Appendix A 2021 Fall Flow Reduction Scenarios

Table 1. Historical Sacramento River main-stem spring-run/fall-run Chinook spawn timing. Emergence dates are based on 2014 data. Spawn timing is based on fresh female carcasses encountered by week, 2003 through 2017. Redds identified with an asterisk were likely not viable due to exposure to warm temperatures. Updated data provided by CDFW on 8/18/21 to best reflect conditions that are anticipated during 2020-2021.

Spawn week	Spawning Percent	Cumulative Spawning (Percent)	Estimated emergence days based on 2014 water temps from Clear Creek gauge	Emergence Date
27-Aug	0.00%	0.00%	67*	2-Nov
3-Sep	0.10%	0.10%	66*	8-Nov
10-Sep	0.20%	0.30%	65*	14-Nov
17-Sep	1.40%	1.70%	65*	21-Nov
24-Sep	5.00%	6.70%	66*	29-Nov
1-Oct	7.80%	14.50%	67*	7-Dec
8-Oct	11.30%	25.80%	70	17-Dec
15-Oct	19.40%	45.20%	72	26-Dec
22-Oct	18.00%	63.30%	76	6-Jan
29-Oct	12.20%	75.50%	79	16-Jan
5-Nov	7.70%	83.20%	83	27-Jan
12-Nov	5.50%	88.70%	86	6-Feb
19-Nov	5.10%	93.70%	89	16-Feb
26-Nov	2.90%	96.70%	91	25-Feb
3-Dec	2.20%	98.90%	93	6-Mar
10-Dec	1.10%	100.00%	94	14-Mar

Table 2. Daily Keswick Dam Releases (cfs) under Alternatives H, I, and J

Date	Alternative H	Alternative I	Alternative J
26-Aug	6800	6800	6800
27-Aug	6800	6800	6800
28-Aug	6800	6800	6800
29-Aug	6800	6800	6800
30-Aug	6800	6800	6800
31-Aug	6800	6800	6800
1-Sep	6800	6800	6800
2-Sep	6800	6800	6800
3-Sep	6800	6800	6800
4-Sep	6800	6800	6800
5-Sep	6800	6800	6800
6-Sep	6800	6800	6800
7-Sep	6800	6800	6800
8-Sep	6800	6800	6800
9-Sep	6800	6800	6800
10-Sep	6800	6800	6800
11-Sep	6800	6800	6800
12-Sep	6800	6800	6800
13-Sep	6800	6800	6800
14-Sep	6800	6800	6800
15-Sep	6800	6800	6800
16-Sep	6800	6800	6800
17-Sep	6800	6800	6800
18-Sep	6800	6800	6800
19-Sep	6800	6800	6800
20-Sep	6800	6800	6800
21-Sep	6800	6800	6800
22-Sep	6800	6800	6800
23-Sep	6800	6800	6800
24-Sep	6800	6800	6800
25-Sep	6800	6800	6800
26-Sep	6800	6800	6800
27-Sep	6800	6800	6800
28-Sep	6800	6800	6800
29-Sep	6800	6800	6800
30-Sep	6800	6800	6800
1-Oct	6800	6800	6800
2-Oct	6800	6800	6800
3-Oct	6800	6800	6800
4-Oct	6800	6800	6800

Date	Alternative H	Alternative I	Alternative J
5-Oct	6800	6800	6800
6-Oct	6800	6800	6800
7-Oct	6800	6800	6800
8-Oct	6800	6800	6800
9-Oct	6800	6800	6800
10-Oct	6800	6800	6800
11-Oct	6800	6800	6800
12-Oct	6800	6800	6800
13-Oct	6400	6800	6800
14-Oct	6000	6800	6800
15-Oct	5600	6800	6800
16-Oct	5200	6800	6800
17-Oct	5000	6800	6800
18-Oct	4800	6800	6800
19-Oct	4600	6800	6800
20-Oct	4400	6800	6400
21-Oct	4200	6800	6000
22-Oct	4000	6800	5800
23-Oct	4000	6800	5600
24-Oct	4000	6800	5400
25-Oct	4000	6800	5200
26-Oct	4000	6400	5000
27-Oct	4000	6000	4800
28-Oct	4000	5600	4600
29-Oct	4000	5200	4400
30-Oct	4000	5000	4200
31-Oct	4000	4800	4000
1-Nov	4000	4600	3900
2-Nov	4000	4400	3800
3-Nov	4000	4200	3700
4-Nov	4000	4000	3600
5-Nov	4000	3900	3500
6-Nov	4000	3800	3400
7-Nov	4000	3700	3300
8-Nov	4000	3600	3250
9-Nov	4000	3500	3250
10-Nov	4000	3400	3250
11-Nov	4000	3300	3250
12-Nov	4000	3250	3250
13-Nov	4000	3250	3250
14-Nov	4000	3250	3250
15-Nov	4000	3250	3250

Date	Alternative H	Alternative I	Alternative J
16-Nov	4000	3250	3250
17-Nov	4000	3250	3250
18-Nov	4000	3250	3250
19-Nov	4000	3250	3250
20-Nov	4000	3250	3250
21-Nov	4000	3250	3250
22-Nov	4000	3250	3250
23-Nov	4000	3250	3250
24-Nov	4000	3250	3250
25-Nov	4000	3250	3250
26-Nov	4000	3250	3250
27-Nov	4000	3250	3250
28-Nov	4000	3250	3250
29-Nov	4000	3250	3250
30-Nov	4000	3250	3250
1-Dec	4000	3250	3250
2-Dec	4000	3250	3250
3-Dec	4000	3250	3250
4-Dec	4000	3250	3250
5-Dec	4000	3250	3250
6-Dec	4000	3250	3250
7-Dec	4000	3250	3250
8-Dec	4000	3250	3250
9-Dec	4000	3250	3250
10-Dec	4000	3250	3250
11-Dec	4000	3250	3250
12-Dec	4000	3250	3250
13-Dec	4000	3250	3250
14-Dec	4000	3250	3250
15-Dec	4000	3250	3250
16-Dec	4000	3250	3250
17-Dec	4000	3250	3250
18-Dec	4000	3250	3250
19-Dec	4000	3250	3250
20-Dec	4000	3250	3250
21-Dec	3900	3250	3250
22-Dec	3800	3250	3250
23-Dec	3700	3250	3250
24-Dec	3600	3250	3250
25-Dec	3500	3250	3250
26-Dec	3400	3250	3250
27-Dec	3300	3250	3250

Date	Alternative H	Alternative I	Alternative J
28-Dec	3250	3250	3250
29-Dec	3250	3250	3250
30-Dec	3250	3250	3250
31-Dec	3250	3250	3250
1-Jan	3250	3250	3250
2-Jan	3250	3250	3250
3-Jan	3250	3250	3250
4-Jan	3250	3250	3250
5-Jan	3250	3250	3250
6-Jan	3250	3250	3250
7-Jan	3250	3250	3250
8-Jan	3250	3250	3250
9-Jan	3250	3250	3250
10-Jan	3250	3250	3250
11-Jan	3250	3250	3250
12-Jan	3250	3250	3250
13-Jan	3250	3250	3250
14-Jan	3250	3250	3250
15-Jan	3250	3250	3250
16-Jan	3250	3250	3250
17-Jan	3250	3250	3250
18-Jan	3250	3250	3250
19-Jan	3250	3250	3250
20-Jan	3250	3250	3250
21-Jan	3250	3250	3250
22-Jan	3250	3250	3250
23-Jan	3250	3250	3250
24-Jan	3250	3250	3250
25-Jan	3250	3250	3250
26-Jan	3250	3250	3250
27-Jan	3250	3250	3250
28-Jan	3250	3250	3250
29-Jan	3250	3250	3250
30-Jan	3250	3250	3250
31-Jan	3250	3250	3250

Table 3. Average Monthly Keswick Dam Releases (cfs) under Alternatives H, I, and J.

Average Monthly Keswick Dam Release (cfs)	Alternative H	Alternative I	Alternative J
Aug	6800	6800	6800
Sep	6800	6800	6800
Oct	5413	6548	6148
Nov	4000	3472	3332
Dec	3813	3250	3250
Jan	3250	3250	3250

Table 4. Monthly Keswick Releases (TAF) under Alternatives H, I, and J.

Monthly Keswick Releases (TAF)	Alternative H	Alternative I	Alternative J
Aug	418	418	418
Sep	405	405	405
Oct	333	403	378
Nov	238	207	198
Dec	234	200	200
Jan	200	200	200