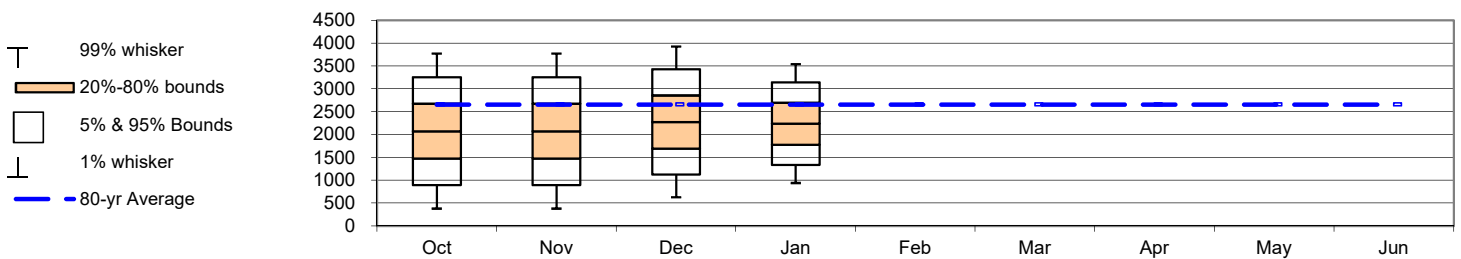


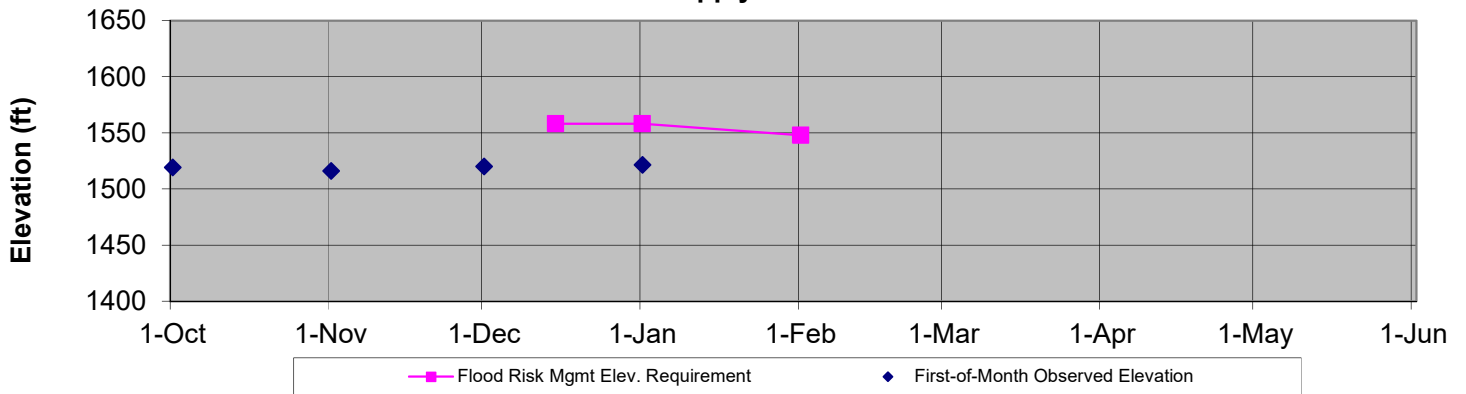
Runoff Forecast and Flood Risk Management (FRM)				1981-2010 Average	Percent of 30yr Average	1929-2008 Average	Percent of Average		
Most Probable Runoff Volume	Apr-Jul	2239	KAF	2438	92%	2655	84%		
	May-Jul	1638	KAF	1784	92%	1959	84%		
31-Jan Flood Risk Management Space		849	KAF						
31-Jan Flood Risk Management Elevation		1547.9	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	2075	2075	2276	2239					
First-of-Month Elev	1519.3	1516.1	1520.1	1521.4					
Date >>		15-Dec	31-Dec	31-Jan	28-Feb	31-Mar	15-Apr	30-Apr	31-May
FRM Space	--	700	700	849					
FRM Elevation	--	1558.2	1558.2	1547.9					

Spread of values around expected forecast



Dworshak Flood Risk Management Elevations - WY 2019

Latest water supply forecast: Jan



Dworshak : January Runoff Forecast & Flood Risk Management Calculation

Apr-Jul Runoff Forecast Calculation					
Variable	Month	Observed Value	% of Average	Regression Coefficient	Runoff (KAF)
		A		B	=A*B
SOI	Sep	-0.90		355.71	-320.1
HQSI Cumulative Precip	Oct-Date	14.70	105%	48.12	707.4
Elk Butte SWE	1-Jan	15.50	105%	6.25	96.9
Cool Creek SWE	1-Jan	21.5	119%	9.96	214.1
Hoodoo Basin SWE	1-Jan	14.4	85%	12.22	176.0
Sherwin SWE	1-Jan	3.7	80%	44.69	165.4
Lost Lake SWE	1-Jan	18.8	82%	4.24	79.7
Intercept		1		1119.86	1119.9
1-Jan Forecast (KAF)				Σ	2239.1

Data Station	Sept	Nov	Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
Climate (Stdzd SOI)									
September SOI	-0.90								
Precipitation (in)									
Headquarters, ID	3.80	5.60	5.30	--	--	--	--		
Cumulative HQSI Data	3.80	9.40	14.70	--	--	--	--		
Snow Water Equiv (First of Month values) (in)									
Elk Butte, ID				15.5	--	--	--		
Cool Creek, ID				21.5	--				
Hoodoo Basin, MT				14.4	--	--	--	--	--
Sherwin, ID				3.7	--	--	--		
Shanghi Summit, ID								--	--
Lost Lake, ID				18.8	--	--	--	--	--
Hemlock, ID								--	--
Crater Meadows Mar						--	--		
Streamflow (End of Month) (kaf)				Jan	Feb	Mar	Apr	May	Jun
Dworshak Inflow				--	--	--	--	--	--

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), Alfredo Rodriguez (509-527-7532), 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. Hoodoo Basin, MT SNOTEL quit reporting on 12/28/18 at 0300. Value of 14.4in is the last recorded value from the station.

Approval:

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

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