

Missouri River Region - Water Management Information

U. S. Army Corps of Engineers - Civil Works

Discharge Measurements for January 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
18,100	-1,000	OMA	1-7-02	1430	11.42	19,100	34	Air Temp 45	6
23,300	+100	NCNE	1-8-02	0945	5.94	23,300	34	Air Temp 33	<1
22,500	-2,000	RUNE	1-8-02	1415	5.2	24,500	35	Air Temp 56	9
21,500	-2,600	MKC	1-8-02	0900	5.8	24,100	33	Air Temp 42	12
25,800	+400	BNMO	1-9-02	0845	4.06	25,400	33	Air Temp 53	<2
14,800	-400	SUX	1-10-02	1045	8.88	15,200	32	Air Temp 36	3
15,600	-600	DENE	1-10-02	1315	16.65	16,200	35	Air Temp 43	<4
16,600	-200	OMA	1-14-02	1430	10.57	16,800	34	Air Temp	1
16,400	-500	DENE	1-15-02	1640	16.46	15,900	36	Air Temp 30	3
24,600	-400	NCNE	1-16-02	1115	6.30	25,000	34	Air Temp 35	2
26,100	-500	RUNE	1-16-02	0950	5.92	26,600	35	Air Temp 28	2
16,400	-100	OMA	1-22-02	1330	10.5	16,500	34	Air Temp 50	<1
26,100	-2,800	WVMO	1-22-02	1200	8.07	28,900	38	Air Temp 61	11
21,900	-700	NCNE	1-23-02	1400	5.63	22,600	36	Air Temp 37	3
22,400	-600	RUNE	1-23-02	1030	4.97	23,000	37	Air Temp 30	3
24,300	100	STJ	1-24-02	0900	4.98	24,200	37	Air Temp 33	<1
15,800	-100	OMA	1-28-02	1400	10.24	15,900	34	Air Temp 24	<1
24,400	+400	NCNE	1-28-02	1100	6.24	24,000	35	Air Temp 27	2
25,100	+100	RUNE	1-29-02	1120	5.65	25,000	37	Air Temp 25	<1

Discharge Measurements for February 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
31,600	+900	BNMO	2-5-02	1100	5.46	30,700	37	Air Temp 44	3
16,500	-200	OMA	2-11-02	1150	10.52	16,700	34	Air Temp 41	1
25,300	0	MKC	2-11-02	0915	6.48	25,300	37	Air Temp 41	0
17,300	+400	SUX	2-12-02	1100	9.56	16,900	33	Air Temp 34	2
16,800	-800	DENE	2-12-02	1400	17.13	17,600	35	Air Temp 38	5
34,300	-1,100	HEMO	2-12-02	1045	3.98	35,400	40	Air Temp 44	3
24,400	-300	NCNE	2-13-02	1430	6.23	24,700	37	Air Temp 48	1
25,300	-600	RUNE	2-13-02	1030	5.69	25,900	38	Air Temp 36	2
28,600	+200	MKC	2-19-02	0915	7.31	28,400	45	Air Temp 53	<1
25,300	-100	NCNE	2-20-02	1400	6.46	24,400	42	Air Temp 43	<1
26,400	-600	RUNE	2-20-02	1045	5.98	27,000	43	Air Temp 37	2
15,800	+800	SUX	2-21-02	1100	9.16	15,000	37	Air Temp 37	5
15,200	-700	DENE	2-21-02	1330	16.51	15,900	38	Air Temp 42	5
26,900	-300	STJ	2-21-02	8030	5.73	27,200	40	Air Temp 39	1
17,100	-100	OMA	2-22-02	0945	10.77	17,200	34	Air Temp 32	<1
26,000	-3,100	WVMO	2-28-02	1130	8.05	29,100	40	Air Temp 39	12

Discharge Measurements For March 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
29,600	+500	BNMO	3-5-02	1115	4.99	29,100	40	Air Temp 59	2
17,500	+700	SUX	3-6-02	1245	9.64	16,800	32	Air Temp 28	4
17,800	-500	DENE	3-6-02	1030	17.53	18,300	34	Air Temp 30	3
19,000	-300	OMA	3-7-02	1350	11.53	19,300	34	Air Temp 34	<2
21,800	+200	NCNE	3-7-02	1015	5.56	21,600	35	Air Temp 33	<1
20,700	-200	STJ	3-7-02	0930	3.92	20,900	38	Air Temp 37	<1
22,900	-600	RUNE	3-8-02	1050	5.09	23,500	36	Air Temp 36	<3
14,600	-700	DENE	3-11-02	1340	16.24	15,300	34	Air Temp 37	5
22,500	-500	NCNE	3-12-02	1355	5.74	23,000	37	Air Temp 50	2
23,100	-300	RUNE	3-12-02	1010	5.15	23,400	37	Air Temp 37	1
16,100	+500	SUX	3-13-02	1315	9.52	15,600	35	Air Temp 43	3
17,300	+400	OMA	3-13-02	0915	10.86	16,900	34	Air Temp 43	2
25,600	+1,000	MKC	3-13-02	0900	6.28	24,600	43	Air Temp 59	<4
39,600	-1,500	HEMO	3-14-02	1130	4.86	41,100	48	Air Temp 68	4
33,900	+3,100	MKC	3-19-02	0900	8.57	30,800	46	Air Temp 53	9
32,800	-400	WVMO	3-20-02	1115	9.26	33,200	44	Air Temp 44	1
23,000	+600	SUX	3-21-02	1030	12.05	22,400	34	Air Temp 19	3
21,600	+200	DENE	3-21-02	1215	18.75	21,400	36	Air Temp 25	<1
20,500	+200	OMA	3-21-02	1545	12.09	20,300	34	Air Temp 27	<1
37,600	-600	BNMO	3-21-02	0915	6.81	38,200	42	Air Temp 34	<2
29,300	+200	NCNE	3-22-02	1400	7.43	29,100	37	Air Temp 37	<1
28,000	+100	RUNE	3-22-02	1115	6.34	27,900	41	Air Temp 30	<1
35,300	+3,000	MKC	3-25-02	1300	9.07	32,300	41	Air Temp 32	8
34,600	+800	STJ	3-27-02	0840	7.72	33,800	38	Air Temp 46	2
57,300	+2,500	HEMO	3-27-02	1100	7.32	54,800	45	Air Temp 50	4
27,900	+1,100	SUX	3-28-02	1030	13.35	26,800	37	Air Temp 48	4

26,900	+400	DENE	3-28-02	1230	20.53	26,500	38	Air Temp 59	1
28,500	+200	OMA	3-28-02	1515	14.71	28,300	34	Air Temp 61	<1
38,300	+1,600	MKC	3-28-02	0830	9.72	36,700	44	Air Temp 64	4
32,600	-1,700	NCNE	3-29-02	1415	8.31	34,300	45	Air Temp 68	5
33,370	-1,300	RUNE	3-29-02	1145	7.78	35,000	44	Air Temp 60	4

Discharge Measurements For April 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
29,500	+400	OMA	4-1-02	1250	15.0	29,100	45	Air Temp 61	<2
33,100	-700	NCNE	4-1-02	0930	8.43	33,800	46	Air Temp 46	2
31,400	+800	SUX	4-2-02	0945	14.28	30,600	40	Air Temp 36	<3
30,200	+800	DENE	4-2-02	1245	21.5	29,400	41	Air Temp 34	<3
36,000	-700	RUNE	4-4-02	1020	8.35	36,700	44	Air Temp 38	2
38,600	+2,700	MKC	4-4-02	0845	9.78	35,900	47	Air Temp 46	7
51,000	-1,600	HEMO	4-4-2002	1100	6.73	52,600	51	Air Temp	3
28,700	+1,000	SUX	4-8-02	0920	13.58	27,600	45	Air Temp 53	4
27,900	+600	DENE	4-8-02	1245	20.86	27,300	46	Air Temp 50	2
29,500	+500	OMA	4-9-02	1110	15.02	29,000	47	Air Temp 49	2
33,700	-100	NCNE	4-9-02	0915	8.58	33,800	47	Air Temp 38	<1
39,100	-900	WVMO	4-9-02	1300	10.31	40,000	48	Air Temp 64	2
41,300	+300	BNMO	4-9-02	0930	7.44	41,000	51	Air Temp 54	<1
35,000	+400	RUNE	4-11-02	1110	8.1	34,600	53	Air Temp 55	1
34,600	+1,500	STJ	4-11-02	0845	7.7	33,100	53	Air Temp 60	4
29,400	+1,400	OMA	4-15-02	1440	14.97	28,000	56	Air Temp 92	<5
34,100	+500	NCNE	4-15-02	1045	8.68	33,600	57	Air Temp 64	<2
40,700	-700	WVMO	4-15-02	1315	10.58	41,400	63	Air Temp 84	<2
39,700	+3,600	MKC	4-15-02	0930	10.01	36,100	66	Air Temp 82	9
52,100	-300	HEMO	4-16-02	0945	6.89	52,400	64	Air Temp 75	<1
29,200	+1,900	SUX	4-17-02	1120	13.73	27,300	60	Air Temp 60	<7
26,900	-1,400	DENE	4-17-02	1345	20.97	28,300	64	Air Temp 67	5
35,200	+900	STJ	4-18-02	0930	7.89	34,300	67	Air Temp 76	3
36,100	+2,000	RUNE	4-19-02	1210	8.37	34,100	66	Air Temp 55	6
41,300	+400	BNMO	4-19-02	1215	7.44	40,900	71	Air Temp 85	1
28,100	+1,400	SUX	4-22-02	1305	13.44	26,700	51	Air Temp 50	5

27,500	+800	DENE	4-22-02	1035	20.72	26,700	50	Air Temp 46	3
28,900	+300	OMA	4-23-02	1305	15.12	29,200	55	Air Temp 61	1
34,300	+400	NCNE	4-23-02	1020	8.74	33,900	55	Air Temp 55	1
35,500	+1,300	STJ	4-24-02	1045	7.93	34,200	60	Air Temp 55	<4
48,200	+1,100	WVMO	4-24-02	1300	11.64	47,100	64	Air Temp 69	2
57,500	+800	BNMO	4-25-02	0930	10.12	56,700	60	Air Temp 56	1
35,100	+1,800	RUNE	4-26-02	1140	8.12	33,300	50	Air Temp 50	5
27,600	+600	SUX	4-29-02	0930	13.43	27,000	47	Air Temp 51	2
27,900	+1,000	DENE	4-29-02	1130	20.84	26,900	48	Air Temp 57	<4
43,200	+2,200	MKC	4-29-02	1030	11.08	41,000	62	Air Temp 75	5
29,900	+600	OMA	4-30-02	1420	15.33	29,300	53	Air Temp 61	2
35,000	+600	NCNE	4-30-02	1120	8.92	34,400	55	Air Temp 56	<2
44,000	-800	MKC	4-30-02	1300	11.24	44,800	64	Air Temp 72	<2

Discharge Measurements for May 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
36,400	+1,300	RUNE	5-2-02	1125	8.57	35,100	56	Air Temp 57	<4
63,500	+5,600	BNMO	5-2-02	0900	10.99	57,900	57	Air Temp 50	9
41,500	+3,000	MKC	5-3-02		10.72	38,500	58	Air Temp 68	7
27,100	+1,500	SUX	5-6-02	0920	13.31	25,600	57	Air Temp 65	5
27,200	+1,400	DENE	5-6-02	1145	20.62	25,800	57	Air Temp 69	5
29,200	+800	OMA	5-7-02	0920	15.14	28,400	61	Air Temp 56	<3
35,500	-1,500	NCNE	5-8-02	1320	9.04	34,000	63	Air Temp 77	4
37,953	+3,453	RUNE	5-8-02	1020	8.95	34,500	64	Air Temp 72	9
32,000	+1,300	OMA	5-14-02	1320	15.90	30,700	55	Air Temp 70	4
38,500	-1,100	NCNE	5-14-02	1020	9.92	39,600	56	Air Temp 61	3
39,400	-500	RUNE	5-15-02	1020	9.57	39,900	55	Air Temp 63	1
66,400	+3,100	MKC	5-15-02	1015	15.70	63,300	62	Air Temp 78	5
41,100	+300	STJ	5-16-02	1100	9.34	40,800	61	Air Temp 68	<1
60,500	+2,200	WVMO	5-17-02	1300	13.45	58,300	62	Air Temp	<4
38,100	+2,100	STJ	5-20-02	1045	8.59	36,000	62	Air Temp	<6
29,000	+800	OMA	5-20-02	1345	15.22	28,200	60	Air Temp 66	3
35,000	-600	NCNE	5-20-02	1020	8.92	35,600	62	Air Temp 63	<2
38,100	+2,100	STJ	5-20-02	1045	8.59	36,000	62		<6
26,500	+1,500	SUX	5-21-02		13.28	25,000	59	Air Temp 66	6
26,600	+1,200	DENE	5-21-02		20.63	25,400	60	Air Temp 55	<5
162,000	+12,000	HEMO	5-21-02	1215	18.41	150,000	63	Air Temp 59	7
49,600	+1,900	WVMO	5-22-02	1030	12.01	47,700	58		<4
41,000	+400	MKC	5-23-02	1030	11.09	40,600	66		<1
69,400	+7,500	BNMO	5-23-02	0930	11.8	61,900	66		<11
36,700	+900	RUNE	5-24-02	1000	8.8	35,800	63	Air Temp 59	<3
37,200	+200	STJ	5-24-02	1045	8.37	37,000	63		<1

29,700	+2,500	SUX	5-29-02	1115	14.23	27,200	68	Air Temp 80	8
27,700	+600	DENE	5-29-02	0900	21.14	27,100	69	Air Temp 68	2
55,400	+600	WVMO	5-29-02	1145	12.87	54,800	67		1
32,800	+2,400	OMA	5-30-02		16.20	30,400	73	Air Temp 86	7
37,400	+1,300	NCNE	5-30-02		9.52	36,100	72	Air Temp 75	<4
39,300	+1,400	RUNE	5-30-02		9.42	37,900	73	Air Temp 74	<4
76,800	+9,000	BNMO	5-30-02	1330	12.75	67,600	73		12

Discharge Measurements for June 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
27,400	+800	SUX	6-3-02	1335	13.75	26,600	67	Air Temp 65	<3
27,200	+1,000	DENE	6-3-02	1110	21.04	26,200	70	Air Temp 66	<4
35,200	+2,500	NCNE	6-3-02		8.99	32,700	77	Air Temp 73	7
30,800	+2,400	OMA	6-4-02	0950	15.69	28,400	73	Air Temp 67	<8
44,700	-100	MKC	6-6-02	0915	11.83	44,800	77	Air Temp	<1
27,000	+700	SUX	6-10-02	1025	13.79	26,300	74	Air Temp 79	<3
26,700	-100	DENE	6-10-02	1240	21.14	26,800	73	Air Temp 82	<1
28,900	+100	OMA	6-10-02	1620	15.64	28,800	75	Air Temp 84	<1
33,800	+1,200	NCNE	6-10-02	1430	8.87	32,600	75	Air Temp 82	<4
35,200	+2,600	RUNE	6-10-02	1020	8.42	32,600	76	Air Temp 79	7
39,400	-500	STJ	6-12-02	0930	8.66	39,900	78	Air Temp	1
110,300	+11,200	BNMO	6-13-02	0915	16.32	99,100	76	Air Temp	10
165,800	+11,800	HEMO	6-13-02	1145	18.7	154,000	77	Air Temp	7
53,700	+3,000	WVMO	6-14-02	1130	12.63	50,700	79	Air Temp	<6
27,000	+500	SUX	6-17-02	1000	13.77	26,500	72	Air Temp 63	2
27,200	+300	DENE	6-17-02	1230	21.2	26,900	73	Air Temp 82	1
31,200	-400	OMA	6-17-02	1500	16.32	31,600	73	Air Temp 81	1
37,700	+1,500	NCNE	6-17-02	1000	9.86	36,200	73	Air Temp 79	4
38,500	+600	RUNE	6-17-02		9.59	37,900	75	Air Temp 79	2
95,800	+2,400	HEMO	6-21-02	1245	12.41	93,400	88	Air Temp 78	<3
26,700	+600	SUX	6-24-02	1020	13.70	26,100	79	Air Temp 78	2
26,400	-100	DENE	6-24-02	1245	21.05	26,500	79	Air Temp 82	<1
28,900	-500	OMA	6-24-02	1530	15.65	29,400	80	Air Temp 92	<2
34,000	+1,500	NCNE	6-24-02	1500	8.92	32,500	80	Air Temp 89	4
35,100	+1,200	RUNE	6-24-02	1145	8.85	33,900	79	Air Temp 86	<4
86,500	+1,900	HEMO	6-25-02	1020	11.32	84,600	79	Air Temp 88	2

44,400	+1,300	WVMO	6-25-02	1200	11.24	43,100	82	Air Temp	<3
51,700	+4,000	BNMO	6-25-02	0930	9.98	47,700	82	Air Temp	<8
39,800	+100	MKC	6-26-02	1200	10.81	39,700	83	Air Temp	<1

Discharge Measurements for July 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
27,400	1,300	SUX	7-1-02	1030	13.94	26,100	80	Air Temp 91	4
26,800	+300	DENE	7-1-02	1315	21.20	26,500	80	Air Temp 84	1
28,800	-200	OMA	7-1-02	1620	15.62	29,000	82	Air Temp 90	<1
31,800	+1,300	NCNE	7-1-02	1515	8.56	30,500	83	Air Temp 89	4
32,800	+1,400	RUNE	7-1-02	1120	8.18	31,400	83	Air Temp 84	4
38,800	+700	WVMO	7-2-02	1200	10.34	38,100	85	Air Temp 86	<2
35,000	0	MKC	7-3-02	0830	9.71	35,000	82	Air Temp 80	0
41,000	+1,600	BNMO	7-5-02	1200	8.93	39,400	86	Air Temp 91	<4
26,500	+200	SUX	7-8-02		13.78	26,300	81	Air Temp 79	<1
30,500	+1,400	NCNE	7-8-02	1430	8.25	29,100	87	Air Temp 100	<5
30,900	+800	RUNE	7-8-02	1100	7.71	30,100	87	Air Temp 95	<3
33,600	-900	MKC	7-9-02	0815	9.39	34,500	87	Air Temp 92	<3
36,600	+1,300	WVMO	7-10-02	1130	9.94	35,300	87	Air Temp 91	<4
26,600	0	SUX	7-15-02	1030	13.81	26,000	79	Air Temp 77	0
26,600	0	DENE	7-15-02	1230	21.10	26,600	79	Air Temp 86	0
28,100	+600	OMA	7-15-02	0940	15.40	27,500	79	Air Temp 73	2
31,900	0	STJ	7-15-02	1215	7.16	31,900	84	Air Temp 95	0
28,000	+1,000	NCNE	7-16-02	1330	8.12	29,000	81	Air Temp 95	3
30,700	+1,000	RUNE	7-16-02	1030	7.65	29,700	81	Air Temp 81	3
37,800	0	WVMO	7-16-02	1045	10.17	37,800	85	Air Temp 86	0
41,200	+2,500	BNMO	7-16-02	1145	8.97	38,700	84	Air Temp 99	6
48,300	+2,500	HEMO	7-19-02	1330	6.37	45,800	84	Air Temp 86	6
26,500	+400	SUX	7-22-02	1415	13.79	26,100	82	Air Temp 91	2
26,700	-300	DENE	7-22-02	1200	21.13	27,000	82	Air Temp 77	1
28,800	+1,600	NCNE	7-22-02	1400	7.81	27,200	M	Air Temp M	6
29,000	+1,300	RUNE	7-22-02	1050	7.25	27,700	81	Air Temp 76	5

29,600	-1,600	MKC	7-23-02	1130	8.45	31,200	85	Air Temp 83	5
29,100	-400	STJ	7-24-02	0900	6.45	29,500	84	Air Temp 84	1
26,800	-400	OMA	7-25-02	1050	15.00	27,200	81	Air Temp 77	1
26,200	0	SUX	7-29-02	1030	13.7	26,200	81	Air Temp 84	0
26,300	-100	DENE	7-29-02	1330	21.02	26,400	82	Air Temp 89	<1
26,600	+600	OMA	7-30-02	1620	14.97	26,000	85	Air Temp 92	2
29,000	+1,400	NCNE	7-30-02	1345	7.85	27,600	85	Air Temp 98	<5
29,100	+700	RUNE	7-30-02	1030	7.27	28,400	84	Air Temp 88	2
43,400	-2,000	HEMO	7-30-02	1045	5.70	45,400	85	Air Temp 89	<5
30,400	-500	MKC	7-31-02	0815	8.63	30,900	85	Air Temp 96	<2

Discharge Measurements for August 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
28,000	600	SUX	8-5-02	1020	14.18	27,400	78	Air Temp 78	2
27,800	+100	DENE	8-5-02	1300	21.48	27,700	79	Air Temp 81	<1
27,700	-600	OMA	8-5-02	1550	15.62	28,300	82	Air Temp 90	<2
28,300	+800	NCNE	8-5-02	1315	7.68	27,500	82	Air Temp 91	3
28,500	+700	RUNE	8-5-02	1030	7.12	27,800	84	Air Temp 88	<3
29,600	-500	STJ	8-7-02	1145	6.58	30,100	82	Air Temp 86	<2
28,400	-500	MKC	8-7-02	0815	8.14	28,900	82	Air Temp 78	<2
30,400	-600	WVMO	8-8-02	1230	8.76	31,000	83	Air Temp 80	<2
33,600	-300	HEMO	8-9-02	1130	3.77	33,900	81	Air Temp 82	<1
26,300	-400	SUX	8-12-02	1100	3.71	26,700	77	Air Temp 77	<2
26,500	0	DENE	8-12-02	1300	3.62	26,500	78	Air Temp 72	0
27,300	-900	OMA	8-12-02	1045	3.61	28,200	78	Air Temp 80	3
31,800	+500	MKC	8-13-02	0845	8.98	31,300	72	Air Temp 62	<2
31,300	0	STJ	8-14-02	0900	7.03	31,300	65	Air Temp 67	0
37,800	-1,400	HEMO	8-14-02	1100	4.63	39,200	80	Air Temp 82	<4
36,600	+3,000	BNMO	8-15-02	0945	8.02	33,600	79	Air Temp 78	8
32,900	+1,800	SUX	8-19-02	1250	15.46	31,100	70	Air Temp 69	<3
32,300	+800	DENE	8-19-02	1050	22.70	31,500	70	Air Temp 69	<3
33,700	-1,700	MKC	8-20-02	0900	9.42	35,400	75	Air Temp 72	5
37,000	+1,400	WVMO	8-21-02	1200	10.03	35,600	80	Air Temp 86	4
35,300	0	OMA	8-26-02	1310	17.35	35,300	77	Air Temp 87	0
37,900	+1,000	NCNE	8-26-02	1555	10.11	36,900	78	Air Temp 84	<3
31,900	+500	SUX	8-27-02	1300	15.21	31,400	77	Air Temp 75	<2
31,500	0	DENE	8-27-02	1050	22.49	31,500	77	Air Temp 74	0
45,800	+2,900	MKC	8-27-02	1000	11.70	42,900	81	Air Temp 84	6
47,300	-3,100	HEMO	8-27-02	1130	6.24	50,400	86	Air Temp 85	<7
44,500	+700	WVMO	8-28-02	1200	11.58	43,800			<2

44,500	-7,100	BNMO	8-28-02	0915	9.58	51,600	78	Air Temp 60	16
37,500	+100	STJ	8-29-02	0945	8.57	37,400	79	Air Temp 79	<1
35,400	+300	RUNE	8-30-01	1030	8.81	35,100	79	Air Temp 75	1

Discharge Measurements for September 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
31,700	+300	SUX	9-3-02	1130	15.18	31,400	74	Air Temp 82	<1
30,600	0	DENE	9-3-02	1400	22.26	30,600	77	Air Temp 75	0
31,600	-200	OMA	9-3-02	1320	16.42	31,800	78	Air Temp 75	<1
37,200	-2,600	BNMO	9-3-02	1030	7.13	39,800	79	Air Temp 78	8
35,800	-700	STJ	9-4-02	0930	8.15	36,500	78	Air Temp 78	<2
36,300	-200	MKC	9-5-02	0830	9.72	36,500	81	Air Temp 83	<1
34,400	+300	RUNE	9-6-02	0930	8.58	34,100	79	Air Temp 81	<1
34,100	+600	NCNE	9-9-02	1420	9.15	33,500	80	Air Temp 91	<2
34,300	+200	RUNE	9-9-02	1140	8.54	34,100	80	Air Temp 88	4
31,600	-600	SUX	9-10-02		15.15	32,200	75	Air Temp 68	<2
32,400	+700	DENE	9-10-02		22.72	31,700	76	Air Temp 67	2
32,500	+600	OMA	9-10-02	0930	16.66	31,900	77	Air Temp 67	<2
35,700	-500	MKC	9-11-02	1100	9.58	36,200	81	Air Temp 66	<2
48,000	+1,100	HEMO	9-12-02	1130	6.34	46,900	79	Air Temp 81	2
30,700	+100	SUX	9-16-02	1200	14.92	30,600	76	Air Temp 75	<1
30,300	+200	DENE	9-16-02	1445	22.20	30,100	86	Air Temp 86	<1
36,200	-1,300	WVMO	9-16-02	1230	10.21	37,500	76	Air Temp 75	<4
33,900	-300	NCNE	9-17-02	1515	9.09	34,200	81	Air Temp 95	<1
35,300	+300	RUNE	9-17-02	1140	8.78	35,000	70	Air Temp 72	<1
37,000	+100	MKC	9-17-02	1130	9.88	36,900	75	Air Temp 72	<1
37,200	-600	WVMO	9-20-02	1245	10.39	37,800	74	Air Temp 70	<2
39,800	+200	HEMO	9-20-02	1010	5.02	40,000	72	Air Temp 63	<1
29,000	+100	SUX	9-23-02	1130	14.45	28,900	63	Air Temp 60	<1
28,300	-700	DENE	9-23-02	1430	21.62	29,000	64	Air Temp 60	<2
29,000	-600	OMA	9-23-02	1700	15.68	29,600	67	Air Temp 68	2
35,700	+1,000	BNMO	9-23-02	1200	8.18	34,700	73	Air Temp 77	<3
36,300	+1,200	MKC	9-23-02	1230	9.72	35,100	70	Air Temp 70	3

31,300	+100	NCNE	9-24-02	1245	8.43	31,200	66	Air Temp 68	<1
32,500	-300	RUNE	9-24-02	1015	8.12	32,800	67	Air Temp 56	<1
32,700	+1,700	STJ	9-26-02	1300	7.36	31,000	79	Air Temp 69	5
32,200	-600	OMA	9-30-02	1315	16.58	32,800	64	Air Temp 86	<2
33,000	-700	NCNE	9-30-02	1045	8.88	33,700	64	Air Temp 78	<5
33,500	-1,700	WVMO	9-30-02	1315	9.70	35,200	71	Air Temp 86	5
36,300	-1,000	HEMO	9-30-02	1200	4.33	37,300	72	Air Temp 82	<3

Discharge Measurements for October 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
34,400	-500	RUNE	10-1-02	1110	8.58	34,900	67	Air Temp 772	<2
32,600	-200	SUX	10-1-02	1125	15.46	32,800	64	Air Temp 73	<1
32,100	-300	DENE	10-1-02	1415	22.66	32,400	65	Air Temp 81	<1
33,300	-3,500	BNMO	10-01-02	0830	6.27	36,800	M	M	11
36,200	-1,400	STJ	10-02-02	0845	8.23	37,600	69	Air Temp 68	4
35,100	-300	MKC	10-02-02	1100	9.46	35,400	71	Air Temp 70	<1
37,000	-2000	HEMO	10-02-02	1100	4.47	39,000	73	Air Temp 76	5
32,100	+100	SUX	10-07-02	1150	15.27	32,000	54	Air Temp 51	<1
32,100	-1,200	OMA	10-07-02	1315	16.54	33,300	57	Air Temp 61	<4
35,400	-1,100	NCNE	10-07-02	1015	9.47	36,500	57	Air Temp 50	<3
35,800	-2,000	RUNE	10-08-02	1115	9.02	37,800	60	Air Temp 70	6
42,500	-3,400	MKC	10-08-02	0845	11.04	45,900	69	Air Temp 66	8
38,300	-1,300	STJ	10-09-02	0900	8.55	39,600	60.0	Air Temp 58	3
39,300	-100	WVMO	10-10-02	1200	10.75	39,300	17	Air Temp 68	<1
49,300	+1,700	HEMO	10-11-02	1200	6.14	47,600	66	Air Temp 71	3
31,200	-1,100	SUX	10-15-02	1120	15.21	32,300	54	Air Temp 47	4
31,100	+200	DENE	10-15-02	1415	22.31	30,900	50	Air Temp 55	<1
37,500	-3,000	BNMO	10-15-02	0945	7.01	40,500	60	Air Temp 54	8
31,400	-1,500	OMA	10-16-02	0945	16.36	32,900	55	Air Temp 44	<5
33,600	-2,000	NCNE	10-16-02	1400	9.00	35,600	54	Air Temp 48	<3
35,200	-600	RUNE	10-16-02	1100	8.66	35,800	58	Air Temp 49	<2
36,600	-1,500	WVMO	10-16-02	1030	10.28	38,100	56	Air Temp 46	4
38,000	+100	MKC	10-17-02	1030	9.80	37,900	55	Air Temp 45	<1
30,800	-900	SUX	10-21-02	1140	15.23	31,700	52	Air Temp 48	3
31,700	-600	DENE	10-21-02	1445	22.47	32,300	44	Air Temp 44	2
41,300	-100	HEMO	10-21-02	1020	4.95	41,400	58	Air Temp 45	<1

31,400	-1,500	OMA	10-22-02	0815	16.37	32,900	52	Air Temp 39	<5
34,300	-2,100	NCNE	10-22-02	1430	9.13	36,400	52	Air Temp 44	6
35,100	-1,400	RUNE	10-22-02	1015	8.65	36,500	54	Air Temp 43	4
31,400	-1,500	OMA	10-22-02	0815	16.37	32,900	52	Air Temp 39	<5
36,500	-2,200	STJ	10-23-02	1045	8.25	38,700	52	Air Temp 40	6
38,600	-1,300	WVMO	10-25-02	1100	10.62	39,900	55	Air Temp 57	3
31,100	-1,400	SUX	10-28-02	1000	15.32	32,500	46	Air Temp 37	5
31,600	-300	DENE	10-28-02	1200	22.45	31,900	47	Air Temp 40	<1
31,300	-1,600	OMA	10-28-02	1445	16.07	32,900	48	Air Temp 44	5
38,100	-4,000	MKC	10-29-02	0845	10.02	42,100	48	Air Temp 48	10
35,300	-1,200	NCNE	10-30-02		9.08	36,500	48	Air Temp 44	3
34,600	-1,100	RUNE	10-30-02		8.52	35,700	48	Air Temp 46	3
41,400	+2,600	BNMO	10-30-02		7.46	44,000	48	Air Temp 46	6

Discharge Measurements for November 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
26,700	-1,800	SUX	11-04-02	1015	14.12	28,500	41	Air Temp 34	<7
27,800	-400	DENE	11-04-02	1215	21.48	28,200	42	Air Temp 34	1
35,000	-1,100	STJ	11-04-02	1300	7.88	36,100	45	Air Temp 59	3
28,300	-1,600	OMA	11-04-02	1530	15.2	29,900	42	Air Temp 42	6
32,700	-1,600	NCNE	11-04-02	1215	8.43	34,300	42	Air Temp 42	5
32,600	-2,500	RUNE	11-04-02	0930	8.03	35,100	42	Air Temp 37	8
35,000	-1,100	STJ	11-04-02	1300	7.88	36,100	45	Air Temp 45	3
38,200	+400	MKC	11-05-02	1030	9.73	37,800	46	Air Temp 47	1
37,900	-1,800	WVMO	11-05-02	1100	10.34	39,700	55	Air Temp 46	<5
38,800	-2,200	BNMO	11-07-02	0915	6.93	41,000	48	Air Temp 63	<6
42,100	-400	HEMO	11-07-02	1130	5.11	42,500	51	Air Temp 68	1
26,600	-2,100	SUX	11-11-02	0950	14.11	28,700	39	Air Temp 34	8
27,700	-1,100	DENE	11-11-02	1215	21.32	28,800	43	Air Temp 36	<4
28,400	-700	OMA	11-11-02	1115	15.24	29,100	44	Air Temp 46	<3
32,700	-400	NCNE	11-11-02	0845	8.42	33,100	46	Air Temp 32	1
33,700	-1,500	STJ	11-12-02	0915	7.55	35,200	46	Air Temp 39	<5
35,900	-200	WVMO	11-13-02	1115	9.98	36,100	46	Air Temp 64	<1
32,900	-700	RUNE	11-14-02	1220	7.95	33,600	48	Air Temp 46	2
35,500	-100	MKC	11-14-02	1145	9.15	35,600	49	Air Temp 56	<1
36,500	+100	BNMO	11-14-02	1115	6.44	36,400	46	Air Temp 57	<1
38,500	+500	HEMO	11-14-02	1145	4.41	38,000	52	Air Temp 60	1
26,800	-1,700	SUX	11-18-02	1435	14.16	28,500	41	Air Temp 47	<
27,800	-1,300	DENE	11-18-02	1415	21.38	29,100	41	Air Temp 55	<5
32,000	-300	NCNE	11-19-02	1415	8.15	32,300		Air Temp	<1
32,200	-200	RUNE	11-19-02	1120	7.77	32,400	44	Air Temp 63	<1
35,300	-700	MKC	11-19-02	1145	9.09	36,000	48	Air Temp 55	<2
28,200	-1,400	OMA	11-20-02	1330	15.16	29,600	43	Air Temp 59	5

34,500	-1,100	WVMO	11-21-02	1115	9.73	35,600	47	Air Temp 50	3
33,200	-800	STJ	11-22-02	1130	7.43	34,000	45	Air Temp 52	2
23,400	-2,600	SUX	11-25-02	1515	13.24	26,000	37	Air Temp 32	11
27,200	-800	DENE	11-25-02	1145	21.21	28,000	45	Air Temp 43	3
35,900	-400	MKC	11-25-02	1125	9.08	36,300	45	Air Temp 7	1
27,200	-200	OMA	11-26-02	1400	14.86	27,400	39	Air Temp 34	<1
35,400	+100	BNMO	11-26-02	1130	6.19	35,300	45	Air Temp 32	<1
38,300	-800	HEMO	11-26-02	1120	4.37	39,100	45	Air Temp 28	2
29,300	-1,500	NCNE	11-27-02	1345	4.14	30,800	40	Air Temp 34	5
32,000	-1,300	RUNE	11-27-02	1115	7.72	33,300	39	Air Temp 30	4

Discharge Measurements for December 2002

COE Discharge	Difference	Station	Date	Time	Gage Height	Measured Discharge	Water Temp (F)	Remarks	% Diff
13,400	-500	SUX	12-02-02	1145	9.16	13,900	35	Air Temp 31	<4
14,500	-500	DENE	12-02-02	1445	16.6	15,000	36	Air Temp 32	3
15,500	-1,600	OMA	12-02-02	1045	10.65	17,100	39	Air Temp 43	10
13,200	-1,100	SUX	12-02-02	1400	9.12	14,300	33	Air Temp 27	8
20,900	-300	MKC	12-10-02	0915	5.34	21,200	38	Air Temp 41	1
20,300	-900	STJ	12-11-02	0830	3.86	21,200	37	Air Temp 43	4
25,700	-800	HEMO	12-11-02	1015	2.87	26,500	43	Air Temp 39	3
13,500	-400	SUX	12-16-02	1215	9.17	13,900	35	Air Temp 40	3
14,400	-900	DENE	12-16-02	1520	16.56	15,300	37	Air Temp 47	6
20,300	-600	NCNE	12-17-02	1300	5.23	20,390	44	Air Temp 44	3
23,200	+700	MKC	12-17-02	1217	5.97	22,500	42	Air Temp 50	3
21,300	-1,900	WVMO	12-18-02	1145	6.80	23,200	45	Air Temp 60	9
14,600	-1,100	OMA	12-19-02	1345	10.28	15,700	39	Air Temp 46	7
24,000	-1,300	BNMO	12-19-02	1219	3.48	25,300	38	Air Temp 43	5
13,700	-800	SUX	12-30-02	1130	9.23	14,500	33	Air Temp 37	6
14,700	-600	DENE	12-30-02	1415	16.69	15,300	35	Air Temp 42	4
14,600	-1,700	OMA	12-31-02	1245	10.29	16,300	36	Air Temp 41	12
19,100	-600	NCNE	12-31-02	1000	4.91	19,700	36	Air Temp 34	3