

RECLAMATION

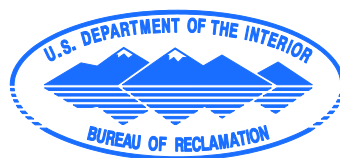
Managing Water in the West

December 7, 2016

Dear Customer:

Attached are the Monthly Water Supply Outlook and projected reservoir and river operating plans for Clark Canyon Reservoir. Inflow for December is forecasted at 13,200 acre-feet, or 88 percent of the 30-year average. If you have any questions or concerns regarding the plans, please contact me at 406-247-7320.

Stephanie Micek
Reservoir and River Operations



U. S. Department of the Interior
Bureau of Reclamation
Montana Area Office
Reservoir and River Operations

CLARK CANYON RESERVOIR OPERATIONS

Water Supply Forecasts and Reservoir Operations December 1, 2016

Reservoir	Elevation	Storage (af)	% Average	% Full
Lima Reservoir:	6570.65	31,425	94	37
Clark Canyon Reservoir:	5523.73	78,094	83	45

*percent of average is based on past 30 years

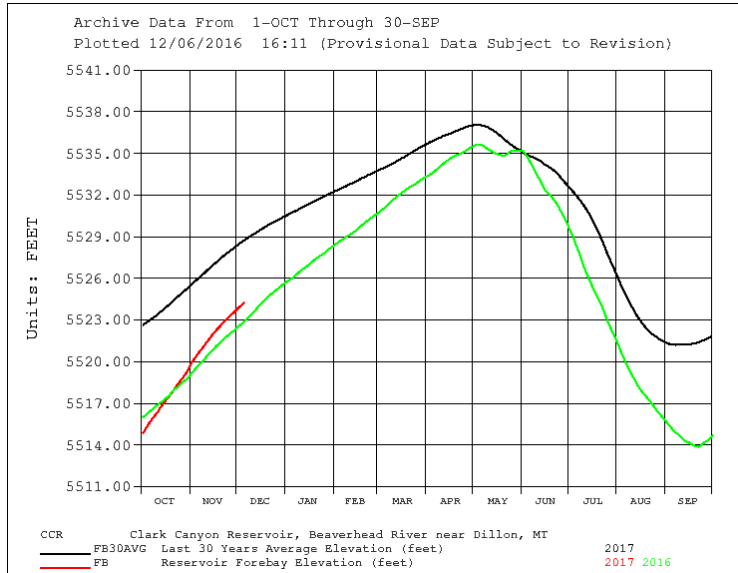
Actual Inflows (1,000 Acre-Feet):

Month	Inflow	Percent of Average
Water Year 2017		
October	16.2	94
November	15.2	87
Water Year 2016		
	142.9	73
October	10.2	59
November	12.2	69
December	12.7	84
January	11.5	88
February	11.1	94
March	12.6	84
April	11.3	80
May	12.6	85
June	10.5	41
July	14.9	69
August	11.2	74
September	12.1	80
<i>April – July</i>	<i>49.3</i>	<i>64</i>

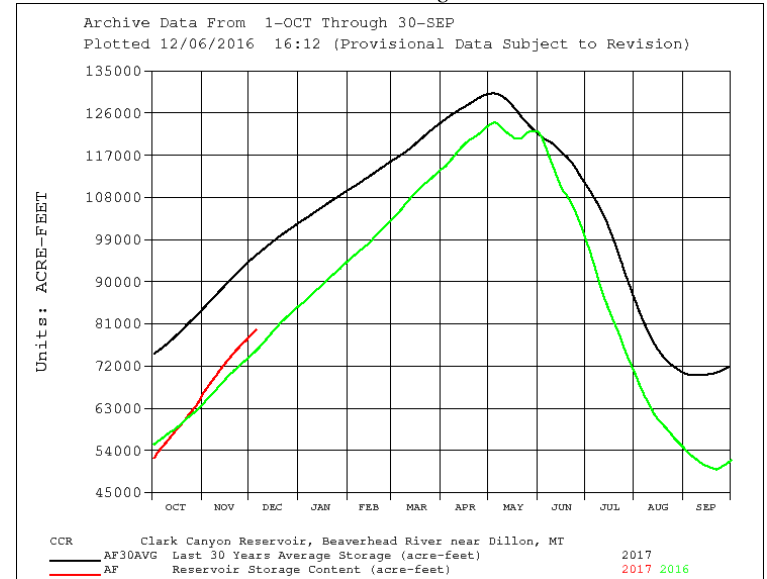
WY 2017 December Forecasted Inflow (1,000 Acre-Feet):

<u>Agency</u>	<u>Inflow</u>	<u>Percent of Average</u>
Reclamation	13.2	88

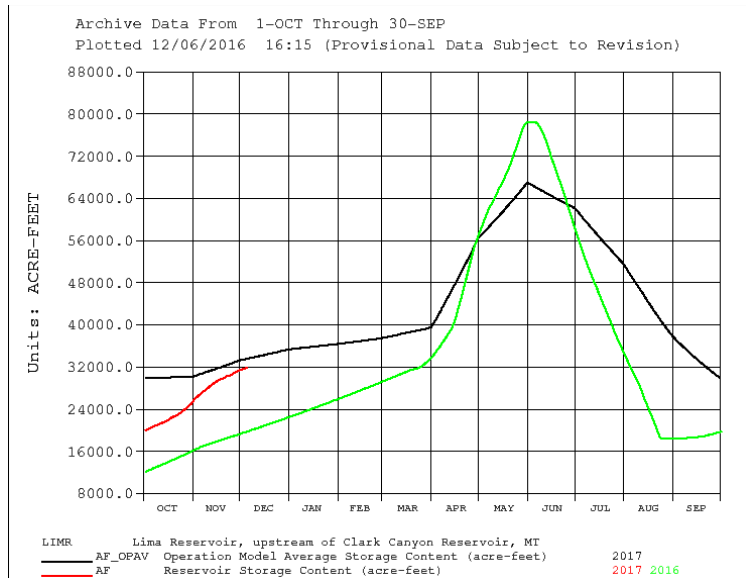
Clark Canyon Reservoir Elevation Graph 46% Full



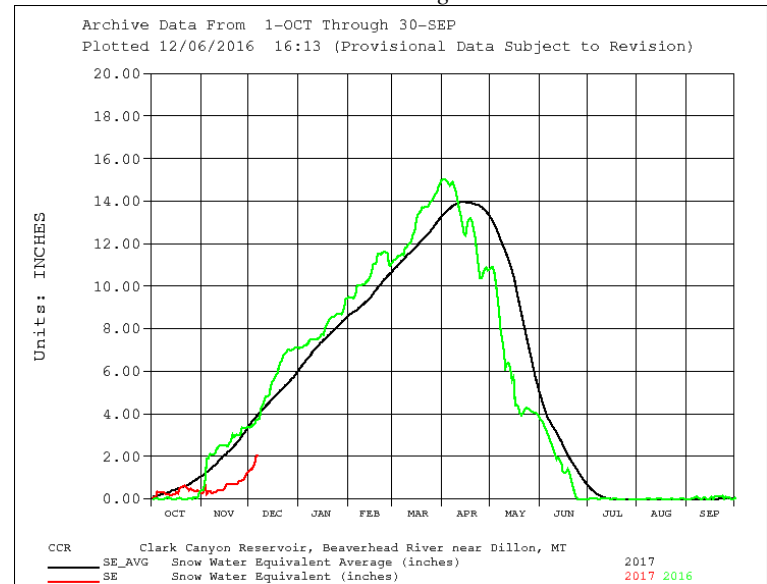
Clark Canyon Reservoir Storage Graph 83% Average



Lima Reservoir Storage Graph 37% Full



Clark Canyon Reservoir Snow Graph 53% Average



CLARK CANYON RESERVOIR MONTHLY OPERATIONS

Based on Most Probable Inflow Forecast with Full Allotments in WY 2017

Clark Canyon Reservoir		Initial Cont Elev 5523.73 ft			78.1 kaf			Maximum Cont Elev 5569.57 ft			310.1 kaf			Minimum Cont Elev 5489.22 ft			10.0 kaf	
	2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total				
Monthly Inflow	kaf	13.2	11.8	10.8	12.5	12.5	11.5	18.2	15.6	11.7	11.9	13.2	15.3	158.2				
River Release	kaf	2.6	2.6	2.3	2.6	2.5	20.9	34.9	44.5	26.4	15.4	3.1	3.0	160.8				
River Release	cfs	42	42	41	42	42	340	587	724	429	259	50	50					
Excess Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Gordon Spring Gain	kaf	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	17.9				
End-Month Elevation	ft	5526.82	5529.31	5531.48	5533.88	5536.18	5534.02	5529.91	5521.61	5516.50	5515.14	5518.89	5522.93					
End-Month Content	kaf	88.7	97.9	106.4	116.3	126.3	116.9	100.2	71.3	56.6	53.1	63.2	75.5					
Net Change Content	kaf	10.6	9.2	8.5	9.9	10.0	-9.4	-16.7	-28.9	-14.7	-3.5	10.1	12.3	-2.6				
Diversions	2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total				
East Bench Demand	kaf	0.00	0.00	0.00	0.00	0.00	5.80	9.40	11.88	7.23	4.37	0.00	0.00	38.68				
East Bench Req Rels	kaf	0.0	0.0	0.0	0.0	0.0	10.5	17.1	21.6	13.1	7.9	0.0	0.0	70.2				
CCWSCOTot Demand	kaf	0.00	0.00	0.00	0.00	0.00	15.60	25.27	31.92	19.44	11.75	0.00	0.00	103.98				
CCWSCODeliv	kaf	0.0	0.0	0.0	0.0	0.0	9.8	15.9	20.1	12.2	7.4	0.0	0.0	65.4				
Non-proj Demand	kaf	0.00	0.00	0.00	0.00	0.00	3.33	5.39	6.81	4.15	2.51	0.00	0.00	22.19				

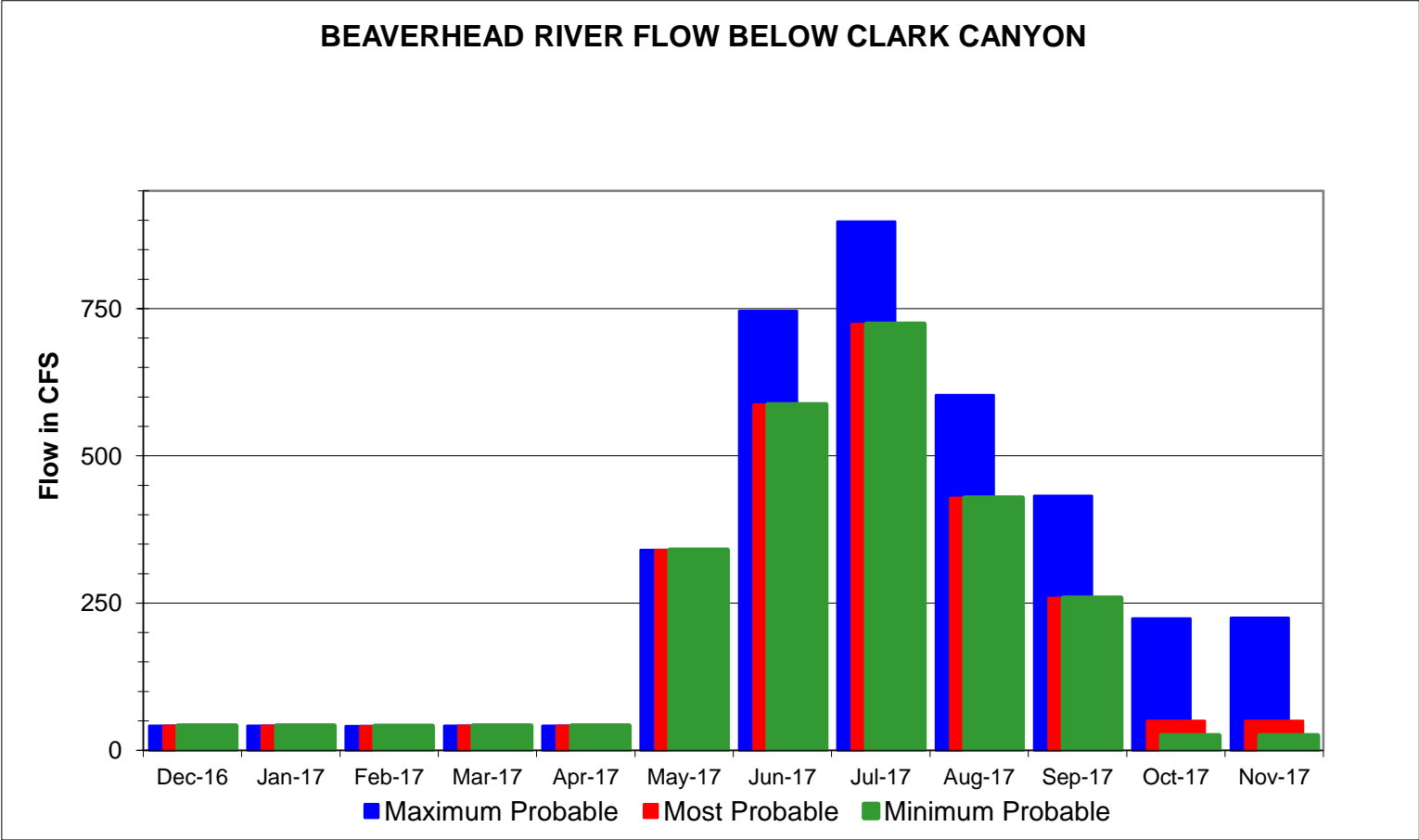
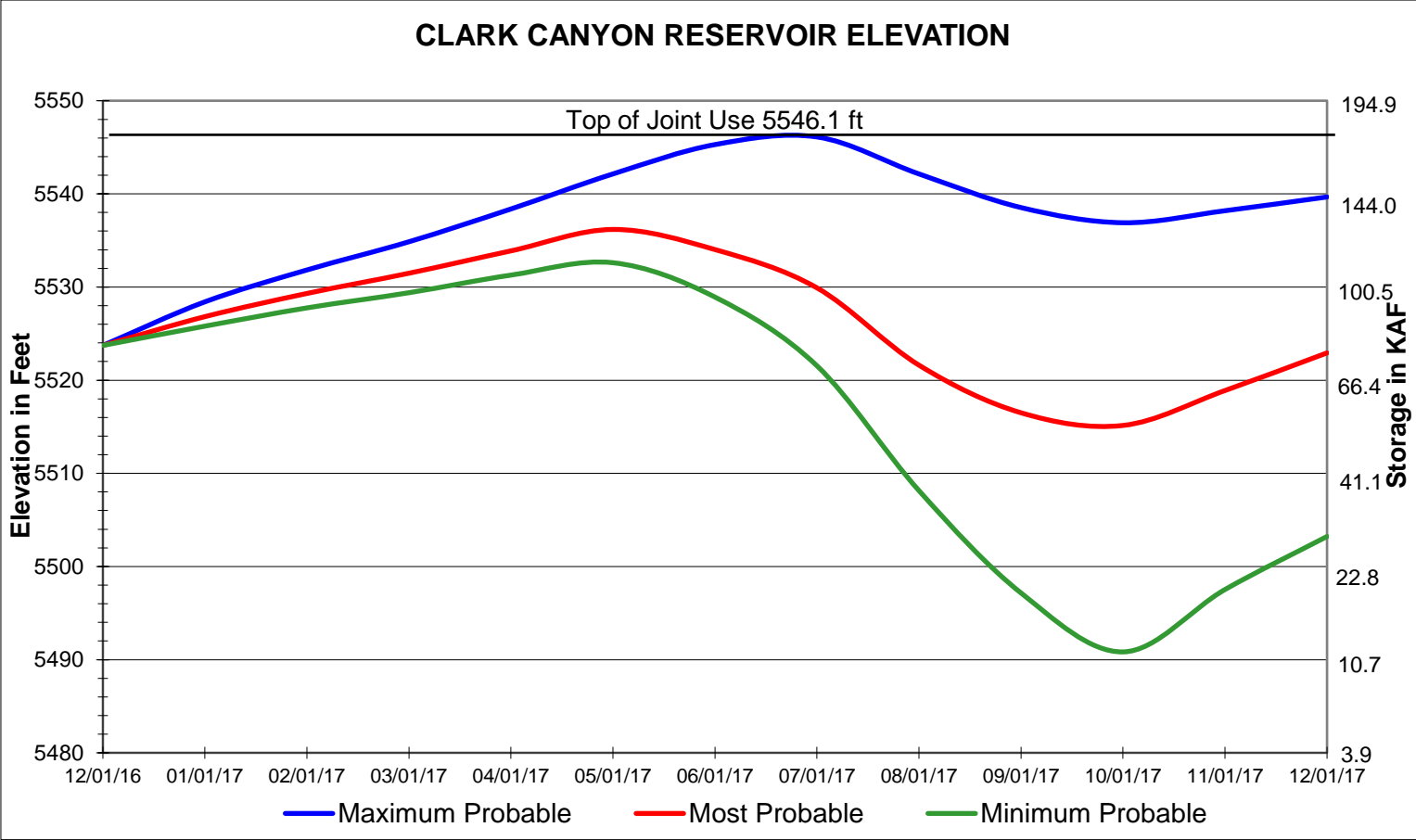
Based on Minimum Probable Inflow Forecast with Full Allotments in WY 2017

Clark Canyon Reservoir		Initial Cont Elev 5523.73 ft			78.1 kaf			Maximum Cont Elev 5569.57 ft			310.1 kaf			Minimum Cont Elev 5489.22 ft			10.0 kaf	
	2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total				
Monthly Inflow	kaf	9.6	9.6	8.4	10.0	7.9	6.3	9.6	10.6	8.0	8.1	9.3	10.2	107.6				
River Release	kaf	2.6	2.6	2.3	2.6	2.5	20.9	34.9	44.5	26.4	15.4	1.5	1.5	157.7				
River Release	cfs	42	42	41	42	42	340	587	724	429	259	25	25					
Excess Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Gordon Spring Gain	kaf	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	17.9				
End-Month Elevation	ft	5525.80	5527.76	5529.39	5531.28	5532.61	5528.92	5521.54	5508.14	5497.16	5490.83	5497.53	5503.22					
End-Month Content	kaf	85.1	92.1	98.2	105.6	111.0	96.4	71.1	37.2	18.8	11.5	19.3	28.0					
Net Change Content	kaf	7.0	7.0	6.1	7.4	5.4	-14.6	-25.3	-33.9	-18.4	-7.3	7.8	8.7	-50.1				
Diversions	2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total				
East Bench Demand	kaf	0.00	0.00	0.00	0.00	0.00	5.80	9.40	11.88	7.23	4.37	0.00	0.00	38.68				
East Bench Req Rels	kaf	0.0	0.0	0.0	0.0	0.0	10.5	17.1	21.6	13.1	7.9	0.0	0.0	70.2				
CCWSCOTot Demand	kaf	0.00	0.00	0.00	0.00	0.00	15.60	25.27	31.92	19.44	11.75	0.00	0.00	103.98				
CCWSCODeliv	kaf	0.0	0.0	0.0	0.0	0.0	9.8	15.9	20.1	12.2	7.4	0.0	0.0	65.4				
Non-proj Demand	kaf	0.00	0.00	0.00	0.00	0.00	3.33	5.39	6.81	4.15	2.51	0.00	0.00	22.19				

Based on Maximum Probable Inflow Forecast with Full Allotments in WY 2017

Clark Canyon Reservoir		Initial Cont Elev 5523.73 ft			78.1 kaf			Maximum Cont Elev 5569.57 ft			310.1 kaf			Minimum Cont Elev 5489.22 ft			10.0 kaf	
	2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total				
Monthly Inflow	kaf	19.0	15.9	15.0	18.4	20.6	36.7	48.6	35.2	19.7	18.2	19.7	20.4	287.4				
River Release	kaf	2.6	2.6	2.3	2.6	2.5	20.9	44.4	55.2	37.1	25.7	13.8	13.4	223.1				
River Release	cfs	42	42	41	42	42	340	746	898	603	432	224	225					
Excess Release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	9.5	10.7	10.7	10.3	10.7	10.4	62.3				
Gordon Spring Gain	kaf	1.5	1.5	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	17.9				
End-Month Elevation	ft	5528.41	5531.83	5534.86	5538.38	5542.14	5545.29	5546.11	5542.14	5538.53	5536.90	5538.19	5539.67					
End-Month Content	kaf	94.5	107.8	120.5	136.3	154.4	170.2	174.4	154.4	137.0	129.5	135.4	142.4					
Net Change Content	kaf	16.4	13.3	12.7	15.8	18.1	15.8	4.2	-20.0	-17.4	-7.5	5.9	7.0	64.3				
Diversions	2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Total				
East Bench Demand	kaf	0.00	0.00	0.00	0.00	0.00	5.80	9.40	11.88	7.23	4.37	0.00	0.00	38.68				
East Bench Req Rels	kaf	0.0	0.0	0.0	0.0	0.0	10.5	17.1	21.6	13.1	7.9	0.0	0.0	70.2				
CCWSCOTot Demand	kaf	0.00	0.00	0.00	0.00	0.00	15.60	25.27	31.92	19.44	11.75	0.00	0.00	103.98				
CCWSCODeliv	kaf	0.0	0.0	0.0	0.0	0.0	9.8	15.9	20.1	12.2	7.4	0.0	0.0	65.4				
Non-proj Demand	kaf	0.00	0.00	0.00	0.00	0.00	3.33	5.39	6.81	4.15	2.51	0.00	0.00	22.19				

CLARK CANYON RESERVOIR



WATER YEAR 2017