

**Attachment 8--Additional hydrology data**

8.1 Summary of peaks (cfs) under baseline and proposed alternative, Whitewater gage.

Year	Baseline Peak	Proposed Action Peak	Year	Baseline Peak	Proposed Action Peak
1975	8927	12296	1991	8412	8593
1976	5130	8386	1992	6063	8583
1977	1581	1636	1993	20492	21040
1978	10678	11364	1994	4919	7755
1979	15164	16261	1995	19346	19125
1980	13884	16326	1996	7860	12412
1981	3773	3771	1997	11996	14350
1982	9140	11023	1998	9877	9158
1983	20640	20350	1999	6793	7783
1984	20782	20941	2000	4817	7840
1985	15186	15503	2001	3487	7439
1986	10357	13727	2002	1153	1170
1987	9241	10191	2003	5312	7033
1988	3436	5814	2004	3413	5207
1989	2465	5243	2005	13574	11372
1990	2574	2566			

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8.2 Comparison of flow duration under baseline and proposed action at Whitewater gage.

Year	Days >6,000 cfs		Days>7,000 cfs		Days>8,000 cfs		Days>10,000 cfs		Days>14,000 cfs	
	Baseline	Plan	Baseline	Plan	Baseline	Plan	Baseline	Plan	Baseline	Plan
1975	32	37	26	33	8	24	0	6	0	0
1976	0	11	0	8	0	2	0	0	0	0
1977	0	0	0	0	0	0	0	0	0	0
1978	27	42	15	36	11	25	2	9	0	0
1979	53	57	35	44	27	34	16	22	4	5
1980	61	55	50	45	42	36	13	17	0	3
1981	0	0	0	0	0	0	0	0	0	0
1982	26	32	16	23	9	15	0	6	0	0
1983	75	71	59	67	53	54	44	44	13	17
1984	85	87	78	77	67	67	57	56	31	30
1985	81	81	75	73	62	57	29	31	4	6
1986	63	59	40	44	25	28	5	17	0	0
1987	42	43	34	34	18	17	0	1	0	0
1988	0	0	0	0	0	0	0	0	0	0
1989	0	0	0	0	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0	0	0
1991	9	13	4	9	1	2	0	0	0	0
1992	1	5	0	3	0	1	0	0	0	0
1993	75	64	66	58	49	50	27	35	17	18
1994	0	7	0	4	0	0	0	0	0	0
1995	93	82	76	74	73	72	61	69	28	29
1996	10	23	7	20	0	9	0	4	0	0
1997	67	64	53	50	47	37	12	15	0	2
1998	30	29	18	14	7	6	0	0	0	0
1999	7	14	0	11	0	0	0	0	0	0
2000	0	7	0	3	0	0	0	0	0	0
2001	0	7	0	3	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	3	0	1	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	31	26	19	17	12	10	7	5	0	0
Average	28.0	29.6	21.6	24.2	16.5	17.6	8.8	10.9	3.1	3.5

8.3 Days reaching various flow levels important to backwater/flooded bottomland habitat.

Year	Days >5,000 cfs*		Days >8,000 cfs*		Days >10,000 cfs*		Days >14,000 cfs*	
	Baseline	Plan	Baseline	Plan	Baseline	Plan	Baseline	Plan
1975	41	39	85	24	0	6	0	0
1976	2	13	0	2	0	0	0	0
1977	0	0	0	0	0	0	0	0
1978	44	44	118	25	2	9	0	0
1979	65	75	27	34	16	22	4	5
1980	67	67	42	36	13	17	0	3
1981	0	0	0	0	0	0	0	0
1982	38	43	9	15	0	6	0	0
1983	92	91	53	54	44	44	13	17
1984	94	95	66	67	57	56	31	30
1985	84	82	62	57	29	31	4	6
1986	101	77	25	28	5	17	0	0
1987	60	59	18	17	1	1	0	0
1988	0	3	0	0	0	0	0	0
1989	0	2	0	0	0	0	0	0
1990	0	0	0	0	0	0	0	0
1991	26	24	1	2	0	0	0	0
1992	2	8	0	1	0	0	0	0
1993	80	73	49	50	27	35	17	18
1994	0	11	0	0	0	0	0	0
1995	94	88	73	72	61	69	28	29
1996	28	27	0	9	0	4	0	0
1997	76	75	47	37	12	15	0	2
1998	40	40	7	6	0	0	0	0
1999	12	17	0	0	0	0	0	0
2000	0	10	0	0	0	0	0	0
2001	0	10	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	2	9	0	0	0	0	0	0
2004	0	1	0	0	0	0	0	0
2005	48	41	12	10	7	5	0	0
Avg. days/yr	35.4	36.3	16.5	17.6	8.8	10.9	3.1	3.5
Percentage of years	68	87	48	61	32	48	10	26

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8.4 Number of cross-sections reaching ½ bankfull or bankfull during May-July

Year	Baseline-No. cross-sections reaching ½ bankfull	Proposed Action-No. cross-sections reaching ½ bankfull	Baseline-No. cross-sections reaching bankfull	Proposed Action-No. cross-sections reaching bankfull
1975	36	52	2	14
1976	5	30	0	1
1977	0	0	0	0
1978	45	47	4	7
1979	54	54	33	38
1980	54	54	25	38
1981	0	0	0	0
1982	37	46	2	7
1983	54	54	44	44
1984	54	54	44	44
1985	54	54	33	33
1986	45	54	4	24
1987	38	44	2	3
1988	0	9	0	0
1989	0	6	0	0
1990	0	0	0	0
1991	31	33	1	1
1992	11	33	0	1
1993	54	54	44	44
1994	3	24	0	1
1995	54	54	15	43
1996	24	52	1	14
1997	51	54	14	31
1998	44	38	3	2
1999	0	24	0	1
2000	2	24	0	0
2001	0	23	0	0
2002	0	0	0	0
2003	6	19	0	0
2004	0	6	0	0
2005	54	47	23	7
	Avg 26	Avg 37	Avg 9	Avg 13
Percentage of years ½ or bankfull flows reached	71%	87%	55%	68%

Attachments

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Attachment 8.5. Comparison of Baseline and Proposed Operation, number of days in the year above given flow, presented according to year category.

Year	Water category	Base >5000 cfs	Action >5000 cfs	Base >7000 cfs	Action >7000 cfs	Base >8000 cfs	Action >8000 cfs	Base >10000 cfs	Action >10000 cfs	Base >14000 cfs	Action >14000 cfs
1977	Dry	0	0	0	0	0	0	0	0	0	0
1981	Dry	0	0	0	0	0	0	0	0	0	0
2002	Dry	0	0	0	0	0	0	0	0	0	0
1990	Dry	0	0	0	0	0	0	0	0	0	0
1988	ModDry	0	3	0	0	0	0	0	0	0	0
1989	ModDry	0	2	0	0	0	0	0	0	0	0
1992	ModDry	2	8	0	3	0	1	0	0	0	0
1994	ModDry	0	11	0	4	0	0	0	0	0	0
2000	ModDry	0	10	0	3	0	0	0	0	0	0
2001	ModDry	0	10	0	3	0	0	0	0	0	0
2003	ModDry	2	9	0	1	0	0	0	0	0	0
2004	ModDry	0	1	0	0	0	0	0	0	0	0
1976	AvgDry	2	13	0	8	0	2	0	0	0	0
1987	AvgDry	60	59	34	34	18	17	0	1	0	0
1991	AvgDry	26	24	4	9	1	2	0	0	0	0
1998	AvgDry	40	40	18	14	7	6	0	0	0	0
1999	AvgDry	12	17	0	11	0	0	0	0	0	0
1982	AvgWet	38	43	16	23	9	15	0	6	0	0
1983	AvgWet	92	91	59	67	53	54	44	44	13	17
1996	AvgWet	28	27	7	20	0	9	0	4	0	0
2005	AvgWet	48	41	19	17	12	10	7	5	0	0
1975	ModWet	41	39	26	33	8	24	0	6	0	0
1978	ModWet	44	44	15	36	11	25	2	9	0	0
1979	ModWet	65	75	35	44	27	34	16	22	4	5
1980	ModWet	67	67	50	45	42	36	13	17	0	3
1985	ModWet	84	82	75	73	62	57	29	31	4	6
1986	ModWet	101	77	40	44	25	28	5	17	0	0
1993	ModWet	80	73	66	58	49	50	27	35	17	18
1995	ModWet	94	88	76	74	73	72	61	69	28	29
1997	ModWet	76	75	53	50	47	37	12	15	0	2
1984	Wet	94	95	78	77	67	67	57	56	31	30
Avg.		35.4	36.3	21.6	24.2	16.5	17.6	8.8	10.9	3.1	3.5