

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

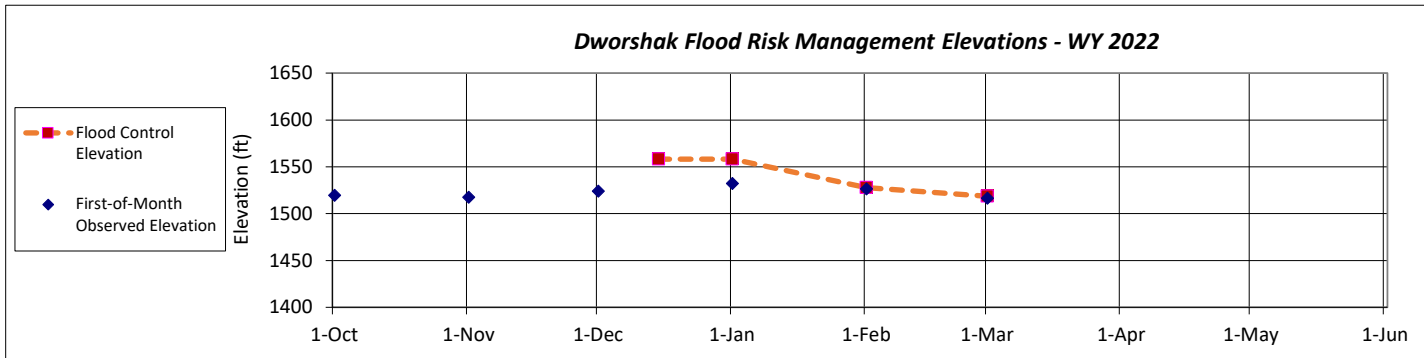
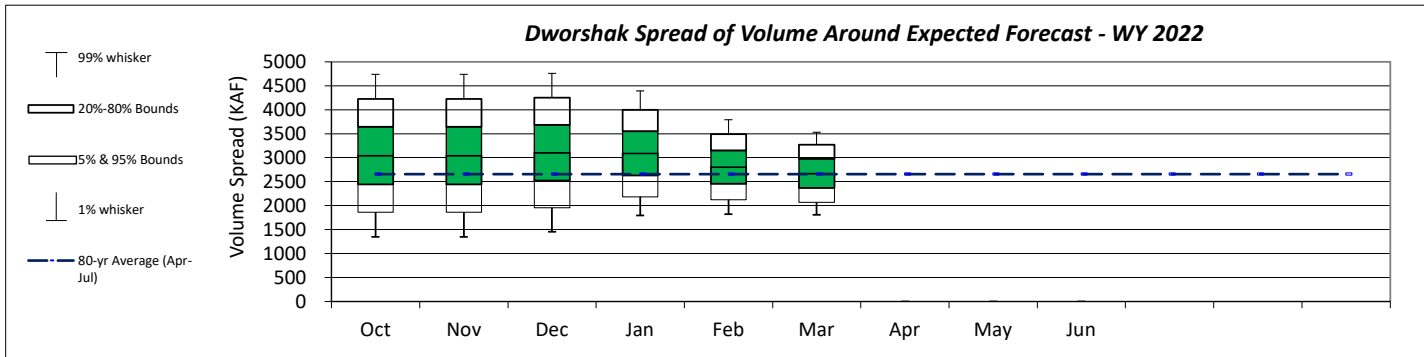
Runoff Forecast	March Value	1991 2020 Average	1991 2020 Percent of Average	1929 2008 Average	1929 2008 Percent of Average
Most Probable Runoff Volume: Apr-Jul (KAF)	2669	2474	108%	2655	101%
Most Probable Runoff Volume: May-Jul (KAF)	1929	1788	108%	1959	98%

Flood Risk Management (FRM)	March Value
31-March Flood Risk Management Space (KAF)	1297
31-March Flood Risk Management Elevation (ft)	1514.8

*Seasonal Flood Risk Management (assumes no shift of Flood Risk Management space to Grand Coulee, nor refill on the Flood Control Refill)*

Seasonal FRM Forecast	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Apr-Jul Runoff Forecast (KAF)	3043	3043	3104	3090	2805	2669			
First-of-Month Elevation (ft)	1519.7	1517.7	1524.3	1532.3	1526.5	1516.7			

Seasonal FRM Space	15 Dec	31 Dec	31 Jan	28 Feb	31 Mar	15 Apr	30 Apr	31 May
Flood Risk Management Space (KAF)	700	700	1127	1248	1297			
Flood Risk Management Elevation (ft)	1558	1558	1527.8	1518.6	1514.8			



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**Apr-Jul Runoff Forecast Calculation**

<i>Variable</i>	<i>Month(s)</i>	<i>Units</i>	<i>Observed Value A</i>	<i>Percent of Average (1991 2020)</i>	<i>Regression Coefficient B</i>	<i>Marginal Runoff (KAF) A*B</i>
SOI	Sept		0.80		220.73	176.6
Headquarters Precipitation	Oct-Mar	Inch	25.20	116%	23.39	589.4
Elk Butte SWE	1-Mar	Inch	24.76	81%	10.16	251.6
Hoodoo Basin SWE	1-Mar	Inch	31.82	95%	10.01	318.5
Sherwin SWE	1-Mar	Inch	10.94	120%	25.42	278.1
Lost Lake SWE	1-Mar	Inch	39.36	91%	6.99	275.1
Crater Meadows SWE	1-Mar	Inch	37.00	95%	13.06	483.2
Intercept			1		296.75	296.8
1-Feb Forecast	Apr-Jul	KAF				2669.3

**Data used in Dworshak Water Supply Forecast**

<i>Climate Data</i>	<i>Sept</i>								
SOI	0.80								
<i>Precipitation Data</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Headquarters, ID (inch)	2.30	7.10	7.50	5.70	2.60	--	--		
Cumulative HQSI Data (inch)	<b>2.30</b>	<b>9.40</b>	<b>16.90</b>	<b>22.60</b>	<b>25.20</b>	--	--		
<i>Snow Water Equivalent, 1st of Month</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
Elk Butte, ID (inch)				13.0	21.4	24.8	--		
Cool Creek, ID (inch)				20.7	31.2				
Hoodoo Basin, MT (inch)				18.1	26.0	31.8	--	--	--
Sherwin, ID (inch)				6.1	9.1	10.9	--		
Shanghi Summit, ID (inch)								--	--
Lost Lake, ID (inch)				21.3	32.5	39.4	--	--	--
Hemlock, ID (inch)								--	--
Crater Meadows Mar (inch)						37.0	--		
<i>Streamflow</i>	<i>Sept</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>
Dworshak Inflow Volume (KAF)				205	145	109	--	--	--

**Notes:**

1. The given forecast is the official Corps of Engineers forecast for Dworshak. If you have any questions please contact Willow Walker (509-527-7073), or Jon Roberts (509-527-7518).
2. Due to updated values for precipitation, snow or streamflow, subsequent forecasts may be different from the forecast published herein.
3. Refer to FRM guidance for final elevations.

Approval:

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