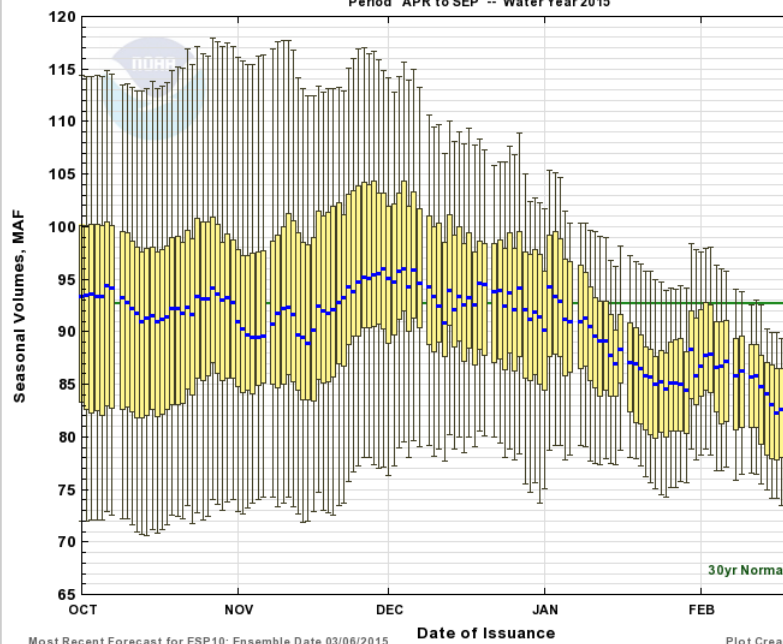
☐ 0 days QPF Ensemble: 2015-03-06 Issued: 2015-03-06

|         |       |       |    |        |        |
|---------|-------|-------|----|--------|--------|
| APR-SEP | 71544 | 80126 | 86 | 88613  | 92704  |
| APR-JUL | 60216 | 67584 | 85 | 76246  | 79855  |
| APR-AUG | 66594 | 75182 | 86 | 83530  | 87532  |
| JAN-JUL | 85782 | 93821 | 93 | 104170 | 101368 |

Move the mouse over the desired "Forecast Period" to display a graph.

### Water Supply Forecasts

COLUMBIA - THE DALLES DAM  
Period APR to SEP -- Water Year 2015



☐ Max Scale ☒ Scale To Data ☐ Scale To Last 45 Days

#### Overlay

ESP10 ESP5 ESP0

#### Data Files

CSV (ESP10 / APR-SEP)



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## Northwest River Forecast Center Water Supply Forecasts

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### SNAKE - LOWER GRANITE DAM (LGDW1) Forecasts for Water Year 2015

#### Official Forecast

☐ 10 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06

| Forecast Period | Forecasts Are in KAF |       |           |       | 30 Year Average (1981-2010) |
|-----------------|----------------------|-------|-----------|-------|-----------------------------|
|                 | 90 %                 | 50 %  | % Average | 10 %  |                             |
| APR-SEP         | 13867                | 16889 | 76        | 20442 | 22279                       |
| APR-JUL         | 11858                | 14705 | 74        | 18129 | 19848                       |
| APR-AUG         | 12860                | 15791 | 75        | 19301 | 21091                       |
| JAN-JUL         | 20316                | 22802 | 83        | 26669 | 27440                       |

☐ 5 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06

|         |       |       |    |       |       |
|---------|-------|-------|----|-------|-------|
| APR-SEP | 14625 | 17560 | 79 | 21153 | 22279 |
| APR-JUL | 12694 | 15338 | 77 | 18799 | 19848 |
| APR-AUG | 13651 | 16456 | 78 | 19998 | 21091 |
| JAN-JUL | 20662 | 23125 | 84 | 27110 | 27440 |

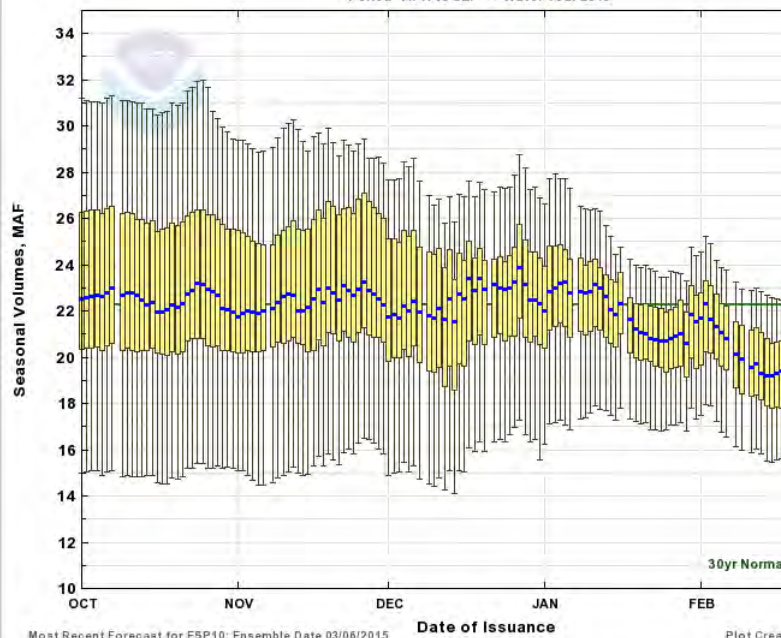
☐ 0 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06

|         |       |       |    |       |       |
|---------|-------|-------|----|-------|-------|
| APR-SEP | 15254 | 18376 | 82 | 21715 | 22279 |
| APR-JUL | 13232 | 16147 | 81 | 19386 | 19848 |
| APR-AUG | 14235 | 17268 | 82 | 20556 | 21091 |
| JAN-JUL | 21094 | 24030 | 88 | 27656 | 27440 |

Move the mouse over the desired "Forecast Period" to display a graph.

### Water Supply Forecasts

SNAKE - LOWER GRANITE DAM  
Period APR to SEP -- Water Year 2015



☐ Max Scale ☒ Scale To Data ☐ Scale To Last 45 Days

#### Overlay

ESP10 ESP5 ESP0

#### Data Files

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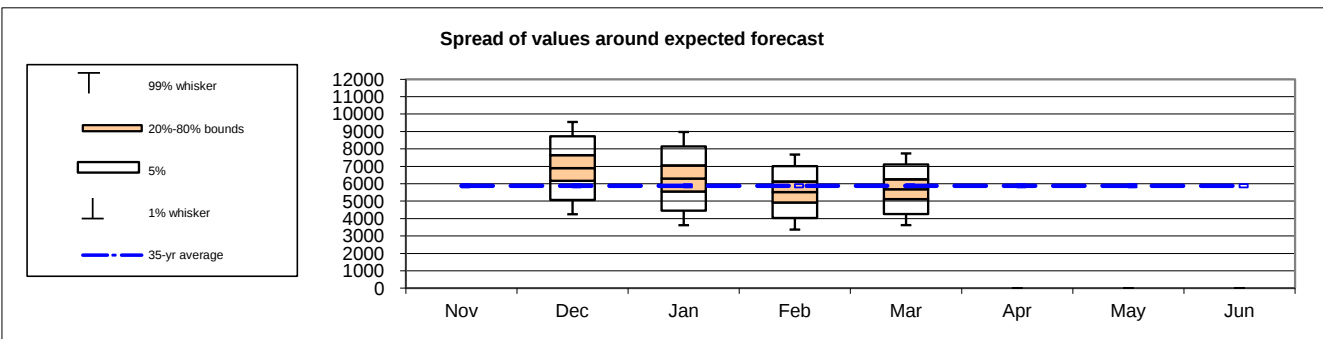
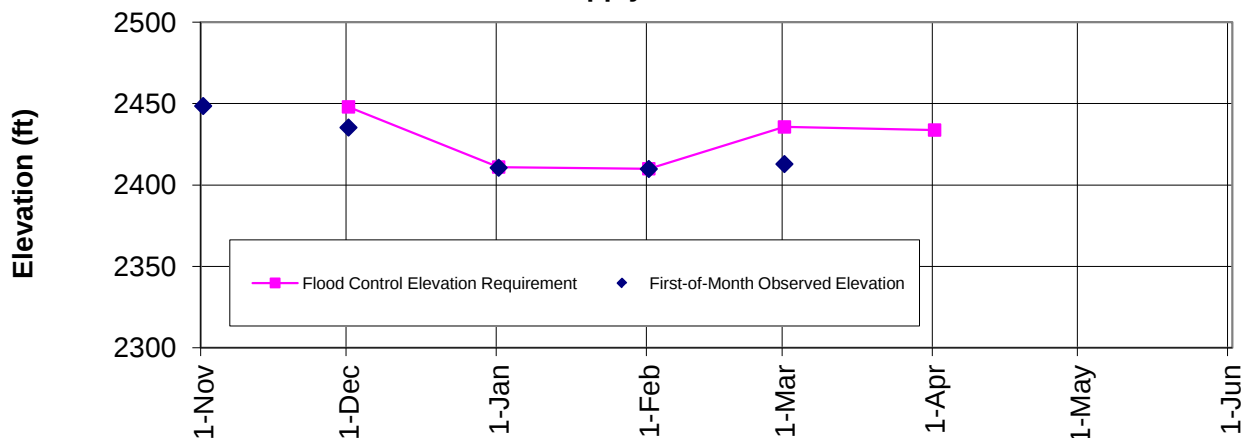
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**Libby : March Runoff Forecast & Flood Control Calculation****WY 2015**

| <b>Runoff Forecast and Flood Control</b> |               |            |  |
|------------------------------------------|---------------|------------|--|
| <b>Most Probable Runoff Volume:</b>      |               |            |  |
| <b>Apr-Aug</b>                           | <b>5683</b>   | <b>KAF</b> |  |
| <b>Apr-Jul</b>                           | <b>5159</b>   | <b>KAF</b> |  |
| <b>May-Jul</b>                           | <b>4656</b>   | <b>KAF</b> |  |
| <b>31-Mar Flood Control Space</b>        | <b>1112</b>   | <b>KAF</b> |  |
| <b>31-Mar Flood Control Elevation</b>    | <b>2433.8</b> | <b>ft</b>  |  |

| 1981-2010<br>Average | Percent of<br>Average | 1929-2008<br>Average | Percent of<br>Average |
|----------------------|-----------------------|----------------------|-----------------------|
| 5885                 | <b>97%</b>            | 6282                 | 90%                   |
| 5342                 | 97%                   | 5720                 | 90%                   |
| 4821                 | 97%                   | 5199                 | 90%                   |

| <b>Seasonal Flood Control VARQ Flood Control Implemented</b> |        |        |        |        |        |        |     |     |
|--------------------------------------------------------------|--------|--------|--------|--------|--------|--------|-----|-----|
| Forecast Date >>                                             | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May | Jun |
| <b>Apr-Aug Runoff Forecast</b>                               |        | 6899   | 6297   | 5523   | 5683   |        |     |     |
| <b>First-of-Month Elev</b>                                   | 2448.5 | 2435.3 | 2410.6 | 2409.8 | 2412.9 |        |     |     |
| Date >>                                                      | 30-Nov | 31-Dec | 31-Jan | 28-Feb | 31-Mar | 30-Apr |     |     |
| <b>Flood Control Space</b>                                   | 500    | 2000   | 2037   | 1032   | 1112   |        |     |     |
| <b>Flood Control Elevation</b>                               | 2448.0 | 2411.0 | 2410.0 | 2435.7 | 2433.8 |        |     |     |

**Libby Flood Control Elevations - 2015****Latest water supply forecast: Mar****Notes:**

1. The given forecast is the official Corps of Engineers forecast for Libby. If you have any questions please contact Joel Fenolio (206) 764-6683, Kevin Shaffer (206) 764-3660, Adam Price (206) 764-3604, or Kristian Mickelson (206) 764-6927.
2. If a prior month's forecast as published in this document is different than what was originally published in the issue month, then the earlier forecast has been adjusted to reflect updated values for precipitation or streamflow.
3. Fernie precipitation values were not collected for 11 days during February. Fernie precipitation was scaled up using the ratio of Total February precipitation at Sparwood to precipitation at Sparwood on the days Fernie reported precip.

# Libby : March Runoff Forecast & Flood Control Calculation

## Apr-Aug Runoff Forecast Calculation:

| Variable                  | Month(s)      | Units       | Observed Value | Percent of Average | Regression Coefficient | Marginal Runoff (KAF) |
|---------------------------|---------------|-------------|----------------|--------------------|------------------------|-----------------------|
|                           |               |             | A              |                    | B                      | =A*B                  |
| SOI                       | ΣJun:Jul      |             |                |                    |                        |                       |
| Eureka RS, MT             | ΣOct:Feb Prcp | inches      | 6.05           | 122%               | 65.9                   | 398.5                 |
| West Glacier, MT          | ΣOct:Feb Prcp | inches      | 18.14          | 128%               | 28.5                   | 517.2                 |
| Cranbrook A, BC           | ΣOct:Feb Prcp | millimeters | 151.60         | 112%               | 2.7                    | 413.9                 |
| Fernie, BC                | ΣOct:Feb Prcp | millimeters | 668.90         | 117%               | 0.6                    | 421.4                 |
| Hawkins Lake, MT          | 1-Mar SWE     | inches      | 15.90          | 79%                | 24.3                   | 386.8                 |
| Stahl Peak, MT            | 1-Mar SWE     | inches      | 24.10          | 84%                | 19.1                   | 460.6                 |
| East Creek, BC            | 1-Mar SWE     | millimeters | 706.00         | 100%               | 0.7                    | 458.9                 |
| Moyie Mountain, BC        | 1-Mar SWE     | millimeters | 228.00         | 64%                | 1.3                    | 289.6                 |
| Sunshine Village, AB      | 1-Mar SWE     | millimeters | 372.00         | 80%                | 1.3                    | 468.7                 |
| Akamina Pass, AB          | 1-Mar SWE     | millimeters | 290.00         | 74%                | 1.0                    | 301.6                 |
| South Racehorse Creek, AB | 1-Mar SWE     | millimeters | 303.00         | 88%                | 1.4                    | 424.2                 |
| Intercept                 |               |             | 1              |                    | 1142.0                 | 1142.0                |
| 1-Mar Forecast (KAF)      |               |             |                |                    | Σ                      | 5683.3                |

## Data used in Libby Water Supply Forecast

WY 2015

| Climate Data              | Jan-14 | Feb-14 | Mar-14 | Jun-14 | Jul-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SOI                       |        |        |        | 0.20   | -0.20  |        |        |        |        |
| Precipitation Data        | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Units  |
| Eureka RS, MT             | 0.55   | 2.42   | 1.22   | 1.21   | 0.65   |        |        |        | inch   |
| West Glacier, MT          | 2.64   | 5.77   | 4.07   | 3.08   | 2.58   |        |        |        | inch   |
| Cranbrook A, BC           | 29.40  | 53.60  | 25.50  | 22.90  | 20.20  |        |        |        | mm     |
| Fernie, BC                | 126.90 | 273.00 | 95.00  | 93.00  | 81.00  |        |        |        | mm     |
| Snow Water Equiv          | 1-Jan  |        |        | 1-Feb  | 1-Mar  | 1-Apr  | 1-May  | 1-Jun  | Units  |
| Hawkins Lake, MT          |        |        |        | 12     | 16     |        |        |        | inch   |
| Stahl Peak, MT            |        |        | 15     | 19     | 24     |        |        |        | inch   |
| East Creek, BC            |        |        |        | 537    | 706    |        |        |        | mm     |
| Moyie Mountain, BC        |        |        | 131    | 193    | 228    |        |        |        | mm     |
| Sunshine Village, AB      |        |        | 200    | 266    | 372    |        |        |        | mm     |
| Akamina Pass, AB          |        |        |        | 230    | 290    |        |        |        | mm     |
| South Racehorse Creek, AB |        |        |        | 234    | 303    |        |        |        | mm     |
| Streamflow                | Jan    |        |        | Feb    | Mar    | Apr    | May    | Jun    | Units  |
| Libby Inflow Volume       |        |        | 218.8  | 335.0  |        |        |        |        | KAF    |
| Reservoir Elevation       | 1-Nov  | 1-Dec  | 1-Jan  | 1-Feb  | 1-Mar  | 1-Apr  | 1-May  | 1-Jun  | Units  |
| Libby FOM Elev            | 2448.5 | 2435.3 | 2410.6 | 2409.8 | 2412.9 |        |        |        | feet   |

for:

Peter F. Brooks, P.E., D. WRE  
 Approving Official  
 Ch., Hydrologic Engineering and Power Branch  
 Northwestern Division

Sara C. Marxen, P.E.  
 Ch., Water Management Section  
 Seattle District

\*Libby Dam official water supply forecasts computed by the Corps Seattle District (on previous pages).

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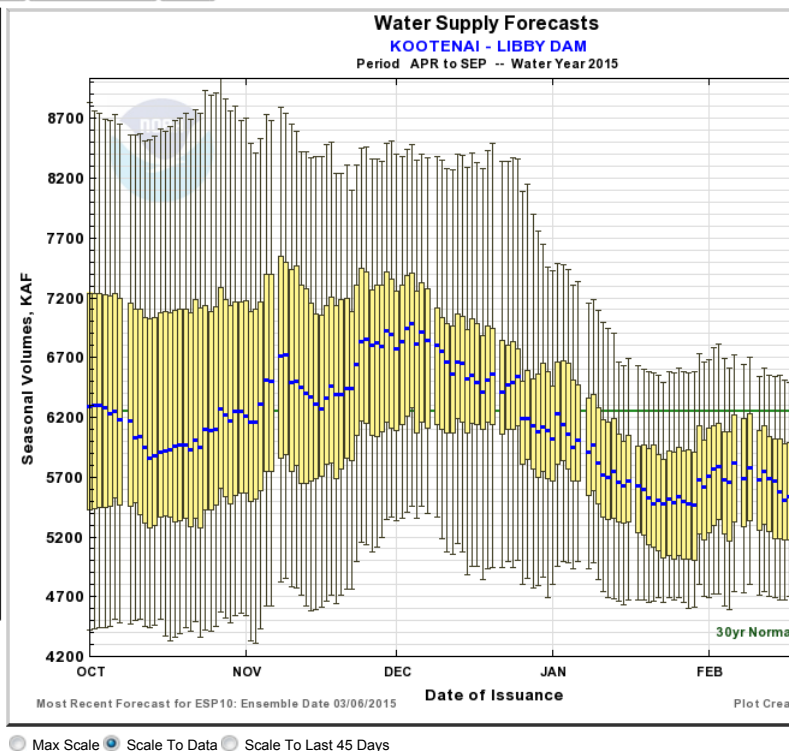
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| KOOTENAI - LIBBY DAM (LYDM8)<br>Forecasts for Water Year 2015                 |                      |      |           |      |                             |
|-------------------------------------------------------------------------------|----------------------|------|-----------|------|-----------------------------|
| <b>Official Forecast</b>                                                      |                      |      |           |      |                             |
| <input type="checkbox"/> 10 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06 |                      |      |           |      |                             |
| Forecast Period                                                               | Forecasts Are in KAF |      |           |      | 30 Year Average (1981-2010) |
|                                                                               | 90 %                 | 50 % | % Average | 10 % |                             |
| APR-SEP                                                                       | 4204                 | 5011 | 80        | 5990 | 6254                        |
| APR-JUL                                                                       | 3561                 | 4242 | 79        | 5158 | 5342                        |
| APR-AUG                                                                       | 3918                 | 4694 | 80        | 5642 | 5885                        |
| JAN-JUL                                                                       | 4482                 | 5139 | 86        | 6116 | 6002                        |
| <input type="checkbox"/> 5 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06  |                      |      |           |      |                             |
| APR-SEP                                                                       | 4366                 | 5099 | 82        | 6185 | 6254                        |
| APR-JUL                                                                       | 3694                 | 4363 | 82        | 5346 | 5342                        |
| APR-AUG                                                                       | 4111                 | 4806 | 82        | 5802 | 5885                        |
| JAN-JUL                                                                       | 4516                 | 5187 | 86        | 6220 | 6002                        |
| <input type="checkbox"/> 0 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06  |                      |      |           |      |                             |
| APR-SEP                                                                       | 4482                 | 5262 | 84        | 6328 | 6254                        |
| APR-JUL                                                                       | 3789                 | 4474 | 84        | 5529 | 5342                        |
| APR-AUG                                                                       | 4203                 | 4969 | 84        | 6034 | 5885                        |
| JAN-JUL                                                                       | 4641                 | 5311 | 88        | 6417 | 6002                        |

Move the mouse over the desired "Forecast Period" to display a graph.



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ESP5
ESP0

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# Dworshak : March Runoff Forecast & Flood Control Calculation

WY 2015

| Runoff Forecast and Flood Control |         |        |     |
|-----------------------------------|---------|--------|-----|
| Most Probable Runoff Volume       | Apr-Jul | 1815   | KAF |
|                                   | May-Jul | 1331   | KAF |
| 31-Mar Flood Control Space        |         | 397    | KAF |
| 31-Mar Flood Control Elevation    |         | 1577.7 | ft  |

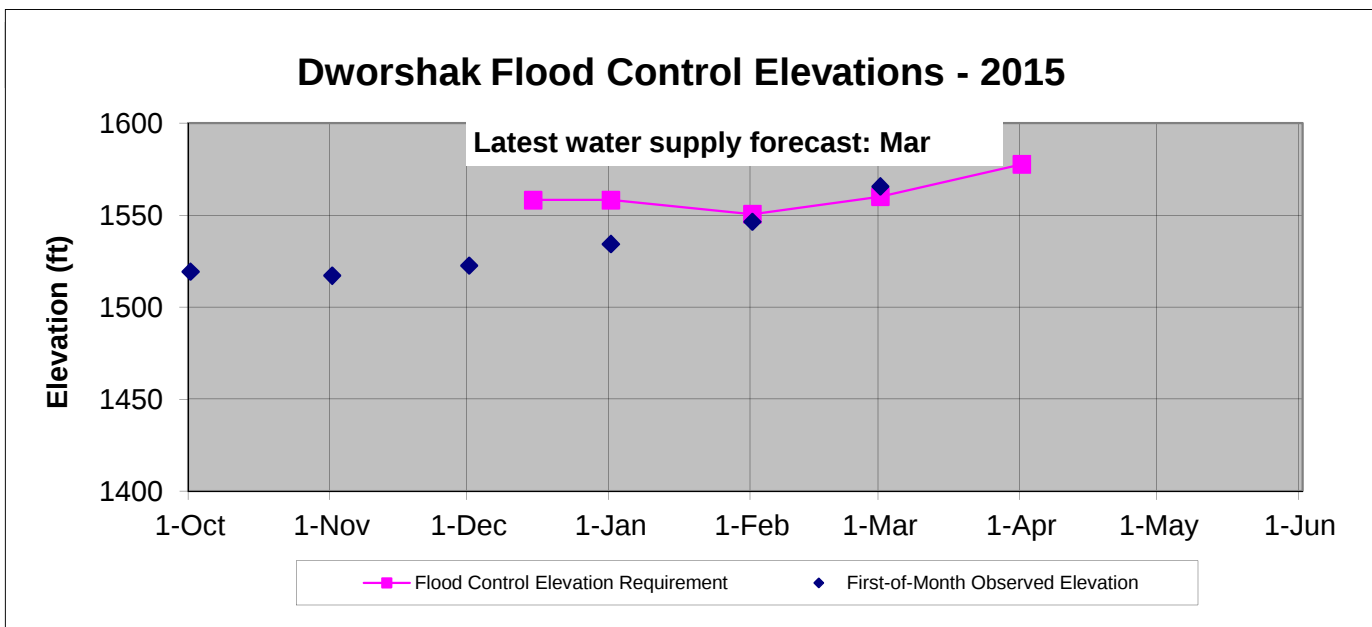
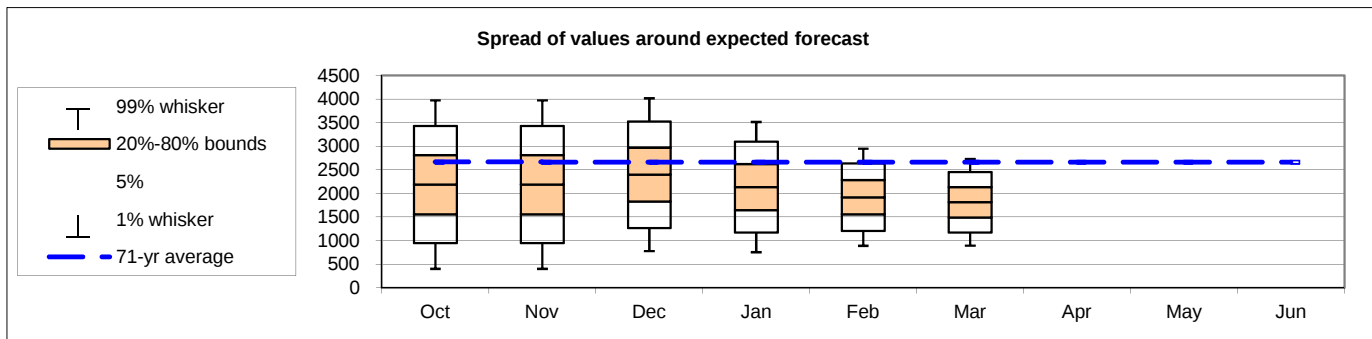
| 1981-2010<br>Average | Percent of<br>Average | 1929-2010<br>Average | Percent of<br>Average |
|----------------------|-----------------------|----------------------|-----------------------|
| 2438                 | 74%                   | 2663                 | 68%                   |
| 1784                 | 75%                   | 1953                 | 68%                   |

## Seasonal Flood Control (assumes no shift of flood control space to Grand Coulee)

| Forecast Date>>         | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr | May | Jun |
|-------------------------|--------|--------|--------|--------|--------|--------|-----|-----|-----|
| Apr-Jul Runoff Forecast | 2189   | 2189   | 2398   | 2136   | 1922   | 1815   |     |     |     |
| First-of-Month Elev     | 1519.4 | 1517.2 | 1522.7 | 1534.4 | 1546.5 | 1565.7 |     |     |     |

| Date >>                 | 15-Dec | 31-Dec | 31-Jan | 28-Feb | 31-Mar | 15-Apr | 30-Apr |
|-------------------------|--------|--------|--------|--------|--------|--------|--------|
| Flood Control Space     | --     | 700    | 700    | 811    | 674    | 397    |        |
| Flood Control Elevation | --     | 1558.2 | 1558.2 | 1550.6 | 1560.0 | 1577.7 |        |



#### Notes:

1. The given forecast is the official Corps of Engineers forecast for Dworshak. If you have any questions please contact Jeremy Giovando (509 527 7053), or Steve Hall (509 527 7550).
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 control space is fixed at 700 KAF.

## Dworshak : March Runoff Forecast & Flood Control Calculation

### Apr-Jul Runoff Forecast Calculation:

| Variable               | Month    | Observed Value | % of Average | Regression Coefficient | Marginal Runoff (KAF) |
|------------------------|----------|----------------|--------------|------------------------|-----------------------|
|                        |          | A              |              | B                      | =A*B                  |
| SOI                    | Sep      | -0.70          |              | 220.73                 | -154.5                |
| HQSI Cumulative Precip | Oct-Date | 24.90          | 114%         | 23.39                  | 582.4                 |
| Elk Butte SWE          | 1-Mar    | 18.5           | 54%          | 10.16                  | 188.0                 |
| Hoodoo Basin SWE       | 1-Mar    | 24.2           | 63%          | 10.01                  | 242.2                 |
| Sherwin SWE            | 1-Mar    | 0.3            | 3%           | 25.42                  | 7.6                   |
| Lost Lake SWE          | 1-Mar    | 28.2           | 56%          | 6.99                   | 197.1                 |
| Crater meadows SWE     | 1-Mar    | 34.9           | 90%          | 13.06                  | 455.8                 |
| Intercept              |          | 1              |              | 296.75                 | 296.8                 |
| 1-Mar Forecast (KAF)   |          |                |              | Σ                      | 1815.4                |

| Data Station                                         | Sept  | Nov  | Dec   | 1-Jan | 1-Feb | 1-Mar | 1-Apr | 1-May | 1-Jun | 1-Jul |
|------------------------------------------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Climate (Stdzd SOI)</b>                           |       |      |       |       |       |       |       |       |       |       |
| September SOI                                        | -0.70 |      |       |       |       |       |       |       |       |       |
| <b>Precipitation (in)</b>                            |       |      |       |       |       |       |       |       |       |       |
| Oct                                                  |       |      |       |       |       |       |       |       |       |       |
| Headquarters, ID                                     | 2.60  | 7.10 | 5.50  | 5.30  | 4.40  | --    | --    |       |       |       |
| Cumulative HQSI Data                                 | 2.60  | 9.70 | 15.20 | 20.50 | 24.90 | --    | --    |       |       |       |
| <b>Snow Water Equiv (First of Month values) (in)</b> |       |      |       |       |       |       |       |       |       |       |
| Elk Butte, ID                                        |       |      |       | 10.5  | 17.3  | 18.5  | --    |       |       |       |
| Cool Creek, ID                                       |       |      |       | 16.7  | 23.5  |       |       |       |       |       |
| Hoodoo Basin, MT                                     |       |      |       | 14.0  | 20.2  | 24.2  | --    | --    | --    |       |
| Sherwin, ID                                          |       |      |       | 1.4   | 3.4   | 0.3   | --    |       |       |       |
| Shanghi Summit, ID                                   |       |      |       |       |       |       |       | --    | --    |       |
| Lost Lake, ID                                        |       |      |       | 16.1  | 24.1  | 28.2  | --    | --    | --    |       |
| Hemlock, ID                                          |       |      |       |       |       |       |       | --    | --    |       |
| Crater Meadows Mar                                   |       |      |       |       |       | 34.9  | --    |       |       |       |
| <b>Streamflow (End of Month) (kaf)</b>               |       |      |       | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   |
| Dworshak Inflow                                      |       |      |       | 260   | 584   | --    | --    | --    | --    | --    |

Approval:

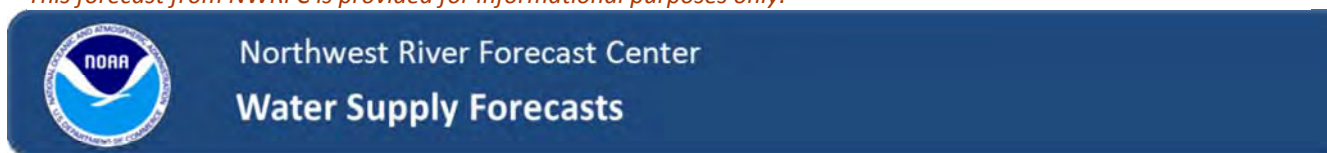
John J. Heitstuman P.E.  
Chief Hydrology Section  
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Peter Brooks, P.E., D. WRE  
Ch., Hydrologic Engineering and Power Branch  
Columbia Basin Water Management Division

\* Dworshak Dam official water supply forecasts computed by the Corps Walla Walla District (on previous pages).

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### NF CLEARWATER - DWORSHAK DAM (DWRI1) Forecasts for Water Year 2015

#### Official Forecast

☐ 10 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06

| Forecast Period | Forecasts Are in KAF |      |           |      | 30 Year Average (1981-2010) |
|-----------------|----------------------|------|-----------|------|-----------------------------|
|                 | 90 %                 | 50 % | % Average | 10 % |                             |
| APR-SEP         | 1465                 | 1858 | 72        | 2260 | 2575                        |
| APR-JUL         | 1365                 | 1736 | 72        | 2140 | 2419                        |
| JAN-JUL         | 2563                 | 2918 | 89        | 3304 | 3289                        |

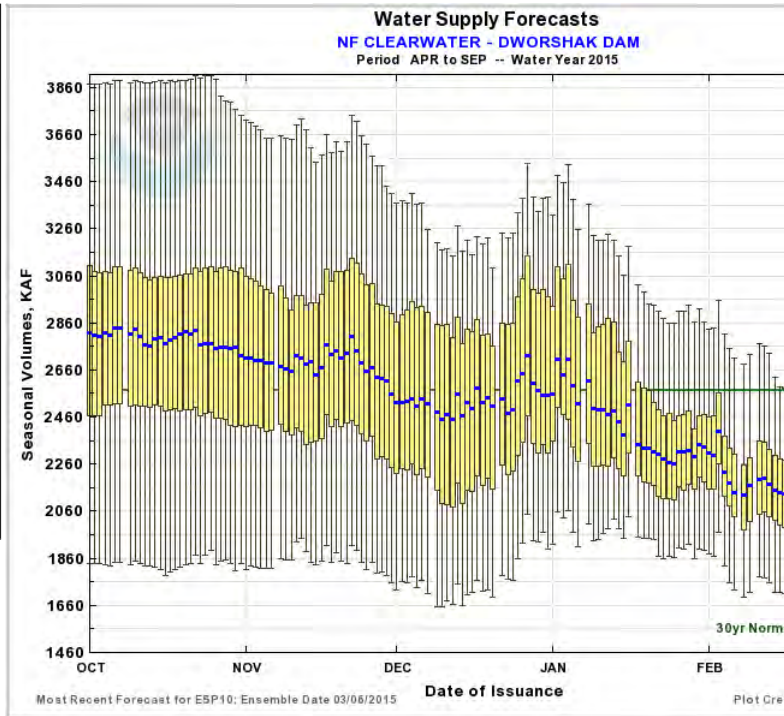
☐ 5 days QPF Ensemble: 2015-03-06 Issued: 2015-03-06

|         |      |      |    |      |      |
|---------|------|------|----|------|------|
| APR-SEP | 1548 | 1958 | 76 | 2339 | 2575 |
| APR-JUL | 1442 | 1811 | 75 | 2214 | 2419 |
| JAN-JUL | 2628 | 2956 | 90 | 3392 | 3289 |

☐ 0 days QPF Ensemble: 2015-03-06 Issued: 2015-03-06

|         |      |      |    |      |      |
|---------|------|------|----|------|------|
| APR-SEP | 1606 | 2064 | 80 | 2429 | 2575 |
| APR-JUL | 1506 | 1932 | 80 | 2292 | 2419 |
| JAN-JUL | 2660 | 3060 | 93 | 3470 | 3289 |

Move the mouse over the desired "Forecast Period" to display a graph.



☐ Max Scale ☒ Scale To Data ☐ Scale To Last 45 Days

**Overlay**  
☐ ESP10 ☒ ESP5 ☐ ESP0

**Data Files**



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\* Grand Coulee Dam water supply forecasts are not used for implementation of BiOp actions.

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*This forecast is provided for informational purposes only.*



## Northwest River Forecast Center Water Supply Forecasts

Close Archive Data/Normals Rankings Adjustments Verification Verify All Years Help

### COLUMBIA - GRAND COULEE DAM (GCDW1) Forecasts for Water Year 2015

#### Official Forecast

☐ 10 days QPF: Ensemble: 2015-03-06 Issued: 2015-03-06

| Forecast Period | Forecasts Are in KAF |       |           |       | 30 Year Average (1981-2010) |
|-----------------|----------------------|-------|-----------|-------|-----------------------------|
|                 | 90 %                 | 50 %  | % Average | 10 %  |                             |
| APR-SEP         | 46243                | 51429 | 86        | 56741 | 60110                       |
| APR-JUL         | 38019                | 42345 | 83        | 47388 | 51015                       |
| APR-AUG         | 43141                | 47635 | 84        | 52338 | 56763                       |
| JAN-JUL         | 51621                | 55832 | 94        | 61525 | 59599                       |

☐ 5 days QPF Ensemble: 2015-03-06 Issued: 2015-03-06

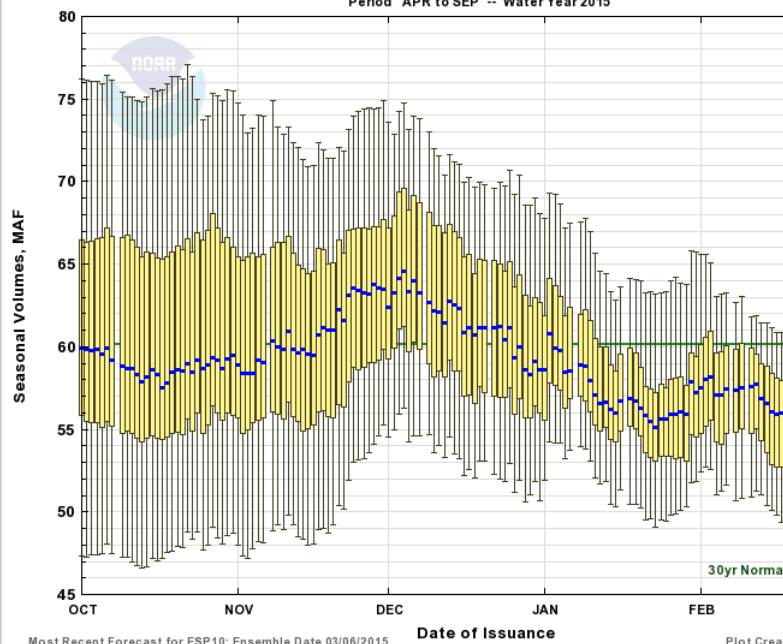
|         |       |       |    |       |       |
|---------|-------|-------|----|-------|-------|
| APR-SEP | 47302 | 52898 | 88 | 58060 | 60110 |
| APR-JUL | 38974 | 43180 | 85 | 48473 | 51015 |
| APR-AUG | 44556 | 49419 | 87 | 54518 | 56763 |
| JAN-JUL | 51708 | 56470 | 95 | 62305 | 59599 |

☐ 0 days QPF Ensemble: 2015-03-06 Issued: 2015-03-06

|         |       |       |    |       |       |
|---------|-------|-------|----|-------|-------|
| APR-SEP | 48298 | 54292 | 90 | 59458 | 60110 |
| APR-JUL | 40134 | 44786 | 88 | 51168 | 51015 |
| APR-AUG | 45515 | 50919 | 90 | 56365 | 56763 |
| JAN-JUL | 52646 | 57832 | 97 | 64715 | 59599 |

Move the mouse over the desired "Forecast Period" to display a graph.

### Water Supply Forecasts COLUMBIA - GRAND COULEE DAM Period APR to SEP -- Water Year 2015



☐ Max Scale ☒ Scale To Data ☐ Scale To Last 45 Days

#### Overlay

ESP10 ESP5 ESP0

#### Data Files

CSV (ESP10 / APR-SEP)



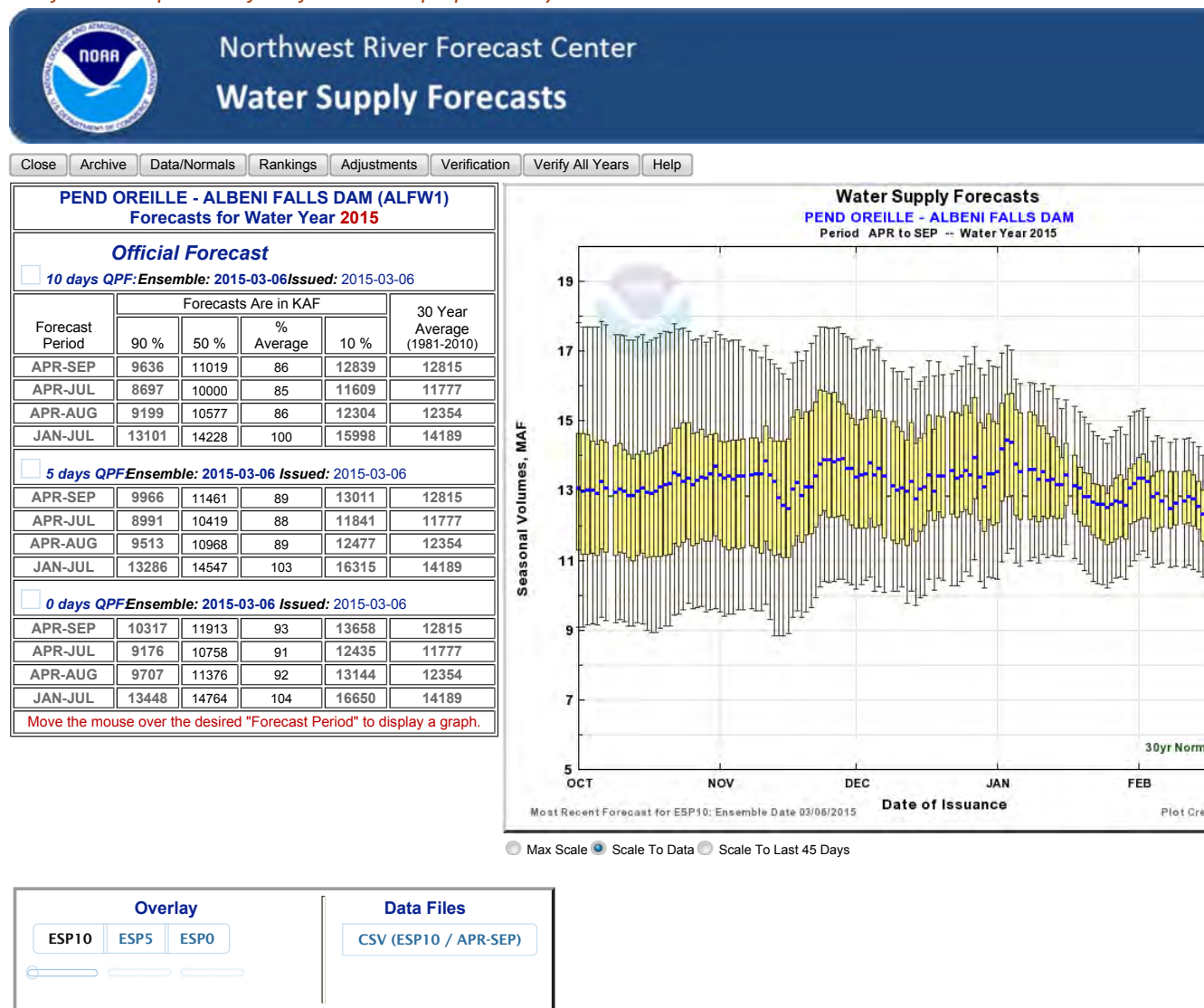
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\* Albeni Falls Dam water supply forecasts are not used for implementation of BiOp actions.

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