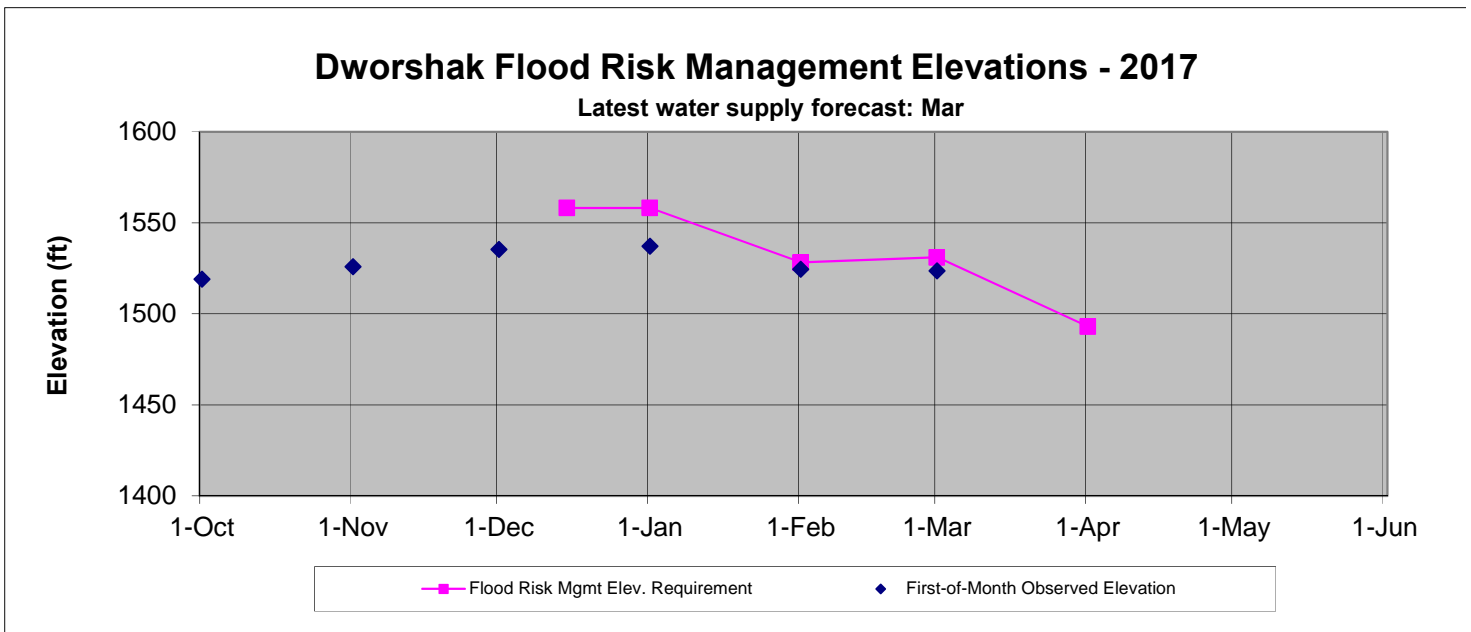
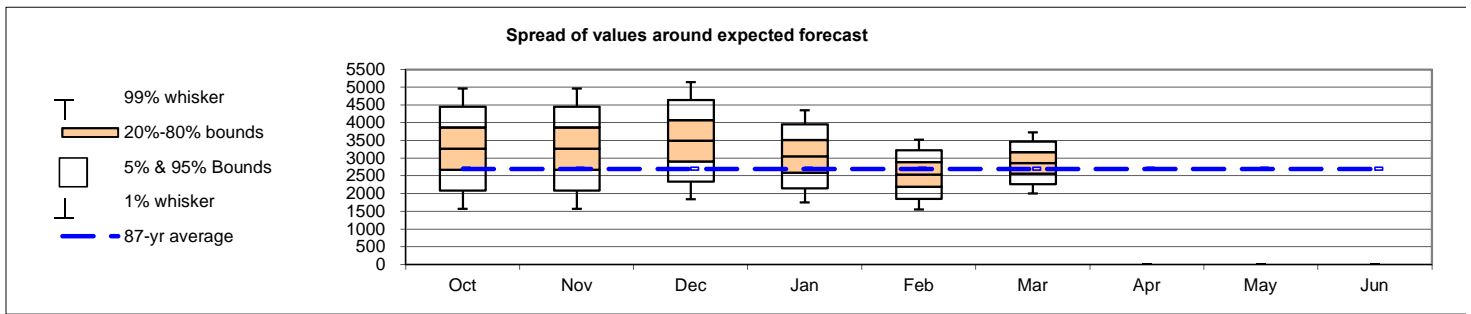


Runoff Forecast and Flood Risk Management (FRM)				1981-2010 Average	Percent of 30yr Average	1929-2008 Average	Percent of Average		
Most Probable Runoff Volume	Apr-Jul	2867	KAF	2438	118%	2696	106%		
	May-Jul	2096	KAF	1784	118%	1972	106%		
31-Mar Flood Risk Management Space		1551	KAF						
31-Mar Flood Risk Management Elevation		1493.1	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	3271	3271	3493	3055	2541	2867			
First-of-Month Elev	1519.1	1525.9	1535.4	1537.3	1524.5	1523.6			
Date >>	15-Dec	31-Dec	31-Jan	28-Feb	31-Mar	15-Apr	30-Apr	31-May	
FRM Space	--	700	700	1120	1082	1551			
FRM Elevation	--	1558.2	1558.2	1528.3	1531.1	1493.1			



## Dworshak : March 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	1.20		220.73	264.9
HQSI Cumulative Precip	Oct-Date	28.40	126%	23.39	664.3
Elk Butte SWE	1-Mar	32.1	109%	10.16	326.1
Hoodoo Basin SWE	1-Mar	31.8	98%	10.01	318.3
Sherwin SWE	1-Mar	10.2	117%	25.42	259.3
Lost Lake SWE	1-Mar	39.0	91%	6.99	272.6
Crater meadows SWE	1-Mar	35.6	101%	13.06	464.9
Intercept		1		296.75	296.8
1-Mar Forecast (KAF)				$\Sigma$	2867.2

Data Station	Sept	Nov	Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
<b>Climate (Stdzd SOI)</b>									
September SOI	1.20								
<b>Precipitation (in)</b>	Oct								
Headquarters, ID	7.90	3.90	3.70	4.70	8.20	--	--		
Cumulative HQSI Data	7.90	11.80	15.50	20.20	28.40	--	--		
<b>Snow Water Equiv (First of Month values) (in)</b>									
Elk Butte, ID				14.8	20.3	32.1	--		
Cool Creek, ID				15.9	20.8				
Hoodoo Basin, MT				11.9	17.2	31.8	--	--	--
Sherwin, ID				6.5	8.5	10.2	--		
Shanghi Summit, ID								--	--
Lost Lake, ID				17.8	24.6	39.0	--	--	--
Hemlock, ID								--	--
Crater Meadows Mar						35.6	--		
<b>Streamflow (End of Month) (kaf)</b>				Jan	Feb	Mar	Apr	May	Jun
Dworshak Inflow				127	471	--	--	--	--

### 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), Amanda Connell (509-527-7632), 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.
4. Due to missing precipitation data on the HQSI gage, the Elk River precipitation was used to estimate missing values.
5. Elk Butte SNOTEL is still down, value estimated using average gain of Hemlock Butte and Lolo Pass (closest in elevation to EBNI) which was 11.8". This is consistent with other SNOTEL sites in the Basin under 5800'.

Approval:

John J. Heitstuman P.E.  
Chief Hydrology Section  
Walla Walla District USACE

William D. Proctor, P.E.  
Ch., Hydrologic Engineering and Power Branch  
Columbia Basin Water Management Division