

RECLAMATION

Managing Water in the West

BOYSEN RESERVOIR OPERATIONS

Water Supply Forecasts and Reservoir Operations

Prepared July 2018

End of June Elevation and Storage: 4,726.79 FT & 777,275 Acre-Feet

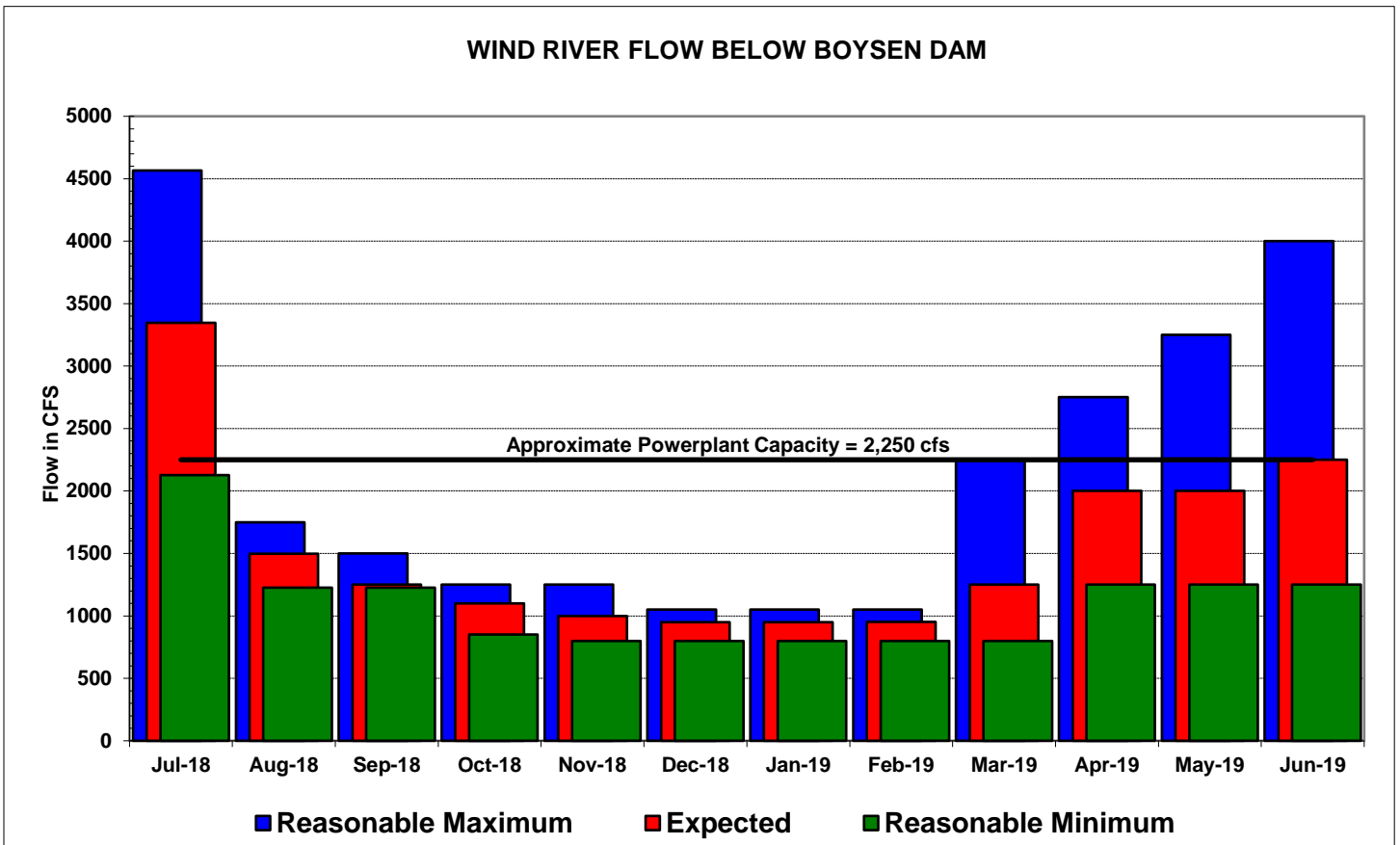
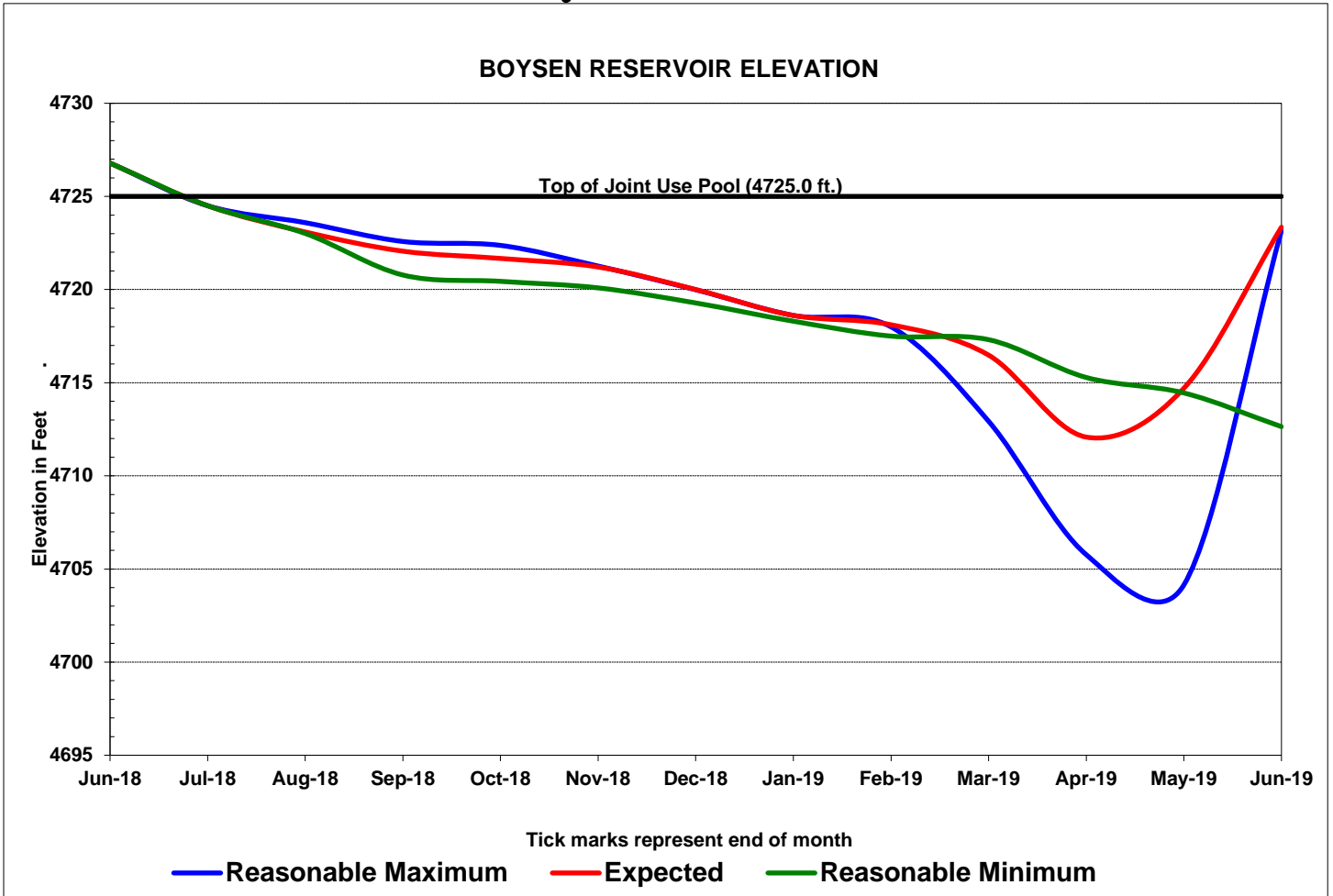
Actual Inflows (1,000 Acre-Feet):

<u>Month</u>	<u>Inflow</u>	<u>Percent of Normal</u>
July 17	314.3	256
August 17	99.8	205
September 17	96.0	210
October 17	114.5	218
November 17	86.0	182
December 17	59.3	159
January 18	55.0	151
February 18	47.5	126
March 18	73.0	141
April 18	62.2	127
May 18	366.8	285
June 18	435.6	162



U.S Department of the Interior
Bureau of Reclamation
Great Plains Region
Wyoming Area Office
Mills, Wyoming

Boysen Reservoir



BOYAOP V1.48 Run: 02-Jul-2018 14:40
 Based on a median probability April-July inflow of 1,025 kaf

BOYSEN RESERVOIR MONTHLY OPERATIONS

Boysen Reservoir	2018	Initial Cont Elev 777.3 kaf 4726.79 ft				Maximum Cont Elev 892.2 kaf 4732.20 ft				Minimum Cont Elev 219.2 kaf 4685.00 ft			
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Monthly Inflow	kaf	160.4	65.1	55.2	60.5	51.0	39.6	36.8	38.9	50.2	52.1	162.0	282.6
Monthly Inflow	cfs	2609	1059	928	984	857	644	598	700	816	876	2635	4749
Turbine Release	kaf	132.4	92.1	74.4	67.7	59.5	58.4	58.4	52.8	76.9	119.0	123.0	133.9
Bypass/Spill	kaf	73.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Release	kaf	205.8	92.1	74.4	67.7	59.5	58.4	58.4	52.8	76.9	119.0	123.0	133.9
Total Release	cfs	3347	1500	1250	1101	1000	950	950	951	1251	2000	2000	2250
End-Month Content	kaf	731.9	704.9	685.7	678.5	670.0	651.2	629.6	615.7	589.0	522.1	561.1	709.8
End-Month Elevation	ft	4724.50	4723.09	4722.06	4721.67	4721.21	4720.16	4718.92	4718.11	4716.48	4712.08	4714.70	4723.35
Net Change Content	kaf	-45.4	-27.0	-19.2	-7.2	-8.5	-18.8	-21.6	-13.9	-26.7	-66.9	39.0	148.7
Boysen Power Plant	2018	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Turbine Release	kaf	132.4	92.1	74.4	67.7	59.5	58.4	58.4	52.8	76.9	119.0	123.0	133.9
Turbine Release	cfs	2153	1498	1250	1101	1000	950	950	951	1251	2000	2000	2250
Generation	gwh	11.908	8.297	6.651	6.026	5.284	5.154	5.100	4.566	6.541	9.732	9.966	11.460
Max Generation	gwh	11.904	11.904	11.520	11.904	11.520	5.952	5.952	5.376	8.928	11.520	11.904	11.520
% Max Generation	%	100	70	58	51	46	87	86	85	73	84	84	99
Ave kwh/af		90	90	89	89	89	88	87	86	85	82	81	86
End-Month Power Cap	mw	16	16	16	16	16	16	16	16	16	15	16	16

BOYAOP V1.48 Run: 02-Jul-2018 14:40
 Based on a reasonable minimum April-July inflow of 950 kaf

BOYSEN RESERVOIR MONTHLY OPERATIONS

Boysen Reservoir	2018	Initial Cont Elev 777.3 kaf 4726.79 ft				Maximum Cont Elev 892.2 kaf 4732.20 ft				Minimum Cont Elev 219.2 kaf 4685.00 ft			
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Monthly Inflow	kaf	85.4	46.7	31.9	46.2	41.4	34.9	32.5	31.1	46.0	42.0	64.1	47.4
Monthly Inflow	cfs	1389	760	536	751	696	568	529	560	748	706	1042	797
Turbine Release	kaf	130.8	75.3	72.9	52.3	47.6	49.2	49.2	44.4	49.2	74.4	76.9	74.4
Bypass/Spill	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
Total Release	kaf	130.8	75.3	72.9	52.3	47.6	49.2	49.2	44.4	49.2	74.4	76.9	74.4
Total Release	cfs	2127	1225	1225	851	800	800	800	799	800	1250	1251	1250
End-Month Content	kaf	731.9	703.3	662.3	656.2	650.0	635.7	619.0	605.7	602.5	570.1	557.3	530.3
End-Month Elevation	ft	4724.50	4723.01	4720.78	4720.44	4720.09	4719.28	4718.30	4717.50	4717.31	4715.28	4714.45	4712.64
Net Change Content	kaf	-45.4	-28.6	-41.0	-6.1	-6.2	-14.3	-16.7	-13.3	-3.2	-32.4	-12.8	-27.0
Boysen Power Plant	2018	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Turbine Release	kaf	130.8	75.3	72.9	52.3	47.6	49.2	49.2	44.4	49.2	74.4	76.9	74.4
Turbine Release	cfs	2127	1225	1225	851	800	800	800	799	800	1250	1251	1250
Generation	gwh	11.896	6.806	6.479	4.621	4.196	4.314	4.278	3.828	4.222	6.268	6.388	6.100
Max Generation	gwh	11.904	11.904	11.520	11.904	11.520	5.952	5.952	5.376	8.928	11.520	11.904	11.520
% Max Generation	%	100	57	56	39	36	72	72	71	47	54	54	53
Ave kwh/af		91	90	89	88	88	88	87	86	86	84	83	82
End-Month Power Cap	mw	16	16	16	16	16	16	16	16	16	16	16	16

BOYAOP V1.48 Run: 02-Jul-2018 14:40
 Based on reasonable maximum April-July inflow of 1,100 kaf

BOYSEN RESERVOIR MONTHLY OPERATIONS

Boysen Reservoir	2018	Initial Cont Elev 777.3 kaf 4726.79 ft				Maximum Cont Elev 892.2 kaf 4732.20 ft				Minimum Cont Elev 219.2 kaf 4685.00 ft			
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Monthly Inflow	kaf	235.4	90.0	70.4	72.9	54.0	41.8	40.7	47.9	59.0	66.1	179.7	527.6
Monthly Inflow	cfs	3828	1464	1183	1186	908	680	662	862	960	1111	2923	8867
Turbine Release	kaf	133.5	107.6	89.3	76.9	74.4	64.6	64.6	58.3	138.4	133.9	134.6	136.8
Bypass/Spill	kaf	147.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.8	65.3	101.2
Total Release	kaf	280.8	107.6	89.3	76.9	74.4	64.6	64.6	58.3	138.4	163.7	199.9	238.0
Total Release	cfs	4567	1750	1501	1251	1250	1051	1051	1050	2251	2751	3251	4000
End-Month Content	kaf	731.9	714.3	695.4	691.4	671.0	648.2	624.3	613.9	534.5	436.9	416.7	706.3
End-Month Elevation	ft	4724.50	4723.59	4722.58	4722.37	4721.26	4719.99	4718.61	4718.00	4712.93	4705.77	4704.14	4723.17
Net Change Content	kaf	-45.4	-17.6	-18.9	-4.0	-20.4	-22.8	-23.9	-10.4	-79.4	-97.6	-20.2	289.6
Boysen Power Plant	2018	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Turbine Release	kaf	133.5	107.6	89.3	76.9	74.4	64.6	64.6	58.3	138.4	133.9	134.6	136.8
Turbine Release	cfs	2171	1750	1501	1251	1250	1051	1051	1050	2251	2250	2189	2299
Generation	gwh	11.900	9.685	7.992	6.868	6.604	5.689	5.619	5.023	11.423	10.189	9.471	11.017
Max Generation	gwh	11.904	11.904	11.520	11.904	11.520	5.952	5.952	5.376	11.904	11.520	11.904	11.520
% Max Generation	%	100	81	69	58	57	96	94	93	96	88	80	96
Ave kwh/af		89	90	89	89	89	88	87	86	83	76	70	81
End-Month Power Cap	mw	16	16	16	16	16	16	16	16	15	13	13	16