

To: All Annual Operating Plan Recipients

From: Lower Colorado Region
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The operation of Lake Powell and Lake Mead in this November 2018 24-Month Study is pursuant to the December 2007 Record of Decision on Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations of Lake Powell and Lake Mead (Interim Guidelines), and reflects the 2018 Annual Operating Plan (AOP) and draft 2019 AOP. Pursuant to the Interim Guidelines, the August 2018 24-Month Study projections of the January 1, 2019, system storage and reservoir water surface elevations set the operational tier for the coordinated operation of Lake Powell and Lake Mead during 2019.

Consistent with Section 6.B of the Interim Guidelines, the Lake Powell operational tier for water year 2019 will be governed by the Upper Elevation Balancing Tier, with an initial water year release volume of 8.23 maf and the potential for an April adjustment to equalization or balancing releases in April 2019. This November 2018 24-Month Study indicates that, consistent with Section 6.B.4 of the Interim Guidelines, an April adjustment to balancing releases is projected to occur and the contents of Lake Powell and Lake Mead will be balanced by the end of the water year, but not more than 9.0 maf and not less than 8.23 maf shall be released from Lake Powell. Based on the most probable inflow forecast, this November 24-Month Study projects a balancing release of 8.85 maf in water year 2019.

Consistent with Section 2.B.5 of the Interim Guidelines, the Intentionally Created Surplus (ICS) Surplus Condition is the criterion governing the operation of Lake Mead for calendar years 2018 and 2019.

The 2019 operational tier determinations will be documented in the 2019 AOP, which is currently in development.

The Interim Guidelines are available for download at: <https://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf>

The 2018 AOP is available for download at: <https://www.usbr.gov/lc/region/g4000/aop/AOP18.pdf>

The draft 2019 AOP is available for download at: https://www.usbr.gov/uc/water/rsvrs/ops/aop/AOP19_Third_Consultation_draft.pdf

Current runoff projections into Lake Powell are provided by the National Weather Service's Colorado Basin River Forecast Center and are as follows: Observed unregulated inflow into Lake Powell for the month of October was 0.351 maf or 69 percent of the 30-year average from 1981 to 2010. The forecast for November unregulated inflow into Lake Powell is 0.320 maf or 68 percent of the 30-year average. The observed 2018 April through July unregulated inflow is 2.602 maf or 36 percent of average.

In this study, the calendar year 2018 diversion for Metropolitan Water District of Southern California (MWD) is forecasted to be 0.857 maf. The calendar year 2018 diversion for the Central Arizona Project (CAP) is forecasted to be 1.503 maf. Consumptive use for Nevada above Hoover (SNWP Use) is forecasted to be 0.255 maf for calendar year 2018.

Due to changing Lake Mead elevations, Hoover's generator capacity is adjusted based on estimated effective capacity and plant availability. The estimated effective capacity is based on projected Lake Mead elevations. Unit capacity tests will be performed as the lake elevation changes. This study reflects these changes in the projections.

Hoover, Davis, and Parker historical gross energy figures come from PO&M reports provided by the Lower Colorado Region's Power Management Office, Bureau of Reclamation, Boulder City, Nevada. Questions regarding these historical energy numbers can be directed to Eric Carty at (702) 293-8129.

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Fontenelle Reservoir



	Regulated Inflow	Evap Losses	Power Release	Bypass Release	Total Release	Reservoir Elev End of Month	Live Storage
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)
* Nov 2017	62	1	78	0	78	6491.65	238
H Dec 2017	46	1	72	8	80	6486.39	204
I Jan 2018	42	1	79	1	80	6479.83	165
S Feb 2018	38	0	72	0	72	6472.86	131
T Mar 2018	58	0	16	56	71	6469.78	117
O Apr 2018	101	1	83	4	87	6472.76	130
R May 2018	354	2	100	123	223	6494.84	260
I Jun 2018	404	2	101	269	370	6499.18	292
C Jul 2018	138	3	92	8	100	6503.79	327
A Aug 2018	50	2	75	1	76	6500.10	299
L Sep 2018	30	2	7	58	65	6495.11	262
WY 2018	1397	15	856	528	1382		
* Oct 2018	42	1	45	20	65	6491.62	238
Nov 2018	43	1	60	0	60	6488.96	222
Dec 2018	33	1	61	0	61	6484.45	193
Jan 2019	32	1	61	0	61	6479.19	162
Feb 2019	30	0	56	0	56	6473.90	136
Mar 2019	48	0	63	0	63	6470.40	121
Apr 2019	75	1	69	0	69	6471.68	126
May 2019	125	1	77	0	77	6481.15	173
Jun 2019	255	2	103	19	122	6500.68	304
Jul 2019	165	3	101	31	132	6504.57	334
Aug 2019	67	2	69	0	69	6504.01	330
Sep 2019	42	2	36	29	65	6500.73	304
WY 2019	957	15	801	100	901		
Oct 2019	46	1	69	0	69	6497.45	280
Nov 2019	41	1	67	0	67	6493.71	253
Dec 2019	32	1	69	0	69	6488.04	215
Jan 2020	30	1	69	0	69	6481.63	176
Feb 2020	28	1	65	0	65	6474.31	138
Mar 2020	53	0	74	0	74	6469.43	117
Apr 2020	85	1	77	0	77	6471.18	124
May 2020	164	1	99	18	117	6480.54	170
Jun 2020	299	2	102	70	173	6499.40	294
Jul 2020	178	3	102	40	141	6503.75	328
Aug 2020	77	2	98	0	98	6500.63	304
Sep 2020	46	2	20	75	95	6493.61	253
WY 2020	1078	15	912	203	1115		
Oct 2020	49	1	98	0	98	6485.94	202

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*

Flaming Gorge Reservoir



Date	Unreg Inflow (1000 Ac-Ft)	Reg Inflow (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Power Release (1000 Ac-Ft)	Bypass Release (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Bank Storage (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	Live Storage (1000 Ac-Ft)	Jensen Flow (1000 Ac-Ft)
* Nov 2017	82	98	4	139	0	139	138	6032.07	3430	166
H Dec 2017	52	86	2	174	0	174	135	6029.85	3343	197
I Jan 2018	52	90	2	175	0	175	131	6027.65	3259	208
S Feb 2018	57	91	2	155	1	157	129	6025.91	3194	197
T Mar 2018	86	99	3	106	0	106	128	6025.65	3184	178
O Apr 2018	121	108	5	101	0	101	128	6025.69	3186	277
R May 2018	422	290	8	163	6	169	133	6028.57	3294	572
I Jun 2018	435	401	11	125	0	125	143	6035.09	3550	278
C Jul 2018	140	102	14	120	0	120	142	6034.33	3519	141
A Aug 2018	42	68	13	124	0	124	139	6032.67	3453	142
L Sep 2018	17	52	11	119	0	119	136	6030.75	3378	132
WY 2018	1594	1580	82	1608	7	1616				2638
* Oct 2018	54	77	7	99	0	99	135	6030.03	3350	131
Nov 2018	48	65	4	89	0	89	134	6029.32	3323	112
Dec 2018	34	62	2	123	0	123	131	6027.75	3263	146
Jan 2019	39	68	2	123	0	123	129	6026.32	3209	143
Feb 2019	45	71	2	111	0	111	128	6025.21	3168	130
Mar 2019	95	110	3	92	0	92	128	6025.60	3182	152
Apr 2019	125	119	5	89	0	89	129	6026.24	3206	239
May 2019	160	112	8	111	0	111	129	6026.07	3200	551
Jun 2019	290	157	10	167	0	167	128	6025.55	3181	592
Jul 2019	185	152	13	85	0	85	130	6026.92	3232	153
Aug 2019	76	78	12	105	0	105	129	6025.93	3195	123
Sep 2019	48	71	11	101	0	101	127	6024.88	3156	115
WY 2019	1199	1142	79	1295	0	1295				2588
Oct 2019	54	77	7	61	0	61	127	6025.10	3164	88
Nov 2019	49	75	3	60	0	60	128	6025.42	3176	88
Dec 2019	35	72	2	105	0	105	126	6024.52	3143	130
Jan 2020	40	79	2	105	0	105	125	6023.82	3117	130
Feb 2020	45	82	2	98	0	98	125	6023.33	3099	126
Mar 2020	102	124	3	68	0	68	127	6024.72	3150	144
Apr 2020	134	125	5	65	0	65	129	6026.15	3203	281
May 2020	245	198	8	213	0	213	128	6025.57	3181	745
Jun 2020	390	263	10	119	0	119	133	6028.98	3310	539
Jul 2020	210	174	14	123	0	123	135	6029.92	3346	223
Aug 2020	89	111	13	123	0	123	134	6029.29	3322	148
Sep 2020	55	104	11	119	0	119	133	6028.64	3297	138
WY 2020	1447	1484	79	1258	0	1258				2780
Oct 2020	59	109	7	123	0	123	132	6028.10	3276	155

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*
Taylor Park Reservoir



Date	Regulated Inflow (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	Live Storage (1000 Ac-Ft)
* Nov 2017	6	6	9315.09	78
H Dec 2017	4	6	9313.84	76
I Jan 2018	4	6	9312.64	74
S Feb 2018	4	6	9311.50	72
T Mar 2018	5	6	9310.51	71
O Apr 2018	8	7	9311.18	72
R May 2018	24	12	9318.33	84
I Jun 2018	13	15	9317.29	82
C Jul 2018	5	14	9311.71	73
A Aug 2018	3	13	9305.51	63
L Sep 2018	3	8	9301.71	58
WY 2018	88	108		
* Oct 2018	5	3	9302.60	59
Nov 2018	4	3	9302.95	59
Dec 2018	3	3	9302.88	59
Jan 2019	3	3	9302.81	59
Feb 2019	2	3	9302.25	58
Mar 2019	3	3	9302.18	58
Apr 2019	5	3	9303.58	60
May 2019	21	10	9310.79	71
Jun 2019	34	15	9321.75	90
Jul 2019	14	18	9319.57	86
Aug 2019	7	15	9315.02	78
Sep 2019	6	13	9310.79	71
WY 2019	106	92		
Oct 2019	6	6	9310.69	71
Nov 2019	5	5	9310.53	71
Dec 2019	5	5	9310.20	70
Jan 2020	4	5	9309.66	69
Feb 2020	4	5	9308.97	68
Mar 2020	4	8	9306.65	65
Apr 2020	9	8	9307.15	65
May 2020	28	30	9306.02	64
Jun 2020	42	30	9313.42	75
Jul 2020	20	10	9319.26	86
Aug 2020	10	8	9320.53	88
Sep 2020	7	8	9320.18	87
WY 2020	144	128		
Oct 2020	7	6	9320.54	88

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Blue Mesa Reservoir



	UnReg Inflow	Regulated Inflow	Evap Losses	Power Release	Bypass Release	Total Release	Reservoir Elev End of Month	Live Storage
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)
* Nov 2017	32	32	0	40	0	40	7499.68	659
H Dec 2017	25	27	0	93	0	93	7491.44	593
I Jan 2018	20	22	0	60	0	60	7486.51	554
S Feb 2018	23	25	0	32	0	32	7485.54	547
T Mar 2018	28	29	0	43	0	43	7483.73	534
O Apr 2018	48	47	1	82	0	82	7478.94	498
R May 2018	112	100	1	85	0	85	7480.90	513
I Jun 2018	56	57	1	98	0	98	7475.06	471
C Jul 2018	21	31	1	101	0	101	7464.43	399
A Aug 2018	19	28	1	93	0	93	7453.77	334
L Sep 2018	12	17	1	30	39	68	7444.44	282
WY 2018	433	453	7	856	39	895		
* Oct 2018	23	22	0	46	11	56	7437.59	248
Nov 2018	20	20	0	21	0	21	7437.22	246
Dec 2018	17	17	0	17	0	17	7437.16	246
Jan 2019	15	15	0	15	0	15	7437.10	245
Feb 2019	13	14	0	15	0	15	7436.75	244
Mar 2019	24	24	0	18	0	18	7438.03	250
Apr 2019	57	55	0	41	0	41	7440.85	264
May 2019	165	154	1	158	0	158	7439.82	259
Jun 2019	220	201	1	81	0	81	7461.00	377
Jul 2019	88	92	1	68	0	68	7464.56	400
Aug 2019	46	54	1	75	0	75	7461.04	378
Sep 2019	35	42	1	68	0	68	7456.60	351
WY 2019	723	709	6	625	11	635		
Oct 2019	36	36	0	42	0	42	7455.52	344
Nov 2019	30	31	0	13	0	13	7458.35	361
Dec 2019	26	26	0	14	0	14	7460.40	374
Jan 2020	24	25	0	13	0	13	7462.27	385
Feb 2020	22	23	0	13	0	13	7463.96	396
Mar 2020	36	40	0	0	14	14	7467.80	421
Apr 2020	77	76	1	0	36	36	7473.65	461
May 2020	221	223	1	6	189	195	7477.40	487
Jun 2020	261	249	1	24	0	24	7505.98	711
Jul 2020	117	107	2	62	0	62	7510.97	754
Aug 2020	63	61	1	71	0	71	7509.65	743
Sep 2020	38	39	1	66	0	66	7506.40	715
WY 2020	952	936	8	325	240	564		
Oct 2020	38	38	1	56	0	56	7504.17	696

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Morrow Point Reservoir



	Unreg Inflow	Blue Mesa Release	Side Inflow	Total Inflow	Power Release	Bypass Release	Total Release	Reservoir Elev End of Month	Live Storage
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)
* Nov 2017	34	40	1	41	42	0	42	7152.45	111
H Dec 2017	26	93	1	94	94	0	94	7152.45	111
I Jan 2018	22	60	2	62	62	0	63	7150.65	110
S Feb 2018	24	32	1	33	34	0	34	7149.19	108
T Mar 2018	29	43	1	44	49	0	49	7143.05	104
O Apr 2018	54	82	6	87	79	0	79	7154.30	112
R May 2018	121	85	8	94	94	0	94	7153.76	112
I Jun 2018	57	98	2	99	99	0	99	7154.16	112
C Jul 2018	22	101	1	102	101	0	101	7155.49	113
A Aug 2018	19	93	0	93	94	0	94	7153.96	112
L Sep 2018	14	68	2	70	84	0	84	7135.77	98
WY 2018	460	895	27	922	935	0	937		
* Oct 2018	24	56	1	57	56	0	56	7136.92	99
Nov 2018	21	21	1	22	9	0	9	7153.73	112
Dec 2018	18	17	1	18	18	0	18	7153.73	112
Jan 2019	17	15	2	17	17	0	17	7153.73	112
Feb 2019	14	15	1	16	16	0	16	7153.73	112
Mar 2019	27	18	3	21	21	0	21	7153.73	112
Apr 2019	65	41	8	49	49	0	49	7153.73	112
May 2019	178	158	13	171	171	0	171	7153.73	112
Jun 2019	235	81	15	96	96	0	96	7153.73	112
Jul 2019	92	68	4	72	72	0	72	7153.73	112
Aug 2019	47	75	1	76	76	0	76	7153.73	112
Sep 2019	36	68	1	69	69	0	69	7153.73	112
WY 2019	774	635	51	686	673	0	673		
Oct 2019	38	42	1	44	44	0	44	7153.73	112
Nov 2019	32	13	2	15	15	0	15	7153.73	112
Dec 2019	28	14	2	16	16	0	16	7153.73	112
Jan 2020	27	13	2	16	16	0	16	7153.73	112
Feb 2020	25	13	3	15	15	0	15	7153.73	112
Mar 2020	40	14	4	18	18	0	18	7153.73	112
Apr 2020	88	36	11	47	47	0	47	7153.73	112
May 2020	247	195	26	221	221	0	221	7153.73	112
Jun 2020	281	24	20	44	44	0	44	7153.73	112
Jul 2020	123	62	6	69	69	0	69	7153.73	112
Aug 2020	67	71	3	75	75	0	75	7153.73	112
Sep 2020	41	66	3	68	68	0	68	7153.73	112
WY 2020	1036	564	84	648	648	0	648		
Oct 2020	41	56	3	58	58	0	58	7153.73	112

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*
Crystal Reservoir



	Unreg Inflow	Morrow Release	Side Inflow	Total Inflow	Power Release	Bypass Release	Total Release	Reservoir Elev End of Month	Live Storage	Tunnel Flow	Below Tunnel Flow
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)
* Nov 2017	38	42	4	46	46	0	46	6749.89	16	1	46
H Dec 2017	29	94	3	97	97	0	97	6749.23	16	1	98
I Jan 2018	25	63	3	66	62	4	66	6747.99	16	1	65
S Feb 2018	27	34	3	37	16	20	36	6750.06	16	0	34
T Mar 2018	33	49	4	52	53	0	53	6747.97	16	13	38
O Apr 2018	60	79	6	84	84	0	84	6749.35	16	53	28
R May 2018	129	94	9	102	102	0	102	6749.41	16	62	39
I Jun 2018	61	99	3	102	102	0	102	6750.48	16	63	42
C Jul 2018	24	101	2	103	103	0	103	6750.59	16	64	41
A Aug 2018	21	94	2	96	98	0	98	6744.83	15	65	36
L Sep 2018	15	84	1	85	87	0	87	6737.22	13	59	33
WY 2018	505	937	45	982	959	26	985			438	553
* Oct 2018	27	56	3	59	55	0	55	6751.87	17	33	24
Nov 2018	24	9	3	12	12	0	12	6753.04	17	0	12
Dec 2018	20	18	2	20	20	0	20	6753.04	17	0	20
Jan 2019	20	17	3	20	20	0	20	6753.04	17	0	20
Feb 2019	16	16	2	18	18	0	18	6753.04	17	0	18
Mar 2019	31	21	4	25	25	0	25	6753.04	17	5	20
Apr 2019	73	49	8	57	57	0	57	6753.04	17	42	15
May 2019	200	171	22	193	134	59	193	6753.04	17	62	131
Jun 2019	270	96	35	131	130	1	131	6753.04	17	61	70
Jul 2019	102	72	10	82	82	0	82	6753.04	17	65	17
Aug 2019	53	76	6	82	82	0	82	6753.04	17	65	17
Sep 2019	41	69	5	74	74	0	74	6753.04	17	55	19
WY 2019	877	673	103	776	710	61	771			388	386
Oct 2019	43	44	5	49	49	0	49	6753.04	17	30	19
Nov 2019	37	15	4	20	20	0	20	6753.04	17	0	20
Dec 2019	32	16	5	20	20	0	20	6753.04	17	0	20
Jan 2020	31	16	5	20	20	0	20	6753.04	17	0	20
Feb 2020	29	15	4	19	0	19	19	6753.04	17	0	19
Mar 2020	46	18	6	25	25	0	25	6753.04	17	5	20
Apr 2020	101	47	12	60	60	0	60	6753.04	17	42	18
May 2020	281	221	34	256	134	121	256	6753.04	17	62	194
Jun 2020	315	44	34	78	78	0	78	6753.04	17	61	17
Jul 2020	138	69	14	83	83	0	83	6753.04	17	65	18
Aug 2020	75	75	8	83	83	0	83	6753.04	17	65	18
Sep 2020	47	68	6	74	74	0	74	6753.04	17	55	19
WY 2020	1175	648	139	786	646	140	786			385	401
Oct 2020	47	58	6	65	65	0	65	6753.04	17	30	35

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*
Vallecito Reservoir



Date	Regulated Inflow (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	Live Storage (1000 Ac-Ft)
* Nov 2017	5	2	7639.49	63
H Dec 2017	3	1	7640.27	65
I Jan 2018	3	0	7641.42	67
S Feb 2018	3	0	7642.57	70
T Mar 2018	4	0	7644.11	73
O Apr 2018	15	3	7649.29	85
R May 2018	30	31	7648.91	84
I Jun 2018	14	35	7639.22	63
C Jul 2018	8	35	7624.15	35
A Aug 2018	5	19	7613.87	22
L Sep 2018	3	4	7613.06	21
WY 2018	102	153		
* Oct 2018	9	3	7617.56	26
Nov 2018	6	1	7621.10	31
Dec 2018	4	0	7623.24	34
Jan 2019	3	0	7624.93	36
Feb 2019	2	0	7625.94	38
Mar 2019	4	0	7628.05	41
Apr 2019	15	0	7635.87	56
May 2019	45	31	7642.55	70
Jun 2019	61	43	7650.24	88
Jul 2019	25	42	7642.87	70
Aug 2019	16	38	7631.96	48
Sep 2019	14	30	7622.38	32
WY 2019	203	189		
Oct 2019	14	17	7619.68	29
Nov 2019	8	2	7623.66	34
Dec 2019	6	2	7626.50	39
Jan 2020	5	2	7628.58	42
Feb 2020	5	2	7630.26	45
Mar 2020	9	2	7633.84	52
Apr 2020	23	2	7644.03	73
May 2020	71	31	7660.29	113
Jun 2020	70	58	7664.83	125
Jul 2020	29	41	7659.94	112
Aug 2020	20	38	7652.71	94
Sep 2020	17	29	7647.67	81
WY 2020	278	226		
Oct 2020	16	16	7647.23	80

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*
Navajo Reservoir



	Mod Unreg	Azetea	Reg	Evap	NIIP	Total	Reservoir Elev	Live	Farmington
	Inflow	Tunnel Div	Inflow	Losses	Diversion	Release	End of Month	Storage	Flow
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)
* Nov 2017	19	0	16	1	0	26	6055.04	1286	41
H Dec 2017	11	0	9	1	0	25	6053.69	1270	40
I Jan 2018	12	0	9	1	0	23	6052.47	1255	40
S Feb 2018	13	0	11	1	1	17	6051.73	1246	33
T Mar 2018	24	2	19	2	6	21	6050.92	1236	30
O Apr 2018	70	13	46	2	20	38	6049.73	1222	42
R May 2018	88	16	71	3	36	32	6049.80	1223	69
I Jun 2018	6	3	24	4	42	42	6044.23	1159	49
C Jul 2018	-9	0	18	4	42	51	6036.94	1080	53
A Aug 2018	-7	0	7	3	42	51	6028.27	991	48
L Sep 2018	2	0	3	2	27	46	6020.80	919	42
WY 2018	268	36	283	24	224	405			540
* Oct 2018	23	1	16	1	7	31	6018.35	897	40
Nov 2018	19	1	13	1	0	19	6017.65	890	29
Dec 2018	15	0	12	0	0	19	6016.81	882	27
Jan 2019	14	0	11	0	0	21	6015.75	873	28
Feb 2019	17	0	15	1	0	16	6015.57	871	22
Mar 2019	46	0	42	1	5	15	6017.83	892	27
Apr 2019	95	2	79	2	21	15	6022.25	933	45
May 2019	185	9	161	3	36	22	6032.55	1034	122
Jun 2019	178	23	137	3	52	21	6038.37	1095	137
Jul 2019	42	22	37	4	57	22	6034.08	1050	71
Aug 2019	32	1	52	3	48	25	6031.79	1027	54
Sep 2019	32	1	47	2	26	21	6031.49	1024	44
WY 2019	698	60	623	21	251	246			645
Oct 2019	39	2	40	1	10	22	6032.25	1031	44
Nov 2019	31	1	24	1	0	21	6032.48	1034	37
Dec 2019	25	0	20	1	0	22	6032.32	1032	37
Jan 2020	22	0	18	1	0	22	6031.96	1028	35
Feb 2020	30	0	27	1	0	20	6032.58	1035	33
Mar 2020	92	0	85	1	6	22	6038.02	1092	44
Apr 2020	170	9	140	2	22	21	6046.69	1187	73
May 2020	277	21	216	3	36	22	6059.56	1342	168
Jun 2020	224	37	174	4	53	28	6066.42	1432	179
Jul 2020	66	29	50	5	57	31	6063.21	1389	98
Aug 2020	45	5	58	4	48	31	6061.36	1365	69
Sep 2020	43	2	53	3	26	30	6060.94	1360	62
WY 2020	1064	105	907	26	257	288			879
Oct 2020	47	2	46	2	0	31	6061.98	1373	59

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Lake Powell



	Unreg	Regulated	Evap	PowerPlant	Bypass	Total	Reservoir Elev	Bank	EOM	Lees
	Inflow	Inflow	Losses	Release	Release	Release	End of Month	Storage	Storage	Ferry Gage
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)
* Nov 2017	387	454	37	630	0	630	3625.29	5200	14332	619
H Dec 2017	299	483	29	740	0	740	3622.85	5179	14068	733
I Jan 2018	262	442	9	860	0	860	3619.14	5147	13672	861
S Feb 2018	269	387	10	730	0	730	3616.02	5121	13346	750
T Mar 2018	332	395	16	800	0	800	3612.23	5090	12956	835
O Apr 2018	382	419	25	705	0	705	3609.39	5067	12669	738
R May 2018	1214	968	29	705	0	705	3611.54	5085	12886	730
I Jun 2018	883	635	45	760	0	760	3609.98	5072	12728	781
C Jul 2018	123	252	53	860	0	860	3603.80	5023	12116	877
A Aug 2018	11	260	50	900	0	900	3597.12	4972	11477	911
L Sep 2018	1	230	45	670	0	670	3592.28	4936	11028	690
WY 2018	4612	5459	386	9000	0	9000				9158
* Oct 2018	351	477	30	625	0	625	3590.46	4923	10862	650
Nov 2018	320	350	29	657	0	657	3587.00	4898	10551	657
Dec 2018	250	343	23	740	0	740	3582.59	4867	10163	745
Jan 2019	235	326	7	860	0	860	3576.74	4827	9662	871
Feb 2019	270	338	7	740	0	740	3572.17	4796	9284	744
Mar 2019	445	411	11	765	0	765	3567.98	4769	8945	770
Apr 2019	690	580	18	670	0	670	3566.73	4761	8845	678
May 2019	1400	1226	21	670	0	670	3572.86	4801	9340	676
Jun 2019	2070	1726	36	740	0	740	3583.24	4871	10220	748
Jul 2019	760	699	44	835	0	835	3581.32	4858	10053	854
Aug 2019	370	470	43	900	0	900	3576.17	4823	9615	918
Sep 2019	340	443	39	650	0	650	3573.43	4805	9387	661
WY 2019	7501	7388	308	8853	0	8853				8972
Oct 2019	455	463	27	480	0	480	3572.94	4801	9347	486
Nov 2019	447	431	26	500	0	500	3571.88	4794	9260	500
Dec 2019	363	417	20	600	0	600	3569.55	4779	9071	605
Jan 2020	361	414	6	720	0	720	3565.93	4756	8782	731
Feb 2020	393	426	6	640	0	640	3563.33	4740	8579	644
Mar 2020	665	544	11	675	0	675	3561.63	4729	8448	680
Apr 2020	1056	827	17	600	0	600	3564.14	4745	8642	608
May 2020	2343	2087	22	600	0	600	3580.69	4854	9998	606
Jun 2020	2666	2052	38	630	0	630	3595.00	4956	11279	638
Jul 2020	1091	999	49	710	0	710	3597.38	4974	11502	729
Aug 2020	500	580	49	760	0	760	3595.12	4957	11291	778
Sep 2020	408	514	45	565	0	565	3594.17	4950	11202	576
WY 2020	10747	9756	315	7480	0	7480				7580
Oct 2020	512	579	31	640	0	640	3593.25	4943	11117	646

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Hoover Dam - Lake Mead



	Glen Release	Side Inflow	Evap Losses	Total Release	Total Release	SNWP Use	Downstream Requirements	Bank Storage	Reservoir Elev End of Month	EOM Storage
Date	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 CFS)	(1000 Ac-Ft)	(1000 Ac-Ft)	(1000 Ac-Ft)	(Ft)	(1000 Ac-Ft)
* Nov 2017	630	40	42	731	12.3	16	731	656	1080.95	10090
H Dec 2017	740	43	37	594	9.7	12	593	664	1082.52	10221
I Jan 2018	860	78	30	449	7.3	10	448	692	1087.50	10642
S Feb 2018	730	60	28	687	12.4	10	693	696	1088.21	10703
T Mar 2018	800	70	32	833	13.5	14	832	695	1088.11	10694
O Apr 2018	705	43	39	1015	17.1	21	1015	675	1084.49	10387
R May 2018	705	21	44	1055	17.1	27	1054	651	1080.00	10011
I Jun 2018	760	27	53	986	16.6	28	985	634	1076.81	9748
C Jul 2018	860	106	65	820	13.3	27	819	637	1077.43	9799
A Aug 2018	900	74	70	749	12.2	28	748	645	1078.88	9918
L Sep 2018	670	86	58	725	12.2	26	724	642	1078.29	9870
WY 2018	9000	692	541	9240		243	9237			
* Oct 2018	625	101	42	641	10.4	23	634	643	1078.52	9889
Nov 2018	657	61	42	693	11.6	24	693	640	1078.05	9850
Dec 2018	740	50	36	454	7.4	17	454	657	1081.25	10115
Jan 2019	860	78	30	618	10.0	12	618	674	1084.36	10375
Feb 2019	740	93	28	684	12.3	14	684	681	1085.55	10476
Mar 2019	765	56	31	1054	17.1	21	1054	664	1082.37	10208
Apr 2019	670	48	38	1058	17.8	23	1058	639	1077.82	9831
May 2019	670	31	43	966	15.7	27	966	619	1073.96	9516
Jun 2019	740	12	51	907	15.2	33	907	604	1071.16	9292
Jul 2019	835	81	64	825	13.4	36	825	603	1071.06	9284
Aug 2019	900	112	68	739	12.0	34	739	614	1073.06	9444
Sep 2019	650	105	56	733	12.3	27	733	610	1072.35	9387
WY 2019	8853	828	530	9372		292	9365			
Oct 2019	480	69	41	509	8.3	28	509	608	1072.00	9359
Nov 2019	500	61	41	669	11.2	21	669	598	1070.01	9200
Dec 2019	600	50	35	593	9.6	14	593	598	1070.10	9208
Jan 2020	720	78	29	607	9.9	14	607	608	1071.85	9347
Feb 2020	640	93	26	663	11.5	17	663	609	1072.16	9372
Mar 2020	675	56	29	988	16.1	22	988	590	1068.53	9083
Apr 2020	600	48	36	997	16.8	25	997	565	1063.59	8697
May 2020	600	31	40	917	14.9	31	917	544	1059.20	8362
Jun 2020	630	12	48	929	15.6	31	929	521	1054.60	8019
Jul 2020	710	81	59	813	13.2	31	813	514	1053.18	7914
Aug 2020	760	112	62	773	12.6	28	773	515	1053.29	7922
Sep 2020	565	105	51	701	11.8	25	701	508	1051.92	7822
WY 2020	7480	796	498	9160		285	9160			
Oct 2020	640	69	37	473	7.7	25	473	519	1054.14	7985

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Davis Dam - Lake Mohave



	Date	Hoover Release (1000 Ac-Ft)	Side Inflow (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Power Release (1000 Ac-Ft)	Spill Release (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Total Release (1000 CFS)	Reservoir Elev End of Month (Ft)	EOM Storage (1000 Ac-Ft)
*	Nov 2017	731	-18	11	595	0	595	10.0	640.07	1619
H	Dec 2017	594	-16	9	552	0	552	9.0	640.68	1636
I	Jan 2018	449	2	10	437	0	437	7.1	640.86	1641
S	Feb 2018	687	-4	10	611	0	611	11.0	643.18	1704
T	Mar 2018	833	-1	13	836	0	836	13.6	642.57	1687
O	Apr 2018	1015	-3	17	1001	0	1001	16.8	642.40	1682
R	May 2018	1055	-11	22	1001	0	1001	16.3	643.17	1703
I	Jun 2018	986	-21	26	909	0	909	15.3	644.29	1734
C	Jul 2018	820	-6	26	827	0	827	13.4	642.91	1696
A	Aug 2018	749	-13	23	730	0	730	11.9	642.29	1679
L	Sep 2018	725	-11	18	814	0	814	13.7	637.87	1561
WY 2018		9240	-103	198	8981	0	8981			
*	Oct 2018	641	-11	15	635	0	635	10.3	637.08	1540
	Nov 2018	693	-12	11	627	0	627	10.5	638.70	1583
	Dec 2018	454	-12	9	433	0	433	7.0	638.70	1583
	Jan 2019	618	-19	10	506	0	506	8.2	641.80	1666
	Feb 2019	684	-15	10	659	0	659	11.9	641.80	1666
	Mar 2019	1054	-17	13	990	0	990	16.1	643.05	1700
	Apr 2019	1058	-20	17	1023	0	1023	17.2	643.00	1699
	May 2019	966	-12	22	932	0	932	15.2	643.00	1699
	Jun 2019	907	-15	25	866	0	866	14.6	643.00	1699
	Jul 2019	825	-15	25	811	0	811	13.2	642.00	1671
	Aug 2019	739	-12	23	705	0	705	11.5	642.00	1671
	Sep 2019	733	-12	18	756	0	756	12.7	640.01	1618
WY 2019		9372	-174	198	8943	0	8943			
	Oct 2019	509	-4	15	674	0	674	11.0	633.00	1434
	Nov 2019	669	-12	10	595	0	595	10.0	635.00	1486
	Dec 2019	593	-12	9	475	0	475	7.7	638.71	1583
	Jan 2020	607	-19	10	496	0	496	8.1	641.80	1666
	Feb 2020	663	-15	10	638	0	638	11.1	641.80	1666
	Mar 2020	988	-17	13	923	0	923	15.0	643.05	1700
	Apr 2020	997	-20	17	962	0	962	16.2	643.00	1699
	May 2020	917	-12	22	882	0	882	14.3	643.00	1699
	Jun 2020	929	-15	25	889	0	889	14.9	643.00	1699
	Jul 2020	813	-15	25	800	0	800	13.0	642.00	1671
	Aug 2020	773	-12	23	739	0	739	12.0	642.00	1671
	Sep 2020	701	-12	18	724	0	724	12.2	640.01	1618
WY 2020		9160	-166	197	8796	0	8796			
	Oct 2020	473	-4	15	637	0	637	10.4	633.00	1434

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*

Parker Dam - Lake Havasu



	Date	Davis Release (1000 Ac-Ft)	Side Inflow (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Total Release (1000 CFS)	MWD Diversion (1000 Ac-Ft)	CAP Diversion (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	EOM Storage (1000 Ac-Ft)	Flow To Mexico (1000 Ac-Ft)	Flow To Mexico (1000 CFS)
*	Nov 2017	595	12	9	349	5.9	89	127	447.86	577	99	1.7
H	Dec 2017	552	17	7	335	5.5	100	144	446.80	557	109	1.8
I	Jan 2018	437	3	6	329	5.3	29	90	445.81	539	125	2.0
S	Feb 2018	611	3	8	429	7.7	12	109	448.52	590	145	2.6
T	Mar 2018	836	-3	9	637	10.4	61	139	447.46	570	195	3.2
O	Apr 2018	1001	-8	11	735	12.4	75	168	447.13	564	175	2.9
R	May 2018	1001	10	13	697	11.3	87	178	448.51	590	124	2.0
I	Jun 2018	909	6	15	712	12.0	91	88	448.43	588	136	2.3
C	Jul 2018	827	20	17	656	10.7	101	72	448.00	580	133	2.2
A	Aug 2018	730	21	17	611	9.9	99	22	447.53	571	104	1.7
L	Sep 2018	814	10	15	512	8.6	95	164	448.95	598	94	1.6
	WY 2018	8981	100	139	6479		910	1431			1504	
*	Oct 2018	635	22	12	394	6.4	86	176	448.12	582	68	1.1
	Nov 2018	627	16	9	383	6.4	82	176	447.50	571	97	1.6
	Dec 2018	433	18	7	299	4.9	39	121	446.50	552	104	1.7
	Jan 2019	506	21	6	318	5.2	78	120	446.50	552	138	2.2
	Feb 2019	659	11	8	485	8.7	51	120	446.50	552	160	2.9
	Mar 2019	990	7	9	718	11.7	69	188	446.70	555	198	3.2
	Apr 2019	1023	16	11	710	11.9	88	183	448.70	593	175	2.9
	May 2019	932	15	13	642	10.4	90	188	448.70	593	104	1.7
	Jun 2019	866	13	16	683	11.5	88	78	448.70	593	105	1.8
	Jul 2019	811	21	17	647	10.5	90	78	448.00	580	111	1.8
	Aug 2019	705	23	17	589	9.6	90	29	447.50	571	100	1.6
	Sep 2019	756	17	15	509	8.6	88	152	447.50	570	89	1.5
	WY 2019	8943	199	140	6377		941	1609			1449	
	Oct 2019	674	23	12	490	8.0	48	140	447.50	571	74	1.2
	Nov 2019	595	16	9	408	6.9	48	140	447.50	571	116	1.9
	Dec 2019	475	18	7	313	5.1	48	140	446.50	552	131	2.1
	Jan 2020	496	21	6	313	5.1	87	106	446.50	552	134	2.2
	Feb 2020	638	11	8	479	8.3	57	100	446.50	552	155	2.7
	Mar 2020	923	7	9	708	11.5	77	125	446.70	555	191	3.1
	Apr 2020	962	16	11	699	11.7	97	125	448.70	593	168	2.8
	May 2020	882	15	13	635	10.3	99	137	448.70	593	100	1.6
	Jun 2020	889	13	16	675	11.3	97	100	448.70	593	102	1.7
	Jul 2020	800	21	17	642	10.4	99	62	448.00	580	107	1.7
	Aug 2020	739	23	17	587	9.5	99	56	447.50	571	97	1.6
	Sep 2020	724	17	15	507	8.5	97	112	447.50	570	86	1.5
	WY 2020	8796	200	139	6455		955	1342			1460	
	Oct 2020	637	23	12	475	7.7	54	112	447.50	571	71	1.2

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*

Hoover Dam - Lake Mead



Date	Power Release (1000 Ac-Ft)	Power Release (1000 CFS)	Reservoir Elev End of Month (Ft)	EOM Storage (1000 Ac-Ft)	Change In Storage (1000 Ac-Ft)	Hoover Static Head (Ft)	Hoover Gen Capacity MW	Hoover Gross Energy MKWH	Percent of Units Available	KWH/AF
* Nov 2017	731	12.3	1080.95	10090	-113	435.01	996.0	287.9	63	393.6
H Dec 2017	594	9.7	1082.52	10221	131	439.05	821.0	235.7	52	396.6
I Jan 2018	449	7.3	1087.50	10642	421	442.14	834.0	176.5	51	392.9
S Feb 2018	687	12.4	1088.21	10703	61	441.97	1220.1	275.0	75	400.3
T Mar 2018	833	13.5	1088.11	10694	-9	442.23	1005.9	333.9	62	400.8
O Apr 2018	1015	17.1	1084.49	10387	-308	437.15	880.9	406.2	55	400.0
R May 2018	1055	17.1	1080.00	10011	-376	432.39	1385.9	412.1	88	390.8
I Jun 2018	986	16.6	1076.81	9748	-263	428.91	1552.0	378.6	100	384.1
C Jul 2018	820	13.3	1077.43	9799	51	432.34	1552.0	313.2	100	382.0
A Aug 2018	749	12.2	1078.88	9918	119	435.01	1562.0	287.4	100	383.8
L Sep 2018	725	12.2	1078.29	9870	-49	434.15	1562.0	278.7	100	384.7
WY 2018	9240							3614.3		
* Oct 2018	641	10.4	1078.52	9889	19	435.29	1406.1	247.8	87	386.7
Nov 2018	693	11.6	1078.05	9850	-39	433.65	755.0	277.9	49	401.0
Dec 2018	454	7.4	1081.25	10115	265	433.17	950.0	177.5	61	390.5
Jan 2019	618	10.0	1084.36	10375	261	435.09	999.0	243.8	63	394.6
Feb 2019	684	12.3	1085.55	10476	101	436.20	1006.1	273.5	63	400.1
Mar 2019	1054	17.1	1082.37	10208	-268	434.74	1000.0	425.7	63	403.8
Apr 2019	1058	17.8	1077.82	9831	-377	430.91	925.9	428.0	60	404.5
May 2019	966	15.7	1073.96	9516	-315	426.74	913.0	384.5	60	397.9
Jun 2019	907	15.2	1071.16	9292	-225	419.15	1512.0	343.2	100	378.6
Jul 2019	825	13.4	1071.06	9284	-8	418.04	1512.0	313.9	100	380.6
Aug 2019	739	12.0	1073.06	9444	160	419.31	1528.0	279.1	100	377.5
Sep 2019	733	12.3	1072.35	9387	-57	420.59	1528.0	278.2	100	379.6
WY 2019	9372							3673.2		
Oct 2019	509	8.3	1072.00	9359	-28	423.65	1326.9	195.9	88	384.6
Nov 2019	669	11.2	1070.01	9200	-159	427.60	919.0	259.9	61	388.6
Dec 2019	593	9.6	1070.10	9208	7	424.41	972.0	227.3	65	383.2
Jan 2020	607	9.9	1071.85	9347	139	422.86	1025.0	232.3	67	382.5
Feb 2020	663	11.5	1072.16	9372	25	422.59	1067.0	254.1	70	383.2
Mar 2020	988	16.1	1068.53	9083	-289	421.20	952.1	382.5	63	387.3
Apr 2020	997	16.8	1063.59	8697	-385	416.95	878.6	386.7	60	387.7
May 2020	917	14.9	1059.20	8362	-335	412.32	865.1	349.6	60	381.3
Jun 2020	929	15.6	1054.60	8019	-343	403.65	1421.9	338.9	100	364.7
Jul 2020	813	13.2	1053.18	7914	-105	400.99	1413.8	295.8	100	363.8
Aug 2020	773	12.6	1053.29	7922	8	400.67	1414.5	279.8	100	361.8
Sep 2020	701	11.8	1051.92	7822	-100	400.69	1406.7	251.9	100	359.5
WY 2020	9160							3454.7		
Oct 2020	473	7.7	1054.14	7985	163	404.67	1245.6	173.3	88	366.4

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*

Davis Dam - Lake Mohave



Date	Power Release (1000 Ac-Ft)	Power Release (1000 CFS)	Reservoir Elev End of Month (Ft)	EOM Storage (1000 Ac-Ft)	Change In Storage (1000 Ac-Ft)	Davis Static Head (Ft)	Davis Gen Capacity MW	Davis Gross Energy MKWH	Percent of Units Available	KWH/AF
* Nov 2017	595	10.0	640.07	1619	107	138.81	151.3	73.1	59	122.7
H Dec 2017	552	9.0	640.68	1636	17	139.44	131.6	69.5	52	126.0
I Jan 2018	437	7.1	640.86	1641	5	141.78	159.6	55.0	63	125.9
S Feb 2018	611	11.0	643.18	1704	63	142.18	162.1	76.6	64	125.4
T Mar 2018	836	13.6	642.57	1687	-17	139.99	189.2	105.4	74	126.1
O Apr 2018	1001	16.8	642.40	1682	-5	141.14	207.4	125.1	81	125.0
R May 2018	1001	16.3	643.17	1703	21	141.89	204.0	126.2	80	126.1
I Jun 2018	909	15.3	644.29	1734	31	143.00	255.0	115.0	100	126.6
C Jul 2018	827	13.4	642.91	1696	-38	141.79	255.0	105.3	100	127.4
A Aug 2018	730	11.9	642.29	1679	-17	141.02	255.0	92.7	100	127.1
L Sep 2018	814	13.7	637.87	1561	-119	136.59	255.0	101.2	100	124.3
WY 2018	8981							1126.3		
* Oct 2018	635	10.3	637.08	1540	-21	135.95	184.3	77.8	72	122.4
Nov 2018	627	10.5	638.70	1583	43	133.68	158.1	76.6	62	122.2
Dec 2018	433	7.0	638.70	1583	0	132.90	207.3	53.9	81	124.3
Jan 2019	506	8.2	641.80	1666	83	134.32	213.9	63.3	84	125.2
Feb 2019	659	11.9	641.80	1666	0	136.12	207.6	82.5	81	125.2
Mar 2019	990	16.1	643.05	1700	34	136.76	207.3	123.1	81	124.4
Apr 2019	1023	17.2	643.00	1699	-1	136.60	234.6	127.5	92	124.6
May 2019	932	15.2	643.00	1699	0	136.04	255.0	116.7	100	125.2
Jun 2019	866	14.6	643.00	1699	0	136.04	255.0	108.6	100	125.4
Jul 2019	811	13.2	642.00	1671	-27	135.51	255.0	101.8	100	125.4
Aug 2019	705	11.5	642.00	1671	0	134.99	255.0	88.5	100	125.5
Sep 2019	756	12.7	640.01	1618	-54	133.94	255.0	93.9	100	124.2
WY 2019	8943							1114.1		
Oct 2019	674	11.0	633.00	1434	-183	131.28	185.9	81.4	73	120.8
Nov 2019	595	10.0	635.00	1486	51	129.81	153.0	70.7	60	118.9
Dec 2019	475	7.7	638.71	1583	97	131.17	200.7	58.1	79	122.3
Jan 2020	496	8.1	641.80	1666	83	134.32	213.9	62.1	84	125.3
Feb 2020	638	11.1	641.80	1666	0	136.12	207.6	80.1	81	125.5
Mar 2020	923	15.0	643.05	1700	34	136.76	207.3	115.2	81	124.8
Apr 2020	962	16.2	643.00	1699	-1	136.60	234.6	120.2	92	124.9
May 2020	882	14.3	643.00	1699	0	136.04	255.0	110.7	100	125.5
Jun 2020	889	14.9	643.00	1699	0	136.04	255.0	111.3	100	125.3
Jul 2020	800	13.0	642.00	1671	-27	135.51	255.0	100.3	100	125.5
Aug 2020	739	12.0	642.00	1671	0	134.99	255.0	92.6	100	125.4
Sep 2020	724	12.2	640.01	1618	-54	133.94	255.0	90.0	100	124.4
WY 2020	8796							1092.8		
Oct 2020	637	10.4	633.00	1434	-183	131.28	185.9	77.1	73	121.0

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

November 2018 24-Month Study

Most Probable Inflow*

Parker Dam - Lake Havasu



Date	Power Release (1000 Ac-Ft)	Power Release (1000 CFS)	Reservoir Elev End of Month (Ft)	EOM Storage (1000 Ac-Ft)	Change In Storage (1000 Ac-Ft)	Parker Static Head (Ft)	Parker Gen Capacity MW	Parker Gross Energy MKWH	Percent of Units Available	KWH/AF
* Nov 2017	349	5.9	447.86	577	30	81.65	90.0	24.1	75	69.2
H Dec 2017	335	5.5	446.80	557	-20	81.55	92.9	22.5	77	67.0
I Jan 2018	329	5.3	445.81	539	-18	80.05	117.1	22.8	98	69.2
S Feb 2018	429	7.7	448.52	590	50	81.30	92.1	30.3	77	70.6
T Mar 2018	638	10.4	447.46	570	-20	81.79	102.6	44.9	85	70.4
O Apr 2018	735	12.4	447.13	564	-6	81.11	120.0	50.8	100	69.1
R May 2018	697	11.3	448.51	590	26	82.36	120.0	48.5	100	69.6
I Jun 2018	712	12.0	448.43	588	-1	80.33	120.0	49.7	100	69.9
C Jul 2018	656	10.7	448.00	580	-8	81.97	120.0	46.0	100	70.2
A Aug 2018	611	9.9	447.53	571	-9	79.27	120.0	42.7	100	69.9
L Sep 2018	512	8.6	448.95	598	27	83.02	120.0	35.9	100	70.1
WY 2018	6479							451.7		
* Oct 2018	394	6.4	448.12	582	-16	82.83	90.0	27.9	75	70.9
Nov 2018	383	6.4	447.50	571	-12	76.44	93.0	25.0	78	65.4
Dec 2018	299	4.9	446.50	552	-19	74.69	113.2	18.9	94	63.0
Jan 2019	318	5.2	446.50	552	0	75.27	91.0	20.3	76	63.8
Feb 2019	485	8.7	446.50	552	0	75.21	92.1	31.8	77	65.5
Mar 2019	718	11.7	446.70	555	4	74.05	119.0	46.7	99	65.0
Apr 2019	710	11.9	448.70	593	38	75.08	120.0	46.7	100	65.8
May 2019	642	10.4	448.70	593	0	76.05	120.0	42.6	100	66.3
Jun 2019	683	11.5	448.70	593	0	76.05	120.0	45.4	100	66.5
Jul 2019	647	10.5	448.00	580	-13	75.71	120.0	42.7	100	66.1
Aug 2019	589	9.6	447.50	571	-9	75.13	120.0	38.5	100	65.4
Sep 2019	509	8.6	447.50	570	0	74.89	120.0	33.1	100	65.0
WY 2019	6377							419.7		
Oct 2019	490	8.0	447.50	571	0	76.29	90.0	32.4	75	66.1
Nov 2019	408	6.9	447.50	571	0	76.14	93.0	26.7	78	65.5
Dec 2019	313	5.1	446.50	552	-19	74.65	114.2	19.7	95	63.2
Jan 2020	313	5.1	446.50	552	0	75.07	94.8	19.9	79	63.6
Feb 2020	479	8.3	446.50	552	0	75.21	92.1	31.3	77	65.4
Mar 2020	708	11.5	446.70	555	4	74.01	120.0	45.9	100	64.9
Apr 2020	699	11.7	448.70	593	38	75.08	120.0	46.0	100	65.8
May 2020	635	10.3	448.70	593	0	76.05	120.0	42.1	100	66.3
Jun 2020	675	11.3	448.70	593	0	76.05	120.0	44.9	100	66.5
Jul 2020	642	10.4	448.00	580	-13	75.71	120.0	42.4	100	66.0
Aug 2020	587	9.5	447.50	571	-9	75.13	120.0	38.4	100	65.4
Sep 2020	507	8.5	447.50	570	0	74.89	120.0	32.9	100	65.0
WY 2020	6455							422.7		
Oct 2020	475	7.7	447.50	571	0	76.29	90.0	31.4	75	66.0

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OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Upper Basin Power



Date	Glen Canyon 1000 MWHR	Flaming Gorge 1000 MWHR	Blue Mesa 1000 MWHR	Morrow Point 1000 MWHR	Crystal Reservoir 1000 MWHR	Fontenelle Reservoir 1000 MWHR
* Nov 2017	288	55	12	14	8	7
H Dec 2017	339	68	27	33	19	6
I Jan 2018	394	68	17	21	12	6
S Feb 2018	335	60	9	12	3	5
T Mar 2018	364	41	12	16	9	1
Winter 2018	2013	334	107	133	71	31
O Apr 2018	318	39	23	27	16	5
R May 2018	318	63	23	33	20	7
I Jun 2018	343	50	27	34	20	8
C Jul 2018	384	48	27	36	20	8
A Aug 2018	393	50	24	33	19	7
L Sep 2018	288	47	8	29	16	1
Summer 2018	2045	297	133	193	111	36
* Oct 2018	268	39	11	19	9	4
Nov 2018	254	33	5	3	2	5
Dec 2018	283	45	4	7	4	5
Jan 2019	326	45	4	6	4	5
Feb 2019	277	41	4	6	3	4
Mar 2019	284	34	4	7	4	4
Winter 2019	1691	236	33	48	26	26
Apr 2019	247	33	10	17	10	5
May 2019	248	40	40	62	23	5
Jun 2019	278	61	21	35	22	9
Jul 2019	317	31	19	26	14	10
Aug 2019	338	38	21	28	14	7
Sep 2019	243	37	19	25	13	3
Summer 2019	1672	240	129	193	97	38
Oct 2019	179	22	11	16	9	6
Nov 2019	185	22	4	5	3	6
Dec 2019	222	38	4	6	4	6
Jan 2020	265	38	4	6	4	5
Feb 2020	233	36	3	5	0	5
Mar 2020	245	25	0	7	4	5
Winter 2020	1330	180	26	45	23	33
Apr 2020	218	24	0	17	10	5
May 2020	223	78	2	80	23	7
Jun 2020	242	44	7	16	13	9
Jul 2020	277	45	19	25	14	10
Aug 2020	297	45	22	27	14	9
Sep 2020	221	44	20	25	13	2
Summer 2020	1257	235	50	164	76	39
Oct 2020	250	45	17	21	11	8

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



November 2018 24-Month Study

Most Probable Inflow*

Flood Control Criteria

Beginning of Month Conditions



Date	Flaming	Blue	Navajo	Lake	Upper Basin	Lake	Total	Total	Flaming	Blue	Tot or Max	Lake	Lake	BOM Space		Mead	Mead	Sys	
	Gorge	Mesa	KAF	Powell	Total	Mead			KAF	KAF	Gorge	Mesa	Navajo	Allow	Powell	Mead	Total	Required	Sched Rel
	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	KAF	MAF
**** PREDICTED SPACE ****								**** CREDITABLE SPACE ****											
Nov 2018	505	582	799	13460	15346	17488	32834	32834	505	582	799	1886	13460	17488	32834	3810	693	0	27.4
Dec 2018	549	584	806	13771	15709	17527	33237	33237	549	584	806	1939	13771	17527	33237	4580	454	0	27.2
Jan 2019	638	584	814	14159	16195	17262	33457	33457	638	584	814	2036	14159	17262	33457	5350	618	0	26.9
**** EFFECTIVE SPACE ****								**** CREDITABLE SPACE ****											
Jan 2019	638	584	814	14159	16195	17262	33457	33457	160	185	352	697	14159	17262	32118	5350	618	0	26.9
Feb 2019	722	584	823	14660	16789	17002	33791	33791	244	185	361	790	14660	17002	32452	1500	684	0	26.6
Mar 2019	790	586	825	15038	17239	16901	34140	34140	310	188	362	860	15038	16901	32799	1500	1054	0	26.0
Apr 2019	791	580	804	15377	17552	17169	34721	34721	308	181	335	824	15377	17169	33370	1500	1058	0	25.7
May 2019	761	566	763	15477	17567	17546	35113	35113	272	165	271	708	15477	17546	33730	1500	966	0	26.0
Jun 2019	721	571	662	14982	16935	17861	34796	34796	223	158	131	512	14982	17861	33355	1500	907	0	27.0
Jul 2019	609	452	601	14102	15764	18085	33850	33850	100	20	15	134	14102	18085	32322	1500	825	0	26.8
**** CREDITABLE SPACE ****								**** CREDITABLE SPACE ****											
Aug 2019	528	430	646	14269	15873	18093	33966	33966	528	430	646	1603	14269	18093	33966	1500	739	0	26.4
Sep 2019	570	452	669	14707	16398	17933	34331	34331	570	452	669	1691	14707	17933	34331	2270	733	0	26.0
Oct 2019	634	479	672	14935	16720	17990	34710	34710	634	479	672	1785	14935	17990	34710	3040	509	0	25.7
Nov 2019	650	485	665	14975	16775	18018	34793	34793	650	485	665	1800	14975	18018	34793	3810	669	0	25.5
Dec 2019	665	468	662	15062	16858	18177	35035	35035	665	468	662	1796	15062	18177	35035	4580	593	0	25.4
Jan 2020	736	456	664	15251	17107	18169	35276	35276	736	456	664	1856	15251	18169	35276	5350	607	0	25.3
**** EFFECTIVE SPACE ****								**** CREDITABLE SPACE ****											
Jan 2020	736	456	664	15251	17107	18169	35276	35276	375	401	547	1323	15251	18169	34744	5350	607	0	25.3
Feb 2020	801	444	668	15540	17453	18030	35483	35483	439	390	550	1380	15540	18030	34950	1500	663	0	25.0
Mar 2020	857	433	661	15743	17695	18005	35700	35700	493	380	543	1416	15743	18005	35165	1500	988	0	24.8
Apr 2020	827	408	604	15874	17715	18294	36009	36009	458	359	479	1296	15874	18294	35464	1500	997	0	24.8
May 2020	767	369	509	15680	17324	18680	36004	36004	390	317	360	1067	15680	18680	35427	1500	917	0	26.0
Jun 2020	743	342	354	14324	15762	19015	34777	34777	358	292	165	815	14324	19015	34153	1500	929	0	27.5
Jul 2020	490	118	264	13043	13915	19358	33273	33273	87	55	19	161	13043	19358	32561	1500	813	0	27.7
**** CREDITABLE SPACE ****								**** CREDITABLE SPACE ****											
Aug 2020	420	75	307	12820	13622	19463	33085	33085	420	75	307	802	12820	19463	33085	1500	773	0	27.4
Sep 2020	469	87	331	13031	13917	19455	33372	33372	469	87	331	886	13031	19455	33372	2270	701	0	27.1
Oct 2020	545	115	336	13120	14115	19555	33670	33670	545	115	336	995	13120	19555	33670	3040	473	0	26.9

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