

Dworshak : April Runoff Forecast & Flood Control Calculation

WY 2009

Runoff Forecast and Non-Shifted Flood Control

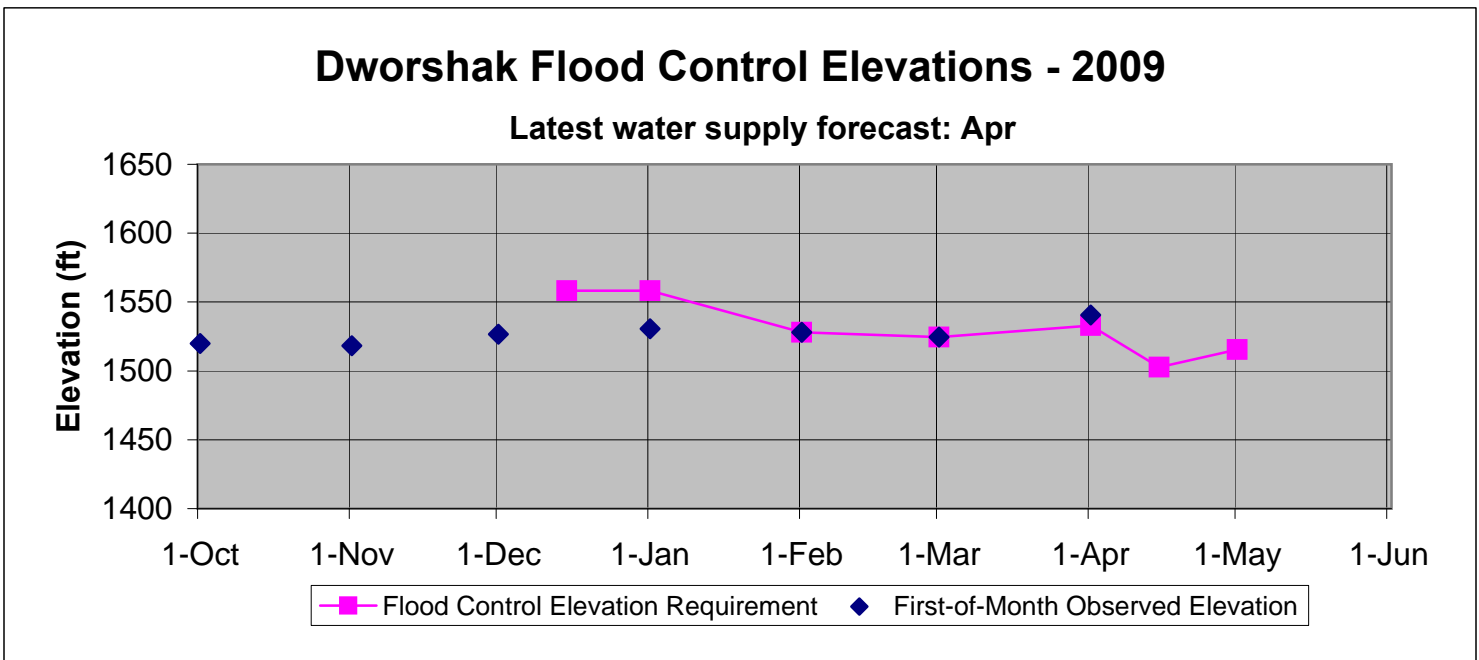
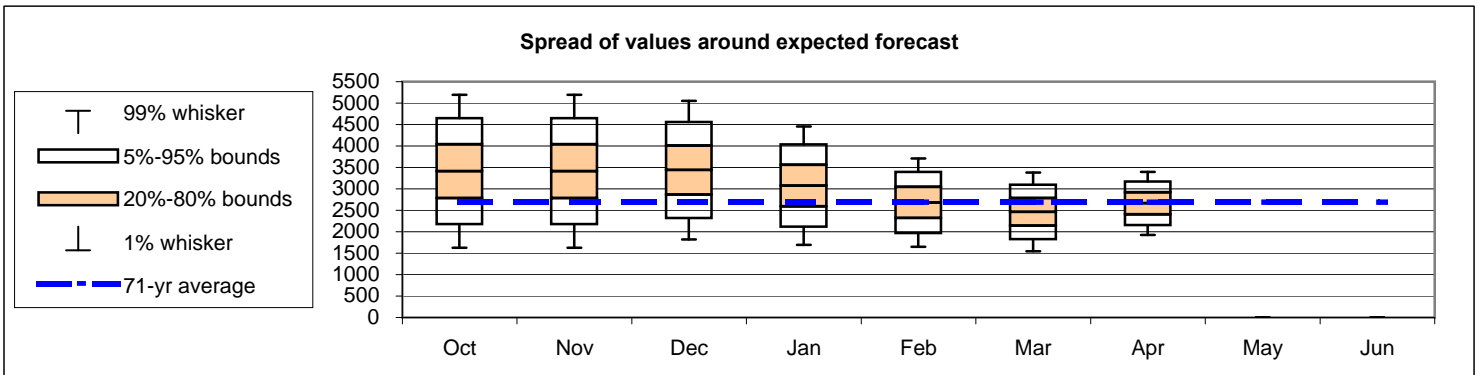
Most Probable Runoff Volume	Apr-Jul	2662	KAF
	May-Jul	1964	KAF
30-Apr Flood Control Space		1287	KAF
30-Apr Flood Control Elevation		1515.6	ft

1929-1999
Average

Percent of
Average
2683 99%
1980 99%

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	3409	3409	3437	3075	2681	2461	2662		
First-of-Month Elev	1519.9	1518.4	1526.7	1530.6	1528.0	1524.4	1540.5		
Date >>		15-Dec	31-Dec	31-Jan	28-Feb	31-Mar	15-Apr	30-Apr	
Flood Control Space	--	700	700	1124	1170	1057	1442	1287	
Flood Control Elevation	--	1558.2	1558.2	1528.0	1524.5	1532.9	1502.8	1515.6	



- Notes: 1. The given forecast is the official Corps of Engineers forecast for Dworshak. If you have any questions please contact Tracy Schwarz (509 527 7522), 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.
 4. 15-Apr target elevation does not reflect flood control shift operation between Dworshak and Grand Coulee.
 5. 30-Apr target elevation may vary as runoff occurs throughout the month of April.

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Apr-Jul Runoff Forecast Calculation:					
Variable	Month	Observed Value	% of Average	Regression Coefficient	Marginal Runoff (KAF)
		A		B	=A*B
SOI	Sep	1.50		114.61	171.9
Elk Butte SWE	1-Apr	33.90	84%	14.98	507.7
Hemlock Butte SWE	1-Apr	49.10	100%	15.43	757.6
Hoodoo Basin SWE	1-Apr	37.50	82%	14.46	542.2
Shanghi Summit SWE	1-Apr	29.10	110%	16.82	489.5
DWR January Inflow	Jan	287.60	141%	0.860	247.3
DWR February Inflow	Feb	161.26	59%	0.150	24.2
DWR March Inflow	Mar	322.30	81%	0.406	130.9
Intercept		1		-209.67	-209.7
1-Apr Forecast (KAF)				Σ	2661.6

Data Station	Sept	Nov	Dec	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun
Climate (Stdzd SOI)									
September SOI	1.50								
Precipitation (monthly depth, inches)									
Headquarters, ID		6.49	4.52						
Snow Water Equiv (first of month SWE depth, inches)									
Elk Butte, ID				12.5	20.0	23.9	33.9	--	--
Hemlock Butte, ID				16.9	29.5	33.8	49.1	--	--
Hoodoo Basin, MT				13.0	23.9	28.9	37.5	--	--
Pierce RS, ID				6.1	10.1	9.5			
Shanghi Summit, ID							29.1	--	
Lost Lake, ID								--	--
Streamflow (monthly volume, KAF)									
Dworshak Inflow				Jan	Feb	Mar	Apr	May	Jun
				288	161	322	--	--	--