

To: All Annual Operating Plan Recipients

From: Lower Colorado Region  
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The operation of Lake Powell and Lake Mead in this December 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 December 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 December 24-Month Study projects a balancing release of 8.66 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/lc/region/g4000/AOP2019/AOP19\\_draft.pdf](https://www.usbr.gov/lc/region/g4000/AOP2019/AOP19_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 November was 0.253 maf or 53 percent of the 30-year average from 1981 to 2010. The forecast for December unregulated inflow into Lake Powell is 0.240 maf or 66 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 0.892 maf. The calendar year 2017 diversion for the Central Arizona Project (CAP) is forecasted to be 1.523 maf. Consumptive use for Nevada above Hoover (SNWP Use) is forecasted to be 0.238 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**

**December 2018 24-Month Study**

Most Probable Inflow\*

**Fontenelle Reservoir**



	Date	Regulated Inflow (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Power Release (1000 Ac-Ft)	Bypass Release (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	Live Storage (1000 Ac-Ft)
*	Dec 2017	46	1	72	8	80	6486.39	204
H	Jan 2018	42	1	79	1	80	6479.83	165
I	Feb 2018	38	0	72	0	72	6472.86	131
S	Mar 2018	58	0	16	56	71	6469.78	117
T	Apr 2018	101	1	83	4	87	6472.76	130
O	May 2018	354	2	100	123	223	6494.84	260
R	Jun 2018	404	2	101	269	370	6499.18	292
I	Jul 2018	138	3	92	8	100	6503.79	327
C	Aug 2018	50	2	75	1	76	6500.10	299
A	Sep 2018	30	2	7	58	65	6495.11	262
<b>WY 2018</b>		<b>1397</b>	<b>15</b>	<b>856</b>	<b>528</b>	<b>1382</b>		
L	Oct 2018	42	1	45	20	65	6491.62	238
*	Nov 2018	38	1	60	0	60	6488.29	216
	Dec 2018	31	1	61	0	61	6483.36	186
	Jan 2019	30	1	61	0	61	6477.52	154
	Feb 2019	28	0	56	0	56	6471.58	126
	Mar 2019	45	0	58	0	58	6468.31	112
	Apr 2019	70	1	61	0	61	6470.26	120
	May 2019	125	1	73	0	73	6480.80	171
	Jun 2019	240	2	102	20	122	6498.42	287
	Jul 2019	155	3	102	8	110	6503.98	330
	Aug 2019	65	2	68	0	68	6503.35	325
	Sep 2019	41	2	36	29	65	6499.94	298
<b>WY 2019</b>		<b>910</b>	<b>15</b>	<b>784</b>	<b>77</b>	<b>861</b>		
	Oct 2019	45	1	69	0	69	6496.52	273
	Nov 2019	41	1	67	0	67	6492.69	246
	Dec 2019	32	1	69	0	69	6486.96	208
	Jan 2020	30	1	69	0	69	6480.37	169
	Feb 2020	28	0	65	0	65	6472.79	131
	Mar 2020	53	0	71	0	71	6468.49	113
	Apr 2020	85	1	77	0	77	6470.27	120
	May 2020	164	1	98	19	117	6479.87	166
	Jun 2020	299	2	102	71	173	6498.88	291
	Jul 2020	178	3	102	39	141	6503.26	324
	Aug 2020	77	2	98	0	98	6500.13	300
	Sep 2020	46	2	21	75	95	6493.07	249
<b>WY 2020</b>		<b>1077</b>	<b>15</b>	<b>909</b>	<b>203</b>	<b>1112</b>		
	Oct 2020	49	1	98	0	98	6485.34	198
	Nov 2020	42	1	95	0	95	6475.57	144

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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)
* Dec 2017	52	86	2	174	0	174	135	6029.85	3343	197
H Jan 2018	52	90	2	175	0	175	131	6027.65	3259	208
I Feb 2018	57	91	2	155	1	157	129	6025.91	3194	197
S Mar 2018	86	99	3	106	0	106	128	6025.65	3184	178
T Apr 2018	121	108	5	101	0	101	128	6025.69	3186	277
O May 2018	422	290	8	163	6	169	133	6028.57	3294	572
R Jun 2018	435	401	11	125	0	125	143	6035.09	3550	278
I Jul 2018	140	102	14	120	0	120	142	6034.33	3519	141
C Aug 2018	42	68	13	124	0	124	139	6032.67	3453	142
A Sep 2018	17	52	11	119	0	119	136	6030.75	3378	132
<b>WY 2018</b>	<b>1594</b>	<b>1580</b>	<b>82</b>	<b>1608</b>	<b>7</b>	<b>1616</b>				<b>2638</b>
L Oct 2018	54	77	7	99	0	99	135	6030.03	3350	131
* Nov 2018	40	61	4	93	0	93	133	6029.15	3316	121
Dec 2018	31	61	2	123	0	123	131	6027.55	3256	139
Jan 2019	36	67	2	123	0	123	129	6026.09	3201	139
Feb 2019	39	67	2	111	0	111	127	6024.88	3156	129
Mar 2019	88	101	3	61	0	61	128	6025.83	3191	116
Apr 2019	105	96	5	60	0	60	130	6026.66	3222	210
May 2019	160	108	8	61	0	61	131	6027.64	3259	501
Jun 2019	270	152	10	137	0	137	131	6027.76	3263	562
Jul 2019	175	130	13	85	0	85	133	6028.54	3293	153
Aug 2019	73	76	13	105	0	105	131	6027.49	3253	123
Sep 2019	48	72	11	101	0	101	129	6026.48	3215	115
<b>WY 2019</b>	<b>1118</b>	<b>1069</b>	<b>80</b>	<b>1159</b>	<b>0</b>	<b>1159</b>				<b>2440</b>
Oct 2019	54	78	7	68	0	68	130	6026.56	3218	94
Nov 2019	49	75	3	65	0	65	130	6026.72	3224	94
Dec 2019	35	72	2	111	0	111	128	6025.68	3185	136
Jan 2020	40	79	2	111	0	111	127	6024.82	3154	136
Feb 2020	45	82	2	104	0	104	126	6024.19	3130	131
Mar 2020	102	120	3	80	0	80	127	6025.17	3167	157
Apr 2020	134	125	5	77	0	77	129	6026.29	3208	293
May 2020	245	198	8	92	0	92	133	6028.79	3303	624
Jun 2020	390	263	11	207	0	207	135	6029.94	3347	627
Jul 2020	210	174	14	123	0	123	136	6030.87	3383	223
Aug 2020	89	111	13	123	0	123	135	6030.24	3358	148
Sep 2020	55	104	11	119	0	119	134	6029.60	3333	138
<b>WY 2020</b>	<b>1447</b>	<b>1482</b>	<b>80</b>	<b>1279</b>	<b>0</b>	<b>1279</b>				<b>2801</b>
Oct 2020	59	109	7	123	0	123	133	6029.06	3313	155
Nov 2020	51	104	3	119	0	119	133	6028.60	3295	151

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

December 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)
*	Dec 2017	4	6	9313.84	76
H	Jan 2018	4	6	9312.64	74
I	Feb 2018	4	6	9311.50	72
S	Mar 2018	5	6	9310.51	71
T	Apr 2018	8	7	9311.18	72
O	May 2018	24	12	9318.33	84
R	Jun 2018	13	15	9317.29	82
I	Jul 2018	5	14	9311.71	73
C	Aug 2018	3	13	9305.51	63
A	Sep 2018	3	8	9301.71	58
<b>WY 2018</b>		<b>88</b>	<b>108</b>		
L	Oct 2018	5	3	9302.60	59
*	Nov 2018	3	3	9302.61	59
	Dec 2018	3	3	9302.54	59
	Jan 2019	3	3	9302.47	59
	Feb 2019	3	3	9302.26	58
	Mar 2019	3	3	9301.83	58
	Apr 2019	4	3	9302.54	59
	May 2019	21	10	9309.86	70
	Jun 2019	37	15	9322.56	92
	Jul 2019	15	18	9320.95	89
	Aug 2019	7	15	9316.48	81
	Sep 2019	6	13	9312.34	74
<b>WY 2019</b>		<b>109</b>	<b>93</b>		
	Oct 2019	6	6	9312.24	74
	Nov 2019	5	5	9312.08	73
	Dec 2019	5	5	9311.76	73
	Jan 2020	4	5	9311.24	72
	Feb 2020	4	5	9310.55	71
	Mar 2020	4	8	9308.29	67
	Apr 2020	9	8	9308.78	68
	May 2020	28	30	9307.67	66
	Jun 2020	42	30	9314.91	78
	Jul 2020	20	10	9320.64	88
	Aug 2020	10	8	9321.89	90
	Sep 2020	7	8	9321.55	90
<b>WY 2020</b>		<b>144</b>	<b>128</b>		
	Oct 2020	7	6	9321.90	90
	Nov 2020	5	5	9321.96	91

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 2018 24-Month Study**

Most Probable Inflow\*

**Blue Mesa Reservoir**



Date	UnReg Inflow (1000 Ac-Ft)	Regulated Inflow (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Power Release (1000 Ac-Ft)	Bypass Release (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	Live Storage (1000 Ac-Ft)
* Dec 2017	25	27	0	93	0	93	7491.44	593
H Jan 2018	20	22	0	60	0	60	7486.51	554
I Feb 2018	23	25	0	32	0	32	7485.54	547
S Mar 2018	28	29	0	43	0	43	7483.73	534
T Apr 2018	48	47	1	82	0	82	7478.94	498
O May 2018	112	100	1	85	0	85	7480.90	513
R Jun 2018	56	57	1	98	0	98	7475.06	471
I Jul 2018	21	31	1	101	0	101	7464.43	399
C Aug 2018	19	28	1	93	0	93	7453.77	334
A Sep 2018	12	17	1	30	39	68	7444.44	282
<b>WY 2018</b>	<b>433</b>	<b>453</b>	<b>7</b>	<b>856</b>	<b>39</b>	<b>895</b>		
L Oct 2018	23	22	0	46	11	56	7437.59	248
* Nov 2018	22	21	0	19	0	19	7438.08	250
Dec 2018	18	18	0	19	0	19	7437.79	249
Jan 2019	15	15	0	18	0	18	7437.07	245
Feb 2019	14	14	0	16	0	16	7436.60	243
Mar 2019	25	26	0	18	0	18	7438.19	251
Apr 2019	50	49	0	43	0	43	7439.37	256
May 2019	145	134	1	105	0	105	7444.94	285
Jun 2019	215	193	1	37	0	37	7470.57	440
Jul 2019	80	83	1	72	0	72	7471.95	449
Aug 2019	45	53	1	74	0	74	7468.66	427
Sep 2019	33	40	1	67	0	67	7464.34	399
<b>WY 2019</b>	<b>684</b>	<b>668</b>	<b>6</b>	<b>536</b>	<b>11</b>	<b>546</b>		
Oct 2019	35	35	0	42	0	42	7463.12	391
Nov 2019	30	30	0	13	0	13	7465.77	408
Dec 2019	26	26	0	14	0	14	7467.68	420
Jan 2020	24	25	0	13	0	13	7469.43	432
Feb 2020	22	23	0	13	0	13	7471.02	443
Mar 2020	36	40	0	0	14	14	7474.63	468
Apr 2020	77	76	1	0	35	35	7480.34	509
May 2020	221	223	1	6	189	195	7483.91	535
Jun 2020	261	249	1	24	0	24	7511.50	759
Jul 2020	117	107	2	90	0	90	7513.23	774
Aug 2020	63	61	1	99	0	99	7508.75	735
Sep 2020	38	39	1	98	0	98	7501.58	674
<b>WY 2020</b>	<b>951</b>	<b>934</b>	<b>8</b>	<b>412</b>	<b>238</b>	<b>650</b>		
Oct 2020	38	38	1	65	0	65	7498.21	647
Nov 2020	31	31	0	36	0	36	7497.55	641

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

# OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



## December 2018 24-Month Study

Most Probable Inflow\*

### Morrow Point Reservoir



	<b>Unreg</b>	<b>Blue Mesa</b>	<b>Side</b>	<b>Total</b>	<b>Power</b>	<b>Bypass</b>	<b>Total</b>	<b>Reservoir Elev</b>	<b>Live</b>
<b>Date</b>	<b>Inflow</b>	<b>Release</b>	<b>Inflow</b>	<b>Inflow</b>	<b>Release</b>	<b>Release</b>	<b>Release</b>	<b>End of Month</b>	<b>Storage</b>
	<b>(1000 Ac-Ft)</b>	<b>(1000 Ac-Ft)</b>	<b>(1000 Ac-Ft)</b>	<b>(1000 Ac-Ft)</b>	<b>(1000 Ac-Ft)</b>	<b>(1000 Ac-Ft)</b>	<b>(1000 Ac-Ft)</b>	<b>(Ft)</b>	<b>(1000 Ac-Ft)</b>
* Dec 2017	26	93	1	94	94	0	94	7152.45	111
H Jan 2018	22	60	2	62	62	0	63	7150.65	110
I Feb 2018	24	32	1	33	34	0	34	7149.19	108
S Mar 2018	29	43	1	44	49	0	49	7143.05	104
T Apr 2018	54	82	6	87	79	0	79	7154.30	112
O May 2018	121	85	8	94	94	0	94	7153.76	112
R Jun 2018	57	98	2	99	99	0	99	7154.16	112
I Jul 2018	22	101	1	102	101	0	101	7155.49	113
C Aug 2018	19	93	0	93	94	0	94	7153.96	112
A Sep 2018	14	68	2	70	84	0	84	7135.77	98
<b>WY 2018</b>	<b>460</b>	<b>895</b>	<b>27</b>	<b>922</b>	<b>935</b>	<b>0</b>	<b>937</b>		
L Oct 2018	24	56	1	57	56	0	56	7136.92	99
* Nov 2018	23	19	1	20	13	0	15	7143.47	104
Dec 2018	19	19	1	20	13	0	13	7153.73	112
Jan 2019	16	18	1	19	19	0	19	7153.73	112
Feb 2019	15	16	1	17	17	0	17	7153.73	112
Mar 2019	28	18	3	21	21	0	21	7153.73	112
Apr 2019	57	43	7	50	50	0	50	7153.73	112
May 2019	160	105	15	120	120	0	120	7153.73	112
Jun 2019	230	37	15	52	52	0	52	7153.73	112
Jul 2019	83	72	3	75	75	0	75	7153.73	112
Aug 2019	47	74	2	76	76	0	76	7153.73	112
Sep 2019	35	67	2	69	69	0	69	7153.73	112
<b>WY 2019</b>	<b>737</b>	<b>546</b>	<b>52</b>	<b>598</b>	<b>583</b>	<b>0</b>	<b>585</b>		
Oct 2019	37	42	2	45	45	0	45	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	35	11	46	46	0	46	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	90	6	96	96	0	96	7153.73	112
Aug 2020	67	99	3	103	103	0	103	7153.73	112
Sep 2020	41	98	3	101	101	0	101	7153.73	112
<b>WY 2020</b>	<b>1035</b>	<b>650</b>	<b>84</b>	<b>735</b>	<b>735</b>	<b>0</b>	<b>735</b>		
Oct 2020	41	65	3	67	67	0	67	7153.73	112
Nov 2020	33	36	2	38	38	0	38	7153.73	112

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

# OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



## December 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)
* Dec 2017	29	94	3	97	97	0	97	6749.23	16	1	98
H Jan 2018	25	63	3	66	62	4	66	6747.99	16	1	65
I Feb 2018	27	34	3	37	16	20	36	6750.06	16	0	34
S Mar 2018	33	49	4	52	53	0	53	6747.97	16	13	38
T Apr 2018	60	79	6	84	84	0	84	6749.35	16	53	28
O May 2018	129	94	9	102	102	0	102	6749.41	16	62	39
R Jun 2018	61	99	3	102	102	0	102	6750.48	16	63	42
I Jul 2018	24	101	2	103	103	0	103	6750.59	16	64	41
C Aug 2018	21	94	2	96	98	0	98	6744.83	15	65	36
A Sep 2018	15	84	1	85	87	0	87	6737.22	13	59	33
<b>WY 2018</b>	<b>505</b>	<b>937</b>	<b>45</b>	<b>982</b>	<b>959</b>	<b>26</b>	<b>985</b>			<b>438</b>	<b>553</b>
L Oct 2018	27	56	3	59	55	0	55	6751.87	17	33	24
* Nov 2018	26	15	4	19	21	0	21	6743.11	14	1	19
Dec 2018	21	13	2	15	12	0	12	6753.04	17	0	12
Jan 2019	18	19	2	21	21	0	21	6753.04	17	0	21
Feb 2019	17	17	2	19	19	0	19	6753.04	17	0	19
Mar 2019	32	21	4	25	25	0	25	6753.04	17	5	20
Apr 2019	65	50	8	58	58	0	58	6753.04	17	42	16
May 2019	180	120	20	140	134	6	140	6753.04	17	62	78
Jun 2019	255	52	25	77	77	0	77	6753.04	17	61	16
Jul 2019	90	75	7	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	39	69	4	73	73	0	73	6753.04	17	55	18
<b>WY 2019</b>	<b>823</b>	<b>585</b>	<b>86</b>	<b>671</b>	<b>660</b>	<b>6</b>	<b>667</b>			<b>389</b>	<b>279</b>
Oct 2019	42	45	5	49	49	0	49	6753.04	17	30	19
Nov 2019	36	15	4	19	19	0	19	6753.04	17	0	19
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	46	12	58	58	0	58	6753.04	17	42	16
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	96	14	111	111	0	111	6753.04	17	65	46
Aug 2020	75	103	8	111	111	0	111	6753.04	17	65	46
Sep 2020	47	101	6	107	107	0	107	6753.04	17	55	52
<b>WY 2020</b>	<b>1173</b>	<b>735</b>	<b>138</b>	<b>873</b>	<b>732</b>	<b>140</b>	<b>873</b>			<b>385</b>	<b>488</b>
Oct 2020	47	67	6	73	73	0	73	6753.04	17	30	43
Nov 2020	38	38	5	43	43	0	43	6753.04	17	0	43

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



**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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)
*	Dec 2017	3	1	7640.27	65
H	Jan 2018	3	0	7641.42	67
I	Feb 2018	3	0	7642.57	70
S	Mar 2018	4	0	7644.11	73
T	Apr 2018	15	3	7649.29	85
O	May 2018	30	31	7648.91	84
R	Jun 2018	14	35	7639.22	63
I	Jul 2018	8	35	7624.15	35
C	Aug 2018	5	19	7613.87	22
A	Sep 2018	3	4	7613.06	21
<b>WY 2018</b>		<b>102</b>	<b>153</b>		
L	Oct 2018	9	3	7617.56	26
*	Nov 2018	5	0	7621.25	31
	Dec 2018	4	0	7623.39	34
	Jan 2019	3	0	7625.07	37
	Feb 2019	3	0	7626.39	39
	Mar 2019	4	0	7628.48	42
	Apr 2019	12	0	7634.71	54
	May 2019	42	30	7640.52	65
	Jun 2019	48	41	7643.32	71
	Jul 2019	21	40	7633.79	52
	Aug 2019	15	37	7620.30	30
	Sep 2019	12	29	7604.25	12
<b>WY 2019</b>		<b>177</b>	<b>183</b>		
	Oct 2019	12	16	7599.97	9
	Nov 2019	8	2	7606.78	14
	Dec 2019	6	2	7611.40	19
	Jan 2020	5	2	7614.59	22
	Feb 2020	5	2	7617.07	25
	Mar 2020	9	2	7622.07	32
	Apr 2020	23	2	7634.61	53
	May 2020	71	31	7652.53	93
	Jun 2020	70	43	7663.07	120
	Jul 2020	29	41	7658.11	107
	Aug 2020	20	38	7650.77	89
	Sep 2020	17	29	7645.63	77
<b>WY 2020</b>		<b>277</b>	<b>209</b>		
	Oct 2020	16	16	7645.18	76
	Nov 2020	9	2	7647.86	82

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



# OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



## December 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)
* Dec 2017	11	0	9	1	0	25	6053.69	1270	40
H Jan 2018	12	0	9	1	0	23	6052.47	1255	40
I Feb 2018	13	0	11	1	1	17	6051.73	1246	33
S Mar 2018	24	2	19	2	6	21	6050.92	1236	30
T Apr 2018	70	13	46	2	20	38	6049.73	1222	42
O May 2018	88	16	71	3	36	32	6049.80	1223	69
R Jun 2018	6	3	24	4	42	42	6044.23	1159	49
I Jul 2018	-9	0	18	4	42	51	6036.94	1080	53
C Aug 2018	-7	0	7	3	42	51	6028.27	991	48
A Sep 2018	2	0	3	2	27	46	6020.80	919	42
<b>WY 2018</b>	<b>268</b>	<b>36</b>	<b>283</b>	<b>24</b>	<b>224</b>	<b>405</b>			<b>540</b>
L Oct 2018	23	1	17	1	7	31	6018.35	897	40
* Nov 2018	15	0	10	1	0	18	6017.43	888	34
Dec 2018	13	0	10	0	0	20	6016.31	878	27
Jan 2019	13	0	10	0	0	21	6015.12	867	28
Feb 2019	16	0	14	1	0	16	6014.78	864	22
Mar 2019	41	0	37	1	5	16	6016.45	879	27
Apr 2019	77	1	64	2	21	16	6019.24	905	44
May 2019	144	7	125	3	36	21	6026.15	970	109
Jun 2019	150	17	127	3	52	21	6031.26	1021	126
Jul 2019	34	18	36	3	57	27	6026.09	970	71
Aug 2019	32	1	53	3	48	28	6023.44	944	52
Sep 2019	30	1	46	2	26	24	6022.80	938	44
<b>WY 2019</b>	<b>588</b>	<b>45</b>	<b>550</b>	<b>20</b>	<b>251</b>	<b>259</b>			<b>624</b>
Oct 2019	37	1	40	1	10	22	6023.54	945	42
Nov 2019	30	1	24	1	0	21	6023.79	948	37
Dec 2019	25	0	20	0	0	22	6023.63	946	37
Jan 2020	22	0	18	0	0	22	6023.24	942	35
Feb 2020	30	0	27	1	0	20	6023.90	949	33
Mar 2020	92	0	85	1	6	22	6029.70	1006	44
Apr 2020	170	9	140	2	22	21	6038.94	1101	73
May 2020	277	21	216	3	36	22	6052.62	1257	168
Jun 2020	224	37	159	4	53	21	6059.24	1338	172
Jul 2020	66	29	50	4	57	22	6056.60	1305	89
Aug 2020	45	5	58	3	48	22	6055.34	1290	61
Sep 2020	43	2	53	3	26	21	6055.64	1293	53
<b>WY 2020</b>	<b>1062</b>	<b>104</b>	<b>891</b>	<b>25</b>	<b>257</b>	<b>255</b>			<b>844</b>
Oct 2020	47	2	46	2	0	22	6057.47	1316	50
Nov 2020	34	2	25	1	0	21	6057.75	1319	39

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 2018 24-Month Study**

Most Probable Inflow\*

**Lake Powell**



Date	Unreg Inflow (1000 Ac-Ft)	Regulated Inflow (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	PowerPlant Release (1000 Ac-Ft)	Bypass Release (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	Bank Storage (1000 Ac-Ft)	EOM Storage (1000 Ac-Ft)	Lees Ferry Gage (1000 Ac-Ft)
* Dec 2017	299	483	29	740	0	740	3622.85	5179	14068	733
H Jan 2018	262	442	9	860	0	860	3619.14	5147	13672	861
I Feb 2018	269	387	10	730	0	730	3616.02	5121	13346	750
S Mar 2018	332	395	16	800	0	800	3612.23	5090	12956	835
T Apr 2018	382	419	25	705	0	705	3609.39	5067	12669	738
O May 2018	1214	968	29	705	0	705	3611.54	5085	12886	730
R Jun 2018	883	635	45	760	0	760	3609.98	5072	12728	781
I Jul 2018	123	252	53	860	0	860	3603.80	5023	12116	877
C Aug 2018	11	260	50	900	0	900	3597.12	4972	11477	911
A Sep 2018	1	230	45	670	0	670	3592.28	4936	11028	690
<b>WY 2018</b>	<b>4612</b>	<b>5459</b>	<b>386</b>	<b>9000</b>	<b>0</b>	<b>9000</b>				<b>9158</b>
L Oct 2018	351	477	30	625	0	625	3590.46	4923	10862	650
* Nov 2018	254	307	29	585	77	662	3586.50	4894	10507	668
Dec 2018	240	329	23	740	0	740	3581.93	4862	10105	745
Jan 2019	235	333	7	860	0	860	3576.13	4823	9611	871
Feb 2019	260	335	7	740	0	740	3571.51	4792	9230	744
Mar 2019	415	361	11	750	0	750	3566.91	4762	8860	755
Apr 2019	620	528	18	635	0	635	3565.45	4753	8744	643
May 2019	1260	1041	21	635	0	635	3569.92	4782	9101	641
Jun 2019	2000	1628	35	700	0	700	3579.87	4848	9928	708
Jul 2019	760	730	43	800	0	800	3578.64	4840	9824	819
Aug 2019	370	476	42	860	0	860	3573.93	4808	9429	878
Sep 2019	340	449	38	650	0	650	3571.23	4790	9207	661
<b>WY 2019</b>	<b>7105</b>	<b>6994</b>	<b>303</b>	<b>8581</b>	<b>77</b>	<b>8658</b>				<b>8783</b>
Oct 2019	455	471	26	480	0	480	3570.83	4788	9174	486
Nov 2019	447	438	25	500	0	500	3569.82	4781	9093	500
Dec 2019	363	423	20	600	0	600	3567.55	4767	8910	605
Jan 2020	361	420	6	720	0	720	3563.95	4744	8627	731
Feb 2020	393	432	6	640	0	640	3561.39	4728	8429	644
Mar 2020	665	556	10	675	0	675	3559.82	4718	8310	680
Apr 2020	1056	838	17	600	0	600	3562.49	4735	8514	608
May 2020	2343	1966	21	600	0	600	3577.88	4834	9759	606
Jun 2020	2666	2133	38	630	0	630	3593.23	4943	11115	638
Jul 2020	1091	1018	48	710	0	710	3595.82	4962	11356	729
Aug 2020	500	600	48	760	0	760	3593.74	4947	11163	778
Sep 2020	408	538	44	565	0	565	3593.02	4941	11096	576
<b>WY 2020</b>	<b>10747</b>	<b>9832</b>	<b>311</b>	<b>7480</b>	<b>0</b>	<b>7480</b>				<b>7580</b>
Oct 2020	512	579	31	640	0	640	3592.10	4935	11012	646
Nov 2020	473	535	29	640	0	640	3590.74	4925	10887	640

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 2018 24-Month Study**

Most Probable Inflow\*

**Hoover Dam - Lake Mead**



Date	Glen Release (1000 Ac-Ft)	Side Inflow Glen to Hoover (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Total Release (1000 CFS)	SNWP Use (1000 Ac-Ft)	Downstream Requirements (1000 Ac-Ft)	Bank Storage (1000 Ac-Ft)	Reservoir Elev End of Month (Ft)	EOM Storage (1000 Ac-Ft)
* Dec 2017	740	43	37	594	9.7	12	593	664	1082.52	10221
H Jan 2018	860	78	30	449	7.3	10	448	692	1087.50	10642
I Feb 2018	730	60	28	687	12.4	10	693	696	1088.21	10703
S Mar 2018	800	70	32	833	13.5	14	832	695	1088.11	10694
T Apr 2018	705	43	39	1015	17.1	21	1015	675	1084.49	10387
O May 2018	705	21	44	1055	17.1	27	1054	651	1080.00	10011
R Jun 2018	760	27	53	986	16.6	28	985	634	1076.81	9748
I Jul 2018	860	106	65	820	13.3	27	819	637	1077.43	9799
C Aug 2018	900	74	70	749	12.2	28	748	645	1078.88	9918
A Sep 2018	670	84	58	725	12.2	24	723	642	1078.29	9870
<b>WY 2018</b>	<b>9000</b>	<b>690</b>	<b>541</b>	<b>9240</b>		<b>241</b>	<b>9237</b>			
L Oct 2018	625	100	42	641	10.4	23	634	643	1078.52	9889
* Nov 2018	662	68	42	690	11.6	16	689	642	1078.32	9872
Dec 2018	740	50	36	472	7.7	10	472	658	1081.40	10127
Jan 2019	860	78	30	554	9.0	11	554	679	1085.23	10449
Feb 2019	740	93	28	710	12.8	10	710	684	1086.17	10528
Mar 2019	750	56	31	996	16.2	20	996	670	1083.49	10303
Apr 2019	635	48	38	1062	17.8	24	1062	643	1078.51	9888
May 2019	635	31	43	997	16.2	33	997	618	1073.82	9505
Jun 2019	700	12	51	919	15.4	33	919	600	1070.40	9232
Jul 2019	800	81	64	843	13.7	36	843	596	1069.67	9174
Aug 2019	860	112	68	775	12.6	33	775	602	1070.81	9264
Sep 2019	650	105	56	735	12.3	26	735	598	1070.09	9207
<b>WY 2019</b>	<b>8658</b>	<b>834</b>	<b>530</b>	<b>9393</b>		<b>276</b>	<b>9386</b>			
Oct 2019	480	69	40	528	8.6	28	528	595	1069.52	9161
Nov 2019	500	61	40	624	10.5	20	624	588	1068.05	9045
Dec 2019	600	50	35	598	9.7	16	598	588	1068.07	9047
Jan 2020	720	78	28	607	9.9	14	607	597	1069.83	9186
Feb 2020	640	93	26	663	11.5	17	663	599	1070.15	9212
Mar 2020	675	56	29	988	16.1	22	988	580	1066.49	8923
Apr 2020	600	48	36	997	16.8	25	997	555	1061.51	8538
May 2020	600	31	40	917	14.9	31	917	533	1057.08	8203
Jun 2020	630	12	47	929	15.6	31	929	511	1052.44	7860
Jul 2020	710	81	58	813	13.2	31	813	504	1051.01	7756
Aug 2020	760	112	62	773	12.6	28	773	505	1051.13	7765
Sep 2020	565	105	51	701	11.8	25	701	498	1049.75	7665
<b>WY 2020</b>	<b>7480</b>	<b>796</b>	<b>493</b>	<b>9139</b>		<b>286</b>	<b>9139</b>			
Oct 2020	640	69	37	473	7.7	25	473	509	1052.01	7828
Nov 2020	640	61	37	634	10.7	17	634	510	1052.16	7840

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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)
* Dec 2017	594	-16	9	552	0	552	9.0	640.68	1636
H Jan 2018	449	2	10	437	0	437	7.1	640.86	1641
I Feb 2018	687	-4	10	611	0	611	11.0	643.18	1704
S Mar 2018	833	-1	13	836	0	836	13.6	642.57	1687
T Apr 2018	1015	-3	17	1001	0	1001	16.8	642.40	1682
O May 2018	1055	-11	22	1001	0	1001	16.3	643.17	1703
R Jun 2018	986	-21	26	909	0	909	15.3	644.29	1734
I Jul 2018	820	-6	26	827	0	827	13.4	642.91	1696
C Aug 2018	749	-13	23	730	0	730	11.9	642.29	1679
A Sep 2018	725	-11	18	814	0	814	13.7	637.87	1561
<b>WY 2018</b>	<b>9240</b>	<b>-103</b>	<b>198</b>	<b>8981</b>	<b>0</b>	<b>8981</b>			
L Oct 2018	641	-11	15	635	0	635	10.3	637.08	1540
* Nov 2018	690	-28	11	610	0	610	10.3	638.62	1581
Dec 2018	472	-12	9	449	0	449	7.3	638.70	1583
Jan 2019	554	-19	10	442	0	442	7.2	641.80	1666
Feb 2019	710	-15	10	685	0	685	12.3	641.80	1666
Mar 2019	996	-17	13	931	0	931	15.1	643.05	1700
Apr 2019	1062	-20	17	1027	0	1027	17.3	643.00	1699
May 2019	997	-12	22	963	0	963	15.7	643.00	1699
Jun 2019	919	-15	25	878	0	878	14.8	643.00	1699
Jul 2019	843	-15	25	830	0	830	13.5	642.00	1671
Aug 2019	775	-12	23	740	0	740	12.0	642.00	1671
Sep 2019	735	-12	18	758	0	758	12.7	640.01	1618
<b>WY 2019</b>	<b>9393</b>	<b>-190</b>	<b>198</b>	<b>8948</b>	<b>0</b>	<b>8948</b>			
Oct 2019	528	-4	15	693	0	693	11.3	633.00	1434
Nov 2019	624	-12	10	550	0	550	9.2	635.00	1486
Dec 2019	598	-12	9	479	0	479	7.8	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
<b>WY 2020</b>	<b>9139</b>	<b>-166</b>	<b>197</b>	<b>8775</b>	<b>0</b>	<b>8775</b>			
Oct 2020	473	-4	15	637	0	637	10.4	633.00	1434
Nov 2020	634	-12	10	560	0	560	9.4	635.00	1486

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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)
*	Dec 2017	552	17	7	335	5.5	100	144	446.80	557	109	1.8
H	Jan 2018	437	3	6	329	5.3	29	90	445.81	539	125	2.0
I	Feb 2018	611	3	8	429	7.7	12	109	448.52	590	145	2.6
S	Mar 2018	836	-3	9	637	10.4	61	139	447.46	570	195	3.2
T	Apr 2018	1001	-8	11	735	12.4	75	168	447.13	564	175	2.9
O	May 2018	1001	10	13	697	11.3	87	178	448.51	590	124	2.0
R	Jun 2018	909	6	15	712	12.0	91	88	448.43	588	136	2.3
I	Jul 2018	827	20	17	656	10.7	101	72	448.00	580	133	2.2
C	Aug 2018	730	21	17	611	9.9	99	22	447.53	571	104	1.7
A	Sep 2018	814	9	15	512	8.6	95	164	448.95	598	94	1.6
	<b>WY 2018</b>	<b>8981</b>	<b>100</b>	<b>139</b>	<b>6479</b>		<b>910</b>	<b>1431</b>			<b>1504</b>	
L	Oct 2018	635	22	12	394	6.4	86	176	448.12	582	68	1.1
*	Nov 2018	610	17	9	357	6.0	85	173	447.99	580	97	1.6
	Dec 2018	449	18	7	270	4.4	71	144	446.50	552	104	1.7
	Jan 2019	442	21	6	279	4.5	85	88	446.50	552	125	2.0
	Feb 2019	685	11	8	441	7.9	77	165	446.50	552	152	2.7
	Mar 2019	931	7	9	720	11.7	16	181	446.70	555	192	3.1
	Apr 2019	1027	16	11	739	12.4	68	176	448.70	593	178	3.0
	May 2019	963	15	13	700	11.4	70	182	448.70	593	119	1.9
	Jun 2019	878	13	16	720	12.1	68	74	448.70	593	127	2.1
	Jul 2019	830	21	17	688	11.2	70	76	448.00	580	135	2.2
	Aug 2019	740	23	17	598	9.7	70	76	447.50	571	104	1.7
	Sep 2019	758	17	15	532	8.9	68	149	447.50	570	96	1.6
	<b>WY 2019</b>	<b>8948</b>	<b>201</b>	<b>140</b>	<b>6438</b>		<b>836</b>	<b>1657</b>			<b>1497</b>	
	Oct 2019	693	23	12	510	8.3	44	144	447.50	571	65	1.1
	Nov 2019	550	16	9	389	6.5	43	120	447.50	571	99	1.7
	Dec 2019	479	18	7	338	5.5	44	124	446.50	552	109	1.8
	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
	<b>WY 2020</b>	<b>8775</b>	<b>200</b>	<b>139</b>	<b>6481</b>		<b>941</b>	<b>1309</b>			<b>1412</b>	
	Oct 2020	637	23	12	475	7.7	54	112	447.50	571	71	1.2
	Nov 2020	560	16	9	396	6.6	54	112	447.50	571	112	1.9

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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
*	Dec 2017	594	9.7	1082.52	10221	131	439.05	821.0	235.7	52	396.6
H	Jan 2018	449	7.3	1087.50	10642	421	442.14	834.0	176.5	51	392.9
I	Feb 2018	687	12.4	1088.21	10703	61	441.97	1220.1	275.0	75	400.3
S	Mar 2018	833	13.5	1088.11	10694	-9	442.23	1005.9	333.9	62	400.8
T	Apr 2018	1015	17.1	1084.49	10387	-308	437.15	880.9	406.2	55	400.0
O	May 2018	1055	17.1	1080.00	10011	-376	432.39	1385.9	412.1	88	390.8
R	Jun 2018	986	16.6	1076.81	9748	-263	428.91	1552.0	378.6	100	384.1
I	Jul 2018	820	13.3	1077.43	9799	51	432.34	1552.0	313.2	100	382.0
C	Aug 2018	749	12.2	1078.88	9918	119	435.01	1562.0	287.4	100	383.8
A	Sep 2018	725	12.2	1078.29	9870	-49	434.15	1562.0	278.7	100	384.7
<b>WY 2018</b>		<b>9240</b>							<b>3614.3</b>		
L	Oct 2018	641	10.4	1078.52	9889	19	435.29	1406.1	247.8	87	386.7
*	Nov 2018	690	11.6	1078.32	9872	-16	434.47	755.0	266.1	49	385.8
	Dec 2018	472	7.7	1081.40	10127	255	433.40	959.9	185.1	61	392.3
	Jan 2019	554	9.0	1085.23	10449	322	435.58	1006.1	215.8	63	389.5
	Feb 2019	710	12.8	1086.17	10528	79	436.94	1006.1	285.8	63	402.5
	Mar 2019	996	16.2	1083.49	10303	-226	435.61	1010.0	399.5	63	401.2
	Apr 2019	1062	17.8	1078.51	9888	-414	431.82	925.9	430.7	60	405.6
	May 2019	997	16.2	1073.82	9505	-383	427.01	913.0	394.5	60	395.5
	Jun 2019	919	15.4	1070.40	9232	-274	418.71	1512.0	348.1	100	378.8
	Jul 2019	843	13.7	1069.67	9174	-58	416.98	1512.0	320.7	100	380.4
	Aug 2019	775	12.6	1070.81	9264	90	417.51	1528.0	292.7	100	377.8
	Sep 2019	735	12.3	1070.09	9207	-57	418.36	1528.0	277.5	100	377.7
<b>WY 2019</b>		<b>9393</b>							<b>3664.2</b>		
	Oct 2019	528	8.6	1069.52	9161	-45	421.29	1341.0	196.6	88	372.0
	Nov 2019	624	10.5	1068.05	9045	-116	423.33	1219.0	239.4	81	383.3
	Dec 2019	598	9.7	1068.07	9047	2	421.30	1140.0	226.5	75	379.1
	Jan 2020	607	9.9	1069.83	9186	139	420.56	1056.0	230.8	70	380.0
	Feb 2020	663	11.5	1070.15	9212	25	421.40	950.0	254.7	62	384.1
	Mar 2020	988	16.1	1066.49	8923	-289	417.36	1210.0	372.2	81	376.8
	Apr 2020	997	16.8	1061.51	8538	-385	411.60	1390.9	370.0	91	370.9
	May 2020	917	14.9	1057.08	8203	-335	410.24	844.5	347.7	60	379.2
	Jun 2020	929	15.6	1052.44	7860	-343	401.53	1386.8	336.9	100	362.6
	Jul 2020	813	13.2	1051.01	7756	-104	398.85	1378.6	294.0	100	361.6
	Aug 2020	773	12.6	1051.13	7765	9	398.53	1379.4	278.2	100	359.7
	Sep 2020	701	11.8	1049.75	7665	-100	398.55	1371.5	250.4	100	357.5
<b>WY 2020</b>		<b>9139</b>							<b>3397.4</b>		
	Oct 2020	473	7.7	1052.01	7828	164	402.53	1215.1	172.4	88	364.6
	Nov 2020	634	10.7	1052.16	7840	12	406.76	1108.6	230.6	81	363.5

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

**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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
*	Dec 2017	552	9.0	640.68	1636	17	139.44	131.6	69.5	52	126.0
H	Jan 2018	437	7.1	640.86	1641	5	141.78	159.6	55.0	63	125.9
I	Feb 2018	611	11.0	643.18	1704	63	142.18	162.1	76.6	64	125.4
S	Mar 2018	836	13.6	642.57	1687	-17	139.99	189.2	105.4	74	126.1
T	Apr 2018	1001	16.8	642.40	1682	-5	141.14	207.4	125.1	81	125.0
O	May 2018	1001	16.3	643.17	1703	21	141.89	204.0	126.2	80	126.1
R	Jun 2018	909	15.3	644.29	1734	31	143.00	255.0	115.0	100	126.6
I	Jul 2018	827	13.4	642.91	1696	-38	141.79	255.0	105.3	100	127.4
C	Aug 2018	730	11.9	642.29	1679	-17	141.02	255.0	92.7	100	127.1
A	Sep 2018	814	13.7	637.87	1561	-119	136.59	255.0	101.2	100	124.3
<b>WY 2018</b>		<b>8981</b>							<b>1126.3</b>		
L	Oct 2018	635	10.3	637.08	1540	-21	135.95	184.3	77.8	72	122.4
*	Nov 2018	610	10.3	638.62	1581	40	137.20	158.1	78.4	62	128.4
	Dec 2018	449	7.3	638.70	1583	2	134.67	153.0	55.7	60	124.1
	Jan 2019	442	7.2	641.80	1666	83	135.09	189.2	55.5	74	125.6
	Feb 2019	685	12.3	641.80	1666	0	136.12	207.6	85.7	81	125.1
	Mar 2019	931	15.1	643.05	1700	34	136.76	207.3	116.1	81	124.7
	Apr 2019	1027	17.3	643.00	1699	-1	136.60	234.6	127.9	92	124.6
	May 2019	963	15.7	643.00	1699	0	136.04	255.0	120.4	100	125.1
	Jun 2019	878	14.8	643.00	1699	0	136.04	255.0	110.1	100	125.4
	Jul 2019	830	13.5	642.00	1671	-27	135.51	255.0	104.0	100	125.3
	Aug 2019	740	12.0	642.00	1671	0	134.99	255.0	92.8	100	125.3
	Sep 2019	758	12.7	640.01	1618	-54	133.94	255.0	94.1	100	124.2
<b>WY 2019</b>		<b>8948</b>							<b>1118.5</b>		
	Oct 2019	693	11.3	633.00	1434	-183	131.28	185.9	83.6	73	120.7
	Nov 2019	550	9.2	635.00	1486	51	129.81	153.0	65.6	60	119.2
	Dec 2019	479	7.8	638.71	1583	97	131.17	200.7	58.6	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
<b>WY 2020</b>		<b>8775</b>							<b>1090.4</b>		
	Oct 2020	637	10.4	633.00	1434	-183	131.28	185.9	77.1	73	121.0
	Nov 2020	560	9.4	635.00	1486	51	129.81	153.0	66.7	60	119.1

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



**OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS**

**December 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
* Dec 2017	335	5.5	446.80	557	-20	81.55	92.9	22.5	77	67.0
H Jan 2018	329	5.3	445.81	539	-18	80.05	117.1	22.8	98	69.2
I Feb 2018	429	7.7	448.52	590	50	81.30	92.1	30.3	77	70.6
S Mar 2018	638	10.4	447.46	570	-20	81.79	102.6	44.9	85	70.4
T Apr 2018	735	12.4	447.13	564	-6	81.11	120.0	50.8	100	69.1
O May 2018	697	11.3	448.51	590	26	82.36	120.0	48.5	100	69.6
R Jun 2018	712	12.0	448.43	588	-1	80.33	120.0	49.7	100	69.9
I Jul 2018	656	10.7	448.00	580	-8	81.97	120.0	46.0	100	70.2
C Aug 2018	611	9.9	447.53	571	-9	79.27	120.0	42.7	100	69.9
A Sep 2018	512	8.6	448.95	598	27	83.02	120.0	35.9	100	70.1
<b>WY 2018</b>	<b>6479</b>							<b>451.7</b>		
L Oct 2018	394	6.4	448.12	582	-16	82.83	90.0	27.9	75	70.9
* Nov 2018	350	6.0	447.99	580	-3	82.25	93.0	26.1	78	74.4
Dec 2018	270	4.4	446.50	552	-28	74.80	116.1	16.9	97	62.6
Jan 2019	279	4.5	446.50	552	0	75.27	91.0	17.7	76	63.2
Feb 2019	441	7.9	446.50	552	0	75.21	92.1	28.8	77	65.3
Mar 2019	720	11.7	446.70	555	4	74.05	119.0	46.8	99	65.0
Apr 2019	739	12.4	448.70	593	38	75.08	120.0	48.7	100	65.9
May 2019	700	11.4	448.70	593	0	76.05	120.0	46.6	100	66.5
Jun 2019	720	12.1	448.70	593	0	76.05	120.0	47.9	100	66.6
Jul 2019	688	11.2	448.00	580	-13	75.71	120.0	45.5	100	66.2
Aug 2019	598	9.7	447.50	571	-9	75.13	120.0	39.2	100	65.4
Sep 2019	532	8.9	447.50	570	0	74.89	120.0	34.6	100	65.1
<b>WY 2019</b>	<b>6432</b>							<b>426.6</b>		
Oct 2019	510	8.3	447.50	571	0	76.29	90.0	33.8	75	66.2
Nov 2019	389	6.5	447.50	571	0	76.14	93.0	25.4	78	65.3
Dec 2019	338	5.5	446.50	552	-19	74.65	114.2	21.4	95	63.5
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
<b>WY 2020</b>	<b>6481</b>							<b>424.4</b>		
Oct 2020	475	7.7	447.50	571	0	76.29	90.0	31.4	75	66.0
Nov 2020	396	6.6	447.50	571	0	76.19	92.0	25.9	77	65.4

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

# OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



## December 2018 24-Month Study

Most Probable Inflow\*

### Upper Basin Power



	Glen Canyon	Flaming Gorge	Blue Mesa	Morrow Point	Crystal Reservoir	Fontenelle Reservoir
Date	1000 MWHR	1000 MWHR	1000 MWHR	1000 MWHR	1000 MWHR	1000 MWHR
* Dec 2017	339	68	27	33	19	6
H Jan 2018	394	68	17	21	12	6
I Feb 2018	335	60	9	12	3	5
S Mar 2018	364	41	12	16	9	1
<b>Winter 2018</b>	<b>2013</b>	<b>334</b>	<b>107</b>	<b>133</b>	<b>71</b>	<b>31</b>
T Apr 2018	318	39	23	27	16	5
O May 2018	318	63	23	33	20	7
R Jun 2018	343	50	27	34	20	8
I Jul 2018	384	48	27	36	20	8
C Aug 2018	393	50	24	33	19	7
A Sep 2018	288	47	8	29	16	1
<b>Summer 2018</b>	<b>2045</b>	<b>297</b>	<b>133</b>	<b>193</b>	<b>111</b>	<b>36</b>
L Oct 2018	268	39	11	19	9	4
* Nov 2018	248	36	5	4	2	5
Dec 2018	283	45	5	4	2	5
Jan 2019	325	45	5	7	4	5
Feb 2019	276	41	4	6	3	4
Mar 2019	278	22	4	7	4	4
<b>Winter 2019</b>	<b>1678</b>	<b>228</b>	<b>34</b>	<b>48</b>	<b>24</b>	<b>25</b>
Apr 2019	233	22	11	18	10	4
May 2019	234	22	27	43	23	5
Jun 2019	261	50	10	19	13	8
Jul 2019	302	31	20	27	14	10
Aug 2019	321	38	21	28	14	6
Sep 2019	242	37	19	25	13	3
<b>Summer 2019</b>	<b>1594</b>	<b>201</b>	<b>107</b>	<b>160</b>	<b>88</b>	<b>37</b>
Oct 2019	178	25	12	16	9	6
Nov 2019	185	24	4	5	3	6
Dec 2019	221	40	4	6	4	6
Jan 2020	263	40	4	6	4	5
Feb 2020	232	38	4	5	0	5
Mar 2020	244	29	0	7	4	5
<b>Winter 2020</b>	<b>1323</b>	<b>196</b>	<b>26</b>	<b>45</b>	<b>23</b>	<b>33</b>
Apr 2020	217	28	0	17	10	5
May 2020	222	34	2	80	23	7
Jun 2020	240	76	7	16	13	8
Jul 2020	276	45	28	35	19	10
Aug 2020	296	45	31	37	19	9
Sep 2020	220	44	30	36	19	2
<b>Summer 2020</b>	<b>1252</b>	<b>228</b>	<b>68</b>	<b>184</b>	<b>85</b>	<b>39</b>
Oct 2020	249	45	20	24	13	8
Nov 2020	247	44	11	14	7	7

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

# OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS



## December 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
<b>**** PREDICTED SPACE ****</b>									<b>**** CREDITABLE SPACE ****</b>										
Dec 2018	561	579	808	13815	15763	17505	33268		561	579	808	1948	13815	17505	33268	4580	472	0	27.1
Jan 2019	653	581	818	14217	16268	17250	33518		653	581	818	2051	14217	17250	33518	5350	554	0	26.9
<b>**** EFFECTIVE SPACE ****</b>									<b>**** CREDITABLE SPACE ****</b>										
Jan 2019	653	581	818	14217	16268	17250	33518		234	234	275	744	14217	17250	32210	5350	554	0	26.9
Feb 2019	740	584	829	14711	16863	16928	33791		321	238	286	845	14711	16928	32483	1500	710	0	26.6
Mar 2019	812	587	832	15092	17323	16849	34172		393	240	288	921	15092	16849	32862	1500	996	0	26.0
Apr 2019	791	579	817	15462	17649	17074	34723		367	233	267	866	15462	17074	33403	1500	1062	0	25.6
May 2019	752	573	791	15578	17694	17489	35183		321	226	218	765	15578	17489	33832	1500	997	0	25.8
Jun 2019	664	544	726	15221	17155	17872	35027		223	185	115	522	15221	17872	33615	1500	919	0	26.7
Jul 2019	543	390	675	14394	16002	18145	34147		90	8	9	106	14394	18145	32645	1500	843	0	26.5
<b>**** CREDITABLE SPACE ****</b>									<b>**** CREDITABLE SPACE ****</b>										
Aug 2019	471	380	726	14498	16076	18203	34280		471	380	726	1578	14498	18203	34280	1500	775	0	26.1
Sep 2019	516	403	752	14893	16564	18113	34677		516	403	752	1671	14893	18113	34677	2270	735	0	25.7
Oct 2019	580	431	758	15115	16885	18170	35055		580	431	758	1769	15115	18170	35055	3040	528	0	25.4
Nov 2019	603	439	751	15148	16940	18216	35156		603	439	751	1792	15148	18216	35156	3810	624	0	25.2
Dec 2019	624	422	748	15229	17023	18332	35354		624	422	748	1794	15229	18332	35354	4580	598	0	25.1
Jan 2020	700	409	750	15412	17271	18330	35601		700	409	750	1859	15412	18330	35601	5350	607	0	24.9
<b>**** EFFECTIVE SPACE ****</b>									<b>**** CREDITABLE SPACE ****</b>										
Jan 2020	700	409	750	15412	17271	18330	35601		372	375	548	1295	15412	18330	35037	5350	607	0	24.9
Feb 2020	772	398	754	15695	17618	18191	35808		443	364	551	1358	15695	18191	35243	1500	663	0	24.7
Mar 2020	832	387	747	15893	17859	18165	36025		502	354	544	1400	15893	18165	35458	1500	988	0	24.4
Apr 2020	815	362	690	16012	17879	18454	36334		479	332	481	1292	16012	18454	35759	1500	997	0	24.5
May 2020	766	321	595	15808	17489	18839	36328		423	290	361	1074	15808	18839	35721	1500	917	0	25.7
Jun 2020	625	295	439	14563	15922	19174	35096		270	264	166	701	14563	19174	34438	1500	929	0	27.2
Jul 2020	457	71	358	13207	14092	19517	33609		87	27	28	142	13207	19517	32866	1500	813	0	27.4
<b>**** CREDITABLE SPACE ****</b>									<b>**** CREDITABLE SPACE ****</b>										
Aug 2020	387	55	391	12966	13800	19621	33421		387	55	391	834	12966	19621	33421	1500	773	0	27.1
Sep 2020	436	94	406	13159	14096	19612	33708		436	94	406	937	13159	19612	33708	2270	701	0	26.7
Oct 2020	512	155	403	13226	14295	19712	34007		512	155	403	1070	13226	19712	34007	3040	473	0	26.5
Nov 2020	583	183	380	13310	14457	19549	34005		583	183	380	1146	13310	19549	34005	3810	634	0	26.4

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