OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE- 19MCN191 Steelhead Overshoot Evaluation Operations
COORDINATION DATE- 20 DEC 2019;
PROJECT- McNary Dam
RESPONSE DATE- 09 Jan 2020 2019

Description of the problem

To support the steelhead overshoot study we propose making spillbay 20 Top Spillway Weir (TSW) the priority spill bay for involuntary spill from March 1, 2020 to April 10, 2020. In addition we propose shifting unit priorities from 1 then 14 through 2 in descending order (per the Fish Passage Plan [FPP]) to 1, 14, 13, **10**, 12, 11, then 9 to 2 in descending order from March 1, 2020 to April 10,2020. The proposed unit priority change is requested to support spring data collection because fixed aspect hydroacoustic transducers are in Unit 10 from the fall 2019 portion of the study. This unit priority change would change which four priority units are screened for the early startup of the bypass (from 1, 14, 13, and 12 to 1, 14, 13 and 10). The spring portion of the steelhead overshoot study will occur from March 1, 2020 to April 10, 2020.

The purpose of the study is to assess the effectiveness of fall and spring surface spill operation, using the TSW in spillbay 20 to provide a route with higher survival for steelhead stocks that overshoot their natal tributaries and overwinter above McNary. Monitoring will evaluate when spill is most effective at passing steelhead downstream.

Type of outage required – None.

> **Impact on facility operation** – A deviation from the FPP spill tables is requested. The following spill pattern from 1 March 2020 to 10 April 2020 prioritizes the TSW in spillbay 20. A slight change in turbine unit priority would also occur.

Table MCN-X

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
																				TSW				9.6
-1																				TSW	1		1	11.6
-1																				TSW	2		2	13.5
-1																		1		TSW	2		3	15.5
-1																		2		TSW	2		4	17.4
-1																		2		TSW	2	1	5	19.4
-1																		2		TSW	2	2	6	21.3
-1																	1	2		TSW	2	2	7	23.3
-1																	2	2		TSW	2	2	8	25.2
-1															1		2	2		TSW	2	2	9	27.2
-1															2		2	2		TSW	2	2	10	29.1
-1													1		2		2	2		TSW	2	2	11	31.1
-1													2		2		2	2		TSW	2	2	12	33.0
-1											1		2		2		2	2		TSW	2	2	13	35.0
-1											2		2		2		2	2		TSW	2	2	14	36.9
-1									1		2		2		2		2	2		TSW	2	2	15	38.9
-1									2		2		2		2		2	2		TSW	2	2	16	40.8
-1		1							2		2		2		2		2	2		TSW	2	2	17	42.8
-1		2							2		2		2		2		2	2		TSW	2	2	18	44.7
-1	1	2							2		2		2		2		2	2		TSW	2	2	19	46.7
-1	2	2							2		2		2		2		2	2		TSW	2	2	20	48.6
-1	2	2	1						2		2		2		2		2	2		TSW	2	2	21	50.6
-1	2	2	2						2		2		2		2		2	2		TSW	2	2	22	52.5
-1	2	2	3						2		2		2		2		2	2		TSW	2	2	23	54.2
-1	3	2	3						2		2		2		2		2	2		TSW	2	2	24	55.9
-1	3	2	3				1		2		2		2		2		2	2		TSW	2	2	25	57.9
-1	3	2	3				2		2		2		2		2		2	2		TSW	2	2	26	59.8

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
-1	3	2	3		1		2		2		2		2		2		2	2		TSW	2	2	27	61.8
-1	3	2	3		2		2		2		2		2		2		2	2		TSW	2	2	28	63.7
-1	3	2	3		2		2		2		2		2	1	2		2	2		TSW	2	2	29	65.7
-1	3	2	3		2		2		2		2		2	2	2		2	2		TSW	2	2	30	67.6
-1	3	2	3		2		2		2		2		2	2	2	1	2	2		TSW	2	2	31	69.6
-1	3	2	3		2		2		2		2		2	2	2	2	2	2		TSW	2	2	32	71.5
-1	3	2	3		2	1	2		2		2		2	2	2	2	2	2		TSW	2	2	33	73.5
-1	3	2	3		2	2	2		2		2		2	2	2	2	2	2		TSW	2	2	34	75.4
-1	3	2	3		2	2	2		2		2	1	2	2	2	2	2	2		TSW	2	2	35	77.4
-1	3	2	3		2	2	2		2		2	2	2	2	2	2	2	2		TSW	2	2	36	79.3
-1	3	2	3		2	2	2		2	1	2	2	2	2	2	2	2	2		TSW	2	2	37	81.3
-1	3	2	3		2	2	2		2	2	2	2	2	2	2	2	2	2		TSW	2	2	38	83.2
-1	3	2	3		2	2	2	1	2	2	2	2	2	2	2	2	2	2		TSW	2	2	39	85.2
-1	3	2	3		2	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	2	2	40	87.1
-1	3	2	3		2	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	3	2	41	88.8
-1	3	2	3	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	3	2	42	90.8
-1	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	3	2	43	92.7
-1	3	2	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	3	2	44	94.3
-1	3	3	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	3	2	45	96.0
-1	3	3	4	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2		TSW	3	2	46	97.7
-1	3	3	4	2	3	2	2	2	2	2	2	2	2	2	2	2	3	2		TSW	3	2	47	99.4
-1	3	3	4	2	3	2	3	2	2	2	2	2	2	2	2	2	3	2		TSW	3	2	48	101.1
-1	3	3	4	2	3	2	3	2	2	2	2	2	2	2	3	2	3	2		TSW	3	2	49	102.8
-1	3	3	4	2	3	2	3	2	3	2	2	2	2	2	3	2	3	2		TSW	3	2	50	104.5
-1	3	3	4	2	3	2	3	2	3	2	2	2	3	2	3	2	3	2		TSW	3	2	51	106.2
-1	3	3	4	2	3	2	3	2	3	2	2	2	3	2	3	2	3	2		TSW	3	3	52	107.9
-1	3	3	4	2	3	2	3	2	3	2	3	2	3	2	3	2	3	2		TSW	3	3	53	109.6

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
-1	3	3	4	3	3	2	3	2	3	2	3	2	3	2	3	2	3	2		TSW	3	3	54	111.3
-1	3	3	4	3	3	2	3	2	3	2	3	2	3	2	3	2	3	3		TSW	3	3	55	113.0
-1	3	3	4	3	3	3	3	2	3	2	3	2	3	2	3	2	3	3		TSW	3	3	56	114.7
-1	3	3	4	3	3	3	3	2	3	2	3	2	3	2	3	3	3	3		TSW	3	3	57	116.4
-1	3	3	4	3	3	3	3	3	3	2	3	2	3	2	3	3	3	3		TSW	3	3	58	118.1
-1	3	3	4	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3		TSW	3	3	59	119.8
-1	3	3	4	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3		TSW	3	3	60	121.5
-1	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		TSW	3	3	61	123.2
-1	3	3	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		TSW	3	3	62	124.8
-1	3	4	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		TSW	3	3	63	126.4
-1	4	4	5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		TSW	3	3	64	128.0
-1	4	4	5	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3		TSW	3	3	65	129.6
-1	4	4	5	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3		TSW	4	3	66	131.2
-1	4	4	5	3	4	3	3	3	3	3	3	3	3	3	3	3	4	3		TSW	4	3	67	132.8
-1	4	4	5	3	4	3	4	3	3	3	3	3	3	3	3	3	4	3		TSW	4	3	68	134.4
-1	4	4	5	3	4	3	4	3	3	3	3	3	3	3	4	3	4	3		TSW	4	3	69	136.0
-1	4	4	5	3	4	3	4	3	4	3	3	3	3	3	4	3	4	3		TSW	4	3	70	137.6
-1	4	4	5	3	4	3	4	3	4	3	3	3	4	3	4	3	4	3		TSW	4	3	71	139.2
-1	4	4	5	3	4	3	4	3	4	3	3	3	4	3	4	3	4	3		TSW	4	4	72	140.8
-1	4	4	5	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3		TSW	4	4	73	142.4
-1	4	4	5	4	4	3	4	3	4	3	4	3	4	3	4	3	4	3		TSW	4	4	74	144.0
-1	4	4	5	4	4	3	4	3	4	3	4	3	4	3	4	3	4	4		TSW	4	4	75	145.6
-1	4	4	5	4	4	4	4	3	4	3	4	3	4	3	4	3	4	4		TSW	4	4	76	147.2
-1	4	4	5	4	4	4	4	3	4	3	4	3	4	3	4	4	4	4		TSW	4	4	77	148.8
-1	4	4	5	4	4	4	4	4	4	3	4	3	4	3	4	4	4	4		TSW	4	4	78	150.4
-1	4	4	5	4	4	4	4	4	4	3	4	3	4	4	4	4	4	4		TSW	4	4	79	152.0
-1	4	4	5	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4		TSW	4	4	80	153.6

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
-1	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		TSW	4	4	81	155.2
-1	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		TSW	5	4	82	156.8
-1	5	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		TSW	5	4	83	158.4
-1	5	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		TSW	5	5	84	160.0
-1	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		TSW	5	5	85	161.6
-1	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4		TSW	5	5	86	163.2
-1	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5		TSW	5	5	87	164.8
-1	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	5		TSW	5	5	88	166.4
-1	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	5	5		TSW	5	5	89	168.0
-1	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	5	5		TSW	5	5	90	169.6
-1	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	5	5	5		TSW	5	5	91	171.2
-1	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5		TSW	5	5	92	172.8
-1	5	5	5	5	5	5	5	4	4	4	4	4	4	4	5	5	5	5		TSW	5	5	93	174.4
-1	5	5	5	5	5	5	5	5	4	4	4	4	4	4	5	5	5	5		TSW	5	5	94	176.0
-1	5	5	5	5	5	5	5	5	4	4	4	4	4	5	5	5	5	5		TSW	5	5	95	177.6
-1	5	5	5	5	5	5	5	5	5	4	4	4	4	5	5	5	5	5		TSW	5	5	96	179.2
-1	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5		TSW	5	5	97	180.8
-1	5	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	5	5		TSW	5	5	98	182.4
-1	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5		TSW	5	5	99	184.0
-2	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		TSW	5	5	100	185.6
-2	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		TSW	5	6	102	188.8
-2	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		TSW	6	6	104	192.0
-2	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6		TSW	6	6	106	195.2
-2	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	6	6		TSW	6	6	108	198.4
-2	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	6	6	6		TSW	6	6	110	201.6
-2	6	6	6	6	6	6	5	5	5	5	5	5	5	5	6	6	6	6		TSW	6	6	112	204.8
-2	6	6	6	6	6	6	6	5	5	5	5	5	5	6	6	6	6	6		TSW	6	6	114	208.0

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
-2	6	6	6	6	6	6	6	6	5	5	5	5	6	6	6	6	6	6		TSW	6	6	116	211.2
-2	6	6	6	6	6	6	6	6	6	5	5	6	6	6	6	6	6	6		TSW	6	6	118	214.4
-2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		TSW	6	6	120	217.6
-2	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		TSW	6	7	122	220.8
-2	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		TSW	7	7	124	224.0
-2	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7		TSW	7	7	126	227.2
-2	7	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	7	7		TSW	7	7	128	230.4
-2	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6	7	7	7		TSW	7	7	130	233.6
-2	7	7	7	7	7	7	6	6	6	6	6	6	6	6	7	7	7	7		TSW	7	7	132	236.8
-2	7	7	7	7	7	7	7	6	6	6	6	6	6	7	7	7	7	7		TSW	7	7	134	240.0
-2	7	7	7	7	7	7	7	7	6	6	6	6	7	7	7	7	7	7		TSW	7	7	136	243.2
-2	7	7	7	7	7	7	7	7	7	6	6	7	7	7	7	7	7	7		TSW	7	7	138	246.4
-2	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		TSW	7	7	140	249.6
-2	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		TSW	7	8	142	253.0
-2	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		TSW	8	8	144	256.4
-2	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8		TSW	8	8	146	259.8
-2	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	7	8	8		TSW	8	8	148	263.2
-2	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	8	8	8		TSW	8	8	150	266.6
-2	8	8	8	8	8	8	7	7	7	7	7	7	7	7	8	8	8	8		TSW	8	8	152	270.0
-2	8	8	8	8	8	8	8	7	7	7	7	7	7	8	8	8	8	8		TSW	8	8	154	273.4
-2	8	8	8	8	8	8	8	8	7	7	7	7	8	8	8	8	8	8		TSW	8	8	156	276.8
-2	8	8	8	8	8	8	8	8	8	7	7	8	8	8	8	8	8	8		TSW	8	8	158	280.2
-2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		TSW	8	8	160	283.6
-2	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		TSW	8	9	162	286.8
-2	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8		TSW	9	9	164	290.0
-2	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9		TSW	9	9	166	293.2
-2	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	8	9	9		TSW	9	9	168	296.4
-2	9	9	9	9	9	8	8	8	8	8	8	8	8	8	8	9	9	9		TSW	9	9	170	299.6
-2	9	9	9	9	9	9	8	8	8	8	8	8	8	8	9	9	9	9		TSW	9	9	172	302.8

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
-2	9	9	9	9	9	9	9	8	8	8	8	8	8	9	9	9	9	9		TSW	9	9	174	306.0
-2	9	9	9	9	9	9	9	9	8	8	8	8	9	9	9	9	9	9		TSW	9	9	176	309.2
-2	9	9	9	9	9	9	9	9	9	8	8	9	9	9	9	9	9	9		TSW	9	9	178	312.4
-2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		TSW	9	9	180	315.6
-2	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		TSW	9	10	182	318.8
-2	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		TSW	10	10	184	322.0
-2	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10		TSW	10	10	186	325.2
-2	10	10	10	10	9	9	9	9	9	9	9	9	9	9	9	9	10	10		TSW	10	10	188	328.4
-2	10	10	10	10	10	9	9	9	9	9	9	9	9	9	9	10	10	10		TSW	10	10	190	331.6
-2	10	10	10	10	10	10	9	9	9	9	9	9	9	9	10	10	10	10		TSW	10	10	192	334.8
-2	10	10	10	10	10	10	10	9	9	9	9	9	9	10	10	10	10	10		TSW	10	10	194	338.0
-2	10	10	10	10	10	10	10	10	9	9	9	9	10	10	10	10	10	10		TSW	10	10	196	341.2
-2	10	10	10	10	10	10	10	10	10	9	9	10	10	10	10	10	10	10		TSW	10	10	198	344.4
-2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		TSW	10	10	200	347.6
-2	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		TSW	10	11	202	350.6
-2	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		TSW	11	11	204	353.6
-2	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11		TSW	11	11	206	356.6
-2	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	11	11		TSW	11	11	208	359.6
-2	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	11	11	11		TSW	11	11	210	362.6
-2	11	11	11	11	11	11	10	10	10	10	10	10	10	10	11	11	11	11		TSW	11	11	212	365.6
-2	11	11	11	11	11	11	11	10	10	10	10	10	10	11	11	11	11	11		TSW	11	11	214	368.6
-2	11	11	11	11	11	11	11	11	10	10	10	10	11	11	11	11	11	11		TSW	11	11	216	371.6
-2	11	11	11	11	11	11	11	11	11	10	10	11	11	11	11	11	11	11		TSW	11	11	218	374.6
-2	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		TSW	11	11	220	377.6
-2	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		TSW	11	12	222	380.8
-2	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		TSW	12	12	224	384
-2	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	12		TSW	12	12	226	387.2
-2	12	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	12	12		TSW	12	12	228	390.4
-2	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	12	12	12		TSW	12	12	230	393.6
-2	12	12	12	12	12	12	11	11	11	11	11	11	11	11	12	12	12	12		TSW	12	12	232	396.8
-2	12	12	12	12	12	12	12	11	11	11	11	11	11	12	12	12	12	12		TSW	12	12	234	400

	SPILLWAY BAY (Gate Opening in feet)																						Total Stops	Total (kcfs)
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**		
-2	12	12	12	12	12	12	12	12	11	11	11	11	12	12	12	12	12	12		TSW	12	12	236	403.2
-2	12	12	12	12	12	12	12	12	12	11	11	12	12	12	12	12	12	12		TSW	12	12	238	406.4
-2	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		TSW	12	12	240	409.6
-2	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		TSW	12	13	242	412.8
	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		TSW	13	13	244	416
	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	13		TSW	13	13	246	419.2
	13	13	13	13	12	12	12	12	12	12	12	12	12	12	12	12	13	13		TSW	13	13	248	422.4
	13	13	13	13	13	12	12	12	12	12	12	12	12	12	12	13	13	13		TSW	13	13	250	425.6
	13	13	13	13	13	13	12	12	12	12	12	12	12	12	13	13	13	13		TSW	13	13	252	428.8
	13	13	13	13	13	13	13	12	12	12	12	12	12	13	13	13	13	13		TSW	13	13	254	432

Impact on unit priority- Turbine unit priority would change to 1, 14, 13, 10, 12, 11, and then 9-2 in descending order from 1 March 2020 to 10 April 2020.

Impact on forebay/tailwater operation - None

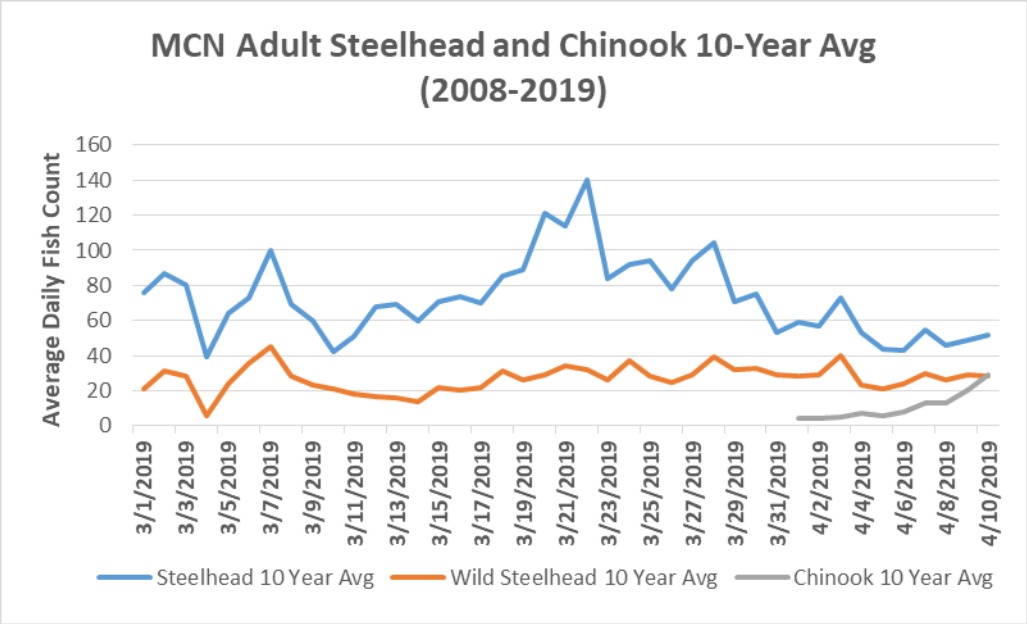
Impact on spill - None

Dates of impacts/repairs – 1 March 2020 to 10 April 2020

Length of time for outage – No outage is being proposed.

Analysis of potential impacts to fish

1. 10-year average adult passage by run during the period of impact for adults and juvenile listed species, as appropriate for the proposed action and time of year;



Generated 24 Oct 2019 12:40:49 PDT. DART Adult Passage Daily Counts www.cbr.washington.edu/dart/query/adult_daily.

2. Statement about the current year's run (e.g., higher or lower than 10-year average).

   Fish runs were trending lower than average in 2019.

3. Estimated exposure to impact by species and age class (i.e., number or percentage of run exposed to an impact by the action).

   The 10-year average % of the adult passage in March and April at McNary Dam during March and April is:

   - Chinook salmon (APR) ~.03%
   - Steelhead (MAR – APR) ~2%

   Juvenile passage is not normally monitored during early March however it is expected that relatively few juvenile salmonids will pass during March and early April.

4. Type of impact by species and age class (increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.).

   Prioritizing surface spill should be a benefit to any adult or juvenile downstream

migrants. There should be negligible impacts to adult and juvenile fish due to unit priority shifts during this time period.

Summary statement - expected impacts on:

Upstream migrants (including Bull Trout)
The overall impact on Chinook salmon and steelhead is expected to be minimal.

The impact on bull trout would be the same as the adult salmonids; however, very few bull trout have been observed at McNary Dam over the last twenty years.

Pacific lamprey passage is not anticipated to be impacted.

Downstream migrants
Impacts to steelhead kelts, juvenile salmonids, or juvenile lamprey as a result of this deviation are expected to be minimal and beneficial due to surface spill operations. Juvenile passage is not normally monitored during early March however it is expected that relatively few juvenile salmonids will pass during March and increasing in April. In 2020, McNary Dam is planning to water up the bypass with the 4 priority units screened, and sample juvenile fish every other day beginning March 1st.

Comments from agencies

Final coordination results

After Action update

Please email or call with questions or concerns.

Thank you,

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