

Appendix I

2020 Fish Operations Plan Spill

Introduction

This appendix provides an evaluation of the target spill described in the 2020 Fish Operations Plan (FOP, Appendix B) compared to the actual spill during the 2020 fish spill season from April 1 through August 31. Daily data including FOP spill, actual spill, total river flow, and generation flow are displayed graphically (Figures I-1 through I-8) and in tabular form (Tables I-1 through I-8) for the eight fish passage projects on the lower Snake River and the Lower Columbia River.

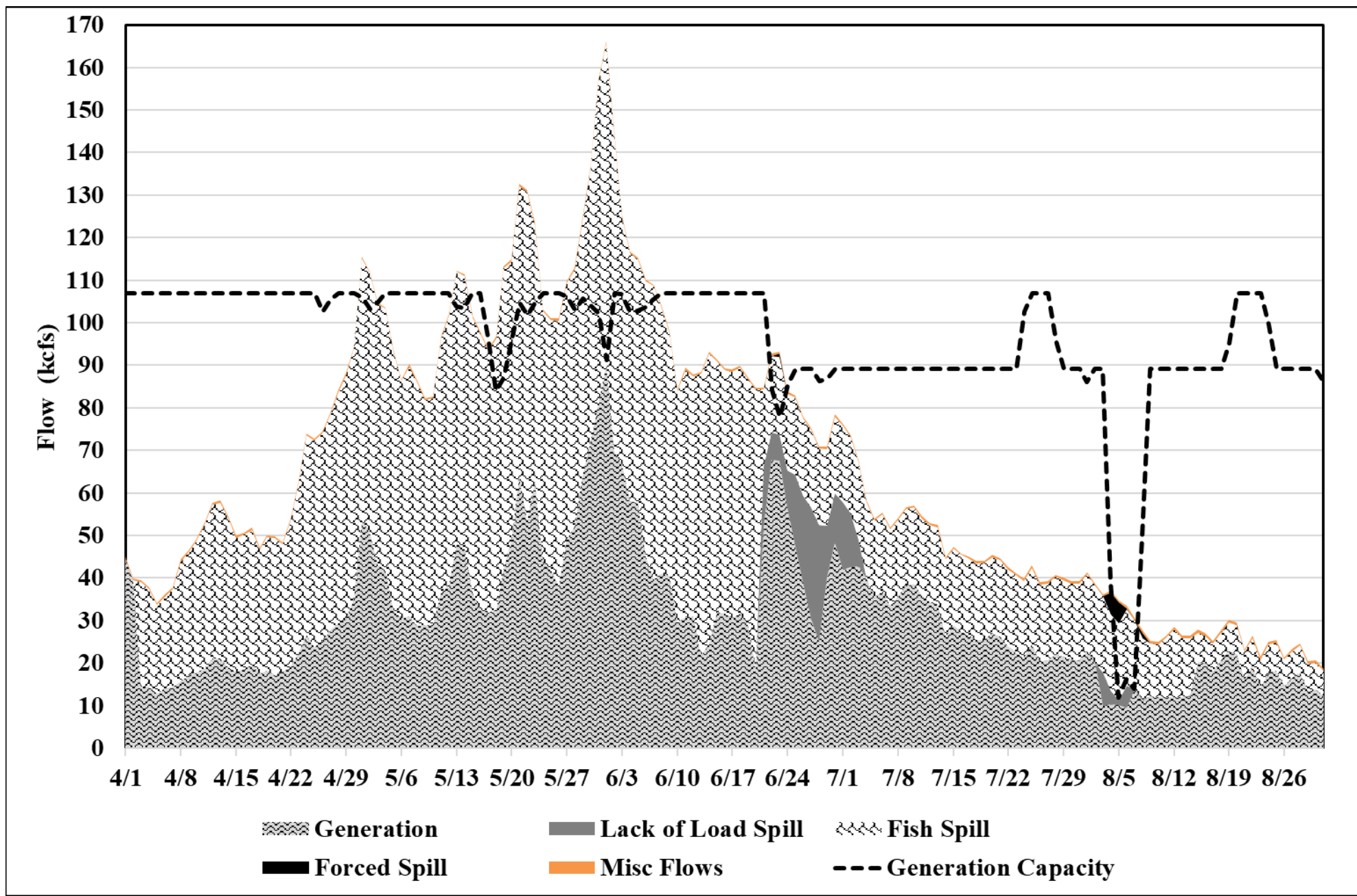


Figure I- 1: Lower Granite project flows, WY 2020

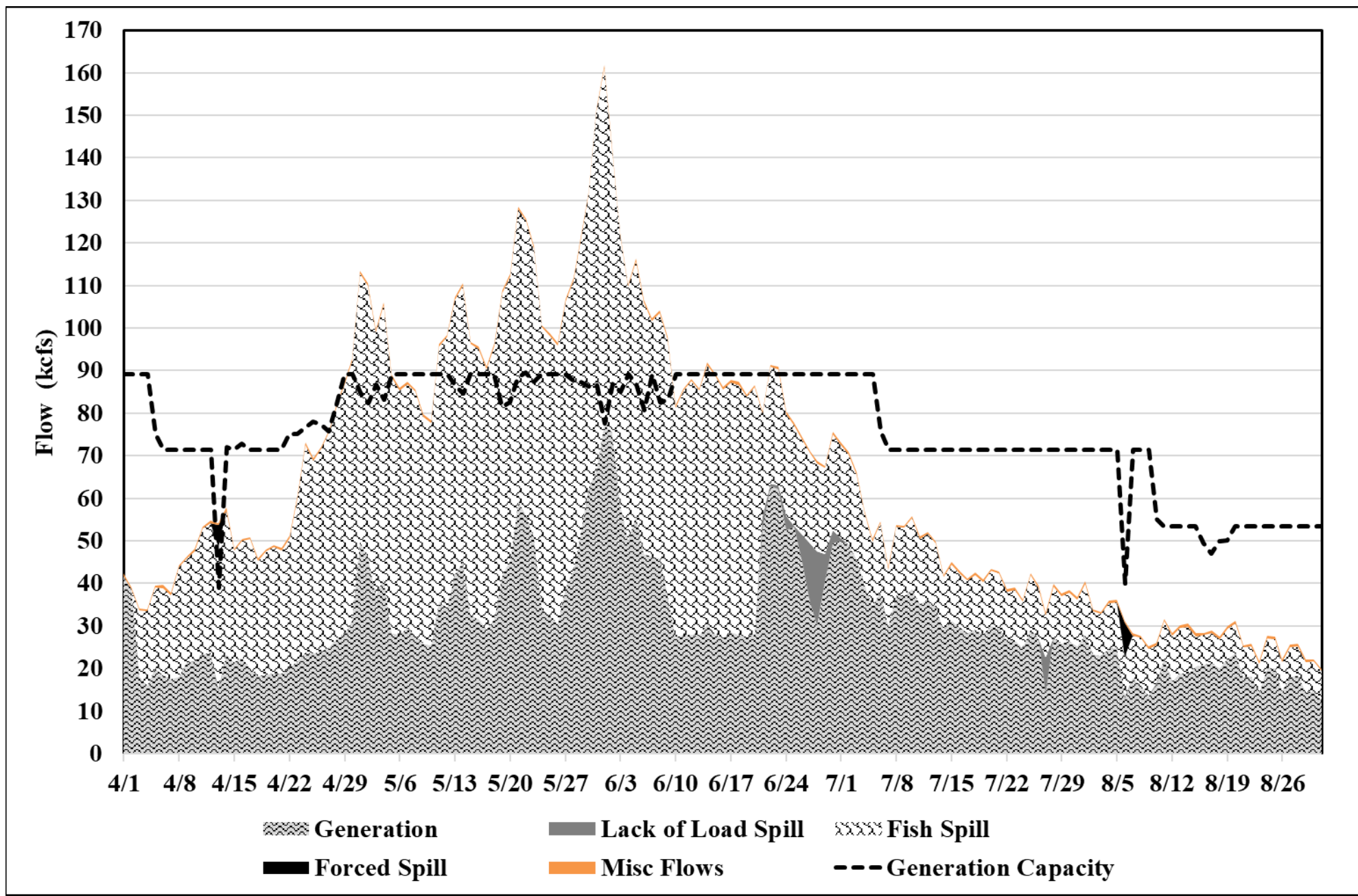


Figure I- 2: Little Goose project flows, WY 2020

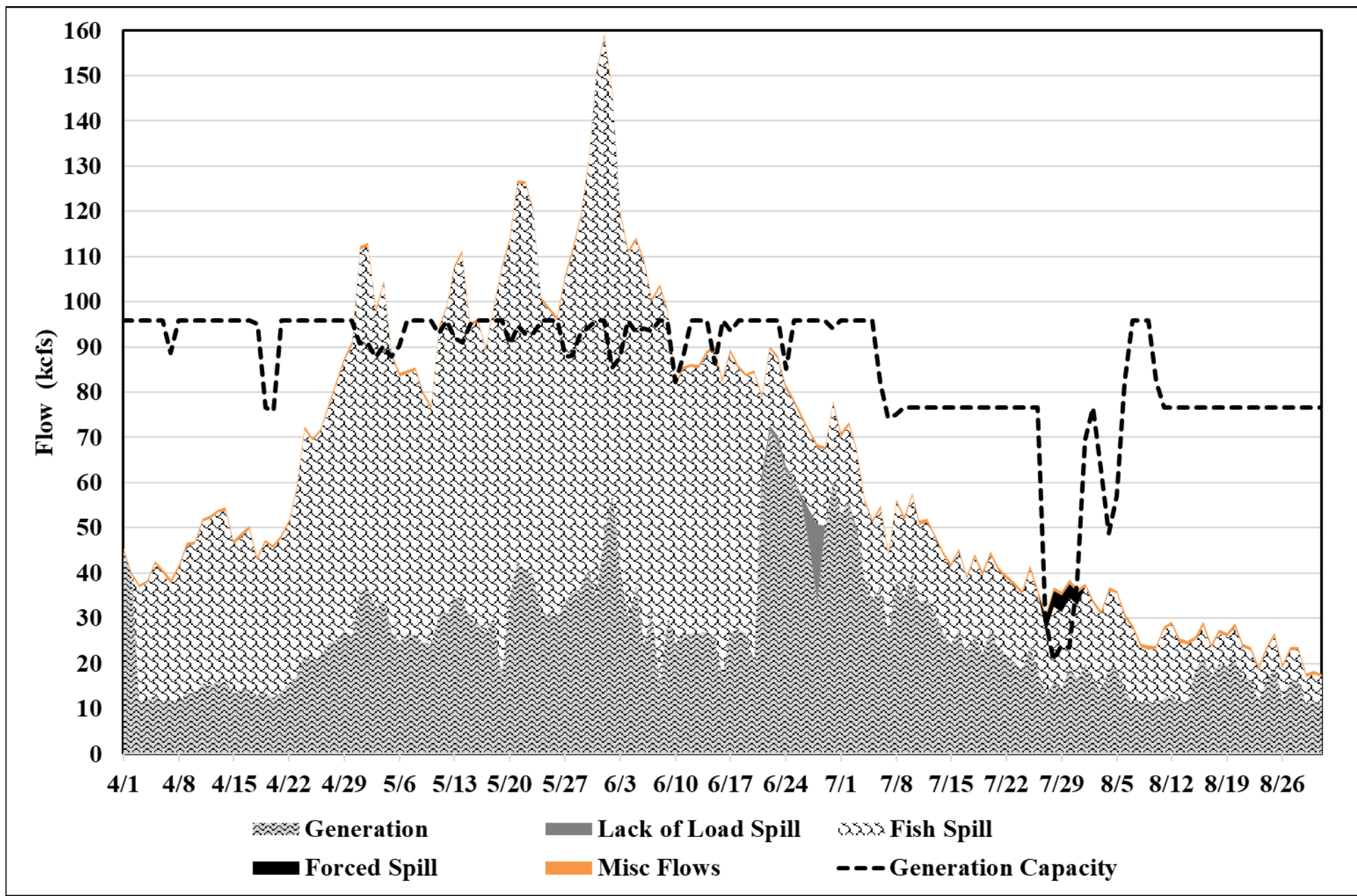


Figure I- 3: Lower Monumental project flows, WY 2020

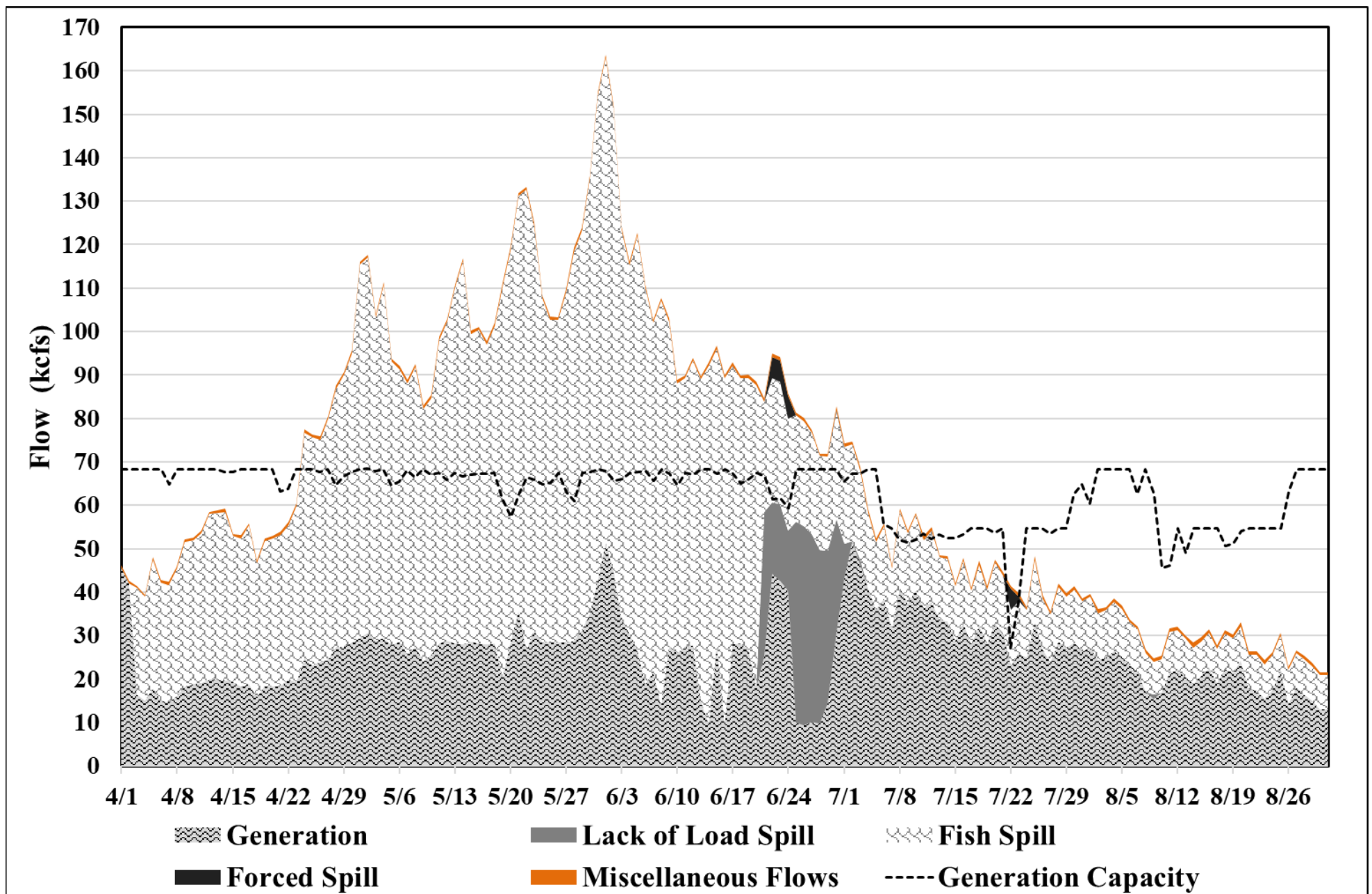


Figure I- 4: Ice Harbor project flows, WY 2020

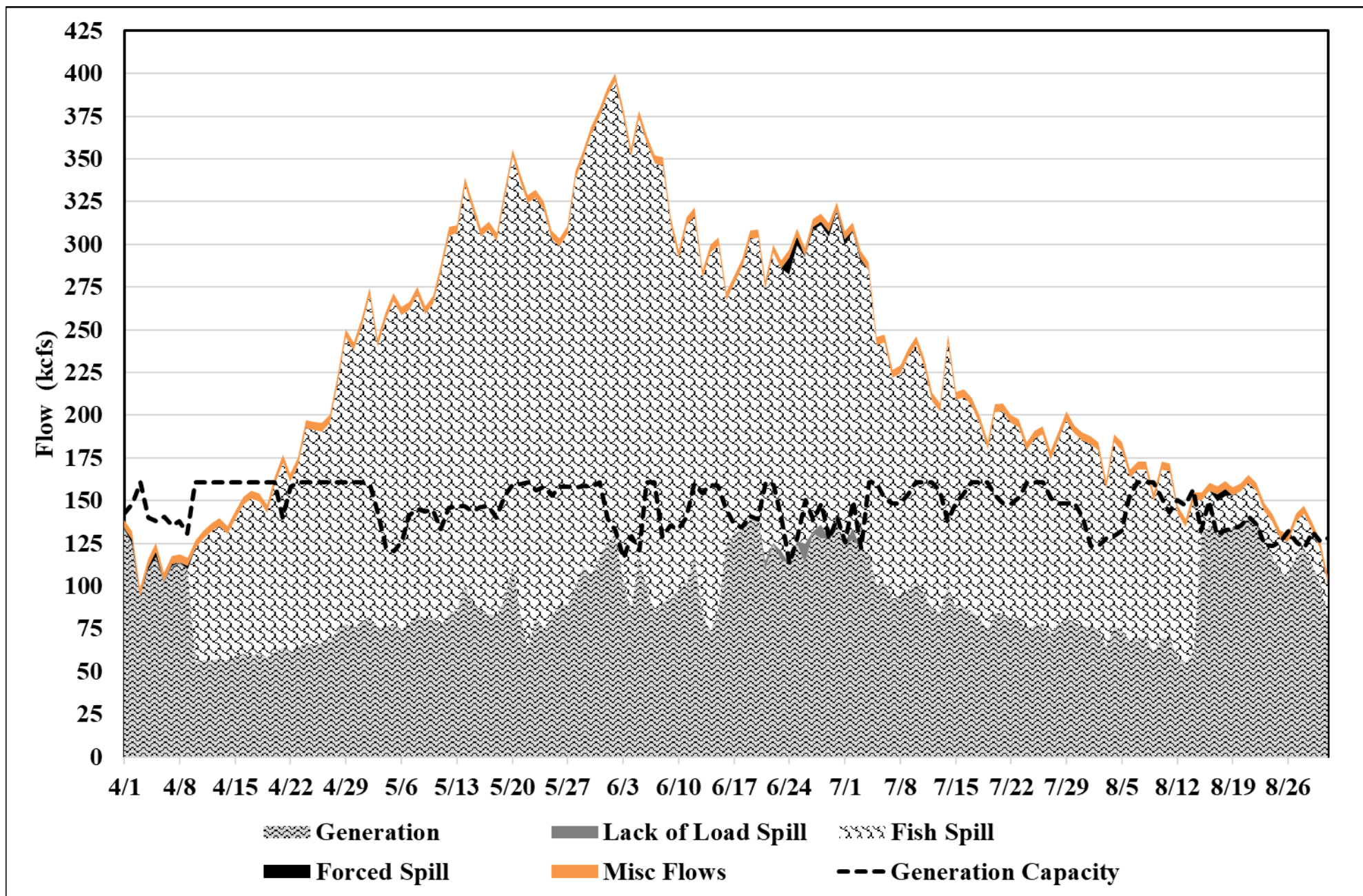


Figure I- 5: McNary project flows, WY 2020

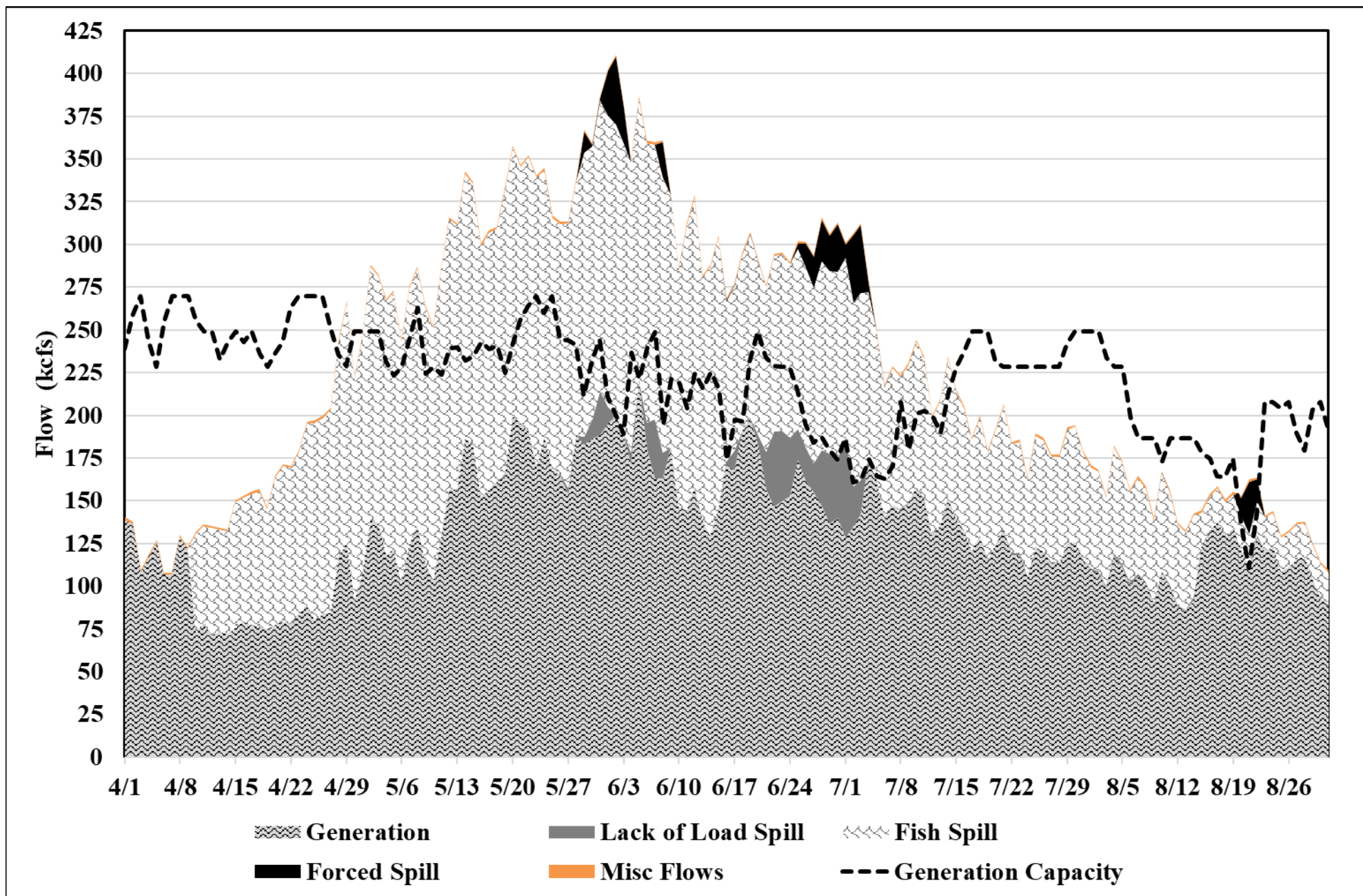


Figure I- 6: John Day project flows, WY 2020

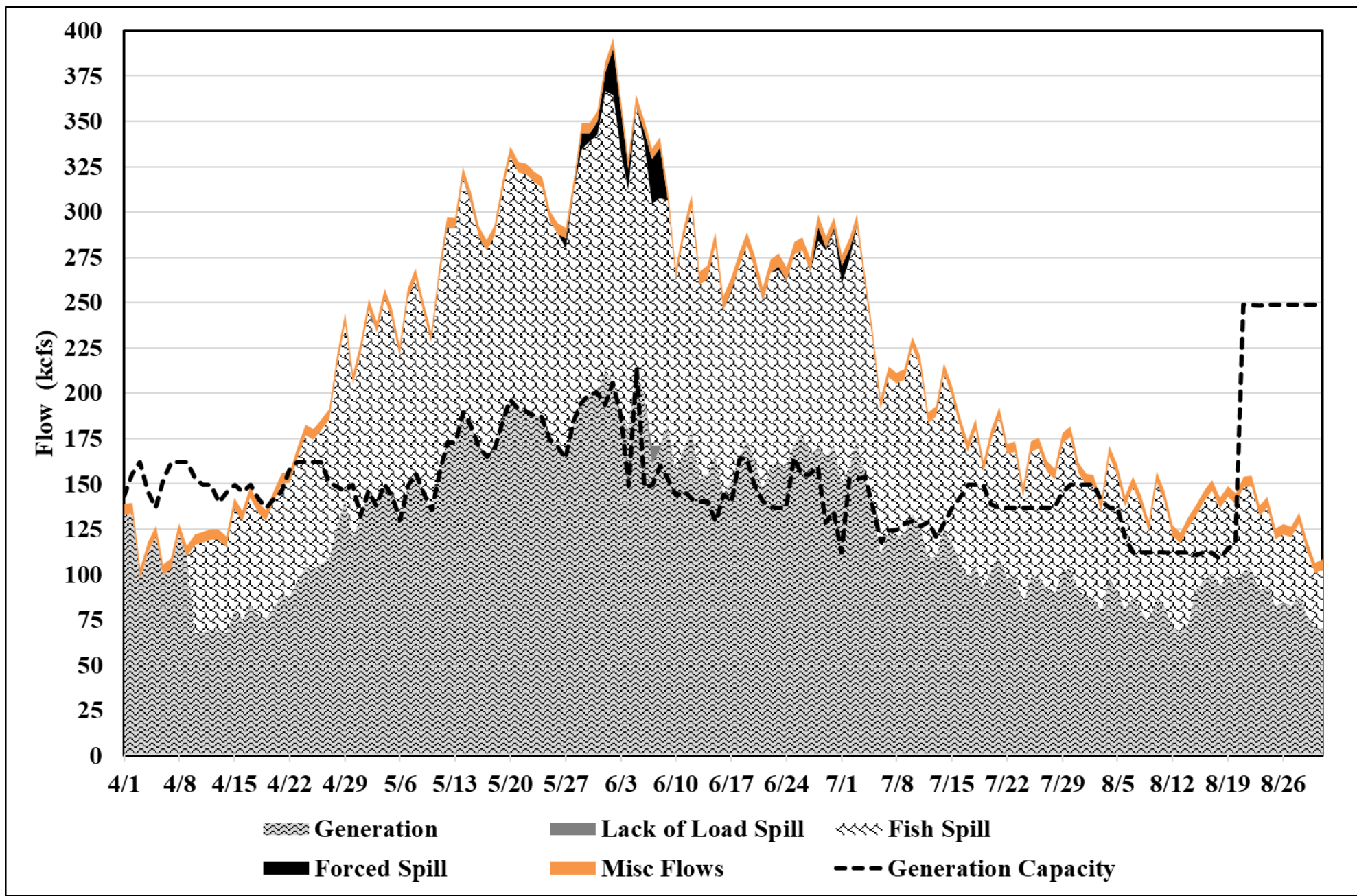


Figure I- 7: The Dalles project flows, WY 2020

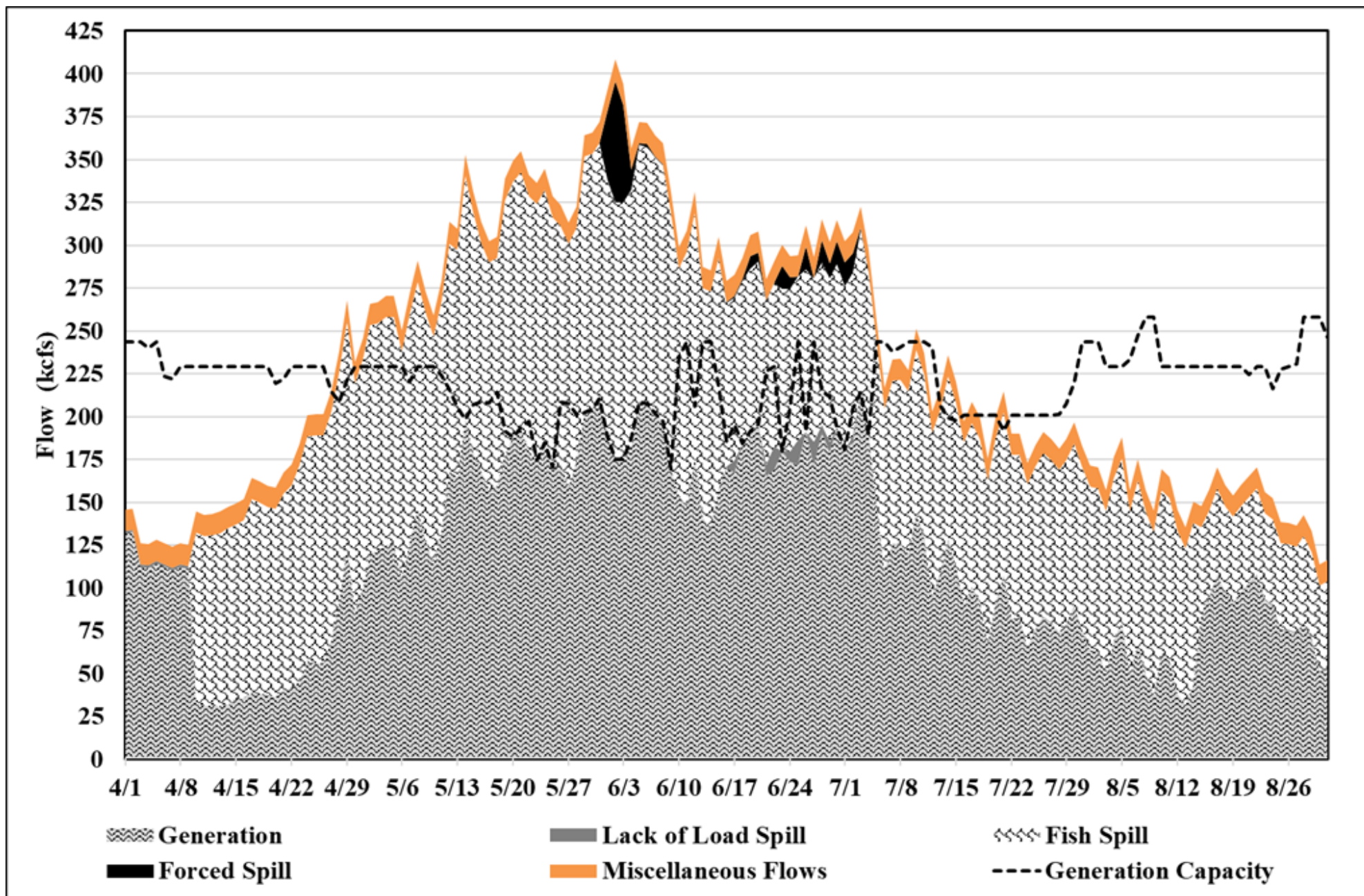


Figure I- 8: Bonneville project flows, WY 2020

Table I- 1: Little Goose project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	45	45	0	0		05/22/20	131	53	77	77		7/12/2020	53	35	19	18
04/02/20	40	39	0	0		05/23/20	123	63	60	61		7/13/2020	53	34	19	18
04/03/20	40	14	25	25		05/24/20	103	44	59	59		7/14/2020	45	26	19	18
04/04/20	38	15	23	23		05/25/20	101	42	59	59		7/15/2020	48	29	19	18
04/05/20	34	13	21	21		05/26/20	101	38	62	62		7/16/2020	46	27	19	18
04/06/20	36	14	22	22		05/27/20	110	49	60	60		7/17/2020	46	27	19	18
04/07/20	38	15	23	23		05/28/20	113	52	61	61		7/18/2020	45	25	19	18
04/08/20	45	16	29	28		05/29/20	125	64	60	60		7/19/2020	44	25	19	18
04/09/20	47	17	29	29		05/30/20	137	72	64	64		7/20/2020	46	27	19	18
04/10/20	50	18	32	31		05/31/20	157	81	76	76		7/21/2020	45	26	19	18
04/11/20	53	19	34	34		06/01/20	166	90	76	76		7/22/2020	44	24	19	18
04/12/20	58	21	37	36		06/02/20	144	69	75	76		7/23/2020	42	22	19	18
04/13/20	59	21	37	37		06/03/20	125	66	58	59		7/24/2020	40	21	19	18
04/14/20	55	19	35	35		06/04/20	117	58	58	58		7/25/2020	43	24	19	18
04/15/20	51	18	32	32		06/05/20	115	57	57	58		7/26/2020	40	20	19	18
04/16/20	51	19	32	32		06/06/20	110	45	65	65		7/27/2020	40	21	19	18
04/17/20	52	20	32	32		06/07/20	109	40	69	69		7/28/2020	41	22	18	18
04/18/20	48	18	30	29		06/08/20	104	41	62	63		7/29/2020	40	21	18	18
04/19/20	51	18	32	31		06/09/20	97	40	57	57		7/30/2020	40	21	18	18
04/20/20	50	17	33	32		06/10/20	85	30	55	55		7/31/2020	40	21	19	18
04/21/20	49	18	31	30		06/11/20	90	31	58	58		8/1/2020	42	23	18	18
04/22/20	54	19	35	34		06/12/20	89	31	57	57		8/2/2020	39	20	18	18
04/23/20	63	22	40	40		06/13/20	89	22	67	66		8/3/2020	36	10	26	18
04/24/20	75	27	47	47		06/14/20	94	25	69	69		8/4/2020	37	10	26	18
04/25/20	73	24	49	49		06/15/20	91	32	59	59		8/5/2020	35	10	24	18
04/26/20	75	25	49	49		06/16/20	90	32	58	58		8/6/2020	34	9	24	18
04/27/20	79	28	51	51		06/17/20	89	30	58	58		8/7/2020	30	14	16	16
04/28/20	84	29	55	54		06/18/20	90	32	58	58		8/8/2020	28	11	17	14
04/29/20	88	30	58	57		06/19/20	88	29	58	58		8/9/2020	26	12	13	13
04/30/20	95	35	59	59		06/20/20	85	20	65	64		8/10/2020	26	12	13	12
05/01/20	116	54	62	62		06/21/20	85	53	32	18		8/11/2020	28	12	15	14
05/02/20	112	51	61	61		06/22/20	93	68	25	18		8/12/2020	30	12	17	16

05/03/20	105	43	61	62	06/23/20	93	67	26	18	8/13/2020	28	12	15	14
05/04/20	104	42	62	62	06/24/20	84	56	27	18	8/14/2020	27	12	15	13
05/05/20	94	32	61	61	06/25/20	83	47	35	18	8/15/2020	28	20	7	7
05/06/20	87	31	56	56	06/26/20	78	39	39	18	8/16/2020	27	20	7	7
05/07/20	91	31	59	59	06/27/20	75	29	45	18	8/17/2020	25	18	7	7
05/08/20	87	29	58	57	06/28/20	71	25	45	18	8/18/2020	28	21	7	6
05/09/20	83	29	53	53	06/29/20	72	40	31	18	8/19/2020	30	23	7	7
05/10/20	83	29	53	53	06/30/20	79	49	29	17	8/20/2020	29	22	7	7
05/11/20	97	37	60	60	07/01/20	77	42	35	18	8/21/2020	24	16	7	7
05/12/20	102	38	63	64	07/02/20	73	43	30	18	8/22/2020	27	19	7	7
05/13/20	112	48	64	64	07/03/20	68	43	25	18	8/23/2020	22	14	7	7
05/14/20	111	47	64	64	07/04/20	58	39	19	18	8/24/2020	25	18	7	7
05/15/20	102	37	65	65	07/05/20	55	36	19	18	8/25/2020	25	18	7	7
05/16/20	98	33	65	65	07/06/20	56	37	19	18	8/26/2020	22	15	7	6
05/17/20	94	32	62	62	07/07/20	52	33	19	18	8/27/2020	24	17	7	6
05/18/20	97	33	64	64	07/08/20	55	36	19	18	8/28/2020	25	18	7	6
05/19/20	113	42	71	72	07/09/20	57	38	19	18	8/29/2020	21	14	7	6
05/20/20	115	49	66	66	07/10/20	58	39	19	18	8/30/2020	21	14	7	6
05/21/20	133	64	68	69	07/11/20	55	36	19	18	8/31/2020	20	12	7	6

Table I- 2: Little Goose project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	42	42	0	0		05/22/20	126	56	69	69		7/12/2020	52	36	16	16
04/02/20	39	39	0	0		05/23/20	119	51	68	68		7/13/2020	50	34	15	15
04/03/20	34	18	16	16		05/24/20	101	34	66	66		7/14/2020	42	29	13	13
04/04/20	34	16	18	18		05/25/20	99	32	66	66		7/15/2020	45	31	13	13
04/05/20	39	20	19	19		05/26/20	96	30	65	65		7/16/2020	43	30	13	13
04/06/20	40	18	21	21		05/27/20	107	39	67	67		7/17/2020	41	28	12	12
04/07/20	38	18	20	20		05/28/20	112	43	68	68		7/18/2020	43	29	13	13
04/08/20	44	18	26	26		05/29/20	121	52	69	69		7/19/2020	41	28	12	12
04/09/20	46	22	24	24		05/30/20	132	62	69	69		7/20/2020	43	30	13	13
04/10/20	48	22	26	26		05/31/20	151	67	84	84		7/21/2020	43	30	13	13
04/11/20	53	23	30	30		06/01/20	162	78	84	84		7/22/2020	39	27	12	12
04/12/20	55	24	30	30		06/02/20	142	75	66	66		7/23/2020	39	27	12	12

04/13/20	54	15	39	33
04/14/20	58	23	34	34
04/15/20	48	21	26	26
04/16/20	50	22	27	27
04/17/20	51	20	31	31
04/18/20	46	18	28	28
04/19/20	48	19	29	29
04/20/20	49	19	30	30
04/21/20	49	19	29	29
04/22/20	51	20	31	31
04/23/20	61	22	39	39
04/24/20	73	24	49	49
04/25/20	70	24	46	46
04/26/20	73	24	48	48
04/27/20	76	25	51	51
04/28/20	83	27	55	55
04/29/20	88	28	59	59
04/30/20	93	31	61	61
05/01/20	113	50	63	63
05/02/20	110	46	64	64
05/03/20	100	37	62	62
05/04/20	106	41	64	64
05/05/20	89	28	60	60
05/06/20	86	28	58	58
05/07/20	88	30	57	57
05/08/20	86	28	58	58
05/09/20	80	26	54	54
05/10/20	79	25	53	53
05/11/20	96	36	60	60
05/12/20	98	34	64	64
05/13/20	107	42	65	65
05/14/20	111	45	65	65
05/15/20	97	33	64	64
05/16/20	96	32	64	64
05/17/20	91	29	61	61
05/18/20	96	32	64	64
05/19/20	109	42	66	66
05/20/20	113	45	67	67
05/21/20	128	59	69	69

06/03/20	122	59	63	63
06/04/20	110	50	60	60
06/05/20	116	56	60	60
06/06/20	107	47	59	59
06/07/20	102	46	55	55
06/08/20	104	46	58	58
06/09/20	98	37	60	60
06/10/20	82	27	54	54
06/11/20	86	28	58	58
06/12/20	88	28	60	60
06/13/20	86	28	58	58
06/14/20	92	30	61	61
06/15/20	90	28	61	61
06/16/20	86	27	59	59
06/17/20	88	29	59	59
06/18/20	88	28	59	59
06/19/20	85	27	57	57
06/20/20	87	28	58	58
06/21/20	80	53	27	24
06/22/20	92	63	28	28
06/23/20	91	62	29	28
06/24/20	81	52	28	24
06/25/20	78	53	24	24
06/26/20	74	45	29	23
06/27/20	71	36	35	21
06/28/20	69	30	38	21
06/29/20	68	41	27	20
06/30/20	76	49	26	23
07/01/20	73	50	22	22
07/02/20	71	49	21	21
07/03/20	66	46	20	20
07/04/20	57	40	17	17
07/05/20	50	35	15	15
07/06/20	55	38	16	16
07/07/20	44	30	13	13
07/08/20	54	37	16	16
07/09/20	54	37	16	16
07/10/20	56	39	17	17
07/11/20	51	35	15	15

7/24/2020	36	25	11	11
7/25/2020	43	29	13	13
7/26/2020	39	27	12	12
7/27/2020	33	14	18	10
7/28/2020	40	27	12	12
7/29/2020	38	26	11	11
7/30/2020	38	26	11	11
7/31/2020	37	25	11	11
8/1/2020	41	28	12	12
8/2/2020	34	23	10	10
8/3/2020	33	23	10	10
8/4/2020	36	25	11	11
8/5/2020	36	25	11	11
8/6/2020	31	13	18	10
8/7/2020	29	18	10	10
8/8/2020	28	16	12	12
8/9/2020	26	14	11	11
8/10/2020	26	16	10	9
8/11/2020	32	22	9	9
8/12/2020	29	17	11	11
8/13/2020	30	19	11	11
8/14/2020	31	19	11	11
8/15/2020	28	20	7	7
8/16/2020	28	21	7	7
8/17/2020	29	21	7	7
8/18/2020	28	20	7	7
8/19/2020	30	22	7	7
8/20/2020	31	24	7	7
8/21/2020	26	18	7	7
8/22/2020	26	18	7	7
8/23/2020	22	14	7	7
8/24/2020	28	20	7	7
8/25/2020	28	20	7	7
8/26/2020	22	15	7	7
8/27/2020	26	18	7	7
8/28/2020	26	18	7	7
8/29/2020	22	14	7	7
8/30/2020	22	15	7	7
8/31/2020	20	12	7	7

Table I- 3: Lower Monumental project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	46	45	0	0		05/22/20	127	41	85	86		7/12/2020	52	34	17	17
04/02/20	40	40	0	0		05/23/20	121	40	81	81		7/13/2020	49	31	17	17
04/03/20	37	12	25	24		05/24/20	101	31	70	71		7/14/2020	45	27	17	17
04/04/20	38	12	26	25		05/25/20	99	31	68	67		7/15/2020	42	24	17	17
04/05/20	43	13	29	29		05/26/20	97	30	66	67		7/16/2020	46	28	17	17
04/06/20	41	12	28	27		05/27/20	106	34	71	71		7/17/2020	40	22	17	17
04/07/20	39	12	26	25		05/28/20	112	36	76	76		7/18/2020	44	27	17	17
04/08/20	42	12	29	29		05/29/20	119	37	82	82		7/19/2020	40	22	17	17
04/09/20	47	14	32	32		05/30/20	132	41	90	90		7/20/2020	45	27	17	17
04/10/20	47	13	33	32		05/31/20	152	35	116	116		7/21/2020	41	24	17	17
04/11/20	52	16	36	35		06/01/20	159	50	109	113		7/22/2020	40	22	17	17
04/12/20	53	15	37	37		06/02/20	147	57	88	89		7/23/2020	38	20	17	17
04/13/20	54	16	37	37		06/03/20	120	41	78	80		7/24/2020	36	18	17	17
04/14/20	55	16	38	37		06/04/20	112	30	81	81		7/25/2020	42	24	17	17
04/15/20	47	14	33	32		06/05/20	115	37	77	76		7/26/2020	36	19	17	17
04/16/20	49	14	34	34		06/06/20	110	24	85	85		7/27/2020	31	13	18	14
04/17/20	50	14	36	35		06/07/20	101	32	68	68		7/28/2020	37	16	21	17
04/18/20	44	13	30	29		06/08/20	104	14	89	89		7/29/2020	36	14	21	17
04/19/20	47	14	33	32		06/09/20	99	30	67	69		7/30/2020	39	19	19	15
04/20/20	46	12	33	33		06/10/20	82	25	57	57		7/31/2020	36	16	20	16
04/21/20	48	14	34	33		06/11/20	86	26	59	60		8/1/2020	38	20	17	17
04/22/20	52	16	35	35		06/12/20	86	27	59	59		8/2/2020	34	16	17	17
04/23/20	59	17	41	41		06/13/20	86	27	59	60		8/3/2020	32	14	17	17
04/24/20	72	22	49	50		06/14/20	89	27	62	61		8/4/2020	37	19	17	17
04/25/20	70	21	49	49		06/15/20	91	26	64	65		8/5/2020	36	19	17	17
04/26/20	72	22	49	50		06/16/20	84	17	65	65		8/6/2020	31	14	17	16
04/27/20	77	24	52	53		06/17/20	90	27	62	62		8/7/2020	29	12	17	16
04/28/20	83	25	57	57		06/18/20	86	28	58	58		8/8/2020	25	12	13	12
04/29/20	88	27	60	60		06/19/20	84	27	57	58		8/9/2020	25	11	13	12
04/30/20	91	26	64	65		06/20/20	85	20	64	64		8/10/2020	25	11	13	12
05/01/20	113	36	75	76		06/21/20	79	60	19	17		8/11/2020	29	12	16	15
05/02/20	113	37	76	77		06/22/20	90	71	18	17		8/12/2020	30	13	16	15
05/03/20	99	32	66	66		06/23/20	88	69	18	17		8/13/2020	27	11	14	13
05/04/20	105	34	70	70		06/24/20	82	63	19	17		8/14/2020	26	11	14	13
05/05/20	89	27	61	62		06/25/20	79	61	17	17		8/15/2020	27	19	7	6

05/06/20	85	25	59	59	06/26/20	75	56	18	17	8/16/2020	29	21	7	7
05/07/20	85	27	58	58	06/27/20	72	46	25	17	8/17/2020	25	17	7	6
05/08/20	86	26	59	59	06/28/20	69	34	34	17	8/18/2020	28	20	7	7
05/09/20	80	25	55	55	06/29/20	68	50	17	17	8/19/2020	27	19	7	7
05/10/20	77	24	52	53	06/30/20	78	61	17	17	8/20/2020	29	21	7	7
05/11/20	95	31	63	64	07/01/20	71	53	17	17	8/21/2020	25	17	7	7
05/12/20	100	31	68	69	07/02/20	73	56	17	17	8/22/2020	24	16	7	7
05/13/20	108	34	73	74	07/03/20	67	48	19	17	8/23/2020	20	12	7	7
05/14/20	112	35	76	77	07/04/20	56	39	17	17	8/24/2020	24	16	7	7
05/15/20	96	30	65	66	07/05/20	52	34	17	17	8/25/2020	27	19	7	7
05/16/20	97	29	67	67	07/06/20	55	37	17	17	8/26/2020	20	12	7	7
05/17/20	90	27	63	64	07/07/20	45	27	17	17	8/27/2020	24	16	7	7
05/18/20	99	30	68	69	07/08/20	57	39	17	17	8/28/2020	24	16	7	7
05/19/20	108	17	90	90	07/09/20	53	35	17	17	8/29/2020	19	11	7	6
05/20/20	114	35	79	79	07/10/20	58	40	17	17	8/30/2020	19	12	7	6
05/21/20	127	43	84	84	07/11/20	52	34	17	17	8/31/2020	19	11	7	6

Table I- 4: Ice Harbor project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	46	46	0	0		05/22/20	133	27	106	106		7/12/2020	55	38	16	16
04/02/20	43	42	0	0		05/23/20	125	31	93	93		7/13/2020	49	34	14	14
04/03/20	42	16	25	25		05/24/20	109	29	79	79		7/14/2020	48	33	14	14
04/04/20	40	15	24	24		05/25/20	104	29	74	74		7/15/2020	42	29	13	13
04/05/20	49	18	30	30		05/26/20	103	28	74	74		7/16/2020	48	33	14	14
04/06/20	43	15	27	27		05/27/20	110	28	81	81		7/17/2020	41	28	12	12
04/07/20	43	15	27	27		05/28/20	119	29	90	90		7/18/2020	47	32	14	14
04/08/20	46	16	30	30		05/29/20	124	31	92	92		7/19/2020	41	28	12	12
04/09/20	52	18	33	33		05/30/20	136	35	100	100		7/20/2020	48	33	14	14
04/10/20	53	19	33	33		05/31/20	155	43	112	112		7/21/2020	45	30	14	13
04/11/20	54	19	35	35		06/01/20	164	51	112	112		7/22/2020	42	23	18	13
04/12/20	59	20	38	38		06/02/20	152	45	106	106		7/23/2020	40	26	13	12
04/13/20	59	20	39	39		06/03/20	124	34	90	90		7/24/2020	37	25	11	11
04/14/20	59	20	39	39		06/04/20	116	31	85	85		7/25/2020	48	33	15	15
04/15/20	54	19	34	34		06/05/20	123	27	96	96		7/26/2020	39	27	12	12
04/16/20	54	18	34	34		06/06/20	111	19	92	92		7/27/2020	36	24	11	11
04/17/20	56	19	37	37		06/07/20	103	22	81	81		7/28/2020	42	29	13	13
04/18/20	48	16	31	31		06/08/20	108	14	93	93		7/29/2020	40	27	12	12
04/19/20	53	18	34	34		06/09/20	103	28	75	75		7/30/2020	41	28	12	12

04/20/20	54	18	35	35	06/10/20	89	26	63	63	7/31/2020	39	26	12	12
04/21/20	54	18	35	35	06/11/20	90	27	62	62	8/1/2020	40	27	12	12
04/22/20	57	20	36	36	06/12/20	94	28	66	66	8/2/2020	36	24	11	11
04/23/20	61	19	41	41	06/13/20	90	15	75	75	8/3/2020	37	25	11	11
04/24/20	78	25	52	52	06/14/20	94	10	83	83	8/4/2020	39	26	11	11
04/25/20	77	23	53	53	06/15/20	97	28	68	68	8/5/2020	37	25	11	11
04/26/20	76	24	52	52	06/16/20	90	10	80	80	8/6/2020	34	23	10	10
04/27/20	81	25	56	56	06/17/20	93	28	64	64	8/7/2020	32	22	10	10
04/28/20	88	28	60	60	06/18/20	90	28	62	62	8/8/2020	27	17	9	9
04/29/20	91	27	63	63	06/19/20	90	27	63	63	8/9/2020	25	15	9	8
04/30/20	96	28	67	67	06/20/20	89	18	70	70	8/10/2020	26	17	9	9
05/01/20	116	29	86	86	06/21/20	85	25	59	25	8/11/2020	32	22	9	9
05/02/20	118	31	86	86	06/22/20	95	44	50	29	8/12/2020	32	22	10	10
05/03/20	104	29	74	74	06/23/20	94	43	51	28	8/13/2020	30	21	9	9
05/04/20	111	29	81	81	06/24/20	86	40	45	26	8/14/2020	28	19	8	8
05/05/20	94	28	66	66	06/25/20	81	10	71	24	8/15/2020	30	21	8	8
05/06/20	92	29	63	63	06/26/20	80	9	70	24	8/16/2020	32	23	8	8
05/07/20	89	26	63	63	06/27/20	77	10	66	23	8/17/2020	28	19	8	8
05/08/20	93	27	65	65	06/28/20	72	10	62	22	8/18/2020	31	22	8	8
05/09/20	83	24	58	58	06/29/20	72	14	57	22	8/19/2020	30	21	8	8
05/10/20	86	26	59	59	06/30/20	83	31	51	25	8/20/2020	33	24	8	8
05/11/20	99	28	70	70	07/01/20	74	43	30	22	8/21/2020	26	18	8	8
05/12/20	103	29	74	74	07/02/20	75	52	23	23	8/22/2020	26	18	8	8
05/13/20	111	28	82	82	07/03/20	69	46	22	21	8/23/2020	24	15	8	8
05/14/20	117	28	88	88	07/04/20	59	41	18	18	8/24/2020	26	18	8	8
05/15/20	100	29	71	71	07/05/20	52	36	16	16	8/25/2020	31	22	8	8
05/16/20	101	28	72	72	07/06/20	56	38	17	17	8/26/2020	23	14	8	8
05/17/20	98	28	69	69	07/07/20	46	32	14	14	8/27/2020	27	18	8	8
05/18/20	102	28	73	73	07/08/20	59	41	18	18	8/28/2020	25	16	8	8
05/19/20	111	20	90	90	07/09/20	54	37	16	16	8/29/2020	24	15	8	8
05/20/20	120	28	90	90	07/10/20	58	40	17	17	8/30/2020	22	13	8	8
05/21/20	132	36	96	96	07/11/20	53	36	16	16	8/31/2020	22	13	8	8

Table I- 5: McNary project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	139	133	1	0		05/22/20	329	63	261	261		7/12/2020	213	87	121	121
04/02/20	132	125	3	0		05/23/20	332	82	245	245		7/13/2020	207	84	118	118
04/03/20	99	94	0	0		05/24/20	325	75	246	246		7/14/2020	248	101	142	141

04/04/20	116	109	2	0
04/05/20	125	117	3	0
04/06/20	108	101	2	0
04/07/20	118	111	2	0
04/08/20	119	113	1	0
04/09/20	116	110	2	0
04/10/20	127	56	66	66
04/11/20	132	57	71	71
04/12/20	137	57	75	75
04/13/20	140	57	78	78
04/14/20	135	56	74	74
04/15/20	144	59	80	80
04/16/20	152	60	87	87
04/17/20	156	59	92	92
04/18/20	154	61	89	89
04/19/20	147	58	85	85
04/20/20	164	62	98	98
04/21/20	177	64	108	108
04/22/20	166	62	99	99
04/23/20	175	63	107	107
04/24/20	197	68	125	125
04/25/20	196	65	126	126
04/26/20	195	67	124	124
04/27/20	200	68	127	127
04/28/20	224	74	145	145
04/29/20	250	78	168	168
04/30/20	243	75	163	163
05/01/20	256	79	172	172
05/02/20	275	82	188	188
05/03/20	245	76	164	164
05/04/20	260	76	180	180
05/05/20	271	78	189	189
05/06/20	263	74	185	185
05/07/20	266	78	183	183
05/08/20	275	83	187	187
05/09/20	264	81	178	178
05/10/20	270	81	184	184
05/11/20	289	77	208	208

05/25/20	308	82	221	221
05/26/20	304	88	210	210
05/27/20	311	89	217	217
05/28/20	343	100	239	239
05/29/20	355	112	239	239
05/30/20	369	107	258	258
05/31/20	379	116	258	258
06/01/20	391	126	261	261
06/02/20	400	130	265	265
06/03/20	380	104	271	271
06/04/20	356	85	267	267
06/05/20	378	118	256	256
06/06/20	363	98	260	260
06/07/20	352	85	263	263
06/08/20	351	89	257	257
06/09/20	316	93	218	218
06/10/20	297	98	194	194
06/11/20	316	101	210	210
06/12/20	321	118	199	199
06/13/20	285	83	197	197
06/14/20	300	74	221	221
06/15/20	304	87	213	213
06/16/20	272	125	142	142
06/17/20	282	131	146	146
06/18/20	292	134	153	153
06/19/20	308	141	163	162
06/20/20	309	139	165	165
06/21/20	279	110	164	159
06/22/20	300	124	171	170
06/23/20	291	115	171	165
06/24/20	297	113	179	169
06/25/20	309	125	180	173
06/26/20	298	114	180	168
06/27/20	315	131	179	178
06/28/20	318	128	185	175
06/29/20	313	128	180	177
06/30/20	325	140	180	180
07/01/20	308	123	180	175

7/15/2020	214	87	122	122
7/16/2020	215	88	123	123
7/17/2020	210	85	120	120
7/18/2020	200	81	114	114
7/19/2020	185	75	106	106
7/20/2020	206	84	118	118
7/21/2020	207	84	118	118
7/22/2020	200	81	114	114
7/23/2020	198	80	113	113
7/24/2020	184	74	105	105
7/25/2020	191	77	109	109
7/26/2020	193	78	110	110
7/27/2020	179	72	102	102
7/28/2020	190	77	109	108
7/29/2020	202	82	115	115
7/30/2020	194	79	111	111
7/31/2020	190	77	108	108
8/1/2020	188	76	107	107
8/2/2020	184	74	105	105
8/3/2020	162	65	92	92
8/4/2020	189	76	108	108
8/5/2020	184	74	105	105
8/6/2020	168	67	96	96
8/7/2020	173	70	99	99
8/8/2020	173	69	99	99
8/9/2020	154	62	88	88
8/10/2020	173	69	99	98
8/11/2020	172	69	98	98
8/12/2020	147	58	84	84
8/13/2020	139	55	79	79
8/14/2020	155	62	88	88
8/15/2020	155	130	21	20
8/16/2020	161	136	21	20
8/17/2020	159	130	24	20
8/18/2020	162	133	24	20
8/19/2020	159	133	21	20
8/20/2020	160	135	20	20
8/21/2020	165	141	20	20

05/12/20	310	84	222	222	07/02/20	313	127	181	174	8/22/2020	161	136	20	20
05/13/20	311	86	220	220	07/03/20	296	122	170	168	8/23/2020	149	124	20	20
05/14/20	339	100	234	234	07/04/20	290	120	165	165	8/24/2020	143	118	20	20
05/15/20	324	89	230	230	07/05/20	246	101	140	140	8/25/2020	132	108	20	20
05/16/20	309	86	219	219	07/06/20	247	101	141	141	8/26/2020	130	106	20	20
05/17/20	313	84	225	225	07/07/20	227	93	130	129	8/27/2020	142	117	20	20
05/18/20	307	83	219	219	07/08/20	229	94	131	131	8/28/2020	147	122	20	20
05/19/20	332	93	235	235	07/09/20	239	98	137	136	8/29/2020	138	113	20	20
05/20/20	356	112	239	239	07/10/20	246	101	141	140	8/30/2020	127	102	20	20
05/21/20	341	83	253	253	07/11/20	234	96	133	133	8/31/2020	106	81	20	20

Table I- 6: John Day project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS	Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS	Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	140	139	0	0	05/22/20	352	191	161	161	7/12/2020	200	129	70	70
04/02/20	138	136	0	0	05/23/20	340	169	170	170	7/13/2020	209	136	73	72
04/03/20	109	108	0	0	05/24/20	345	188	156	156	7/14/2020	235	151	82	82
04/04/20	119	118	0	0	05/25/20	317	168	147	147	7/15/2020	215	139	75	75
04/05/20	127	126	0	0	05/26/20	313	164	148	147	7/16/2020	206	133	72	72
04/06/20	108	107	0	0	05/27/20	313	154	158	155	7/17/2020	187	121	66	66
04/07/20	108	107	0	0	05/28/20	339	188	149	149	7/18/2020	200	129	69	69
04/08/20	130	129	0	0	05/29/20	367	182	184	166	7/19/2020	180	116	63	63
04/09/20	123	122	0	0	05/30/20	359	186	172	160	7/20/2020	193	124	68	68
04/10/20	132	73	57	57	05/31/20	387	188	198	170	7/21/2020	207	133	73	72
04/11/20	136	78	57	57	06/01/20	403	195	206	170	7/22/2020	185	118	66	65
04/12/20	135	71	63	63	06/02/20	411	200	210	170	7/23/2020	186	118	67	65
04/13/20	134	73	60	60	06/03/20	381	189	191	170	7/24/2020	164	105	58	58
04/14/20	133	72	60	60	06/04/20	349	172	176	170	7/25/2020	189	123	66	66
04/15/20	150	76	73	73	06/05/20	386	221	164	164	7/26/2020	187	120	66	66
04/16/20	153	79	73	73	06/06/20	361	181	179	164	7/27/2020	177	113	63	62
04/17/20	155	78	76	76	06/07/20	360	163	196	161	7/28/2020	177	114	62	62
04/18/20	157	76	79	79	06/08/20	361	163	196	161	7/29/2020	193	125	67	67
04/19/20	146	75	70	70	06/09/20	330	181	148	148	7/30/2020	195	126	68	68

04/20/20	164	77	86	86
04/21/20	171	79	91	91
04/22/20	170	78	91	91
04/23/20	180	84	95	95
04/24/20	196	89	106	106
04/25/20	197	80	116	116
04/26/20	200	84	114	114
04/27/20	205	84	119	119
04/28/20	244	118	125	125
04/29/20	267	126	140	140
04/30/20	223	92	130	130
05/01/20	248	107	140	140
05/02/20	270	120	148	148
05/03/20	253	107	145	145
05/04/20	268	118	149	149
05/05/20	273	122	150	150
05/06/20	244	101	142	142
05/07/20	275	124	150	150
05/08/20	287	136	150	150
05/09/20	265	114	150	150
05/10/20	252	103	148	148
05/11/20	287	130	156	156
05/12/20	316	157	158	158
05/13/20	312	156	155	155
05/14/20	343	186	155	155
05/15/20	337	183	152	152
05/16/20	300	152	147	147
05/17/20	308	157	150	150
05/18/20	310	161	148	148
05/19/20	333	164	168	168
05/20/20	358	200	157	157
05/21/20	346	195	150	150

06/10/20	286	146	139	139
06/11/20	312	144	167	167
06/12/20	329	158	170	170
06/13/20	282	138	142	142
06/14/20	288	129	158	158
06/15/20	305	146	158	158
06/16/20	269	171	96	94
06/17/20	278	168	109	97
06/18/20	295	191	103	103
06/19/20	307	198	108	108
06/20/20	291	183	107	102
06/21/20	276	157	118	97
06/22/20	295	147	147	103
06/23/20	295	150	145	103
06/24/20	290	153	136	102
06/25/20	302	174	127	105
06/26/20	302	161	139	106
06/27/20	294	155	138	103
06/28/20	316	147	167	111
06/29/20	306	137	169	107
06/30/20	313	140	172	109
07/01/20	301	128	172	105
07/02/20	307	135	170	107
07/03/20	312	142	170	109
07/04/20	279	174	104	98
07/05/20	251	162	88	88
07/06/20	218	141	76	76
07/07/20	229	148	80	80
07/08/20	224	145	78	78
07/09/20	231	149	81	80
07/10/20	245	158	86	86
07/11/20	235	150	83	82

7/31/2020	179	115	63	63
8/1/2020	171	110	60	60
8/2/2020	168	108	59	59
8/3/2020	153	99	53	53
8/4/2020	182	118	64	64
8/5/2020	174	112	61	61
8/6/2020	157	101	55	55
8/7/2020	165	106	57	57
8/8/2020	158	102	55	55
8/9/2020	140	90	49	49
8/10/2020	167	108	58	58
8/11/2020	157	100	55	55
8/12/2020	138	88	48	48
8/13/2020	133	85	46	46
8/14/2020	143	92	50	50
8/15/2020	145	123	21	21
8/16/2020	155	133	21	21
8/17/2020	159	137	20	20
8/18/2020	151	130	20	20
8/19/2020	156	134	20	20
8/20/2020	153	121	31	20
8/21/2020	162	111	51	20
8/22/2020	164	129	34	20
8/23/2020	142	120	20	20
8/24/2020	145	123	20	20
8/25/2020	130	109	20	20
8/26/2020	133	112	20	20
8/27/2020	138	116	20	20
8/28/2020	139	117	21	21
8/29/2020	126	104	21	21
8/30/2020	115	93	21	21
8/31/2020	110	88	20	20

Table I- 7: The Dalles project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	139	133	0	0		05/22/20	328	190	132	131		7/12/2020	190	109	75	75
04/02/20	140	134	0	0		05/23/20	323	188	129	129		7/13/2020	193	110	78	77
04/03/20	104	98	0	0		05/24/20	320	187	127	128		7/14/2020	217	124	87	87
04/04/20	118	112	0	0		05/25/20	302	175	121	121		7/15/2020	205	118	81	82
04/05/20	127	121	0	0		05/26/20	294	171	117	118		7/16/2020	188	107	75	75
04/06/20	106	100	0	0		05/27/20	292	164	122	117		7/17/2020	174	98	69	69
04/07/20	109	103	0	0		05/28/20	319	185	128	127		7/18/2020	186	106	74	75
04/08/20	128	123	0	0		05/29/20	349	195	149	140		7/19/2020	163	92	65	65
04/09/20	116	110	0	0		05/30/20	349	199	144	140		7/20/2020	181	103	72	72
04/10/20	122	68	49	49		05/31/20	356	200	150	143		7/21/2020	193	109	78	77
04/11/20	124	68	49	49		06/01/20	383	213	164	153		7/22/2020	173	98	70	69
04/12/20	125	70	50	50		06/02/20	396	206	185	159		7/23/2020	174	98	70	70
04/13/20	125	69	50	50		06/03/20	361	188	167	144		7/24/2020	149	84	60	60
04/14/20	121	67	48	49		06/04/20	330	179	145	132		7/25/2020	174	99	69	70
04/15/20	143	80	57	57		06/05/20	365	213	145	146		7/26/2020	176	99	71	70
04/16/20	135	75	54	54		06/06/20	352	199	147	141		7/27/2020	163	91	66	65
04/17/20	148	83	59	59		06/07/20	335	161	168	134		7/28/2020	159	89	64	64
04/18/20	141	78	57	56		06/08/20	341	169	166	137		7/29/2020	179	101	72	71
04/19/20	136	75	55	54		06/09/20	313	183	125	125		7/30/2020	182	104	73	73
04/20/20	147	82	59	59		06/10/20	270	156	108	108		7/31/2020	162	91	65	65
04/21/20	157	88	63	63		06/11/20	292	169	117	117		8/1/2020	156	88	62	62
04/22/20	157	88	63	63		06/12/20	310	180	124	124		8/2/2020	156	88	62	62
04/23/20	171	97	68	68		06/13/20	267	153	107	107		8/3/2020	141	79	56	56
04/24/20	183	104	74	73		06/14/20	271	155	109	108		8/4/2020	171	97	68	67
04/25/20	181	103	72	72		06/15/20	289	166	116	116		8/5/2020	161	91	64	64
04/26/20	186	106	74	74		06/16/20	254	145	101	101		8/6/2020	144	81	57	57
04/27/20	192	109	77	77		06/17/20	264	151	105	104		8/7/2020	154	87	61	62
04/28/20	222	128	88	89		06/18/20	277	165	105	105		8/8/2020	144	81	57	58
04/29/20	245	141	98	98		06/19/20	289	174	108	108		8/9/2020	130	72	52	52
04/30/20	211	121	85	84		06/20/20	276	164	105	105		8/10/2020	157	88	63	63
05/01/20	229	133	90	91		06/21/20	259	147	105	104		8/11/2020	147	82	59	59
05/02/20	252	146	100	101		06/22/20	274	160	107	106		8/12/2020	128	71	51	51
05/03/20	240	138	96	96		06/23/20	277	162	108	106		8/13/2020	123	68	49	49

05/04/20	258	150	102	103	06/24/20	270	159	103	102	8/14/2020	132	73	53	53
05/05/20	248	143	99	99	06/25/20	284	173	104	100	8/15/2020	139	91	42	42
05/06/20	227	130	91	91	06/26/20	286	178	101	100	8/16/2020	146	97	44	44
05/07/20	257	149	103	103	06/27/20	274	166	102	101	8/17/2020	152	101	45	46
05/08/20	269	156	108	108	06/28/20	299	169	123	107	8/18/2020	143	94	43	43
05/09/20	251	145	100	100	06/29/20	287	165	116	112	8/19/2020	149	99	44	44
05/10/20	234	135	93	94	06/30/20	297	171	120	118	8/20/2020	145	96	43	43
05/11/20	270	157	108	108	07/01/20	276	150	120	111	8/21/2020	155	102	47	46
05/12/20	298	173	119	119	07/02/20	286	161	120	114	8/22/2020	155	103	46	46
05/13/20	297	173	118	119	07/03/20	299	174	120	119	8/23/2020	138	91	42	42
05/14/20	325	190	130	130	07/04/20	267	154	107	107	8/24/2020	143	94	43	43
05/15/20	311	181	124	125	07/05/20	235	135	94	94	8/25/2020	126	82	38	38
05/16/20	292	170	116	117	07/06/20	198	112	80	79	8/26/2020	128	84	38	37
05/17/20	285	165	115	114	07/07/20	215	123	86	86	8/27/2020	127	83	38	38
05/18/20	293	170	117	117	07/08/20	212	121	85	85	8/28/2020	135	88	40	40
05/19/20	317	185	127	127	07/09/20	213	123	85	85	8/29/2020	119	77	36	36
05/20/20	337	197	134	135	07/10/20	232	134	92	93	8/30/2020	107	69	32	32
05/21/20	328	192	130	131	07/11/20	221	126	89	88	8/31/2020	109	70	32	33

Table I- 8: Bonneville project flows, WY 2020

Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS		Date	Outflow KCFS	Generation Flow KCFS	Actual Spill KCFS	FOP Spill KCFS
04/01/20	146	132	1	0		05/22/20	341	180	149	149		7/12/2020	203	95	96	95
04/02/20	146	133	1	0		05/23/20	336	175	149	149		7/13/2020	216	108	96	95
04/03/20	126	112	1	0		05/24/20	344	185	147	147		7/14/2020	236	128	95	95
04/04/20	126	112	1	0		05/25/20	328	168	148	148		7/15/2020	220	113	96	95
04/05/20	128	114	1	0		05/26/20	324	173	138	138		7/16/2020	197	89	96	95
04/06/20	126	112	1	0		05/27/20	313	159	142	142		7/17/2020	208	101	95	95
04/07/20	124	110	1	0		05/28/20	323	174	136	136		7/18/2020	200	92	95	95
04/08/20	126	112	1	0		05/29/20	364	202	149	149		7/19/2020	175	67	95	95
04/09/20	125	111	2	4		05/30/20	366	204	149	149		7/20/2020	200	92	95	95
04/10/20	145	33	99	100		05/31/20	372	211	149	149		7/21/2020	215	107	95	95
04/11/20	143	31	99	100		06/01/20	390	189	189	150		7/22/2020	190	82	95	95
04/12/20	143	31	99	100		06/02/20	408	175	221	150		7/23/2020	190	82	95	95
04/13/20	144	31	101	101		06/03/20	394	175	207	150		7/24/2020	173	65	95	95
04/14/20	147	32	103	103		06/04/20	356	182	162	150		7/25/2020	184	76	95	95

04/15/20	149	35	102	103
04/16/20	152	36	104	104
04/17/20	164	39	113	113
04/18/20	162	38	111	111
04/19/20	160	37	110	110
04/20/20	158	36	110	110
04/21/20	167	41	114	114
04/22/20	172	42	118	118
04/23/20	184	46	125	125
04/24/20	201	58	131	131
04/25/20	201	56	133	133
04/26/20	201	56	133	133
04/27/20	215	69	133	133
04/28/20	238	92	134	133
04/29/20	268	123	133	133
04/30/20	232	87	133	133
05/01/20	246	100	133	133
05/02/20	266	120	133	133
05/03/20	267	122	133	133
05/04/20	271	125	133	133
05/05/20	270	126	132	132
05/06/20	250	105	133	133
05/07/20	272	126	133	133
05/08/20	291	146	133	133
05/09/20	273	128	133	133
05/10/20	259	114	133	133
05/11/20	279	134	133	133
05/12/20	313	168	133	133
05/13/20	310	165	133	133
05/14/20	353	198	142	142
05/15/20	331	179	140	140
05/16/20	314	168	133	133
05/17/20	303	157	133	133
05/18/20	305	160	133	133
05/19/20	339	178	148	148
05/20/20	349	188	149	149
05/21/20	355	194	149	149

06/05/20	372	209	151	150
06/06/20	371	207	152	150
06/07/20	364	202	150	150
06/08/20	359	197	150	150
06/09/20	331	170	149	149
06/10/20	299	153	133	133
06/11/20	309	148	149	149
06/12/20	331	176	143	143
06/13/20	287	142	133	133
06/14/20	285	134	139	139
06/15/20	305	157	135	135
06/16/20	279	170	97	95
06/17/20	283	167	103	95
06/18/20	293	184	96	95
06/19/20	306	191	102	95
06/20/20	308	196	100	95
06/21/20	280	165	103	95
06/22/20	290	169	109	95
06/23/20	300	180	108	95
06/24/20	293	173	108	95
06/25/20	294	172	109	95
06/26/20	312	191	109	95
06/27/20	293	171	109	95
06/28/20	315	191	112	95
06/29/20	302	179	110	95
06/30/20	315	194	109	95
07/01/20	302	181	109	95
07/02/20	307	185	110	95
07/03/20	323	214	96	95
07/04/20	297	190	95	95
07/05/20	256	148	95	95
07/06/20	217	109	95	95
07/07/20	233	125	95	95
07/08/20	234	126	95	95
07/09/20	227	119	96	95
07/10/20	251	143	96	95
07/11/20	237	129	96	95

7/26/2020	191	83	96	95
7/27/2020	187	79	95	95
7/28/2020	181	74	95	95
7/29/2020	187	80	95	95
7/30/2020	197	89	95	95
7/31/2020	183	75	95	95
8/1/2020	171	64	95	95
8/2/2020	170	63	95	95
8/3/2020	157	50	95	95
8/4/2020	176	69	95	95
8/5/2020	188	81	95	95
8/6/2020	157	50	95	95
8/7/2020	175	68	95	95
8/8/2020	157	50	95	95
8/9/2020	145	38	95	95
8/10/2020	169	62	95	95
8/11/2020	165	57	95	95
8/12/2020	146	38	95	95
8/13/2020	136	32	92	92
8/14/2020	150	44	94	95
8/15/2020	148	85	50	50
8/16/2020	157	95	50	50
8/17/2020	171	108	50	50
8/18/2020	160	98	50	50
8/19/2020	154	92	50	50
8/20/2020	160	98	50	50
8/21/2020	165	102	50	50
8/22/2020	171	108	50	50
8/23/2020	156	93	50	50
8/24/2020	153	90	51	50
8/25/2020	139	76	50	50
8/26/2020	138	75	50	50
8/27/2020	137	74	50	50
8/28/2020	143	80	51	50
8/29/2020	133	70	51	50
8/30/2020	114	50	51	50
8/31/2020	116	53	51	50