

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 prepared for December 2016 for Tiber Dam (Lake Elwell). Based on the December 1 water supply forecast, the December runoff into Lake Elwell is expected to equal 11,800 acre-feet (66 percent of average). If you have any questions or concerns, please contact me at 406-247-7334.

Clayton R. Jordan
Reservoir and River Operations



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

LAKE ELWELL OPERATIONS
 Water Supply Forecasts and Reservoir Operations
 December 1, 2016

Present Elevation and Storage:

2983.29 feet and 766,574 acre-feet (101% of Average and 83% full)

Actual Inflows (1000's of Acre-Feet):

<u>Water Year 2017</u>	<u>Inflow</u>	<u>Percent of Average</u>
October	38.2	251
November	33.0	158
<u>Water Year 2016</u>	<u>Inflow</u>	<u>Percent of Average</u>
October	8.2	47
November	11.7	52
December	16.1	87
January	16.4	97
February	21.5	96
March	18.2	43
April	60.4	111
May	86.1	68.7
June	48.0	33
July	9.1	20
August	1.7	12
September	7.5	65
<i>April-July</i>	<i>203.5</i>	<i>55</i>

December 1 Inflow Forecast (December Inflows – 1,000's Acre-Feet):

<u>Agency</u>	<u>Inflow</u>	<u>Percent of Average</u>
Reclamation	11.8	66

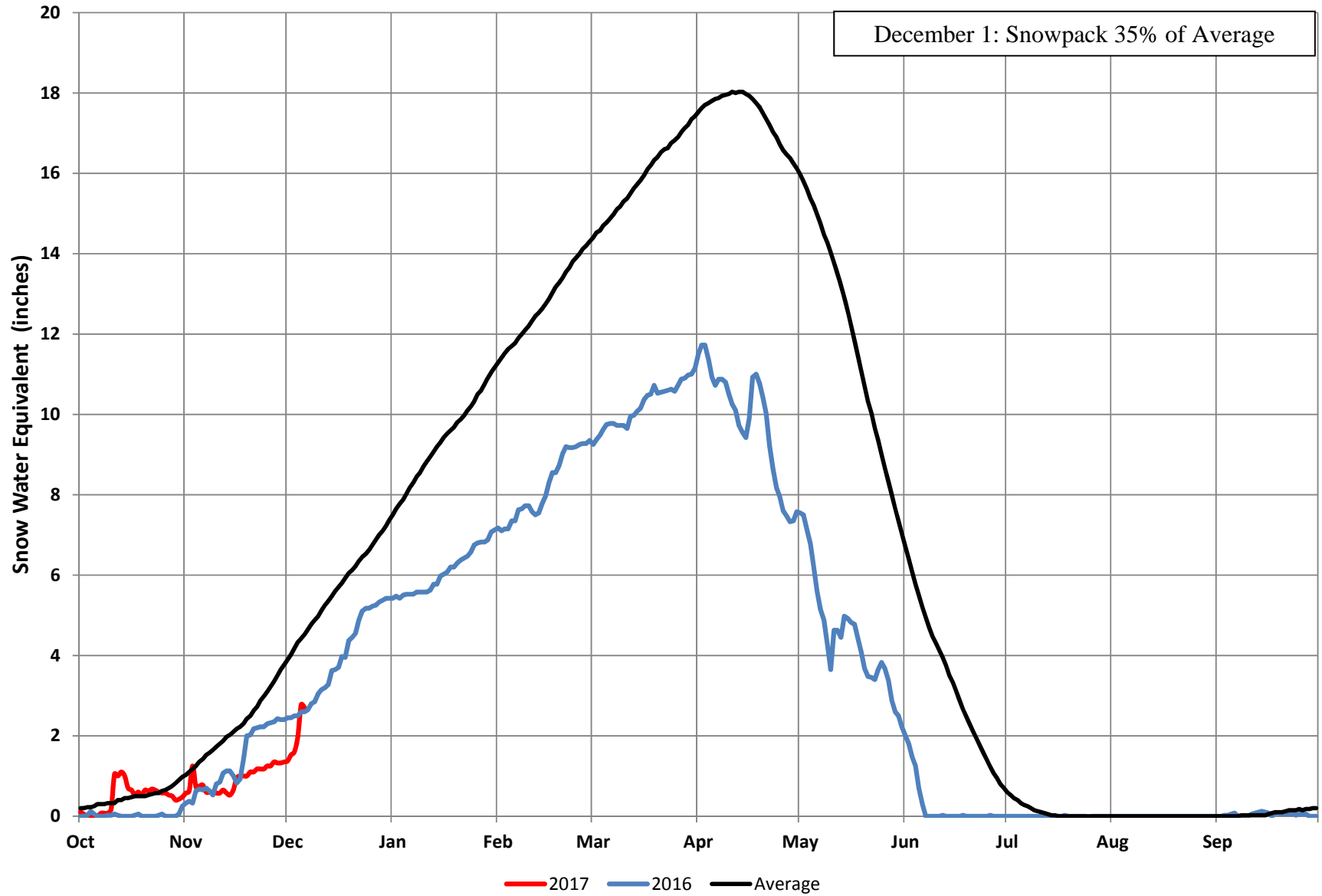
SNOW and PRECIPITATION UPDATE
Based on Mountain Data from NRCS SNOTEL Sites
As of December 1, 2016

BASIN Data Site Name	Elev.	Snow Water Equivalent			Total Precipitation		
	feet	Current	Median	% Median	Current	Median	% Median

SUN, TETON AND MARIAS RIVER BASINS

Badger Pass	6900	3.7	6.6	56	8.5	10.0	85
Dupuyer Creek	5750	.1	1.1	9	3.6	4.6	78
Mount Lockhart	6400	1.0	4.2	24	7.3	7.7	95
Pike Creek	5930	.8	-M	*	13.5	9.3	145
Waldron	5600	.8	2.1	38	5.5	5.4	102
Wood Creek	5960	.0	1.6	0	5.8	5.1	114
Basin Index (%)				36			105

Snowpack above Lake Elwell



LAKE ELWELL (TIBER RESERVOIR) MONTHLY OPERATIONS

Based on December 2016 Most Probable Inflow Forecast

Tiber Reservoir		Initial Cont Elev 766.6 kaf 2983.29 ft				Maximum Cont Elev 1356.5 kaf 3013.69 ft				Minimum Cont Elev 260.7 kaf 2932.27 ft				Total
2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
Monthly Inflow	kaf	11.8	14.7	20.1	49.5	60.3	163.5	142.7	49.7	17.5	14.3	20.6	20.0	584.7
Evaporation	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
Dam Release	kaf	30.7	30.7	27.8	30.7	35.7	67.7	80.3	61.5	55.3	41.7	43.0	35.7	540.8
Dam Release	cfs	499	499	501	499	600	1101	1349	1000	899	701	699	600	
End-Month Content	kaf	747.7	731.7	724.0	742.8	767.4	863.2	925.6	913.8	876.0	848.6	826.2	810.5	
End-Month Elevation	ft	2981.98	2980.85	2980.30	2981.64	2983.35	2989.47	2993.00	2992.35	2990.22	2988.60	2987.23	2986.23	
Net Change Content	kaf	-18.9	-16.0	-7.7	18.8	24.6	95.8	62.4	-11.8	-37.8	-27.4	-22.4	-15.7	43.9

Based on December 2016 Minimum Probable Inflow Forecast

Tiber Reservoir		Initial Cont Elev 766.6 kaf 2983.29 ft				Maximum Cont Elev 1356.5 kaf 3013.69 ft				Minimum Cont Elev 260.7 kaf 2932.27 ft				Total
2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
Monthly Inflow	kaf	9.3	11.1	13.4	21.5	34.8	78.3	68.6	18.6	4.9	4.9	8.4	10.7	284.5
Evaporation	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
Dam Release	kaf	30.7	30.7	27.8	21.5	22.6	30.7	29.8	30.7	30.7	29.8	24.6	19.0	328.6
Dam Release	cfs	499	499	501	350	380	499	501	499	499	501	400	319	
End-Month Content	kaf	745.2	725.6	711.2	711.2	723.4	771.0	809.8	797.7	771.9	747.0	730.8	722.5	
End-Month Elevation	ft	2981.81	2980.41	2979.36	2979.36	2980.26	2983.59	2986.18	2985.39	2983.65	2981.93	2980.79	2980.19	
Net Change Content	kaf	-21.4	-19.6	-14.4	0.0	12.2	47.6	38.8	-12.1	-25.8	-24.9	-16.2	-8.3	-44.1

Based on December 2016 Maximum Probable Inflow Forecast

Tiber Reservoir		Initial Cont Elev 766.6 kaf 2983.29 ft				Maximum Cont Elev 1356.5 kaf 3013.69 ft				Minimum Cont Elev 260.7 kaf 2932.27 ft				Total
2016	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov		
Monthly Inflow	kaf	14.3	18.4	23.9	59.4	81.1	225.1	340.0	105.2	30.9	25.0	31.9	30.7	985.9
Evaporation	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
Dam Release	kaf	30.7	30.7	27.8	43.0	77.6	179.9	213.5	110.7	61.5	47.6	49.2	41.7	913.9
Dam Release	cfs	499	499	501	699	1304	2926	3588	1800	1000	800	800	701	
End-Month Content	kaf	750.2	737.9	734.0	750.4	753.9	799.1	925.6	920.1	889.5	866.9	849.6	838.6	
End-Month Elevation	ft	2982.16	2981.29	2981.02	2982.17	2982.41	2985.48	2993.00	2992.70	2990.99	2989.69	2988.66	2988.00	
Net Change Content	kaf	-16.4	-12.3	-3.9	16.4	3.5	45.2	126.5	-5.5	-30.6	-22.6	-17.3	-11.0	72.0

LAKE ELWELL

