

**WATER-QUALITY MONITORING PROGRAM  
CHATFIELD BASIN AND RESERVOIR  
DENVER METROPOLITAN AREA  
BASIC-DATA REPORT  
JANUARY 1990 - DECEMBER 1990**



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CHATFIELD BASIN AND RESERVOIR  
DENVER METROPOLITAN AREA  
BASIC-DATA REPORT  
JANUARY 1990 - DECEMBER 1990**

**Prepared for the**

**Chatfield Basin Association  
Denver, Colorado**

**Prepared By:**

**Advanced Sciences, Inc.  
Lakewood, Colorado**

ASI Project No. 969.01

February 15, 1991  
Revised: April 25, 1991



April 25, 1991

Ms. Holly I. Holder, Esq.  
Chair, Chatfield Basin Authority  
c/o Saunders, Snyder, Ross and Dickson, PC  
707 Seventeenth Street, Suite 3500  
Denver, CO 80202

Subject: Water-Quality Monitoring Program, Chatfield Basin and Reservoir, near  
Denver, Colorado; Revised Fourth Quarterly Basic-Data Report, Cumulative  
Basic-Data, January through December 1990 (Revised);  
ASI Project Nos. 969.01

Dear Ms. Holder:

The attached Tables 1 through 12 incorporate the field measurements and laboratory chemical and biological data collected in conjunction with the Chatfield Basin and Reservoir Monitoring Program for the 1990 calendar-year period. The original submittal dated February 15, 1991, has been revised to incorporate all of the supplemental tributary surveys for the period between September through December 1990 (Tables 13 through 20).

We at ASI appreciate having this opportunity to provide the Chatfield Basin Authority with continuing water-quality monitoring services. If you have any questions, or need additional information, please give us a call.

Yours truly,

Grant Evenson  
Scientist

James R. Kunkel, Ph.D., P.E.  
Senior Hydrologist/Project Manager

Reviewed by:

Timothy D. Steele, Ph.D.  
Manager, Physical Sciences

Ms. Holly I. Holder, Esq.  
April 25, 1991  
Page Two

Attachments - Water-Quality Basic Data and Biological Data Tables, January - December 1990  
- Monitoring Sites Location Figures 1, 2, and 3

cc: Denver Regional Council of Governments  
2480 West 26th Avenue, Suite 200B  
Denver, Colorado 80211  
Attn: Mr. Larry G. Mugler

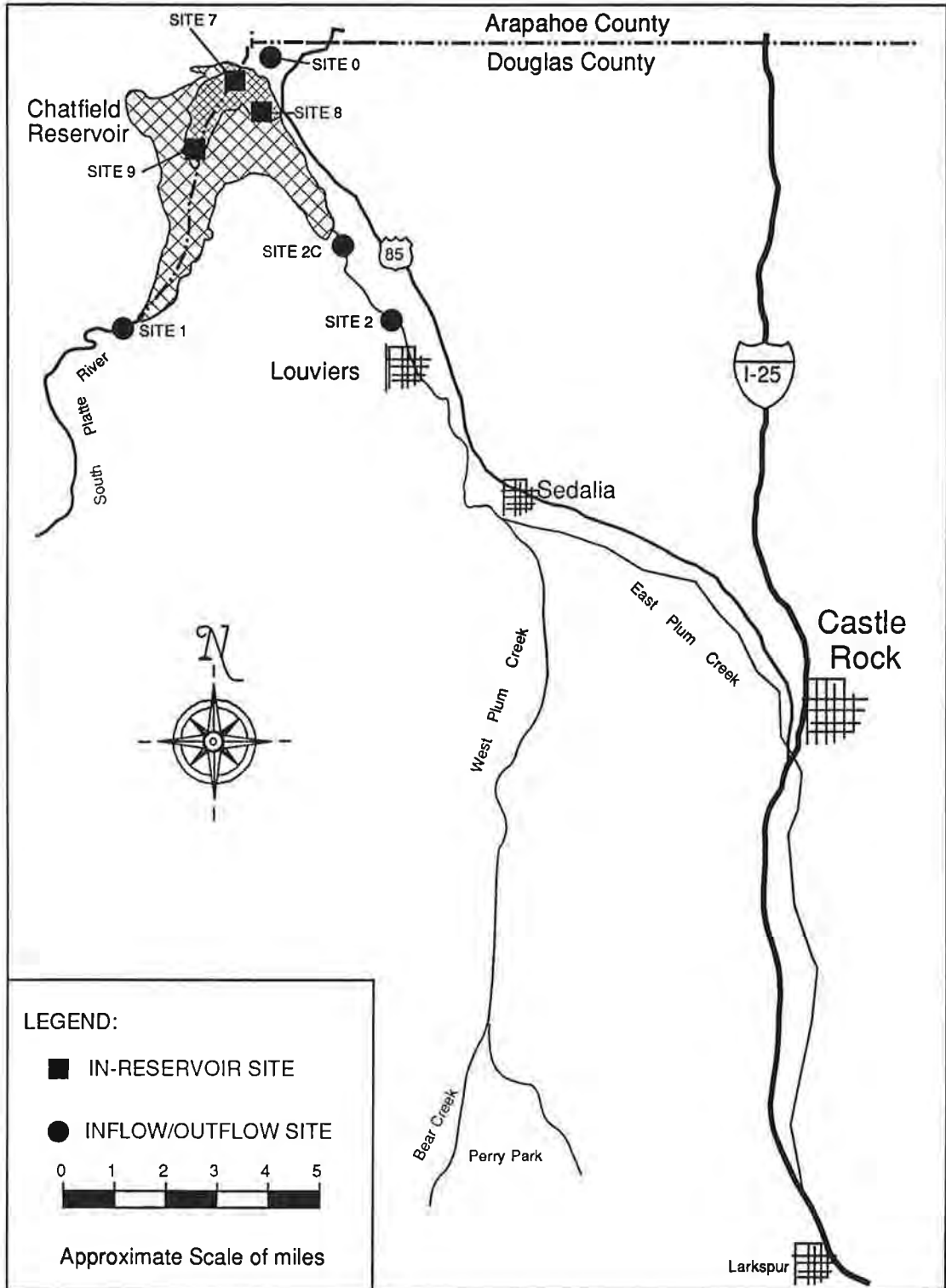
Martin Marietta Astronautics Group  
P.O. Box 179  
Denver, Colorado 80201  
Attn: Mr. Robert M. McMullen

Centennial Water & Sanitation District  
62 West Plaza Drive  
Highlands Ranch, Colorado 80126  
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Stanford Place 3, Suite 1000  
4582 South Ulster Street Parkway  
Denver, Colorado 80237  
Attn: Dr. Keith Little

File No. 969.01

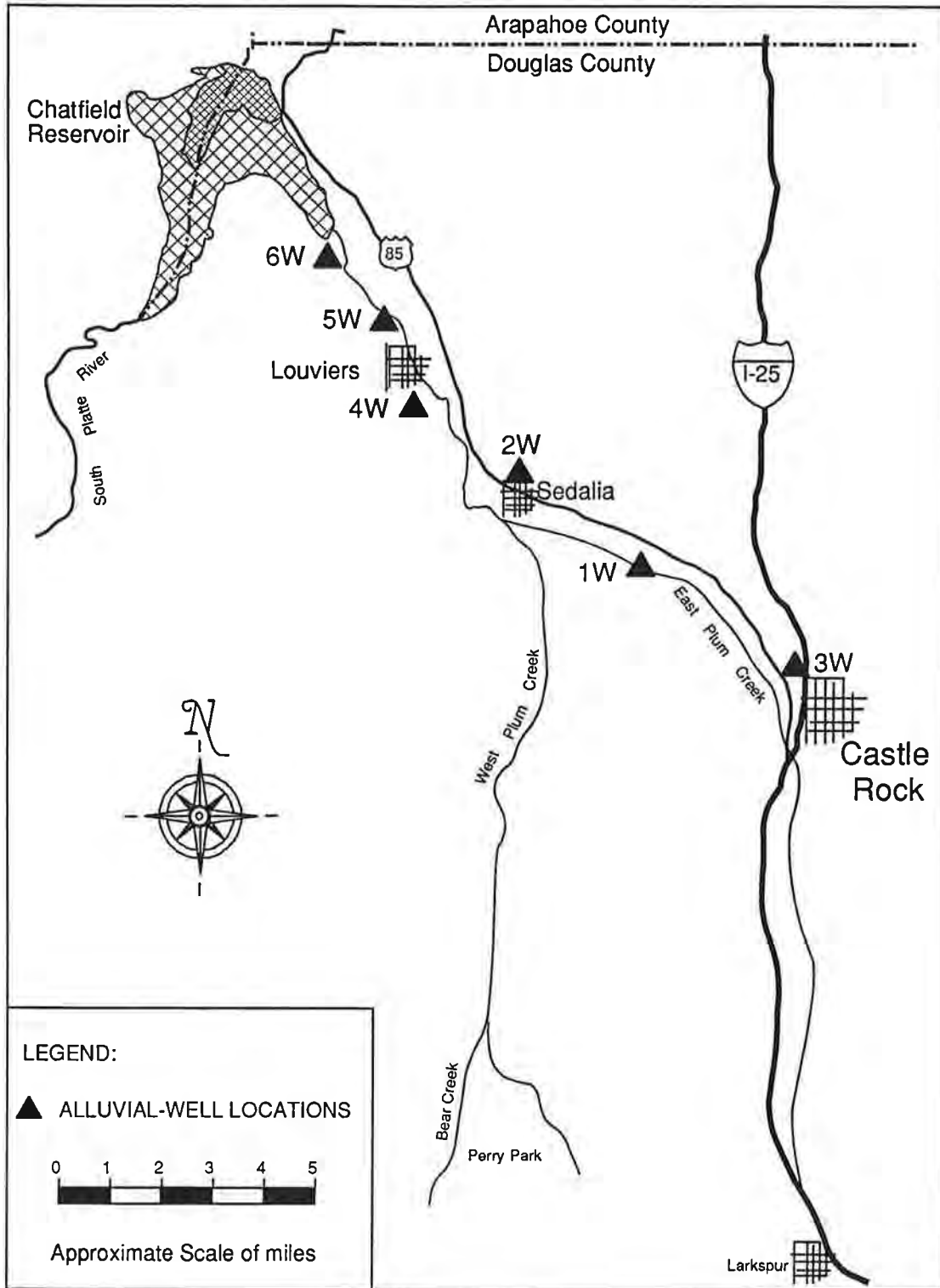




CHATFIELD BASIN AND RESERVOIR  
WATER-QUALITY MONITORING PROGRAM

INFLOW/OUTFLOW AND  
IN-RESERVOIR MONITORING  
STATION LOCATIONS

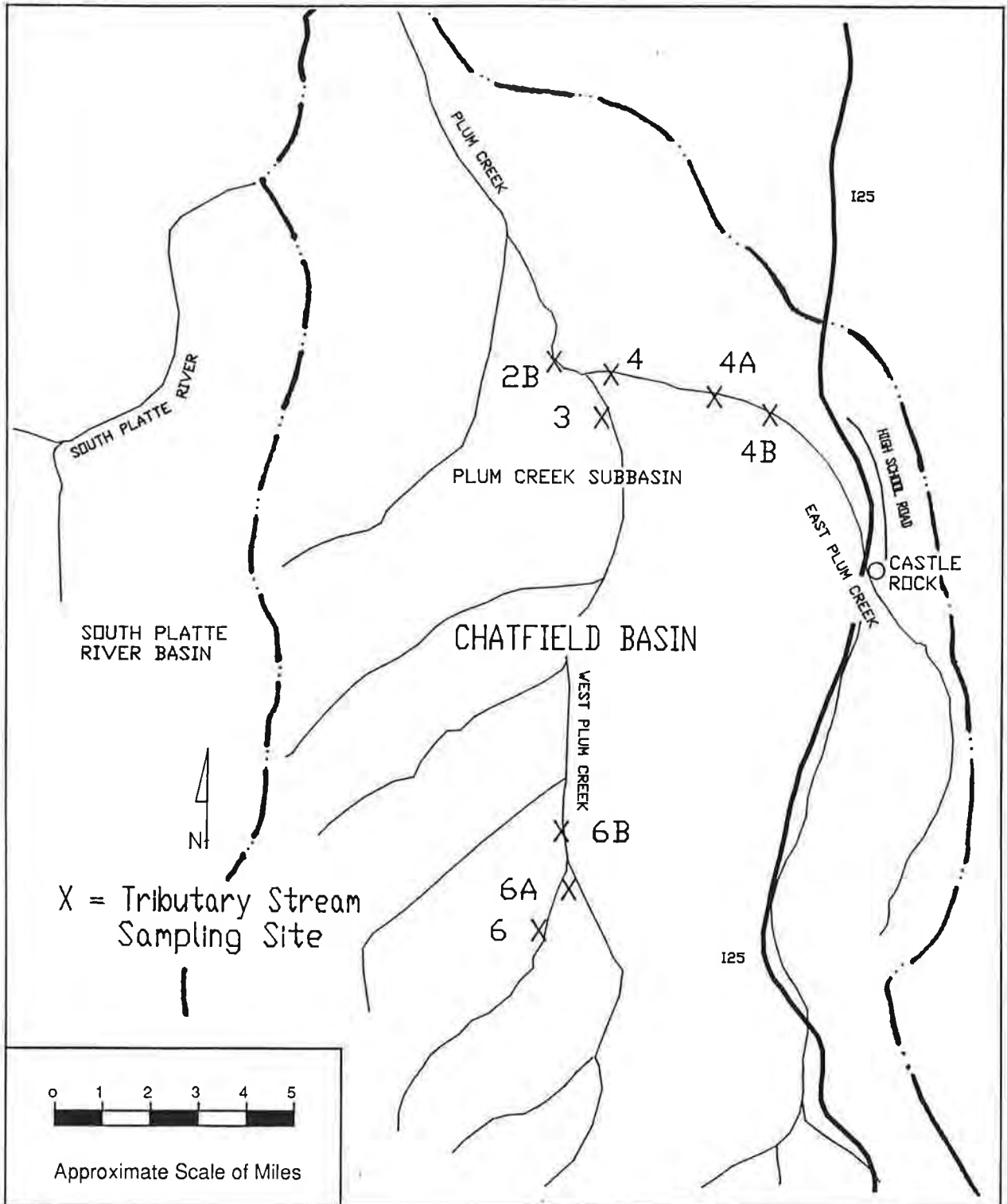




CHATFIELD BASIN AND RESERVOIR  
WATER-QUALITY MONITORING PROGRAM

ALLUVIAL-WELL  
MONITORING LOCATIONS





CHATFIELD BASIN AND RESERVOIR  
WATER-QUALITY MONITORING PROGRAM

CHATFIELD BASIN SUPPLEMENTAL-  
TRIBUTARY SITE-LOCATION MAP







**BASIC DATA TABLES**

TABLE 1  
06709601 CHATFIELD RESERVOIR OUTFLOW NEAR LITTLETON, CO. (SITE 0)  
WATER-QUALITY DATA

DATE	TIME	INSTAN- TANEOUS STREAM- FLOW (CFS)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SUS- PENDE SEDI- MENT (MG/L)	LABOR- ATORY SAMPLE NUMBER
26-Jan-90	1220	1.0	310	8.0	11.0	8.1		0.07	0.01	0.19	-0.005			-0.005	4.4	621
01-Mar-90	1400	0.01	270	6.0	8.0	8.2		0.05	-0.01	0.14	0.375			0.307	80.0	1313
27-Mar-90	1415	0.01	261	10.0	10.0	8.3		-0.05	-0.01	0.04	0.042			0.005	36.0	1987
26-Apr-90	1050	60	220	11.0	10.2	8.4		0.05	-0.01	0.02	-0.005			-0.005	5.4	2815
22-May-90	1300	130	290	17.0	9.0	7.2		0.05	-0.01	-0.02	0.005			0.005	15.8	3546
21-Jun-90	1115	100	355	19.0	8.2	7.7		0.12	-0.01	0.03	0.008			0.005	14.6	4730
27-Jul-90	1240	65	230	16.0	6.2	8.0		0.14	-0.01	-0.02	0.013			0.006	4.2	5699
27-Jul-90	9999	65	230	16.0	6.2	8.0		0.18	-0.01	-0.02	0.016			-0.005	5.2	5701
30-Aug-90	1600	100	300	19.5	8.1	7.4		0.09	-0.01	-0.02	0.011			0.011	4.8	6585
26-Sep-90	1530	0.0	250	17.5	9.0	8.2		0.18	-0.01	-0.02	-0.030			-0.005	10.0	7445
22-Oct-90	1300	10	215	9.5	8.1	7.4		-0.05	-0.01	-0.02	0.027			-0.005	9.2	8125
30-Nov-90	1400	5	325	5.5	6.0	7.6		0.12	-0.01	1.31	0.040			0.021	4.9	8895
02-Jan-91	1130	5	255	1.0	12.1	7.2		0.37	0.03	1.72	0.028			0.021	8.0	88

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 2  
0670800 SOUTH PLATTE RIVER AT WATERTON, CO. (SITE 1)  
WATER-QUALITY DATA

DATE	TIME	INSTAN- TANEOUS STREAM- FLOW	SPE- CIFIC CON- DUC- TANCE FIELD	TEMPER- ATURE (DEG C)	DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	PH (LAB STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHOS, TOTAL (MG/L AS P)	SUS- PENDE D MENT (MG/L)	LABOR- ATORY SAMPLE
26-Jan-90	1430	33	250	1.0	13.1	8.1		0.20	-0.01	0.04		-0.005		-0.005	2.6	622
01-Mar-90	1430	41	260	3.5	10.5	8.2		-0.05	-0.01	0.02		0.006		0.005	20.0	1314
27-Mar-90	1445	31	290	8.0	9.8	8.5		-0.05	-0.01	-0.02		-0.005		-0.005	12.0	1988
26-Apr-90	1025	37	230	9.0	11.6	8.4		0.05	-0.01	-0.02		0.006		0.006	1.4	2816
03-May-90	1100	32	290	13.0	8.8	8.2		0.13	-0.01	-0.02		-0.005		-0.005	-1.0	2977
14-May-90	1545	130	310	14.5	8.6	8.5		0.09	-0.01	-0.02		0.007		0.007	3.0	3346
22-May-90	1015	70	220	16.0	10.0	8.4		0.14	-0.01	-0.02		-0.005		-0.005	24.7	3545
01-Jun-90	1200	170	255	12.5	9.0	7.7		0.07	-0.01	0.39		0.010		0.010	3.0	4008
06-Jun-90	1030	65	220	14.5	9.9	8.4		0.07	-0.01	-0.02		-0.005		-0.005	2.0	4116
15-Jun-90	1500	61	270	15.0	9.9	8.1		0.14	-0.01	-0.02		0.020		0.018	2.2	4501
21-Jun-90	1055	1110	330	16.0	9.8	7.9		0.08	-0.01	0.08		-0.005		-0.005	3.7	4728
27-Jul-90	1325	100	200	18.0	6.8	8.7		0.08	-0.01	-0.02		0.005		-0.005	0.8	5700
30-Aug-90	1245	160	310	20.0	12.2	7.8		0.12	-0.01	-0.02		-0.005		-0.005	3.0	6584
26-Sep-90	1310	22	310	16.5	9.2	7.8		0.19	-0.01	-0.02		0.010		-0.005	2.0	7446
22-Oct-90	1205	36	180	6.5	7.2	7.3		-0.05	-0.01	-0.02		-0.005		-0.005	1.4	8124
30-Nov-90	1340	37	195	1.0	12.6	7.9		0.05	-0.01	-0.02		0.007		-0.005	0.6	8897
02-Jan-91	1200	61	180	0.0	10.3	7.5		0.15	-0.01	0.06		0.018		-0.005	-2.0	89

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT.

TABLE 3  
06709530 PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO. (SITE 2)  
WATER-QUALITY DATA

DATE	TIME	INSTAN- TANEOUS STREAM- FLOW (CFS)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	PH LAB (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	SUS- PENDE MENT (MG/L)	LABOR- ATORY SAMPLE NUMBER
26-Jan-90	1445	65	290	0.5	12.8	8.0		0.26	0.02	2.08		0.040			0.038	61.0	623
01-Mar-90	1445	23	280	12.0	9.8	8.1		0.07	-0.01	1.43		0.160			0.131	198.0	1315
27-Mar-90	1500	15	290	12.0	8.3	8.2		-0.05	-0.01	0.52		0.059			0.057	324.0	1989
26-Apr-90	930	59	180	12.0	10.6	8.3		0.06	-0.01	0.29		0.081			0.068	76.2	2817
26-Apr-90	1300	53	240	13.0	11.0	7.2		0.49	-0.01	0.35		0.048			0.044	15.2	2818
03-May-90	1200	100	290	18.0	7.0	8.0		0.12	-0.01	0.37		0.103			0.053	75.0	2978
14-May-90	1530	65	330	19.0	6.3	8.2		0.06	-0.01	0.34		0.067			0.061	84.0	3347
22-May-90	945	65	230	18.5	8.6	7.2		0.06	-0.01	0.50		0.090			0.040	1.3	3544
01-Jun-90	1145	34	260	20.0	6.8	7.8		0.06	-0.01	0.41		0.092			0.088	49.0	4007
06-Jun-90	1000	6.0	230	24.0	7.0	8.2		0.08	-0.01	0.35		0.144			0.107	12.0	4115
15-Jun-90	1515	3.4	290	23.0	8.0	8.2		0.12	-0.01	0.40		0.076			0.062	4.8	4502
21-Jun-90	1030	3.0	360	22.0	8.6	8.2		0.08	-0.01	0.45		0.038			0.038	5.7	4729
27-Jul-90	1300	0.0															
30-Aug-90	1200	0.0															

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

\* 0. - MEANS NO DISCRETE TIME BECAUSE SAMPLE WAS COMPOSITED.

DISCRETE STREAMFLOW AND FIELD MEASUREMENTS INCLUDED IN SEPARATE TABLES 15-18.

TABLE 3  
06709530 PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO. (SITE 2)  
WATER-QUALITY DATA

DATE	TIME	INSTANTANEOUS STREAM-FLOW (CFS)	SPE-CIFIC CON-DUC-TANCE FIELD (US/CM)	TEMPER-ATURE (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	PH FIELD (STAND-ARD UNITS)	PH LAB (STAND-ARD UNITS)	NITRO-GEN- TOTAL (MG/L AS N)	NITRO-GEN- AMMONIA TOTAL (MG/L AS N)	NITRO-GEN- NITRITE TOTAL (MG/L AS N)	NITRO-GEN- NITRATE TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	SUS-PENDED SEDI-MENT (MG/L)	LABOR-ATORY SAMPLE NUMBER
26-Sep-90	1600	0.0															
30-Nov-90	1100	9.1	270	3.0	12.8	7.5		0.06	-0.01	0.74		0.155			0.039	117.8	8896
30-Nov-90	9999	9.1	270	3.0	12.8	7.5		0.06	-0.01	0.73		0.175			0.041	150.7	8905
02-Jan-91	1215		220	0.0	10.2	7.5		0.23	-0.01	0.84		0.025			0.027	15.0	90

**NOTES:**

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\* 0. - MEANS NO DISCRETE TIME BECAUSE SAMPLE WAS COMPOSITED.

DISCRETE STREAMFLOW AND FIELD MEASUREMENTS INCLUDED IN SEPARATE TABLES 15-18.

TABLE 3a  
 105024239321401 PLUM CREEK ABOVE CHATFIELD RESERVOIR (SITE 2C)  
 WATER-QUALITY DATA (PAIRED SAMPLES)

DATE	TIME	INSTAN- TANEOUS STREAM- FLOW (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- AMMONIA TOTAL (MG/L AS N)	NITRO- GEN- NITRITE TOTAL (MG/L AS N)	NITRO- GEN- NITRATE TOTAL (MG/L AS N)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	SUS- PENDE MENT (MG/L)	LABOR- ATORY SAMPLE NUMBER
30-Nov-90	1115		3.0	260	6.0	7.2	0.06	-0.01	0.73	0.175	0.041	151	8905
02-Jan-91	930		1.0	290	8.4	7.0	0.37	-0.01	0.23	-0.005	-0.005	7.0	91

NOTES:

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MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 4  
105033539331901 CHATFIELD RESERVOIR NEAR DAM (SITE 7)  
WATER-QUALITY DATA

DATE	TIME	TOTAL DEPTH (FEET)	SAMP- LING DEPTH (FEET)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- TANCE (US/CM)	TRANS- PARENCY DISK (FEET)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- NITRITE (MG/L AS N)	NITRO- GEN- NITRATE (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHYTO- PLANK- TON, (SPEC- IES NUMBER)	LABOR- ATORY SAMPLE NUMBER
26-Jan-90	1240		5.3	5.0	10.5	270	13.2	8.2	-2	0.20				-0.005		-0.005	3.8	624
26-Jan-90	1245	10.5	9.0	4.5		245	12.8	8.1	4	0.20				-0.005		-0.005		625
27-Mar-90	1345		6.3	7.0	12.5	250	9.8	8.0	6	0.10				0.011		0.009	4.7	1990
27-Mar-90	1355	40.0	38.0	5.5		250	10.0	8.3	18	0.10				0.017		0.016		1991
13-Apr-90	1125		4.8	9.0	9.0	355	9.5	8.5	12	0.10				-0.005		-0.005	4.7	2490
13-Apr-90	1130	23.0	21.0	8.6		380	8.5	8.4	14	0.20				-0.005		-0.005		2491
26-Apr-90	1215		6.8	11.0	13.5	250	11.2	8.5	8	0.20				-0.005		-0.005	3.6	2809
26-Apr-90	1220	33.0	31.0	10.0		255	10.2	8.1	8	0.20				-0.005		-0.005		2810
22-May-90	1200		4.5	16.0	9.0	230	9.0	8.5	2				0.50	0.030		-0.005	3.6	3552
22-May-90	1155	28.0	26.0	17.0		245	8.9	7.8	6				0.50	0.032		-0.005		3551
06-Jun-90	1200		3.5	18.0	7.0	280	8.3	8.3	6				0.40	0.005		0.005	4.8	4121
06-Jun-90	1210	34.0	32.0	20.5		240	6.9	8.2	6				0.50	0.010		0.009		4122
21-Jun-90	1545		2.2	21.0	4.4	360	8.4	8.0	18	-0.10				-0.005		-0.005	5.2	4731
21-Jun-90	1550	27.0	25.0	16.0		360	6.8	8.0	14	0.10				0.020		0.020		4732
11-Jul-90	1105		4.2	21.0	8.4	265	6.8	7.6	2	0.20				-0.005		-0.005	3.4	5269
11-Jul-90	1100	33.8	31.8	17.0		250	5.8	7.4	6	0.30				0.018		0.016		5270
27-Jul-90	1200		5.5	17.0	11.0	265	6.8	8.3	-2	0.10				0.007		-0.005	3.6	5697
27-Jul-90	1205	39.0	5.5	16.0		250	4.6	7.8	20	0.40				0.023		0.012		5698
18-Aug-90	1225		4.0	19.5	8.0	295	3.2	7.7	-2	0.20				0.018		0.017	5.5	6245
18-Aug-90	1230	38.0	36.0	20.2		300	7.1	7.2	14	0.50				0.067		0.063		6246
30-Aug-90	1350		2.8	21.0	5.6	300	7.9	8.5	2	0.20				0.005		0.005	5.4	6586
30-Aug-90	1355	30.5	28.0	19.5		290	6.3	7.4	-2	0.20				0.008		0.006		6587

3.6

3.7

NOTES:  
BLANK RANGES INDICATE NO DATA WERE AVAILABLE  
MINUS SIGN MEANS "LESS THAN" INDICATED VALUE  
TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT  
\* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER.

2 2



TABLE 4  
 105033539331901 CHATFIELD RESERVOIR NEAR DAM (SITE 7)  
 WATER-QUALITY DATA

DATE	TIME	TOTAL DEPTH (FEET)	SAMP- LING DEPTH (FEET)	TEMPER- ATURE (DEG C)	SECCHI DISK (FEET)	TRANS- PAREN- CY (US/CM)	CON- DUC- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN- AMMONIA (MG/L AS N)	NITRO- GEN- NITRITE (MG/L AS N)	NITRO- GEN- NITRATE (MG/L AS N)	NITRO- GEN- TOTAL KJELDL. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHLORO- PHYLL A (UG/L)	PHYTO- PLANK- TON, (SPEC- IES NUMBER)	LABOR- ATORY SAMPLE NUMBER
12-Sep-90	1040		1.4	17.0	2.7			11.2	7.5	6					0.062			-0.005	42.6		7014
12-Sep-90	1045	33.5	31.5	18.0			250	9.5	7.2	32					0.047			-0.005			7015
26-Sep-90	1425		2.0	17.0	4.1		350	9.3	7.8	30					0.041			-0.005	29.3		7422
26-Sep-90	1430	28.0	26.0	15.5			340	8.2	7.9	30					0.026			0.016			7434
22-Oct-90	935		2.0	7.5	4.0		230	7.9	8.2	14			1.20		0.051			0.031	*		8128
22-Oct-90	940	28.0	26.0	8.5			220	6.7	7.5	4		-0.10			0.022			0.006			8129
30-Nov-90	1240		1.7	4.0	3.5		250	7.5	7.7	2			0.50		0.022			0.010	*		8902
30-Nov-90	1245	32.8	3.5	4.0			220	7.8	7.8	6			0.50		0.029			0.020			8903
02-Jan-91	1100		2.3	0.0	4.5		220	10.2	7.6	8			0.70		-0.005			-0.005	*		93
02-Jan-91	9999		2.3	0.0	4.5		220	10.2	7.6	8			0.40		-0.005			-0.005			92
02-Jan-91	1105	15.0	12.5	0.0			220	10.6	7.5	10			0.30		-0.005			-0.005			94

NOTES:  
 BLANK RANGES INDICATE NO DATA WERE AVAILABLE  
 MINUS SIGN MEANS "LESS THAN" INDICATED VALUE  
 TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT  
 \* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER.

TABLE 5  
105030239324801 CHATFIELD RESERVOIR NEAR PLUM CREEK INFLOW (SITE 8)  
WATER-QUALITY DATA

DATE	TIME	SAMP- PAREN- CON- OXYGEN, PH PH AT 105 NITRO- GEN- GEN- GEN- GEN- PHOS- PHOS- PHOS- PHYTO-				SOLIDS, RESIDUE NITRO- GEN- GEN- GEN- GEN- PHOS- PHOS- PHOS- PHYTO-				PHOS- PHOS- PHOS- PHYTO-				LABOR-								
		TOTAL DEPTH	LING DEPTH	TEMPER- ATURE	SECCHI DISK	TANCE FIELD	DUC- FIELD	SOLVED	(STAND- ARD	(STAND- ARD	SUS- PENDED	TOTAL (MG/L AS N)	TOTAL (MG/L AS N)		TOTAL (MG/L AS N)	TOTAL (MG/L AS N)	KJELDL. (MG/L AS N)	PHOS- TOTAL (MG/L AS P)	PHOS- SOLVED (MG/L AS P)	PHOS- SOLVED (MG/L AS P)	TOTAL (MG/L AS P)	CHLORO- PHYLL A CORR. (UG/L)
26-Jan-90	1400		2.5	3.5	5.0	280	13.2	8.2		4	0.30					-0.005	-0.005		4.7			626
26-Jan-90	1405	7.0	6.0	3.5		310	12.4	8.1		8	0.40				-0.005	-0.005						627
27-Mar-90	1315		5.3	7.0	10.5	250	10.0	8.4		18	-0.10				-0.005	-0.005		3.6				1992
27-Mar-90	1330	16.0	14.0	6.0		250	10.2	8.3		6	-0.10				-0.005	-0.005						1993
13-Apr-90	1110		2.5	9.0	5.0	380	8.8	8.3		10	-0.10				-0.005	-0.005		4.7				2489
13-Apr-90	1100	14.0	12.0	9.0		355	6.2	8.4		12	0.20				-0.005	-0.005						2488
26-Apr-90	1145		2.5	11.0	5.0	250	10.8	8.5		10	0.10				-0.005	-0.005		3.0				2811
26-Apr-90	1150	14.5	12.5	10.5		220	10.5	8.2		28	0.30				0.017	0.017						2812
22-May-90	1145		4.0	16.0	8.0	225	9.4	8.3		4				0.20	0.012	-0.005		2.0				3550
22-May-90	1135	10.5	9.0	16.0		235	9.1	8.5		6				0.20	0.019	-0.005						3549
06-Jun-90	1150		3.1	18.8	6.1	270	8.6	8.4		10				1.20	-0.005	-0.005		3.5				4119
06-Jun-90	1140	14.0	12.0	20.0		240	8.0	8.4		10				0.70	0.019	0.006						4120
21-Jun-90 #)																						

NOTES:

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TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

\* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER

#) - MEANS BOAT MECHANICAL PROBLEMS; UNBLE TO COLLECT SAMPLE

TABLE 5  
 105030239324801 CHATFIELD RESERVOIR NEAR PLUM CREEK INFLOW (SITE 8)  
 WATER-QUALITY DATA

DATE	TIME	SAMP- TOTAL DEPTH (FEET)	TEMPER- ATURE (DEG C) (FEET)	SECCHI DISK (FEET)	SPE- CIFIC CON- DUC- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	PH (STAND- ARD UNITS)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN- TOTAL (MG/L) AS N)	NITRO- GEN- TOTAL (MG/L) AS N)	NITRO- GEN- TOTAL (MG/L) AS N)	NITRO- GEN- TOTAL (MG/L) AS N)	PHOS- PHORUS, TOTAL (MG/L) AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L) AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L) AS P)	PHOS- PHORUS, ORTH- THO, TOTAL (MG/L) AS P)	CHLORO- PHYLL A CORR. (UG/L)	PHYTO- PLANK- TON, (SPEC- IES NUMBER)	LABOR- ATORY SAMPLE NUMBER	
																					DEPTH (FEET)
21-Jun-90 #)																					
11-Jul-90	1040		4.4	21.0	8.8	225	6.8	7.2	6	0.30				0.012	0.011		2.2		5267		
11-Jul-90	1045	11.3	9.8	19.5		270	6.8	7.2	20	0.20				0.007	0.007				5268		
27-Jul-90	1130		3.5	18.5	7.0	250	6.8	8.2	2	0.20				0.005	-0.005		3.7		5695		
27-Jul-90	1135	14.0	12.0	17.0		245	6.5	7.8	-2	0.20				0.105	-0.005				5696		
18-Aug-90	1240		1.8	20.9	3.5	285	7.2	7.6	-2	0.30				0.010	0.010		5.9		6247		
18-Aug-90	1245	13.0	11.0	20.0		305	6.8	7.9	4	0.20				0.024	0.024				6248		
30-Aug-90	1320		2.5	21.0	5.0	300	7.4	7.5	-2	0.20				0.006	0.006		5.4		6588		
30-Aug-90	1325	12.5	10.5	20.0		300	7.7	8.3	10	0.30				0.024	0.015				6589		
12-Sep-90	1020		1.4	17.0	2.7	250	9.8	7.4	10	0.60				0.012	-0.005		27.7		7016		
12-Sep-90	1025	10.0	8.0	17.0		250	9.5	7.3	70	0.60				0.083	0.063				7017		
26-Sep-90	1050		1.8	17.0	3.5	300	8.1	7.8	22	0.40				0.033	-0.005		13.3		7437		
26-Sep-90	1455	10.0	8.5	17.0		300	7.2	7.8	60	0.50				0.061	0.028				7438		

NOTES:

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\* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER

#) - MEANS BOAT MECHANICAL PROBLEMS; UNBLE TO COLLECT SAMPLE

**TABLE 5**  
**105030239324801 CHATFIELD RESERVOIR NEAR PLUM CREEK INFLOW (SITE 8)**  
**WATER-QUALITY DATA**

DATE	TIME	SAMP-		SPE-		CON-		PH		SOLIDS,		NITRO-				PHOS-				PHYTO-	
		DEPTH	TEMPER-	SECCHI	DUC-	OXYGEN,	FIELD	LAB	DEG. C,	GEN-	AMMONIA	NITRITE	NITRATE	TOTAL	KJELD.	PHOS-	PHORUS,	DIS-	DIS-	ORTHO,	CHLORO-
		(FEET)	(DEG C)	(FEET)	(US/CM)	(MG/L)	UNITS)	UNITS)	(MG/L)	AS N)	AS N)	AS N)	AS N)	AS N)	AS P)	AS P)	AS P)	AS P)	(UG/L)	NUMBER)	NUMBER)
22-Oct-90	915	1.6	8.0	3.2	240	8.2	8.2		10	-0.10					0.024		0.011		*		8126
22-Oct-90	920	7.5	5.5	7.5		220	9.6	7.8	6	0.60					0.026		0.013				8127
30-Nov-90	1220		2.0	4.0	4.1	240	8.0	7.3	2	0.50					0.023		0.010		*		8898
30-Nov-90	9999		2.0	4.0	4.1	240	8.0	7.9	4	0.50					0.022		0.012				8904
30-Nov-90	1225	6.5	4.5	4.0		225	8.1	7.9	-2	0.40					0.030		0.012				8899
02-Jan-91	1000		2.0	0.0	4.0	215	9.8	7.7	12	1.80					0.008		-0.005		*		95
02-Jan-91	1005	6.0	4.0	0.0		210	9.8	7.7	28	2.70					0.023		-0.005				96

**NOTES:**

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\* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER

#) - MEANS BOAT MECHANICAL PROBLEMS; UNBLE TO COLLECT SAMPLE

TABLE 6  
 105042739321201 CHATFIELD RESERVOIR NEAR SOUTH PLATTE RIVER INFLOW (SITE 9)  
 WATER-QUALITY DATA

DATE	TIME	TOTAL DEPTH (FEET)	SAMP- LING DEPTH (FEET)	TEMPER- ATURE (DEG C)	TRANS- PARENCY DISK (FEET)	SPE- CIFIC CON- DUC- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH (STAND- ARD UNITS)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NITRATE (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHLORO- PHYLL A CORR. (UG/L)	PHYTO- PLANK- TON, (SPEC- IES NUMBER)	LABOR- ATORY SAMPLE NUMBER
26-Jan-90	1320		6.0	4.5	12.0	270	14.6	8.2	-2	0.30					-0.005		-0.005	1.4		628
26-Jan-90	1325	12.1	10.5	4.5		315	11.4	8.1	-2	0.60					-0.005		-0.005			629
27-Mar-90	1245		6.3	7.0	12.5	255	9.8	8.3	8	-0.10					0.006		-0.005	3.6		1994
27-Mar-90	1300	14.5	12.5	6.5		260	9.8	8.3	6	-0.10					0.005		0.005			1995
13-Apr-90	1040		4.3	12.0	8.5	370	8.1	8.4	10	0.40					-0.005		-0.005	3.6		2486
13-Apr-90	9999		4.3	12.0	8.5	370	8.1	8.4	10	0.10					-0.005		-0.005			2492
13-Apr-90	1040	14.5	12.5	9.0		350	9.1	8.4	12	-0.10					-0.005		-0.005			2487
26-Apr-90	1125		3.0	11.5	6.0	250	10.4	8.5	12	0.20					-0.005		-0.005	1.7		2813
26-Apr-90	1130	17.5	15.5	11.0		220	10.4	8.4	18	0.20					-0.005		-0.005			2814
2-May-90	1120		2.3	15.0	4.5	240	9.8	8.3	10				0.30	0.033			-0.005	2.6		3548
2-May-90	1110	15.1	13.1	16.0		250	8.8	8.3	14				0.30	0.030			0.005			3547
26-Jun-90	1120		3.8	17.0	7.5	240	9.1	8.3	6				0.30	0.006			0.006	4.0		4117
26-Jun-90	1115	13.0	11.5	17.0		245	7.8	8.2	10				0.40	0.011			0.005			4118
21-Jun-90	1155		2.2	21.0	4.3	355	8.4	8.0	16	0.10					0.020		0.011	4.2		4733
21-Jun-90	1205	12.1	10.1	18.0		350	7.8	8.0	24	-0.10					0.015		0.014			4734
11-Jul-90	1005		4.4	18.0	8.8	270	6.3	7.7	2	0.20					0.015		0.015	3.9		5265
11-Jul-90	1010	14.7	13.2	15.0		220	6.8	7.5	16	0.40					0.040		0.030			5266
27-Jul-90	1100		5.0	16.0	10.0		6.4	8.4	-2	0.10					0.007		-0.005	5.4		5693
27-Jul-90	1105	11.0	8.5	16.0		250	5.8	8.4	-2	0.30					0.011		-0.005			5694
8-Aug-90	1250		4.4	20.5	8.8	295	6.8	7.8	-2	0.20					0.045		0.011	4.6		6249
8-Aug-90	1255	13.0	11.1	20.0		285	6.7	7.8	-2	0.30					0.043		0.033			6250
10-Aug-90	1455		1.9	21.0	3.8	300	7.5	7.5	4	0.30					0.019		0.013	3.3		6590

NOTES:  
 BLANK RANGES INDICATE NO DATA WERE AVAILABLE  
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 \* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER

**TABLE 6**  
**105042739321201 CHATFIELD RESERVOIR NEAR SOUTH PLATTE RIVER INFLOW (SITE 9)**  
**WATER-QUALITY DATA**

DATE	TIME	TOTAL DEPTH (FEET)	SAMP- LING DEPTH (FEET)	TEMPER- ATURE (DEG C)	TRANS- PAREN- CY DISK (FEET)	SPE- CIFIC CON- DUC- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- NITRITE (MG/L AS N)	NITRO- GEN- NITRATE (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CHLORO- PHYLL A CORR. (UG/L)	PHYTO- PLANK- TON, (SPEC- IES NUMBER)	LABOR- ATORY SAMPLE NUMBER
30-Aug-90	1445	6.0	4.0	21.0		300	7.1	7.9	6	0.30				0.011			0.011			6591
12-Sep-90	1100		1.4	19.0	2.8	255	11.4	7.9	12	0.60				0.011			-0.005	12.4		7018
12-Sep-90	1105	6.5	4.5	18.0		270	12.4	7.6	14	0.80				0.028			0.012			7019
26-Sep-90	1400		2.0	17.0	4.0	330	8.0	7.8	20	0.40				0.030			-0.005	7.8		7435
26-Sep-90	1405	6.0	4.5	17.0		300	7.5	7.9	20	0.40				0.025			-0.005			7436
22-Oct-90	955		2.0	9.0	4.1	220	8.6	7.5	2	-0.10				0.017			0.011	*		8130
22-Oct-90	1000	7.0	5.0	9.0		230	8.2	7.5	2	0.20				0.022			0.008			8131
30-Nov-90	1300		2.0	4.0	4.1	225	11.8	7.8	2	0.50				0.023			0.014	*		8900
30-Nov-90	1305	4.1	2.6	3.5		230	11.4	7.9	2	0.50				0.023			0.010			8901
02-Jan-91	1020		2.0	0.0	4.0	180	9.8	7.2	6	1.40				0.008			-0.005	*		97
02-Jan-91	1025	5.0	3.5	0.0		185	9.7	7.3	6	3.70				0.013			-0.005			98

NOTES:  
 BLANK RANGES INDICATE NO DATA WERE AVAILABLE  
 MINUS SIGN MEANS "LESS THAN" INDICATED VALUES  
 TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT  
 \* CHLOROPHYLL-a ANALYSES INADVERTENTLY OMITTED DURING MONTHS OF OCTOBER, NOVEMBER, & DECEMBER



**ALLUVIAL-WELL DATA**



**TABLE 7**  
**104543039262001 ALLUVIAL WELL NEAR PLUM CREEK WASTEWATER AUTHORITY WWTP (SITE 1W)**  
**WATER-QUALITY DATA**

DATE	TIME	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	LAB- ORATORY SAMPLE NUMBER
06-Jul-90	900	11.5	400	11.4	6.4	3.70	0.105	0.108	5106
30-Aug-90	850	5.0	275	9.1	6.4	4.70	0.102	0.086	6583
28-Sep-90	1130	11.0	285	6.2		3.70	0.115	0.099	7567
13-Nov-90	1000	12.0	335	6.2	7.1	0.90	0.037	0.016	8603
18-Dec-90	940	9.5	250	7.2	6.3	3.40	0.123	0.099	9466

**NOTES**

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

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TABLE 8  
 104581539271501 ALLUVIAL WELL NEAR TOWN OF SEDALIA (SITE 2W)  
 WATER-QUALITY DATA

DATE	TIME	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	LAB- ORATORY SAMPLE NUMBER
06-Jul-90	930	13.5	395	9.4	6.5	3.50	0.061	0.055	5107
30-Aug-90	820	5.0	275	7.0	6.5	5.10	0.066	0.044	6582
28-Sep-90	1040	9.9	280	6.2		3.70	0.067	0.056	7571
14-Nov-90	1030	11.5	290	7.5	7.0	3.60	0.067	0.063	8604
18-Dec-90	1005	10.0	250	6.1	6.4	3.80	0.067	0.048	9467

**NOTES**

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

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TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 9  
 104513039214501 ALLUVIAL WELL IN TOWN OF CASTLE ROCK WELL FIELD (SITE 3W)  
 WATER-QUALITY DATA

DATE	TIME	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	LAB- ORATORY SAMPLE NUMBER
06-Jul-90	1035	14.0	375	11.4	6.5	1.20	0.061	0.010	5108
28-Sep-90	1020	10.5	330	7.6		1.10	0.071	0.010	7568
14-Nov-90	930	11.0	300	8.8	6.9	3.20	0.171	0.149	8605
18-Dec-90	930	9.5	290	6.8	6.2	1.00	0.019	-0.005	9465

NOTES

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 10  
 104595039273001 ALLUVIAL WELL AT FLYING C RANCH ON DOUGLAS COUNTY ROAD (SITE 4W)  
 WATER-QUALITY DATA

DATE	TIME	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	LAB- ORATORY SAMPLE NUMBER
28-Sep-90	1220	13.8	195	2.2		-0.10	0.012	-0.005	7570
14-Nov-90	1100	13.0	200	3.5	7.6	-0.10	-0.005	-0.005	8606
18-Dec-90	1015	10.0	255	5.0	6.6	1.40	0.052	0.033	9486

**NOTES**

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 11  
 105000539284001 ALLUVIAL WELL NEAR PLUM CREEK AT LOUVIERS ROAD (SITE 5W)  
 WATER-QUALITY DATA

DATE	TIME	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	LAB- ORATORY SAMPLE NUMBER
28-Sep-90	1230	13.0	250	4.6		0.40	0.051	-0.005	7569
14-Nov-90	1130	11.5	265	2.8	7.1	-0.10	-0.005	-0.005	8607
18-Dec-90	1030	9.0	185	7.1	7.0	-0.10	-0.005	-0.005	9469

NOTES

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 12  
 105022039302001 ALLUVIAL WELL AT PLUM CREEK STABLES ON TITAN ROAD (SITE 6W)  
 WATER-QUALITY DATA

DATE	TIME	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	PH FIELD (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	LAB- ORATORY SAMPLE NUMBER
28-Sep-90	1250	13.0	330	4.6		0.20	-0.005	-0.005	7572
14-Nov-90	1200	12.0	270	5.0	7.3	-0.10	-0.005	-0.005	8608
18-Dec-90	1045	5.5	220	3.9	6.9	-0.10	-0.005	-0.005	9470

**NOTES**

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

**SUPPLEMENTAL-TRIBUTARY SURVEY DATA**

TABLE 13  
 PLUM CREEK BELOW THE CONFLUENCE OF EAST & WEST PLUM CREEK (SITE 2B)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

DATE	TIME	INSTAN- TANEOUS STREAM- FLOW (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CONduc- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	pH (STAND- ARD UNITS)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, TOTAL KJELDL. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO (MG/L AS P)	FECAL COLI- FORMS (#/100ML)
04-Sep-90	1120		24.0	370	7.9	8.7		0.04	0.01	2.30		0.05	0.02	0
11-Sep-90	1115		21.0	405	6.4	7.9	1.44	0.04	0.19	0.66	0.59	0.05	0.03	78
18-Sep-90	1225		23.0	360	7.4	8.3	0.99	0.02	0.01	0.57	0.41	0.05	0.03	142
25-Sep-90	1100		20.0	448	7.6	8.4		0.03	-0.01	0.89		0.04	0.03	48
02-Oct-90	1230		14.5	450	7.6	8.0	2.36	0.03	0.01	2.10	0.25	0.06	0.05	42
16-Oct-90	230		14.5	450	5.8	7.6		0.04	0.01	1.20		0.06	0.04	4
23-Oct-90	1220		12.0	535	8.5	7.9	1.65	0.03	0.02	1.30	0.33	0.06	0.03	34
31-Oct-90	1136		13.0	440	9.0	8.0	2.71	0.06	0.01	2.60	0.10	0.04	0.03	0
07-Nov-90	115		6.5	490	10.6	8.1	2.38	0.03	0.03	2.20	0.15	0.08	0.02	15
15-Nov-90	800		3.0	495	9.5	8.0	3.55	0.03	0.02	3.00	0.53	0.02	0.01	0
20-Nov-90	1050		9.0	460	9.4	8.2	2.90	0.03	0.01	2.70	0.19	0.12	0.06	16
27-Nov-90	1155		5.0	440	9.4	8.1	2.31	0.02	0.01	2.00	0.30	0.06	0.04	6
04-Dec-90	1204		1.0	480	12.1	8.1	5.47	0.07	0.07	4.00	1.40	0.18	0.09	12
11-Dec-90	1130		6.0	500	9.5	8.1	4.08	0.03	0.09	3.30	0.69	0.14	0.09	9
18-Dec-90	1112		1.0	460	12.3	8.0	3.92	0.11	0.04	3.30	0.58	0.15	0.07	45

NOTE:

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT



TABLE 14  
 WEST PLUM CREEK AT SEDALIA, COLORADO (SITE 3)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA  
 Location: SW 1/4, NE 1/4, Sec. 23 T. 7S, R. 68W, Douglas County, on upstream side of bridge on State Highway 67, 0.6 mi.  
 south of Sedalia and 0.1 mi. upstream from mouth.

DATE	TIME	INSTAN- TANEOUS STREAM FLOW (cfs)	STAGE (FEET)	TEMPER- ATURE (DEG C)	SPE- CIFIC CONDUC- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	pH (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- AMMONIA TOTAL (MG/L AS N)	NITRO- GEN- NITRITE TOTAL (MG/L AS N)	NITRO- GEN- NITRATE TOTAL (MG/L AS N)	NITRO- GEN- TOTAL KJELDL. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, (MG/L AS P)	FECAL COLI- FORMS (#/100ML)
04-Sep-90	1110		-0.42	23.0	300	8.4	8.4	1.80	0.04	-0.01	1.60	0.19	0.03	0.01	4
11-Sep-90	1050			20.0	297	8.0	8.2	0.98	0.04	-0.01	0.53	0.45	0.02	0.01	44
18-Sep-90	1125		-0.62	21.0	278	6.5	8.2	0.77	0.02	0.00	0.49	0.28	0.02	0.01	50
25-Sep-90	1020		-0.33	18.0	336	7.3	8.0		0.02	-0.01	0.52		0.02	-0.01	22
02-Oct-90	1200		-0.75	15.0	318	7.0	8.1	0.74	0.03	-0.01	0.54	0.20	0.02	-0.01	60
16-Oct-90	1420		0.20	18.0	340	7.0	8.2		0.05	-0.01	0.43		0.04	0.01	32
23-Oct-90	1205		0.31	11.0	350	8.9	8.0	0.86	0.02	-0.01	0.70	0.16	0.03	0.01	36
30-Oct-90	1117		0.12	12.5	320	9.4	8.1	1.36	0.02	-0.01	1.10	0.25	0.03	0.02	12
07-Nov-90	1300		0.42	5.5	345	10.4	8.1	0.68	0.01	-0.01	0.67	0.10	0.04	0.01	11

NOTES:

- A Laboratory value.
- B Field-instrument malfunction, estimated from water temperature assuming saturation.
- C High-flow discharge estimated, based on extrapolation from preliminary rating curve.
- D Laboratory-incubator malfunction, unable to complete analysis.

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 14  
 WEST PLUM CREEK AT SEDALIA, COLORADO (SITE 3)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

Location: SW 1/4, NE 1/4, Sec. 23 T. 7S, R. 68W, Douglas County, on upstream side of bridge on State Highway 67, 0.6 mi. south of Sedalia and 0.1 mi. upstream from mouth.

DATE	TIME	INSTAN- TANEOUS STREAM FLOW (cfs)	STAGE (FEET)	TEMPER- ATURE (DEG C)	SPE- CIFIC CONduc- TANCE FIELD (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	pH (STAND- ARD UNITS)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- AMMONIA TOTAL (MG/L AS N)	NITRO- GEN- NITRITE TOTAL (MG/L AS N)	NITRO- GEN- NITRATE TOTAL (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, (MG/L AS P)	FECAL COLI- FORMS (#/100ML)
20-Nov-90	1035		0.32	8.0	350	10.0	8.2	1.16	0.02	-0.01	0.69	0.46	0.06	0.01	6
27-Nov-90	1135		0.36	4.0	360	9.3	8.1	1.33	0.05	0.00	0.69	0.64	0.02	0.02	13
04-Dec-90	1150		0.42	4.0	350	10.6	8.0	1.82	0.04	-0.01	0.84	0.98	0.06	0.02	2
11-Dec-90	1120		0.44	6.0	360	8.2	8.0	1.26	0.02	-0.01	0.62	0.63	0.09	0.04	6
18-Dec-90	1054		0.39	3.5	370	10.8	8.0	1.70	0.02	-0.01	0.69	1.00	0.04	-0.01	19

NOTES:

- A Laboratory value.
- B Field-instrument malfunction, estimated from water temperature assuming saturation.
- C High-flow discharge estimated, based on extrapolation from preliminary rating curve.
- D Laboratory-incubator malfunction, unable to complete analysis.

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 15  
 EAST PLUM CREEK AT SEDALIA, COLORADO (SITE 4)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

Location: NE 1/4, NE 1/4, Sec. 23, T. 7S, R. 68W, Douglas County, on upstream side of bridge on State Highway 67, 0.3 mi.  
 south of Sedalia and 0.3 mi. upstream from mouth.

DATE	TIME	INSTAN- TANEOUS STREAM FLOW (cfs)	STAGE (FEET)	TEMPER- ATURE (DEG C)	SPE- CIFIC	OXYGEN, DIS- SOLVED (MG/L)	pH (STD. UNITS)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN- AMMONIA TOTAL (MG/L AS N)	NITRO- GEN- NITRITE TOTAL (MG/L AS N)	NITRO- GEN- NITRATE TOTAL (MG/L AS N)	NITRO- GEN, TOTAL KJELDL. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, (MG/L AS P)	FECAL COLI- FORMS (#/ 100ML)
					CONDUC- TANCE FIELD (US/CM)										
04-Sep-90	1100		-0.45	23.0	410	7.2	8.6	2.99	0.03	0.03	2.10	0.86	0.07	0.03	0
11-Sep-90	1020		-0.54	21.0	381	6.8	8.0	1.37	0.04	0.01	0.73	0.64	0.05	0.03	26
18-Sep-90	1130		-0.46	23.0	369	7.2	8.6	0.94	0.02	0.03	0.60	0.31	0.07	0.02	205
25-Sep-90	1047		-0.42	19.0	451	7.8	8.6	1.51	0.02	0.02	1.30	0.19	0.04	0.02	92
02-Oct-90	1030		-0.52	15.0	550	7.9	8.2	5.26	0.03	0.05	5.10	0.11	0.10	0.06	302
16-Oct-90	1430		-0.65	19.0	530	7.4	8.3		0.05	0.02	2.00		0.06	0.04	26
23-Oct-90	1145		-0.42	11.5	560	8.8	8.1	2.15	0.02	0.02	2.00	0.13	0.08	0.06	54
31-Oct-90	1131		-0.49	14.0	445	8.9	8.2	3.88	0.02	0.03	3.70	0.15	0.06	0.05	368
07-Nov-90	1230		-0.72	8.0	600	10.3	8.2	4.16	0.01	0.04	4.00	0.12	0.08	0.04	51
15-Nov-90	815		-0.53	4.0	580	9.8	8.1	4.93	0.03	0.06	4.40	0.47	0.02	0.02	22
20-Nov-90	1022		-0.58	8.0	560	9.7	8.4	4.83	0.02	0.03	4.30	0.50	0.07	0.05	30
27-Nov-90	1143		-0.63	5.0	505	10.0	8.3	2.88	0.02	0.01	2.60	0.27	0.09	0.07	11
04-Dec-90	1136		-0.54	5.0	600	11.3	8.0	7.75	0.04	0.05	6.70	1.00	0.14	0.08	8
11-Dec-90	1100			6.5	610	7.2	8.2	6.62	0.23	0.17	5.60	0.85	0.25	0.20	34
18-Dec-90	1045		-0.50	3.0	570	10.4	8.1	6.01		0.10	5.30	0.61	0.18	0.10	91

NOTES:  
 BLANK RANGES INDICATE NO DATA WERE AVAILABLE  
 MINUS SIGN MEANS "LESS THAN" INDICATED VALUE  
 TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 16  
EAST PLUM CREEK DOWNSTREAM FROM THE PCWA WWTP (SITE 4A)  
SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

DATE	TIME	INSTAN- TANEOUS STREAM FLOW (cfs)	TEMPER- ATURE (DEG C)	SPE- CIFIC CONDUC- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	pH (STAND- ARD UNITS)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, TOTAL KJLDL. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO (MG/L AS P)	FECAL COLI- FORMS (#/100ML)
04-Sep-90	1015		21.0	630	6.5	7.5	17.00	0.64	0.82	14.00	2.20	0.13	0.06	22
11-Sep-90	950		18.0	505	4.5	7.6	7.02	0.04	0.04	6.50	0.48	0.12	0.09	10
18-Sep-90	1110		20.0	578	6.9	7.4	16.90	0.09	0.02	16.00	0.92	0.32	0.24	220
25-Sep-90	905		18.0	691	7.4	7.6	16.80	0.04	0.02	16.00	0.73	0.06	0.03	1542
02-Oct-90	1145		14.5	637	7.6	7.4	15.70	0.11	0.19	15.00	0.48	0.15	0.13	56
16-Oct-90	1345		16.0	505	7.9	8.2		0.04	0.01	1.10		0.07	0.05	28
23-Oct-90	1110		10.0	520	8.6	7.9	1.34	0.03	0.01	1.20	0.13	0.09	0.06	66
31-Oct-90	1028		11.0	510	8.8	8.0	1.52	0.02	-0.01	1.40	0.12	0.07	0.06	42
07-Nov-90	1115		6.0	585	9.6	7.8	3.93	0.02	0.02	3.70	0.21	0.06	0.03	10
14-Nov-90	1620		8.0	530	8.3	7.8	5.46	0.03	0.01	5.10	0.35	0.02	0.01	19
20-Nov-90	955		9.0	580	8.7	7.8	6.50	0.05	0.02	5.90	0.58	0.07	0.04	8
27-Nov-90	1110		4.0	500	10.2	8.0	1.76	0.02	-0.01	1.30	0.45	0.07	0.05	2
04-Dec-90	1050		6.0	675	11.8	7.5	10.90	0.42	0.11	9.30	1.50	0.13	0.09	1
11-Dec-90	1050		5.0	610	7.9	7.8	7.84	0.03	0.24	6.50	1.10	0.42	0.33	2
18-Dec-90	1000		5.0	610	12.0	7.6	7.69	0.40	0.21	6.50	0.98	0.16	0.10	2

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

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TABLE 17  
 EAST PLUM CREEK UPSTREAM FROM THE PCWA WWTP (SITE 4B)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

DATE	TIME	INSTAN- TANEOUS STREAM FLOW (cfs)	STAGE (FEET)	TEMPER- ATURE (DEG C)	SPE- CIFIC CONDC- TANCE (US/CM)	OXYGEN, DIS- SOLVED (MG/L)	pH (STAND- ARD UNITS)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, TOTAL KJELDL. (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO (MG/L AS P)	FECAL COLI- FORMS (#/100ML)
04-Sep-90	950		0.08	18.0	420	6.4	7.6	2.21	0.05	0.01	1.80	0.41	0.11	0.08	0
11-Sep-90	930		-0.04	16.5	373	4.6	7.6	1.29	0.04	0.01	0.86	0.42	0.09	0.07	12
18-Sep-90	1100		-0.08	17.0	387	4.2	7.4	0.85	0.02	0.01	0.70	0.14	0.10	0.07	0
25-Sep-90	850		0.13	14.5	454	7.2	7.8		0.02	-0.01	0.73		0.07	0.06	54
02-Oct-90	1030		-0.10	15.0	456	7.9	7.8	1.10	0.03	0.01	1.00	0.09	0.10	0.07	38
16-Oct-90	1400		0.22	16.0	520	7.9	8.2	1.03	0.03	0.01	0.83	0.19	0.07	0.05	20
23-Oct-90	1050		0.28	10.0	530	8.9	7.8	1.26	0.03	0.01	1.20	0.05	0.10	0.07	58
31-Oct-90	1015		0.25	11.0	530	8.9	7.9	1.38	0.01	-0.01	1.20	0.17	0.08	0.06	50
07-Nov-90	1130		0.30	5.5	530	9.8	7.9	1.18	0.02	0.01	1.10	0.07	0.06	0.05	3
15-Nov-90	1610		0.28	8.5	500	8.3	7.9	1.60	0.03	0.01	1.10	0.49	0.02	0.01	9
21-Nov-90	940		0.27	7.0	500	9.2	8.0	1.63	0.03	0.01	1.30	0.32	0.08	0.04	6
27-Nov-90	1103		0.27	3.5	500	10.7	7.9	1.70	0.03	-0.01	1.20	0.49	0.08	0.06	1
04-Dec-90	1100		0.28	4.0	515	8.7	7.9	2.51	0.04	-0.01	1.40	1.10	0.07	0.05	1
11-Dec-90	1030		0.27	4.0	500	12.3	8.0	1.58	0.02	-0.01	0.98	0.59	0.07	0.05	0
18-Dec-90	1000		0.15	2.5	500	12.2	7.9	1.81	0.03	-0.01	1.50	0.30	0.05	0.04	4

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 18  
 BEAR CREEK NEAR PERRY PARK, COLORADO (SITE 6)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

Location: SE 1/4, SE 1/4, Sec. 15, T. 9S, R. 68W, Douglas County, on Left Bank 0.2 mi. downstream from Golf Course Reservoir,  
 and 0.2 mi. upstream from Perry Park Wastewater Treatment Plant.

DATE	TIME	INSTAN- TANEOUS STREAM FLOW (cfs)	STAGE (FEET)	TEMPER- ATURE (DEG C)	SPE- CIFIC CONDUCTANCE FIELD (US/CM)	pH (STD. UNITS)	OXYGEN, DIS- SOLVED (MGL)	NITRO- GEN- TOTAL (MG/L AS N)	NITRO- GEN- NITRATE (MG/L AS N)	NITRO- GEN- NITRITE (MG/L AS N)	NITRO- GEN- AMMONIA (MG/L AS N)	NITRO- GEN- TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, (MG/L AS P)	FECAL COLI- FORMS (#/100ML)
04-Sep-90	1150		0.45	30.0	231	7.9	7.1	2.26	1.50	0.01	0.04	0.75	0.04	0.01	2
18-Sep-90	935		0.36	13.0	221	7.9	7.0	0.82	0.69	0.02	0.03	0.11	0.03	0.01	56
02-Oct-90	910		0.34	12.0	477	7.6	7.6	0.97	0.86	0.03	0.03	0.08	0.05	0.02	20
16-Oct-90	1010		0.40	9.0	385	7.5	7.2	0.80	0.67	0.03	0.05	0.10	0.04	0.01	4
30-Oct-90	910		0.40	7.0	430	7.4	7.4	1.34	1.30	0.03	0.06	0.01	0.04	0.01	0
13-Nov-90	2230		0.40	8.0	375	7.6	7.1	1.05	1.00	0.04	0.08	0.01	0.01	-0.01	11
28-Nov-90	2150		0.43	5.0	290	7.8	10.0	0.71	0.68	0.02	0.03	-0.01	0.05	0.06	6
11-Dec-90	930		0.38	5.0	280	7.8	9.3	1.71	0.44	0.01	0.02	0.62	0.05	0.01	2

.00241

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 19  
 BEAR CREEK DOWNSTREAM FROM PERRY PARK WWTP (SITE 6A)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER QUALITY DATA

DATE	TIME	INSTAN-	SPE-	OXYGEN, DIS-	pH (STAND-	NITRO-	NITRO-	NITRO-	NITRO-	PHOS-	PHOS-	FECAL	
		TANEOUS	CIFIC			GEN,	GEN,	GEN,	GEN,				PHORUS,
		STREAM	CONDUC-	SOLVED	ARD	TOTAL	AMMONIA	NITRATE	TOTAL	TOTAL	ORTH	FORMS	
		FLOW	TANCE	(MG/L)	(UNITS)	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(MG/L	(#/	
		(cfs)	(US/CM)			AS N)	AS N)	AS N)	AS N)	AS P)	AS P)	100ML)	
		(DEG C)											
04-Sep-90	1205	18.0		7.5	7.7	5.31	0.05	0.13	3.90	1.28	0.95	0.91	0
18-Sep-90	1000	15.0	491	7.0	7.9	7.63	0.13	0.44	6.90	0.29	1.34	0.88	54
02-Oct-90	949	13.0	1007	8.6	8.5	12.00	0.05	0.61	11.00	0.44	2.32	1.94	28
16-Oct-90	1035	9.5	890	9.2	8.6	15.50	0.03	0.56	14.00	0.91	2.68	2.34	42
30-Oct-90	930	7.5	1060	8.4	7.9	16.30	0.13	0.59	15.00	0.67	3.10	2.19	72
13-Nov-90	1050	7.0	705	8.0	7.8	15.30	0.25	0.54	14.00	0.80	1.61	1.24	50
28-Nov-90	1010	4.5	380	10.0	7.9	3.94	0.08	0.14	3.20	0.60	0.87	0.81	0
11-Dec-90	950	3.0	385	8.4	7.7	3.60	0.06	0.14	2.50	0.96	0.80	0.75	15

NOTES:  
 BLANK RANGES INDICATE NO DATA WERE AVAILABLE  
 MINUS SIGN MEANS "LESS THAN" INDICATED VALUE  
 TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT

TABLE 20  
 WEST PLUM CREEK DOWNSTREAM FROM THE CONFLUENCE OF BEAR CREEK (SITE 6B)  
 SUPPLEMENTAL TRIBUTARY SURVEYS - WATER-QUALITY DATA

DATE	TIME	INSTANTANEOUS STREAM FLOW		TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	OXYGEN, DIS-SOLVED (MG/L)	pH (STANDARD UNITS)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, TOTAL KJELDL. (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO (MG/L AS P)	FECAL COLIFORMS (#/100ML)
		(cfs)	(FEET)												
04-Sep-90	1250		0.18	25.5	293	7.60	8.7	2.28	0.03	0.01	1.60	0.67	0.05	0.03	24
18-Sep-90	1055		0.22	18.0	318	8.10	8.2	0.66	0.02	-0.01	0.52	0.13	0.03	0.01	34
02-Oct-90	1030		0.25	13.5	583	8.80	8.2	0.76	0.03	0.01	0.59	0.16	0.05	0.02	20
16-Oct-90	1115		0.30	12.8	410	8.20	8.3	0.64	0.04	0.01	0.48	0.15	0.03	0.01	168
30-Oct-90	1030		0.30	11.0	410	8.80	8.1	0.88	0.03	0.01	0.78	0.09	0.05	0.02	6
13-Nov-90	1140		0.31	10.0	395	8.20	8.3	0.85	0.03	0.01	0.68	0.16	0.05	0.02	30
28-Nov-90	1050		0.35	3.0	400	10.50	8.1	1.04	0.02	0.00	0.64	0.40	0.09	0.06	6
11-Dec-90	1035		0.27	5.0	385	10.00	8.2	0.96	-0.01	-0.01	0.56	0.40	0.04	0.02	1

.00684

NOTES:

BLANK RANGES INDICATE NO DATA WERE AVAILABLE

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

TIME = 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE IT





**BIOLOGICAL DATA TABLES**

TABLE 1: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on June 6, 1990.

TAXON	STATION		
	RM-1	RP-1	RS-1
DIVISION BACILLARIOPHYTA			
<u>Asterionella formosa</u>		8	78
<u>Cyclotella bodanica</u>	219	187	156
<u>Fragilaria crotonensis</u>			8
<u>Navicula minuscula</u>	31		4
<u>Nitzschia sp.</u>	94		
<u>Stephanodiscus alpinus</u>	31	16	16
<u>Synedra radians</u>	31	78	16
DIVISION CHLOROPHYTA			
<u>Ankyra judayi</u>	94	94	78
<u>Chlamydomonas sp.</u>	63	16	
<u>Chlorella sp.</u>	24813	9875	30938
<u>Coccomyxa sp.</u>	1625		2625
<u>Crucigenia tetrapedia</u>			63
<u>Dictyosphaerium pulchellum</u>		187	
<u>Kirchneriella lunaris</u>	94		
<u>Oocystis lacustris</u>	188	374	343
<u>O. pusilla</u>		47	
<u>Pandorina morum</u>			187
<u>Pseudosphaerocystis lacustris</u>	16	515	218
<u>Quadriqula sp.</u>	8	8	
<u>Scenedesmus acuminatus</u>	63		
<u>S. intermedius</u>	63		
<u>Schroederia setigera</u>		8	4
<u>Tetrastrum elegans</u>	125		
DIVISION CHRYSOPHYTA			
<u>Dinobryon divergens</u>	16	16	125
DIVISION CRYPTOPHYTA			
<u>Chroomonas sp.</u>			47
<u>Cryptomonas marsonii</u>	250	109	31
<u>Rhodomonas minuta</u>	188	234	158
DIVISION CYANOPHYTA			
<u>Aphanothece sp.</u>		2683	
<u>Dactylococcopsis fascicularis</u>	31	4	
DIVISION EUGLENOPHYTA			
<u>Euqlena oxyuris var. minor</u>	16		
DIVISION PYRROPHYTA			
<u>Ceratium hirundinella</u>	16		
TOTAL:	28075	14459	35095
NUMBER OF SPECIES:	22	18	18

TABLE 2: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on June 21, 1990.

TAXON	STATION	
	RM-1	RS-1
DIVISION BACILLARIOPHYTA		
<u>Asterionella formosa</u>	344	188
<u>Cyclotella bodanica</u>	94	63
<u>Fragilaria crotonensis</u>	1000	344
<u>Melosira granulata</u>	16	16
<u>M. italica</u>	8	8
<u>M. italica</u> var. <u>tenuissima</u>	8	595
<u>Stephanodiscus alpinus</u>	8	31
<u>S. astrea</u>	31	
<u>S. dubius</u>	63	31
DIVISION CHLOROPHYTA		
<u>Ankyra judayi</u>	63	157
<u>Chlorella</u> sp.	6938	5188
<u>Coccomyxa</u> sp.	1375	
<u>Coelastrum</u> sp.	94	
<u>Crucigenia quadrata</u>	500	
<u>C. tetrapedia</u>	500	
<u>Dictyosphaerium pulchellum</u>	250	125
<u>Oocystis lacustris</u>	125	
<u>O. parva</u>	125	63
<u>O. pusilla</u>		125
<u>Pediastrum duplex</u>	8	
<u>Scenedesmus linearis</u>	16	
<u>Staurastrum</u> sp.	8	31
DIVISION CHRYSOPHYTA		
<u>Dinobryon divergens</u>	16	470
DIVISION CRYPTOPHYTA		
<u>Cryptomonas marsonii</u>	63	63
<u>Cryptomonas</u> sp.		31
<u>Rhodomonas minuta</u>	219	814
DIVISION CYANOPHYTA		
<u>Aphanocapsa delicatissima</u>	500	
<u>A. elachista</u> var. <u>conferta</u>	24125	21125
<u>Aphanothece</u> sp.		7375
DIVISION PYRROPHYTA		
<u>Ceratium hirundinella</u>		16
TOTAL:	36497	36859
NUMBER OF SPECIES:	26	21

TABLE 3: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on July 11, 1990.

TAXON	STATION		
	RM-1	RP-1	RS-1
DIVISION BACILLARIOPHYTA			
<u>Asterionella formosa</u>	421	390	438
<u>Cyclotella kuetzingiana</u>		16	
<u>Fragilaria crotonensis</u>	8	1158	16
<u>Melosira granulata</u>		8	8
<u>Nitzschia</u> sp.		31	
<u>Stephanodiscus alpinus</u>	4		
<u>S. dubius</u>	63	376	
<u>Synedra radians</u>		8	
DIVISION CHLOROPHYTA			
<u>Ankyra judayi</u>	16	31	31
<u>Chlamydomonas</u> sp.		94	
<u>Chlorella</u> sp.	1688	2128	1189
<u>Chlorococcum</u> sp.		31	
<u>Coccomyxa</u> sp.	3063	908	376
<u>Coelastrum sphaericum</u>	8		
<u>Crucigenia quadrata</u>		109	
<u>C. tetrapedia</u>		500	31
<u>Dictyosphaerium pulchellum</u>		125	
<u>Eudorina elegans</u>		8	
<u>Kirchneriella lunaris</u>		157	188
<u>Oocystis lacustris</u>			8
<u>Pediastrum duplex</u>	4	8	
<u>Pseudosphaerocystis lacustris</u>	312		94
<u>Scenedesmus ecornus</u>		63	
<u>S. linearis</u>	8		16
<u>Staurastrum paradoxum</u>	4		
<u>Tetrastrum staurogeniaeforme</u>		94	
DIVISION CHRYSOPHYTA			
<u>Dinobryon divergens</u>		31	16
<u>Mallomonas</u> sp.		31	31
DIVISION CRYPTOPHYTA			
<u>Cryptomonas marsonii</u>		94	63
<u>C. ovata</u>		8	
<u>C. rostratiformis</u>		8	
<u>Rhodomonas minuta</u>	702	1815	157
DIVISION CYANOPHYTA			
<u>Aphanocapsa delicatissima</u>		500	
<u>A. elachista</u> var. <u>conferta</u>	2063		
<u>Aphanothece</u> sp.	10500	8670	10298
<u>Dactylococcopsis fascicularis</u>	4		8
DIVISION PYRROPHYTA			
<u>Ceratium hirundinella</u>	16	16	
TOTAL:	18884	17416	12968
NUMBER OF SPECIES:	17	29	17

TABLE 4: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on July 27, 1990.

TAXON	STATION		
	RM-1	RP-1	RS-1
DIVISION BACILLARIOPHYTA			
<u>Asterionella formosa</u>	282	31	31
<u>Fragilaria crotonensis</u>		16	16
<u>Hantzschia amphioxys</u>		8	
<u>Melosira granulata</u>		16	8
<u>M. italica</u>		8	
<u>Navicula notha</u>			31
<u>Nitzschia linearis</u>			8
<u>Stephanodiscus alpinus</u>		8	
<u>S. dubius</u>	31	31	
DIVISION CHLOROPHYTA			
<u>Ankyra judayi</u>	31	188	94
<u>Chlorella</u> sp.	2875	2813	1596
<u>Chlorogonium</u> sp.		31	
<u>Coccomyxa</u> sp.	1063	1563	
<u>Eudorina elegans</u>			313
<u>Oocystis lacustris</u>	16	94	31
<u>Pseudosphaerocystis lacustris</u>	16	16	376
DIVISION CHRYSOPHYTA			
<u>Dinobryon divergens</u>	94	8	250
<u>Mallomonas akrokomas</u>	63		
<u>Mallomonas</u> sp.	63		
DIVISION CRYPTOPHYTA			
<u>Cryptomonas marsonii</u>	125	63	63
<u>C. ovata</u>	31	63	
<u>C. rostratiformis</u>		31	
<u>Rhodomonas minuta</u>	1375	2066	1628
DIVISION CYANOPHYTA			
<u>Aphanocapsa elachista</u> var. <u>conferta</u>	1250	5188	
<u>Aphanothece</u> sp.	47250	6063	11800
<u>Coelosphaerium naegelianum</u>	16	16	
<u>Dactylococcopsis fascicularis</u>		31	
<u>Lynqbya limnetica</u>		125	313
TOTAL:	54581	18477	16558
NUMBER OF SPECIES:	16	23	15

TABLE 5: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on August 30, 1990.

TAXON	STATION		
	RM-1	RP-1	RS-1
DIVISION BACILLARIOPHYTA			
<u>Asterionella formosa</u>	31	16	16
<u>Cyclotella ocellata</u>			31
<u>C. stelligera</u>		125	
<u>Cymbella minuta</u>			16
<u>Fragilaria constreuns</u>		8	63
<u>F. crotonensis</u>	16	125	16
<u>Melosira granulata</u>	532	250	845
<u>M. granulata</u> var. <u>angustissima</u>	219	8	8
<u>M. italica</u>	188	938	16
<u>Navicula capitata</u>			31
<u>Nitzschia agnewii</u>			63
<u>N. palea</u>			8
<u>Stephanodiscus alpinus</u>	31	8	8
<u>S. dubius</u>			407
<u>Synedra cyclopum</u>	31		
DIVISION CHLOROPHYTA			
<u>Ankyra judayi</u>	94	31	63
<u>Chlorella</u> sp.	2348	2500	2375
<u>Chlorococcum</u> sp.	31	125	
<u>Coccomyxa</u> sp.	31	188	
<u>Gloeocystis gigas</u>			63
<u>Monoraphidium griffithii</u>			8
<u>Nephrocytium agardhianum</u>			250
<u>Scenedesmus ecornus</u>			63
<u>S. linearis</u>		16	8
DIVISION CHRYSOPHYTA			
<u>Dinobryon divergens</u>	156	31	16
<u>Mallomonas</u> sp.			31
DIVISION CRYPTOPHYTA			
<u>Cryptomonas marsonii</u>			31
<u>C. ovata</u>		63	
<u>Rhodomonas minuta</u>	157	63	438
DIVISION CYANOPHYTA			
<u>Anabaena circinalis</u>	16	31	
<u>A. spiroides</u>	630	16	
<u>Aphanizomenon flos-aquae</u>	11141	12013	15650
<u>Aphanocapsa delicatissima</u>		188	1125
<u>A. elachista</u> var. <u>conferta</u>	3881	17625	
<u>Aphanothece</u> sp.	376	1625	7813
<u>Coelosphaerium naegelianum</u>	1815	16	16
<u>Dactylococcopsis fascicularis</u>	31		
<u>Lynqbya limnetica</u>	218		
<u>Merismopedia tenuissima</u>	563	1375	
<u>Oscillatoria</u> sp.			500
TOTAL:	22536	37384	29978
NUMBER OF SPECIES:	22	24	29

TABLE 6: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on September 12, 1990.

TAXON	STATION		
	RM-1	RP-1	RS-1
DIVISION BACILLARIOPHYTA			
<u>Gyrosigma spencerii</u>		8	
<u>Melosira granulata</u>		125	
<u>M. italica</u>	16		16
<u>Stephanodiscus alpinus</u>	8		8
<u>S. dubius</u>	250	375	188
DIVISION CHLOROPHYTA			
<u>Ankyra judayi</u>		125	
<u>Chlorella</u> sp.	6250	3125	2625
<u>Chlorococcum</u> sp.			188
<u>Coccomyxa</u> sp.		13875	
<u>Gloeocystis gigas</u>		31	
<u>Oocystis parva</u>		500	
<u>Scenedesmus linearis</u>		63	
DIVISION CRYPTOPHYTA			
<u>Cryptomonas</u> sp.			63
<u>Rhodomonas minuta</u>	63	375	250
DIVISION CYANOPHYTA			
<u>Anabaena circinalis</u>		1663	
<u>A. flos-aquae</u>	16		
<u>A. spiroides</u>	100	225	
<u>Aphanizomenon flos-aquae</u>	90163	49625	9250
<u>Aphanocapsa delicatissima</u>			750
<u>Aphanothece</u> sp.	2250	24625	
<u>Coelosphaerium naegelianum</u>		750	
<u>Merismopedia tenuissima</u>	2000		1875
<u>Microcystis aeruginosa</u>	1250		
DIVISION PYRROPHYTA			
<u>Ceratium hirundinella</u>	16	125	
TOTAL:	102382	95615	15213
NUMBER OF SPECIES:	12	16	10



TABLE 7: Species list and density (cells/mL) of phytoplankton collected from Chatfield Reservoir on September 26, 1990.

TAXON	STATION		
	RM-1	RP-1	RS-1
DIVISION BACILLARIOPHYTA			
<u>Asterionella formosa</u>	16	63	
<u>Fragilaria crotonensis</u>	31		
<u>Melosira granulata</u>	1000	1000	500
<u>M. italica</u>		500	1346
<u>Stephanodiscus alpinus</u>	8	31	
<u>S. dubius</u>		125	63
DIVISION CHLOROPHYTA			
<u>Ankyra judayi</u>	31		
<u>Chlorella</u> sp.	3250	2625	970
<u>Coccomyxa</u> sp.			31
<u>Gloeocystis gigas</u>		63	47
<u>Pteromonas angulosa</u>			16
DIVISION CRYPTOPHYTA			
<u>Rhodomonas minuta</u>	125	63	
DIVISION CYANOPHYTA			
<u>Anabaena circinalis</u>		31	
<u>Aphanizomenon flos-aquae</u>	115013	53875	50138
<u>Aphanocapsa delicatissima</u>		625	
<u>A. elachista</u> var. <u>conferta</u>			1064
<u>Aphanothece</u> sp.		3000	313
<u>Coelosphaerium naegelianum</u>	1418		
<u>Merismopedia tenuissima</u>	4500		
<u>Microcystis aeruginosa</u>			8
<u>Rhabdogloea ellipsoidea</u>		63	
DIVISION EUGLENOPHYTA			
<u>Euglena</u> sp.		16	
DIVISION PYRROPHYTA			
<u>Ceratium hirundinella</u>	16	63	
TOTAL:	125408	62143	54496
NUMBER OF SPECIES:	11	15	11