COMMODORE

WATER-QUALITY MONITORING PROGRAM
CHATFIELD BASIN AND RESERVOIR
FINAL BASIC-DATA REPORT
JANUARY 2000-DECEMBER 2000

March 12, 2001

Prepared For:

Chatfield Watershed Authority
Denver, Colorado

Prepared By:

Commodore Advanced Sciences, Inc.
4251 Kipling Street, Suite 575
Wheat Ridge, Colorado 80033-6810

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ADVANCED SCIENCES, INC.

March 12, 2001

Chatfield Watershed Authority
Attention: Ms. Jeanie Rossilon, Chair
c/o Denver Regional Council of Governments
2480 W. 26th Avenue, Suite 200B
Denver, CO 80211-5580

Subject: Water-Quality Monitoring Program, Chatfield Basin and Reservoir: Final Basic-Data Report, January 2000-December 2000
CAS Project No. 8206.04

Dear Ms. Rossilon:

This 2000 Annual Basic-Data Report is submitted by Commodore Advanced Sciences, Inc. (CAS) in fulfillment of the subject program's contract requirements. The data provided in this report were collected in accordance with "2000 Chatfield Watershed Authority, Water Quality Monitoring Program (April 4, 2000)." ACZ Laboratories, Inc., Steamboat Springs, CO, and Acculabs, Inc., Golden, CO performed chemical analyses, and biological analyses were performed by Plateau Ecosystems Consulting, Inc. (PEC), Arvada, CO, Chadwick and Associates, Englewood, CO, and the University of Colorado (CU) Limnology Laboratory. A total of 40 duplicate samples were analyzed for chemical constituents in this year's program.

The report is organized into four primary sections - 1. Sampling Site Descriptions and Locations; 2. Basic Data Tables; 3. Summary Data Tables; and 4. Figures. The first section of the report provides written descriptions (Table 1) and maps (Figures 1 and 2) for each sampling location.

Tables 2 through 23 provide the field measurements and laboratory chemical data for samples collected by CAS for the January-through-December 2000 period. Tables 2 through 17 contain data for the two-inflow/outflow sites and the in-reservoir site. Separate tables are provided for field measurements, miscellaneous analyses, nutrient analyses, and metals analyses for each of the sampling sites. Table 19 contains data from an annual reservoir-bottom sediment sample analyzed for total phosphorous, five metals, and total organic carbon. This sample is taken at the in-reservoir location (field code RM) shown on Figure 1.

Table 18 includes tabular in-reservoir water-quality profiles for March 1, 2000 through November 29, 2000 water-quality surveys. The field parameters are presented at one-meter increments for pH, specific conductance, dissolved oxygen and temperature. These data are shown graphically in Figures 17 through 30.

4251 KIPLING STREET, SUITE 575 WHEAT RIDGE, CO 80033 303.421.1511 FAX: 303.463.4833

Tables 19 and 20 provide the results of field measurements and laboratory analyses, respectively, for the five alluvial groundwater-monitoring wells sampled during 2000.

The phytoplankton and zooplankton results are provided in both tabular (Tables 22 and 23) and graphical format (Figures 10 through 16). Of particular note is that the diversity of species of phytoplankton increased dramatically from that observed in previous years.

Tables 24 through 26 provide the data collected during the supplemental field screening surveys performed during June through April, 2000 at 23 locations throughout the watershed (one location is on private property and CAS was not granted access at this location). Figures 2A through 2C are maps of the sampling locations, and Figures 31 through 36 provide graphical summaries of nitrate and phosphorous for the field screening locations.

Table 27 provides a summary of the total phosphorous and chlorophyll_a concentrations in the reservoir for the period 1982 to 2000. As indicated on this table the average growing-season concentrations of total phosphorous decreased and chlorophyll_a constituents increased from 1999 levels. The average total phosphorous concentration during the 2000 growing season did not exceed the growing-season standard, and the average chlorophyll_a concentration remained less than the growing-season goal established for Chatfield Reservoir.

Table 28 provides a summary of the data for trace metals analyses from the inflow/outflow and reservoir sites for the last 4 years. For comparative purposes only, water-quality standards for each of these trace metals are also provided on this table. Where applicable, the standards presented on this table are numerical standards based on a hardness of 100 mg/l CaCO3 (the estimated average low flow hardness) for segment 6 of the South Platte River as established by the Colorado Water Quality Control Commission (WQCC). If such a standard does not exist, the basic standard established by the WQCC is provided. The data on this table indicate that the concentrations of these trace metals at the inflow/outflow and reservoir sampling sites during 2000 were consistent with the concentrations in samples from the previous 3 years. It should be noted that dissolved mercury was detected in relatively high concentrations in all inflow/outflow and reservoir samples collected on July 12, 200. The fact that all locations exhibited concentrations several orders of magnitude greater than detected at all other times or were the only times mercury was detected in any samples from a location indicates that these detects of mercury were likely to contamination of the samples that occurred after sample collection.

Plots of peak and average concentrations for the indicator in-reservoir variables (total phosphorus, chlorophyll-a, and Secchi depth) are given in Figures 3 through 8. Beginning in 1997, the time-series plots depict a point value, rather than an average value from three reservoir locations (filed codes RM, RP, and RS). Comparison of growing-season total-phosphorus versus chlorophyll-a concentrations is shown in Figure 9.

In addition to this data report, CAS was also contracted to perform other activities during calendar-year 2000. The first of these activities was to prepare a report discussing models available for modeling the Chatfield watershed and reservoir. This report was submitted under separate cover on October 9, 2000. The second activity was to compile an inventory of other

sources of data applicable to water-quality monitoring for the Chatfield watershed. This inventory is included with this report as Appendix A.

CAS appreciates having the opportunity to provide the Chatfield Watershed Authority with continuing water-quality monitoring and data compilation services. This Basic-Data Report constitutes the final deliverable under our 2000 calendar-year contract. If you have any questions, or need additional information, please give me a call at (303)421-1511.

Sincerely,
COMMODORE ADVANCED SCIENCES, INC.

Doug Dennison, R.G.
Project Manager

Attachments – Final Annual Basic-Data Report

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Sampling Site Descriptions and Locations

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Figures (Continued)

Appendix A

SAMPLING SITE DESCRIPTIONS AND LOCATIONS

TABLE 1
2000 CHATFIELD WATERSHED AUTHORITY
WATER QUALITY MONITORING PROGRAM

SAMPLING LOCATION DESCRIPTIONS

In-Reservoir and Inflow/Outflow Sites (Figure 1)

Field Code	Description
RM	In-reservoir near dam
PC	Plum Creek at Titan Road, USGS Site 06709530
SO	Outfall from Chatfield Reservoir, USGS Site 06709601
SP	South Platte at Waterton, USGS Site 06708000

Basin-Wide Screening Locations (Figure 2)

Field Code	Description
CH01	6.2 miles up Deer Creek Canyon Road at confluence of north and south forks of Deer Creek
CH02	Deer Creek just west of Chatfield Reservoir - sampled within park boundary
CH03	Up Waterton Canyon Road to just below Strontia Springs Dam
CH04	South Platte River at Waterton Canyon bridge - routine monitoring site SP
CH05	Drainage from Lockheed-Martin facility - sample at bridge across from Waterton Canyon turnoff on Wadsworth Boulevard
CH06	South Platte River approximately 1 mile upstream from Chatfield Reservoir - follow road past beaver ponds on the south end
CH07	South Platte River at the bridge for the main park road
CH08	Massey Draw just west of the Chatfield park perimeter road near the bike path
CH09	Cook Creek at intersection with Noe Road
CH10	East Plum Creek just below confluence with Cook Creek - under railroad tracks just south of Larkspur
CH11	East Plum Creek at subdivision turnoff - bridge on the east frontage road of I-25 near Tomah exit between Larkspur and Castle Rock
CH12	East Plum Creek at the business park on the south end of Castle Rock

TABLE 1
2000 CHATFIELD WATERSHED AUTHORITY
WATER QUALITY MONITORING PROGRAM

SAMPLING LOCATION DESCRIPTIONS

CH13	East Plum Creek just upstream of the Plum Creek Wastewater Plant - bridge at Meadows Boulevard and Highway 85
CH14	East Plum Creek at Sedalia - State Highway 67 bridge
CH15	Plum Creek off County Road 16 from Highway 85 - near alluvial well number 4
CH16	Plum Creek at Titan Road bridge
CH17	Plum Creek within Chatfield State Park boundary above reservoir
CH18	Indian Creek at intersection with Rio Grande Avenue west of Sedalia
CH19	Site is on private land and permission for access was not granted
CH20	Jackson Creek on FR502 (road was washed out) - for last 2 events site was moved to the intersection of Jackson Creek Road off Road 105
CH21	Bear Creek west of Perry Park subdivision - follow Cheyenne Road to intersection
CH22	West Plum Creek at Red Rock Road intersection off Road 105
CH23	West Plum Creek at intersection with Dakan Road off Road 105
CH24	West Plum Creek at intersection with Highway 67 west of Sedalia

Alluvial Groundwater Monitoring Wells (Figure 2)

Field Code	**Description**
1W	At Plum Creek Wastewater Treatment Plant
2W	Town of Sedalia Cistern
3W	Town of Castle Rock Well Located at Douglas County Fairgrounds
4W	Residential Well on Airport Road Southwest of Louviers – Flying C Ranch
5W	Residential Well Located West of Louviers

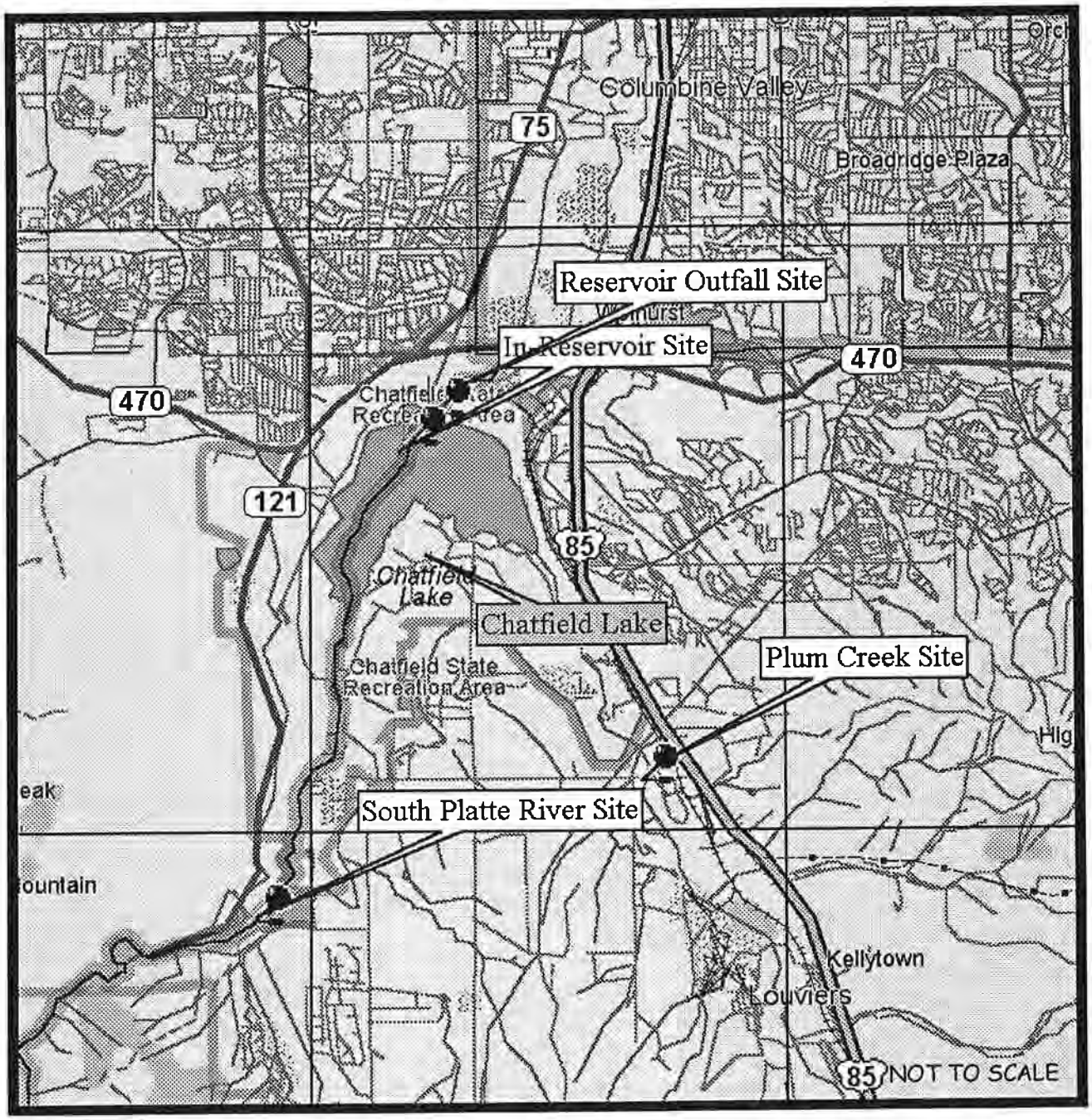

FIGURE 1
IN-RESERVOIR AND INFLOW/OUTFLOW SAMPLING LOCATIONS

CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM

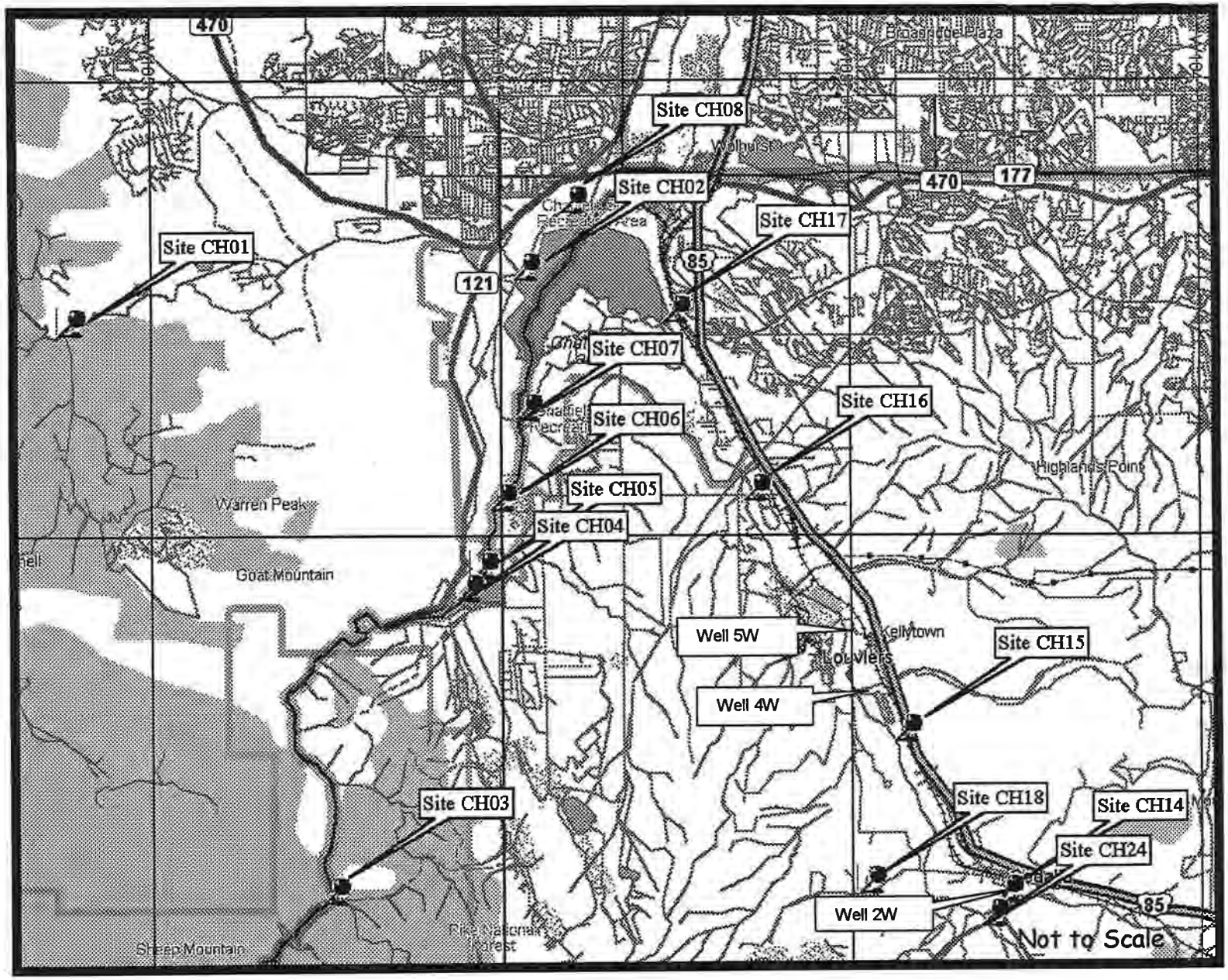

FIGURE 2A

BASIN-WIDE SCREENING SURVEY AND MONITORING WELL SAMPLING LOCATIONS

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

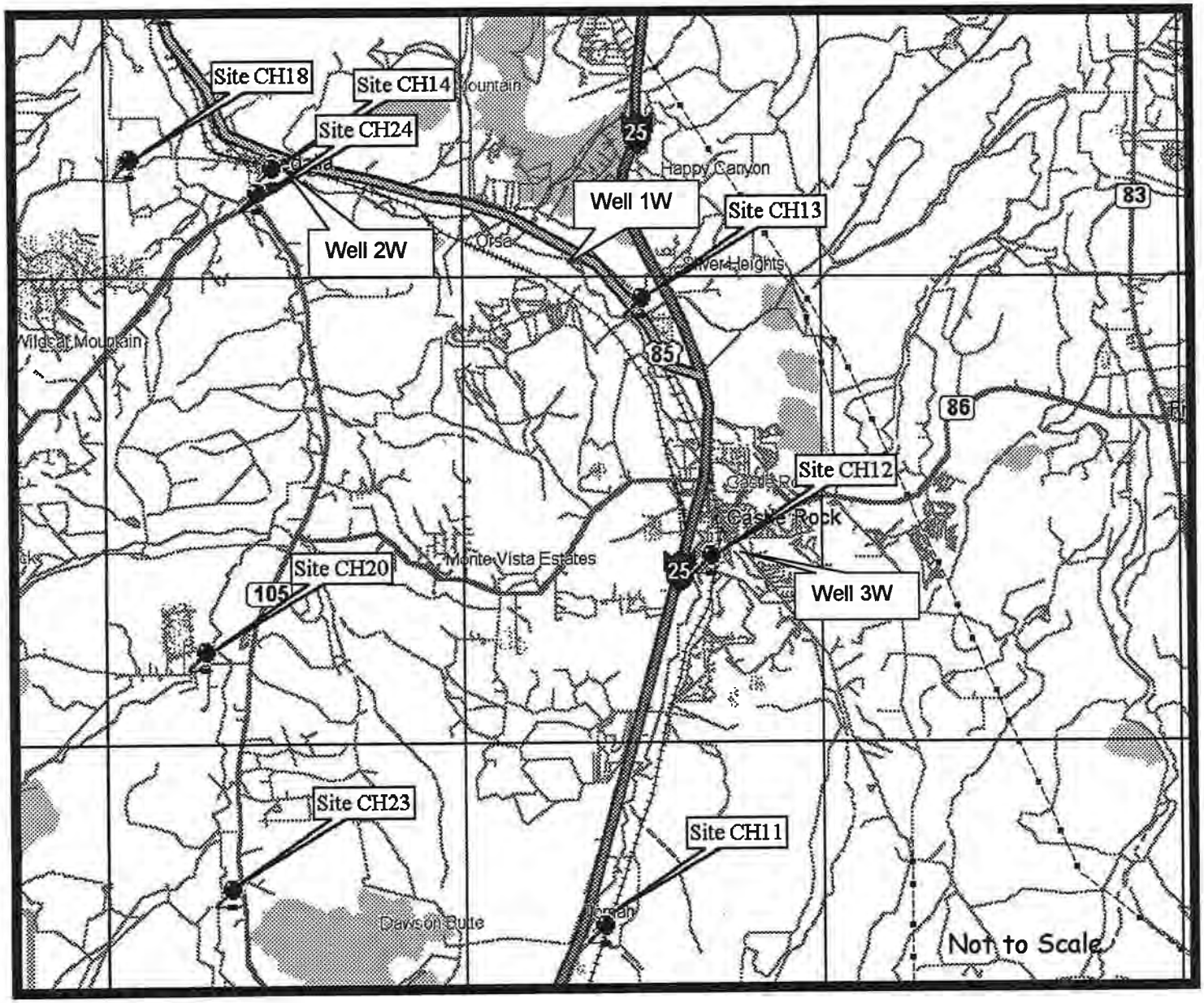

FIGURE 2B

BASIN-WIDE SCREENING SURVEY AND MONITORING WELL SAMPLING LOCATIONS

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

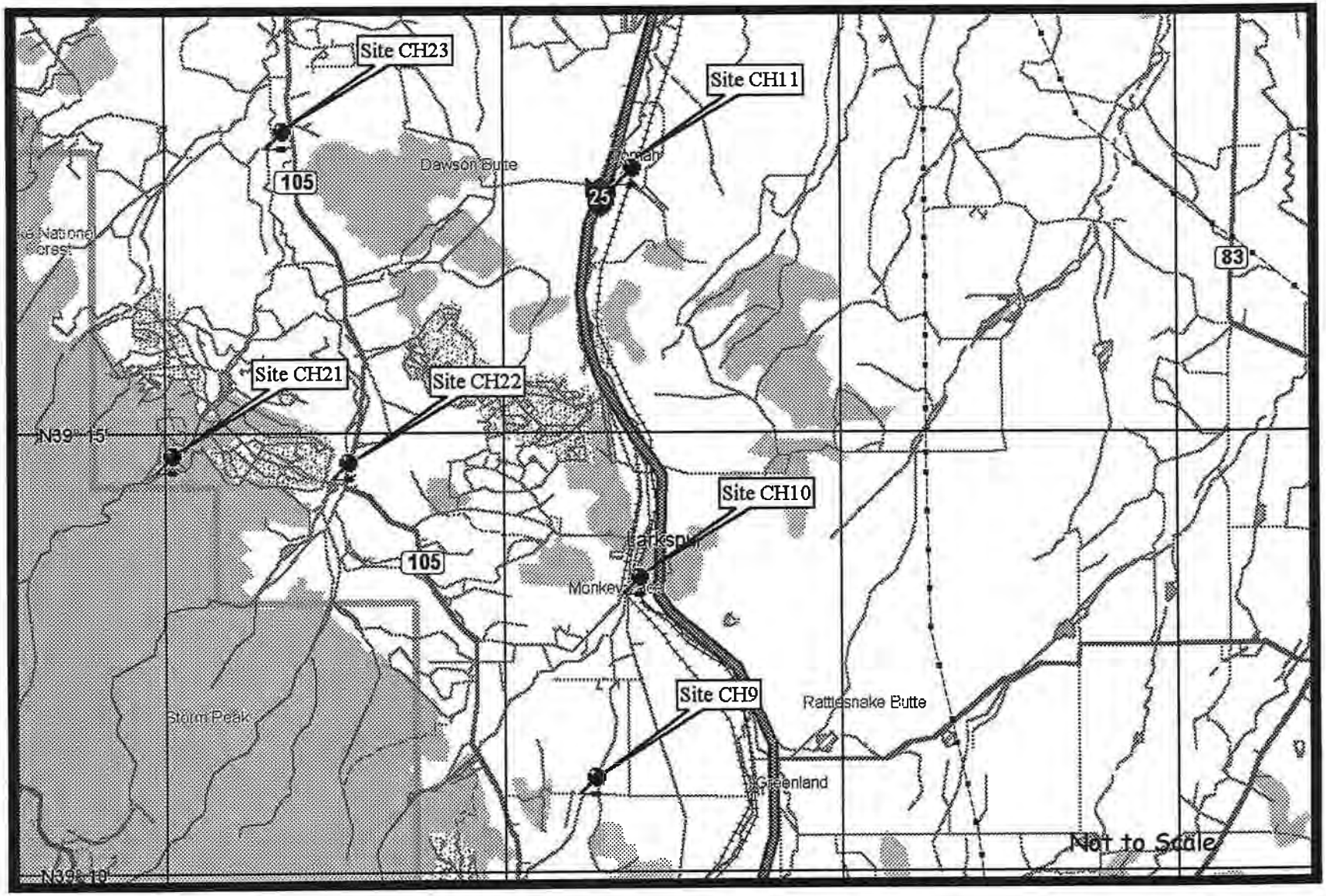

FIGURE 2C

BASIN-WIDE SCREENING SURVEY AND MONITORING WELL SAMPLING LOCATIONS

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

BASIC DATA TABLES

TABLE 2
SOUTH PLATTE RIVER AT WATERTON, CO
(FIELD CODE - SP; USGS STATION 06708000)
FIELD MEASUREMENTS

DATE	TIME	Instantaneous Streamflow (CFS) [1]	Specific Conductance Field (us/cm)	Oxygen, Dissolved (mg/l)	pH Field (Std. Units)	Temperature (Deg C)
MDL [2]						
PQL [3]						
03-01-2000	830	39.1	0.662	9.78	7.06	3.7
03-29-2000	700	40.8	0.683	13.04	7.24	4.8
04-12-2000	730	40.8	0.273	9.53	7.51	4.5
05-10-2000	650	42.4	0.251	9.32	6.62	8.3
06-14-2000	650	468.0	0.265	8.24	6.97	10.3
07-12-2000	635	204.0	0.295	8.13	6.88	14.5
07-26-2000	1420	64.9	0.304	9.94	8.43	18.4
08-03-2000	700	64.9	0.302	9.50	7.30	15.1
08-15-2000	705	67.0	0.281	9.41	7.16	14.8
08-30-2000	720	72.2	0.291	9.89	7.90	14.4
09-13-2000	715	85.2	0.297	10.18	7.79	12.4
09-27-2000	720	37.4	0.351	10.01	7.86	9.5
10-18-2000	720	37.4	0.383	10.60	7.86	8.0
11-29-2000	730	39.1	0.396	14.47	7.88	-0.2
12-28-2000	720	32.4	0.341	6.98	7.56	-0.1

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) STREAMFLOW DATA SOURCE: U.S. ARMY CORPS OF ENGINEERS (WRITTEN COMMUNS., FEBRUARY 28,2001)

2) MDL = METHOD DETECTION LIMIT.

3) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 3
SOUTH PLATTE RIVER AT WATERTON, CO
(FIELD CODE - SP; USGS STATION 06708000)
MISCELLANEOUS ANALYSES

Date	Bicarbonate as CaCO3 (mg/L)	Biological Oxygen Demand (5 day) (mg/L)	Coliform, Fecal (#/100 ML)	Cyanide, WAD (mg/L)	Total Suspended Solids (TSS) (gm/M^3)	Total Alkalinity (mg/L)
MDL [1]	2	3	1	0.01	5	2
PQL [2]	10	3	1	0.05	20	10
01-Mar-00		4	1		2.5	
29-Mar-00	65	10	2	0.005	2.5	67
*29-Mar-00***	*65*	*1.5*		*0.025*	*2.5*	*65*
12-Apr-00		1.5	1		12	
10-May-00	68	1.5	8	0.005	2.5	68
*10-May-00***	*65*	*1.5*		*0.005*	*2.5*	*65*
14-Jun-00		150	14		2.5	
12-Jul-00		150	0.5		2.5	
26-Jul-00					2.5	
*26-Jul-00***					*2.5*	
03-Aug-00	81	1	51	0.005	6	81
16-Aug-00					6	
30-Aug-00		7	55		26	
13-Sep-00					16	
27-Sep-00		1.5	11		2.5	
18-Oct-00		1.5	70		2.5	
29-Nov-00	94	1.5	10	0.005	2.5	94
28-Dec-00		1.5	42		2.5	

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 4
SOUTH PLATTE RIVER AT WATERTON, CO
(FIELD CODE - SP; USGS STATION 06708000)
NUTRIENT ANALYSES

DATE	Nitrate (mg/L as N)	Nitrate/ Nitrite (mg/L as N)	Nitrite (mg/L as N)	Nitrogen, ammonia (mg/L)	Nitrogen, total (mg/L)	Phosphorus ortho, total (mg/L as P)	Phosphorus, total (mg/L as P)
MDL [1]	0.02	0.02	0.01	0.05	0.1	0.005	0.02
PQL [2]	0.10	0.10	0.05	0.3	0.5	0.03	0.1
01-Mar-00	0.36	0.36	0.005	0.025		0.0025	0.01
29-Mar-00	0.12	0.12	0.005	0.025	0.2	0.0025	0.01
*29-Mar-00***	*0.12*	*0.12*	*0.005*	*0.025*	*0.1*	*0.0025*	*0.025*
12-Apr-00	0.15	0.15	0.005	0.025		0.0025	0.02
10-May-00	0.07	0.07	0.005	0.025	0.5	0.0025	0.005
*10=May-00***	*0.10*	*0.10*	*0.005*	*0.025*	*0.3*	*0.005*	*0.01*
14-Jun-00	0.11	0.11	0.005	0.025		0.006	0.01
12-Jul-00	0.14	0.14	0.005	0.025		0.007	0.01
26-Jul-00	0.02	0.02	0.005	0.025		0.028	0.03
*26-Jul-00***	*0.01*	*0.01*	*0.005*	*0.12*		*0.024*	*0.03*
03-Aug-00	0.05	0.05	0.005	0.025	0.5	0.028	0.05
16-Aug-00	0.09	0.09	0.005	0.025		0.007	0.02
30-Aug-00	0.17	0.18	0.01	0.025		0.071	0.11
13-Sep-00	0.05	0.05	0.005	0.11		0.007	0.01
27-Sep-00	0.05	0.05	0.005	0.025		0.0025	0.01
18-Oct-00	0.05	0.05	0.005	0.025		0.0025	0.01
29-Nov-00	0.04	0.04	0.005	0.025	0.3	0.0025	0.02
28-Dec-00	0.11	0.11	0.005	0.025		0.0025	0.01

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 5
SOUTH PLATTE RIVER AT WATERTON, CO
(FIELD CODE - SP; USGS STATION 06708000)
METALS ANALYSES

DATE	Arsenic, total (mg/l)	Cadmium, dissolved (mg/l)	Calcium, dissolved (mg/l)	Chromium, Hexavalent dissolved (mg/l)	Chromium, Trivalent dissolved (mg/l)	Copper, dissolved (mg/l)	Hardness dissolved (mg/l)	Iron, dissolved (mg/l)
MDL [1]	0.001	0.003	0.2	0.005	0.005	0.01	1	0.01
PQL [2]	0.005	0.02	1.0	0.005	0.005	0.05	7	0.05
01-Mar-00		0.0015	44.9			0.005	141	
29-Mar-00	0.0005		32.2				109	
*29-Mar-00***	*0.0005*		*32.0*				*109*	
10-May-00	0.0005	0.0015	25.8			0.005	100	0.03
*10-May-00***	*0.0005*	*0.0015*	*26.6*			*0.005*	*100*	*0.03*
14-Jun-00		0.0015	30.7			0.005	104	
12-Jul-00		0.0015	30.3			0.005	104	
03-Aug-00	0.0005	0.0015	31.0			0.005	117	0.005
16-Aug-00				0.0025	0.0025			
30-Aug-00		0.0015	33.2			0.005	114	
27-Sep-00		0.0015	32.1			0.005	122	
18-Oct-00		0.0015	34.6			0.005	139	
29-Nov-00	0.0005	0.0015	36.1			0.005	139	0.005
28-Dec-00			33.0				120	

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

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2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 5
SOUTH PLATTE RIVER AT WATERTON, CO
(FIELD CODE - SP; USGS STATION 06708000)
METALS ANALYSES

DATE	Lead, dissolved (mg/l)	Magnesium, dissolved (mg/l)	Manganese, dissolved (mg/l)	Mercury, dissolved (mg/l)	Nickel, dissolved (mg/l)	Selenium, dissolved (mg/l)	Silver, dissolved (mg/l)	Zinc, dissolved (mg/l)
MDL [1]	0.04	0.2	0.005	0.0002	0.01	0.001	0.005	0.01
PQL [2]	0.2	1.0	0.03	0.001	0.05	0.005	0.03	0.05
01-Mar-00	0.02	6.9		0.0001		0.001		
29-Mar-00		7.0						
*29-Mar-00***		*7.0*						
10-May-00	0.02	8.6	0.009	0.0001	0.005	0.0005	0.0025	0.005
*10-May-00***	*0.02*	*8.1*	*0.011*	*0.0001*	*0.005*	*0.0005*	*0.0025*	*0.005*
14-Jun-00	0.02	6.6		0.0001		0.0005		
12-Jul-00	0.02	6.9		0.137		0.0005		
03-Aug-00	0.02	9.7	0.0025	0.0003	0.005	0.0005	0.0025	0.02
16-Aug-00								
30-Aug-00	0.02	7.5		0.0001		0.0005		
27-Sep-00	0.02	10.1		0.0001		0.0005		
18-Oct-00	0.02	12.7		0.0001		0.0005		
29-Nov-00	0.02	11.9	0.015	0.0001	0.005	0.0005	0.0025	0.005
28-Dec-00		9.1						

UNDERLINED VALUES ARE LESS THAN MDL.

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1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 6
PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO
(FIELD CODE - PC; USGS STATION 06709530)
FIELD MEASUREMENTS

DATE	TIME	Instantaneous Streamflow (CFS) [1]	Specific Conductance Field (us/cm)	Oxygen, Dissolved (mg/l)	pH Field (Std. Units)	Temperature (Deg C)
MDL [2]						
PQL [3]						
01-Mar-00	800	18.0	0.439	9.63	6.41	5.1
29-Mar-00	730	37.0	0.847	10.57	7.41	6.2
12-Apr-00	740	63.0	0.261	9.26	7.55	6.1
10-May-00	750	71.0	0.227	7.47	6.44	10.1
14-Jun-00	835	9.4	0.359	5.74	6.99	14.8
12-Jul-00	655	0.2	0.475	4.31	7.37	20.0
26-Jul-00			------ DRY -----			
03-Aug-00			------ DRY -----			
16-Aug-00			------ DRY -----			
30-Aug-00	700	15.0	0.434	5.83	6.77	18.0
13-Sep-00	700	3.7	0.420	8.05	6.80	13.4
27-Sep-00	705	13.0	0.418	9.56	6.71	8.1
18-Oct-00	700	9.7	0.437	10.02	6.81	6.4
29-Nov-00	710	36.0	0.470	12.04	6.69	-0.4
28-Dec-00	700	42.0	0.474	3.37	6.81	0.3

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) STREAMFLOW DATA SOURCE: U.S. GEOLOGICAL SURVEY NWIS-W PROVISIONAL DATA

2) MDL = METHOD DETECTION LIMIT.

3) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 7
PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO
(FIELD CODE - PC; USGS STATION 06709530)
MISCELLANEOUS ANALYSES

Date	Bicarbonate as CaCO3 (mg/L)	Biological Oxygen Demand (5 day) (mg/L)	Coliform, Fecal (#/100 ML)	Cyanide, WAD (mg/L)	Total Suspended Solids (TSS) (gm/M^3)	Total Alkalinity (mg/L)
MDL [1)]	2	3	1	0.01	5	2
PQL[2)]	10	3	1	0.05	20	10
01-Mar-00		4	11		40	
29-Mar-00	90	2	170	0.005	132	90
12-Apr-00		1.5	58		124	
10-May-00	59	3	580	0.005	112	59
14-Jun-00		150	420		56	
12-Jul-00		11	42		74	
26-Jul-00			---- DRY ----			
03-Aug-00			---- DRY ----			
16-Aug-00			---- DRY ----			
30-Aug-00		16	1400		130	
13-Sep-00					50	
27-Sep-00		1.5	100		80	
18-Oct-00		1.5	100		36	
29-Nov-00	110	1.5	22	0.005	6	110
28-Dec-00		3	20		22	

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 8
PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO
(FIELD CODE - PC; USGS STATION 06709530)
NUTRIENT ANALYSES

DATE	Nitrate (mg/L as N)	Nitrate/ Nitrite (mg/L as N)	Nitrite (mg/L as N)	Nitrogen, ammonia (mg/L)	Nitrogen, total (mg/L)	Phosphorus ortho, total (mg/L as P)	Phosphorus, total (mg/L as P)
MDL [1]	0.02	0.02	0.01	0.05	0.1	0.005	0.02
PQL [2]	0.10	0.10	0.05	0.3	0.5	0.03	0.10
01-Mar-00	0.89	0.89	0.005	0.025		0.035	0.05
29-Mar-00	0.50	0.50	0.005	0.025	0.6	0.048	0.12
12-Apr-00	0.43	0.43	0.005	0.025		0.056	0.10
10-May-00	0.22	0.22	0.005	0.025	0.5	0.079	0.07
14-Jun-00	0.20	0.20	0.005	0.025		0.038	0.04
12-Jul-00	0.01	0.01	0.005	0.025		0.017	0.04
26-Jul-00				---- DRY ----			
03-Aug-00				---- DRY ----			
16-Aug-00				---- DRY ----			
30-Aug-00	0.63	0.64	0.01	0.05		0.134	0.19
13-Sep-00	0.34	0.34	0.005	0.08		0.026	0.21
27-Sep-00	0.63	0.63	0.005	0.025		0.007	0.13
18-Oct-00	0.46	0.46	0.005	0.025		0.031	0.06
29-Nov-00	0.88	0.89	0.01	0.09	1.6	0.014	0.03
28-Dec-00	0.97	1.00	0.03	0.025		0.032	0.05

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 9
PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO
(FIELD CODE - PC; USGS STATION 06709530)
METALS ANALYSES

DATE	Arsenic, total (mg/l)	Cadmium, dissolved (mg/l)	Calcium, dissolved (mg/l)	Chromium, Hexavalent dissolved (mg/l)	Chromium, Trivalent dissolved (mg/l)	Copper, dissolved (mg/l)	Hardness dissolved (mg/l)	Iron, dissolved (mg/l)
MDL [1]	0.001	0.003	0.2	0.005	0.005	0.01	1	0.01
PQL [2]	0.005	0.02	1.0	0.005	0.005	0.05	7	0.05
01-Mar-00		0.0015	44.9			0.005	141	
29-Mar-00	0.002		39.9				125	
10-May-00	0.001	0.0015	28.5			0.005	90	0.4
14-Jun-00		0.0015	43.4			0.005	134	
12-Jul-00		0.0015	44.5			0.005	142	
26-Jul-00				---- Dry ----				
03-Aug-00				---- Dry ----				
16-Aug-00				---- Dry ----				
30-Aug-00		0.0015	49.0			0.005	150	
27-Sep-00		0.0015	47.0			0.005	145	
18-Oct-00		0.0015	51.2			0.005	158	
29-Nov-00	0.0005	0.0015	55.5			0.005	169	0.01
28-Dec-00			49.6				154	

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 9
PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO
(FIELD CODE - PC; USGS STATION 06709530)
METALS ANALYSES

DATE	Lead, dissolved (mg/l)	Magnesium, dissolved (mg/l)	Manganese, dissolved (mg/l)	Mercury, dissolved (mg/l)	Nickel, dissolved (mg/l)	Selenium, dissolved (mg/l)	Silver, dissolved (mg/l)	Zinc, dissolved (mg/l)
MDL [1]	0.04	0.2	0.005	0.0002	0.01	0.001	0.005	0.01
PQL [2]	0.2	1	0.03	0.001	0.05	0.005	0.03	0.05
01-Mar-00	0.02	6.9		0.0001		0.001		
29-Mar-00		6.1						
10-May-00	0.02	4.6	0.104	0.0001	0.005	0.0005	0.0025	0.03
14-Jun-00	0.02	6.1		0.0001		0.0005		
12-Jul-00	0.02	7.4		0.128		0.0005		
26-Jul-00				---- Dry ----				
03-Aug-00				---- Dry ----				
16-Aug-00				---- Dry ----				
30-Aug-00	0.02	6.8		0.0001		0.0005		
27-Sep-00	0.02	6.6		0.0001		0.0005		
18-Oct-00	0.02	7.4		0.0001		0.0005		
29-Nov-00	0.02	7.3	0.205	0.0001	0.005	0.0005	0.0025	0.01
28-Dec-00		7.2						

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 10
CHATFIELD RESERVOIR OUTFLOW NEAR LITTLETON, CO
(FIELD CODE - SO; USGS STATION 06709601)
FIELD MEASUREMENTS

DATE	TIME	Instantaneous Streamflow (CFS) [1]	Specific Conductance Field (us/cm)	Oxygen, Dissolved (mg/l)	pH Field (Std. Units)	Temperature (Deg C)
MDL [2]						
PQL [3]						
03-01-2000	900	31.0	0.749	10.01	7.89	5.9
03-29-2000	815	80.0	0.819	11.73	8.27	7.0
04-12-2000	920	104.0	0.335	11.01	8.31	9.7
05-10-2000	825	97.0	0.324	8.16	6.77	12.3
06-14-2000	750	201.0	0.307	7.07	6.59	16.6
07-12-2000	730	169.0	0.313	9.58	7.23	19.4
07-26-2000	1355	53.0	0.289	9.23	7.82	19.1
08-03-2000	745	73.0	0.286	8.08	7.24	19.4
08-16-2000	735	29.0	0.309	7.87	7.23	20.3
08-30-2000	745	15.0	0.326	7.84	7.86	19.9
09-13-2000	740	6.0	0.313	7.79	7.75	16.1
09-27-2000	740	16.0	0.314	8.94	7.89	13.0
10-18-2000	745	6.0	0.349	8.87	8.14	9.3
11-29-2000	800	20.0	0.363	12.64	8.03	1.6
12-28-2000	810	66.0	0.381	8.83	7.97	1.9

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) STREAMFLOW DATA SOURCE: U.S. ARMY CORPS OF ENGINEERS (WRITTEN COMMUNS., FEBRUARY 22, 2001)

2) MDL = METHOD DETECTION LIMIT.

3) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 11
CHATFIELD RESERVOIR OUTFLOW NEAR LITTLETON, CO
(FIELD CODE - SO; USGS STATION 06709601)
MISCELLANEOUS ANALYSES

Date	Bicarbonate as CaCO3 (mg/L)	Biological Oxygen Demand (5 day) (mg/L)	Coliform, Fecal (#/100 ML)	Cyanide, WAD (mg/L)	Total Suspended Solids (TSS) (gm/M^3)	Total Alkalinity (mg/L)
MDL [1]	2	3	1	0.01	5	2
PQL[2]	10	3	1	0.05	20	10
01-Mar-00		3	1		2.5	
*01-Mar-00***		*2*			*2.5*	
29-Mar-00	98	35	0.5	0.005	2.5	98
12-Apr-00		1.5	0.5		6	
10-May-00	87	1.5	10	0.005	2.5	87
14-Jun-00		150	5		10	
12-Jul-00		150	0.5		2.5	
26-Jul-00					2.5	
03-Aug-00	75	9	0.5	0.005	2.5	75
16-Aug-00					18	
30-Aug-00		6	6		10	
13-Sep-00					16	
27-Sep-00		3	3		8	
18-Oct-00		1.5	1		8	
29-Nov-00	89	1.5	3	0.005	2.5	89
*29-Nov-00***	*90*	*1.5*		*0.005*	*2.5*	*90*
28-Dec-00		1.5	1		6	

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 12
CHATFIELD RESERVOIR OUTFLOW NEAR LITTLETON, CO
(FIELD CODE - SO; USGS STATION 06709601)
NUTRIENT ANALYSES

DATE	Nitrate (mg/L as N)	Nitrate/ Nitrite (mg/L as N)	Nitrite (mg/L as N)	Nitrogen, ammonia (mg/L)	Nitrogen, total (mg/L)	Phosphorus ortho, total (mg/L as P)	Phosphorus, total (mg/L as P)
MDL [1]	0.02	0.02	0.01	0.05	0.1	0.005	0.02
PQL [2]	0.1	0.1	0.05	0.3	0.5	0.03	0.1
01-Mar-00	0.24	0.24	0.005	0.025		0.006	0.01
*01-Mar-00***	*0.21*	*0.21*	*0.005*	*0.025*		*0.0025*	0.01
29-Mar-00	0.01	0.01	0.005	0.025	0.4	0.0025	0.01
12-Apr-00	0.01	0.01	0.005	0.025		0.0025	0.01
10-May-00	0.04	0.04	0.005	0.08	0.4	0.007	0.01
14-Jun-00	0.03	0.03	0.005	0.07		0.011	0.01
12-Jul-00	0.01	0.01	0.005	0.07		0.005	0.01
26-Jul-00	0.05	0.05	0.005	0.13		0.018	0.02
03-Aug-00	0.03	0.03	0.005	0.025	0.5	0.047	0.05
16-Aug-00	0.01	0.01	0.005	0.05		0.016	0.04
30-Aug-00	0.01	0.01	0.005	0.025		0.011	0.02
13-Sep-00	0.01	0.01	0.005	0.09		0.009	0.01
27-Sep-00	0.01	0.01	0.005	0.025		0.005	0.02
18-Oct-00	0.03	0.03	0.005	0.025		0.0025	0.01
29-Nov-00	0.02	0.02	0.005	0.025	0.5	0.0025	0.02
*29-Nov-00***	*0.02*	*0.02*	*0.005*	*0.025*	*0.4*	*0.0025*	*0.01*
28-Dec-00	0.05	0.05	0.005	0.025		0.0025	0.02

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 13
CHATFIELD RESERVOIR OUTFLOW NEAR LITTLETON, CO
(FIELD CODE - SO; USGS STATION 06709601)
METALS ANALYSES

DATE	Arsenic, total (mg/l)	Cadmium, dissolved (mg/l)	Calcium, dissolved (mg/l)	Chromium, Hexavalent dissolved (mg/l)	Chromium, Trivalent dissolved (mg/l)	Copper, dissolved (mg/l)	Hardness dissolved (mg/l)	Iron, dissolved (mg/l)
MDL [1]	0.001	0.003	0.2	0.005	0.005	0.01	1	0.01
PQL [2]	0.005	0.02	1.0	0.005	0.005	0.05	7	0.05
01-Mar-00		0.0015	30.8			0.005	106	
*01-Mar-00***		*0.0015*	*31.0*			*0.005*	*107*	
29-Mar-00	0.0005		36.9				128	
10-May-00	0.0005	0.0015	37.2			0.005	129	0.05
14-Jun-00		0.0015	34.7			0.005	118	
12-Jul-00		0.0015	29.4			0.005	104	
03-Aug-00	0.001	0.0015	32.6			0.005	112	0.05
16-Aug-00				0.0025	0.0025			
30-Aug-00		0.0015	34.2			0.005	119	
27-Sep-00		0.0015	36.0			0.005	122	
18-Oct-00		0.0015	37.6			0.005	131	
29-Nov-00	0.0005	0.0015	42.6			0.005	146	0.005
*29-Nov-00***	*0.001*	*0.0015*	*42.3*			*0.005*	*144*	*0.005*
28-Dec-00			40.1				141	

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 13
CHATFIELD RESERVOIR OUTFLOW NEAR LITTLETON, CO
(FIELD CODE - SO; USGS STATION 06709601)
METALS ANALYSES

DATE	Lead, dissolved (mg/l)	Magnesium, dissolved (mg/l)	Manganese, dissolved (mg/l)	Mercury, dissolved (mg/l)	Nickel, dissolved (mg/l)	Selenium, dissolved (mg/l)	Silver, dissolved (mg/l)	Zinc, dissolved (mg/l)
MDL [1]	0.04	0.2	0.005	0.0002	0.01	0.001	0.005	0.01
PQL [2]	0.2	1	0.03	0.001	0.05	0.005	0.03	0.05
01-Mar-00	0.08	7.1		0.0001		0.0005		
*01-Mar-00***	*0.08*	*7.2*		*0.0001*		*0.0005*		
29-Mar-00		8.8						
10-May-00	0.02	8.7	0.249	0.0001	0.005	0.0005	0.0025	0.005
14-Jun-00	0.02	7.6		0.0001		0.0005		
12-Jul-00	0.02	7.3		0.091		0.0005		
03-Aug-00	0.02	7.5	0.072	0.0001	0.005	0.0005	0.0025	0.05
16-Aug-00								
30-Aug-00	0.02	8.2		0.0001		0.0005		
27-Sep-00	0.02	7.8		0.0001		0.0005		
18-Oct-00	0.02	8.9		0.0001		0.0005		
29-Nov-00	0.02	9.5	0.019	0.0001	0.005	0.0005	0.0025	0.005
*29-Nov-00***	*0.02*	*9.3*	*0.017*	*0.0001*	*0.005*	*0.0005*	*0.0025*	*0.005*
28-Dec-00		9.8						

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 14
CHATFIELD RESERVOIR NEAR DAM
(FIELD CODE - RM)
FIELD MEASUREMENTS

DATE	TIME	Sampling depth (Meters)	Total depth (Meters)	Transparency Secchi disk (Meters)	pH, Field (Std. Units)	Specific Conductance (us/cm)	Oxygen, dissolved (mg/l)	Temperature (deg. C)
MDL [1]								
PQL [2]								
01-Mar-00	945	1			7.89	0.761	12.97	5.2
01-Mar-00	1000	1.5		3	7.89	0.761	12.97	5.7
01-Mar-00	1015	10	11		7.94	0.751	12.97	5.1
29-Mar-00	1000	1			8.10	0.820	12.59	7.5
29-Mar-00	1015	1		2	8.10	0.820	12.59	7.5
29-Mar-00	1030	10	11		8.24	0.800	14.64	7.3
12-Apr-00	830	1			8.08	0.333	12.12	9.5
12-Apr-00	845	1		3	8.08	0.333	12.12	9.5
12-Apr-00	900	10	11		8.13	0.333	12.34	9.5
10-May-00	925	1			7.75	0.338	9.97	15.3
10-May-00	940	2		4	7.72	0.338	9.80	15.3
10-May-00	955	10	11		7.04	0.339	7.92	11.6
14-Jun-00	950	1			7.88	0.314	8.94	18.8
14-Jun-00	935	1		2	7.88	0.314	8.94	18.8
14-Jun-00	920	10	11		7.17	0.308	5.22	15.4
12-Jul-00	1010	1			8.08	0.324	9.84	22.9
12-Jul-00	1025	1		2	8.08	0.324	9.84	22.9
12-Jul-00	1040	10	11.1		6.37	0.306	4.17	17.9
26-Jul-00	1300	1			7.72	0.298	8.51	22.8
26-Jul-00	1315	1		2	7.72	0.298	8.51	22.8
26-Jul-00	1330	10	11		6.78	0.291	2.87	19.3
03-Aug-00	1300	1			7.74	0.300	8.57	23.4
03-Aug-00	1245	2		4	7.75	0.300	8.62	23.3
03-Aug-00	1230	10	11		7.08	0.284	0.71	20.6
16-Aug-00	945	1			7.62	0.310	7.83	22.4
16-Aug-00	1000	1		2	7.62	0.310	7.83	22.4
16-Aug-00	1015	10	11		7.65	0.310	7.35	22.3
30-Aug-00	1000	1			7.92	0.314	8.24	21.3
30-Aug-00	1015	1		2	7.92	0.314	8.24	21.3
30-Aug-00	1030	10	11		7.98	0.313	8.02	21.3
13-Sep-00	930	1			7.99	0.308	8.44	19.4
13-Sep-00	945	1		2	7.99	0.308	8.44	19.4
13-Sep-00	1000	10	11		8.13	0.309	8.60	19.3
27-Sep-00	930	1			7.99	0.311	9.06	14.4
27-Sep-00	945	1		2	7.99	0.311	9.06	14.4
27-Sep-00	1000	10	11		8.09	0.311	8.79	14.2
18-Oct-00	1100	0.5			8.46	0.320	9.24	12.0
18-Oct-00	1045	1		1	8.46	0.320	9.24	11.9
18-Oct-00	1030	10	11		8.42	0.318	9.75	11.9
29-Nov-00	1000	1			8.07	0.353	12.51	2.5
29-Nov-00	945	1.5		3	8.18	0.354	12.60	2.4
29-Nov-00	930	8	9		8.41	0.355	12.39	2.4

UNDERLINED VALUES ARE LESS THAN MDL.
BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.
** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.
1) MDL = METHOD DETECTION LIMIT.
2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 15
CHATFIELD RESERVOIR NEAR DAM
(FIELD CODE - RM)
MISCELLANEOUS ANALYSES

DATE	Sampling depth (Meters)	Biological Oxygen Demand (5 day) (mg/L)	Chlorophyll_a (mg/M^3)	Coliform, Fecal (#/100 ML)	Cyanide, WAD (mg/L)	Total Suspended Solids (TSS) (gm/M^3)	Total Alkalinity (mg/L)
MDL [1]		3	0.30	1	0.01	5	2
PQL [2]		3		1	0.05	20	10
01-Mar-00	1	1.5	11.12	0.5		2.50	
01-Mar-00	1.5	1.5		0.5		2.50	
01-Mar-00	10	1.5		0.5		2.50	
29-Mar-00	1	1.5	10.43	0.5	0.005	2.50	39
29-Mar-00	1	1.5		0.5	0.005	2.50	96
29-Mar-00	10	1.5		0.5	0.005	2.50	96
12-Apr-00	1	1.5	10.08	0.5		8	
12-Apr-00	1	1.5		1.0		10	
*12-Apr-00***	*1*	*1.5*				*10*	
12-Apr-00	10	1.5		0.5		10	
10-May-00	1	1.5	1.92	7.0	0.005	2.50	89
10-May-00	2	1.5		8.0	0.005	2.50	85
10-May-00	10	1.5		0.5	0.005	42	96
14-Jun-00	1	150.0	8.69	1.0		2.50	
14-Jun-00	1	150.0		0.5		6	
14-Jun-00	10	150.0		1.0		20	
12-Jul-00	1	3.0	6.61	0.5		2.50	
12-Jul-00	1	3.0		0.5		2.50	
12-Jul-00	10	150.0		0.5		2.50	
*12-Jul-00***	*10*	*150.0*				*2.50*	
26-Jul-00	1		4.05			2.50	
26-Jul-00	1					2.50	
26-Jul-00	10					2.50	
03-Aug-00	1	1.5	3.31	0.5	0.005	2.50	75
03-Aug-00	2	6.0		0.5	0.005	2.50	57
*03-Aug-00***	*2*	*15.0*			*0.005*	*2.50*	*76*
03-Aug-00	10	1.5		0.5	0.005	2.50	79
16-Aug-00	1		6.61			10	
16-Aug-00	1					2.50	
16-Aug-00	10					2.50	
30-Aug-00	1	3.0	10.78	5.0		6	
30-Aug-00	1	4.0		7.0		10	
30-Aug-00	10	3.0		20.0		2.50	
13-Sep-00	1		10.61			2.50	
13-Sep-00	1					8	
13-Sep-00	10					2.50	
27-Sep-00	1	3.0	15.30	3.0		6	
27-Sep-00	1	3.0		4.0		14	
27-Sep-00	10	3.0		3.0		12	
18-Oct-00	0.5	1.5	17.73	2.0		12	
*18-Oct-00***	*0.5*	*1.5*				*6*	
18-Oct-00	1	1.5		0.5		8	
18-Oct-00	10	1.5		0.5		62	
29-Nov-00	1	1.5	5.56	1.0	0.005	2.50	86
29-Nov-00	1.5	1.5		3.0	0.005	2:50	88
29-Nov-00	8	1.5		0.5	0.005	44	87

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 16
CHATFIELD RESERVOIR NEAR DAM
(FIELD CODE - RM)
NUTRIENT ANALYSES

DATE	Sampling depth (Meters)	Nitrogen, total (mg/L)	Phosphorus ortho, total (mg/L as P)	Phosphorus, total (mg/L as P)
MDL [1]		0.1	0.005	0.02
PQL [2]		0.5	0.03	0.1
01-Mar-00	1	0.30	0.0025	0.01
01-Mar-00	1.5	0.30	0.0025	0.01
01-Mar-00	10	0.20	0.0025	0.01
29-Mar-00	1	0.05	0.0025	0.03
29-Mar-00	1	0.20	0.0025	0.03
29-Mar-00	10	0.20	0.0025	0.03
12-Apr-00	1	0.05	0.0025	0.02
12-Apr-00	1	0.05	0.0025	0.04
*12-Apr-00***	*1*	0.05	0.0025	0.02
12-Apr-00	10	0.05	0.0025	0.02
10-May-00	1	0.40	0.0025	0.01
10-May-00	2	0.30	0.0025	0.01
10-May-00	10	0.40	0.0230	0.03
14-Jun-00	1	0.05	0.0025	0.01
14-Jun-00	1	0.05	0.0025	0.01
14-Jun-00	10	0.05	0.0150	0.01
12-Jul-00	1	0.30	0.0025	0.01
12-Jul-00	1	0.50	0.0025	0.01
12-Jul-00	10	0.20	0.0025	0.01
*12-Jul-00***	*10*	1.00	0.0025	0.01
26-Jul-00	1	0.30	0.0025	0.01
26-Jul-00	1	0.20	0.0025	0.01
26-Jul-00	10	0.20	0.0025	0.01
03-Aug-00	1	0.50	0.0070	0.01
03-Aug-00	2	0.50	0.0025	0.01
*03-Aug-00***	*2*	0.50	0.0025	0.01
03-Aug-00	10	0.50	0.0240	0.02
16-Aug-00	1	0.50	0.0025	0.01
16-Aug-00	1	0.50	0.0025	0.02
16-Aug-00	10	0.50	0.0025	0.01
30-Aug-00	1	0.10	0.0070	0.01
30-Aug-00	1	0.05	0.0025	0.02
30-Aug-00	10	0.05	0.0080	0.02
13-Sep-00	1	1.00	0.0025	0.03
13-Sep-00	1	5.00	0.0070	0.01
13-Sep-00	10	0.05	0.0025	0.01
27-Sep-00	1	0.05	0.0025	0.02
27-Sep-00	1	0.05	0.0070	0.02
27-Sep-00	10	0.05	0.0025	0.02
18-Oct-00	0.5	0.05	0.0025	0.01
*18-Oct-00***	*0.5*	0.05	0.0025	0.01
18-Oct-00	1	0.05	0.0025	0.02
18-Oct-00	10	0.05	0.0170	0.06
29-Nov-00	1	0.50	0.0050	0.01
29-Nov-00	1.5	0.40	0.0025	0.01
29-Nov-00	8	0.60	0.0080	0.08

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

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2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 17
CHATFIELD RESERVOIR NEAR DAM
(FIELD CODE - RM)
METALS ANALYSES

DATE	Sampling depth (Meters)	Arsenic, total (mg/l)	Cadmium, dissolved (mg/l)	Calcium, dissolved (mg/l)	Chromium, Hexavalent dissolved (mg/l)	Chromium, Trivalent dissolved (mg/l)	Copper, dissolved (mg/l)	Hardness dissolved (mg/l)
MDL [1]		0.001	0.003	0.2	0.005	0.005	0.01	1
PQL [2]		0.005	0.02	1.0	0.005	0.005	0.05	7
01-Mar-00	1		0.0015	34.5			0.005	122
01-Mar-00	1.5		0.0015	34.6			0.005	122
01-Mar-00	10		0.0015	34.6			0.005	122
29-Mar-00	1	0.0005		36.7				128
29-Mar-00	1	0.0005		36.8				129
29-Mar-00	10	0.0005		37.0				129
10-May-00	1	0.0005	0.0015	36.9			0.005	128
10-May-00	2	0.0005	0.0015	37.4			0.005	130
10-May-00	10	0.001	0.0015	40.5			0.005	138
14-Jun-00	1		0.0015	35.4			0.005	120
14-Jun-00	1		0.0015	35.8			0.005	121
14-Jun-00	10		0.0015	34.1			0.005	115
12-Jul-00	1		0.0015	30.8			0.005	108
12-Jul-00	1		0.0015	30.6			0.005	107
12-Jul-00	10		0.0015	29.2			0.005	103
*12-Jul-00***	*10*		*0.0015*	*29.8*			*0.005*	*106*
03-Aug-00	1	0.0005	0.0015	32.9			0.005	113
03-Aug-00	2	0.0005	0.0015	32.5			0.005	112
*03-Aug-00***	*2*	*0.0005*	*0.0015*	*32.8*			*0.020*	*113*
03-Aug-00	10	0.0005	0.0015	32.2			0.005	111
16-Aug-00	1				0.0025	0.0025		
16-Aug-00	1				0.0025	0.0025		
16-Aug-00	10				0.0025	0.0025		
30-Aug-00	1		0.0015	34.5			0.005	120
30-Aug-00	1		0.0015	34.8			0.005	121
30-Aug-00	10		0.0015	35.0			0.005	121
27-Sep-00	1		0.0015	36.2			0.005	123
27-Sep-00	1		0.0015	35.3			0.005	119
27-Sep-00	10		0.0015	36.2			0.005	123
18-Oct-00	0.5		0.0015	36.6			0.005	127
*18-Oct-00***	*0.5*		*0.0015*	*36.1*			*0.005*	*125*
18-Oct-00	1		0.0015	36.3			0.005	126
18-Oct-00	10		0.0015	36.3			0.005	126
29-Nov-00	1	0.0005	0.0015	41.8			0.005	143
29-Nov-00	1.5	0.0005	0.0015	42.1			0.005	144
29-Nov-00	8	0.0005	0.0015	41.6			0.005	142

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

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1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 17
CHATFIELD RESERVOIR NEAR DAM
(FIELD CODE - RM)
METALS ANALYSES

DATE	Sampling depth (Meters)	Iron, dissolved (mg/l)	Lead, dissolved (mg/l)	Magnesium, dissolved (mg/l)	Manganese, dissolved (mg/l)	Mercury, dissolved (mg/l)	Nickel, dissolved (mg/l)	Selenium, dissolved (mg/l)	Silver, dissolved (mg/l)	Zinc, dissolved (mg/l)
MDL [1]		0.01	0.04	0.2	0.005	0.0002	0.01	0.001	0.005	0.01
PQL [2]		0.05	0.2	1	0.03	0.001	0.05	0.005	0.03	0.05
01-Mar-00	1		0.02	8.7		0.0001		0.006		
01-Mar-00	1.5		0.02	8.7		0.0001		0.0005		
01-Mar-00	10		0.02	8.7		0.0001		0.0005		
29-Mar-00	1			8.9						
29-Mar-00	1			8.9						
29-Mar-00	10			8.9						
10-May-00	1	0.005	0.02	8.8	0.107	0.0001	0.005	0.0005	0.0025	0.005
10-May-00	2	0.005	0.02	8.9	0.107	0.0001	0.005	0.0005	0.0025	0.005
10-May-00	10	0.14	0.02	8.9	0.486	0.0001	0.005	0.0005	0.0025	0.02
14-Jun-00	1		0.02	7.7		0.0001		0.0005		
14-Jun-00	1		0.02	7.6		0.0001		0.0005		
14-Jun-00	10		0.02	7.3		0.0001		0.0005		
12-Jul-00	1		0.02	7.6		0.152		0.0005		
12-Jul-00	1		0.02	7.5		0.076		0.0005		
12-Jul-00	10		0.02	7.4		0.171		0.0005		
*12-Jul-00***	*10*		*0.02*	*7.6*		*0.059*		*0.0005*		
03-Aug-00	1	0.02	0.02	7.6	0.0025	0.0003	0.005	0.0005	0.0025	0.06
03-Aug-00	2	0.02	0.02	7.5	0.008	0.0002	0.005	0.0005	0.0025	0.05
*03-Aug-00***	*2*	*0.23*	*0.02*	*7.6*	*0.06*	*0.0006*	*0.01*	*0.0005*	*0.0025*	*0.11*
03-Aug-00	10	0.09	0.02	7.5	0.17	0.0004	0.005	0.0005	0.0025	0.06
16-Aug-00	1									
16-Aug-00	1									
16-Aug-00	10									
30-Aug-00	1		0.02	8.3		0.0001		0.0005		
30-Aug-00	1		0.02	8.2		0.0001		0.0005		
30-Aug-00	10		0.02	8.1		0.0001		0.0005		
27-Sep-00	1		0.02	7.8		0.0001		0.0005		
27-Sep-00	1		0.02	7.6		0.0001		0.0005		
27-Sep-00	10		0.02	7.9		0.0001		0.0005		
18-Oct-00	0.5		0.02	8.7		0.0001		0.0005		
*18-Oct-00***	*0.5*		*0.02*	*8.5*		*0.0001*		*0.0005*		
18-Oct-00	1		0.02	8.6		0.0001		0.0005		
18-Oct-00	10		0.02	8.6		0.0001		0.0005		
29-Nov-00	1	0.005	0.02	9.3	0.021	0.0001	0.005	0.0005	0.0025	0.01
29-Nov-00	1.5	0.005	0.02	9.4	0.021	0.0001	0.005	0.0005	0.0025	0.01
29-Nov-00	8	0.005	0.02	9.3	0.038	0.0001	0.005	0.0005	0.0025	0.005

UNDERLINED VALUES ARE LESS THAN MDL.
BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.
** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.
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2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 18
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

March 1, 2000, 0945 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.9	761	13.0	5.2
2	7.9	754	13.0	5.2
3	7.9	751	12.9	5.0
4	7.9	754	12.2	5.0
5	7.9	759	12.1	5.0
6	7.9	750	13.0	5.0
7	7.9	755	13.0	5.0
8	7.9	745	12.9	5.0
9	7.9	749	12.9	5.1
10	7.9	751	13.0	5.1

March 29, 2000, 1000 hours				
DEPTH (meters)	pH	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.1	820	12.6	7.5
2	8.1	822	13.4	7.1
3	8.1	822	14.1	7.1
4	8.1	822	14.1	7.1
5	8.2	823	14.4	7.1
6	8.2	822	14.3	7.1
7	8.2	818	14.8	7.2
8	8.3	814	13.3	7.3
9	8.3	805	14.1	7.2
10	8.2	800	14.6	7.3

TABLE 18 (Continued)
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

April 12, 2000, 0830 hours

DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.1	333	12.1	9.5
2	8.1	333	12.1	9.7
3	8.1	333	12.3	9.6
4	8.1	333	12.3	9.7
5	8.1	334	12.4	9.6
6	8.1	334	12.3	9.6
7	8.1	334	12.3	9.6
8	8.1	333	12.4	9.6
9	8.1	333	12.4	9.6
10	8.1	333	12.3	9.5

May 10, 2000, 0925 hours

DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.8	338	10.0	15.3
2	7.7	338	9.8	15.3
3	7.7	339	10.0	15.2
4	7.7	340	9.8	15.2
5	7.6	341	9.9	15.1
6	7.4	333	9.8	14.0
7	7.3	335	8.7	12.4
8	7.2	338	8.2	12.0
9	7.2	338	7.6	11.7
10	7.0	339	7.9	11.6

TABLE 18 (Continued)
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

June 14, 2000, 0920 hours

DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.9	314	8.9	18.8
2	7.9	314	9.3	18.7
3	7.8	315	9.2	18.7
4	7.8	315	9.0	18.6
5	7.7	316	9.0	18.5
6	7.6	316	9.0	18.5
7	7.4	305	7.8	17.5
8	7.2	299	7.1	16.6
9	7.2	305	5.7	15.8
10	7.2	308	5.2	15.4

July 12, 2000, 1005 hours

DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.1	324	9.8	22.9
2	8.0	324	9.8	22.6
3	7.7	323	9.6	22.4
4	7.4	320	8.1	21.8
5	7.0	314	7.8	19.3
6	6.9	312	7.0	19.0
7	6.8	307	6.6	18.7
8	6.7	306	6.1	18.5
9	6.6	307	4.6	18.0
10	6.4	306	4.2	17.9

TABLE 18 (Continued)
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

July 26, 2000, 1300 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.7	298	8.5	22.8
2	7.7	299	8.3	22.7
3	7.6	298	8.2	22.4
4	7.4	298	8.1	22.3
5	7.3	297	7.5	22.1
6	6.9	296	5.9	21.1
7	6.9	290	4.1	20.0
8	6.8	290	3.6	19.7
9	6.7	289	2.9	19.3
10	6.8	291	2.9	19.3

August 3, 2000, 1300 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.7	300	8.6	23.4
2	7.8	300	8.6	23.3
3	7.7	300	8.8	22.9
4	7.7	299	8.5	22.7
5	7.6	299	8.5	22.7
6	7.3	302	8.2	22.4
7	7.1	291	4.2	21.9
8	7.0	288	2.2	21.1
9	7.0	286	1.1	20.7
10	7.1	284	0.7	20.6

TABLE 18 (Continued)
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

August 16, 2000, 0945 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.6	310	7.8	22.4
2	7.6	310	7.9	22.4
3	7.6	310	7.8	22.4
4	7.6	310	7.8	22.4
5	7.6	310	7.8	22.4
6	7.6	310	7.9	22.4
7	7.6	309	7.9	22.3
8	7.7	310	7.8	22.3
9	7.7	310	7.1	22.3
10	7.7	310	7.4	22.3

August 30, 2000, 1000 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.9	314	8.2	21.3
2	7.9	314	8.2	21.3
3	7.9	314	8.3	21.3
4	7.9	314	8.1	21.3
5	7.9	315	8.1	21.3
6	7.9	314	8.1	21.3
7	8.0	313	8.1	21.3
8	7.9	313	8.1	21.3
9	8.0	313	8.1	21.3
10	8.0	313	8.0	21.3

TABLE 18 (Continued)
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

September 13, 2000, 0930 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.0	308	8.4	19.4
2	8.0	308	8.3	19.4
3	8.0	309	8.3	19.3
4	8.0	309	8.5	19.3
5	8.0	309	8.4	19.3
6	8.0	309	8.3	19.3
7	8.0	308	8.5	19.3
8	8.0	308	8.5	19.3
9	8.1	309	8.7	19.3
10	8.1	309	8.6	19.3

September 27, 2000, 0930 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.0	311	9.1	14.4
2	8.0	311	8.9	14.3
3	8.0	312	8.9	14.3
4	8.0	312	9.1	14.3
5	8.0	312	9.0	14.3
6	8.0	312	8.9	14.3
7	8.0	310	8.9	14.3
8	8.0	311	8.9	14.2
9	8.1	311	8.9	14.3
10	8.1	311	8.8	14.2

TABLE 18 (Continued)
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
(FIELD CODE RM)

October 18, 2000, 1025 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.5	320	9.2	12.0
2	8.5	320	9.1	11.9
3	8.5	320	9.2	11.9
4	8.5	320	9.3	11.9
5	8.5	320	9.1	11.9
6	8.5	320	9.8	11.9
7	8.5	318	10.0	11.9
8	8.5	319	9.8	11.9
9	8.5	319	10.0	11.9
10	8.4	318	9.8	11.9

November 29, 2000, 0930 hours				
DEPTH (meters)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.1	353	12.5	2.5
2	8.2	354	12.6	2.4
3	8.3	355	12.6	2.4
4	8.4	355	12.8	2.4
5	8.5	356	12.7	2.4
6	8.5	356	12.6	2.4
7	8.4	355	12.3	2.4
8	8.4	355	12.4	2.4

TABLE 19
CHATFIELD RESERVOIR NEAR DAM
(FIELD CODE - RM)
SEDIMENT-QUALITY DATA

DATE	Cadmium, total (mg/l)	Copper, total (mg/l)	Lead, total (mg/l)	Mercury, total (mg/l)	Phosphorus, total (mg/l)	Selenium, total (mg/l)
MDL [1]	0.5	2	7	0.02	0.0004	0.2
PQL [2]	2	8	30	0.1	0.002	0.8
16-Aug-00	0.25	11	12	0.01	0.026	0.8

DATE	Carbon, total organic (TOC) (mg/Kg)	Texture by Hydrometer Sand (percent)	Silt (percent)	Clay (percent)	Solids (percent)
MDL [1]	0.02	0.1	0.1	0.1	0.1
PQL [2]	0.1	5	5	5	0.5
16-Aug-00	0.78	60	12.5	27.5	49.6

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 20
ALLUVIAL GROUNDWATER MONITORING WELLS
(FIELD CODE - 1W, 2W, 3W, 4W, 5W)
FIELD MEASUREMENTS

DATE	WELL NUMBER	TIME	SPECIFIC CONDUCTANCE FIELD (us/cm)	OXYGEN, DISSOLVED (mg/l)	pH FIELD (std. Units)	TEMPERATURE (Deg C)
MDL [1]						
PQL [2]						
05-Apr-00	CH1W	1240	0.449	instrument failed	6.87	12.7
05-Apr-00	CH2W	1215	0.963	instrument failed	6.89	12.3
05-Apr-00	CH3W	1325	0.458	instrument failed	6.83	12.7
05-Apr-00	CH4W	1130	0.557	instrument failed	7.27	17.1
05-Apr-00	CH5W	1115	0.925	instrument failed	6.92	11.3
25-Apr-00	CH1W	1145	0.392	5.70	6.82	11.8
25-Apr-00	CH2W	1125	0.392	4.85	6.92	11.8
25-Apr-00	CH3W	1230	0.436	5.26	6.90	12.3
25-Apr-00	CH4W	1020	0.254	3.99	7.37	17.4
25-Apr-00	CH5W	950	0.373	5.45	7.00	10.6
03-May-00	CH1W	1115	0.435	6.50	6.95	13.0
03-May-00	CH2W	1050	0.388	4.76	6.95	12.8
03-May-00	CH3W	1155	0.432	5.29	6.92	13.0
03-May-00	CH4W			No access		
03-May-00	CH5W	620	0.375	5.36	7.19	11.7
24-May-00	CH1W	1115	0.449	6.88	6.95	13.0
24-May-00	CH2W	1100	0.392	4.88	6.98	13.3
24-May-00	CH3W	1200	0.436	6.38	7.01	12.9
24-May-00	CH4W			No access		
24-May-00	CH5W	945	0.387	5.37	6.98	12.1
07-Jun-00	CH1W	1140	0.466	6.67	7.19	14.1
07-Jun-00	CH2W	1120	0.420	5.74	7.10	14.6
07-Jun-00	CH3W	1220	0.442	6.16	7.40	14.8
07-Jun-00	CH4W	1010	0.273	3.26	7.56	20.9
07-Jun-00	CH5W	940	0.391	5.96	7.19	12.6
21-Jun-00	CH1W	1145	0.475	6.82	7.16	13.2
21-Jun-00	CH2W	1125	0.425	5.02	7.19	13.8
21-Jun-00	CH3W	1220	0.453	6.52	7.45	13.0
21-Jun-00	CH4W			No access		
21-Jun-00	CH5W	950	0.409	4.54	7.42	12.1

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 21
ALLUVIAL GROUNDWATER MONITORING WELLS
(FIELD CODE - 1W, 2W, 3W, 4W, 5W)
NUTRIENT ANALYSES

DATE	WELL NUMBER	TIME	Nitrate (mg/L as N)	Nitrate/ Nitrite (mg/L as N)	Nitrite (mg/L as N)	Nitrogen, total (mg/L)	Phosphorus ortho, total (mg/L as P)	Phosphorus, total (mg/L as P)
MDL [1]			0.02	0.02	0.01	0.1	0.005	0.02
PQL [2]			0.1	0.1	0.05	0.5	0.03	0.1
05-Apr-00	CH1W	1240	2.71	2.71	0.005	3.3	0.108	0.2
*05-Apr-00***	*CH1W*	*1240*	*2.76*	*2.76*	*0.005*	*3*	*0.106*	*0.18*
05-Apr-00	CH2W	*1215*	3.18	3.18	0.005	3	0.067	0.04
05-Apr-00	CH3W	1325	3.98	3.98	0.005	3.9	0.381	0.33
05-Apr-00	CH4W	1130	0.01	0.01	0.005	0.05	0.0025	0.01
05-Apr-00	CH5W	1115	0.01	0.01	0.005	0.05	0.01	0.02
25-Apr-00	CH1W	1145	2.69	2.69	0.005	3.1	0.083	0.2
25-Apr-00	CH2W	1125	3.01	3.01	0.005	3.4	0.058	0.04
25-Apr-00	CH3W	1230	3.71	3.71	0.005	0.7	0.359	0.31
25-Apr-00	CH4W	1020	0.03	0.03	0.005	320	0.0025	0.01
25-Apr-00	CH5W	950	0.01	0.01	0.005	0.05	0.0025	0.02
03-May-00	CH1W	1115	3.51	3.51	0.005	1.2	0.094	0.14
03-May-00	CH2W	1050	3.98	3.98	0.005	1.7	0.154	0.06
03-May-00	CH3W	1155	4.67	4.67	0.005	2.4	0.351	0.32
03-May-00	CH4W				No access			
03-May-00	CH5W	620	0.04	0.04	0.005	0.5	0.006	0.02
24-May-00	CH1W	1115	2.37	2.37	0.005	3	0.204	0.13
24-May-00	CH2W	1100	2.7	2.7	0.005	0.6	0.195	0.14
24-May-00	CH3W	1200	3.24	3.24	0.005	1.6	0.468	0.38
*24-May-00***	*CH3W*	*1200*	*3.27*	*3.27*	*0.005*	*3.8*	*0.346*	*0.43*
24-May-00	CH4W				No access			
24-May-00	CH5W	945	0.02	0.02	0.005	0.5	0.063	0.03
07-Jun-00	CH1W	1140	2.28	2.28	0.005	2.3	0.081	0.11
07-Jun-00	CH2W	1120	2.61	2.61	0.005	1.9	0.081	0.05
07-Jun-00	CH3W	1220	2.93	2.93	0.005	3.7	0.348	0.34
07-Jun-00	CH4W	1010	0.01	0.01	0.005	0.05	0.0025	0.02
07-Jun-00	CH5W	940	0.01	0.01	0.005	0.05	0.008	0.02
21-Jun-00	CH1W	1145	2.32	2.32	0.005	2.9	0.075	0.15
21-Jun-00	CH2W	1125	2.61	2.61	0.005	0.7	0.064	0.06
21-Jun-00	CH3W	1220	2.88	2.88	0.005	2.9	0.226	0.22
21-Jun-00	CH4W				No access			
21-Jun-00	CH5W	950	0.01	0.01	0.005	0.05	0.009	0.01
*21-Jun-00***	*CH5W*	*950*	*0.01*	*0.01*	*0.005*	*0.05*	*0.008*	*0.01*

UNDERLINED VALUES ARE LESS THAN MDL.
BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.
** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.
1) MDL = METHOD DETECTION LIMIT.
2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 22
PHYTOPLANKTON DATA, 2000 SURVEY RESULTS
CHATFIELD RESERVOIR (Field Code RM)

Date	03/29/2000	05/10/2000	07/26/2000	08/16/2000	09/13/2000	11/29/2000
BACILLARIOPHYTA (cells/ml)						
Asterionella formosa	30					692.5
Aulacoseira granulata				190	90	85
Aulacoseira granulata var. angustissima				100		
Aulacoseira italica var. italica		18			10	
Aulacoseira italica var. tenuissima		3			10	
Aulacoseira subarctica	95					
Cyclotella bodanica		2	146.5	25	10	
Cyclotella stelligera				5		
Fragilaria crotonensis				10		
Nitzschia acicularis				25	15	
Nitzschia paleacea				50	40	
Nitzschia sp.					105	
Stephanodiscus niagarae	7.5	7				
Synedra acus	2.5					
Synedra cyclopum		21				
Synedra rumpens var familiaris					2.5	2.5
Synedra rumpens var fragilarioides				2.5	30	
Synedra sp.	2.5					
Synedra ulna var chaseana					25	2.5
Tabellaria fenestrata	355					
CHLOROPHYTA (cells/ml)						
Ankistrodesmus gracilis						5
Ankyra judayi	7.5	10	18	20		
Chlamydomonas sp. 1				750	500	250
Chlamydomonas sp. 2				62.5		10
Chlorella minutissima	312.5	62.5	6250	10250	27500	5875
Chlorogonium acutisimum				20		
Choricystis minor	1687.5	937.5	2125	8125	4000	10250
Closterium sp.						2.5
Coenochloris polycocca					158	
Crucigenia tetrapedia					158.5	
Crucigeniella apiculata					2.5	
Dictysophaerium ehrenbergianum					50	
Dictyosphaerium pulchellum						125
Fusola viridis					2.5	5
Gloeotila sp.					317	
Gonium pectorale				60		
Kirchneriella lunaris					5	
Lagerheimia genevensis					317	
Micractinium pusillum						40
Monoraphidium contortum			1		25	
Monoraphidium minutum				60	238	
Monoraphidium mirabile				10		
Monoraphidium sp.					2.5	
Oocystis borgei				15		
Pediastrum duples		30				
Scenedesmus aculeolatus				10		
Scenedesmus acuminatus var tetradesmoides					20	
Scenedesmus brevispina						20
Scenedesmus communis					40	10
Scenedesmus ecornis				20		
Scenedesmus intermedius					10	

TABLE 22
PHYTOPLANKTON DATA, 2000 SURVEY RESULTS
CHATFIELD RESERVOIR (Field Code RM)

Date	03/29/2000	05/10/2000	07/26/2000	08/16/2000	09/13/2000	11/29/2000
CHRYSOPHYTA (cells/ml)						
Chromulina parvula	3500	125	1000	250	2750	500
Dinobryon bavaricum					1195	
Dinobryon divergens	20			10	5	
Dinobryon sociale var americana			3.5		90	
Mallomonas akrokomos var. parvula	2.5	1	9	5		
Mallomonas sp.	22.5	1	1			
Ochromonas minuscula	125	10	15.5			1750
CRYPTOPHYTA (cells/ml)						
Campylomonas reflexa	45	109	36	40	195	55
Campylomonas rostratiformis		5	9	10	15	5
Plagioselmis nannoplanctica	100	130	873	420	1465	830
Unknown cryptophyte			2			
CYANOPHYTA (cells/ml)						
Anabaena flos-aquae			320			
Anabaena inaequalis					155	
Anabaena spiroides			45			
Aphanizomenon flos-aquae	120	46				
Aphanizomenon issatschenkoi				445	100	
Aphanocapsa delicatissima				10250	10000	1750
Aphanothece clathrata			4500		1346	
Aphanothece minutissima	750		15375	79250	31000	3250
Chroococcus minimus					8000	
Cyanobium sp.	62.5	8	62.5	250	1250	
Dactylococcopsis acicularis				240	2.5	
Dactylococcopsis fascicularis				500	435.5	30
Lyngbya limnetica			20.5			
Mersmopedia tenuissima			3000			
Oscillatoria limnetica				2500	9544	
Oscillatoria sp.				70	6653	
Pseudanabaena mucicola				15		
Pseudanabaena sp.					2416	
Woronichinia karelica			175.5			
DINOPHYTA (cells/ml)						
Ceratium hirundinella			3.5			
Peridiniopsis kulczynskii						2.5
Peridinium lomnickii				1	1	
EUGLENOPHYTA (cells/ml)						
Euglena sp.				5		
Trachelomonas planctonica					2.5	
Trachelomonas sp.					5	
TOTAL DENSITY	7248	1526	33992	114071	110309	25548
Number of Species	19	18	23	37	49	24

TABLE 23
ZOOPLANKTON DATA, 2000 SURVEY RESULTS
CHATFIELD RESERVOIR (FIELD CODE RM) - August 16, 1999

Taxa	Mean Density in Concentrate (organisms/ml)	Specific Density in Lake (organisms/ml)	General Density in Lake (organisms/ml)
ROTIVERA (rotifers)			
Asplanchna sp.	2.67	2.40	2
Conochiloides sp.	0.67	0.60	1
Kellicottia sp.	8.67	7.79	8
Keratella sp.	73.67	66.23	66
CLADOCERA (water fleas)			
Bosmina longirostris	9.00	8.09	8
Daphnia rosea	37.00	33.26	33
COPEPODA (copepods)			
Canthocamptus sp.	3.33	2.99	3
Cyclops sp.	1.00	0.90	1
Diaptomus sp.	3.33	2.99	3
Leptodiaptomus sp.	1.67	1.50	2
TOTAL DENSITY	141.33	127.05	127
TOTAL NUMBER OF TAXA	10	10	10

TABLE 24
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED - APRIL 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
05-Apr-00	CH01	730	8	0.520	Instrument Failed	6.67	21.0	2.3	0.02		82
*05-Apr-00***	*CH01*	*730*									*66*
05-Apr-00	CH02	925	3	0.459	Instrument Failed	7.30	7.2	2.1	0.34		46
05-Apr-00	CH03	845	160	0.659	Instrument Failed	7.18	6.0	2.2	0.00		2.5
05-Apr-00	CH04	815	50	0.257	Instrument Failed	7.16	5.6	2.6	0.90		2.5
05-Apr-00	CH05	800	3	0.536	Instrument Failed	6.93	6.3	0.0	0.03		44
05-Apr-00	CH06	1000	55	0.723	Instrument Failed	7.62	8.4	1.8	0.00		2.5
05-Apr-00	CH07	1020	55	0.728	Instrument Failed	7.47	8.2	2.8	0.82		8
05-Apr-00	CH08	940	2	0.890	Instrument Failed	7.95	10.4	0.0	0.00		24
05-Apr-00	CH09	1515	3	0.486	Instrument Failed	7.59	16.4	1.0	0.07		2.5
*05-Apr-00***	*CH09*	*1515*									*2.5*
05-Apr-00	CH10	1500	18	0.251	Instrument Failed	7.67	14.8	1.7	0.02		12
05-Apr-00	CH11	1425	33	0.496	Instrument Failed	7.72	15.5	0.0	0.07		120
05-Apr-00	CH12	1400	35	0.540	Instrument Failed	7.59	14.8	0.0	0.03		280
05-Apr-00	CH13	1250	50	0.596	Instrument Failed	7.57	14.6	0.0	0.10		424
05-Apr-00	CH14	1650	30	0.769	Instrument Failed	7.87	16.8	0.0	0.15		724
05-Apr-00	CH15	1140	100	0.695	Instrument Failed	7.67	10.2	0.0	0.04		776
05-Apr-00	CH16	1100	275	0.766	Instrument Failed	7.19	10.4	0.0	0.04		178
05-Apr-00	CH17	1040	275	0.825	Instrument Failed	7.29	9.9	0.0	0.06		130
05-Apr-00	CH18	1200	3.5	0.702	Instrument Failed	7.52	10.2	0.0	0.04		96
05-Apr-00	CH20	1620	10	0.191	Instrument Failed	7.76	13.6	0.0	0.04		62
05-Apr-00	CH21	1550	NO ACCESS DUE TO SNOW								
05-Apr-00	CH22	1540	14	0.274	Instrument Failed	7.72	14.6	2.1	0.02		28
05-Apr-00	CH23	1600	18	0.568	Instrument Failed	7.98	16.7	1.1	0.05		34
05-Apr-00	CH24	1640	30	0.542	Instrument Failed	7.75	16.8	0.0	0.15		116
12-Apr-00	CH01	650	9	0.189	12.43	6.87	3.1	0.0	0.02		20
12-Apr-00	CH02	930	2	0.356	10.03	8.22	5.9	2.0	0.03		22
12-Apr-00	CH03	1015	250	0.286	10.42	8.18	5.7	4.2	0.02		2.5
*12-Apr-00***	*CH03*										*2.5*
12-Apr-00	CH04	730	55	0.273	9.53	7.51	4.5	0.1	0.00		
12-Apr-00	CH05	715	3	0.215	9.49	7.27	5.5	0.0	0.02		6
12-Apr-00	CH06	905	50	0.288	9.67	7.75	5.7	0.0	0.00		2.5
12-Apr-00	CH07	910	50	0.311	10.48	8.19	6.2	0.0	0.00		2.5
12-Apr-00	CH08	920	2	1.020	10.39	8.33	8.3	1.0	0.02		8
12-Apr-00	CH09	1245	3	0.086	10.03	7.83	3.1	3.1	0.03		2.5
12-Apr-00	CH10	1230	20	0.086	8.62	8.11	9.2	3.4	0.02		16
12-Apr-00	CH11	1215	39	0.150	8.87	8.11	10.4	2.5	0.03		54
*12-Apr-00***	*CH11*										*42*
12-Apr-00	CH12	1200	45	0.172	8.57	8.05	11.8	1.7	0.04		76

TABLE 24
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED - APRIL 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
12-Apr-00	CH13	1145	50	0.207	8.05	8.13	12.0	1.7	0.04		90
12-Apr-00	CH14	1110	60	0.296	7.87	7.91	12.1	2.4	0.10		330
12-Apr-00	CH15	1045	150	0.267	9.09	8.28	9.7	0.0	0.10		216
12-Apr-00	CH16	740	240	0.261	9.26	7.55	6.1	0.0	0.02		
12-Apr-00	CH17	800	245	0.301	8.76	7.52	6.4	0.0	0.04		170
12-Apr-00	CH18	1120	5	0.265	10.44	8.16	8.9	0.0	0.00		62
12-Apr-00	CH20	1400	12	0.074	7.53	8.02	12.0	0.1	0.03		34
12-Apr-00	CH21	1315	1	0.079	9.49	7.80	6.2	2.9	0.02		2.5
12-Apr-00	CH22	1300	16	0.082	7.48	7.81	10.2	4.4	0.03		2.5
12-Apr-00	CH23	1345	20	0.171	7.94	7.93	13.2	2.6	0.01		44
12-Apr-00	CH24	1100	32	0.173	9.16	8.08	9.7	2.2	0.06		186
19-Apr-00	CH01	630	8	0.181	10.16	6.28	4.6	4.9	0.00		2.5
19-Apr-00	CH02	825	4	0.490	8.79	7.68	6.3	2.7	0.02		28
19-Apr-00	CH03	750	160	0.277	9.95	7.75	5.9	2.2	0.00		2.5
19-Apr-00	CH04	725	50	0.270	10.16	7.65	5.4	2.4	0.00		2.5
19-Apr-00	CH05	710	1	0.685	9.83	7.73	5.0	2.7	0.02		2.5
19-Apr-00	CH06	905	50	0.296	9.6	7.97	6.8	3.8	0.00		2.5
*19-Apr-00***	*CH06*										*2.5*
19-Apr-00	CH07	925	55	0.305	9.37	7.77	6.8	3.0	0.00		2.5
19-Apr-00	CH08	840	2	1.070	10.67	8.04	6.7	3.9	0.00		2.5
19-Apr-00	CH09	1330	4	0.087	8.45	7.91	8.3	3.1	0.01		2.5
19-Apr-00	CH10	1310	20	0.084	8.74	8.00	8.2	4.0	0.01		20
19-Apr-00	CH11	1245	29	0.146	8.72	8.05	8.7	2.9	0.00		16
19-Apr-00	CH12	1205	40	0.168	8.13	7.92	10.1	0.0	0.02		92
19-Apr-00	CH13	1140	40	0.211	9.07	7.87	10.1	0.0	0.03		98
19-Apr-00	CH14	1115	50	0.288	7.89	7.92	11.1	0.0	0.05		224
19-Apr-00	CH15	1025	160	0.217	8.83	7.86	9.2	0.0	0.03		180
19-Apr-00	CH16	1000	170	0.240	8.8	7.80	7.7	2.3	0.01		80
19-Apr-00	CH17	940	170	0.274	8.65	7.67	7.5	1.0	0.05		106
19-Apr-00	CH18	1050	3	0.290	8.12	7.85	10.0	0.0	0.03		96
19-Apr-00	CH20	1510	16	0.072	8.82	7.57	7.3	3.2	0.02		16
19-Apr-00	CH21	1415	1	0.079	10.06	7.77	4.8	3.8	0.00		2.5
19-Apr-00	CH22	1355	22	0.078	8.99	8.09	7.7	2.7	0.02		2.5
19-Apr-00	CH23	1445	25	0.152	8.9	7.59	8.1	3.1	0.02		54
19-Apr-00	CH24	1105	34	0.162	8.56	7.93	9.4	0.0	0.01		154
*19-Apr-00***	*CH24*										*140*
25-Apr-00	CH01	610	11	0.132	10.17	6.54	4.9	3.1	0.01		24
25-Apr-00	CH02	805	5	0.396	8.68	7.07	5.8	3.1	0.02		10
*25-Apr-00***	*CH02*										*16*

TABLE 24
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED - APRIL 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
25-Apr-00	CH03	735	180	0.297	9.68	6.93	6.3	3.8	0.01		2.5
25-Apr-00	CH04	705	45	0.268	9.12	7.02	6.0	3.0	0.00		2.5
25-Apr-00	CH05	650	1	1.070	9.04	7.59	6.2	3.1	0.03		12
25-Apr-00	CH06	845	60	0.299	9.4	7.34	6.6	3.3	0.00		2.5
25-Apr-00	CH07	855	60	0.303	9.44	7.37	6.6	3.4	0.01		2.5
25-Apr-00	CH08	820	2.5	0.982	9.51	7.85	6.8	4.0	0.02		2.5
25-Apr-00	CH09	1400	5	0.086	6.7	7.70	15.0	2.9	0.04		2.5
25-Apr-00	CH10	1340	18	0.082	8.76	7.75	12.7	3.3	0.05		2.5
25-Apr-00	CH11	1310	30	0.141	8.2	7.78	13.3	2.3	0.06		12
25-Apr-00	CH12	1250	30	0.161	7.08	7.57	14.0	1.0	0.06		88
25-Apr-00	CH13	1155	30	0.200	6.89	7.58	13.3	0.0	0.04		94
25-Apr-00	CH14	1110	40	0.245	7.34	7.64	13.4	0.0	0.13		274
25-Apr-00	CH15	1005	70	0.194	9.14	7.35	8.8	0.0	0.05		178
25-Apr-00	CH16	935	72	0.217	9.06	7.31	7.1	1.9	0.03		74
25-Apr-00	CH17	910	75	0.252	8.56	7.25	6.9	1.7	0.04		82
25-Apr-00	CH18	1040	3	0.267	8.47	7.66	11.2	0.0	0.05		148
25-Apr-00	CH20	1525	18	0.073	7.56	7.87	14.9	2.6	0.05		14
25-Apr-00	CH21	1440	0.5	0.080	10.09	7.95	8.6	2.9	0.03		2.5
25-Apr-00	CH22	1425	20	0.075	7.78	7.81	13.3	2.7	0.02		2.5
25-Apr-00	CH23	1510	25	0.139	6.47	7.88	15.8	2.5	0.05		38
*25-Apr-00***	*CH23*	*1510*									*46*
25-Apr-00	CH24	1055	35	0.149	8.86	7.60	10.4	0.1	0.03		102

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 25
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED -MAY 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
03-May-00	CH01	620	9	0.173	9.41	7.01	6.4	2.6	0.02		14
03-May-00	CH02	800	6	0.499	7.35	7.49	9.7	2.2	0.03		16
03-May-00	CH03	730	115	0.280	8.92	7.36	7.6	2.8	0.01		8
03-May-00	CH04	700	34	0.274	8.37	7.26	8.4	2.8	0.00		8
*03-May-00***	*CH04*	*700*									*80*
03-May-00	CH05	650	3	0.457	7.66	7.45	9.1	2.4	0.04		16
03-May-00	CH06	835	35	0.309	7.64	7.61	10.4	2.3	0.00		8
03-May-00	CH07	850	40	0.311	7.87	7.45	10.2	3.0	0.01		6
03-May-00	CH08	810	5	0.806	8.55	7.92	11.3	3.1	0.04		14
03-May-00	CH09	1320	4	0.092	6.35	7.67	18.8	2.8	0.03		8
03-May-00	CH10	1245	20	0.091	7.25	7.83	15.9	1.9	0.01		10
03-May-00	CH11	1230	24	0.154	7.32	7.89	16.8	1.9	0.05		22
03-May-00	CH12	1210	25	0.179	6.42	7.68	17.9	0.7	0.07		42
03-May-00	CH13	1130	29	0.213	6.62	7.69	17.2	0.0	0.04		100
03-May-00	CH14	1035	40	0.256	6.71	7.81	16.9	0.0	0.15		302
03-May-00	CH15	950	65	0.203	7.79	7.61	13.2	0.0	0.09		200
03-May-00	CH16	920	70	0.224	7.60	7.53	11.5	0.2	0.08		128
03-May-00	CH17	900	75	0.264	7.59	7.39	11.3	0.0	0.09		186
03-May-00	CH18	1010	9	0.263	8.14	7.81	13.8	2.1	0.04		34
03-May-00	CH20	1450	24	0.079	6.43	7.85	18.8	2.4	0.09		28
03-May-00	CH21	1400	1	0.085	9.09	7.99	11.1	2.9	0.01		6
03-May-00	CH22	1345	29	0.082	7.00	7.77	17.2	2.4	0.05		6
*03-May-00***	*CH22*	*1345*									*6*
03-May-00	CH23	1430	30	0.136	8.38	8.01	19.7	1.2	0.04		50
03-May-00	CH24	1025	35	0.153	7.81	7.75	14.3	1.5	0.06		
10-May-00	CH01	610	9	0.176	9.31	6.55	6.5	3.0	0.02		8
10-May-00	CH02	1050	5	0.528	8.45	7.32	13.8	1.7	0.06		18
10-May-00	CH03	715	120	0.266	8.61	6.69	8.8	2.8	0.01		2.5
10-May-00	CH04	650	30	0.251	9.32	6.62	8.3	2.3	0.01		
10-May-00	CH05	635	3	0.645	7.99	7.00	9.2	2.5	0.08		2.5
*10-May-00***	*CH05*	*635*									*8*
10-May-00	CH06	1035	35	0.292	9.01	7.29	13.0	2.3	0.01		2.5
10-May-00	CH07	1025	40	0.297	9.40	6.88	12.7	2.3	0.00		2.5
10-May-00	CH08	1100	4	0.726	7.70	7.99	16.5	2.6	0.05		18
10-May-00	CH09	1350	5	0.097	6.13	7.55	18.2	2.4	0.06		2.5
10-May-00	CH10	1335	26	0.087	7.52	7.77	16.2	2.5	0.05		12

TABLE 25
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED -MAY 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
10-May-00	CH11	1315	22	0.149	7.33	7.88	17.6	1.8	0.05		26
10-May-00	CH12	1255	27	0.170	6.84	7.55	18.7	0.0	0.03		192
10-May-00	CH13	1240	35	0.201	6.19	7.73	19.0	0.0	0.05		146
10-May-00	CH14	1215	40	0.244	6.32	7.68	19.9	0.0	0.10		328
10-May-00	CH15	1130	75	0.206	7.37	7.41	16.9	0.0	0.05		232
10-May-00	CH16	750	80	0.227	7.47	6.44	10.1	1.4	0.06		
10-May-00	CH17	1005	85	0.258	8.21	6.98	12.9	0.0	0.05		144
10-May-00	CH18	1150	5	0.368	7.10	7.63	17.7	1.9	0.03		2.5
10-May-00	CH20	1510	21	0.082	6.65	7.70	18.6	3.0	0.04		6
10-May-00	CH21	1425	0.5	0.088	8.65	7.89	11.7	2.9	0.02		2.5
*10-May-00***	*CH21*	*1425*									*2.5*
10-May-00	CH22	1410	25	0.095	7.32	7.80	17.2	2.0	0.02		10
10-May-00	CH23	1455	40	0.158	6.62	7.69	19.7	2.1	0.06		26
10-May-00	CH24	1205	40	0.161	6.70	7.69	18.0	1.3	0.32		88
17-May-00	CH01	630	6	0.233	9.63	6.37	7.7	3.2	0.01		2.5
17-May-00	CH02	805	6	0.675	6.81	7.28	12.1	3.0	0.04		2.5
17-May-00	CH03	735	225	0.288	10.88	6.84	8.9	3.1	0.00		2.5
17-May-00	CH04	710	150	0.272	9.43	6.52	9.0	3.0	0.01		2.5
17-May-00	CH05	655	1	0.825	7.84	7.25	11.1	3.4	0.07		2.5
17-May-00	CH06	840	160	0.283	8.40	7.47	9.8	2.7	0.00		2.5
17-May-00	CH07	850	160	0.281	8.89	7.40	9.6	3.1	0.00		2.5
*17-May-00***	*CH07*	*850*									*2.5*
17-May-00	CH08	815	2	1.060	8.56	7.95	12.3	3.2	0.04		6
17-May-00	CH09	1225	3	0.101	7.93	7.60	8.6	2.7	0.01		8
17-May-00	CH10	1150	16	0.103	8.19	7.76	9.6	3.1	0.01		8
17-May-00	CH11	1130	18	0.174	7.99	7.74	10.5	2.8	0.04		28
17-May-00	CH12	1115	22	0.197	8.01	7.64	11.4	2.3	0.02		48
17-May-00	CH13	1055	30	0.251	7.97	7.69	11.9	1.1	0.05		36
17-May-00	CH14	1035	30	0.322	7.83	7.80	12.8	1.6	0.06		184
17-May-00	CH15	940	90	0.257	8.30	7.64	11.1	0.0	0.05		126
17-May-00	CH16	925	110	0.274	7.82	7.48	11.2	2.4	0.13		70
17-May-00	CH17	905	115	0.305	7.54	7.29	11.3	0.5	0.07		112
17-May-00	CH18	1005	2	0.361	7.43	7.51	12.9	2.5	0.00		10
17-May-00	CH20	1400	10	0.095	8.63	7.76	8.4	3.0	0.02		8
*17-May-00***	*CH20*	*1400*									*6*
17-May-00	CH21	1305	0.5	0.098	9.60	7.82	6.9	2.2	0.04		6

TABLE 25
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED -MAY 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
17-May-00	CH22	1250	10	0.127	7.47	7.64	10.6	3.1	0.01		10
17-May-00	CH23	1335	24	0.204	7.80	7.76	9.5	3.3	0.03		12
17-May-00	CH24	1020	40	0.203	7.88	7.65	12.0	2.3	0.05		54
24-May-00	CH01	620	3	0.316	9.55	6.79	10.3	3.2	0.09		2.5
24-May-00	CH02	800	4	0.719	5.70	7.13	13.9	2.9	0.05		2.5
24-May-00	CH03	725	425	0.263	8.93	6.88	9.6	3.5	0.00		2.5
24-May-00	CH04	700	90	0.251	9.22	6.59	9.8	2.8	0.01		2.5
24-May-00	CH05	650	1	0.736	8.02	7.16	12.7	3.6	0.08		6
24-May-00	CH06	830	100	0.292	8.35	6.79	11.4	2.6	0.00		10
24-May-00	CH07	845	100	0.268	8.93	7.05	10.7	3.6	0.00		2.5
24-May-00	CH08	810	3	1.090	7.60	7.49	14.5	3.9	0.06		2.5
*24-May-00***	*CH08*	*810*									*8*
24-May-00	CH09	1330	3	0.103	6.37	7.61	14.9	2.1	0.02		2.5
24-May-00	CH10	1310	12	0.107	6.97	7.73	15.3	1.4	0.02		32
24-May-00	CH11	1230	20	0.192	6.61	7.68	18.0	2.5	0.03		2.5
24-May-00	CH12	1210	25	0.216	5.28	7.54	19.6	2.3	0.07		16
24-May-00	CH13	1130	35	0.277	6.02	7.40	19.6	1.3	0.06		2.5
24-May-00	CH14	1045	40	0.324	6.49	7.47	20.5	2.1	0.07		96
24-May-00	CH15	955	85	0.270	6.45	7.16	17.1	1.6	0.09		56
24-May-00	CH16	920	90	0.293	5.23	7.11	15.4	2.2	0.07		52
24-May-00	CH17	900	90	0.318	6.76	6.90	13.9	0.0	0.08		104
24-May-00	CH18	1015	2	0.380	7.66	7.33	15.4	3.4	0.05		14
*24-May-00***	*CH18*	*1015*									*8*
24-May-00	CH20	1450	10	0.104	6.16	7.83	18.6	3.4	0.04		6
24-May-00	CH21	1405	0.5	0.101	8.86	7.87	11.3	3.1	0.02		2.5
24-May-00	CH22	1350	13	0.127	6.39	7.66	17.4	2.6	0.04		6
24-May-00	CH23	1430	20	0.224	6.97	7.86	19.4	3.1	0.02		8
24-May-00	CH24	1030	45	0.214	6.16	7.41	17.8	2.6	0.05		26
31-May-00	CH01	625	3	0.310	7.50	6.74	11.3	3.2	0.03		2.5
31-May-00	CH02	805	3	0.779	5.95	7.24	15.2	2.9	0.06		2.5
31-May-00	CH03	735	300	0.210	7.30	6.60	13.2	2.6	0.00		2.5
31-May-00	CH04	710	400	0.209	7.44	6.61	13.1	3.0	0.00		2.5
31-May-00	CH05	655	1	0.608	6.24	7.55	13.6	3.6	0.06		2.5
31-May-00	CH06	830	300	0.218	7.57	7.19	14.1	1.6	0.00		12
31-May-00	CH07	855	300	0.217	7.61	7.34	13.9	2.8	0.02		8
31-May-00	CH08	815	3	1.320	8.73	7.74	15.7	3.7	0.01	0.009	2.5

TABLE 25
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED -MAY 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
31-May-00	CH09	1200	3	0.102	5.71	7.66	19.8	3.0	0.05		2.5
31-May-00	CH10	1145	10	0.103	6.05	7.74	20.2	2.6	0.05		14
*31-May-00***	*CH10*	*1145*									*8*
31-May-00	CH11	1125	10	0.195	5.88	7.74	20.6	2.8	0.03		8
31-May-00	CH12	1105	15	0.216	5.87	7.63	21.6	2.4	0.06		20
31-May-00	CH13	1045	20	0.280	6.01	7.62	20.9	2.0	0.13		24
31-May-00	CH14	1030	30	0.348	6.13	7.80	21.6	0.0	0.09		188
31-May-00	CH15	940	75	0.306	6.57	7.61	18.2	2.9	0.05		60
31-May-00	CH16	925	80	0.310	5.22	7.35	16.2	2.6	0.07		34
31-May-00	CH17	910	80	0.339	6.18	7.33	14.8	2.2	0.08		102
*31-May-00***	*CH17*	*910*									*92*
31-May-00	CH18	1000	1	0.427	7.32	7.50	16.4	2.2	0.07	0.009	2.5
31-May-00	CH20	1350	5	0.115	5.29	7.87	23.9	3.5	0.05	0.025	2.5
31-May-00	CH21	1240	0.01	0.104	8.10	7.90	15.7	2.9	0.04		6
31-May-00	CH22	1220	12	0.138	5.98	7.74	21.1	2.0	0.03		2.5
31-May-00	CH23	1325	10	0.256	5.21	8.16	24.5	2.8	0.04		2.5
31-May-00	CH24	1020	30	0.236	6.74	7.65	19.4	2.8	0.04		6

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

TABLE 26
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED - JUNE 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
07-Jun-00	CH01	620	1	0.321	8.20	6.58	11.2	3.0	0.05		2.5
07-Jun-00	CH02	755	3	1.130	5.15	7.17	14.2	2.8	0.06		2.5
07-Jun-00	CH03	725	675	0.246	8.79	6.87	11.2	2.7	0.00		2.5
07-Jun-00	CH04	700	400	0.243	8.40	6.60	11.7	2.7	0.00		2.5
07-Jun-00	CH05	645	1	0.950	6.99	7.31	14.2	3.0	0.06		2.5
07-Jun-00	CH06	840	425	0.250	8.71	7.44	0.0	1.9	0.00		2.5
07-Jun-00	CH07	850	425	0.249	8.47	7.37	12.5	2.8	0.00		2.5
07-Jun-00	CH08	820	1	1.350	6.86	7.68	16.4	3.1	0.03		2.5
07-Jun-00	CH09	1405	2	0.111	5.57	7.71	24.3	2.8	0.05		2.5
07-Jun-00	CH10	1350	8	0.107	6.52	7.92	23.2	2.9	0.05		14
07-Jun-00	CH11	1330	9	0.194	5.98	8.03	24.0	2.8	0.06		6
07-Jun-00	CH12	1310	13	0.225	5.34	7.82	25.9	3.1	0.08		2.5
*07-Jun-00***	*CH12*										*12*
07-Jun-00	CH13	1150	20	0.300	5.26	7.74	23.8	2.0	0.07	0.029	8
07-Jun-00	CH14	1105	25	0.365	5.12	7.85	24.8	1.7	0.11		48
07-Jun-00	CH15	955	70	0.334	5.92	7.75	19.9	2.8	0.13	0.035	40
07-Jun-00	CH16	925	80	0.345	5.12	7.32	17.6	3.0	0.14		2.5
*07-Jun-00***	*CH16*										*24*
07-Jun-00	CH17	905	80	0.359	7.47	7.31	15.4	2.9	0.09		32
07-Jun-00	CH18	925	80	0.345	5.12	7.32	17.6	3.0	0.14		2.5
07-Jun-00	CH20	1525	3	0.132	5.71	8.08	23.0	3.2	0.14		2.5
07-Jun-00	CH21	1445	0.01	0.112	7.97	8.15	16.0	1.4	0.07		2.5
07-Jun-00	CH22	1425	6	0.150	5.84	7.95	24.3	2.0	0.05		2.5
07-Jun-00	CH23	1510	8	0.297	5.93	8.53	24.6	2.4	0.02		2.5
07-Jun-00	CH24	1055	30	0.267	6.43	7.83	22.6	3.0	0.05		2.5
14-Jun-00	CH01	605	1	0.383	8.55	6.88	8.4	3.3	0.02		
14-Jun-00	CH02	1005	2	1.220	5.79	7.39	14.5	2.3	0.08		
14-Jun-00	CH03	710	570	0.262	8.06	6.52	10.4	2.9	0.00		
14-Jun-00	CH04	650	480	0.265	8.24	6.97	10.3	2.6	0.00		
14-Jun-00	CH05	630	0.5	1.270	7.75	7.52	11.0	3.2	0.07		
14-Jun-00	CH06	1020	500	0.267	8.79	7.55	13.6	3.0	0.01		
14-Jun-00	CH07	1030	500	0.267	8.66	7.63	13.3	3.4	0.00		
14-Jun-00	CH08	805	0.01	1.300	6.55	7.07	12.9	2.6	0.01		
14-Jun-00	CH09	1345	1	0.119	5.12	7.73	22.1	2.3	0.11		
14-Jun-00	CH10	1330	7	0.113	5.53	7.88	21.5	2.9	0.05		
14-Jun-00	CH11	1255	10	0.212	5.74	7.94	20.9	2.8	0.16		

TABLE 26
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED - JUNE 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
14-Jun-00	CH12	1240	13	0.249	5.41	7.89	23.4	3.1	0.05		
14-Jun-00	CH13	1220	17	0.341	5.71	7.90	22.6	2.4	0.13		
*14-Jun-00***	*CH13*										*2.5*
14-Jun-00	CH14	1200	20	0.418	6.06	7.97	24.1	3.4	0.13		
14-Jun-00	CH15	1110	60	0.367	6.55	7.96	20.6	3.0	0.09		
*14-Jun-00***	*CH15*										*20*
14-Jun-00	CH16	835	65	0.359	5.74	6.99	14.8	1.2	0.05		
14-Jun-00	CH17	1045	65	0.345	6.96	7.47	14.5	2.4	0.09		
14-Jun-00	CH18	1135	0.01	0.464	7.66	8.25	19.0	2.9	0.07		
14-Jun-00	CH20	1515	2	0.141	6.01	8.07	22.5	3.0	0.04		
14-Jun-00	CH21	1430	0.01	0.117	7.64	8.13	15.8	2.8	0.06		
14-Jun-00	CH22	1410	7	0.154	5.67	8.06	22.0	1.9	0.03		
14-Jun-00	CH23	1455	6	0.308	6.32	8.64	24.0	2.8	0.02		
14-Jun-00	CH24	1150	25	0.282	6.29	7.92	22.0	3.0	0.10		
21-Jun-00	CH01	640	1	0.412	8.90	7.05	8.9	3.2	0.01	0.018	6
*21-Jun-00***	*CH01*									*0.017*	*2.5*
21-Jun-00	CH02	820	2	1.320	5.52	7.59	12.6	1.8	0.08	0.032	34
21-Jun-00	CH03	750	175	0.291	8.60	7.52	10.1	2.9	0.00	0.0025	6
21-Jun-00	CH04	730	100	0.277	8.68	7.74	10.6	2.5	0.00	0.0025	6
21-Jun-00	CH05	715	0.01	1.320	7.34	8.03	11.5	2.9	0.06	0.034	8
21-Jun-00	CH06	850	120	0.295	8.30	7.84	11.9	2.8	0.00	0.0025	10
21-Jun-00	CH07	905	120	0.294	8.18	7.86	11.6	2.4	0.00	0.0025	6
21-Jun-00	CH08	840	0.01	1.300	6.33	7.66	14.1	2.4	0.01	0.0025	6
21-Jun-00	CH09	1400	1	0.136	5.20	7.76	23.2	3.2	0.07	0.009	12
21-Jun-00	CH10	1345	4	0.125	5.45	7.93	21.6	2.8	0.03	0.0025	14
21-Jun-00	CH11	1325	5	0.240	5022.00	7.90	22.3	2.3	0.05	0.012	10
21-Jun-00	CH12	1250	7	0.283	6.24	7.75	24.3	3.0	0.05	0.011	10
21-Jun-00	CH13	1200	15	0.383	6.55	7.83	22.4	2.3	0.08	0.024	2.5
21-Jun-00	CH14	1110	20	0.445	6.47	8.12	23.4	3.2	0.11	0.043	32
*21-Jun-00***	*CH14*									*0.043*	*26*
21-Jun-00	CH15	1010	55	0.402	6.91	7.86	18.9	3.0	0.07	0.029	18
21-Jun-00	CH16	940	60	0.395	6.33	7.59	16.8	2.9	0.07	0.021	30
21-Jun-00	CH17	920	65	0.401	6.73	7.52	12.9	2.4	0.05	0.019	20
21-Jun-00	CH18	1040	0.01	0.488	7.83	8.15	17.3	3.6	0.09	0.028	2.5
21-Jun-00	CH20	1515	1	0.154	5.95	8.04	22.7	3.2	0.06	0.006	6
21-Jun-00	CH21					--- DRY ---					

TABLE 26
BASIN-WIDE SCREENING SURVEYS
CHATFIELD WATERSHED - JUNE 2000

			Field Measurements							Laboratory Analyses	
DATE	Screening Location	TIME	Instantaneous Flow (est.) (cfs) [1]	Specific Conductance Field (us/cm)	Oxygen, dissolved (mg/l)	pH (std. Units)	Temperature (Deg C)	Nitrate, Field (mg/l)	Total Phosphorous Field (mg/l)	Phosphorus ortho, total (mg/L as P)	Total Suspended Solids (TSS) (gm/M^3)
MDL [1]										0.005	5
PQL [2]										0.03	20
21-Jun-00	CH22	1420	5	0.164	5.82	8.19	22.7	2.4	0.03	0.007	6
21-Jun-00	CH23	1455	6	0.331	5.48	8.50	24.4	2.9	0.04	0.016	<u>2.5</u>
21-Jun-00	CH24	1100	25	0.295	6.64	7.97	21.0	2.9	0.07	0.01	<u>2.5</u>

UNDERLINED VALUES ARE LESS THAN MDL.

BLANK RANGES INDICATE NO ANALYSES WERE REQUESTED.

** DATA ITALICIZED MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

1) MDL = METHOD DETECTION LIMIT.

2) PQL = PRACTICAL QUANTITATION LIMIT.

SUMMARY DATA TABLES

TABLE 27
GROWING SEASON (MAY-THROUGH-SEPTEMBER)
TOTAL-PHOSPHORUS AND CHLOROPHYLL-a CONCENTRATIONS
CHATFIELD RESERVOIR

Year	Total-Phosphorus Concentration (mg/L)[1)2)]	Chlorophyll-a Concentration (ug/L)[1)3)]
1982	0.023	15
1983	0.050	16
1984	0.035	6.7
1985	0.028	8.9
1986	[4)]	[4)]
1987	0.077	5.7
1988	0.023	7.6
1989	0.011	3.6
1990	0.015	7.1
1991	0.025	3.0
1992	0.015	3.9
1993	0.015	4.0
1994	0.013	3.0
1995	0.010	3.6
1996	0.034	3.9
1997	0.012	2.4
1998	0.016	3.8
1999	0.021	4.7
2000	0.012	7.5
Mean	0.024	6.1
Std. Dev.	0.016	3.8
Maximum	0.077	16.0
Minimum	0.010	2.4
N	18	18

1) Average Reservoir values.
2) Growing-season standard = 0.027 mg/L.
3) Growing-season goal = 17 ug/L.
4) No data.

TABLE 28
CHATFIELD WATERSHED
SUMMARY OF METALS DATA, 1997 - 2000

Site RM - Reservoir

	Water Quality Standards (mg/l)		Summary 1997 - 1999		2000	
Metal	Acute	Chronic	% Detect	Maximum (mg/l)	% Detect	Maximum (mg/l)
Arsenic (Total)	0.36	0.15	21.43%	0.001	7.69%	0.001
Cadmium	0.01	0.001	1.72%	0.004	0.00%	N/A
Chromium III	0.05	0.05	0.00%	N/A	0.00%	N/A
Chromium VI	0.016	0.011	2.38%	0.007	0.00%	N/A
Copper	0.018	0.012	11.21%	0.01	3.33%	0.02
Iron	0.3	0.3	92.86%	0.59	50.00%	0.23
Lead	0.096	0.004	0.86%	0.2	0.00%	N/A
Manganese	3.11	0.05	90.48%	0.156	90.00%	0.486
Mercury	0.002	0.0001	37.93%	0.0011	26.67%	0.171
Nickel	0.925	0.096	0.00%	N/A	10.00%	0.01
Selenium	0.14	0.01	1.72%	0.018	3.33%	0.006
Silver	0.002	0.003	0.00%	N/A	0.00%	N/A
Zinc	0.117	0.106	76.19%	0.06	70.00%	0.11

* Numerical standards based on hardness of 100 mg/l (as CaCO3) for South Platte River segment 6 or, if such standards are not applicable, the standard is the basic standard established by the WQCC.

Site SO - Reservoir Outfall

	Water Quality Standards (mg/l)		Summary 1997 - 1999		2000	
Metal	Acute	Chronic	% Detect	Maximum (mg/l)	% Detect	Maximum (mg/l)
Arsenic (Total)	0.36	0.15	40.00%	0.002	40.00%	0.001
Cadmium	0.01	0.001	7.14%	0.004	0.00%	N/A
Chromium III	0.05	0.05	0.00%	N/A	0.00%	N/A
Chromium VI	0.016	0.011	7.14%	0.008	0.00%	N/A
Copper	0.018	0.012	14.29%	0.01	0.00%	N/A
Iron	0.3	0.3	100.00%	0.37	50.00%	0.05
Lead	0.096	0.004	0.00%	N/A	18.18%	0.08
Manganese	3.11	0.05	100.00%	0.198	100.00%	0.249
Mercury	0.002	0.0001	0.00%	N/A	9.09%	0.091
Nickel	0.925	0.096	0.00%	N/A	0.00%	N/A
Selenium	0.14	0.01	2.38%	0.001	0.00%	N/A
Silver	0.002	0.003	0.00%	N/A	0.00%	N/A
Zinc	0.117	0.106	80.00%	0.04	25.00%	0.05

* Numerical standards based on hardness of 100 mg/l (as CaCO3) for South Platte River segment 6 or, if such standards are not applicable, the standard is the basic standard established by the WQCC.

TABLE 28 (Continued)
CHATFIELD WATERSHED
SUMMARY OF METALS DATA, 1997 - 1999

Site PC - Plum Creek at Titan Road

	Water Quality Standards (mg/l)		Summary 1997 - 1999		2000	
Metal	Acute	Chronic	% Detect	Maximum (mg/l)	% Detect	Maximum (mg/l)
Arsenic (Total)	0.36	0.15	60.00%	0.003	66.67%	0.002
Cadmium	0.01	0.001	2.44%	0.004	0.00%	N/A
Chromium III	0.05	0.05	6.67%	0.005	0.00%	N/A
Chromium VI	0.016	0.011	6.67%	0.005	0.00%	N/A
Copper	0.018	0.012	4.88%	0.01	0.00%	N/A
Iron	0.3	0.3	93.33%	0.6	100.00%	0.40
Lead	0.096	0.004	0.00%	N/A	0.00%	N/A
Manganese	3.11	0.05	100.00%	1.12	100.00%	0.205
Mercury	0.002	0.0001	0.00%	N/A	12.50%	0.128
Nickel	0.925	0.096	0.00%	N/A	0.00%	N/A
Selenium	0.14	0.01	29.27%	0.002	12.50%	0.001
Silver	0.002	0.003	0.00%	N/A	0.00%	N/A
Zinc	0.117	0.106	70.59%	0.2	100.00%	0.03

* Numerical standards based on hardness of 100 mg/l (as CaCO3) for South Platte River segment 6 or, if such standards are not applicable, the standard is the basic standard established by the WQCC.

Site SP - South Platte at Waterton

	Water Quality Standards (mg/l)		Summary 1997 - 1999		2000	
Metal	Acute	Chronic	% Detect	Maximum (mg/l)	% Detect	Maximum (mg/l)
Arsenic (Total)	0.36	0.15	16.67%	0.001	0.00%	N/A
Cadmium	0.01	0.001	0.00%	N/A	0.00%	N/A
Chromium III	0.05	0.05	0.00%	N/A	0.00%	N/A
Chromium VI	0.016	0.011	8.33%	0.007	0.00%	N/A
Copper	0.018	0.012	9.30%	0.01	0.00%	N/A
Iron	0.3	0.3	100.00%	0.24	50.00%	0.03
Lead	0.096	0.004	0.00%	N/A	0.00%	N/A
Manganese	3.11	0.05	100.00%	0.042	75.00%	0.015
Mercury	0.002	0.0001	2.33%	0.0002	20.00%	0.137
Nickel	0.925	0.096	0.00%	N/A	0.00%	N/A
Selenium	0.14	0.01	2.33%	0.002	10.00%	0.001
Silver	0.002	0.003	0.00%	N/A	0.00%	N/A
Zinc	0.117	0.106	58.33%	0.04	25.00%	0.02

* Numerical standards based on hardness of 100 mg/l (as CaCO3) for South Platte River segment 6 or, if such standards are not applicable, the standard is the basic standard established by the WQCC.

FIGURES

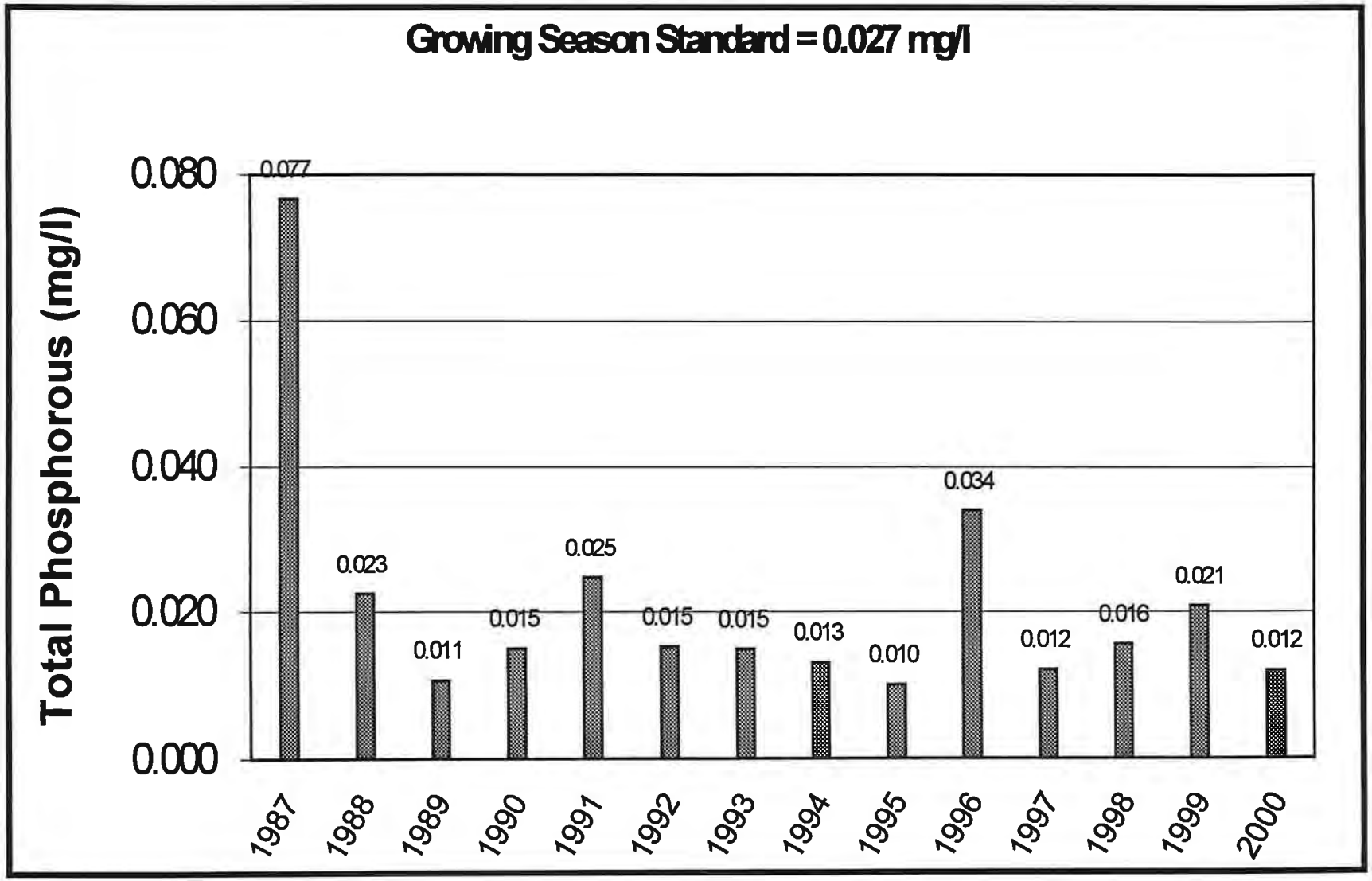


FIGURE 3

AVERAGE GROWING-SEASON TOTAL PHOSPHOROUS CONCENTRATION IN RESERVOIR, 1982-2000

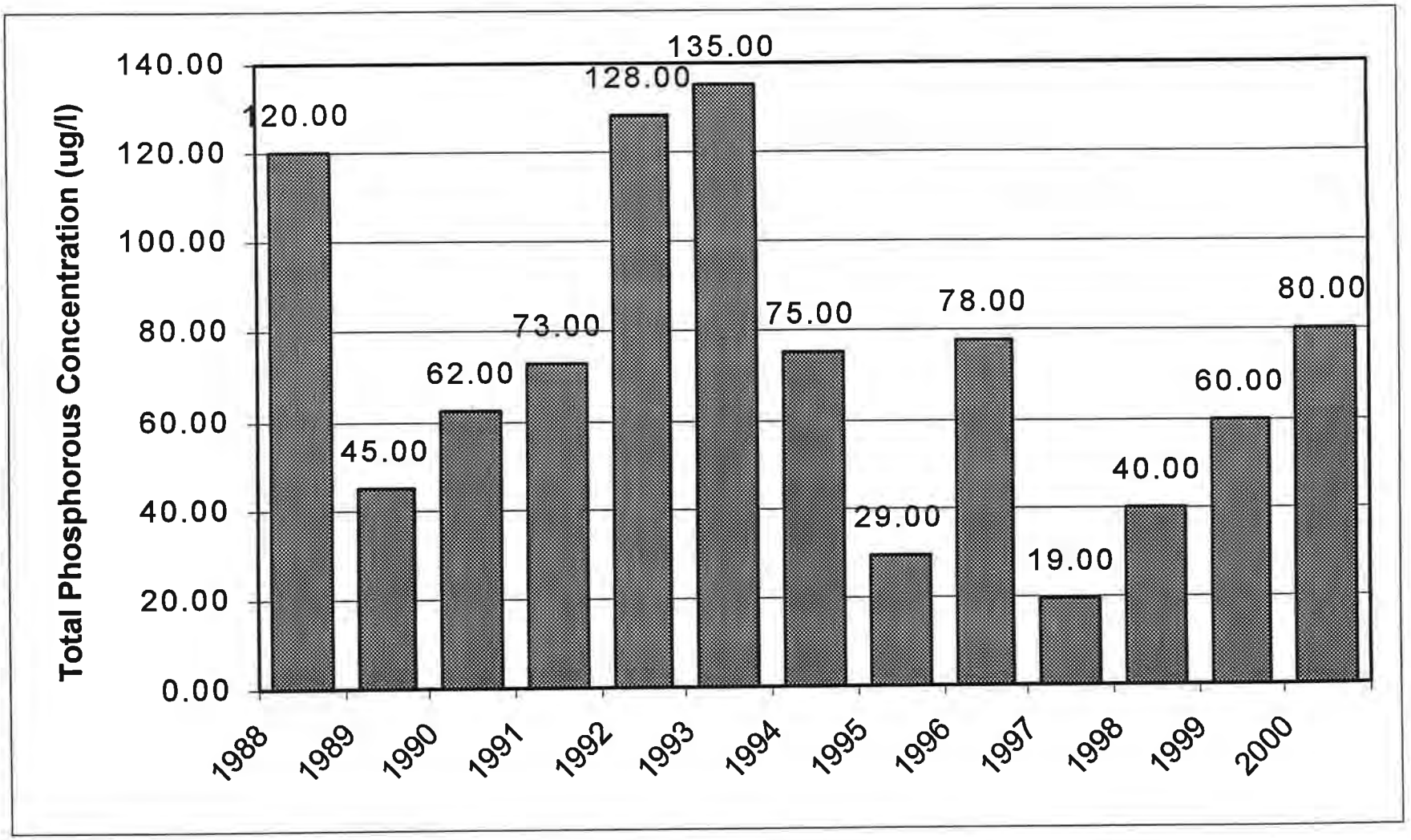


FIGURE 4
PEAK TOTAL PHOSPHOROUS CONCENTRATION IN RESERVOIR, 1988-2000

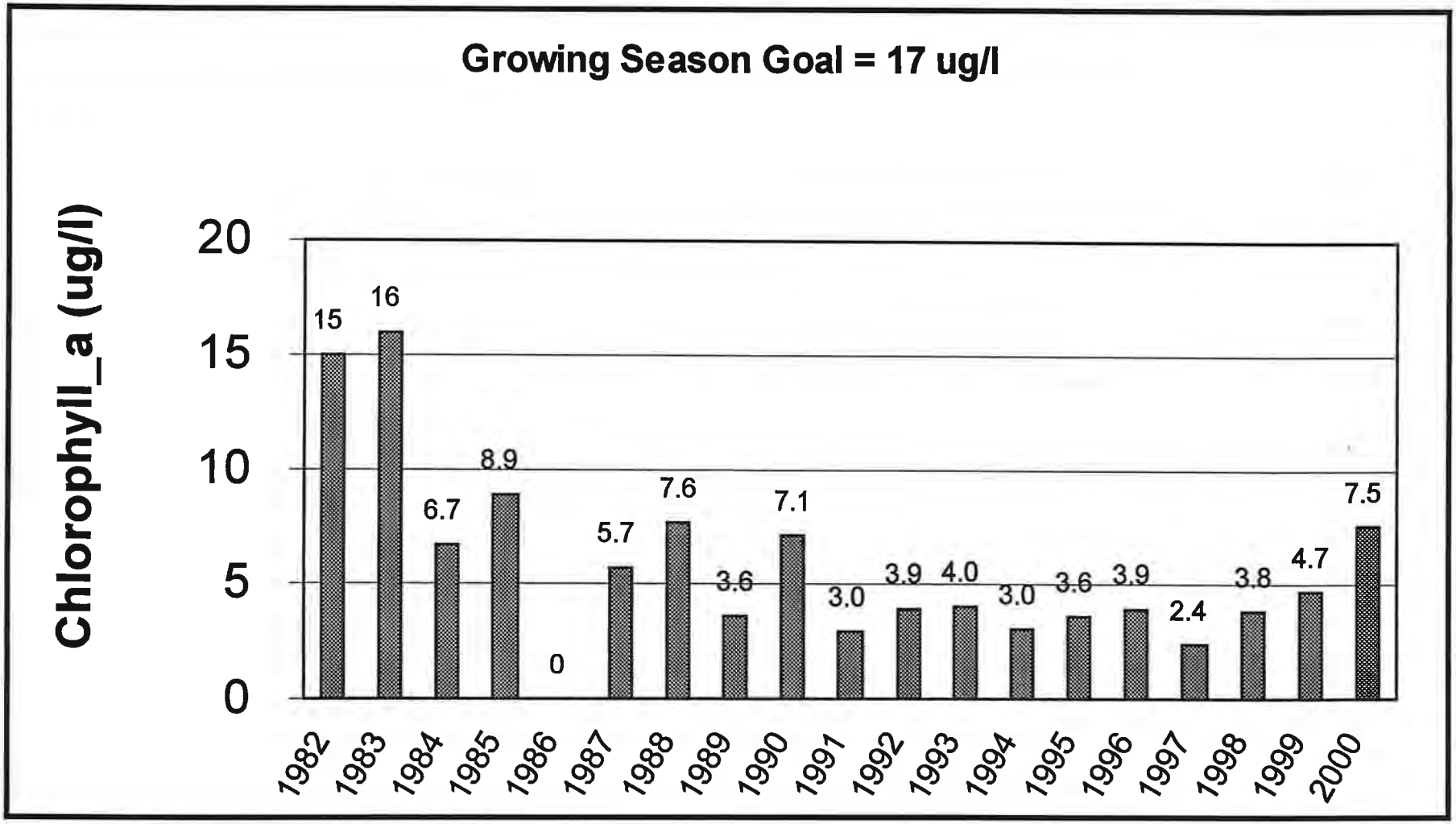


FIGURE 5
AVERAGE GROWING-SEASON CHLOROPHYLL_a CONCENTRATION IN RESERVOIR, 1982-2000

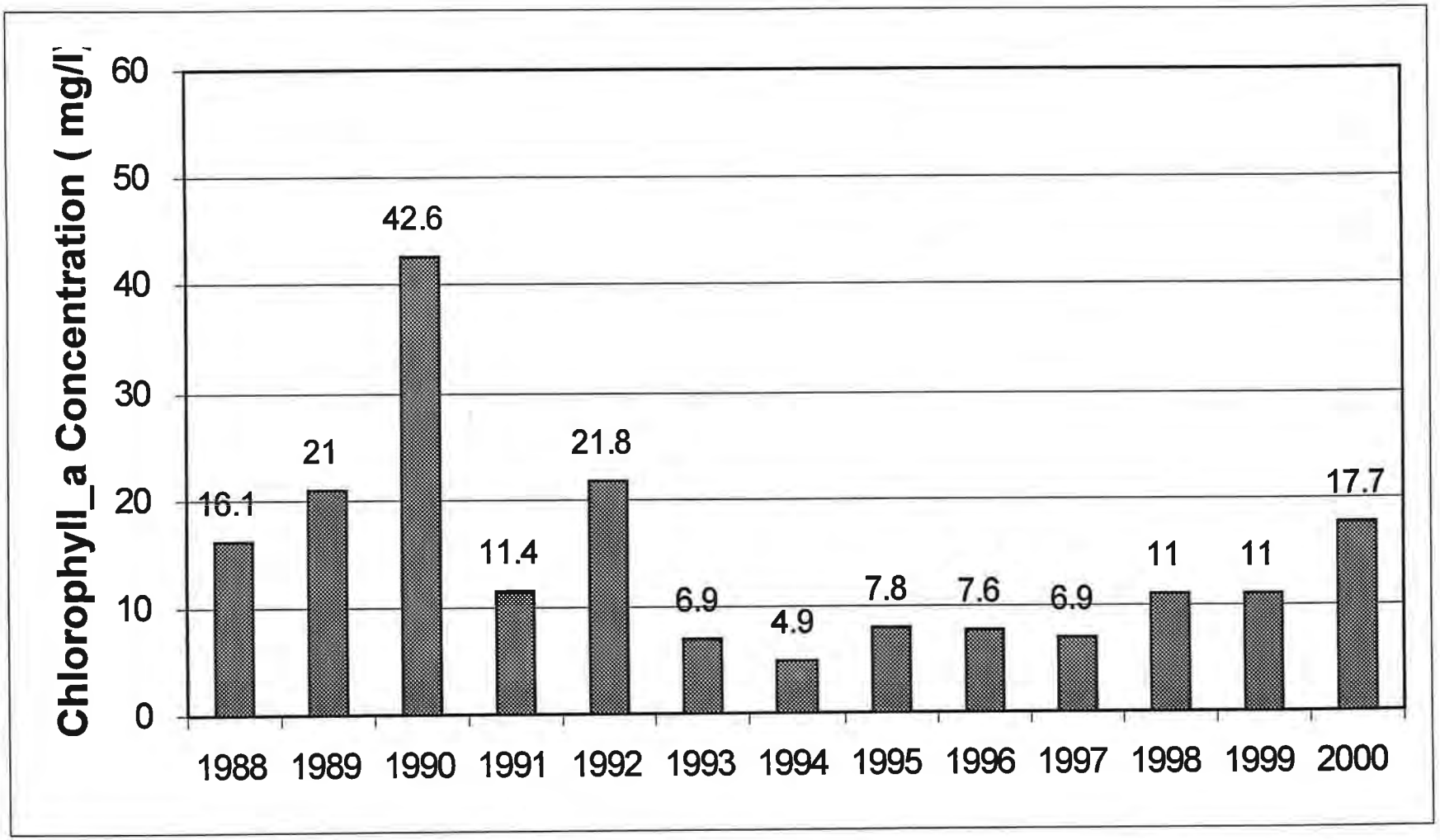


FIGURE 6
PEAK CHLOROPHYLL_a CONCENTRATION IN RESERVOIR, 1988-2000

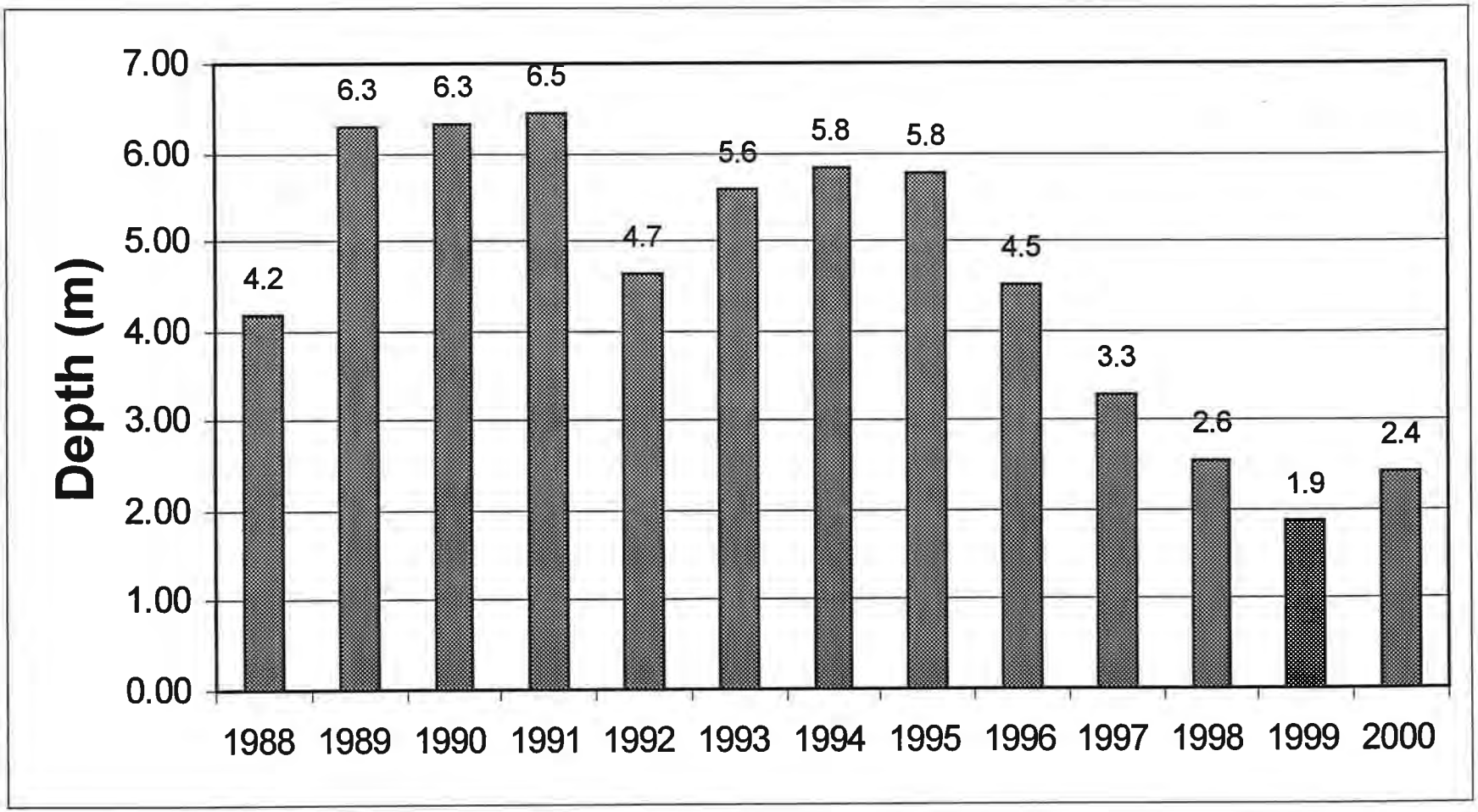


FIGURE 7
AVERAGE GROWING-SEASON SECCHI DEPTH IN RESERVOIR, 1988-2000

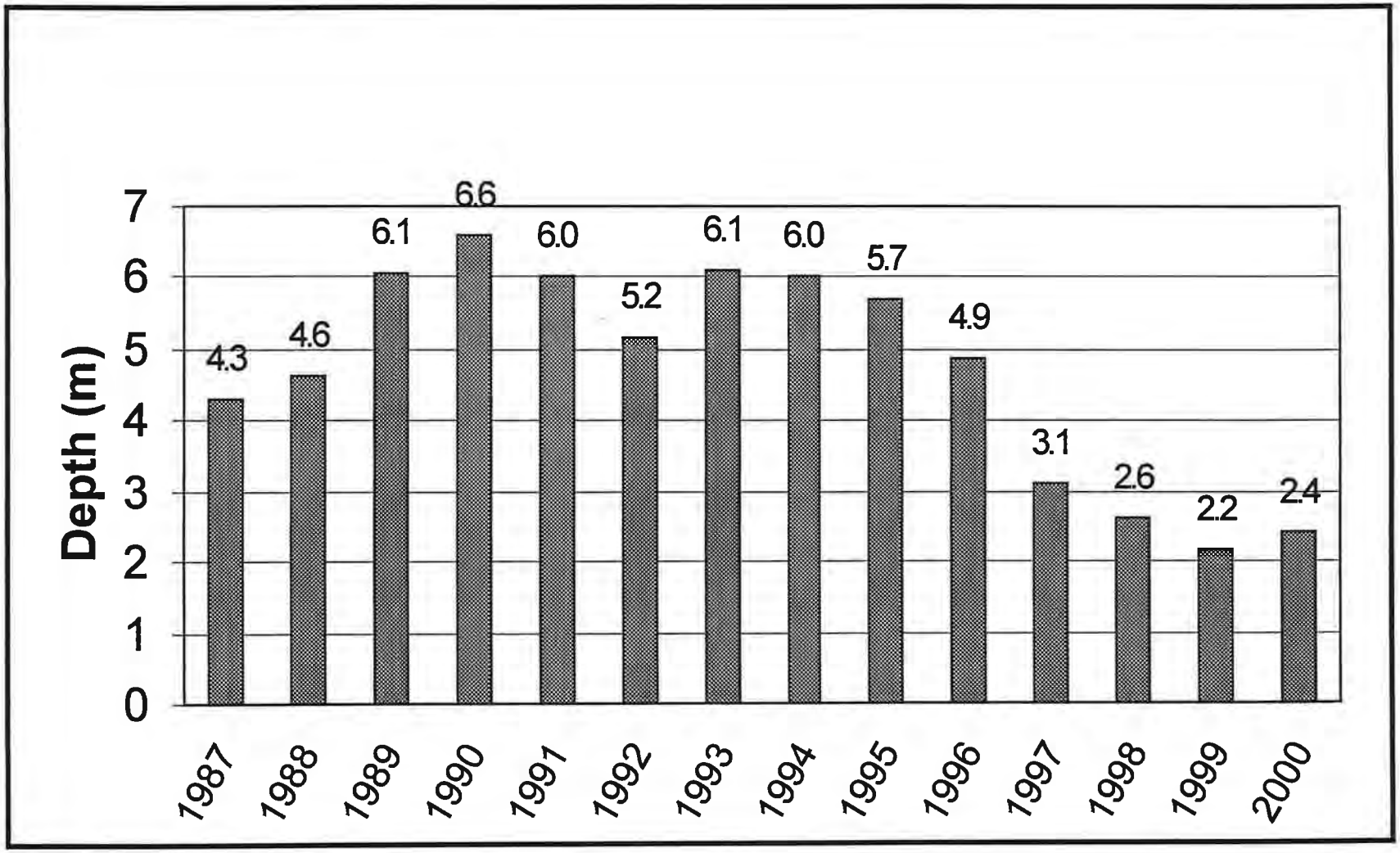


FIGURE 8
AVERAGE ANNUAL SECCHI DEPTH IN RESERVOIR, 1982-2000

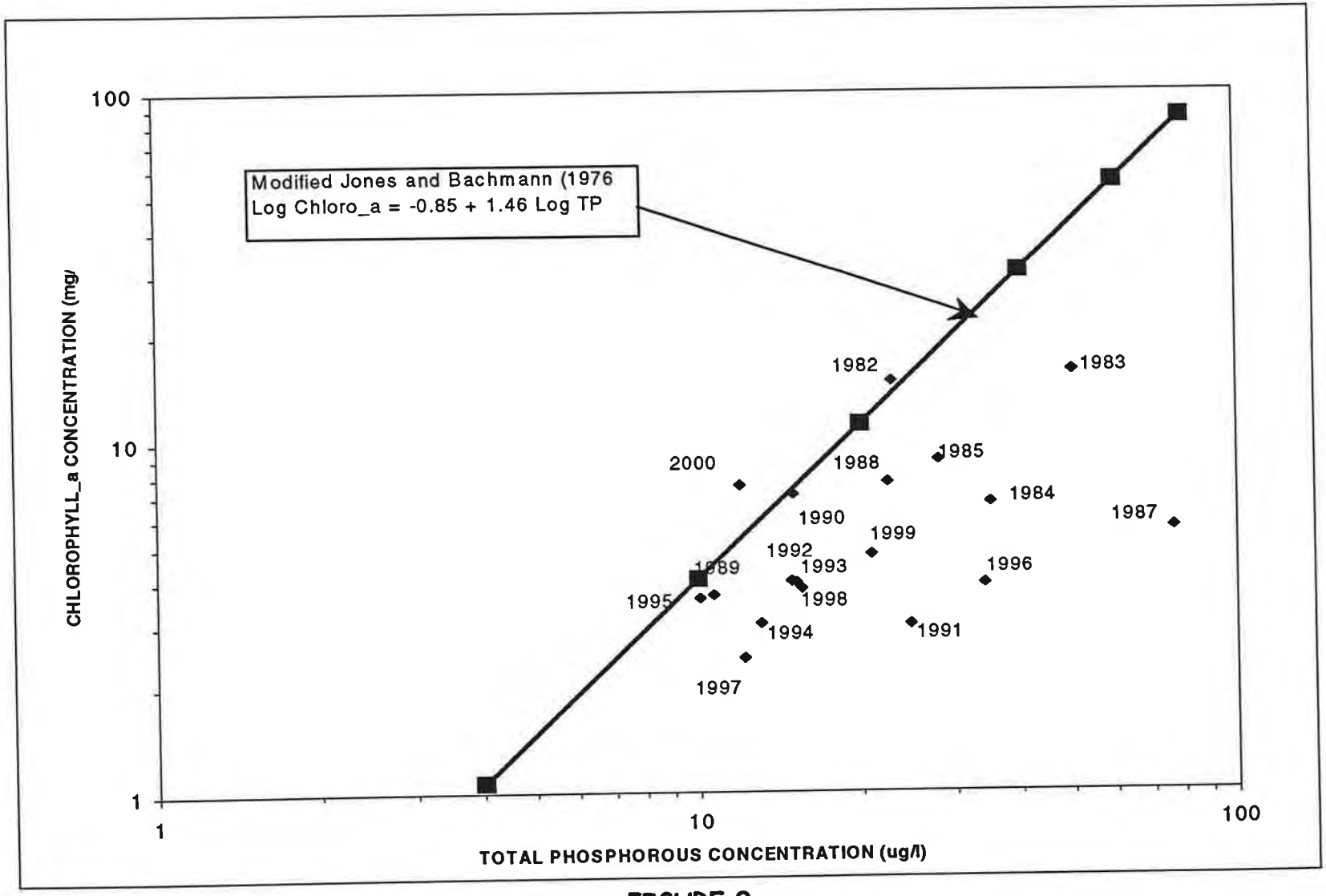


FIGURE 9

GROWING SEASON CHLOROPHYLL_a vs. TOTAL PHOSPHOROUS IN RESERVOIR, 1982-2000

Chatfield Reservoir Phytoplankton
March 2000

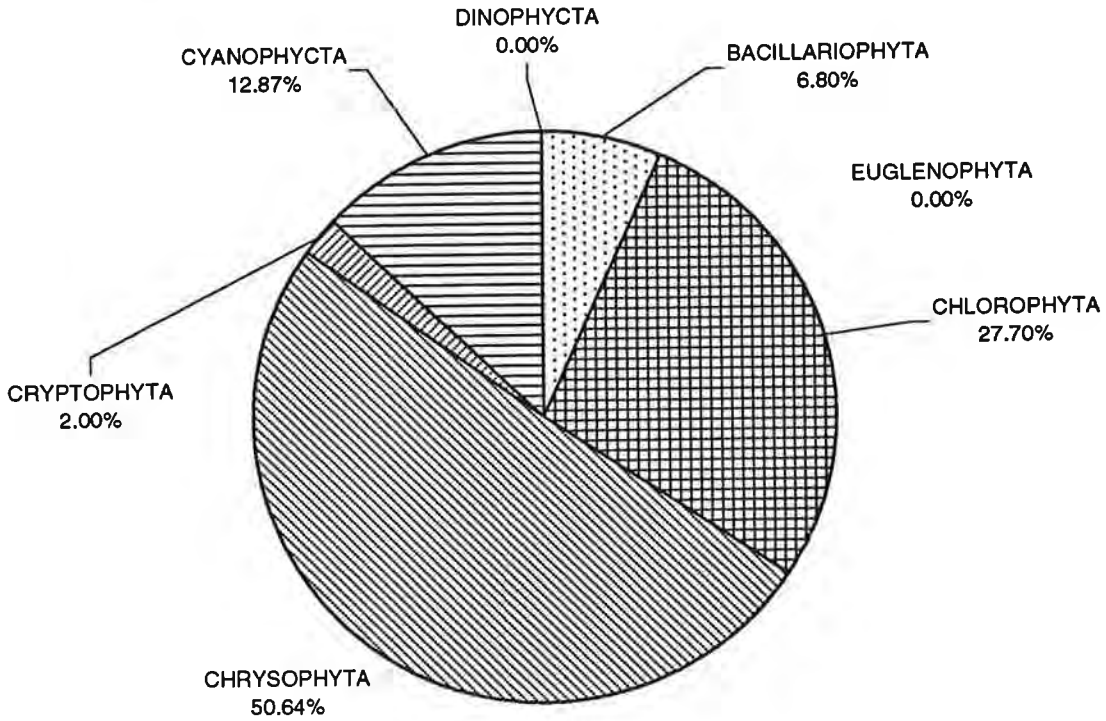


FIGURE 10

SUMMARY OF RESULTS OF PHYTOPLANKTON ANALYSES CONDUCTED FOR A SAMPLE COLLECTED AT SITE RM-1, CHATFIELD RESERVOIR, MARCH 29, 2000

Chatfield Reservoir Phytoplankton
May 2000

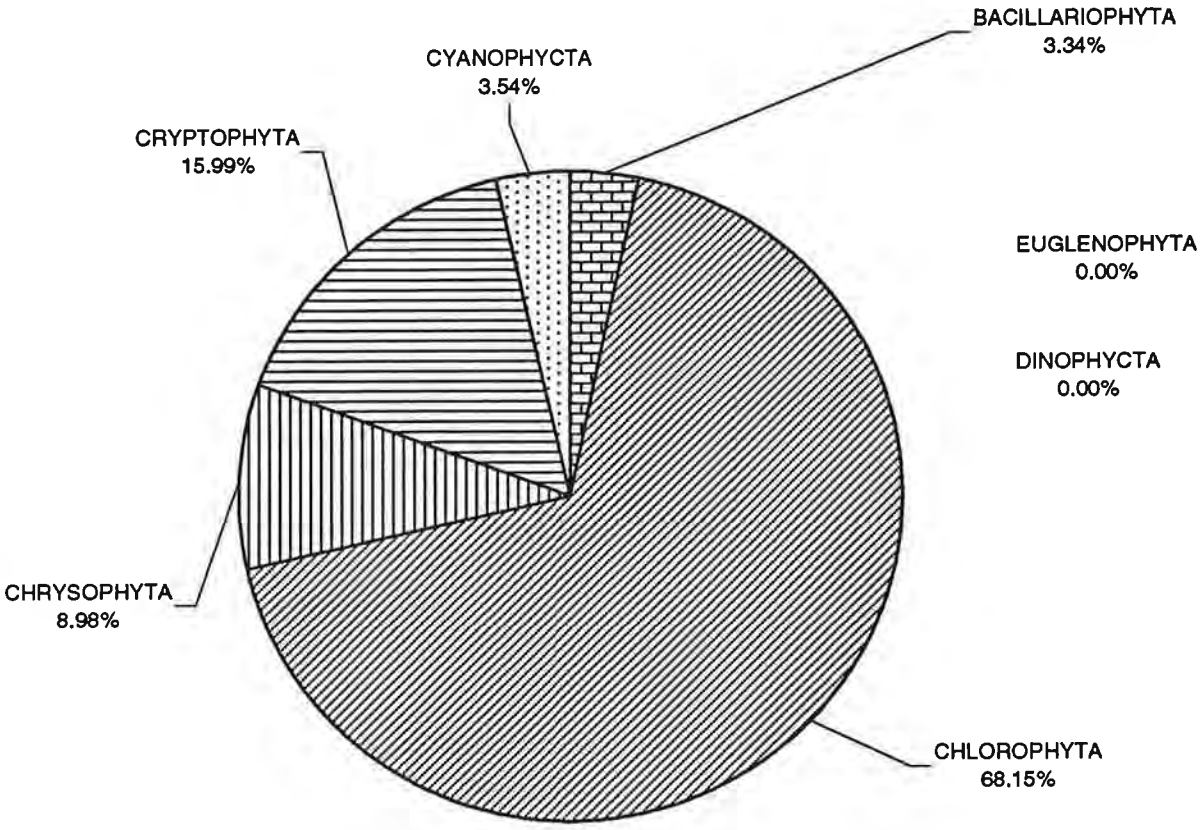


FIGURE 11

SUMMARY OF RESULTS OF PHYTOPLANKTON ANALYSES CONDUCTED FOR A SAMPLE COLLECTED AT SITE RM-1, CHATFIELD RESERVOIR, MAY 10, 2000

Chatfield Reservoir Phytoplankton
July 2000

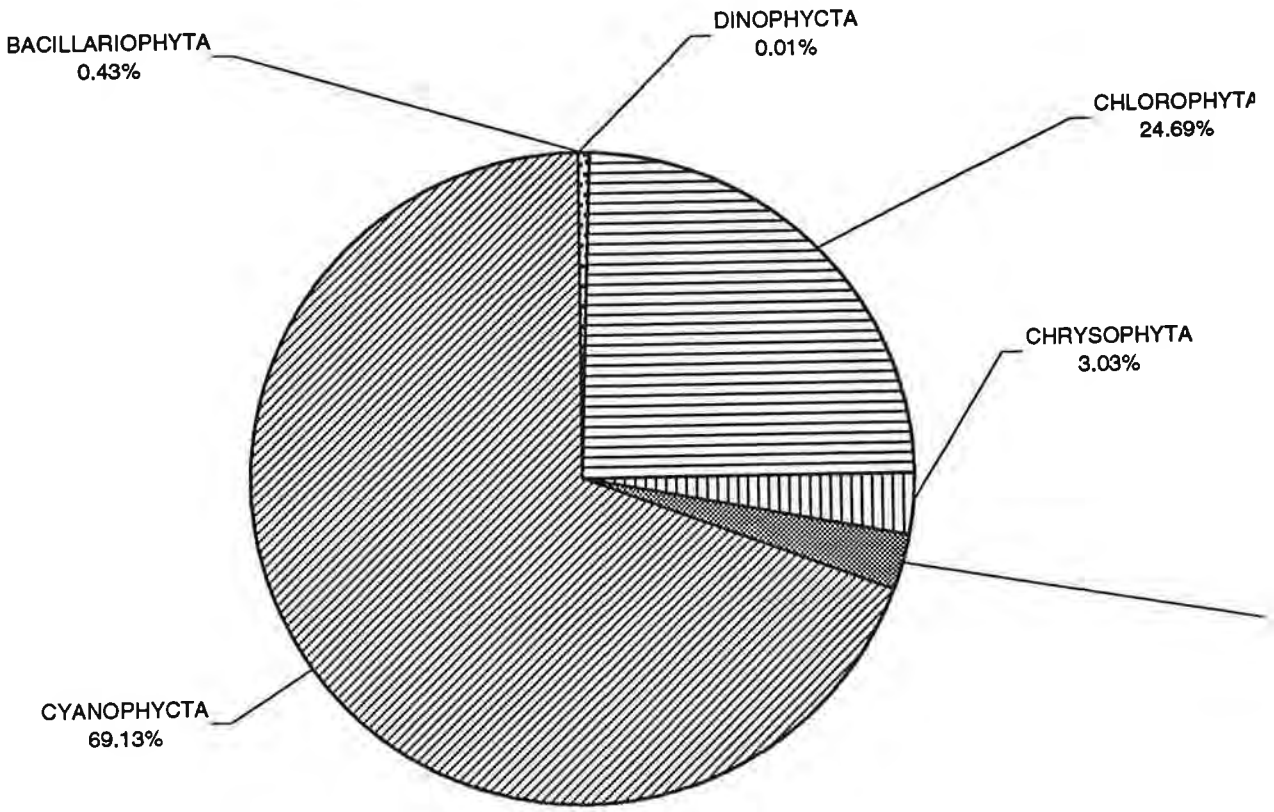


FIGURE 12
SUMMARY OF RESULTS OF PHYTOPLANKTON ANALYSES CONDUCTED FOR A SAMPLE COLLECTED AT SITE RM-1, CHATFIELD RESERVOIR, JULY 26, 2000

Chatfield Reservoir Phytoplankton
August 2000

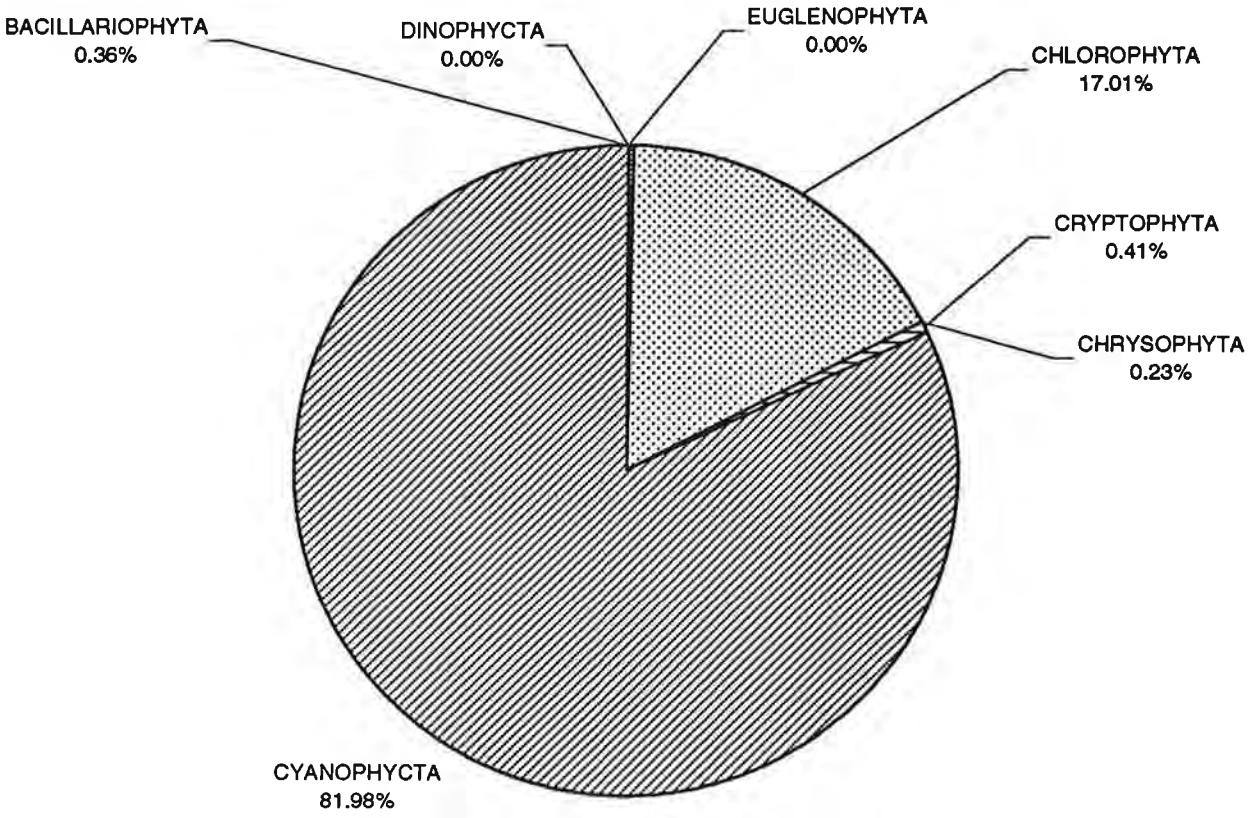


FIGURE 13
SUMMARY OF RESULTS OF PHYTOPLANKTON ANALYSES CONDUCTD FOR A SAMPLE COLLECTED AT SITE RM-1, CHATFIELD RESERVOIR, AUGUST 16, 2000

Chatfield Reservoir Phytoplankton
September 2000

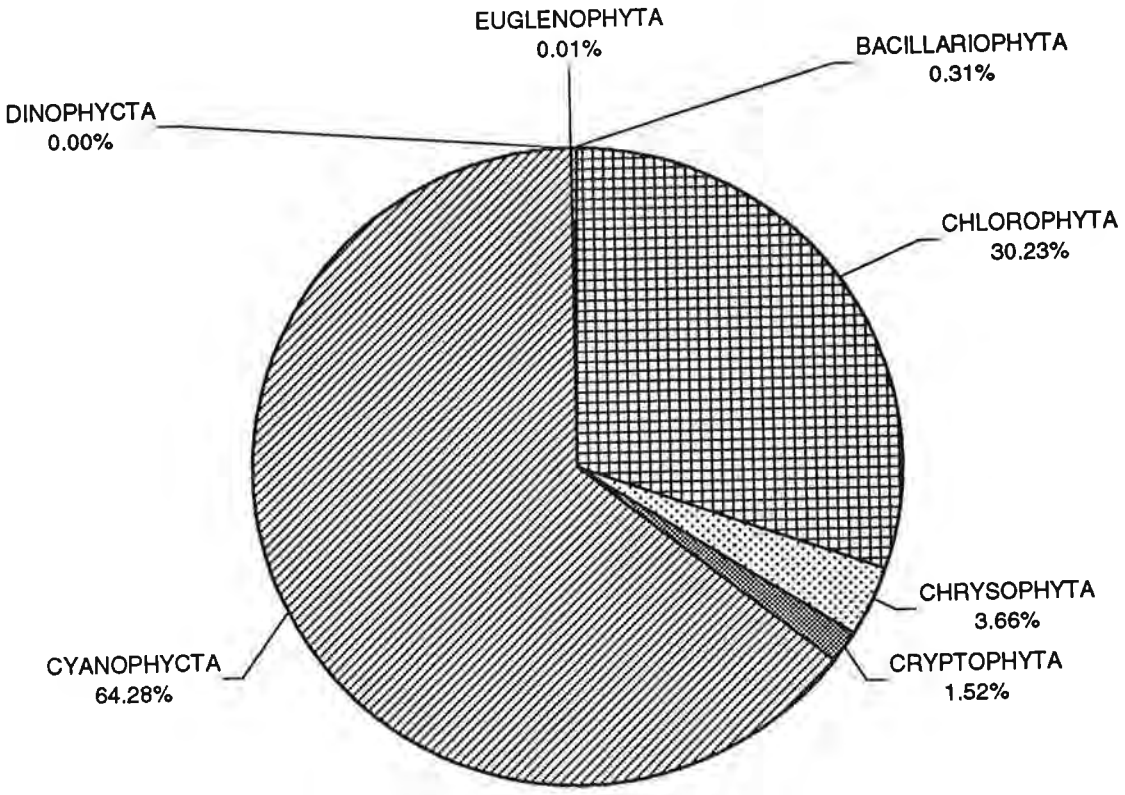


FIGURE 14

SUMMARY OF RESULTS OF PHYTOPLANKTON ANALYSES CONDUCTED FOR A SAMPLE COLLECTED AT SITE RM-1, CHATFIELD RESERVOIR, SEPTEMBER 13, 2000

Chatfield Reservoir Phytoplankton
November 2000

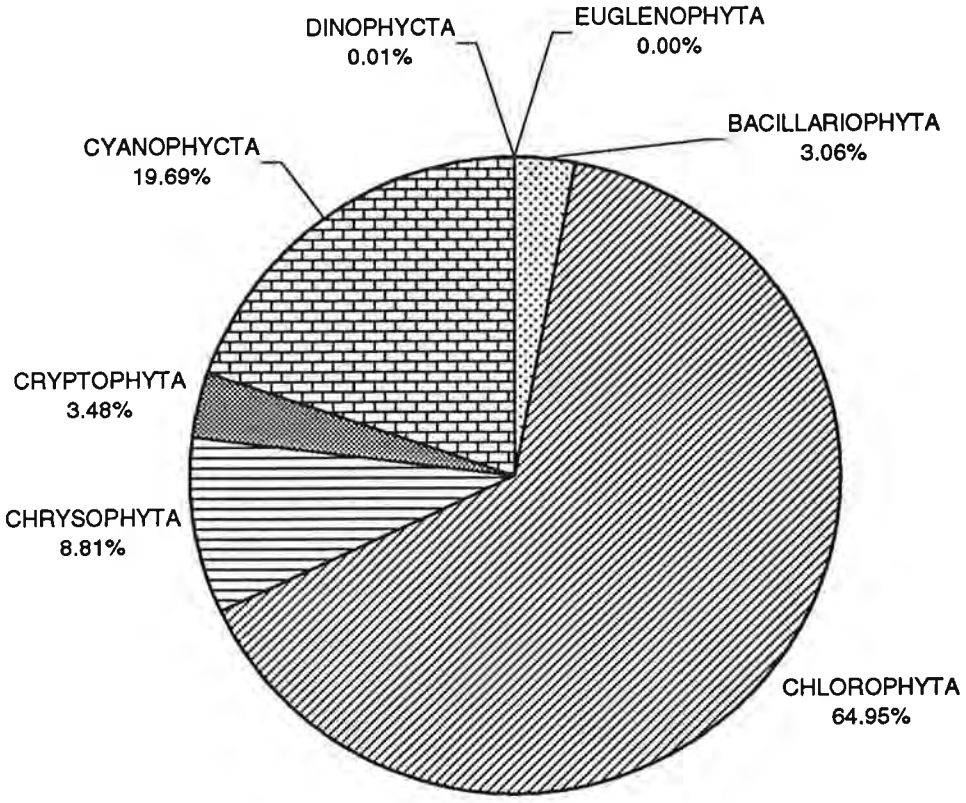


FIGURE 15

SUMMARY OF RESULTS OF PHYTOPLANKTON ANALYSES CONDUCTED FOR A SAMPLE COLLECTED AT SITE RM-1, CHATFIELD RESERVOIR, NOVEMBER 29, 2000

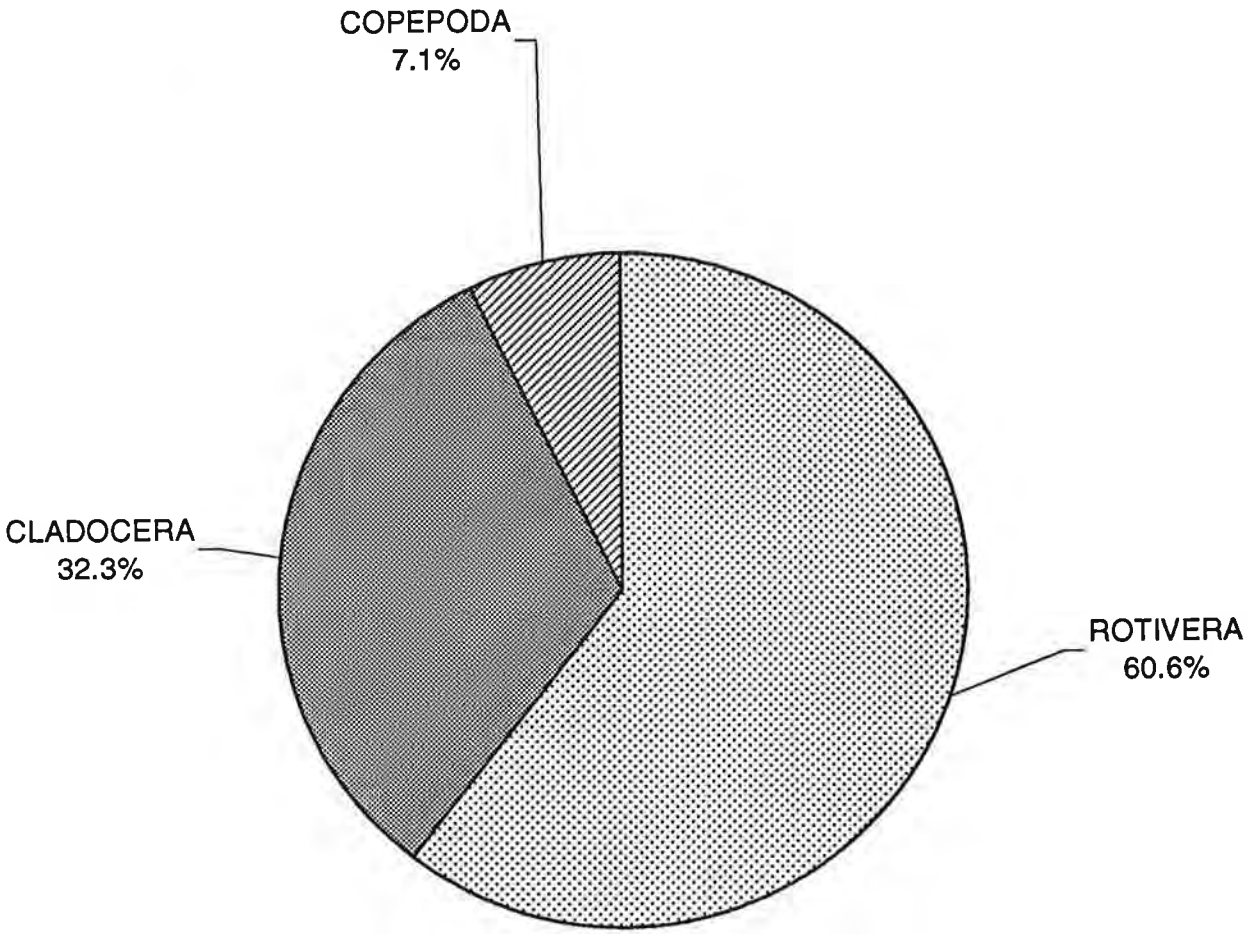
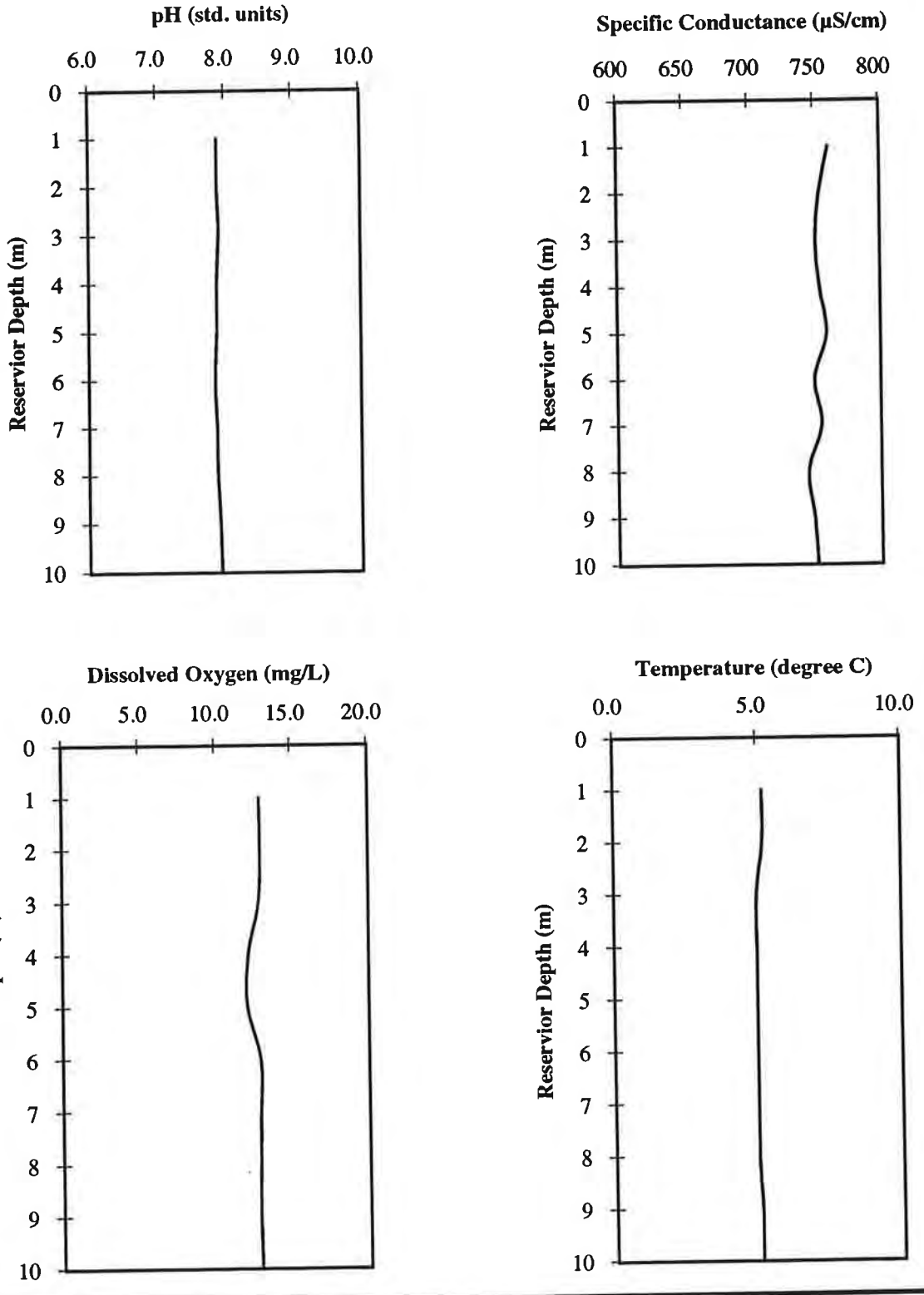


FIGURE 16

SUMMARY OF RESULTS OF ZOOPLANKTON ANALYSES CONDUCTED FOR A SAMPLED COLLECTED AT SITE RM, CHATFIELD RESERVOIR, AUGUST 16, 2000



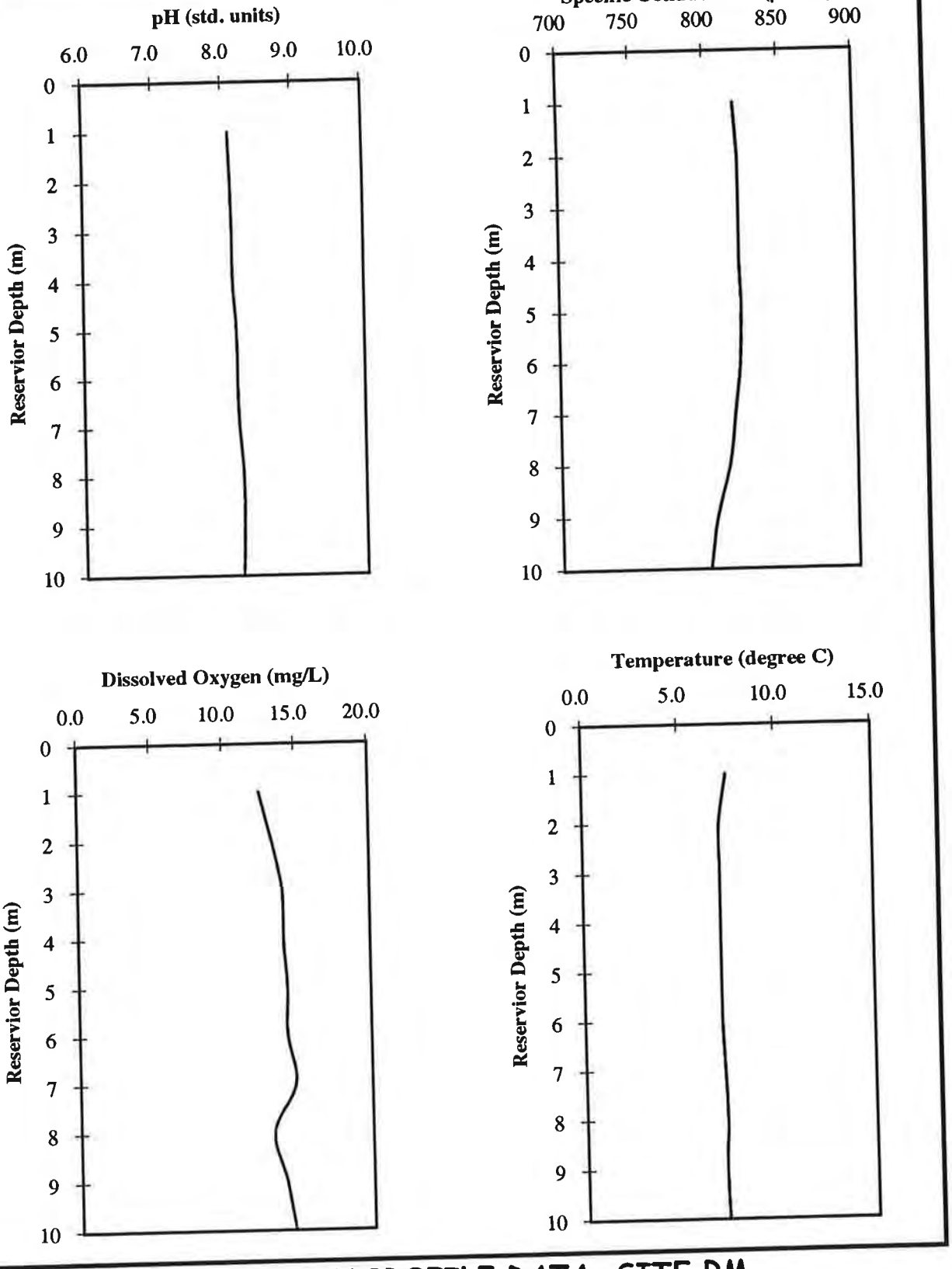
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - MARCH 1, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 17



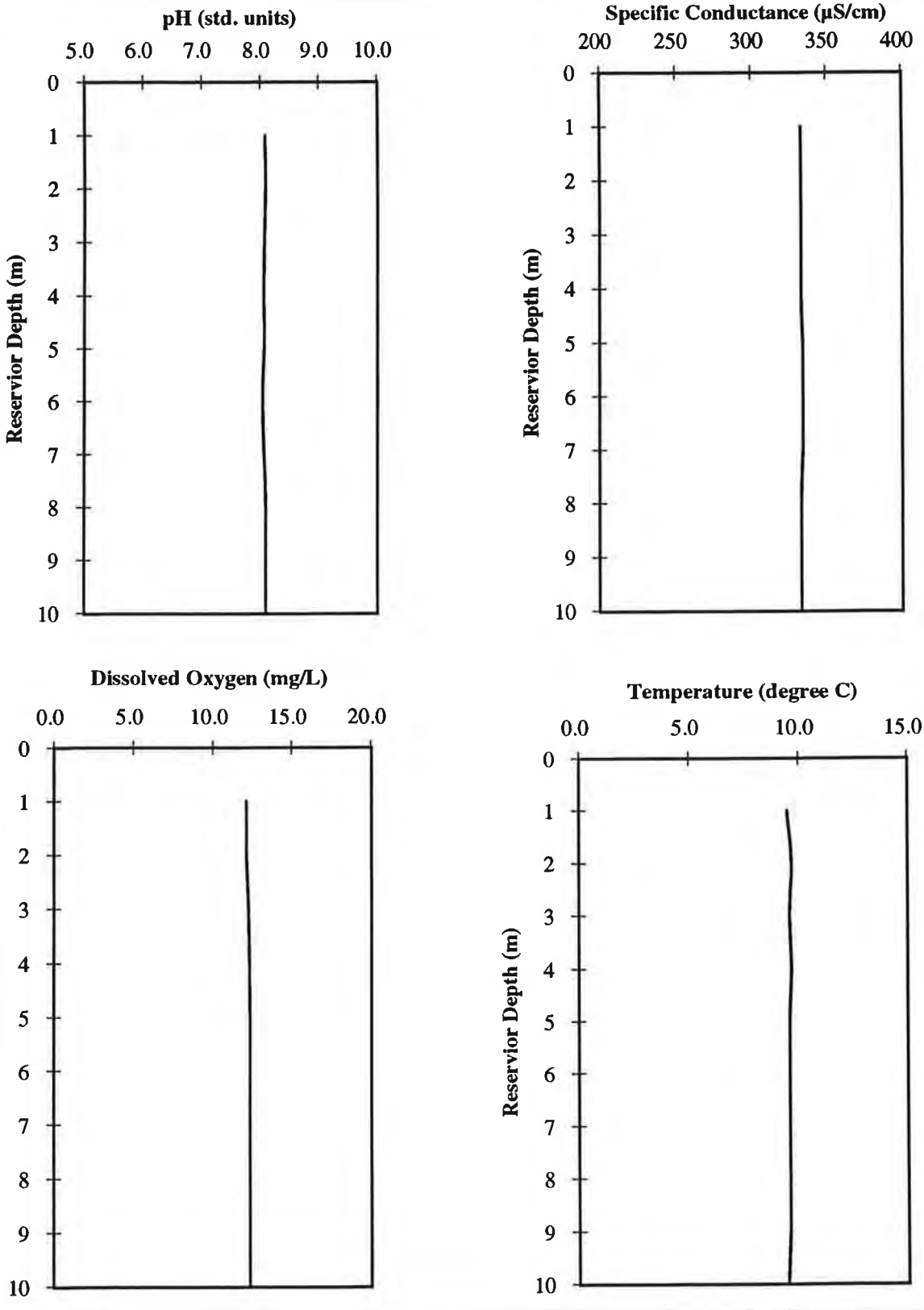
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - MARCH 29, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 18



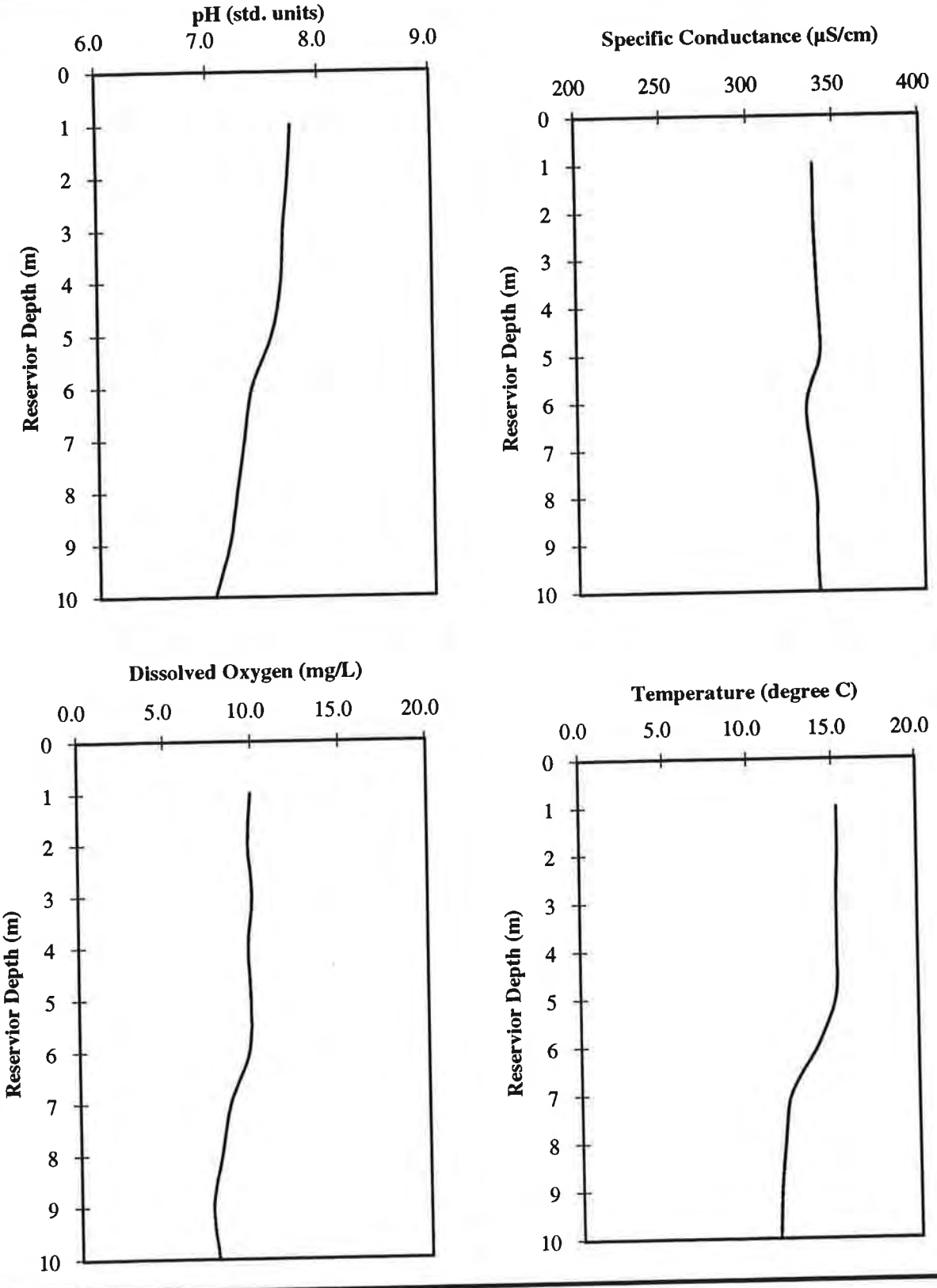
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - APRIL 12, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 19



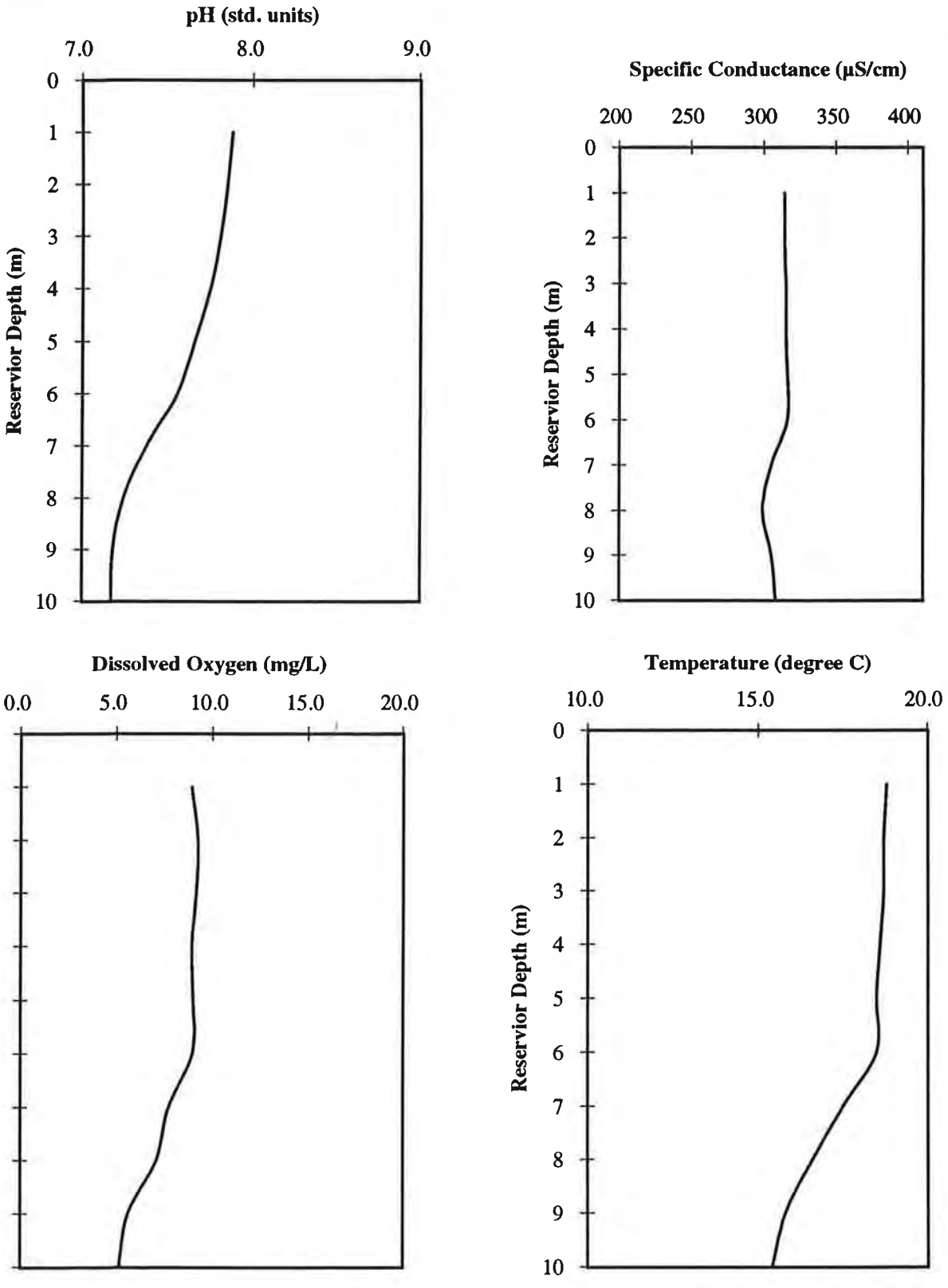
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - MAY 10, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 20



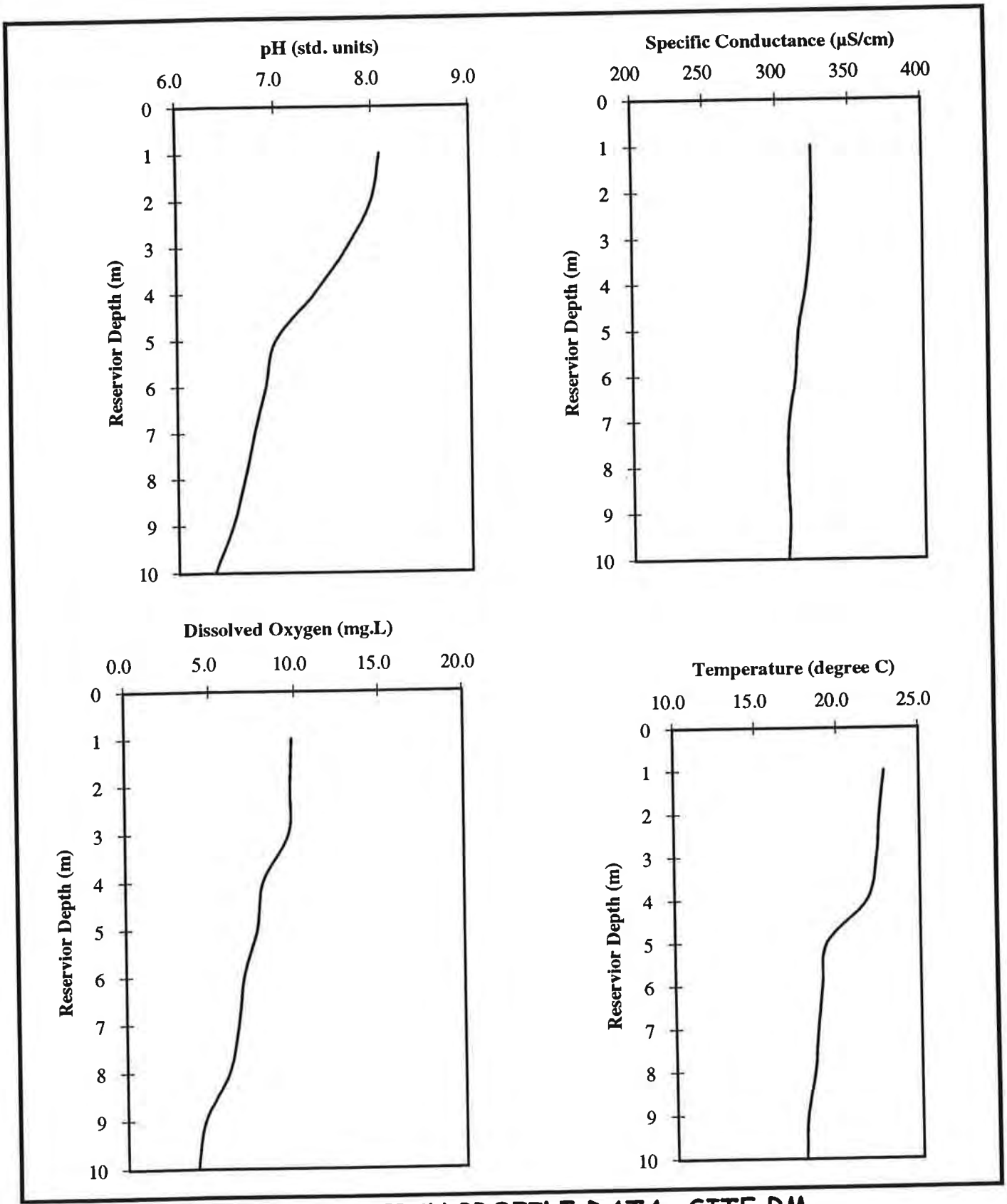
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - JUNE 14, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 21



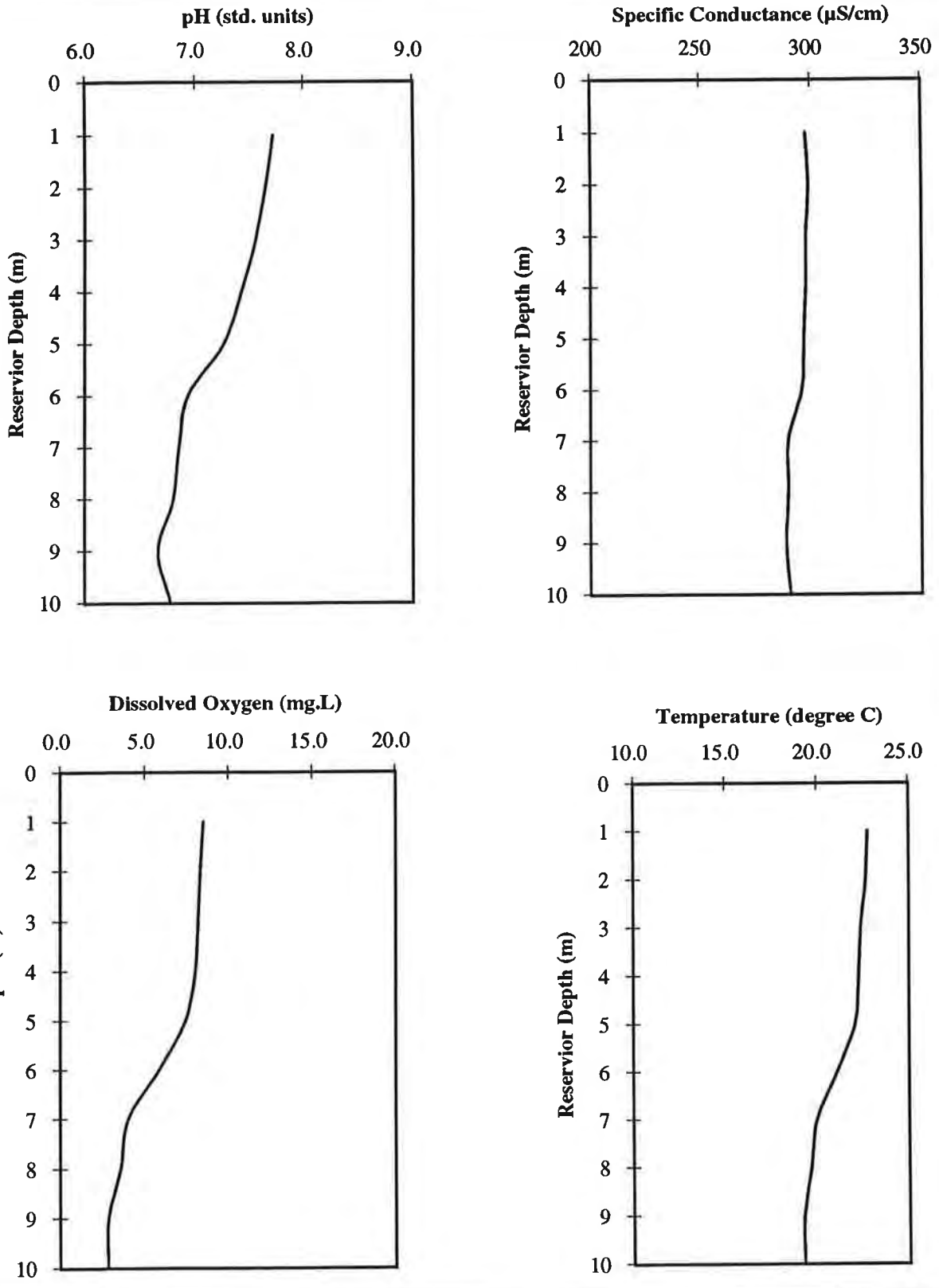
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - JULY 12, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 22



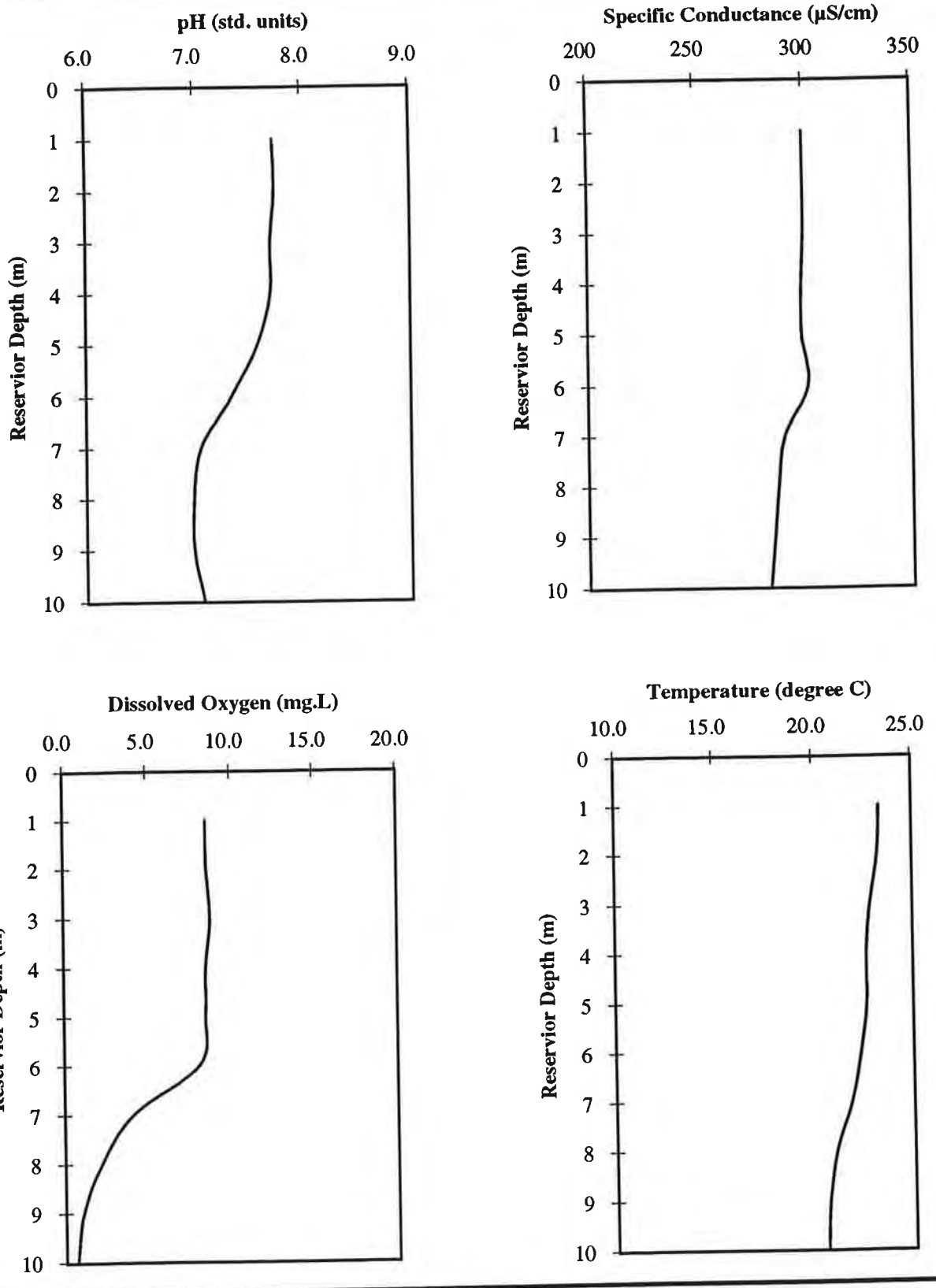
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - JULY 26, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 23



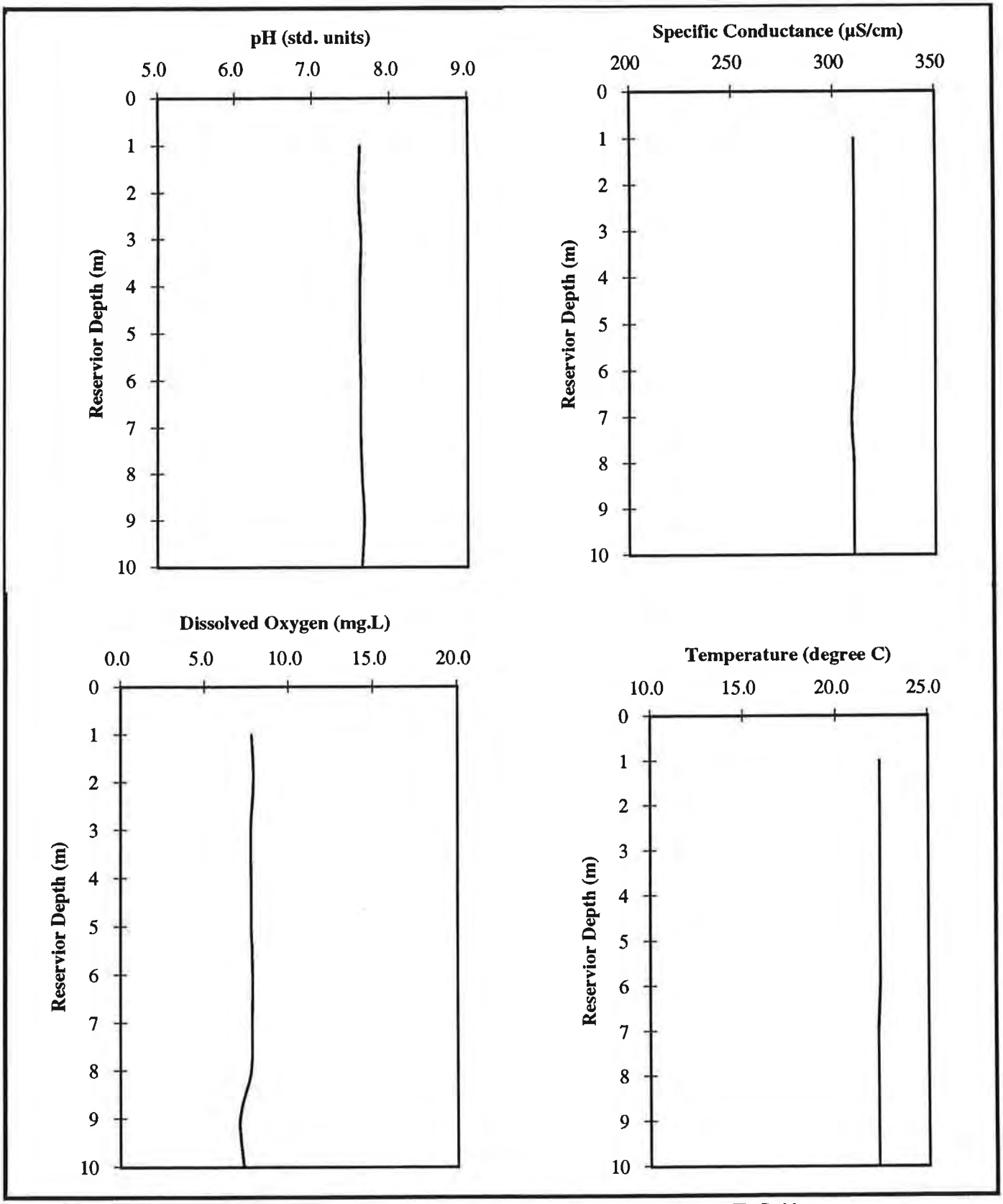
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - AUGUST 3, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 24



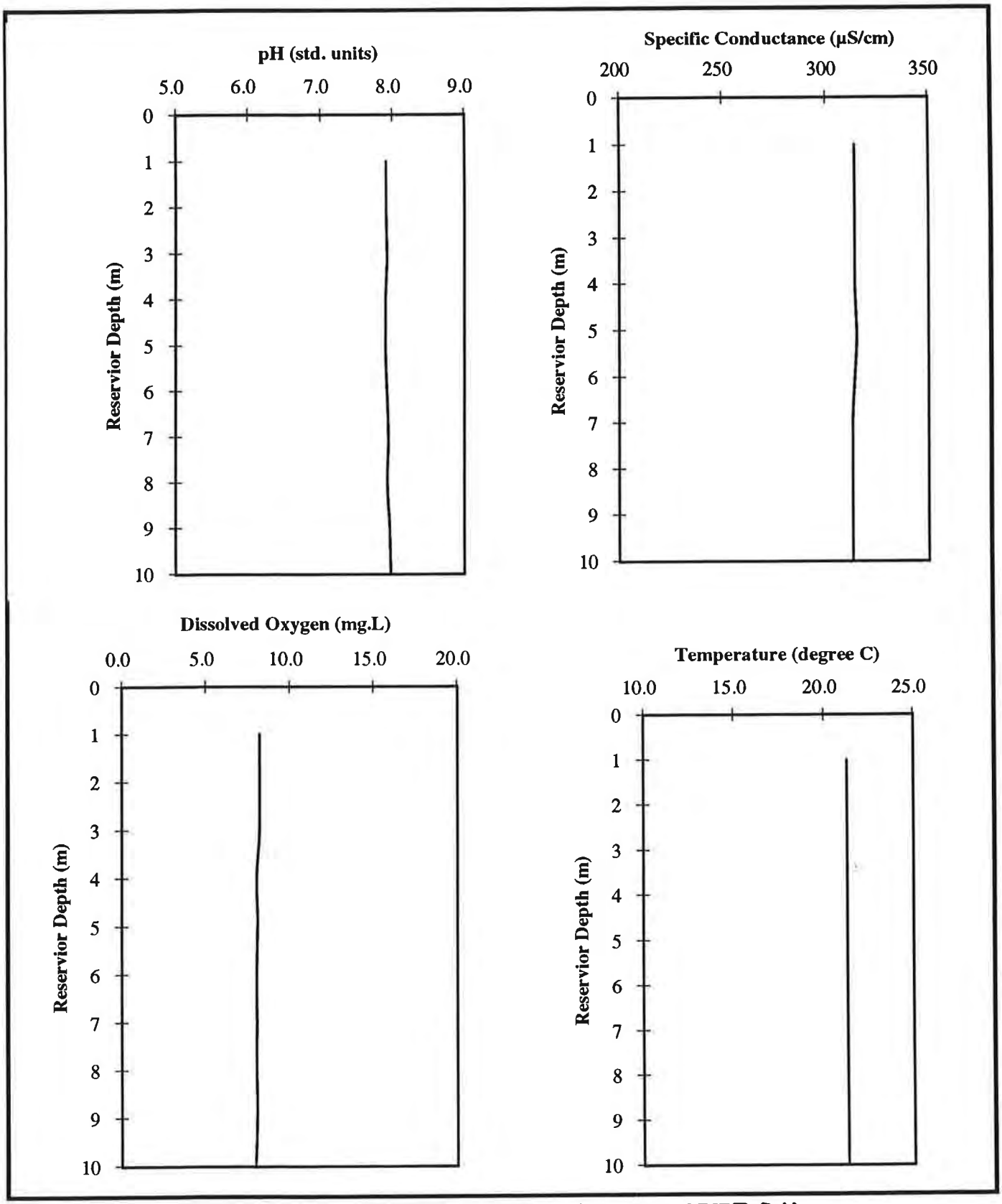
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - AUGUST 16, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 25



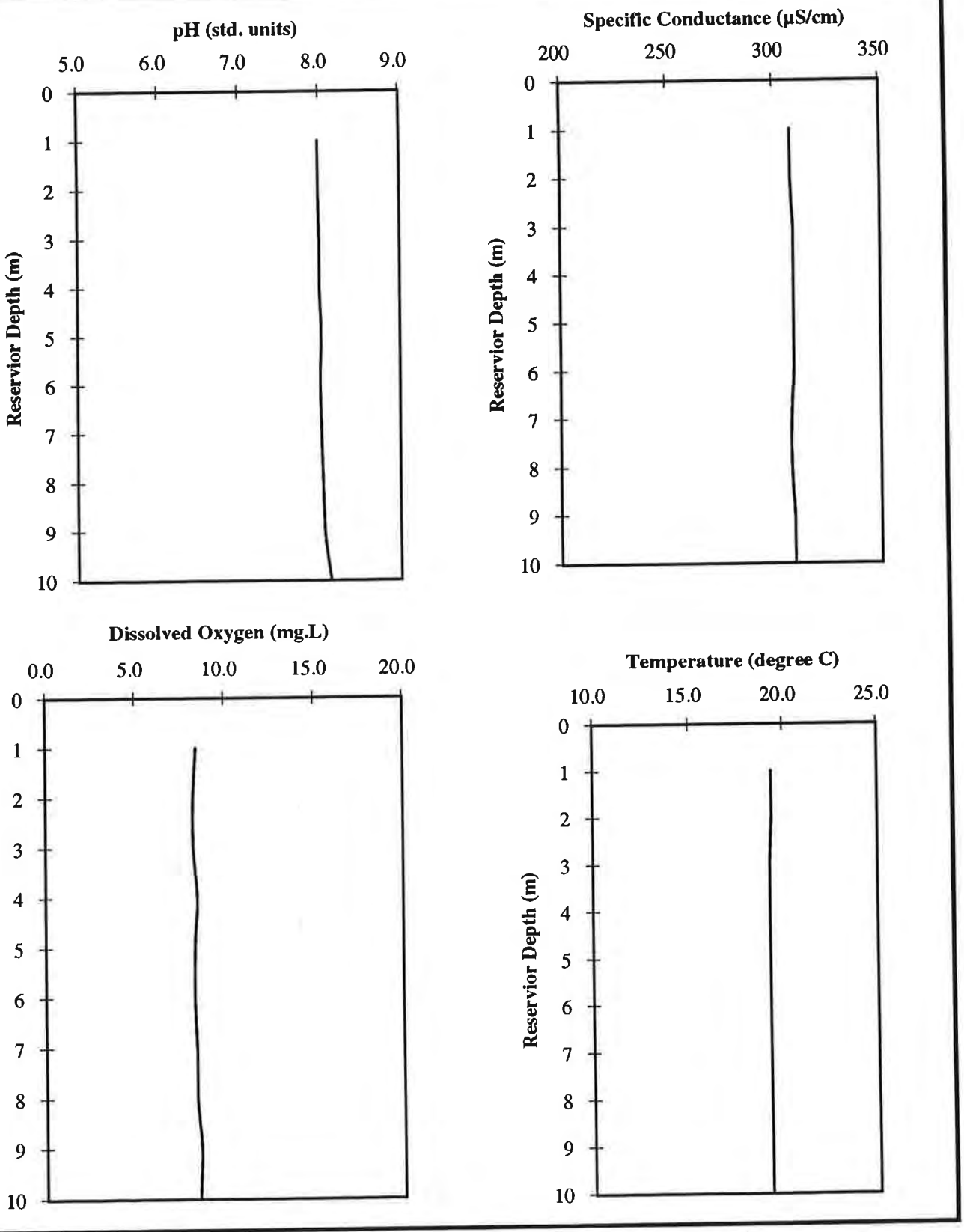
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - AUGUST 30, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 26



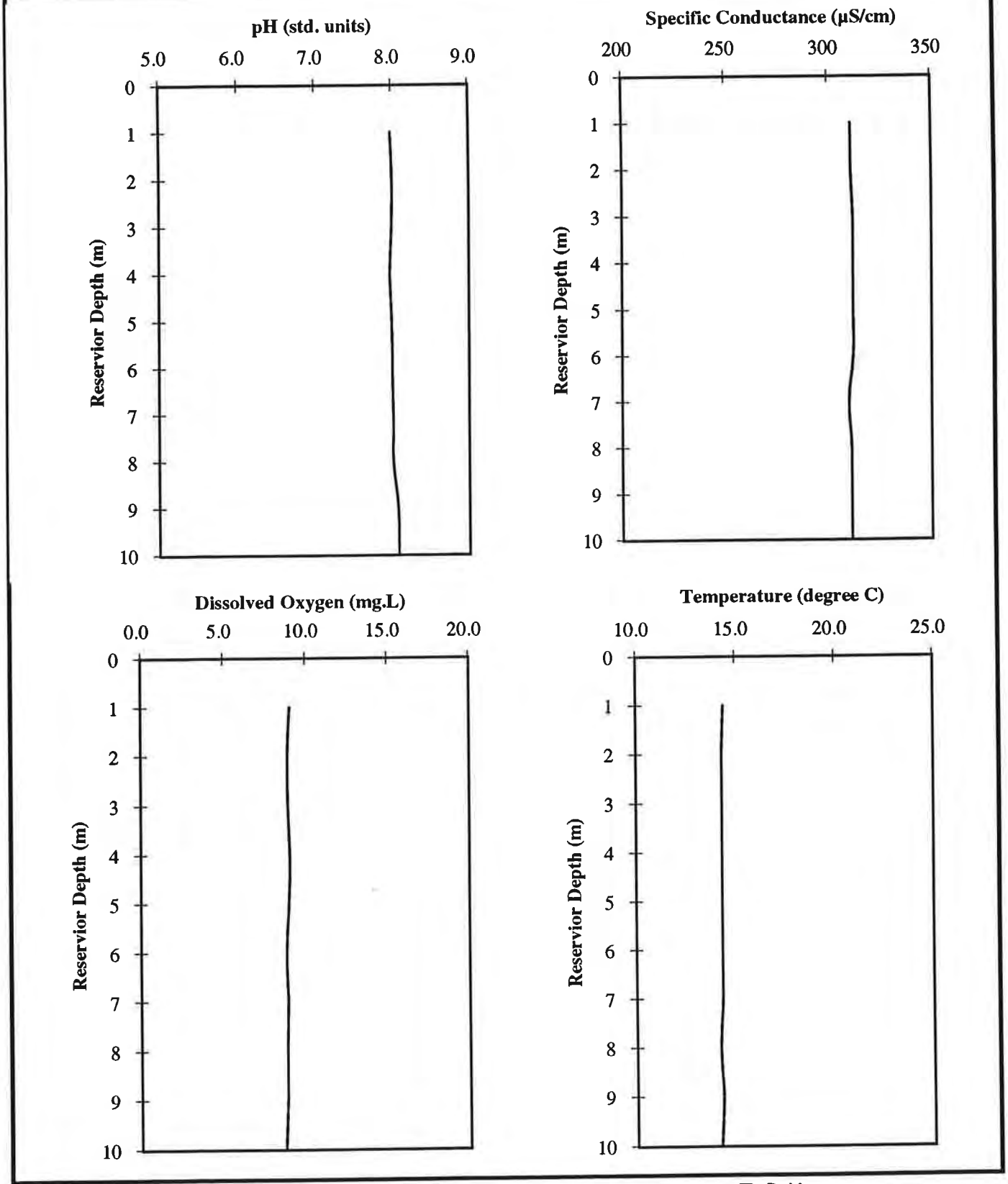
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - SEPTEMBER 13, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 27



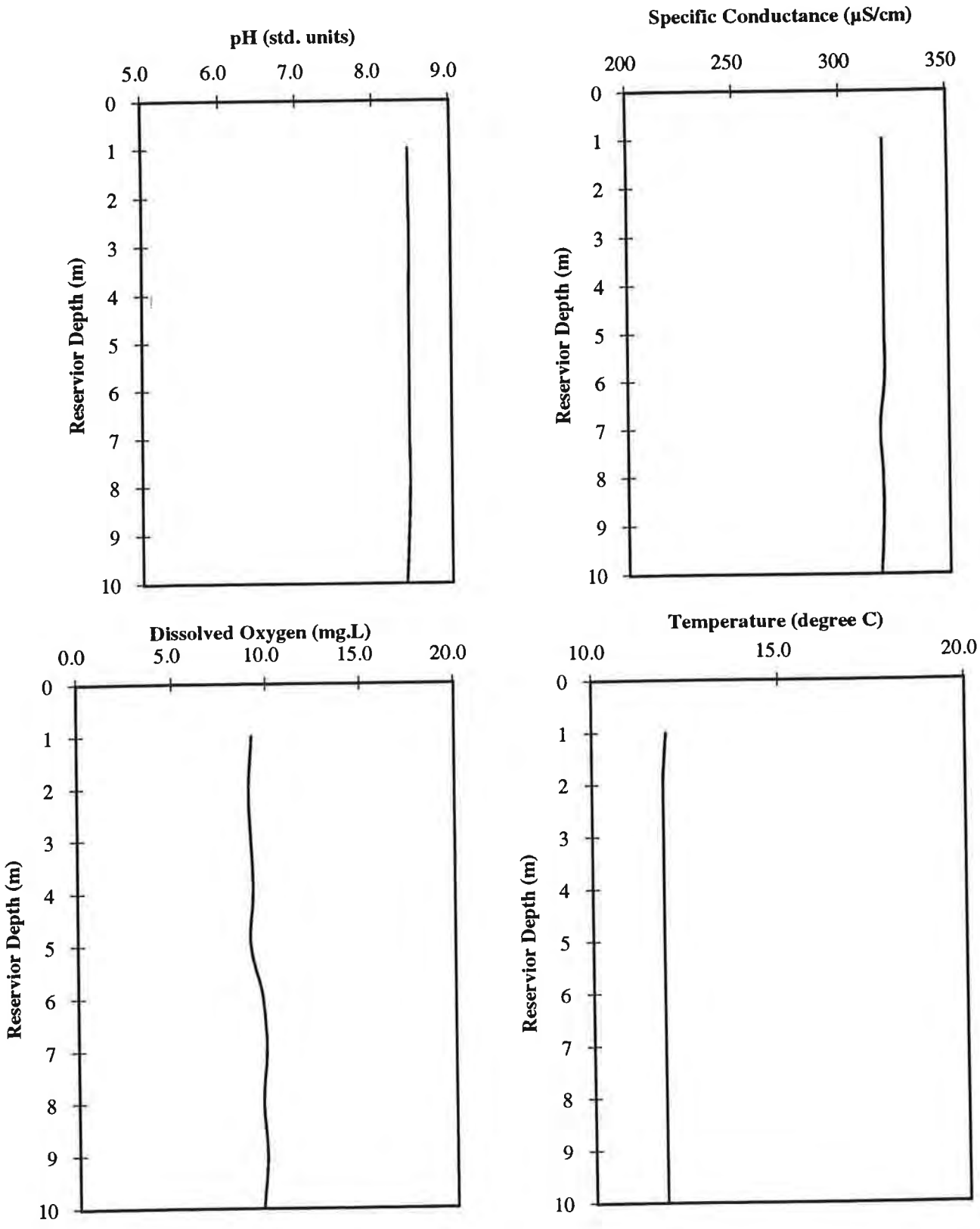
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - SEPTEMBER 27, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 28



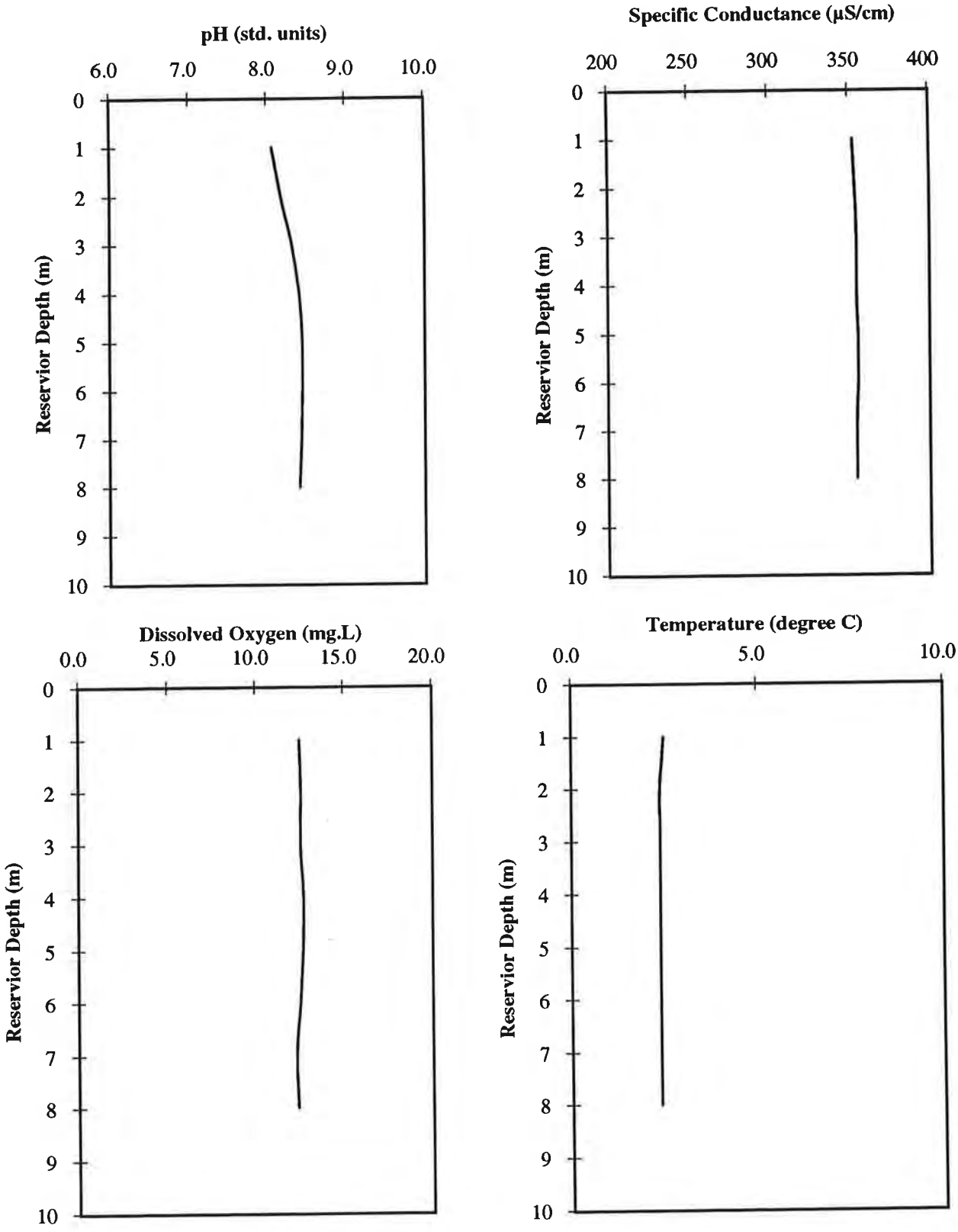
IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - OCTOBER 18, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 29



IN-RESERVOIR DEPTH PROFILE DATA, SITE RM

CHATFIELD RESERVOIR - NOVEMBER 29, 2000

CHATFIELD BASIN AND RESERVOIR

WATER-QUALITY MONITORING PROGRAM

Figure 30

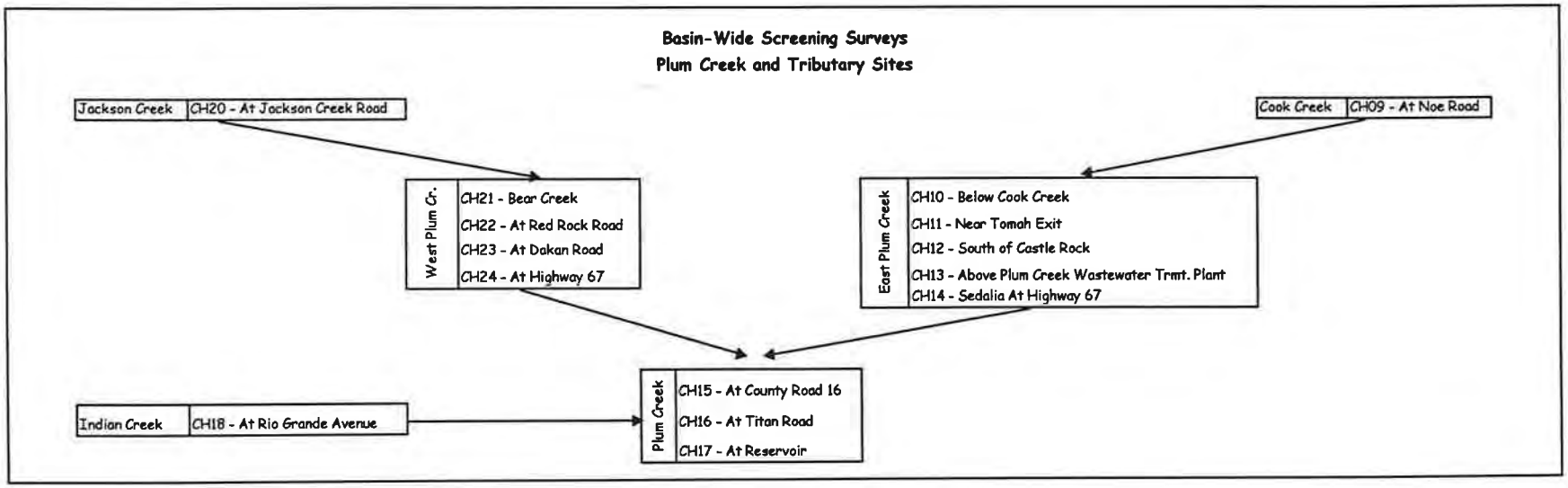
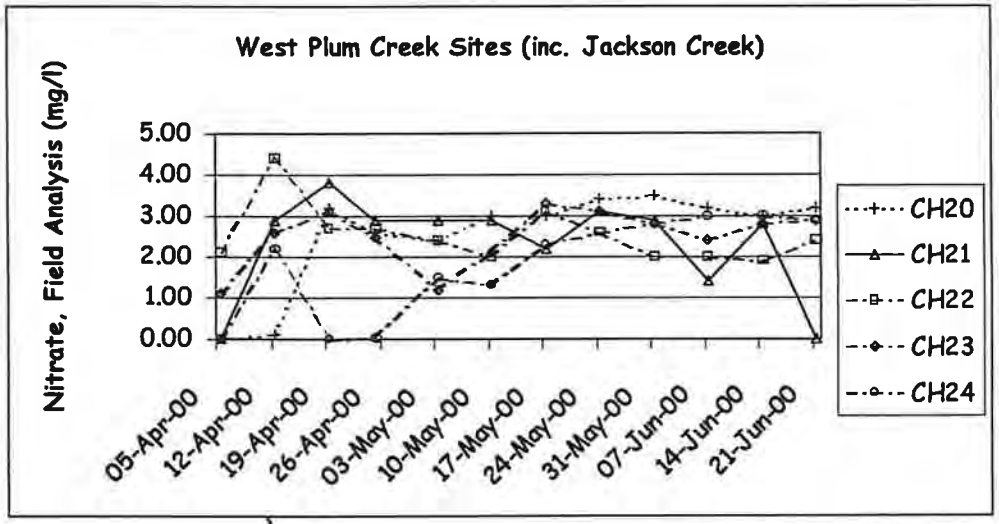
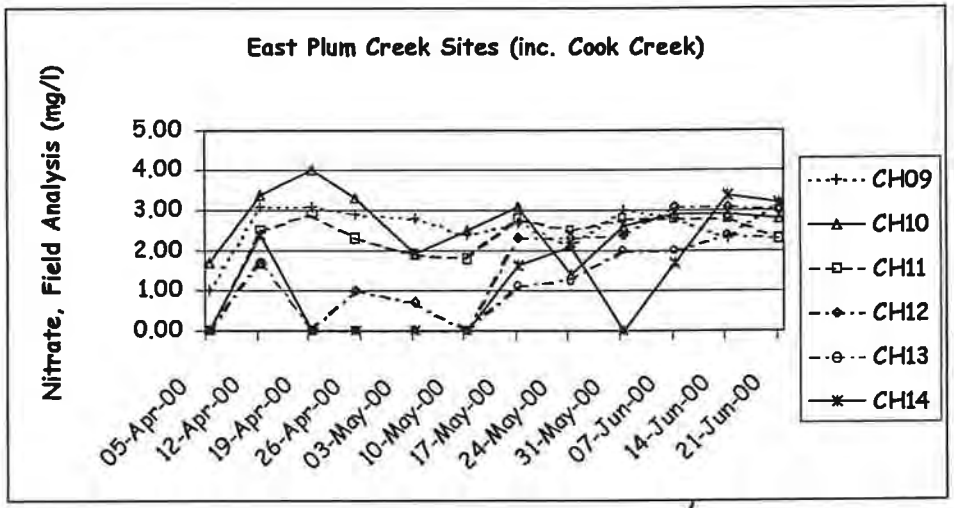
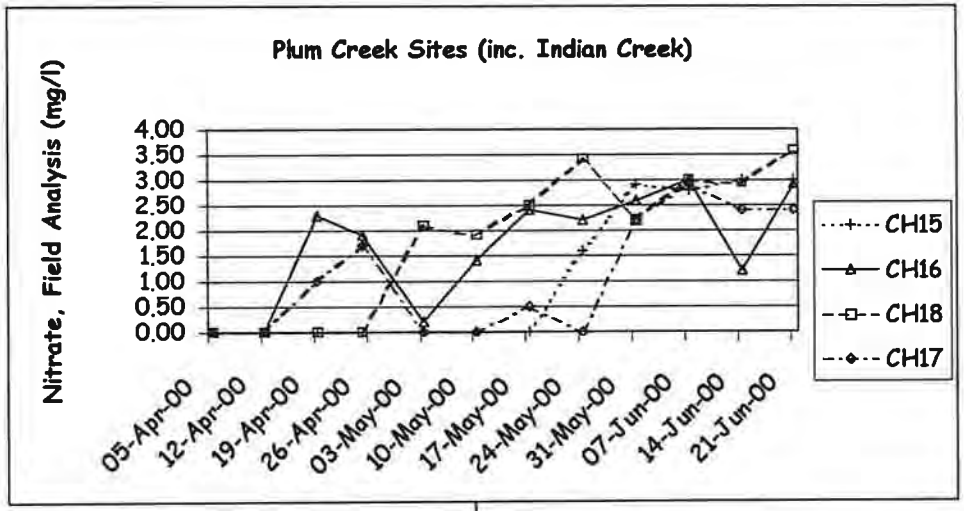


FIGURE 31
SCHEMATIC DIAGRAM OF PLUM CREEK AND TRIBUTARY BASIN-WIDE SCREENING SURVEY SITES







CHATFIELD RESERVOIR

FIGURE 32

SUMMARY OF NITRATE DATA FOR PLUM CREEK AND TRIBUTARY SCREENING SURVEY SITES, APRIL - JUNE, 2000

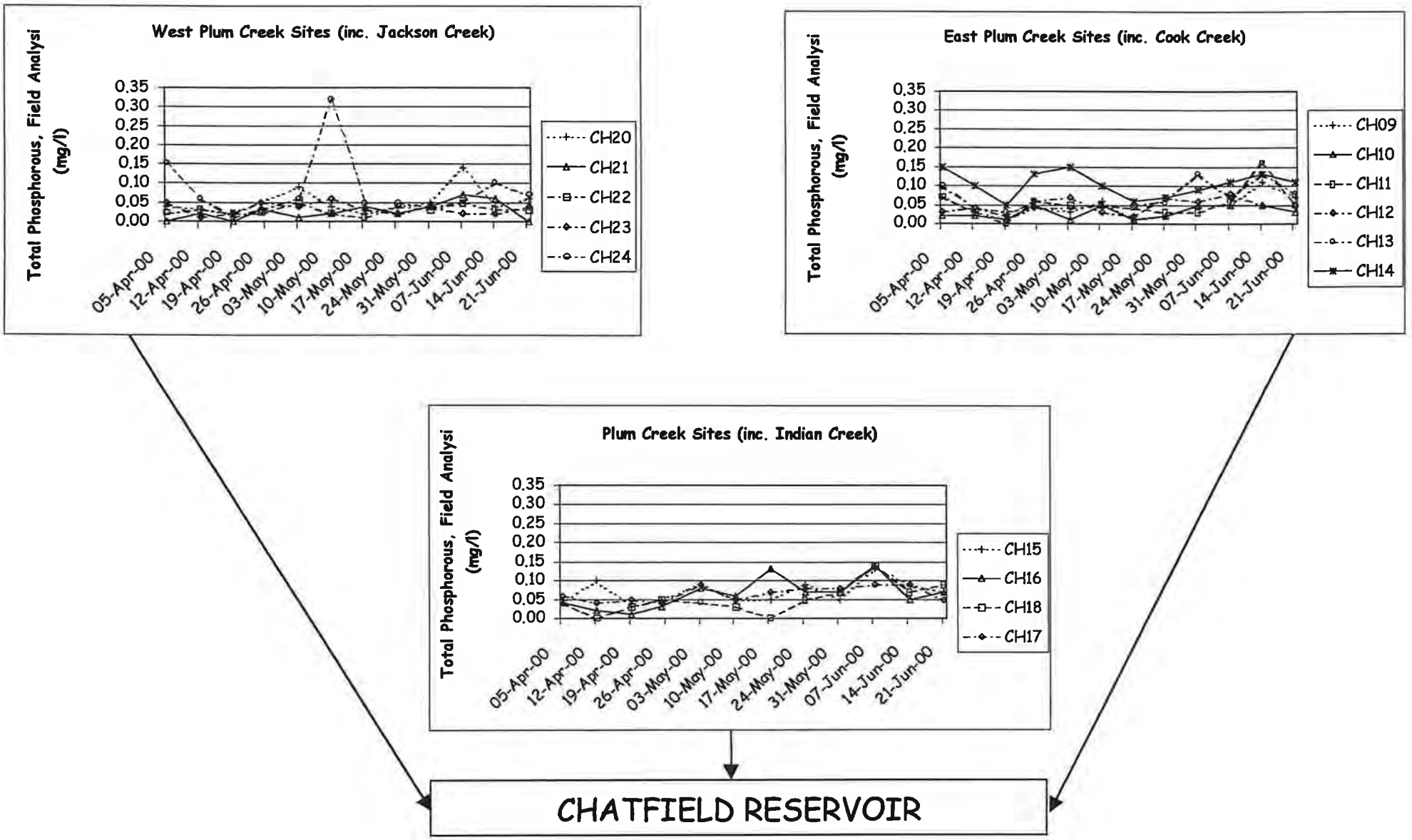


FIGURE 33

SUMMARY OF TOTAL PHOSPHOROUS DATA FOR PLUM CREEK AND TRIBUTARY SCREENING SURVEY SITES, APRIL – JUNE, 2000

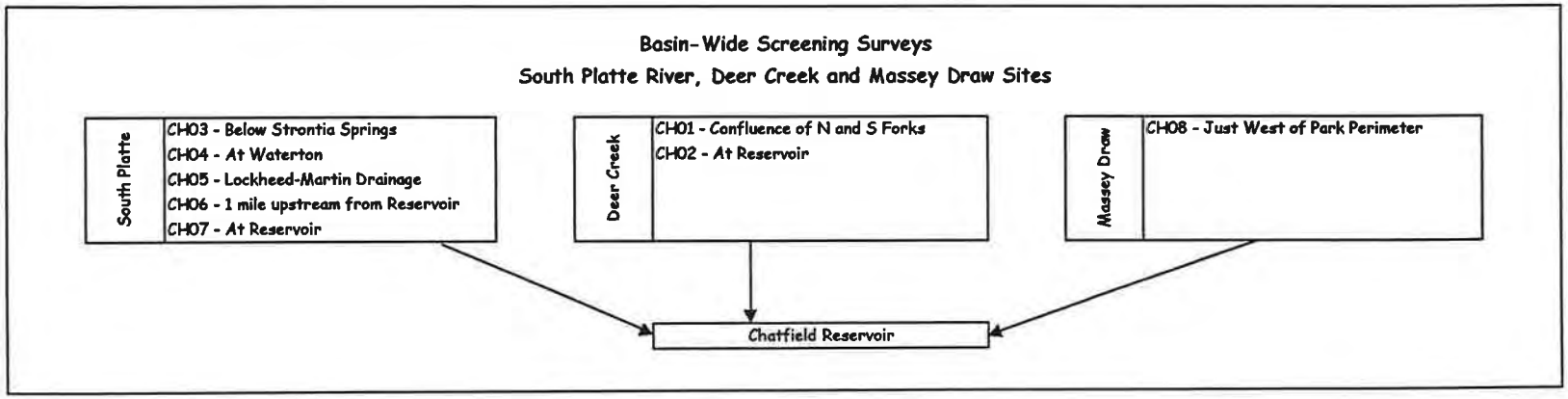


FIGURE 34

SCHEMATIC DIAGRAM OF SOUTH PLATTE RIVER, DEER CREEK, AND MASSEY DRAW BASIN-WIDE SCREENING SURVEY SITES

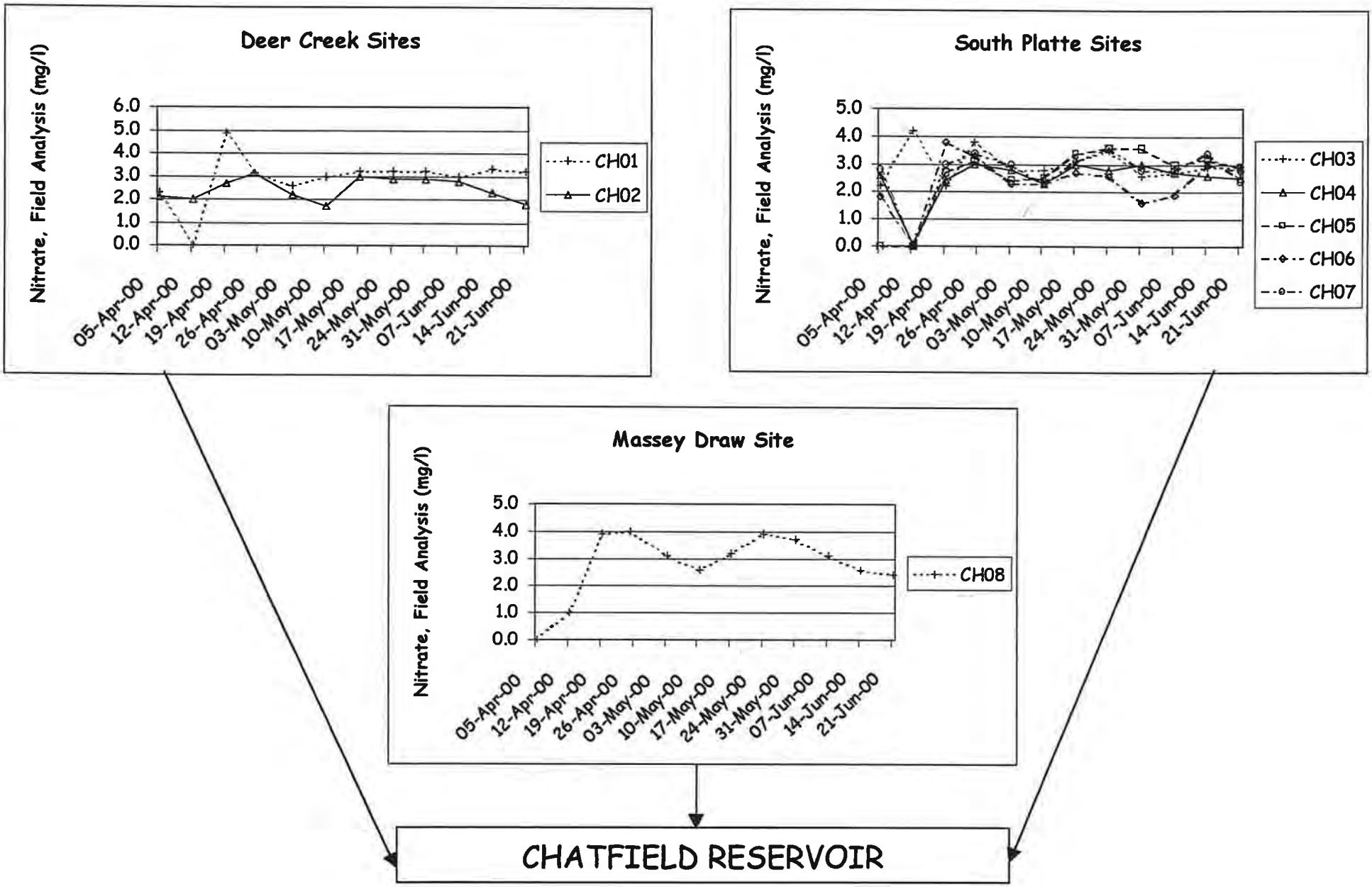


FIGURE 35

SUMMARY OF NITRATE DATA FOR SOUTH PLATTE RIVER, DEER CREEK, AND MASSEY DRAW SCREENING SURVEY SITES, APRIL - JUNE, 2000

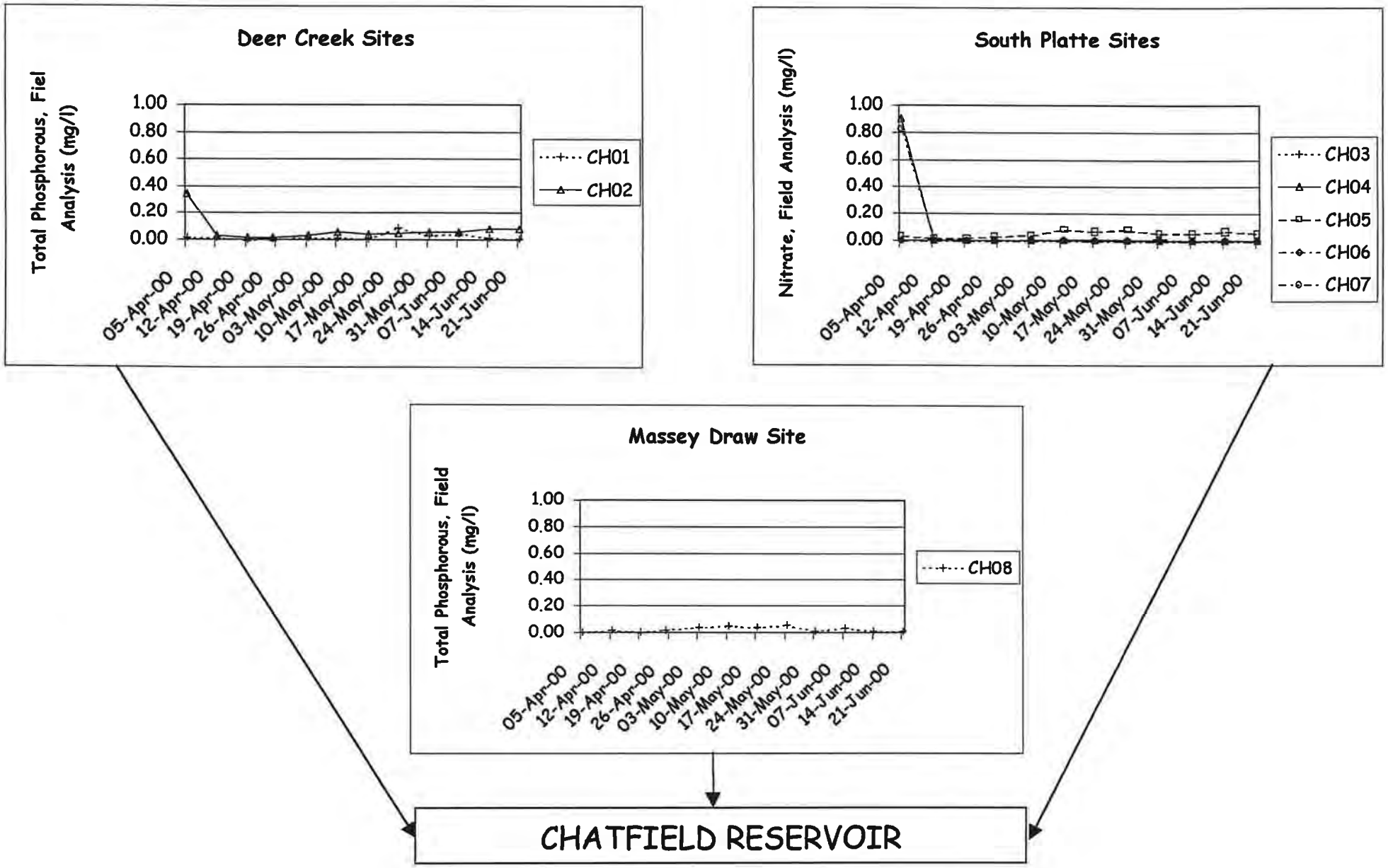


FIGURE 36

SUMMARY OF TOTAL PHOSPHOROUS DATA FOR SOUTH PLATTE RIVER, DEER CREEK, AND MASSEY DRAW SCREENING SURVEY SITES, APRIL – JUNE, 2000

APPENDIX A

IMPACTS OF A NATURAL WETLAND ON TOTAL-PHOSPHORUS LOADS DOWNSTREAM FROM A WASTEWATER TREATMENT PLANT

by

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INTRODUCTION

The treatment of domestic wastewater to obtain an effluent total-phosphorus concentration acceptable to regulators frequently requires using advanced wastewater treatment (AWT) technologies such as chemical-physical treatment, rapid infiltration basins, constructed wetlands, or land application systems. The design and construction costs of such systems may range from a few hundred thousand dollars to over one million dollars for even the smallest wastewater treatment facilities serving only several hundred to one thousand persons. Moreover, annual operation and maintenance costs may range from several tens of thousands of dollars per year to many tens of thousands of dollars per year. The per-connection cost for design and construction may be as high as $10,000, with annual operation and maintenance costs per connection of over $50. These costs are over and above those for operation and maintenance of conventional wastewater treatment facilities and include the costs for phosphorus treatment only. Many smaller water-and-sanitation or special districts cannot afford such costs. As an example of the natural-wetland total-phosphorus treatment process, this paper considers measured streamflow and water-quality data for several months in 1990 and 1992 to assess the performance of natural wetlands in removing total phosphorus downstream from a relatively small (65,000 gallons per day) wastewater treatment plant.

The Perry Park Water and Sanitation District's Waucondah Wastewater Treatment Facility discharges to Bear Creek about 0.4 miles (mi) downstream from Waucondah Lake (Figure 1). The Treatment Facility consists of primary and secondary treatment with the following processes: bar screen, primary clarifier, rotating biological contactors, secondary clarifier, chlorination, and chlorine contact basin. The existing Treatment Facility is designed for an average daily flow of 0.32 million gallons per day (mgd), but currently has only about 312 units, comprising about 780 residents, connected to it. The future number of total units is estimated to be about 1,300, serving a projected resident population of between 3,900 and 4,000 people (Richard P. Arber Associates, Inc., 1990).

Effluent discharge and water-quality data obtained from the District indicates that the average daily discharge during the period January 1987 through December 1990 from the Treatment Facility was about 63,000 gallons per day (gpd), or about 0.1 cubic feet per second (cfs). Total-phosphorus concentrations in the effluent from the Treatment Facility over the same time period averaged about 6.8 milligrams per liter (mg/L). The Colorado Department of Health (CDH) has instructed the District to design, construct and operate an AWT facility to remove enough total phosphorus from the effluent of the Waucondah Wastewater Treatment Facility to attain a concentration in the effluent of 0.2 mg/L averaged over a 30-day period (CDH, 1991). The design and construction costs of AWT alternatives have been estimated to be between $404,000 and $979,000 (Richard P. Arber Associates, Inc., 1991). Operation-and-maintenance costs of the proposed AWT facility alternatives were estimated to range between $18,000 and $58,000 per year. These annual costs are in addition to the costs to operate the existing Treatment Facility. Because of these large costs and the small population base of sewer connections to pay for them, the District sought relief from the 0.2 mg/L total-phosphorus concentration limit presently stipulated by the CDH for

the Waucondah Wastewater Treatment Facility effluent.

BACKGROUND AND EXISTING DATA

The Chatfield Basin Authority and Perry Park Water and Sanitation District collected intermittent streamflow and water-quality data on Bear Creek upstream from the Treatment Facility (Site 6 on Figure 1), between August 1986 and August 1987, September through December 1990, and March through August 1992 (ASI, 1991a; 1991b; 1992; 1993). The Authority and the District also collected streamflow and water-quality data on Bear Creek downstream from the Treatment Facility (Site 6A on Figure 1) and downstream from the confluence of Bear Creek and West Plum Creek (Site 6B on Figure 1) for the September-through-December 1990 period and the March-through-August 1992 period (ASI, 1991b; 1992). Streamflow and water-quality data at the three in-stream flow sites (6, 6A, and 6B) and the Treatment Facility effluent are available concurrently only for eight samples collected during the September-through-December 1990 period and five samples collected during the March-through-August 1992 period. These 13 samples form the basis for the analyses of total phosphorus presented below. An additional five samples were collected in 1992 at site 6C on Bear Creek upstream from the confluence with West Plum Creek. These five samples were used to the assess the predictive capability of a phosphorus-balance method for estimating in-stream total-phosphorus loads on Bear Creek. The data used in this paper are not presented here but are part of the public record for the Chatfield Basin Authority (ASI, 1991a; 1991b; 1993).

TOTAL PHOSPHORUS IN BEAR CREEK AND WEST PLUM CREEK

Total-phosphorus loads in Bear Creek and West Plum Creek, based upon data collected during the September-through-December 1990 and March-through-August 1992 periods, were analyzed to assess the historical wetlands uptake downstream from the Waucondah Wastewater Treatment Facility. These fall, early winter, and spring/summer data should represent a reasonable assessment of total-phosphorus removals, based upon the 13 concurrent data points available during this period. The results of the phosphorus-balance analysis are summarized in Table 1.

For the period of record analyzed, total-phosphorus concentrations in Bear Creek just downstream from Waucondah Lake and upstream from the Waucondah Wastewater Treatment Facility (Site 6 on Figure 1) averaged about 0.14 mg/L. with an average load of about 0.59 pounds per day (lbs/d) for the 15 samples given in Table 1. Total-phosphorus concentrations and discharge from the Waucondah Wastewater Treatment Facility for the period analyzed were obtained from the District (Table 1). The total-phosphorus concentration for this period averaged about 7.0 mg/L, and the discharge averaged about 0.09 cfs. The resulting average total-phosphorus load discharged to Bear Creek by the Treatment Facility for this period was about 3.5 lbs/d. Because total-phosphorus and discharge data are reported only monthly at the Treatment Facility, it was assumed that these values were relatively constant throughout a given month and could occur on any given day during that month.

During the assessment period, water-quality data were collected in Bear Creek downstream from the Treatment Facility at the culvert leaving the pond into which the effluent is discharged (Site 6A on Figure 1 and Table 1). From the available data summarized in Table 1, the concentration of total phosphorus in Bear Creek at this point averaged about 1.1 mg/L. The streamflow at Site 6B was estimated by summing the measured streamflow at Site 6 and the average monthly discharge measured at the Treatment Facility. The resulting average total-phosphorus load at Site 6A was 3.5 lbs/d for the period, substantially higher than the Bear Creek total-phosphorus loads upstream from the Treatment Facility effluent discharge as would be expected. This total-phosphorus load averaging 3.5 lbs/d is identical to the 3.5 lbs/d

discharged by the Treatment Facility about 0.1 mi upstream. This is because much of the total phosphorus discharged by the Treatment Facility is in a dissolved form. The man-made pond just downstream from the treatment facility is most effective in removing phosphorus adsorbed onto settleable solids and, therefore, does not greatly reduce the total-phosphorous load if it is primarily dissolved.

Water-quality and streamflow data collected during the analysis period in West Plum Creek downstream from confluence with Bear Creek (Site 6B), are shown in Table 1. Total-phosphorus concentrations at Site 6B for this period averaged about 0.07 mg/L, and total-phosphorus loads for the period averaged about 2.1 lbs/d. This total-phosphorus load represents the combined load from Bear Creek and from West Plum Creek. In order to estimate how much of this total-phosphorus load may have come from Bear Creek required calculations, based upon several assumptions, as described below.

ANALYSIS OF TOTAL PHOSPHORUS REMOVAL BY THE BEAR CREEK WETLANDS

To estimate the streamflow in Bear Creek just upstream from its confluence with West Plum Creek (Site 6C, where no streamflow data are available, on Figure 1), it was assumed that Site 6C had the same streamflow as Site 6A upstream. The streamflow in West Plum Creek just upstream from its confluence with Bear Creek (hypothetical Site 6D) was calculated by subtracting the streamflow at Site 6C from the measured streamflow at Site 6B. The resulting calculated streamflow in West Plum Creek is shown in Table 1, which also summarizes the calculations of total-phosphorus loads for all sites.

No known data on total-phosphorus concentrations exist for West Plum Creek upstream from its confluence with Bear Creek (Site 6D). For purposes of this current analysis, we have assumed that the total-phosphorus concentration in West Plum Creek at Site 6D is 0.02 mg/L for all streamflows analyzed during the period, except for the April 9, 1992 analysis which assumed a concentration the same as Site 6B. This assumption is based upon a 0.02 mg/L detection limit, historical data at Site 6 in Bear Creek, and consideration of total-phosphorus concentration data at other locations in the Chatfield Reservoir basin. This assumption should provide a worst-case removal-rate analysis for the Bear Creek data. Table 1 shows the estimated total-phosphorus loads for West Plum Creek, based upon these assumptions.

The total-phosphorus loads for Bear Creek at Site 6C, upstream from its confluence with West Plum Creek, were calculated by subtracting the loads in West Plum Creek upstream from Site 6B from the measured loads at Site 6B. The total-phosphorus loads at Site 6C are shown in Table 1. The resulting estimates of total-phosphorus concentrations at Site 6C were calculated from the loads and streamflow at the site. Analysis of the resulting calculated total-phosphorus loads at Site 6C indicates that an average of 1.2 lbs/d was discharged by Bear Creek into West Plum Creek for available discrete samples during the period analyzed. The average calculated total-phosphorous concentration at Site 6C for this period is about 0.18 mg/L, which is less than the proposed total-phosphorus discharge standard of 0.20 mg/L for the Waucondah Wastewater Treatment Facility.

This reduction in Bear Creek total-phosphorus loads from an average of 3.5 lbs/d at Site 6A to 1.3 lbs/d at Site 6C represents a 63 percent removal by the 2.3 mi of ponds and wetlands in Bear Creek. This removal percentage is on the upper end of reported total-phosphorus removals in wetlands (EPA, 1976 and 1988; Herron, 1990). One reason for this relatively large total-phosphorus removal rate may be as follows. For the period analyzed, the streamflows were generally low, providing the opportunity for water to come in contact with the Bear Creek sediments and plant roots. Another reason for the seemingly high total-phosphorus removal rates is that the EPA-reported removal efficiencies are for free-water surface systems of relatively short distances (less than several hundred feet). Also, a 2.3 mi stream reach, such as Bear Creek downstream from the Treatment Facility, could result in much larger total-phosphorus

removals. Therefore, if the effluent-discharge compliance point for the Waucondah Wastewater Treatment Facility were moved downstream in Bear Creek to it confluence with West Plum Creek, the approximately 2.3 mi of wetlands in Bear Creek would be considered in the observed reduction of total-phosphorus concentrations to acceptable levels.

Future population growth within the District should result in increases in the total-phosphorus loads discharged to Bear Creek by the Treatment Facility, assuming the associated total-phosphorus concentrations do not decrease. The ability of the 2.3 mi of wetlands to continue assimilating total phosphorus over the long term, or to assimilate increased phosphorus loads presently is unknown. We judge that the 2.3 mi of wetlands downstream form the Treatment Facility should be able to assimilate phosphorus, even if the loads due to increased sewer connections in the District increase. Monitoring of the performance of the ponds/wetlands system would help to confirm continued benefits of the phosphorus-assimilative capacity downstream from the Treatment Facility and to assess if this assimilation occurs over a wider range of streamflows and weather conditions, as well as over the long term.

During the period March-through-August 1992, the Perry Part Water and Sanitation District monitored total-phosphorus concentrations at Sites 6, 6A, 6B, and 6C. Only five of the samples collected could be compared to the calculated removals shown in Table 1. Results of this comparison are as follows:

Date	Predicted TP Concentration (mg/L)	Measured TP Concentration (mg/L)
4/09/92	0.16	0.15
4/21/92	0.15	0.18
5/06/92	<0.02	<0.02
6/10/92	0.26	0.10
7/07/92	0.10	<0.02

The average percent difference in the predicted versus the measured total phosphorus for the above five measurements was about 26 percent. This percentage is considered to be reasonable. Therefore, based upon this case study, the use of natural wetlands to remove total phosphorus downstream from a wastewater treatment facility appears to be possible and the prediction of such removals using a simple phosphorus balance also appears to be possible. This natural removal mechanism may provide financial relied to smaller water and sanitation or special districts which are being required by regulatory agencies to construct and to operate costly AWT facilities for removal of total phosphorus.

SUMMARY AND CONCLUSIONS

Short-term benefits of this phosphorus-assimilative assessment resulted in an approved compliance-schedule extension granted by the CDH (1992a). In conjunction with available basinwide monitoring data (ASI, 1991a; 1991b; 1992; 1993) and development of a non-point source plan (WCC, 1992), the total-phosphorus wastewater-effluent discharge target concentration was modified from 0.2 mg/L to 1.0 mg/L (CDH, 1992b), thereby enabling relatively small dischargers to streams in the Chatfield basin to apply more flexibility in implementing cost-effective wastewater treatment.

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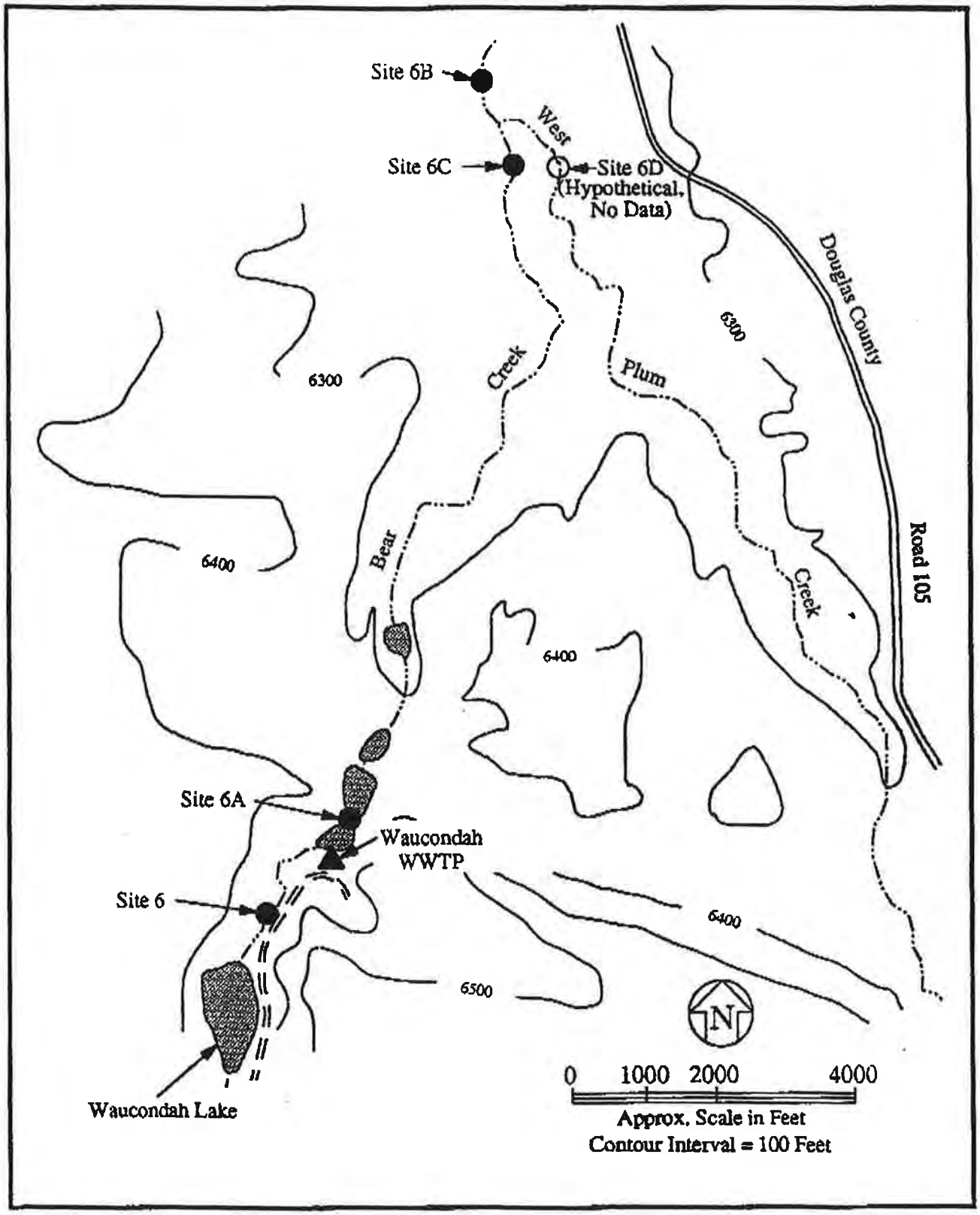
Table 1
Total Phosphourus Load Calculations, Bear Creek/West Plum Creek System

DATE	Site 6[1] INSTANTANEOUS STREAM FLOW (CFS)	Site 6[1] PHOSPHORUS, TOTAL (MG/L AS P)	Site 6[1] PHOSPHORUS, TOTAL (LBS/D AS P)	Site WWTP[1] INSTANTANEOUS STREAM FLOW (CFS)	Site WWTP[1] PHOSPHORUS, TOTAL (MG/L AS P)	Site WWTP[1] PHOSPHORUS, TOTAL (LBS/D AS P)	Site 6A[1] INSTANTANEOUS STREAM FLOW (CFS)	Site 6A[1] PHOSPHORUS, TOTAL (MG/L AS P)	Site 6A[1] PHOSPHORUS, TOTAL (LBS/D AS P)
04-Sep-90	0.35	0.04	0.08	0.08	8.12	3.50	0.43	0.95	2.20
18-Sep-90	0.21	0.09	0.03	0.08	8.12	3.50	0.29	1.34	2.09
02-Oct-90	0.20	0.05	0.05	0.09	7.93	3.85	0.29	2.32	3.63
16-Oct-90	0.28	0.04	0.06	0.09	7.93	3.85	0.37	2.68	5.34
30-Oct-90	0.28	0.04	0.06	0.09	7.93	3.85	0.37	3.10	6.18
13-Nov-90	0.28	0.01	0.02	0.09	7.44	3.61	0.37	1.61	3.21
28-Nov-90	0.33	0.05	0.09	0.09	7.44	3.61	0.42	0.87	1.97
11-Dec-90	0.24	0.05	0.06	0.08	6.24	2.69	0.32	0.80	1.38
24-Apr-92	1.40	0.01	0.08	0.11	7.82	4.64	1.51	0.31	2.52
09-Apr-92	8.70	0.08	3.75	0.09	5.66	2.74	8.79	0.13	6.16
21-Apr-92	12.00	0.01	0.65	0.10	5.66	3.05	12.10	0.16	10.43
06-May-92	8.70	0.01	0.47	0.10	6.58	3.55	8.80	0.01	0.47
21-May-92	0.07	1.45	0.55	0.10	6.58	3.55	0.17	1.34	1.23
10-Jun-92	3.50	0.15	2.83	0.09	4.75	2.30	3.59	0.30	5.80
07-Jul-92	0.47	0.01	0.03	0.11	6.83	4.05	0.58	0.07	0.22
TOTALS			8.80			52.32			52.84
AVERAGES	2.47	0.14	0.59	0.09	7.00	3.49	2.56	1.07	3.52

DATE	Site 6B[1] INSTANTANEOUS STREAM FLOW (CFS)	Site 6B[1] PHOSPHORUS, TOTAL (MG/L AS P)	Site 6B[1] PHOSPHORUS, TOTAL (LBS/D AS P)	West Plum Creek (Hypothetical Site 6D)[1] INSTANTANEOUS STREAM FLOW (CFS)	West Plum Creek (Hypothetical Site 6D)[1] PHOSPHORUS, TOTAL (MG/L AS P)	West Plum Creek (Hypothetical Site 6D)[1] PHOSPHORUS, TOTAL (LBS/D AS P)	Site 6C[1] INSTANTANEOUS STREAM FLOW (CFS)	Site 6C[1] PHOSPHORUS, TOTAL (MG/L AS P)	Site 6C[1] PHOSPHORUS, TOTAL (LBS/D AS P)
04-Sep-90	1.6	0.05	0.43	1.20	0.02	0.13	0.43	0.13	0.30
18-Sep-90	1.9	0.03	0.31	1.60	0.02	0.17	0.29	0.09	0.13
02-Oct-90	2.2	0.05	0.59	1.90	0.02	0.20	0.29	0.25	0.39
16-Oct-90	2.6	0.03	0.42	2.20	0.02	0.24	0.37	0.09	0.18
30-Oct-90	2.6	0.05	0.70	2.20	0.02	0.24	0.37	0.23	0.46
13-Nov-90	2.7	0.05	0.73	2.30	0.02	0.25	0.37	0.24	0.48
28-Nov-90	2.8	0.09	1.36	2.40	0.02	0.26	0.42	0.49	1.10
11-Dec-90	2.3	0.04	0.50	2.00	0.02	0.22	0.32	0.16	0.28
24-Apr-92									
09-Apr-92	10	0.16	8.62	8.49	0.16	7.32	1.51	0.16	1.30
21-Apr-92	14.9	0.09	7.23	2.8	0.02	0.30	8.79	0.15	6.92
06-May-92	16	0.01	0.86	7.2	0.02	0.78	12.10	0.02	0.09
21-May-92									
10-Jun-92	4.7	0.20	5.07	1.12	0.02	0.12	3.59	0.26	4.94
07-Jul-92	1.2	0.06	0.39	0.58	0.02	0.06	0.58	0.10	0.33
TOTALS			27.20			10.28			16.91
AVERAGES	2.27	0.07	2.09	2.77	0.03	0.79	2.26	0.18	1.30

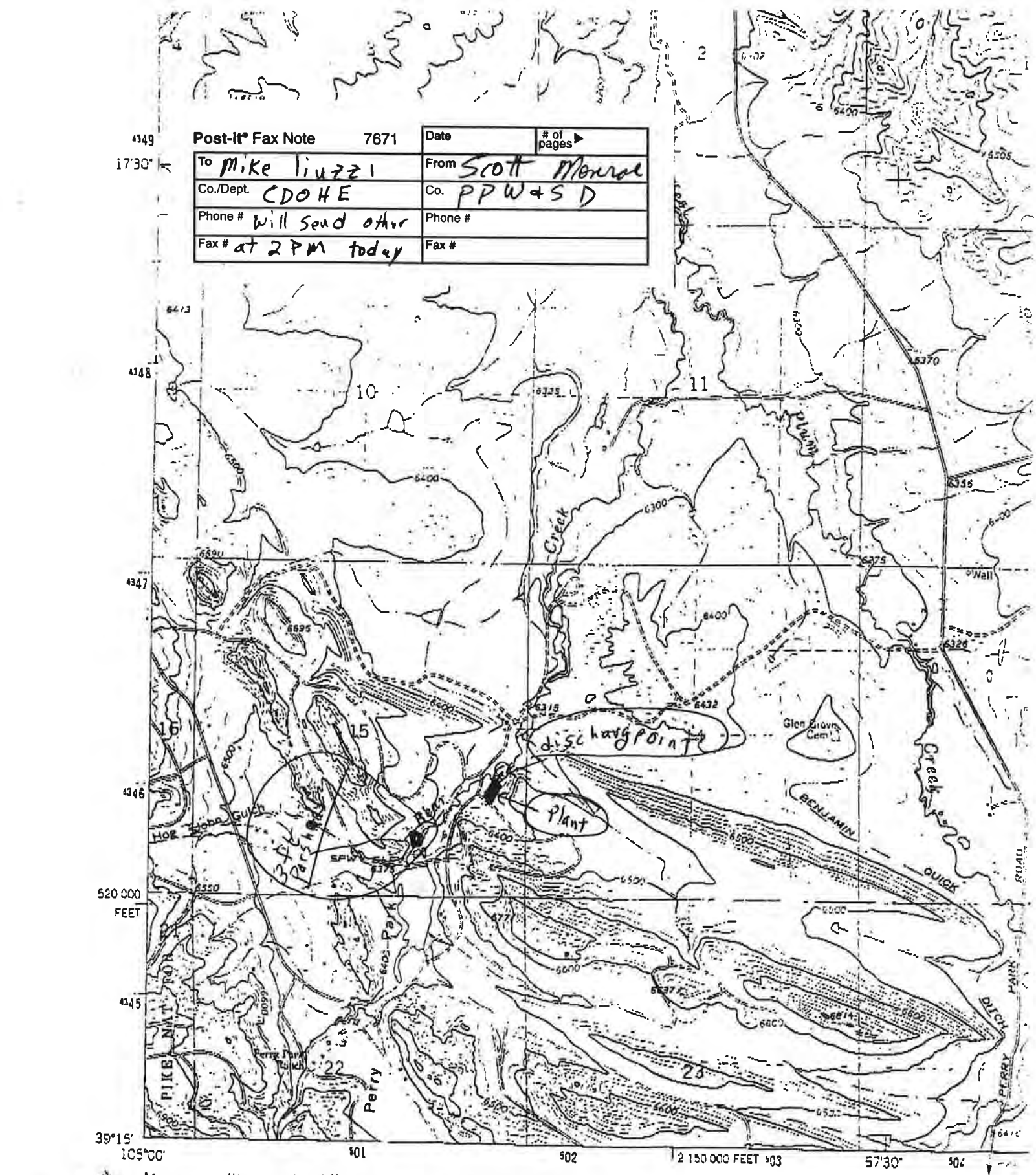
1) See Figure 1 for location.



Location Map, Bear Creek/West Plum Creek Monitoring Sites

FIG-1.DRW

Figure 1



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Topography by photogrammetric methods from aerial photographs taken 1964. Field checked 1965

Polyconic projection. 1927 North American datum
10,000-foot grid based on Colorado coordinate system, central zone
1000-meter Universal Transverse Mercator grid ticks,
zone 13, shown in blue

DAWSON MOUNTAIN 4062 II NE

CO-0022551

Ammonia Compliance Monitoring

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
4/20/95	900	BC	7.9	7.0	0.42	cool and cloudy	6.8	8.0
4/24/95	1000	BC	8.4	6.0	0.68	cold and clear	6.6	10.0
4/27/95	905	BC	7.9	5.5	0.44	cold and light clouds	6.6	9.0
5/1/95	855	BC	7.9	7.0	0.96	cool and cloudy	6.7	9.5
5/4/95	1030	BC	7.7	8.5	0.98	cool and clear	6.6	10.0
5/8/95	1010	BC	7.3	8.0	1	cloudy	7.0	10.0
5/11/95	1040	BC	7.7	10.0	0.96	clear	6.7	12.0
5/15/95	920	BC	7.1	11.0	0.86	clear and warm	6.8	12.0
5/18/95	1035	BC	7.0	9.0	1.8	clear and cool	6.7	9.6
5/22/95	930	SB	6.9	7.0	overflow	overcast	6.7	10.0
5/25/95	930	BC	7.0	8.0	overflow	cloudy and cool	6.8	11.0
5/30/95	900	BC	7.5	8.5	1.55	cloudy and cool	6.7	11.0
6/1/95	1000	BC	7.2	9.0	1.4	beautiful warm day	6.7	11.0
6/8/95	1045	BC	7.2	13.0	0.94	raining	6.6	12.5
6/12/95	1100	BC	7.0	14.5	0.8	clear and warm	6.8	14.0
6/15/95	945	BC	7.2	14.5	0.7	clear and warm	6.7	14.0
6/22/95	930	BC	7.0	15.0	0.36	clear and warm	6.6	14.0
6/26/95	1005	BC	7.5	16.5	0.38	clear and warm	7.0	14.5
6/29/95	930	BC	7.8	15.5	0.6	raining	7.3	13.5
7/2/95	900	BC	7.3	15.5	0.66	warm and cloudy	6.8	14.5
7/6/95	905	BC	7.0	17.5	0.68	warm and clear	6.9	16.0
7/10/95	915	BC	7.1	18.5	0.46	hot and clear	6.6	17.0
7/13/95	1040	BC	6.5	17.0	0.38	warm and clear	6.8	17.0
7/17/95	900	BC	7.1	18.5	0.48	warm and partly cloudy	6.8	17.0
7/20/95	1005	BC	7.0	18.5	0.54	warm and clear	6.9	17.0
7/24/95	1120	BC	7.0	19.0	0.52	warm and clear	6.5	16.5
7/27/95	1000	BC	7.0	18.6	0.34	warm and clear	6.6	16.5
7/31/95	935	BC	7.0	18.5	0.26	raining	6.7	16.0
8/3/95	1015	BC	7.0	18.7	0.26	hot and clear	8.0	17.0
8/7/95	1020	BC	6.4	18.5	0.38	warm and clear	7.5	17.5
8/10/95	915	BC	7.5	18.0	0.36	hot	7.1	17.9
8/14/95	915	BC	7.5	17.2	0.34	light rain and cool	7.5	17.8
8/17/95	915	BC	7.6	18.1	0.26	light clouds and warm	7.3	18.2
8/21/95	1025	BC	6.5	18.8	0.12	hot and clear	6.9	18.0
8/24/95	950	BC	7.1	17.1	0.2	light clouds and hot	6.7	18.5
8/28/95	930	BC	7.0	17.4	0.2	clear and warm	6.7	18.5
8/31/95	1035	BC	7.7	18.6	0.18	hot and clear	7.1	18.5
9/4/95	900	BC	7.6	20.0	0.18	hot and clear	7.5	19.0
9/7/95	945	BC	7.5	17.5	0.18	cool and overcast	6.9	18.0
9/11/95	910	BC	7.3	15.0	0.16	cool and light clouds	6.8	17.5
9/14/95	930	BC	7.5	17.0	0.16	cool and light clouds	7.1	17.0
9/18/95	1000	BC	7.3	16.0	0.12	cool and overcast	6.8	17.0
9/25/95	1010	BC	7.2	13.0	0.16	cool and clear	7.0	14.0
10/6/95	900	BC	7.0	11.0	0.16	cool and clear	7.0	12.5
10/9/95	945	BC	7.6	11.5	0.16	cool and light clouds	7.1	14.0
10/16/95	1000	BC	7.7	11.0	0.16	cool and light clouds	7.1	14.0
10/27/95	930	BC	7.8	8.5	0.18	cool and clear	7.2	12.5
10/31/95	1000	BC	7.8	11.0	0.16	cool and clear	7.0	13.0

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
11/3/95	1020	BC	7.0	7.0	0.16	cool and clear	6.8	11.5
11/6/95	905	BC	7.7	7.0	0.16	light clouds and cool	6.8	11.0
11/9/95	915	BC	7.3	6.0	0.16	clear and cool	6.7	11.5
11/13/95	1030	BC	7.8	7.5	0.17	cool and overcast	6.8	12.0
11/20/95	1130	BC	7.5	6.5	0.2	cool and clear	6.9	10.5
11/27/95	1000	BC	7.7	5.5	0.17	overcast and light snow	6.9	10.0
12/5/95	915	BC	7.4	5.0	0.16	cool and clear	7.1	10.5
12/13/95	910	BC	7.2	7.0	0.04	clear and warm	7.0	11.0
12/18/95	930	BC	7.2	5.0	0.02	20F and snowing	6.8	10.0
12/26/95	900	BC	7.1	3.5	0.02	cold and clear	6.8	8.5
12/29/95	930	BC	7.4	4.0	0.02	cold and light clouds	7.3	8.0
1/9/96	1000	BC	7.2	4.5	0.02	40F and clear	6.8	7.5
1/17/96	930	BC	7.1	6.0	0.02	40F and overcast	6.7	9.0
1/22/96	930	BC	7.2	4.5	0.02	40F and light clouds	6.9	7.0
2/2/96	930	BC	7.3	2.0	0.02	-10F and clear	6.9	4.5
2/5/96	1030	BC	7.3	4.5	0.02	clear and 50F	6.9	7.0
2/13/96	900	BC	7.2	4.5	0.1	clear and 40F	7.0	7.0
2/20/96	915	BC	7.7	6.5	0.18	clear and 40F	7.0	8.0
2/27/96	1100	BC	7.1	5.0	0.06	15F and light snow	6.7	7.5
3/6/96	900	BC	7.6	5.0	0.15	20F and cloudy	6.8	7.5
3/11/96	915	BC	7.7	6.0	0.15	55F and clear	6.8	8.0
3/20/96	900	BC	7.7	6.0	0.12	40F and clear	6.9	8.0
3/25/96	1000	BC	7.8	4.0	0.14	0F and clear	7.0	8.0
4/3/96	1100	BC	8.0	8.0	0.3	55F and overcast	7.0	10.0
4/8/96	930	BC	8.0	9.0	0.35	60F and light clouds	6.9	10.0
4/11/96	1100	BC	8.0	10.0	0.42	60F and light clouds	6.9	11.0
4/15/96	915	BC	7.9	7.0	0.32	30F and clear	7.2	9.0
4/22/96	1000	BC	8.0	8.5	0.42	45F and light clouds	7.2	10.5
4/25/96	1000	BC	8.0	9.0	0.42	50F and clear	6.9	11.0
5/2/96	1100	BC	7.3	12.0	0.4	60F and clear	6.7	13.0
5/9/96	1020	BC	7.9	16.0	0.32	60F and clear	7.1	14.0
5/16/96	900	BC	8.0	16.0	0.26	65F and clear	7.3	14.0
5/23/96	1100	BC	7.7	17.0	0.2	60F and overcast	7.8	15.0
5/30/96	900	BC	7.9	15.0	0.56	60F and clear	7.7	13.5
6/6/96	900	BC	7.7	16.0	0.5	55F and cloudy	7.2	14.0
6/13/96	915	BC	7.0	18.5	0.16	70F and clear	7.0	15.7
6/20/96	1015	BC	7.0	18.5	0.2	70F and clear	7.1	15.8
6/27/96	915	BC	7.3	18.5	0.14	70F and cloudy	7.1	17.0
7/1/96	1000	SH	7.0	18.7	0.08	85F and clear	7.0	18.0
7/4/96	900	TB	6.8	19.0	0.12			
7/8/96	930	TB	6.6	18.5	0.1	cool and 70F	6.8	18.1
7/11/96	900	TB	7.0	18.0	0.12	clear and 80F		
7/15/96	1100	TB			0.26	warm	6.9	18.0
7/18/96	1200	TB	6.7	20.5	0.18	warm	7.0	20.1
7/22/96	1400	TB			0.04	hot		
7/25/96	1100	TB	6.4	18.9	0.06	warm	6.7	19.7
7/29/96	1100	TB	6.5	18.6	0.06	cloudy and warm	6.6	18.7
8/1/96	830	TB	7.1	17.1	0.06	clear and warm	7.7	18.7
8/5/96	1200	TB	6.8	18.9	0.08	clear and hot	6.6	19.5
8/8/96	1300	TB	7.1	18.2	0.06	clear and warm	6.7	19.0

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
8/12/96	1100	TB	7.0	18.0	0.04	clear and hot	6.7	19.0
8/15/96	1100	TB	6.8	18.3	0.08	clear and warm	7.1	20.0
8/19/96	1100	TB			0.04	clear and warm	6.9	19.0
8/22/96	1100	TB	6.6	15.5	0.04	cloudy and cool	6.7	18.6
8/26/96	1100	TB	6.8	15.4	0.02	cloudy and warm	6.8	18.9
8/29/96	1100	TB	6.8	14.9	0.04	clear	6.6	17.1
9/2/96	1100	TB	6.6	14.4	0.02	clear	6.8	18.1
9/5/96	1100	TB			0.02	clear		
9/9/96	1100	TB	6.9	15.0	0.02	clear	6.8	17.9
9/12/96	1100	TB			0.02	clear		
9/16/96	1100	TB	6.7	14.0	0.02	clear	6.8	16.0
9/19/96	1100	TB	7.3	10.0			7.5	16.0
9/23/96	1100	TB			0.04	clear		
9/26/96	1100	TB	7.0	11.0	0.02	clear	7.2	15.8
9/30/96	1100	TB	6.9	14.3	0.02	clear		
10/3/96	1100	TB	7.0	14.5	0.04	clear	7.3	15.7
10/7/96	1100	TB	7.1	14.0	0.06	clear		
10/16/96	1100	TB	7.2	14.0	0.1	clear	7.4	15.4
10/14/96	1100	TB	7.3	13.9			7.5	13.1
10/22/96	1100	TB	7.3	12.8		clear	7.6	12.9
10/31/96	1100	TB	7.0	13.0		cold and snow	6.6	12.0
11/5/96	1100	TB	6.8	12.0		clear	6.5	12.7
11/12/96	1100	TB	6.9	11.2		clear and cold	6.8	12.0
11/21/96	1100	TB	7.1	10.5		clear and cold	6.8	11.3
11/28/96	1100	TB	6.5	10.9		snow	6.9	11.0
12/5/96	1100	TB	7.0	11.0		cloudy	7.2	11.8
12/12/96	1100	TB	6.6	4.0		clear	7.0	8.0
12/19/96	1100	TB	6.8	5.4		clear and cool	6.9	9.5
12/27/96	1100	TB	7.1	5.5		clear and cool	7.4	10.7
1/3/97	1200	TB	6.9	4.9		clear and cold	6.3	9.9
1/10/97	1200	TB	6.0	4.0		clear and cold	6.8	7.5
1/16/97	1100	TB	6.7	4.9		clear and cold	6.7	8.2
1/23/97	1300	JH	6.5	5.2	0.02	clear and cold	6.7	8.5
1/30/97	1100	TB	6.6	6.5		clear and cold	6.6	9.4
2/6/97	1000	TB	6.7	7.4		cloudy and snow	6.8	10.1
2/14/97	1200	JH	6.7	7.0		cloudy	6.8	9.8
2/18/97	1300	JH	6.9	8.4		cloudy	6.8	10.8
2/27/97	1030	JH	6.8	5.4	0.15	cloudy and 35F	6.5	8.5
3/6/97	1100	JH	7.1	10.1	0.18	clear and warm	6.9	8.9
3/13/97	1100	TB	6.8	5.3	0.1	cloudy and cool	6.8	10.6
3/20/97	1130	JH	6.7	11.0	0.2	clear and warm	6.8	11.1
3/27/97	1000	JH	6.8	7.5	0.21	clear and warm	6.2	10.5
4/3/97	1100	JH	6.7	14.2	0.29	cool	6.9	12.4
4/9/97	930	JH	6.7	13.1	0.28	cool	6.8	10.9
4/14/97	1000	JH			0.26	cool		
4/17/97	930	JH	6.9	12.0	0.26	warm	6.7	11.9
4/21/97	1100	JH			0.5			
4/24/97	945	JH	6.5	9.8	0.7	cold	6.5	8.9
4/28/97	1030	JH		8.7	0.08	cold		
5/1/97	1100	JH	6.9	9.2	1	cool	6.7	10.1

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
5/5/97	1030	JH			0.9	warm		
5/8/97	1100	JH	6.8	12.1	0.88	warm	6.9	11.1
5/12/97	1130	JH			0.7			
5/15/97	930	JH	6.6	12.2	0.62	warm	6.7	12.5
5/19/97	1045	JH			0.48			
5/22/97	1130	JH	6.8	13.1	0.64	warm	6.7	13.4
5/26/97	1100	TB	6.7	12.5	0.6	cool		
5/29/97	1030	JH			0.62	cool	6.8	14.2
6/2/97	1000	JH			0.24			
6/5/97	1130	JH	6.9	16.3	0.26	warm	7.3	16.3
6/9/97	1130	JH			0.9		7.3	14.8
6/12/97	1120	JH	6.9	19.1	0.7	cool	7.2	13.8
6/16/97	1000	JH			0.72			
6/19/97	1100	JH	6.7	20.6	0.5	warm	7.0	18.3
6/23/97	900	JH			0.48			
6/26/97	1130	JH	6.5	21.4	0.1	warm	7.0	19.8
6/30/97	1000	JH			0.1	warm		
7/3/97	800	JH	7.4	17.6	0.08	cool	8.3	15.8
7/7/97	1100	JH			0.08	clear and hot		
7/10/97	1100	JH	7.0	19.1	0.026	warm	7.4	18.1
7/14/97	1000	RB	7.0	20.4	0.027	hot	8.2	18.1
7/17/97	1200	TB	7.0	20.0	0.08	hot	7.4	20.0
7/21/97	1500	JH			0.008	hot		
7/24/97	1300	JH	7.1	28.3	0.008	hot	7.9	24.3
7/28/97	1200	JH			0.03	hot		
7/31/97	1400	JH	6.6	22.8	0.1	cool	7.1	23.4
8/4/97	1530	RB			0.1	cloudy	7.2	20.4
8/7/97	1500	JH	7.0	21.3	0.4	warm	6.7	19.8
8/11/97	1400	RB			0.4	warm		
8/14/97	1400	JH	7.2	21.2	0.42	warm	7.5	17.6
8/18/97	1000	TB	6.4	19.2	0.4	cool	6.6	17.7
8/21/97	1400	JH	6.5	20.1	0.28	cool	7.2	20.0
8/25/97	1300	TB	7.3	20.6	0.24	clear and hot	7.4	20.3
8/28/97	1300	JH	6.9	20.1	0.28	clear and hot	7.4	21.9
9/1/97	1000	JH			0.26	clear		
9/4/97	1500	JH	7.2	20.3	0.24	clear	7.4	22.0
9/8/97	1100	RB	7.1	19.7	0.36	clear	7.4	18.3
9/11/97	1100	RB					7.8	19.8
9/15/97	1100	RB	6.6	18.8	0.12	sunny and partly cloudy	7.7	19.0
9/18/97	1300	RB	7.3	19.7	0.1	hot and sunny	7.8	19.5
9/22/97	1300	RB	7.0	16.3	0.18	cold and rainy	6.9	17.3
9/25/97	1600	JH	7.1	17.0	0.14	clear	7.2	18.1
10/2/97	1100	TB	6.6	16.0	0.1	clear and warm	6.6	18.1
10/6/97	1400	RB	7.0	16.6	0.12	clear and warm	7.9	19.7
10/15/97	1400	RB	7.1	13.5		clear and cool	7.8	15.4
10/22/97	1500	JH	7.1	15.7		clear and cool	7.5	16.1
10/30/97	1300	RB	6.8	6.7		clear and cool	6.5	12.4
11/6/97	1000	JH	6.8	13.1	0.2	clear and cool	6.5	9.0
11/13/97	1300	RB	6.5	5.7		clear and cold	7.0	11.5
11/20/97	1300	RB	6.6	6.1	0.15	clear and cool	6.7	9.0

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
11/25/97	1300	RB				clear and cool	7.1	10.5
12/5/97	1400	JH	6.7	8.3	0.25	clear and cool	6.7	10.1
12/11/97	1300	JH	6.6	5.0	0.34	clear and cold	6.6	8.0
12/18/97	1200	JH	6.5	4.0		clear and cool	7.0	12.3
12/26/97	1400	JH	6.8	6.0		clear and cool	6.9	10.4
1/2/98	1300	JH	6.9	9.5		clear and cool	7.2	12.4
1/8/98	1400	JH	6.7	8.7		cold	7.3	11.5
1/15/98	1400	JH	6.5	9.9		cloudy and cold	7.1	12.1
1/22/98	1300	JH	7.0	7.9		cloudy and cold	6.8	8.9
1/29/98	1300	RB	6.5	5.7		sunny and cold	6.8	9.0
2/5/98	1100	RB	6.6	6.3		cloudy and cold	6.8	9.3
2/13/98	1300	JH	6.5	9.0		clear and cool	6.7	9.5
2/19/98	1200	JH	6.7	8.9		clear and cool	6.7	8.5
2/26/98	1300	RB	6.6	5.1		clear and cool	6.7	8.0
3/4/98	1330	JH	7.1	10.0		clear and cold	6.6	11.1
3/12/98	1300	JH	7.2	9.7		clear and cool	6.7	9.8
3/17/98	600	TB	6.4	4.6		clear and cool	6.6	6.5
3/17/98	1000	TB	6.8	8.3		clear and cool	6.6	9.5
3/17/98	1400	JH	6.9	9.7		clear and cool	6.7	9.9
3/17/98	1800	JH	6.4	5.9		clear and cool	6.6	8.2
3/26/98	1000	JH	7.6	8.2		clear and warm	6.6	11.5
4/2/98	1000	JH	7.2	8.3	0.86	clear and warm	6.7	9.9
4/6/98	1100	JH	7.4	8.3	0.98	clear and warm	6.6	8.7
4/9/98	1000	JH	7.4	8.0	0.98	clear and warm	6.6	8.8
4/13/98	1100	RB			1.08	sunny and cool		
4/16/98	1030	JH	7.5	3.7	1	snowy and cold	7.1	13.4
4/20/98	930	JH			1.02	cloudy and cool		
4/23/98	1100	JH	7.7	6.6	1	cloudy and warm	6.6	9.7
4/27/98	1000	JH			1.14	clear and cool		
4/30/98	1100	JH	7.3	5.5	1.2	clear and warm	6.8	8.0
5/1/98	1100	JH	6.9	9.2	1	cool	6.7	10.1
5/5/98	1030	JH			0.9	warm		
5/8/98	1100	JH	6.8	12.1	0.88	warm	6.9	11.1
5/12/98	1130	JH	6.7		1	warm		
5/15/98	930	JH	6.8	12.5		warm	6.7	12.5
5/4/98	1000	JH			1.5			
5/7/98	1030	JH	6.8	3.9	1.6	cool and cloudy		
5/11/98	1000	JH			1.34	sunny and warm		
5/14/98	900	JH	7.5	5.3	1.2	cloudy and warm	6.8	9.8
5/27/98	1000	JH	7.8	5.0	1.08	sunny and hot	7.0	9.3
5/25/98	1000	JH			0.68	sunny and hot		
5/28/98	900	JH	6.7	12.3	0.6	sunny and warm	7.2	12.0
6/1/98	900	RB			0.5	sunny and warm		
6/4/98	900	JH	6.9	9.2	0.48	cloudy and cold	7.0	10.1
6/8/98	900	JH			0.4	cloudy and rain		
6/11/98	1000	JH	7.9	13.3	0.3	clear	6.9	11.2
6/15/98	1000	JH			0.38	clear		
6/18/98	1000	JH	7.8	10.1	0.36	sunny and warm	6.7	12.1
6/22/98	1000	JH			0.34	sunny and warm		
6/25/98	930	JH	6.4	14.6	0.23	sunny and hot	6.6	11.7

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
6/29/98	1000	JH			0.2	sunny and hot		
7/2/98	1000	JH	6.9	15.4	0.22	sunny and hot	6.8	14.8
7/6/98	1000	TB			0.2	cloudy and warm		
7/9/98	1000	JH	6.9	19.7	0.14	cloudy and warm	6.7	18.3
7/13/98	1000	JH			0.12			
7/16/98	1000	JH	7.3	18.9	0.2	sunny and hot	6.6	17.6
7/20/98	1000	JH			0.1	sunny and hot		
7/23/98	1000	JH	7.5	18.6	0.12	partly cloudy	6.8	17.8
7/27/98	1000	JH			0.4	cloudy		
7/30/98	1000	JH	6.8		0.36	partly cloudy	6.9	21.4
8/3/98	1000	JH			0.28	partly cloudy		
8/6/98	1000	JH	6.4		0.28	sunny	6.9	13.3
8/10/98	1000	JH			0.3	partly cloudy		
8/13/98	1000	JH	6.8	21.6	0.32	partly cloudy	6.9	21.6
8/20/98	1000	JH	7.6	23.4	0.36	cloudy	7.2	20.1
8/24/98	1000	JH				cloudy		
8/27/98	1000	JH	7.0	19.4	0.24	cloudy	7.1	19.1
8/31/98	1000	JH			0.2	clear		
9/3/98	1000	JH	7.9	19.4	0.4	clear	7.2	18.4
9/7/98	1000	JH			0.24	clear		
9/10/98	1000	JH	7.7	18.4	0.22	clear	7.0	18.2
9/17/98	1000	JH	7.5	17.8	0.2	clear	7.1	17.8
9/24/98	1000	JH	7.4	15.8	0.22	clear	7.2	16.9
10/1/98	1000	JH	7.3	16.8	0.12	clear	7.0	17.2
10/8/98	1000	JH	6.9	16.6	0.1	clear	7.0	16.8
10/15/98	1000	JH	7.3	13.5	0.06	clear	7.0	16.5
10/22/98	1000	JH	7.5	15.4	0.04	clear and cool	7.1	14.7
10/28/98	1000	JH	7.3	12.1	0.06	clear and cool	7.1	15.7

Ammonia Compliance Monitoring

			Bear Creek				Waucondah Effluent	
Date	Time	Initials	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
4/20/95	900	BC	7.9	7.0	0.42	cool and cloudy	6.8	8.0
4/24/95	1000	BC	8.4	6.0	0.68	cold and clear	6.6	10.0
4/27/95	905	BC	7.9	5.5	0.44	cold and light clouds	6.6	9.0
5/1/95	855	BC	7.9	7.0	0.96	cool and cloudy	6.7	9.5
5/4/95	1030	BC	7.7	8.5	0.98	cool and clear	6.6	10.0
5/8/95	1010	BC	7.3	8.0	1	cloudy	7.0	10.0
5/11/95	1040	BC	7.7	10.0	0.96	clear	6.7	12.0
5/15/95	920	BC	7.1	11.0	0.86	clear and warm	6.8	12.0
5/18/95	1035	BC	7.0	9.0	1.8	clear and cool	8.7	9.6
5/22/95	930	SB	6.9	7.0	overflow	overcast	6.7	10.0
5/25/95	930	BC	7.0	8.0	overflow	cloudy and cool	6.8	11.0
5/30/95	900	BC	7.5	8.5	1.55	cloudy and cool	6.7	11.0
6/1/95	1000	BC	7.2	9.0	1.4	beautiful warm day	6.7	11.0
6/8/95	1045	BC	7.2	13.0	0.94	raining	6.6	12.5
6/12/95	1100	BC	7.0	14.5	0.8	clear and warm	6.8	14.0
6/15/95	945	BC	7.2	14.5	0.7	clear and warm	6.7	14.0
6/22/95	930	BC	7.0	15.0	0.36	clear and warm	6.6	14.0
6/26/95	1005	BC	7.5	16.5	0.38	clear and warm	7.0	14.5
6/29/95	930	BC	7.8	15.5	0.6	raining	7.3	13.5
7/2/95	900	BC	7.3	15.5	0.66	warm and cloudy	6.8	14.5
7/6/95	905	BC	7.0	17.5	0.68	warm and clear	6.9	16.0
7/10/95	915	BC	7.1	18.5	0.46	hot and clear	6.6	17.0
7/13/95	1040	BC	6.5	17.0	0.38	warm and clear	6.8	17.0
7/17/95	900	BC	7.1	18.5	0.48	warm and partly cloudy	6.8	17.0
7/20/95	1005	BC	7.0	18.5	0.54	warm and clear	6.9	17.0
7/24/95	1120	BC	7.0	19.0	0.52	warm and clear	6.5	16.5
7/27/95	1000	BC	7.0	18.6	0.34	warm and clear	6.6	16.5
7/31/95	935	BC	7.0	18.5	0.26	raining	6.7	16.0
8/3/95	1015	BC	7.0	18.7	0.26	hot and clear	8.0	17.0
8/7/95	1020	BC	6.4	18.5	0.38	warm and clear	7.5	17.5
8/10/95	915	BC	7.5	18.0	0.36	hot	7.1	17.9
8/14/95	915	BC	7.5	17.2	0.34	light rain and cool	7.5	17.8
8/17/95	915	BC	7.6	18.1	0.26	light clouds and warm	7.3	18.2
8/21/95	1025	BC	6.5	18.8	0.12	hot and clear	6.9	18.0
8/24/95	950	BC	7.1	17.1	0.2	light clouds and hot	6.7	18.5
8/28/95	930	BC	7.0	17.4	0.2	clear and warm	6.7	18.5
8/31/95	1035	BC	7.7	18.6	0.18	hot and clear	7.1	18.5
9/4/95	900	BC	7.6	20.0	0.18	hot and clear	7.5	19.0
9/7/95	945	BC	7.5	17.5	0.18	cool and overcast	6.9	18.0
9/11/95	910	BC	7.3	15.0	0.16	cool and light clouds	6.8	17.5
9/14/95	930	BC	7.5	17.0	0.16	cool and light clouds	7.1	17.0
9/18/95	1000	BC	7.3	16.0	0.12	cool and overcast	6.8	17.0
9/25/95	1010	BC	7.2	13.0	0.16	cool and clear	7.0	14.0
10/6/95	900	BC	7.0	11.0	0.16	cool and clear	7.0	12.5
10/9/95	945	BC	7.6	11.5	0.16	cool and light clouds	7.1	14.0
10/16/95	1000	BC	7.7	11.0	0.16	cool and light clouds	7.1	14.0
10/27/95	930	BC	7.8	6.5	0.18	cool and clear	7.2	12.5
10/31/95	1000	BC	7.8	11.0	0.16	cool and clear	7.0	13.0

Blannual Downstream pH Monitoring

Date: 2-12-99
Sampled by: John P. Hertz
Weather Condition: Clear - Cool
Stream Condition: Clear-Low-ice on sides

	Location #1		Location #2		Location #3		Location #4	
	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.61	3.8°C	6.34	.5°C	5.94	.5°C	6.32	.4°C
10:00 AM	6.86	3.6°C	7.56	1.7°C	6.24	6.5°C	6.66	.7°C
2:00 PM	7.30	4.7°C	6.56	6.2°C	6.95	5.1°C	6.41	.6°C
6:00 PM	6.98	3.9°C	5.75	4.5°C	6.25	3.2°C	6.39	3.2°C

Additional Comments:

John Paulk: Water very cloudy from waterfowl in open part. Two ponds both about half acre open at one end only ice on rest of pond.
Tom Wiens: Stream eight-inch depths, six feet wide, ice on sides, and water clear.
Crandall: Stream eight-inch depth, seven feed wide, ice on side, water clear.
Bridge at Dakan: Stream six-inch depth, nine feet wide, ice on side, and water clear.

Date: 8-18-98
Sampled by: Terry Brownell and John P. Hertz
Weather Condition: Clear and warm
Stream Condition: Clear

	Location #1		Location #2		Location #3		Location #4	
	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.50	10.0°C	6.00	19.0°C	7.00	18.0°C	7.60	16.0°C
10:00 AM	6.44	14.0°C	6.30	20.0°C	7.25	20.0°C	7.70	19.0°C
2:00 PM	6.85	16.0°C	6.40	21.0°C	7.15	22.0°C	7.64	25.0°C
6:00 PM	6.55	16.0°C	6.30	20.0°C	7.10	21.0°C	7.50	23.0°C

Additional Comments:

Paulk: Clear, pond four feet deep.

Tom Wiens: Clear, seven inches feet, eight inches deep.
Crandall: Twelve feet wide, twelve inches deep.
Bridge at Dakan & 105: Clear, eight feet wide, twelve inches deep.

Date: 3-17-98
Sampled by: Terry Brownell and John P. Hertz
Weather Condition: Clear and cool
Stream Condition: Clear

	Location #1		Location #2		Location #3		Location #4	
	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.44	6.2°C	5.81	4.0°C	6.02	3.8°C	6.22	4.4°C
10:00 AM	6.69	5.5°C	6.20	7.8°C	6.28	7.5°C	6.78	8.7°C
2:00 PM	6.92	9.0°C	6.37	11.1°C	6.48	10.8°C	6.92	10.5°C
6:00 PM	6.43	8.1°C	5.87	8.8°C	6.02	9.1°C	6.25	8.4°C

Additional Comments:

Tom Wiens: stream clear six feet wide, six inches deep.
Crandall: stream ten feet wide, eight inches deep, clear.
Bridge at Dakan & 105: stream clear, eight feet wide, and one foot deep.
John Paulk: semi clear, pond three feet deep, up the river from the plant and down stream from the plant, A lot of Beavers building domes.

Date: 12-10-97
Sampled by: Terry Brownell
Weather Condition: Clear and cool
Stream Condition: Clear

	Location #1		Location #2		Location #3		Location #4	
	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.45	3.6°C	6.00	5.0°C	5.92	3.7°C	6.30	4.5°C
10:00 AM	6.70	3.7°C	6.50	5.4°C	6.12	4.2°C	6.50	6.0°C
2:00 PM	6.80	4.5°C	6.72	6.0°C	6.32	5.1°C	6.53	6.02°C
6:00 PM	6.75	5.5°C	6.53	5.6°C	6.10	4.2°C	6.40	5.50°C

Additional Comments:

Paulk: Both Ponds about empty, clear.
Tom Wiens: seven feet wide, seven inches deep, clear.
Crandall: eight feet wide, one foot deep, clear
Bridge at Dakan & 105: five inches deep, seven feet wide, clear.

Date: 8-10-97
Sampled by: Terry Brownell and John P. Hertz
Weather Condition: Clear and warm
Stream Condition: Clear

	Location #1 John Paulk		Location #2 Tom Wiens		Location #3 Karla Romanin		Location #4 Jeff Alvis	
	District personnel have been denied access to land belonging to John Paulk and Tom Wiens.				Both Plume and Bear Creek		Dakin & 105 Rd. by wooden bridge.	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	Access Denied		6.85	16.4°C	7.30	17.1°C	7.45	16.7°C
10:00 AM			6.45	20.8°C	7.28	20.9°C	7.71	22.6°C
2:00 PM			7.10	24.1°C	7.54	26.2°C	8.10	28.0°C
6:00 PM			7.34	24.8°C	7.66	24.4°C	7.95	25.0°C

Additional Comments:

Streams are clear, at Wiens, clear two feet wide, three feet deep. Both Plume and Bear Creek come together ten feet wide, six inches deep, clear. Stream at Dakin and 105 Bridge clear, eight feet wide, four inches deep. Clear Warm Day.

Date: 12-12-96
Sampled by: Terry Brownell
Weather Condition: Warm and Clear, 60°
Stream Condition: Low, clear

	Location #1 John Paulk		Location #2 Tom Wiens		Location #3 Karla Romanin		Location #4 Jeff Alvis	
	District personnel have been denied access to land belonging to John Paulk and Tom Wiens.				Both Plume and Bear Creek		Dakin & 105 Rd. by wooden bridge.	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	Access Denied		Access Denied		6.68	0.5°C	6.55	1.4°C
10:00 AM					7.86	1.4°C	7.81	3.8°C
2:00 PM					7.83	4.1°C	7.68	5.8°C
6:00 PM					7.81	5.2°C	7.74	6.8°C

Additional Comments:

Sunny, windy, warm, about 60^0. The stream at Karla Romanin had about 1/2 ice on top, it is running about 1 ½' wide, two inches to four inches deep on Jeff Alvis, no ice. About two feet wide, three inches deep, both streams look clear.

Date: 8-12-96
Sampled by: Terry Brownell
Weather Condition: Hot and Clear,
Stream Condition: Low, clear

	Location #1 John Paulk		Location #2 Tom Wiens		Location #3 Karla Romanin		Location #4 Jeff Alvis	
	District personnel have been denied access to land belonging to John Paulk and Tom Wiens.				Both Plume and Bear Creek		Dakin & 105 Rd. by wooden bridge.	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	Access Denied		Access Denied		7.30	19.0°C	7.61	18.1°C
10:00 AM					7.50	22.0°C	7.77	20.0°C
2:00 PM					7.75	22.3°C	7.83	19.5°C
6:00 PM					7.74	21.8°C	7.80	19.0°C

Date: 12-29-95
Sampled by: Bob C.
Weather Condition: 20° F and light snow
Stream Condition: Low and mostly frozen over

	Location #1 John Paulk		Location #2 Tom Wiens		Location #3 Karla Romanin		Location #4 Jeff Alvis	
	District personnel have been denied access to land belonging to John Paulk and Tom Wiens.				Both Plume and Bear Creek		Dakin & 105 Rd. by wooden bridge.	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	Access Denied		Access Denied		7.57	1.5°C	7.63	1.5°C
10:00 AM					7.98	4.0°C	7.98	14.0°C
2:00 PM					8.52	5.5°C	8.48	15.0°C
6:00 PM					8.05	4.0°C	7.90	14.0°C

Date: 9-4-95
Sampled by: Bob C.
Weather Condition: Hot and clear
Stream Condition: Low and clear

	Location #1 John Paulk		Location #2 Tom Wiens		Location #3 Karla Romanin		Location #4 Jeff Alvis	
	District personnel have been denied access to land belonging to John Paulk and Tom Wiens.				Both Plume and Bear Creek		Dakin & 105 Rd. by wooden bridge.	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	Access Denied		Access Denied		7.24	14.0°C	7.56	13.0°C
10:00 AM					7.40	16.0°C	7.56	14.0°C
2:00 PM					7.78	18.0°C	7.82	18.0°C
6:00 PM					7.74	20.0°C	7.85	19.0°C

Ammonia Compliance Monitoring

Bear Creek							Waucondah Effluent	
Date	Time	Initals	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
07/01/1999	1000	MG			0.3	SUNNY AND WARM	7.14	15.6
07/05/1999	1000	JH			0.24	SUNNY AND HOT		
07/08/1999	1000	JH	6.78	19.2	0.22	CLOUDY AND WARM	7.89	16.5
07/12/1999	1000	JB	7.29	18.7	0.1	SUNNY AND WARM	7.21	17.7
07/15/1999	1000	JB	7.16	19.8	0.22	SUNNY AND WARM	7.17	18.1
07/19/1999	1000	JB	7.2	20.9	0.2	SUNNY AND WARM	6.9	19.7
07/23/1999	1000	MG	7.19		0.25	SUNNY AND WARM		
07/26/1999	1000	JB			0.2	SUNNY AND WARM		
07/29/1999	1000	JB	7.06	21.7	0.2	SUNNY AND WARM	6.7	19.3
08/02/1999	1000	MW	7.18	18.9	0.22	CLOUDY AND WARM	7.21	17.6
08/05/1999	1000	JB	6.82	18.1	0.22	CLOUDY AND COOL	6.88	17.1
08/09/1999	1000	SY	7.29	18	0.22	SUNNY AND WARM	7.64	17.9
08/12/1999	1000	MW	6.92	18.3	0.4	SUNNY AND HOT	6.84	18.6
08/16/1999	900	SY	6.94	18.3	0.4	SUNNY AND WARM	6.95	17
08/19/1999	1015	MW	6.87	18.3	0.4	SUNNY AND WARM	6.66	18
08/23/1999	915	SY	7.45	18.3	0.3	SUNNY AND WARM	7.13	18.3
08/26/1999	915	MW	7.23	18.3	0.28	SUNNY AND HOT		18.6
08/30/1999	900	SY	7.3	18.3	0.3	SUNNY AND HOT	6.93	17.6
09/02/1999	1000	SY	7.3	18.3	0.3	SUNNY AND HOT	6.55	18.3
09/06/1999	1000	JB	7.41	18.1	0.3	SUNNY	6.51	18.2
09/09/1999	1000	JB	7.31	17.2	0.3	SUNNY	7.18	16
09/13/1999	1030	JB	7.4	17.1	0.3	SUNNY	8.31	17.3
09/16/1999	1000	JB	7.46	15.5	0.3	SUNNY AND COOL	6.53	14.8
09/20/1999	1020	JB	7.21	15.4	0.28	CLOUDY AND COOL	7.8	14.9
09/23/1999	1000	JB	7.19	15.2	0.3	CLOUDY AND COOL	6.96	15
09/27/1999	1000	JB	7.2	14.1	0.26		7.45	13.7
09/30/1999	1000	JB	7.35	13.2	0.25	SUNNY AND COOL	7.08	12.9
10/04/1999	930	SY	7.65	11	0.28	SUNNY AND COOL	7.35	13.9
10/07/1999	930	MW	7.51	11.3	0.2	CLOUDY AND COOL	7.38	15.5
10/11/1999	930	SY	7.84	11.4	0.01	SUNNY AND COOL	7.19	15.3
10/14/1999	930	MW	7.65	11.3	0.2	SUNNY AND WARM	7.52	13.3
10/18/1999	900	SY	8.21	8.3	0.1	CLOUDY AND COLD	7.76	11.7
10/21/1999	930	MW	7.87	7.6	0.21	SUNNY AND COOL	7.85	10
10/25/1999	945	MW	8.29	7.5	0.11	SUNNY AND WARM	7.69	11.3
10/28/1999	915	SY	8.35	7.4	0.1	SUNNY AND COOL	7.78	11.3
11/01/1999	1000	SY	8.26	8.2	0.2	SUNNY AND COOL	8.53	12.4
11/04/1999	1100	MW	8.37	9.1	0.1	SUNNY AND WARM	7.95	12
11/08/1999	1030	MW	8.28	10.2	0.1	SUNNY AND WARM	8.24	12.8
11/11/1999	900	MW	8.87	6.5	0.1	CLOUDY AND WARM	7.7	11
11/15/1999	1145	MW	7.8	8.9	0.1	SUNNY AND HOT	7.98	12.3
11/18/1999	1430	MW	7.87	9.1	0.1	SUNNY AND COOL	7.84	12.9
11/22/1999	830	MW	9.27	9.1	0.1	CLOUDY AND SNOW	7.38	12.6
11/25/1999	820	MW	8.68	8.9	0.1	CLOUDY AND WARM	8.41	11.2
11/29/1999	910	SY	8.7	3.9	0.1	SUNNY AND WARM	8.15	11.5
12/02/1999	1400	SY	8.68	5.7	0.1	SUNNY AND MILD	8.24	9.2
12/07/1999	845	SY	8.89	2.1	0.2	SUNNY AND COLD	8.43	8.4
12/09/1999	930	SY	8.91	1.9	0.2	SUNNY AND COLD	8.61	8

Ammonia Compliance Monitoring

Bear Creek							Waucondah Effluent	
Date	Time	Initals	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
11/05/1998	1000	JH	6.93	13.6	0.02	SUNNY AND COLD	6.76	13.1
11/12/1998	1000	JH	7.33	8.1	0.02	SUNNY AND COLD	6.53	11.3
11/20/1998	1000	JH	7.44	6.9	0.02	SUNNY	6.67	12.6
11/24/1998	1000	JH	6.65	7.8	0.02	SUNNY	6.9	12.3
12/03/1998	1000	JH	7.76	8.6	0.02	SUNNY	8.43	12.4
12/10/1998	1000	JH	6.41	8.4	0.02	SUNNY	6.59	12.6
12/17/1998	1000	JH	7.7	4.8	0.16	SUNNY	6.61	11.7
12/23/1998	900	TB	7	3	0.15	SUNNY AND COLD	6.8	10
12/31/1998	900	JH	6.89	2.9	0.18	SUNNY AND COLD	6.66	9.3
01/07/1999	1000	JH	6.88	3	0.14	SUNNY AND COLD	6.76	10.1
01/13/1999	1000	JH	6.78	3.1	0.12	SUNNY	6.82	10.2
01/21/1999	1000	JH	6.5	4.8	0.2	SUNNY AND COLD	6.6	8.1
01/28/1999	1000	JH	6.97	6.7	0.12	SUNNY AND COLD	6.58	9.1
02/04/1999	1000	JH	7.15	6.8	0.16	SUNNY AND WARM		
02/11/1999	1000	WP	7.2	5.9	0.12	SUNNY AND COLD	6.5	5.1
02/18/1999	1000	JH	7.04	6.2	0.14	SUNNY AND COOL	7.05	7.2
02/25/1999	1000	JH	6.48	6.2	0.18	SUNNY AND WARM	6.54	11
03/04/1999	1000	JH	6.61	5.5	0.15	SUNNY AND WARM	6.67	11.5
03/11/1999	1000	JH	6.86	6.9	0.1	CLOUDY AND WARM	6.6	9.9
03/18/1999	1000	JH	6.74	14.2	0.16	SUNNY AND WARM	6.7	10.2
03/25/1999	1000	JH	6.68	11.4	0.18	SUNNY AND WARM	6.65	12
04/01/1999	1000	JH	6.54	9.2	0.08	CLOUDY AND COOL	6.6	9.8
04/05/1999	1000	JH			0.18	CLOUDY AND SNOW		
04/08/1999	1000	JH	6.58	11	0.16	CLEAR AND WARM	6.5	12
04/12/1999	1000	JH			0.1	SUNNY AND COLD		
04/15/1999	1000	JH	7.29	7.1	0.24	COLD AND SNOW	7.06	9.2
04/19/1999	1000	JH			0.38	CLOUDY AND WARM		
04/22/1999	1000	JH	6.75	8.4	0.6	CLOUDY AND SNOW	6.6	9.8
04/26/1999	1000	JH			0.38	SUNNY		
04/29/1999	1000	RB	6.65	9	OVER FLOW	CLOUDY AND RAIN	6.8	9.5
05/03/1999	1000	JH			OVER FLOW	RAIN		
05/06/1999	1000	JH	7.75	5.5	1.7	CLEAR AND COOL	7.5	9.6
05/10/1999	1000	JH			1.66	CLOUDY AND COOL		
05/13/1999	1000	JH	6.58	9.6	1.3	CLEAR AND WARM	7.13	11.3
05/17/1999	1000	JH			1.2	SUNNY AND WARM		
05/20/1999	1000	JH	6.56	9.5	1	CLOUDY AND WARM	7.22	11.4
05/24/1999	1000	JH			0.9	SUNNY AND WARM		
05/27/1999	1000	JH			0.9	CLOUDY AND RAIN	6.98	12.1
05/31/1999	1000	MG			1.7	CLOUDY AND COOL		
06/03/1999	1000	MG	7.42	13	1.3	SUNNY AND COOL	6.84	11.6
06/07/1999	1000	JH			1.8	SUNNY AND HOT		
06/10/1999	1000	JH	7.24	6.5	OVER FLOW			
06/14/1999	1000	MG			0.7	SUNNY AND CLEAR	6.99	11
06/17/1999	1000	MG			0.73	RAIN	7.11	10.7
06/21/1999	1000	MG			0.7	SUNNY AND WARM	6.58	12.2
06/24/1999	1000	MG			0.6	SUNNY AND WARM	7.02	15
06/28/1999	1000	JH			0.4	SUNNY AND WARM	6.86	13.7

Ammonia Compliance Monitoring

Bear Creek							Waucondah Effluent	
Date	Time	Initals	pH	Temp. (C)	Stream Gauge	Weather Condition	pH	Temp. (C)
12/13/1999	930	SY	8.81	7.8	0.2	CLOUDY AND COLD	7.35	7.3
12/16/1999	930	SY	8.95	8.2	0.2	SUNNY AND MILD	8.59	9.1
12/20/1999	1100	SY	9.1	3.7	0.2	SNOW	8.5	7.9
12/23/1999	900	SY	8.5	3.6	0.2	SNOW	8.85	3.3
12/27/1999	905	MW	8.61	3.9	0.2	SUNNY AND COLD	8.15	6
12/30/1999	915	SY	8.4	3.8	0.2	SUNNY	8.4	7.4
01/03/2000	1115	SY	7.8	3.3	0.3	SNOW AND COLD	8	7
01/06/2000	930	MW	7.3		0.2	SUNNY AND COLD	7.3	
01/10/2000	830	MW	7.4		0.2	SUNNY	7.4	8
01/13/2000	900	MW	7.2		0.2	SUNNY AND COLD	7	8.3
01/17/2000	1100	MW	7.2		0.1	SUNNY AND COLD	7.5	9.6
01/20/2000	950	MW	7.6	4.3	0.2	SUNNY AND COOL	7	9.8
01/24/2000	1000	SY	7.6	4.8	0.2	SUNNY AND WARM	7.4	9
01/27/2000	930	SY	7.5	4.5	0.2	SNOW	7.33	7.3
01/31/2000	1140	SY	7.8	4	0.2	SUNNY AND SNOW	7.6	7.4
02/03/2000	1030	SY	8.05	7.6	0.2	SUNNY	7.85	6
02/08/2000	1000	MW	8.16	7.5	0.2	SUNNY	7.5	7
02/11/2000	1155	MW	8.05	7.3	0.2	CLOUDY	7.19	7.1
02/14/2000	900	MW	7.12	4.2	0.15	SUNNY	7.2	6.7
02/17/2000	910	MW	7.17	5	0.15	CLOUDY	7.23	6.2
02/21/2000	1000	SY	7.2	5	0.2	SUNNY	7.2	6.7
02/24/2000	900	JH	7.18	6.1	0.18	SUNNY	7.14	8.4
02/28/2000	800	MW	7.82	4.6	0.2	SUNNY AND COOL	6.53	14.8

METRO WASTEWATER RECLAMATION DISTRICT

6450 York Street - Denver, Colorado 80229-7499
(303) 286-3000 Telefax (303) 286-3030

04/06/1999

MS BEV CARSON, MANAGER
PERRY PARK WATER & SANITATION DISTRICT
5676 W RED ROCK DR
LARKSPUR CO 80118

LABORATORY SERVICES REPORT

SAMPLE NAME: *BEAR CREEK P P FLUME* METRO ID#: *384406*
SAMPLE DATE: 03/17/1999 DATE RECEIVED: 03/17/1999
SAMPLE TYPE: G

ANALYTICAL RESULTS:

AMMONIA-N	mg/L	<0.2

SAMPLE NAME: *BEAR CREEK DAKAN RD* METRO ID#: *384407*
SAMPLE DATE: 03/17/1999 DATE RECEIVED: 03/17/1999
SAMPLE TYPE: G

ANALYTICAL RESULTS:

AMMONIA-N	mg/L	<0.2

If you wish to retain these samples, they may be obtained at the Metro District Laboratory within 30 days after the date of this report. Thereafter, the samples will be discarded. Empty sample bottles must be picked up within 45 days.

Harry M. Harada Jr.
Director of Laboratory Services

Wocoda PLANT ?

1996 Ammonia

Jan. 3.9 mg/L
Feb. 1.7 mg/L
March 1.6 mg/L
April 2.9 mg/L
May .8 mg/L
June .8 mg/L
July 1.2 mg/L
August 1.1 mg/L
September 2.1 mg/L
October .5 mg/L
November 1.1 mg/L
December .5 mg/L

1995 Ammonia

Jan. 4.3 mg/L
Feb. .6 mg/L
March. 2.5 mg/L
April 3.3 mg/L
May .9 mg/L
June .9 mg/L
July .6 mg/L
August 1.2 mg/L
Sept. .5 mg/L
Oct. 1.8 mg/
Nov. 1.1 mg/L
Dec. 1.1 mg/L

Biannual Downstream pH Monitoring

Date 2-12-99 Sampled by John P. Hertz

Weather condition Clear - Cool

Stream condition Clear - Low - ice on sides

	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.61	3.8°	6.34	5.0°	5.94	5.0°	6.32	4.0
10:00 AM	6.86	3.6°	7.56	1.7°	6.24	1.5°	6.66	1.7°
2:00 PM	7.30	4.7°	7.56	6.2°	6.95	5.1°	6.41	6.0°
6:00 PM	6.98	3.9°	5.75	4.5°	6.25	3.2°	6.39	5.5°

Additional comments:

John Paulk: two ponds both about half Acre open at one end only ice on rest of pond water very cloudy from waterfowl in open part

Tom Wiens Stream eight inch depth six feet wide ice on sides water clear

Crandall - Stream eight inch depth seven feet wide ice on side water clear

Bridge at Dakan - Stream six inch depth Nine feet wide ice on side water clear

Biannual Downstream pH Monitoring

Date 8-18-98 Sampled by TD & JH

Weather condition Clear & warm

Stream condition Clear

Time	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.50	10.0°C	6.00	19.0°C	7.00	19.0°C	7.60	16.0°C
10:00 AM	6.49	14.0°C	6.30	20.0°C	7.25	20.0°C	7.70	19.0°C
2:00 PM	6.95	18.0°C	6.40	21.0°C	7.15	22.0°C	7.64	25.0°C
6:00 PM	6.55	16.0°C	6.30	20.0°C	7.10	21.0°C	7.50	23.0°C

Additional comments:

Tom Wiens clear 7' wide 8" deep

Crandal 12' wide 12" deep, clear Bridge at 105 & Dakan clear 8' wide 12" deep. Paulk clear, Pond 4' deep

Biannual Downstream pH Monitoring

Date 3-17-98 Sampled by Terry Brownell and John Hertz

Weather condition clear cool

Stream condition clear

	Location #1		Location #2		Location #3		Location #4	
	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
Time	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.44	6.2°C	5.81	4.0°C	6.02	3.8°C	6.22	4.4°C
10:00 AM	6.69	5.5°C	6.20	7.8°C	6.28	7.5°C	6.28	8.7°C
2:00 PM	6.92	9.0°C	6.37	11.1°C	6.48	10.8°C	6.92	10.5°C
6:00 PM	6.43	8.1°C	5.87	8.8°C	6.60	9.1°C	6.55	8.4°C

Additional comments:

Tom Wiens stream clear 6' wide 6" Deep. Crandall stream 10' wide 8" Deep clear. Bridge at Dakan & 105 stream clear 8' wide 1' deep. John Paulk Semi clear, Pond 3' Deep up the River from the plant and down stream from the plant. Alot of Beavers building domes.

Biannual Downstream pH Monitoring

Date 12-10-97 Sampled by Jay & Brown

Weather condition clear cool

Stream condition clear

Time	John Paulk 6221 PP Road		Tom Wiens 5567 PP Road		Crandall 4845 PP Road		Bridge at Dakan & 105	
	pH	Temp.	pH	Temp.	pH	Temp.	pH	Temp.
6:00 AM	6.45	3.6°	6.00	5.0	5.92	3.7	6.30	4.5°C
10:00 AM	6.70	3.7°	6.56	5.4	6.12	4.2	6.50	6.00°C
2:00 PM	6.80	4.5	6.72	6.0	6.32	5.1	6.53	6.02
6:00 PM	6.75	5.5	6.53	5.6	6.10	4.2	6.40	5.50

Additional comments:

Paulk Both Ponds About empty clear

Tom Wiens 7' wide 7" Deep Clear

Crandall 6' wide 1' Deep Clear

Bridge at 105 5" Deep 7' wide. Clear

Biannual Downstream Ph Monitoring

Date 8-10-97 Sampled by: T.D. / J.H.

Weather condition clear warm
Stream condition clear

	Location #1		Location #2		Location #3		Location #4	
	John Palk		Tom Wiens		Karla Romanin		Jeff Alvis	
	District personal have been denied access to land belonging to John Palk and Tom Wiens.				Both plume & Deer Creek East of Dakin Rd. culdesac		App. 1/2 mile downstream of ~~culdesac west side of~~ Dakin & 105 Rd. by wooden bridge.	
Time	Ph	Temp.	Ph	Temp.	Ph	Temp.	Ph	Temp.
6:00	Access Denied		6.95	16.4	7.30	17.1	7.45	16.7
10:00			6.45	20.8	7.28	20.9	7.71	22.6
14:00			~~7.10~~ 7.10	24.1	7.54	26.2	8.10	28.0
18:00			7.34	24.8	7.66	24.4	7.95	25.0

Additional comments:

Streams are clear, at wiens clear 2' wide 3' Deep Both Plume & Deer creek come together 10' wide 6" Deep clear stream at Dakin and 105 Bridge clear 8' wide 4" Deeps Clear warm Day

Biannual Downstream Ph Monitoring

Date 12-12-96 Sampled by: Jerry C Blowers

Weather condition warm clear 60°
Stream condition Low clear.

	Location #1		Location #2		Location #3		Location #4	
	John Palk		Tom Wiens		Karla Romanin		Jeff Alvis	
	District personal have been denied access to land belonging to John Palk and Tom Wiens.				East of Dakin Rd. culdesac		App. 1/2 mile downstream of culdesac west side of Dakin Rd. by wooden bridge.	
Time	Ph	Temp.	Ph	Temp.	Ph	Temp.	Ph	Temp.
6:00	Access		Access		6.68	0.5°C	6.55	1.1°C
10:00					7.86	1.4°C	7.81	3.8°C
14:00	Denied		Denied		7.93	4.1°C	7.68	5.0°C
18:00					7.81	5.2°C	7.74	6.8°C

Additional comments: Sunny windy warm About 60° The Stream at Karla Romanin Had about ½ Tce on top it is Running About 1½ wide 2" to 4" deep on Jeff Alvis No Tce. About 2' wide 3" to 6" Deep Both streams look Clear

HYDROLOGIC DATA-SOURCE COMPILATON, CHATFIELD WATERSHED, COLORADO

Prepared for
Chatfield Watershed Authority
c/o Denver Regional Council of Governments
2480 W. 26th Avenue, Suite 200B
Denver, CO 80211-5580

Prepared on Behalf of
Commodore Advanced Sciences, Inc.
4251 Kipling Street, Suite 575
Wheat Ridge, CO 80033-6810

By
TDS Consulting Inc.
595 West Meadow Road
Evergreen, CO 80439-9745

TDS Project No. 9903

December 30, 2000

CHATFIELD WATERSHED AUTHORITY – DATA SOURCES

Compiled by: T.D. Steele, on Behalf of Commodore ASI Status: 12/30/00

Chatfield Watershed Authority Monitoring Program, Commodore Advanced Sciences Inc
Contact: Russell N. Clayshulte, DRCOG, 303-480-6766, rclayshulte@drcog.org
Contact: Doug Dennison, Commodore ASI, 303-463-4833, ddennison@commodore.com

CWA WQ Monitoring Sites (see below for additional sites):

(a) Base program: *RM-7 (since 1997); PC-2, SO-0, and SP-1 (since 8/86)*
Historical Reservoir sites (pre-1997): RM(7),RP(8), RS(9)
Phytoplankton species and density (since 8/87; growing season)
Water-Column Reservoir profiles: SC, Temp, pH, and DO

(b) Watershed historical sites:
Bear Creek sites 6A, 6B, and 6C – See Perry Park W&S District
East Plum Creek sites 4, 4A, and 4B – See PCWA
Site 5 -- East Plum Creek near Larkspur (1986-87 CYs)
Site 3 -- West Plum Creek near Sedalia (1986-87, 1991 CYs)
Site 2C -- mainstem Plum Creek near Reservoir (paired with PC-2)

Alluvial wells along Plum Creek: up to 6 wells (see annual monitoring reports)
Well ID #s: 1W, 2W, 4W, 5W, & 6W (upstream to downstream)
Record: 1990-92, 1995 (1), 1998, 2000; None: 1993-94, 1996-97, 1999

Annual reservoir bottom-sediment chemistry samples: *1997-99, 2000*

Basinwide Screening Surveys: 24 locations, sites CH01 through CH24 *(1999-2000)*

U.S. Geological Survey, Water Resources Division (USGS, WRD)
Contact: Bob Brandle, 303-236-9404 x 219, Colorado District, Lakewood Field Office

06708000	South Platte River at Waterton, CO (2,621 mi^2) 1927-81 Water Years (WYs)	Daily streamflows *[USGS; see SEO]*
06708500	Deer Creek near Littleton, CO (26.2 mi^2) 1943-46 WYs	Daily streamflows
06708750	East Plum Creek at Castle Rock, CO (102 mi^2) Record: 8/85-9/89 (discontinued)	Daily streamflows
06708800	East Plum Creek below Haskins Gulch, CO (n/a) Record started: 4/2/99; published 4-9/99; internet retrieval: 10/99-9/00 *East Plum Creek above PCWA discharge* *CWA/PCWA Site 4B (WQ data available since 1991):* *1991-94, C-ASI 1/95-current, PCWA*	Daily streamflows
06709000	Plum Creek near (below) Sedalia, CO (274 mi^2) Record: 6/42-9/47 (Qs); 8/90-present (streamflows and precipitation)	Daily Qs and Ppt.

CWA Site 2B (3 WQ samples during April-May 1991)
Note: Requested historical ppt. records (since 9/90), not on Web site.
Received ppt. data from Bob Brandle & Gregg O'Neill, USGS, 11/29/00.]

06709500 Plum Creek near Louviers, CO (302 mi^2) Daily streamflows
Record: 1948-89(?) WYs (discontinued)

06709530 Plum Creek at Titan Road near Louviers, CO (315 mi^2) Daily Qs
Record: 5/84-present
CWA Site 2 (8/86-present), primary inflow WQ monitoring site

06709600 Chatfield Lake near Littleton, CO (3,018 mi^2) 5/75-?? (stages)
1977-81 WYs, WQ data

06710245 South Platte River at Union Ave. near Littleton (3,043 mi^2) Daily Qs
Record: 4/89-?? *(need to check)*

06710000 South Platte River at Littleton, CO (3,069 mi^2) Daily streamflows
Record: 1942-86 WYs

Plum Creek Wastewater Authority (PCWA)
Contact: Tim Grotheer, 303-681-1991, timgpcwa@cds.net

Site 4B East Plum Creek above PCWA discharge *(see USGS 06708800)*
Period of Record: 8/91-3/94

Site 001A PCWA Effluent Discharge *(current monitoring, update record?)*
Period of Record: Qs, 1/95-5/00; WQ, 1/96-6/00

Site 4A East Plum Creek below PCWA discharge
CWA Site 4A (supplemental intermittent WQ data, 8/91-3/94)
PCWA Site 4A (1/95-5/00) (update?)

Site 4(C) East Plum Creek below gravel pits
Designated as PCWA Site 4 (2/99, 12/99-5/00) (update?)

Site 4 Plum Creek at Sedalia
CWA Site 4 (supplemental intermittent WQ data, 1986-87, 1990-92)

State of Colorado, State Engineers Office (SEO)
Contact: Dave Dzurovchin, 303-866-3585 x 287, dave.dzurovchin@state.co.us

06708000 South Platte River at Waterton, CO (2,621 mi^2) Daily Streamflows
Record: 1982-present [see USGS for historical record: 1927-81 WYs]
CWA Site 1 (8/86-present), primary SP-inflow WQ monitoring site
Note: 2000 WY record received (provisional 15-minute Q readings)

U.S. Army Corps of Engineers, Omaha District
Contact: Ray Childs, 303-979-4120 x 116; cell: 303-507-7443 (precipitation records)
Contact: Kevin Grode, 402-221-3256 (in-Reservoir levels/outflow Qs/precipitation)
Contact: Bill Otto, 402-221-4803 (WQ data for Reservoir; inflows/outflow)

Reported in ASI (1992 CY): Site 08CHL1, Chatfield Lake near Dam
Record: June 1982-August 1992 (15 pages of STORET data)[ASI, 1993, Supplemental Notebook]
Web site: www.nwd-mv.usace.army.mil\rec\ *(need to check)*

Chatfield Dam Evaporation & Climatological Station

Monthly tabulations in electronic spreadsheet form: 12/99-10/00
Data collection discontinued: 11/00 (Cause: budget cutbacks.)

Sampling-Site Location Maps: Obtained from Ray Childs at TRC meeting (12/1/00)

See attachments.

Denver Water Department (DWD)
Contact: Steve Lohman, 303-628-5994, srl@water.denver.co.gov

Reported in ASI (1992 CY): South Platte River sites 1301, 1330, and 1331.
Above includes quarterly data for 1991 & 1992.
No data reported in ASI (1993).
Site WS-LP-001, South Platte River below Strontia Springs Reservoir
Site WS-LP-002, South Platte River below Chatfield Reservoir
Site WS-LP-003, South Platte River below Dutch Creek
Site WS-LP-004, South Platte River north of Dartmouth Avenue
Site WS-LP-005, South Platte River south of Florida Ave. at dam
Site WS-LP-006, South Platte River below Cherry Creek confluence
Site WS-LP-007, South Platte River below Sand Creek confluence
Site WS-LP-008, South Platte River at Henderson
Constituents: Q, coliform, temperature, pH, hardness, SC, tubidity, DO, NH3-N, TKN, T-P, TOC, TSS, Fe, Fe-D, Mn, Mn-D, anions
Records: between 5 and 10 years

Lockheed Martin Corporation (L-M)
Contact: Thomas Giordano, 303-977-3745, Thomas.j.Giordano@lmco.com

Numerous WQ monitoring sites included in supplemental ASI annual monitoring report for 1993: South Platte River sites SP1, SP2, SP3, Brush Creek branch sites SW-26-G, SW-18-G, & SW-87; Brush Creek site SW-18-G; added South Platte River site SP4 downstream (LMA fax, 11/30/00).

Perry Park Water & Sanitation District
Contact: Scott Monroe, 303-681-2050, smonroeperrypark@uswest.net

Sites (upstream to downstream): 6 (1986-87), WWTP discharge, 6A, 6C, and 6B along Bear Creek; September-December 1990 & April-July 1992.
Ammonia-compliance monitoring (Permit CO-0022551): 4/95-2/00.

Biannual downstream pH monitoring: 9/95-2/99; 4 locations.
Supplemental information provided as an attachment.

Centennial Water & Sanitation District
Contact: Paul Grundemann, pgrunde@rmi.net or Rick McLoud, 303-791-0430
Participant in S. Platte CURE; upper monitoring site below Chatfield Res.

Upper South Platte Watershed Protection Association (USPWPA)
Contact: Carol Ekarius, 719-837-3737, uspwpa@chaffee.net
Monitoring program under development (EPA 104(b)3 grant not awarded)
Attachment 1 (proposed monitoring-site locations) not provided.
3-Tiered Monitoring Strategy has been proposed:
Watershed-wide reconnaissance, 2 surveys (spring runoff; fall low flow)
[estimated approximately 100 samples (sites)]
Extensive sampling, 15 sites (staggered, more frequent during high flows)
Four "target" reservoirs, evaluate current trophic status

Cooley Gravel Company (Kobel Land) – Cherokee Ranch
Contact: Jamie Wilkins (need to check), 303-716-5304
WQ monitoring: upstream vs. downstream of gravel-pit operations.
Reported in ASI (1993) by Tuttle Appegate, Inc.
Monitoring program apparently discontinued in 1999.

Colorado Department of Health (CDH)
Contact: Robert McDonnell, CDPH&E-WQCD, 303-692-3578
Reservoir Sites 1R, 2R, 3R; Period of Record: 6/83-9/85) [see ASI, 1991]

State of Colorado, Division of Wildlife
Contact: John Woodling, 303-291-7224
Numerous Plum Creek subwatershed locations; South Platte River near Strontia Springs (impacts of Buffalo Creek fire and resultant sediment transport (information obtained by phone contact, 12/13/00).

Roxboro Park Metro District
Contact: Larry Moore, 303-979-7286, Joe Nye, Engineer
WWTP discharges into the South Platte River above Chatifield Reservoir.

City of Littleton, Public Services Department/Littleton-Englewood WW Treatment Plant
Contact: *Fred Bromberger*; Phil Russell, 303-762-2611, prussell@ci.englewood.co.us
Contacted 12/19/00, sent via e-Mail S. Platte CURE monitoring plan.

Town of Castle Rock, Department of Public Works
Contact: Stan Brown or Will Koger, wkoger@ci.castlerock.co.us

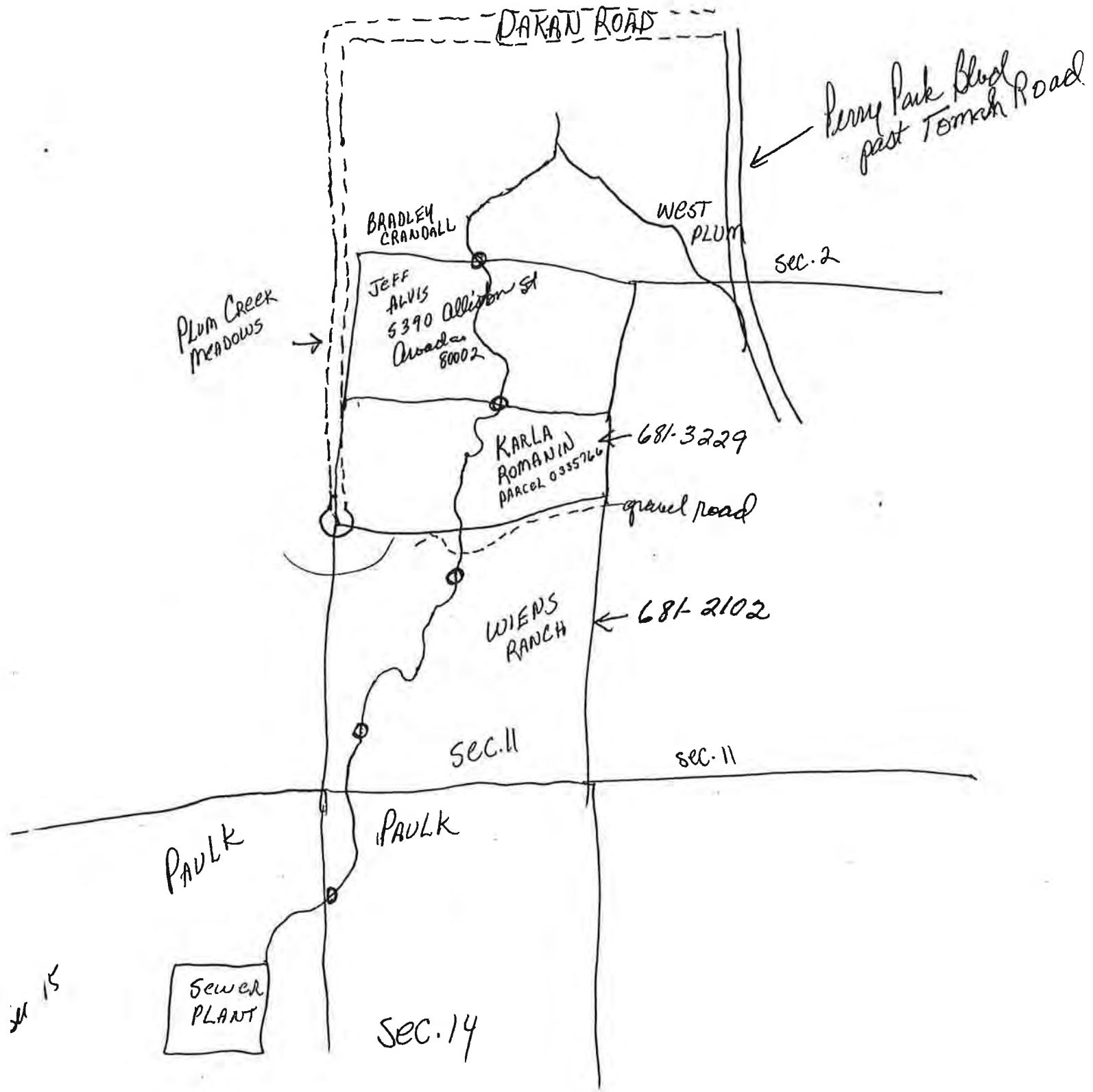
South Platte CURE, Watershed Coordinator
Contact: Cathy Shugarts, 303-286-3084, spcure@earthlink.net

DataCompilation(TDS123000)

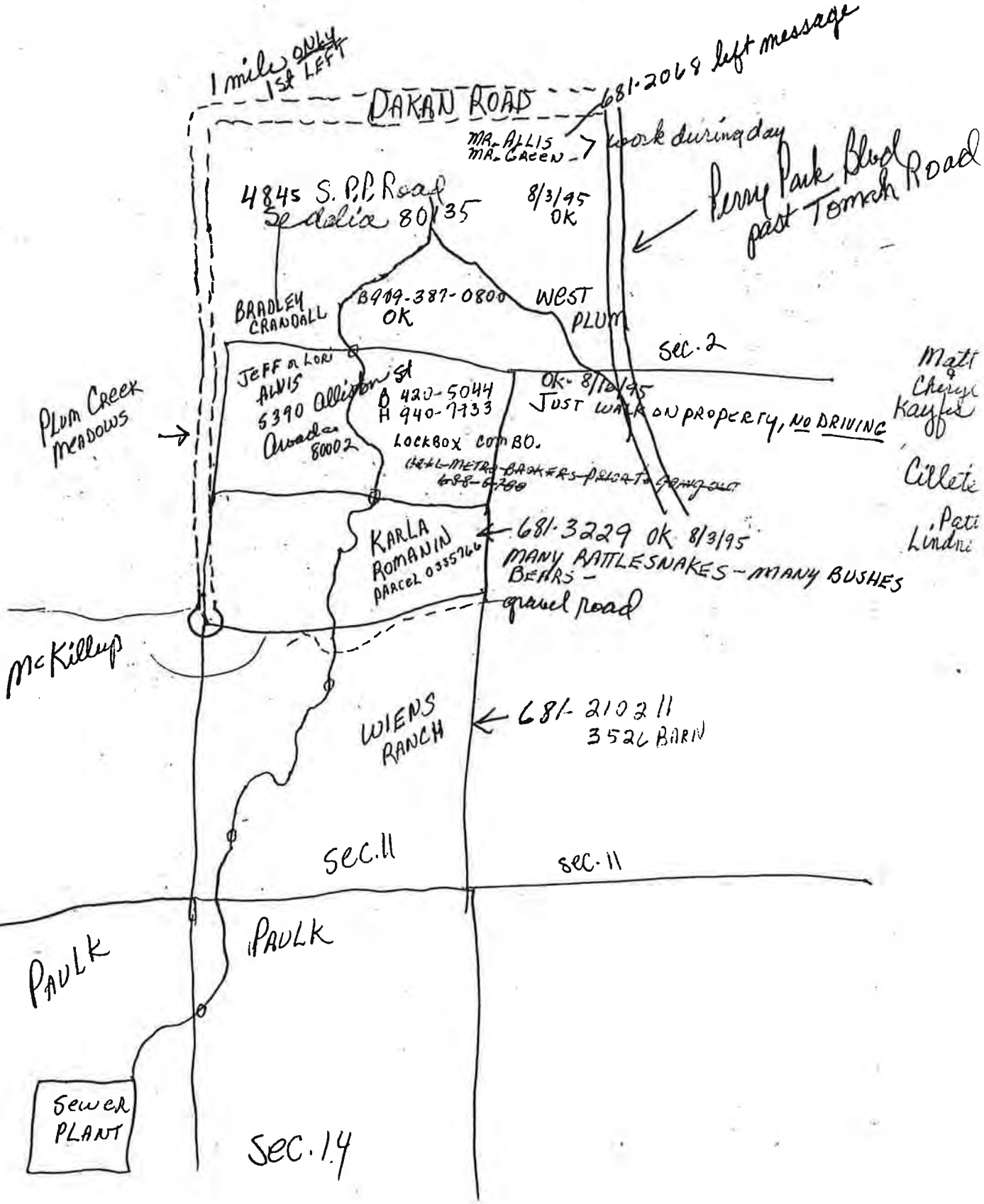
Attachment 1
Perry Park Supplemental Information and Data

[Source: Scott Monroe, Perry Park Water & Sanitation District]

?


DAKAN ROAD
Perry Park Blvd past Tomah Road
BRADLEY CRANDALL
WEST PLUM
sec. 2
JEFF ALVIS 5390 Allison St Arvada 80002
PLUM Creek MEADOWS
KARLA ROMANIN PARCEL 0335766
681-3229
gravel road
WIENS RANCH
681-2102
sec. 11
sec. 11
PAULK
PAULK
SEWER PLANT
Sec. 14

6 AM → 6 PM 2 hr increments
compliance monitoring
taking temp + pH
done at site – take a few minutes
Week of 21st



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405 Urban St., Suite 401
Lakewood, CO 80228
PH. (303) 980-0036
Fax (303) 980-1206

TRANSMITTAL

Date
January 29, 1993

Project Paper titled "Impacts of a Natural Wetland on on Total-Phosphorus Loads Downstream from a Wastewater Treatment Plant"

To
Perry Park Water and Sanitation District
5676 West Red Rock Drive
Larkspur, Colorado 80118

Attention
Beverly E. Carson
Administrative Manger

We are sending by
☒ First Class ☐ Express Mail
☐ Overnight ☐ Second Day
☐ Courier ☐ Hand Deliver

the following
☒ Enclosed
☐ Separately

Quantity	Description
1	Subject paper which will be presented at the AWRA-Colorado Section 1993 Symposium on Basin Planning and Management to be held on March 5, 1993 at Brittany Hill Restaurant, 9350 Grant St., Thornton, CO Paper will be published in the Symposium Proceedings by Colorado State University, Water Resources Research Institute.

Comments

Sent by
James R. Kunkel, Ph.D., P.E. and Timothy D. Steele, Ph.D.

Copies to
File

File: 8498

Biannual Downstream Ph Monitoring

Date 8-12-96 Sampled by: TB

Weather condition Hot clear
Stream condition Low clear

	Location #1		Location #2		Location #3		Location #4	
	John Palk		Tom Wiens		Karla Romanin		Jeff Alvis	
	District personal have been denied access to land belonging to John Palk and Tom Wiens.				East of Dakin Rd. culdesac		App. 1/2 mile downstream of culdesac west side of Dakin Rd. by wooden bridge.	
Time	Ph	Temp.	Ph	Temp.	Ph	Temp.	Ph	Temp.
6:00	Access		Access		7.30	19.0	7.61	18.1
10:00	Denied		Denied		7.50	22.0	7.77	20.0
14:00					7.75	22.3	7.83	19.5
18:00					7.74	21.8	7.80	19.0

Additional comments:

Biannual Downstream Ph Monitoring

Date 12-29-95 Sampled by: B A C

Weather condition 20° F Clr Snow
Stream condition Low & Mostly Frozen over

	Location #1		Location #2		Location #3		Location #4	
	John Palk		Tom Wiens		Karla Romanin		Jeff Alvis	
	District personal have been denied access to land belonging to John Palk and Tom Wiens.				East of Dakin Rd. culdesac		App. 1/2 mile downstream of culdesac west side of Dakin Rd. by wooden bridge.	
Time	Ph	Temp.	Ph	Temp.	Ph	Temp.	Ph	Temp.
6:00	Access		Access		7.57	1.5°C	7.63	1.5°C
10:00	Denied		Denied		7.98	4°C	7.98	14°C
14:00					8.52	5.5°C	8.48	15°C
18:00					8.05	4°C	7.9	14°C

Additional comments:

Biannual Downstream Ph Monitoring

Date 9-4-95 Sampled by: Bob Clifford

Weather condition HOT & Clear
Stream condition Low & clear

	Location #1		Location #2		Location #3		Location #4	
	John Palk		Tom Wiens		Karla Romanin		Jeff Alvis	
	District personal have been denied access to land belonging to John Palk and Tom Wiens.				East of Dakin Rd. culdasac		App. 1/2 mile downstream of culdesac west side of Dakin Rd. by wooden bridge.	
Time	Ph	Temp.	Ph	Temp.	Ph	Temp.	Ph	Temp.
6:00	Access		Access		7.24	14°C	7.56	13°C
10:00	Denied		Denied		7.4	16°C	7.56	14°C
14:00					7.78	18°C	7.82	18°C
18:00					7.74	20°C	7.85	19°C

Additional comments:

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

DATE	TIME	TEMPER-ATURE (DEG C)	SPE-CIFIC CONDUC-TANCE (US/CM)	OXYGEN, DIS-SOLVED (MG/L)	pH FIELD (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 TOTAL (MG/L AS P)	FECAL COLI-FORMS (#/ 100ML)	NITRO-GEN, NITRITE + NITRATE TOTAL (mg/L as N)
26-Mar-92											0.31			
09-Apr-92							-0.2			0.3	0.13			0.19
23-Apr-92											0.16			
06-May-92							-0.2			0.4	-0.02			0.31
21-May-92							-0.2			0.5	0.54			5.23
10-Jun-92							-0.2			-0.3	0.30			0.52
02-Jul-92							-0.2			-0.3	0.01			0.23
20-Jul-92							-0.2			-0.3	0.05			0.85
06-Aug-92							-0.2			-0.3	0.04			1.92

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.
E = ESTIMATED
SOURCE: PERRY PARK WATER & SANITATION DISTRICT

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

DATE	TIME	STAGE (FEET)	INSTANTANEOUS STREAMFLOW (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH FIELD (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 TOTAL (MG/L AS P)	FECAL COLIFORMS (#/100ML)	NITROGEN, NITRITE + NITRATE TOTAL (mg/L as N)
01-Apr-92		0.90	10 E						-0.1			0.3	0.16			0.03
21-Apr-92		1.00	12 E										0.09			
06-May-92		1.20	16 E						0.2			0.3	0.02			0.25
21-May-92									-0.2			0.6	0.06			0.09
10-Jun-92		0.50							0.2			0.4	0.20			0.21
07-Jul-92									-0.2			(0.7)	0.06			0.38
20-Jul-92									0.1			0.5	(0.60)			0.12
06-Aug-92									-0.2			0.4	0.05			0.04

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.
E = ESTIMATED
SOURCE: PERRY PARK WATER & SANITATION DISTRICT

TABLE 21
BEAR CREEK UPSTREAM FROM THE CONFLUENCE OF WEST PLUM CREEK (SITE 6C)
SUPPLEMENTAL TRIBUTARY SURVEYS--WATER-QUALITY DATA

DATE	TIME	STAGE (FEET)	INSTANTANEOUS STREAMFLOW (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH FIELD (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 TOTAL (MG/L AS P)	FECAL COLIFORMS (#/100ML)	NITROGEN, NITRITE + NITRATE TOTAL * (mg/L as N)
24-Mar-92													-0.02			
09-Apr-92									-0.2			0.4	0.15			0.15
21-Apr-92													0.18			
06-May-92									-0.2			0.4	-0.02			0.03
21-May-92									-0.2			0.3	-0.02			-0.02
10-Jun-92									-0.2			-0.3	0.10			-0.02
07-Jul-92									-0.2			-0.3	-0.02			-0.14
20-Jul-92									-0.2			-0.3	0.14			0.02
06-Aug-92									-0.2			-0.3	-0.02			-0.02

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE.
BLANK RANGES INDICATE NO DATA WERE AVAILABLE.
TIME = 9999 MEANS THIS SAMPLE IS A DUPLICATE OR A SPLIT OF THE VALUE IMMEDIATELY ABOVE.
E = ESTIMATED
SOURCE: PERRY PARK WATER & SANITATION DISTRICT

Attachment 2
Upper South Platte Watershed Protection Association,
Proposed Monitoring Program

[Source: Carol Ekarius, USPWPA Coordinator]

Project Proposal
EPA 104(b)3 Grant Program
Upper South Platte Watershed Protection Association

Name of Project: Assessment of Environmental Indicators for the Upper South Platte Watershed

Name of Applicant: Upper South Platte Watershed Protection Association
Carol Ekarius, Coordinator
Box 74
Hartsel, CO 80449
719-837-2737
Fax: 719-836-2745—Please call first.
uspwpa@chaffee.net

Background: The Upper South Platte watershed (see map, Attachment 1) begins at Strontia Springs Reservoir, and extends to the headwaters of the South Platte in the mountains southwest of the Denver metro area. It encompasses an area of roughly 2600 square miles.

The Upper South Platte is an important watershed for Colorado, and many down river states. Consider the following:

- Before it flows to Nebraska, the South Platte provides water to over half the residents of Colorado for drinking water and agriculture.
- The Colorado Water Quality Control Commission has established a waste-load allocation for phosphorous in the Upper South Platte as part of its Chatfield Reservoir Control Regulation, and in the Statement of Basis for its 1999 triennial review the Commission stated that the Association should "establish, as necessary, allocations for the point and nonpoint sources in the Upper South Platte Watershed, in order to assure that Reservoir base-load and background limits are achieved in the South Platte above the Strontia Springs Reservoir". At this time, none of the point sources are using advanced treatment, and most are still using aerated lagoons. These point source entities will be gravely impacted by the allocation within the next five to ten years, unless basin wide strategies can be applied to meet the allocation.
- Portions of five counties comprise the watershed (Park, Jefferson, Douglas, Teller and Clear Creek). These are all in the to top ten fastest growing counties in Colorado and the Nation according to most recently available Census Data.
- The United States Department of Agriculture, Natural Resource Conservation Service (NRCS) and the Colorado Department of Health and the Environment's Water Quality Control Division (CDPHE) have identified the watershed as a Class 1—High Priority watershed in the Colorado Unified Watershed Assessment (CUWA). This classification is based primarily on sediment loads in various segments of the watershed and acid mine drainage/metals from historic mining operations. There are also eleven segments listed on the monitoring and evaluation list as requiring additional data. Per the CUWA, six segments are currently targeted for TMDL's.
- The US Forest Service and Bureau of Land Management (USFS and BLM) own almost 70% of the land area within the watershed. The Upper South Platte watershed is one of twelve nation-wide selected by the USFS headquarters for a "Restoration Project", and

the USFS is currently considering Wild & Scenic Designation on a portion of the watershed; however area residents question the actual water quality of segments under consideration,

- The Buffalo Creek Fire was a catastrophic fire that occurred in the watershed in 1998. During wet-season events following the fire, more sediment entered the South Platte than had in the eighteen years prior to the event, from all other sources. These events also contributed abnormally high levels of nutrients and other pollutants.
- Denver Water, the City of Aurora, and Colorado Springs all bring trans-mountain diversion waters into the metro areas through the Upper South Platte system, and there is limited understanding of the impacts of these diversions on the watershed, particularly what impact they have on waste-load allocations,
- The watershed is an important fishery. According to Colorado Division of Wildlife (CDOW) estimates, the Upper South Platte has 25% of all "angling days" that occur in Colorado, more than any other watershed. Also, there are portions that are whirling disease free, so CDOW is considering developing a new hatchery in the watershed, as they currently have no disease free hatcheries. Several stream segments support native fish populations, like the greenback cutthroat trout, which require cold, clear, well-oxygenated streams.
- The watershed is home to many species of wildlife, including elk, mule deer, antelope, mountain goats, big horn sheep, wild turkey, bear, and mountain lion. It is also home to several threatened and endangered species, including American and arctic peregrine falcons, whooping cranes, bald eagle, meadow jumping mouse, Mexican spotted owl, and mountain plover. Also of concern in the watershed are Prebbles, boreal and wood house toads.

The Upper South Platte Watershed Association is a relatively new organization that brings together a broad array of stakeholders (see Attachment 2). The Association is bringing together parties that have not traditionally been engaged in the process. In fact, many of the parties have "never sat at the table before, much less sat at the table with each other." The group's broad goals are reflected in its mission statement:

> *The Upper South Platte Watershed Protection Association seeks to protect water quality and the ecological health of the Upper South Platte Watershed, through the cooperative efforts of watershed stakeholders, with emphasis placed on community values and economic sustainability.*

The Association has hired a Coordinator and is undertaking two major initiatives:

1. With the assistance of a Sustainable Development grant from EPA, the Association is working on a major water quality protection planning program, and
2. With a 319 grant, the Association is performing an Information and Education project and a nonpoint source planning process.

The Association plans to develop a draft Watershed Restoration Action Strategy (WRAS) as part of these two planning endeavors, and has submitted a draft WRAS outline (see Attachment 3) to EPA.

Need Statement: In 1998/99, the Association contracted with Brown and Caldwell to prepare a "Data Inventory and Assessment" (DIA) for the watershed, with financial assistance from a Regional Geographic Initiative grant. A number of points became clear through the development of the DIA (see map, Attachment 4):

- Historic data for chemical, physical, and biological constituents are insufficient, are too inconsistent, or at too high a detection limit to provide meaningful information, and many segments within the watershed have no data available at all,
- There is limited understanding of the impacts of the point sources on the trophic status of the reservoirs within the watershed, and on overall watershed health,
- There is limited data to understand the impacts of point sources versus nonpoint sources, including ISDS contributions, on the waste-load allocation and on overall watershed health,
- Although a handful of organizations (e.g. Denver Water, City of Aurora, USGS, CDPHE) have done some monitoring in the watershed, this monitoring has not been done in a strategic and coordinated fashion.

As a result, one of the nine recommendations for future actions that came out of the DIA was for the Association to "Participate in developing a coordinated water quality monitoring program" for the watershed. Consequently the Association specified within its Sustainable Development grant that one of the seven tasks it would undertake with funds from that grant would be to "Coordinate Long-Term Water Quality Monitoring". To that end, the Association has appointed a Monitoring Committee, which has recommended the *Assessment of Environmental Indicators for the Upper South Platte Watershed* as the first logical step in developing a comprehensive understanding of what's happening in the watershed from the physical, chemical and biological standpoints.

The *Assessment* will provide a strong basis for developing a public dialog on watershed strategy, by providing a one-year snapshot of water quality within the watershed. This will enable the Association and its members to design a well-targeted, long-term, strategic monitoring program.

Goals:

- Provide a watershed reconnaissance for upstream/downstream conditions for point sources, for areas with highly concentrated ISDS systems, and for four target reservoirs within the watershed;
- Provide reconnaissance of trans-mountain diversion waters at points of introduction within the watershed;
- Target stream segments that require more in-depth monitoring by sampling the mouths of all major tributaries within the watershed during first tier sampling. Than in the second tier of sampling, tributaries that show a "hit" at the mouth will be sampled up-stream to better identify and understand the causes of such hits; and
- Incorporate data into a watershed wide database (Access) that will be accessible to members of public and interested parties and which can than be used to expand GIS capability.

Description of Project:

The sampling program will be broken down into three categories:

1. The first sampling strategy we'll employ will be a watershed wide reconnaissance, which will consist of two sampling cycles, one during spring runoff, and one during low flow in the fall. This reconnaissance will include collecting and analyzing 100 samples throughout the watershed in each cycle. Points will include upstream/downstream of all point sources, transmountain diversions, concentrated ISDS areas, and selected points along tributaries to allow assessment of which tributaries may require further monitoring in the future.

These samples will be taken in a single day of sampling, dropped at the lab in the evening, and run the following day. Because sampling will occur over a short time and samples will be processed in a like time frame, all samples will be collected and analyzed using the same techniques, resulting in comparable data being developed for all sites.

2. The second sampling strategy will be to do extensive sampling on fifteen sites in the watershed. Each of these sites will not only be sampled during the previous sampling cycle, but will also be sampled 15 other times during the year. The sampling intervals would reflect the hydrograph, with samples taken less frequently in winter and more frequently approaching, during, and immediately following runoff. The in-depth sampling on these sites will provide a better understanding of seasonal fluctuations and loadings in the watershed.
3. The third strategy will include running samples on four target reservoirs within the watershed to develop background understanding of current trophic status within those reservoirs. The reservoirs to be sampled are: Cheesman, Eleven-Mile, Spinney and Antero.

Samples will be analyzed for the following parameters:

Instantaneous Stream Flow in CFS (field, sites in strategy 2)
Temperature, Degrees C (field all points)
pH (field, sites in strategy 1)
Specific Conductance (field all sites)
Total Suspended Solids in mg/l (all points)
Particulate & Soluable Phosphorous in ug/l (all points)
Nitrate & Ammonia Nitrogen in ug/l (all points)
Total Organic Carbon ug/l (all points)
Dissolved Oxygen mg/l (reservoirs)
Chlorophyll ug/l (reservoirs)
Secchi Depth m (reservoirs)
Phytoplankton Biomass & Species cells/cu cm, by species (reservoirs)

Sampling will be performed during 200. We will work with Dr. Bill Lewis of the Center for Limnology at the University of Colorado, with all analysis being performed by Dr. Lewis' staff and students. Dr. Lewis' staff and students will also perform the sampling for parts 2 and 3 above. Sampling for part 1 will be done by local students, who'll attend specialized training. Attachment 5—Work plan lays out schedules, responsible parties, etc.. Attachment 6 provides Milestones, and Attachment 7 provides the project Budget.

Outputs & Reports:

This *Assessment* will provide a model for coordinating monitoring for the assessment of watershed impacts using a basin-wide approach. By bringing various agencies and entities together to begin strategically monitoring, the data will be more useful to the broadest audience, including the general public. As the Association is working to develop a draft WRAS for the watershed, coordinated and strategic monitoring will empower us to "identify voluntary environmental management systems that focus on improvement of environmental performance, pollution prevention, effective compliance management, and stakeholder involvement".

Dr. Lewis will interpret the data generated, prepare it into an archival and accessible database, and write-up a report of his findings. The accessible database format will enable interested parties to better utilize the data. This will also enable the Association to utilize the data in developing GIS layers in the future.

The Association will provide EPA with an mid-project report following in July, 2001 and a final report by the end of January, 2002. (See Attachment 6—Milestones.)

Attachment 5--Workplan Milestones

WORKPLAN ELEMENTS	RESPONSIBLE PARTY	Estimated Hours	2000 J A S O N D	2001 J F M A M J J A S O N D
Organize final application, detailed workplan, QAPP, etc.	USPWPA	20		
Train student samplers	USPWPA & Denver Water Staff	64		
Sample 100 sites & deliver samples to CU--2 times	Students--3 Pairs of students from Colorado Mountain College's Environmental Technology Program	140		
Analyze samples from 100 sites	Dr. Lewis & crew	100		
Sample and analyze 15 sites, 15 times	Dr. Lewis & crew	600		
Sample and analyze 4 reservoirs, 4 times	Dr. Lewis & crew	250		
Develop and prepare database, interpret data, and final report to USPWPA	Dr. Lewis & crew	200		
Student sampler report to USPWPA	Students from CMC	30		
Grant administration and coordination	USPWPA	40		
Mid-project report to EPA	USPWPA	15		
Final report to Epa	USPWPA	25		

Attachment 6--Budget

2002 J F	Item	Total	From Grant	Match	Salaries	Professional Services	Misc Exp's	Sampling and analysis	Travel and Training
	Prepare detailed workplan, QAPP	750		750	700		50		
	Train students	1810	760	1050	1410		200		200
	Sample 100 sites per sampling	2000	2000		1400		100		500
	Analyze 100 samples	10000	10000					10000	
	Sample & analyze 15x15	26000	26000					26000	
	Sample & analyze 4x4 reservoirs	16000	11000	5000				16000	
	Interpret data & prepare report	9000	9000			9000			
	Grant admin & EPA reports	3300	3300		2800		500		
	Total	**68860**	**62060**	**6800**	**6310**	**9000**	**850**	**52000**	**700**

Attachment 3
South Platte River (Segments 6, 14, & 15)
TMDL Study and Monitoring Program

[Source: Phil Russell, Littleton-Englewood WWTP]

Plan Overview

Implementation of a South Platte River (Segments 8, 14, & 15) TMDL Study: Nitrate Testing for Calibration of the Water Quality Model

The South Platte Coalition for Urban River Evaluation (SPCURE) Monitoring committee will manage an overall study to provide coordinated, relatively comprehensive, data collection for input into a nitrate TMDL model for the South Platte River. The Laboratory Division staff of the Littleton/Englewood Wastewater Treatment Plant will be responsible for the coordination of routine and special studies, and collection and recording/distribution of data for model input and calibration. They shall produce the final work-plan, including the provisions for quality control, and coordinate this data collection effort with consultants Bill Lewis and Jim Saunders and with the CWQCD. Each primary entity (Centennial, Littleton/Englewood, Glendale, and Metro) will participate in the effort and contribute a fair share to the work. Other interested entities (including the CWQCD) may volunteer to participate and assist. A list of Participants is provided in Attachment A.

Nitrogen Monitoring Study

Beginning October 1, 1998 all SPCURE nitrogen monitoring stations on the main-stem of the South Platte and on the main tributaries at, or near, their confluence (Bear Creek, Cherry Creek, Sand Creek, and Clear Creek) (Attachment B) will be monitored by grab sampling twice per month through 1999 (See Attachment C, Nitrogen TMDL, for schedule). These sample locations will include at least the following parameters for use in the nitrate model (Ref. Attachment D, Nitrogen TMDL, Priority 1 items):

Estimated Flow (nearest gauge and flow corrected)
Ammonia as Nitrogen (NH_3)
Nitrate (NO_3)
Temperature (field)
pH (field)

These samples shall be collected with some attention to travel time in the stream. Depending on travel time, downstream sites may be run on different days.

Monitoring stations shall include all in-stream monitoring locations and each major municipal effluent (Centennial, Littleton/Englewood, Glendale, and Metro). (Note: Removal of river water by diversion at the Burlington Ditch must also be monitored in terms of volume and quality. Where waters into the Burlington Ditch and bypassing the Burlington headgate may not be of the same quality, samples should be taken of both flows.)

Each sampling entity shall submit their field sampling protocol (including site description) for collecting grab samples to Littleton/Englewood staff for review (including review of CWQCD's protocols). Any functional differences in monitoring protocols shall be discussed by the SPCURE Monitoring committee to resolve any issues or conflicts. If necessary, a training session/protocol will be developed by SPCURE (consistent with CWQCD protocols). Each Facility/Laboratory conducting analyses will supply a reference to the Standard Operating Procedure used in each analysis; if a modified method is used, then a copy of the SOP modification should be forwarded to the Littleton/Englewood staff. Contact information for the laboratory performing the analysis should also be provided.

Before October 1, 1998, the Metro District laboratory will make up unknown test solutions for NH_3 and NO_3. The samples will be distributed to all laboratories running the nitrogen series at these monitoring locations. Test results on these unknowns from each laboratory shall be provided to Littleton/Englewood staff for review. The Littleton/Englewood staff shall make recommendations for test modifications, sample splits, or other changes necessary to insure quality control.

Special Nitrate/Nutrient Study

Monthly, during 1998 and 1999, (See Attachment C, Nutrient TMDL, for proposed schedule), the special study samples collected above shall be supplemented by the following additional tests (Ref. Attachment D, Nutrient TMDL, Priority 1 & 2 items) at all nitrogen sampling locations:

CBOD5
DO
Alkalinity
TOC
Conductivity

Other Model Calibration Studies

Other studies are needed to provide important variable input into a Nitrogen TMDL model. They will be developed and implemented by the SPCURE Monitoring committee. Participants will be informed of how they can assist in the studies. The following is a description of the proposed research.

Survey: Surface Ungaged Sites:

By November 1999, the participants shall complete two sampling programs to evaluate quality and quantity of "extraneous" surface flow contributions to the mainstem between Chatfield and Brighton. The S Platte should be split into geographical sections and should be thoroughly examined on both sides of the stream by work teams. A thorough survey should be made for previously unidentified potential groundwater sources, including a watercraft survey, if possible. If a flow is detected, the flow rate should be measured and a sample should be collected and analyzed for, at least, priority 1 variables.

It is recommended that one set of samples should be taken in the low-flow winter period and one set should be taken during late summer at relatively low flows while irrigation (agricultural ditches and lawn irrigation) are still occurring. This effort does not have to coordinated by day or week, but should avoid rainstorms/wet weather and should be at relatively consistent flow levels in the stream. (Note: Where possible, existing data from Denver's Department of Environment or other sources will be used in place of additional sampling.)

Sample Site Homogeneity:

By December 31, 1998, each sampling location (Attachment B) will be reviewed and verified (with field testing if necessary) as being a representative location (i.e., well-mixed river at low-flows). This will entail the measurement along a transect profile of at least eight samples using conductivity (and nitrate, where appropriate). Where a well-mixed sample can not be confirmed at any sample location, the location shall be moved or an integrated sampling protocol instituted.

Flow Study:

By February 1999, Metro, Glendale, Littleton/Englewood, and Centennial (Metro will coordinate study) will cooperatively conduct two winter, low-flow travel time studies (five studies) to determine travel between Chatfield Reservoir and Ft. Lupton (Segment 5 may be eliminated if comparable travel time studies already exist).

L/E WWTP Effluent Profile:

Littleton/Englewood Wastewater Treatment plant will develop a "normal" 24-Hour profile of the ammonia and nitrate levels in its effluent using at least 6 separate grab samples per day on at least three separate days (at least one weekend day) with a comparison to the flow proportioned average for each day. Data on pH, Temperature and flow should also be collected.

24 hour Diurnal River Study:

At least twice during the low-flow period of the 1999-2000 winter and a third time during a low-flow warm month period, 24-hour (2 hour interval) discrete grab samples shall be collected at one, or more, locations along the mainstem (at or upstream of the Burlington Ditch headgate and downstream of the confluence with Cherry Creek). Variables to be measured are listed in Attachment D, Priority 1 & 2 items.

River Temperature:

At locations above and below discharges along segments 6 & 14 of the S. Platte river, temperature profiles will be measured for daily and seasonal variation. Gaging station information and temperature data loggers are recommended sources of data.

Groundwater:

Studies of groundwater quality will be undertaken to determine the general quality of the groundwater contributions into Segments 6 and 14. (Note: Where possible existing data from Denver's Department of Environment or other sources will be used in place of additional sampling.) Wells to be considered should not be influenced by proximity to the river and should represent flows that would enter the river. Quantity of groundwater flow into Segments 6 and 14 will be based on flow balances at existing meters rather than new data collection; however, other agencies (such as USGS and Denver Environment) will be contacted to determine if there is site specific groundwater accretion data.

Quality Assurance

While it is recognized that this study is being developed with the cooperation of a number of different groups, it is also recognized that the information produced should be of a quality that can be defended by the SPCURE monitoring committee, if queried. In that regard, all analyses should be conducted using approved EPA methods appropriate for a TMDL approach.

The SPCURE Monitoring committee will organize and evaluate a quarterly "round robin" test, during 1999 to evaluate relative analytical accuracy and precision. Laboratories having result varying more than 15% from the standard will be contacted to determine the reason(s) for the variance; corrective action will be documented.

Rationale

Attachment E lists all of the water quality parameters that might be of use in the production of a TMDL study. They include the WQCD (1) 303d list of possible pollutants of concern in the S. Platte river, (2) analyses performed at trend monitoring stations and (3) synoptic list of all potential variables of interest. It also contains two other lists of variables useful in the production of a nitrate/nutrient TMDL study.

Coordination

Sampling SOPs, Analytical SOPs, Data, and queries concerning coordination of sampling dates, etc. should be forwarded to:

Phil Russell
L/E WWTP
2900 S. Platte River Drive
Englewood, CO 80110
303-762-2611 303-762-2620 (FAX)
e-mail: prussell@ci.englewood.co.us

Attachment A

SPCURE Monitoring Committee - Member Information

Contact	Facility	Phone	E-mail Address	Comments
Cathy Shugarts	SPCURE Watershed Coordinator	303-286-3084 303-286-3029 (FAX)	SPCURE@earthlink.net	
Phil Russell	L/E WWTP 2900 S. Platte River Drive Englewood, CO 80110	303-762-2611 303-762-2620 (FAX)	prussell@ci.englewood.co.us	Samples to Phil Russell 2900 S. Platte River Drive Englewood, CO 80110
Todd Harris	Metro	303-286-3255 303-286-3029 (FAX)	tharris@mwrd.dst.co.us JVANROYEN@mwrd.dst.co.us	Samples to Todd Harris Kevin Feely (Nitrate QA Stds) 303-286-3470 KFeeley@mwrd.dst.co.us
Paul Grundemann	Centennial	303-791-7181 303-791-6549 (FAX)	pgrunde@rmi.net abake@ix.netcom.com swithin@juno.com (no attachements)	Samples to Al Baker Centennial WWTP 8700 S. Santa Fe Drive Highlands Ranch, CO 80126 303-791-2165 (523)
Randy Giffin	Aurora	303-690-4977 303-699-3918 (FAX)	N/A	Samples to Randy Giffin Wemlinger Water Treatment Plant 18301 E. Quincy Aurora, CO 80015
Vic Lucero	Thornton	303-255-7771 303-255-7729 (FAX)	Vlucero@ci.thornton.co.us ltaylor@ci.thornton.co.us	Samples to Vic Lucero City of Thornton Water Quality Lab 9500 Civic Cntr Dr Thornton CO 80229

Attachment A

Joan Chavez	S. Adams	303-289-5769	joanchavez@uswest.net	Samples to Joan Chavez S. Adams County Water and Sanitation District 9702 Monaco St. Henderson, CO 80640
Toni Lusk	Brighton	303-659-4050 (City) 303-655-2159 (FAX)	N/A	Samples to Toni Lusk City of Brighton 325 N. Kuner Rd. Brighton, CO 80601
Lynda Hedl	Glendale	303-639-4503 303-329-9766 (FAX)	lhedl@glendale.co.us	Samples to Lynda Hedl 4360 E. Virginia Ave. Glendale, CO 80246
Tom Bueb Cheryl Burchett	Coors	303-277-5688 (TB) 303-277-3080(FAX) 303-277-3226 (CB)	buebster@aol.com cheryl.burchett@coors.com	STORET-X data storage
Dick Parchini Shara Johnson Joni Nuttle	CDPHE/WQCD Consultant/Modeling Data	303-692-3392 303-782-0390(FAX)	dick.parachini@state.co.us shara.johnson@state.co.us joni.nuttle@state.co.us	

Meeting: Last Tuesday of Month

Attachment B

SPCURE Monitoring Committee - Sample Sites

Contact	Facility	Sample Sites		Comments
Paul Grundemann 303-791-7181 303-791-6549(FAX) pgrunde@rmi.net Al Baker 303-791-2185 (523) abake@ix.netcom.com	Centennial	Effluent	39° 33.417' N 105° 02.117' W	[1]Limited Sampling/Analyses
		Upstream	39° 34.033' N 105° 02.800' W	
		C-470[1]	39° 34.000' N 105° 02.367' W	
		Mineral Ave[1]	39° 34.917' N 105° 01.867' W	
		Union Ave[1]	39° 37.967' N 105° 00.933' W	
Phil Russell 303-762-2611 303-762-2620(FAX) prussell@ci.englewood.co.us	L/E WWTP	Effluent	39° 40.059' N 105° 00.006' W	[1]Limited Sampling/Analyses
		Upstream (Dartmouth)	39° 39.821' N 105° 00.250' W	
		Downstream (Evans)	39° 40.518' N 104° 59.841' W	
		Bear Creek (Gauging Station)	39° 39.150' N 105° 01.969' W	
		Bear Creek (Mouth)[1]	39° 39.036' N 105° 00.852' W	
		S. Platte, upstream of Bear Creek[1]	39° 38.770' N 105° 00.879' W	
		Little Dry Creek[1]	39° 39.588' N 105° 00.151' W	
		Harvard Gulch[1]	39° 40.371' N 104° 59.818' W	
		PSC Outfall[1]	39° 40.206' N 104° 59.936' W	
		PSC Creek[1]	39° 40.048' N 105° 00.222' W	
		Big Dry Creek[1]	39° 37.833' N 105° 00.875' W	
Randy Giffin 303-690-4977 303-699-3918(FAX)	Aurora	Effluent	39° 45.683' N 105° 51.283' W	
		Upstream	39° 45.417' N 105° 50.817' W	
		Downstream	39° 45.667' N 105° 51.950' W	
Todd Harris 303-286-3255 303-286-3029(FAX) tharris@mwrd.dst.co.us John vanRoyen JVANROYEM@mwrd.dst.co.us	Metro	Effluent	39° 48.470' N 104° 57.158' W	
		Upstream - 64th Street	39° 48.461' N 104° 57.319' W	
		Sand Creek (above FRICO siphon)	39° 48.397' N 104° 57.602' W	
		Downstream (78th Ave.)	39° 50.210' N 104° 56.553' W	
		124th Ave	39° 55.211' N 104° 52.009' W	

Attachment B

South Platte River CURE Monitoring Sub Committee - Sample Sites

Contact	Facility	Sample Sites		Comments
Vic Lucero 303-255-7771 303-255-7729(FAX) vlucero@ci.thornton.co.us ltaylor@ci.thornton.co.us	Thornton	Above Burlington Ditch Above Clear Creek Clear Creek above confluence w/S. Platte	39° 47.512' N 104° 58.000' W 39° 49.652' N 104° 56. 695' W 39° 49.651' N 104° 56. 936' W	
Joan Chavez 303-289-5769 joanchavez@uswest.net	S. Adams	Effluent Upstream - McKay Rd.	39° 52.495' N 104° 54.610' W 39° 52.447' N 104° 54.763' W	
Toni Lusk 303-659-4050 (City) 303-655-2159 (FAX)	Brighton	Effluent Upstream – 160th Downstream	39° 59.527' N 104° 49.562' W 39° 56.539' N 104° 49.689' W 39° 59.627' N 104° 49.542' W	Upstream – 160th 39° 59.226' N 104° 49.935' W (By Map)
Lynda Hedl lhedl@glendale.co.us	Glendale	Effluent Cherry Creek near Champa (USGS)	39° 42.350' N 104° 56.167' W 39° 44.550' N 104° 59.967' W	

Attachment C

Sampling Schedule - SPCURE Monitoring Committee

	DATE	
Month	Nitrogen TMDL	Nutrient TMDL
November 1998	4th & 18th	18th
December 1998	2nd & 16th	16th
January 1999	6th & 20th	20th
February 1999	3rd & 17th	17th
March 1999	3rd & 17th	17th
April 1999	7th & 21st	21st
May 1999	5th & 19th	19th
June 1999	2nd & 16th	16th
July 1999	7th & 21st	21st
August 1999	4th & 18th	18th
September 1999	1st & 15th	15th
October 1999	6th & 20th	20th
November 1999	3rd & 17th	17th
December 1999	1st & 15th	15th
January 2000	5th & 19th	19th
February 2000	2nd & 16th	16th
March 2000	1st & 15th	15th
April 2000	5th & 19th	19th
May 2000	3rd & 17th	17th
June 2000	7th & 21st	21st
July 2000	5th & 19th	19th
August 2000	2nd & 16th	16th
September 2000	6th & 20th	20th
October 2000	4th & 18th	18th
November 2000	1st & 15th	15th
December 2000	5th & 20th	20th

Typically, sampling is performed the first and third Wednesday of every month.
Samples collected during the first week are analyzed for priority 1 components in Attachment D.
Samples collected during the third week are analyzed priority 1 and 2 components in Attachment D.

Attachment D: SPCURE Monitoring Committee – Analytical Variables

Analyses	Priority	Nitrogen TMDL	Nutrient TMDL	Future Concerns
Flow	1	X	X	
Temp (C)	1	X	X	
Ammonia (NH3) as N	1	X	X	
Nitrate (NO3) as N	1	X	X	
Nitrate (NO2+NO3) as N	4			X
Nitrite (NO2)	3	X	X	
pH	1	X	X	
CBOD	2		X	
BOD	2		X	
DO	2		X	
Alkalinity	2		X	
Hardness	3			X
Conductivity	2		X	
P as Total	3			X
TSS	2		X	
TDS	3			X
TOC	3			X
Ag, D	4			X
Cd, D	3			X
Cr, D	4			X
Cu, D	3			X
Fe, D	4			X
Mn, D	3			X
Pb, D	3			X
Se, D	3			X
Zn, D	3			X
Fecal Coliform	3			X
E. Coliform	3			X

Priority: 1-Critical to development of a Nitrogen TMDL. 2-Very Important for a Nutrient TMDL, shou be completed if possible. 3-Important to the completion of future S. Platte TMDLs. 4-May not be important to the development of a TMDL.

Attachment E: Analytical Variable Lists

Analyses	Priority	Nitrogen TMDL	Nitrogen Special	WQCD Trend	WQCD Synoptic	303d
Flow	1	X	X			
Temp (C)	1	X	X	X	X	
Amonnia (NH3) as N	1	X	X	X	X	
Nitrate (NO3) as N	1	X	X	X		X
Nitrate (NO2+NO3) as N	4	X			X	
Nitrite (NO2)	3	X				
pH	1	X	X	X	X	
CBOD	2		X			
BOD	2					
DO	2		X	X	X	X
Alkalinity	2		X		X	
Hardness	3			X	X	
Conductivity	2		X		X	
P as Total	3			X	X	
TSS	2		X	X		
TDS	3			X		
Turbidity	4					
TOC	3		X			
Hg	4				X	
Ag, D	4			X	X	
As, D	4					
Cd, D	3			X	X	X
Cr, D	3				X	
Cu, D	3			X	X	X
Fe, D	4			X	X	
Ni, D	4					
Mn, D	3			X	X	X
Pb, D	3			X	X	
Se, D	3			X	X	
Zn, D	3			X	X	

Priority: 1-Critical to development of a Nitrogen TMDL. 2-Very important for a Nutrient TMDL, should be completed if possible. 3-Important to the completion of future S. Platte TMDLs. 4-May not be important to the development of a TMDL.

Analyses	Priority	Nitrogen Essential	Nitrogen Important	WQCD Trend	WQCD Synoptic	303d
Ag, T	4				X	
As, T	4					
Cd, T	4				X	
Cr, T	4				X	
Cu, T	4				X	
Fe, T	4				X	
Ni, T	4					
Mn, T	4				X	
Pb, T	4				X	
Se, T	4				X	
Zn, T	4				X	
Fecal Coliform	3				X	X
E. Coliform	3				X	

Priority: 1-Critical to development of a Nitrogen TMDL. 2-Very important for a Nutrient TMDL, should be completed if possible. 3-Important to the completion of future S. Platte TMDLs. 4-May not be important to the development of a TMDL.

Attachment 4
COE Chatfield Precipitation Records and Surface-Water Monitoring Sites

[Source: Ray Child, COE Tri-Lakes (Chatfield Reservoir Office)]

Subj:	**Chatfield Water Sample Location and Weather Reports**
Date:	11/29/00 10:51:35 AM Mountain Standard Time
From:	*Raymond.L.Child@nwo02.usace.army.mil (Child, Raymond L NWO)*
To:	*tdsconsult@aol.com (Tim Steel)*
File:	**Chatfiel.zip** (52684 bytes) DL Time (28800 bps): < 1 minute

---------- Headers ----------
Return-Path: <Raymond.L.Child@nwo02.usace.army.mil>
Received: from rly-yb03.mx.aol.com (rly-yb03.mail.aol.com [172.18.146.3]) by air-yb05.mail.aol.com (v77.14) with ESMTP; Wed, 29 Nov 2000 12:51:33 -0500
Received: from dms-lcc-pdx-m1.dms.usace.army.mil (dms-lcc-pdx-m1.dms.usace.army.mil [137.161.250.6]) by rly-yb03.mx.aol.com (v76_r1.19) with ESMTP; Wed, 29 Nov 2000 12:50:52 -0500
Received: by dms-lcc-pdx-m1.dms.usace.army.mil with Internet Mail Service (5.5.2650.21)
id <X63FG2NF>; Wed, 29 Nov 2000 09:49:43 -0800
Message-ID: <22A12F509BD5D31188F700A0C9B6B906B8CAB0@nwomail02.nwo.usace.army.mil>
From: "Child, Raymond L NWO" <Raymond.L.Child@nwo02.usace.army.mil>
To: Tim Steel <tdsconsult@aol.com>
Subject: Chatfield Water Sample Location and Weather Reports
Date: Wed, 29 Nov 2000 09:50:43 -0800
Return-Receipt-To: "Child, Raymond L NWO"
<Raymond.L.Child@nwo02.usace.army.mil>
MIME-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2650.21)
Content-Type: multipart/mixed;
boundary="----_=_NextPart_000_01C05A2C.E54921D0"

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

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PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1990 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX	TIME	MIN	TIME	RANGE	SUM RAINFALL, INCHES MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
06-24											M
06-25											M
06-26											M
06-27											M
06-28											M
06-29											M
06-30											M
07-01											M
07-02											M
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07-07											M
07-08											M
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07-12											M
07-13											M
07-14											M
07-15											M
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PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1990 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING				SUM RAINFALL, INCHES			
DATE	MAX	TIME	MIN	TIME	RANGE	MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
08-05											M
08-06											M
08-07											M
08-08											M
08-09											M
08-10											M
08-11											M
08-12											M
08-13											M
08-14											M
08-15											M
08-16											M
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08-21											M
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08-27											M
08-28											M
08-29											M
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09-01											M
09-02											M
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PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1990 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16							M
09-17							M
09-18							M
09-19	3.26 1200	3.26 1200	.00	.00 1200	.00 1200	.00	P
09-20	3.28 2400	3.26 0000	.02	.01 2000	.00 0100	.02	
09-21	3.49 0500	3.28 0000	.21	.10 0200	.00 0400	.21	
09-22	3.49 0000	3.49 0000	.00	.00 0100	.00 0100	.00	
09-23	3.49 0000	3.49 0000	.00	.00 0100	.00 0100	.00	
09-24	3.49 0000	3.49 0000	.00	.00 0100	.00 0100	.00	
09-25	4.07 2300	3.49 0000	.58	.33 2000	.00 0100	.58	
09-26	4.07 0000	4.07 0000	.00	.00 0100	.00 0100	.00	P
09-27	4.10 2000	4.07 0000	.03	.02 1800	.00 0100	.03	
09-28	4.23 0900	4.10 0000	.13	.08 0900	.00 0100	.13	
09-29	4.35 1100	4.23 0000	.12	.04 0600	.00 0100	.12	
09-30	4.35 0000	4.35 0000	.00	.00 0100	.00 0100	.00	
PERIOD	4.35	3.26		.33	.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
M - NO UNIT VALUES AVAILABLE FOR THIS DAY

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 16:59 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1991 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	7.03 0000	7.03 0000	.00	.00 0045	.00 0045	.00	
04-02	7.17 1045	7.03 0000	.14	.09 1045	.00 0045	.14	
04-03	7.17 0000	7.17 0000	.00	.00 0045	.00 0045	.00	
04-04	7.17 0000	7.17 0000	.00	.00 0045	.00 0045	.00	
04-05	7.17 0000	7.17 0000	.00	.00 0045	.00 0045	.00	
04-06	7.17 0000	7.17 0000	.00	.00 0045	.00 0045	.00	P
04-07	7.17 0145	7.17 0145	.00	.00 0145	.00 0145	.00	P
04-08	7.57 1545	7.17 0000	.40	.14 1045	.00 0045	.40	
04-09	7.57 0000	7.57 0000	.00	.00 0045	.00 0045	.00	
04-10	7.57 0000	7.57 0000	.00	.00 0045	.00 0045	.00	
04-11	7.57 0000	7.57 0000	.00	.00 0045	.00 0045	.00	
04-12	7.62 1845	7.57 0000	.05	.03 1545	.00 0045	.05	
04-13	7.86 1945	7.62 0000	.24	.07 1345	.00 0045	.24	
04-14	7.86 0000	7.86 0000	.00	.00 0045	.00 0045	.00	
04-15	7.86 0000	7.86 0000	.00	.00 0045	.00 0045	.00	
04-16	7.86 0000	7.86 0000	.00	.00 0045	.00 0045	.00	
04-17	7.86 0000	7.86 0000	.00	.00 0045	.00 0045	.00	
04-18	7.88 2345	7.86 0000	.02	.01 2345	.00 0045	.02	
04-19	7.88 0000	7.88 0000	.00	.00 0045	.00 0045	.00	
04-20	7.88 0000	7.88 0000	.00	.00 0045	.00 0045	.00	
04-21	7.90 2345	7.88 0000	.02	.01 2345	.00 0045	.02	
04-22	7.90 0000	7.90 0000	.00	.00 0045	.00 0045	.00	
04-23	7.93 2045	7.90 0000	.03	.03 2045	.00 0045	.03	
04-24	7.93 0000	7.93 0000	.00	.00 0045	.00 0045	.00	
04-25	7.93 0000	7.93 0000	.00	.00 0045	.00 0045	.00	
04-26	7.93 0000	7.93 0000	.00	.00 0045	.00 0045	.00	
04-27	7.93 0000	7.93 0000	.00	.00 0045	.00 0045	.00	
04-28	7.93 0000	7.93 0000	.00	.00 0045	.00 0045	.00	
04-29	7.99 2400	7.93 0000	.06	.01 2400	.00 0045	.06	
04-30	8.47 1445	7.99 0000	.48	.14 1245	.00 0245	.48	
05-01	8.47 0000	8.47 0000	.00	.00 0045	.00 0045	.00	
05-02	8.47 0000	8.47 0000	.00	.00 0045	.00 0045	.00	
05-03	8.47 0000	8.47 0000	.00	.00 0045	.00 0045	.00	
05-04	8.85 2400	8.47 0000	.38	.10 1845	.00 0045	.38	
05-05	8.91 0445	8.85 0000	.06	.02 0245	.00 0545	.06	
05-06	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-07	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-08	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	P
05-09	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-10	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-11	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-12	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	

ITED ES I MEN INTE - GE CAL EY - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 16:59 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1991 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-14	8.91 0000	8.91 0000	.00	.00 0045	.00 0045	.00	
05-15	9.90 2400	8.91 0000	.99	.60 1445	.00 0045	.99	
05-16	10.23 1345	9.90 0000	.33	.15 0545	.00 0145	.33	P
05-17	10.61 0145	10.57 0045	.04	.04 0145	.00 0045	.04	P
05-18	10.61 0000	10.61 0000	.00	.00 0045	.00 0045	.00	
05-19	10.61 0000	10.61 0000	.00	.00 0045	.00 0045	.00	
05-20	10.61 0000	10.61 0000	.00	.00 0045	.00 0045	.00	
05-21	10.61 0000	10.61 0000	.00	.00 0045	.00 0045	.00	
05-22	10.69 2345	10.61 0000	.08	.05 2045	.00 0045	.08	
05-23	10.79 2400	10.69 0000	.10	.07 2345	.00 0045	.10	
05-24	10.98 0645	10.79 0000	.19	.07 0545	.00 0745	.19	
05-25	10.98 0000	10.98 0000	.00	.00 0045	.00 0045	.00	
05-26	10.98 0000	10.98 0000	.00	.00 0045	.00 0045	.00	
05-27	10.98 0000	10.98 0000	.00	.00 0045	.00 0045	.00	
05-28	11.36 2400	10.98 0000	.38	.37 2345	.00 0045	.38	
05-29	11.40 0045	11.36 0000	.04	.04 0045	.00 0145	.04	
05-30	11.40 0000	11.40 0000	.00	.00 0045	.00 0045	.00	
05-31	12.28 2400	11.40 0000	.88	.74 2245	.00 0045	.88	
06-01	12.42 1945	12.28 0000	.14	.10 1845	.00 0145	.14	
06-02	12.53 2045	12.42 0000	.11	.06 1845	.00 0045	.11	
06-03	12.65 0445	12.53 0000	.12	.09 0245	.00 0045	.12	
06-04	12.65 0000	1.26 1745	11.39	11.39 1845	.00 0045	11.39	
06-05	12.65 0000	12.65 0000	.00	.00 0045	.00 0045	.00	
06-06	12.76 1845	12.65 0000	.11	.03 0845	.00 0045	.11	
06-07	12.78 1745	12.76 0000	.02	.01 1445	.00 0045	.02	
06-08	12.78 0000	12.78 0000	.00	.00 0045	.00 0045	.00	
06-09	12.78 0000	12.78 0000	.00	.00 0045	.00 0045	.00	
06-10	12.85 1945	12.78 0000	.07	.04 1945	.00 0045	.07	
06-11	12.85 0000	12.85 0000	.00	.00 0045	.00 0045	.00	
06-12	12.85 0000	12.85 0000	.00	.00 0045	.00 0045	.00	
06-13	12.85 0000	12.85 0000	.00	.00 0045	.00 0045	.00	
06-14	12.95 2345	12.85 0000	.10	.05 2345	.00 0045	.10	
06-15	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	
06-16	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	
06-17	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	
06-18	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	
06-19	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	
06-20	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	P
06-21	12.95 0000	12.95 0000	.00	.00 0045	.00 0045	.00	
06-22	13.03 2245	12.95 0000	.08	.08 2245	.00 0045	.08	
06-23	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	

ITED ES I MEN INTE - GE CAL Y - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 16:59 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1991 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	P
06-25	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
06-26	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
06-27	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
06-28	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
06-29	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
06-30	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-01	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-02	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-03	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-04	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-05	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-06	13.03 0000	13.03 0000	.00	.00 0045	.00 0045	.00	
07-07	13.05 1845	13.03 0000	.02	.01 1745	.00 0045	.02	
07-08	13.22 2345	13.05 0000	.17	.07 1745	.00 0045	.17	
07-09	13.23 2045	13.22 0000	.01	.01 2045	.00 0045	.01	
07-10	13.26 2145	13.23 0000	.03	.02 2145	.00 0045	.03	
07-11	13.26 0000	13.26 0000	.00	.00 0045	.00 0045	.00	
07-12	13.71 2045	13.26 0000	.45	.26 1945	.00 0045	.45	
07-13	13.71 0000	13.71 0000	.00	.00 0045	.00 0045	.00	P
07-14							M
07-15							M
07-16							M
07-17							M
07-18	.00 0845	.00 0845	.00	.00 0845	.00 0845	.00	P
07-19	.00 0000	.00 0000	.00	.00 0045	.00 0045	.00	P
07-20							M
07-21							M
07-22							M
07-23							M
07-24							M
07-25							M
07-26							M
07-27							M
07-28							M
07-29	.00 0754	.00 0754	.00	.00 0754	.00 0754	.00	P
07-30	.00 0000	.00 0000	.00	.00 0045	.00 0045	.00	P
07-31	.00 0000	.00 0000	.00	.00 0045	.00 0045	.00	
08-01	.01 1945	.00 0000	.01	.01 1945	.00 0045	.01	
08-02	.03 2045	.01 0000	.02	.01 1845	.00 0045	.02	
08-03	.69 2345	.03 0000	.66	.23 1945	.00 0045	.66	
08-04	.73 0345	.69 0000	.04	.02 0345	.00 0045	.04	

ITED ES I MEN INTE - GE CAL Y - R RE: ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 16:59 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1991 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	.76 0645	.73 0000	.03	.03 0645	.00 0045	.03	
08-06	.75 2045	.73 0000	.02	.01 1945	.00 0045	.02	
08-07	.75 0000	.75 0000	.00	.00 0045	.00 0045	.00	
08-08	.75 0000	.75 0000	.00	.00 0045	.00 0045	.00	
08-09	.80 2245	.75 0000	.05	.04 2045	.00 0045	.05	
08-10	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	
08-11	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	P
08-12							M
08-13							M
08-14							M
08-15							M
08-16							M
08-17							M
08-18							M
08-19							M
08-20	.88 1545	.00 0845	.88	.88 1545	.00 0845	.88	P
08-21	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
08-22	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
08-23	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
08-24	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
08-25	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
08-26	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
08-27	1.03 1845	.88 0000	.15	.09 1845	.00 0045	.15	
08-28	1.52 2145	1.03 0000	.49	.22 1945	.00 0045	.49	
08-29	1.52 0000	1.52 0000	.00	.00 0045	.00 0045	.00	
08-30	1.52 0000	1.52 0000	.00	.00 0045	.00 0045	.00	P
08-31	1.52 0000	1.52 0000	.00	.00 0045	.00 0045	.00	P
09-01	1.52 0000	1.52 0000	.00	.00 0045	.00 0045	.00	
09-02	1.56 1545	1.52 0000	.04	.04 1545	.00 0045	.04	
09-03	1.56 0000	1.56 0000	.00	.00 0045	.00 0045	.00	P
09-04	1.56 0000	1.56 0000	.00	.00 0045	.00 0045	.00	P
09-05	1.56 0000	1.56 0000	.00	.00 0045	.00 0045	.00	
09-06	1.57 1645	1.56 0000	.01	.01 1645	.00 0045	.01	
09-07	1.60 2045	1.57 0000	.03	.02 1945	.00 0045	.03	
09-08	1.60 0000	1.60 0000	.00	.00 0045	.00 0045	.00	
09-09	1.60 0000	1.60 0000	.00	.00 0045	.00 0045	.00	P
09-10	1.64 2400	1.60 0000	.04	.03 1845	.00 0045	.04	
09-11	1.65 0045	1.64 0000	.01	.01 0045	.00 0145	.01	
09-12	1.72 1645	1.65 0000	.07	.06 1645	.00 0045	.07	
09-13	1.72 0000	1.72 0000	.00	.00 0045	.00 0045	.00	
09-14	1.72 0000	1.72 0000	.00	.00 0045	.00 0045	.00	
09-15	1.73 0445	1.72 0000	.01	.01 0445	.00 0045	.01	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)
DATE PROCESSED: 11-27-2000 @ 16:59 BY gboneill

06709000
PLUM CREEK NEAR SEDALIA, CO.
(00045) PRECIPITATION STORE STATISTIC(S) 00006
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1991

TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	1.73 0000	1.73 0000	.00	.00 0045	.00 0045	.00	
09-17	1.73 0000	1.73 0000	.00	.00 0045	.00 0045	.00	
09-18	1.74 0645	1.73 0000	.01	.01 0645	.00 0045	.01	
09-19	1.75 0945	1.74 0000	.01	.01 0945	.00 0045	.01	
09-20	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-21	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-22	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-23	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	P
09-24	1.75 0345	1.75 0345	.00	.00 0345	.00 0345	.00	P
09-25	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-26	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-27	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-28	1.75 0000	1.75 0000	.00	.00 0045	.00 0045	.00	
09-29	1.90 2400	1.75 0000	.15	.07 2345	.00 0045	.15	
09-30	1.96 1345	1.90 0000	.06	.04 0045	.00 0145	.06	
PERIOD	13.71	.00		11.39	.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
M - NO UNIT VALUES AVAILABLE FOR THIS DAY

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATISTICAL DIS

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:00 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1992 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	8.08 0845	8.07 0000	.01	.01 0845	.00 0045	.01	
04-02	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-03	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-04	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	P
04-05	8.08 0145	8.08 0145	.00	.00 0145	.00 0145	.00	P
04-06	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-07	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-08	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-09	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-10	8.08 0000	8.08 0000	.00	.00 0045	.00 0045	.00	
04-11	8.13 1845	8.08 0000	.05	.04 1645	.00 0045	.05	
04-12	8.13 0000	8.13 0000	.00	.00 0045	.00 0045	.00	
04-13	8.13 0000	8.13 0000	.00	.00 0045	.00 0045	.00	
04-14	8.20 1945	8.13 0000	.07	.07 1945	.00 0045	.07	
04-15	8.23 1745	8.20 0000	.03	.02 1645	.00 0045	.03	
04-16	8.26 1145	8.23 0000	.03	.03 1145	.00 0045	.03	
04-17	8.26 0000	8.26 0000	.00	.00 0045	.00 0045	.00	
04-18	8.27 0345	8.26 0000	.01	.01 0345	.00 0045	.01	
04-19	8.27 2400	8.27 0000	.00	.00 2400	.00 0045	.00	
04-20	8.30 0945	8.27 0000	.03	.01 0845	.00 0145	.03	
04-21	8.30 0000	8.30 0000	.00	.00 0045	.00 0045	.00	
04-22	8.32 1945	8.30 0000	.02	.02 1945	.00 0045	.02	
04-23	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
04-24	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
04-25	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
04-26	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	P
04-27	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
04-28	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
04-29	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
04-30	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-01	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-02	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-03	8.32 0000	.32 2345	8.00	2.00 2400	.00 0045	~~2.00~~ O	
05-04	8.32 0045	2.32 0000	6.00	6.00 0045	.00 0145	~~6.00~~ O	
05-05	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-06	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-07	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-08	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-09	8.32 0000	8.32 0000	.00	.00 0045	.00 0045	.00	
05-10	8.34 0445	8.32 0000	.02	.02 0445	.00 0045	.02	
05-11	8.34 0000	8.34 0000	.00	.00 0045	.00 0045	.00	P
05-12	8.59 2145	8.34 0000	.25	.21 1945	.00 0045	.25	P

ITED ES D MENT INTE - GE CAL Y - R RE: ES D: ON STAT DI:

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:00 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1992 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	8.59 0000	8.59 0000	.00	.00 0045	.00 0045	.00	
05-14	8.59 0000	8.59 0000	.00	.00 0045	.00 0045	.00	
05-15	8.59 0000	8.59 0000	.00	.00 0045	.00 0045	.00	
05-16	8.59 0000	8.59 0000	.00	.00 0045	.00 0045	.00	
05-17	8.61 2345	8.59 0000	.02	.02 2345	.00 0045	.02	P
05-18	8.61 0000	8.61 0000	.00	.00 0045	.00 0045	.00	P
05-19	8.61 0000	8.61 0000	.00	.00 0045	.00 0045	.00	
05-20	8.61 0000	8.61 0000	.00	.00 0045	.00 0045	.00	
05-21	8.64 1745	8.61 0000	.03	.02 1545	.00 0045	.03	
05-22	8.66 0845	8.64 0000	.02	.01 0845	.00 0045	.02	
05-23	8.66 0000	8.66 0000	.00	.00 0045	.00 0045	.00	
05-24	8.66 0000	8.66 0000	.00	.00 0045	.00 0045	.00	
05-25	8.96 2145	8.66 0000	.30	.06 0445	.00 0045	.30	
05-26	9.09 2400	8.96 0000	.13	.07 1945	.00 0045	.13	
05-27	9.18 1945	9.09 0000	.09	.02 0145	.00 0345	.09	
05-28	9.19 0645	9.18 0000	.01	.01 0645	.00 0045	.01	
05-29	9.19 0000	9.19 0000	.00	.00 0045	.00 0045	.00	
05-30	9.19 0000	9.19 0000	.00	.00 0045	.00 0045	.00	
05-31	9.63 2400	9.19 0000	.44	.20 1445	.00 0045	.44	P
06-01	10.35 1945	9.63 0000	.72	.14 0845	.00 1145	.72	
06-02	10.36 0245	10.35 0000	.01	.01 0245	.00 0045	.01	P
06-03	10.36 0000	10.36 0000	.00	.00 0045	.00 0045	.00	
06-04	10.38 2045	10.36 0000	.02	.01 1845	.00 0045	.02	
06-05	10.38 2400	10.38 0000	.00	.00 2400	.00 0045	.00	
06-06	10.43 1945	10.38 0000	.05	.02 1945	.00 0245	.05	P
06-07	10.43 0000	10.43 0000	.00	.00 0045	.00 0045	.00	
06-08	10.68 1645	10.43 0000	.25	.21 1545	.00 0045	.25	
06-09	10.68 0000	10.68 0000	.00	.00 0045	.00 0045	.00	P
06-10	10.68 0000	10.68 0000	.00	.00 0045	.00 0045	.00	
06-11	11.33 1645	10.68 0000	.65	.57 1545	.00 0045	.65	
06-12	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-13	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	P
06-14	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-15	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-16	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-17	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-18	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-19	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-20	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-21	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	P
06-22	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	
06-23	11.33 0000	11.33 0000	.00	.00 0045	.00 0045	.00	P

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)
06709000 DATE PROCESSED: 11-27-2000 @ 17:00 BY gboneill
PLUM CREEK NEAR SEDALIA, CO.
(00045) PRECIPITATION STORE STATISTIC(S) 00006
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1992 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24							M
06-25	.10 2400	.00 1145	.10	.10 1245	.00 1145	.10	P
06-26	.44 2400	.10 0000	.33	.19 2145	.00 0245	.33	
06-27	.48 0045	.44 0000	.04	.04 0045	.00 0145	.04	P
06-28	.48 0345	.48 0345	.00	.00 0345	.00 0345	.00	P
06-29	.51 1945	.48 0000	.03	.02 1945	.00 0045	.03	P
06-30	.51 0000	.51 0000	.00	.00 0045	.00 0045	.00	
07-01	.51 0000	.51 0000	.00	.00 0045	.00 0045	.00	
07-02	.57 1345	.51 0000	.06	.03 0545	.00 0045	.06	
07-03	.57 0000	.57 0000	.00	.00 0045	.00 0045	.00	
07-04	.57 0000	.57 0000	.00	.00 0045	.00 0045	.00	
07-05	.57 0000	.57 0000	.00	.00 0045	.00 0045	.00	
07-06	.57 0000	.57 0000	.00	.00 0045	.00 0045	.00	P
07-07	.57 0000	.57 0000	.00	.00 0045	.00 0045	.00	
07-08	.59 1045	.57 0000	.02	.01 0745	.00 0045	.02	
07-09	.59 0000	.59 0000	.00	.00 0045	.00 0045	.00	
07-10	.59 0000	.59 0000	.00	.00 0045	.00 0045	.00	P
07-11	.59 0000	.00 0745	.59	.59 0845	.00 0045	.59	
07-12	.85 2045	.59 0000	.26	.15 1745	.00 0045	.26	
07-13	.85 0000	.00 1545	.85	.85 1645	.00 0045	.85	
07-14	.85 0000	.85 0000	.00	.00 0045	.00 0045	.00	
07-15	1.07 2245	.85 0000	.22	.12 1645	.00 0045	.22	
07-16	1.10 1845	1.07 0000	.03	.03 1845	.00 0045	.03	
07-17	1.54 1645	1.10 0000	.44	.22 1645	.00 0045	.44	P
07-18	1.54 0000	1.54 0000	.00	.00 0045	.00 0045	.00	P
07-19	1.54 0345	1.54 0345	.00	.00 0345	.00 0345	.00	P
07-20	1.60 1745	1.54 0000	.06	.03 1645	.00 0045	.06	
07-21	1.60 0000	1.60 0000	.00	.00 0045	.00 0045	.00	
07-22	1.62 1545	1.60 0000	.02	.02 1545	.00 0045	.02	
07-23	1.63 1845	1.62 0000	.01	.01 1845	.00 0045	.01	
07-24	1.73 1945	1.63 0000	.10	.05 1845	.00 0045	.10	
07-25	1.94 2345	1.73 0000	.21	.09 2245	.00 0045	.21	
07-26	1.95 0845	1.94 0000	.01	.01 0845	.00 0045	.01	
07-27	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	P
07-28	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	
07-29	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	
07-30	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	
07-31	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	
08-01	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	P
08-02	1.95 0000	1.95 0000	.00	.00 0045	.00 0045	.00	
08-03	1.98 1945	1.95 0000	.03	.03 1945	.00 0045	.03	
08-04	1.99 1945	1.98 0000	.01	.01 1945	.00 0045	.01	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:00 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1992 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	------(00045) RAINFALL READING-------			----------SUM RAINFALL, INCHES----------			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	2.00 1745	1.99 0000	.01	.01 1745	.00 0045	.01	
08-06	2.00 0000	2.00 0000	.00	.00 0045	.00 0045	.00	
08-07	2.00 0000	2.00 0000	.00	.00 0045	.00 0045	.00	P
08-08	2.00 0000	2.00 0000	.00	.00 0045	.00 0045	.00	
08-09	2.00 0000	2.00 0000	.00	.00 0045	.00 0045	.00	
08-10	2.04 0945	2.00 0000	.04	.03 0945	.00 0045	.04	
08-11	2.08 2345	2.04 0000	.04	.04 2345	.00 0045	.04	
08-12	2.17 1045	2.08 0000	.09	.03 0845	.00 0045	.09	
08-13	2.18 0545	2.17 0000	.01	.01 0545	.00 0045	.01	P
08-14							M
08-15							M
08-16							M
08-17	.48 1745	.00 0745	.48	.28 1545	.00 0745	.48	P
08-18	.49 0545	.48 0000	.01	.01 0545	.00 0045	.01	
08-19	.49 0000	.49 0000	.00	.00 0045	.00 0045	.00	
08-20	.49 0000	.49 0000	.00	.00 0045	.00 0045	.00	
08-21	.49 0000	.49 0000	.00	.00 0045	.00 0045	.00	P
08-22	.49 0000	.49 0000	.00	.00 0045	.00 0045	.00	P
08-23	.50 2245	.49 0445	.01	.01 2245	.00 0445	.01	P
08-24	2.56 2245	.50 0000	2.06	.22 0745	.00 0045	2.06	
08-25	2.58 1645	2.56 0000	.02	.01 0445	.00 0045	.02	
08-26	2.58 0000	2.58 0000	.00	.00 0045	.00 0045	.00	
08-27	2.58 0000	2.58 0000	.00	.00 0045	.00 0045	.00	
08-28	2.58 0000	2.58 0000	.00	.00 0045	.00 0045	.00	
08-29	2.58 0000	2.58 0000	.00	.00 0045	.00 0045	.00	
08-30	2.58 0000	2.58 0000	.00	.00 0045	.00 0045	.00	
08-31	2.62 1845	2.58 0000	.04	.02 1545	.00 0045	.04	
09-01	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-02	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-03	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-04	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-05	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-06	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-07	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-08	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-09	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-10	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-11	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-12	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-13	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-14	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-15	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:00 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1992 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-17	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-18	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-19	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-20	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-21	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-22	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-23	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-24	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-25	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-26	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-27	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-28	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-29	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
09-30	2.62 0000	2.62 0000	.00	.00 0045	.00 0045	.00	
PERIOD	11.33	.00		6.00	.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
M - NO UNIT VALUES AVAILABLE FOR THIS DAY

ITED TES I IMEN INTE - GE ICAL EY - R RE ES D ION STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1993 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX TIME	MIN TIME	RANGE	SUM RAINFALL, INCHES MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	5.37 1045	5.29 0000	.08	.07 0945	.00 0045	.08	
04-02	5.81 2400	5.37 0000	.44	.19 2045	.00 0045	.44	
04-03	6.09 1145	5.81 0000	.28	.05 0145	.00 0545	.28	
04-04	6.09 0000	6.09 0000	.00	.00 0045	.00 0045	.00	P
04-05	6.09 0000	6.09 0000	.00	.00 0045	.00 0045	.00	
04-06	6.51 2345	6.09 0000	.42	.16 1545	.00 0045	.42	
04-07	6.66 1545	6.51 0000	.15	.06 1145	.00 0045	.15	
04-08	6.66 0000	6.66 0000	.00	.00 0045	.00 0045	.00	
04-09	6.66 0000	6.66 0000	.00	.00 0045	.00 0045	.00	P
04-10							M
04-11							M
04-12	.38 2345	.00 1145	.38	.10 1445	.00 1145	.38	P reset
04-13	.59 1845	.38 0000	.21	.10 1045	.00 0045	.21	
04-14	.62 2245	.59 0000	.03	.02 2145	.00 0045	.03	
04-15	.71 0945	.62 0000	.09	.09 0945	.00 0045	.09	
04-16	.86 2245	.71 0000	.15	.08 2045	.00 0045	.15	
04-17	.87 0445	.86 0000	.01	.01 0445	.00 0045	.01	
04-18	.88 2145	.87 0000	.01	.01 2145	.00 0045	.01	
04-19	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
04-20	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
04-21	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
04-22	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
04-23	.88 0000	.88 0000	.00	.00 0045	.00 0045	.00	
04-24	1.17 1845	.88 0000	.29	.07 1845	.00 0045	.29	
04-25	1.17 0000	1.17 0000	.00	.00 0045	.00 0045	.00	
04-26	1.17 0000	1.17 0000	.00	.00 0045	.00 0045	.00	
04-27	1.17 0000	1.17 0000	.00	.00 0045	.00 0045	.00	
04-28	1.17 0000	1.17 0000	.00	.00 0045	.00 0045	.00	
04-29	1.17 0000	1.17 0000	.00	.00 0045	.00 0045	.00	
04-30	1.50 2245	1.17 0000	.33	.14 2145	.00 0045	.33	
05-01	1.51 1245	1.50 0000	.01	.01 1245	.00 0045	.01	
05-02	1.51 0000	1.51 0000	.00	.00 0045	.00 0045	.00	
05-03	1.51 0000	1.51 0000	.00	.00 0045	.00 0045	.00	
05-04	1.51 0000	1.51 0000	.00	.00 0045	.00 0045	.00	
05-05	1.51 0000	1.51 0000	.00	.00 0045	.00 0045	.00	
05-06	1.51 0000	1.51 0000	.00	.00 0045	.00 0045	.00	
05-07	1.51 0000	1.51 0000	.00	.00 0045	.00 0045	.00	
05-08	1.60 2145	1.51 0000	.09	.08 2045	.00 0045	.09	
05-09	1.64 1145	1.60 0000	.04	.02 0245	.00 0045	.04	
05-10	1.64 0000	1.64 0000	.00	.00 0045	.00 0045	.00	
05-11	1.64 0000	1.64 0000	.00	.00 0045	.00 0045	.00	
05-12	1.64 0000	1.64 0000	.00	.00 0045	.00 0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1993 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX	TIME	MIN	TIME	RANGE	SUM RAINFALL, INCHES MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
05-13	1.64	0000	.04	0945	1.60	1.60	1045	.00	0045	1.60	P
05-14											M
05-15											M
05-16											M
05-17											M
05-18											M
05-19	.10	2400	.00	0345	.10	.10	1145	.00	0345	.10	P
05-20	.11	0045	.10	0000	.01	.01	0045	.00	0145	.01	
05-21	.14	1845	.11	0000	.03	.03	1845	.00	0045	.03	
05-22	.17	1545	.14	0000	.03	.01	0745	.00	0045	.03	
05-23	.17	0000	.17	0000	.00	.00	0045	.00	0045	.00	
05-24	.25	1945	.17	0000	.08	.05	1545	.00	0045	.08	
05-25	.26	1045	.25	0000	.01	.01	1045	.00	0045	.01	
05-26	.27	1545	.26	0000	.01	.01	1545	.00	0045	.01	
05-27	.34	1845	.27	0000	.07	.04	1545	.00	0045	.07	
05-28	.39	1845	.34	0000	.05	.02	1645	.00	0045	.05	
05-29	.39	0000	.39	0000	.00	.00	0045	.00	0045	.00	
05-30	.44	1845	.39	0000	.05	.05	1845	.00	0045	.05	
05-31	.44	0000	.44	0000	.00	.00	0045	.00	0045	.00	
06-01	.44	0000	.44	0000	.00	.00	0045	.00	0045	.00	
06-02	.47	1645	.44	0000	.03	.02	1645	.00	0045	.03	
06-03	.52	0745	.47	0000	.05	.04	0445	.00	0045	.05	
06-04	.77	2145	.52	0000	.25	.09	2045	.00	0045	.25	
06-05	.77	0000	.77	0000	.00	.00	0045	.00	0045	.00	
06-06	.77	0000	.77	0000	.00	.00	0045	.00	0045	.00	
06-07	.77	0000	.77	0000	.00	.00	0045	.00	0045	.00	
06-08	.77	0000	.77	0000	.00	.00	0045	.00	0045	.00	
06-09	.92	1345	.77	0000	.15	.12	1245	.00	0045	.15	
06-10	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-11	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-12	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-13	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-14	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-15	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-16	.92	0000	.92	0000	.00	.00	0045	.00	0045	.00	
06-17	1.92	2400	.92	0000	1.00	.59	1645	.00	0045	1.00	
06-18	2.44	1845	1.92	0000	.52	.14	0145	.00	0245	.52	
06-19	2.44	0000	.02	2145	2.42	2.42	2245	.00	0045	2.42	
06-20	2.46	1645	2.44	0000	.02	.02	1645	.00	0045	.02	
06-21	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-22	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-23	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1993 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING				SUM RAINFALL, INCHES					
DATE	MAX	TIME	MIN	TIME	RANGE	MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
06-24	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-25	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-26	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-27	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-28	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-29	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
06-30	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
07-01	2.46	0000	2.46	0000	.00	.00	0045	.00	0045	.00	
07-02	2.52	2145	2.46	0000	.06	.04	2045	.00	0045	.06	
07-03	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-04	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-05	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-06	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-07	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-08	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-09	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-10	2.52	0000	2.52	0000	.00	.00	0045	.00	0045	.00	
07-11	2.57	1445	2.52	0000	.05	.02	1445	.00	0045	.05	
07-12	2.58	1245	2.57	0000	.01	.01	1245	.00	0045	.01	
07-13	3.18	2245	2.58	0000	.60	.51	1945	.00	0045	.60	
07-14	3.61	1745	3.18	0000	.43	.38	1545	.00	0045	.43	
07-15	3.62	1845	3.61	0000	.01	.01	1845	.00	0045	.01	
07-16	3.62	0000	3.62	0000	.00	.00	0045	.00	0045	.00	
07-17	3.62	0000	3.62	0000	.00	.00	0045	.00	0045	.00	
07-18	3.62	0000	3.62	0000	.00	.00	0045	.00	0045	.00	
07-19	4.05	1545	3.62	0000	.43	.31	1545	.00	0045	.43	
07-20	4.05	0000	4.05	0000	.00	.00	0045	.00	0045	.00	
07-21	4.07	1745	4.05	0000	.02	.02	1745	.00	0045	.02	
07-22	4.15	2345	4.07	0000	.08	.08	2345	.00	0045	.08	
07-23	4.21	2045	4.15	0000	.06	.05	1945	.00	0045	.06	
07-24	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-25	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-26	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-27	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-28	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-29	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-30	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
07-31	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
08-01	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
08-02	4.21	0000	4.21	0000	.00	.00	0045	.00	0045	.00	
08-03	4.28	1045	4.21	0000	.07	.05	0545	.00	0045	.07	
08-04	4.28	0000	4.28	0000	.00	.00	0045	.00	0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1993 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	4.29 0245	4.28 0000	.01	.01 0245	.00 0045	.01	
08-06	4.29 0000	4.29 0000	.00	.00 0045	.00 0045	.00	
08-07	4.29 0000	4.29 0000	.00	.00 0045	.00 0045	.00	
08-08	4.34 1445	4.29 0000	.05	.05 1445	.00 0045	.05	
08-09	4.34 0000	4.34 0000	.00	.00 0045	.00 0045	.00	
08-10	4.34 0000	4.34 0000	.00	.00 0045	.00 0045	.00	
08-11	4.34 0000	4.34 0000	.00	.00 0045	.00 0045	.00	
08-12	4.61 1645	4.34 0000	.27	.25 1645	.00 0045	.27	
08-13	4.61 0000	4.61 0000	.00	.00 0045	.00 0045	.00	
08-14	4.61 0000	4.61 0000	.00	.00 0045	.00 0045	.00	
08-15	4.61 0000	4.61 0000	.00	.00 0045	.00 0045	.00	
08-16	4.61 0000	4.61 0000	.00	.00 0045	.00 0045	.00	
08-17	4.61 0000	4.61 0000	.00	.00 0045	.00 0045	.00	
08-18	4.66 1645	4.61 0000	.05	.04 1545	.00 0045	.05	
08-19	4.66 0000	4.66 0000	.00	.00 0045	.00 0045	.00	
08-20	4.67 1945	4.66 0000	.01	.01 1945	.00 0045	.01	P
08-21	4.79 1745	4.67 0000	.12	.12 1745	.00 0045	.12	
08-22	4.79 0000	4.79 0000	.00	.00 0045	.00 0045	.00	
08-23	4.79 0000	4.79 0000	.00	.00 0045	.00 0045	.00	
08-24	4.79 0000	4.79 0000	.00	.00 0045	.00 0045	.00	
08-25	4.79 0000	4.79 0000	.00	.00 0045	.00 0045	.00	
08-26	4.80 1645	4.79 0000	.01	.01 1645	.00 0045	.01	
08-27	4.80 0000	4.80 0000	.00	.00 0045	.00 0045	.00	P
08-28	4.80 0000	4.80 0000	.00	.00 0045	.00 0045	.00	
08-29	4.80 0000	4.80 0000	.00	.00 0045	.00 0045	.00	
08-30	4.89 0945	4.80 0000	.09	.06 0745	.00 0045	.09	
08-31	4.89 0000	4.89 0000	.00	.00 0045	.00 0045	.00	
09-01	4.89 0000	4.89 0000	.00	.00 0045	.00 0045	.00	
09-02	5.30 1345	4.89 0000	.41	.18 1245	.00 0045	.41	
09-03	5.31 0245	5.30 0000	.01	.01 0245	.00 0045	.01	
09-04	5.31 0000	5.31 0000	.00	.00 0045	.00 0045	.00	
09-05	5.35 2400	5.31 0000	.04	.03 2345	.00 0045	.04	
09-06	5.36 0045	5.35 0000	.01	.01 0045	.00 0145	.01	
09-07	5.47 0945	5.36 0000	.11	.11 0945	.00 0045	.11	P
09-08	5.65 0545	5.64 0345	.01	.01 0545	.00 0345	.01	P
09-09	5.65 0000	5.65 0000	.00	.00 0045	.00 0045	.00	
09-10	5.65 0000	5.65 0000	.00	.00 0045	.00 0045	.00	
09-11	5.65 0000	5.65 0000	.00	.00 0045	.00 0045	.00	
09-12	5.65 0000	5.65 0000	.00	.00 0045	.00 0045	.00	
09-13	6.15 1745	5.65 0000	.50	.14 0745	.00 0045	.50	
09-14	6.20 1245	6.15 0000	.05	.03 1145	.00 0045	.05	
09-15	6.20 0000	6.20 0000	.00	.00 0045	.00 0045	.00	

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1993 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING				SUM RAINFALL, INCHES				
DATE	MAX	TIME	MIN	TIME	RANGE	MAX	TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	6.25	2245	6.20	0000	.05	.04	1945	.00 0045	.05	
09-17	6.29	2400	6.25	0000	.04	.02	2145	.00 0045	.04	
09-18	6.35	0445	6.29	0000	.06	.04	0445	.00 0145	.06	
09-19	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-20	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-21	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	P
09-22	6.35	0345	6.35	0345	.00	.00	0345	.00 0345	.00	P
09-23	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-24	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-25	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-26	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-27	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-28	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-29	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
09-30	6.35	0000	6.35	0000	.00	.00	0045	.00 0045	.00	
PERIOD	6.66		.00			2.42		.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
M - NO UNIT VALUES AVAILABLE FOR THIS DAY

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATION DESCRIPTION

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1994 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	10.77 0000	10.77 0000	.00	.00 0045	.00 0045	.00	
04-02	10.87 1045	10.77 0000	.10	.06 0945	.00 0045	.10	
04-03	10.87 0000	10.87 0000	.00	.00 0045	.00 0045	.00	P
04-04	10.88 1645	10.87 0000	.01	.01 1645	.00 0045	.01	
04-05	10.91 1745	10.88 0000	.03	.02 1745	.00 0045	.03	
04-06	10.99 1245	10.91 0000	.08	.05 1045	.00 0045	.08	
04-07	10.99 0000	10.99 0000	.00	.00 0045	.00 0045	.00	
04-08	10.99 0000	10.99 0000	.00	.00 0045	.00 0045	.00	
04-09	11.02 2045	10.99 0000	.03	.01 1545	.00 0045	.03	
04-10	11.27 1445	11.02 0000	.25	.11 1245	.00 0045	.25	
04-11	11.28 1145	11.27 0000	.01	.01 1145	.00 0045	.01	
04-12	11.29 1045	11.28 0000	.01	.01 1045	.00 0045	.01	
04-13	11.29 0000	11.29 0000	.00	.00 0045	.00 0045	.00	
04-14	11.29 0000	11.29 0000	.00	.00 0045	.00 0045	.00	
04-15	11.29 0000	11.29 0000	.00	.00 0045	.00 0045	.00	
04-16	11.29 0000	11.29 0000	.00	.00 0045	.00 0045	.00	
04-17	11.29 0000	11.29 0000	.00	.00 0045	.00 0045	.00	
04-18	11.29 0000	11.29 0000	.00	.00 0045	.00 0045	.00	
04-19	11.30 1745	11.29 0000	.01	.01 1745	.00 0045	.01	
04-20	11.30 0000	11.30 0000	.00	.00 0045	.00 0045	.00	
04-21	11.30 0000	11.30 0000	.00	.00 0045	.00 0045	.00	
04-22	11.31 1345	11.30 0000	.01	.01 1345	.00 0045	.01	
04-23	11.31 0000	11.31 0000	.00	.00 0045	.00 0045	.00	
04-24	11.31 0000	11.31 0000	.00	.00 0045	.00 0045	.00	
04-25	12.13 1645	11.31 0000	.82	.27 1345	.00 0045	.82	
04-26	12.14 0445	12.13 0000	.01	.01 0445	.00 0045	.01	
04-27	12.36 1945	12.14 0000	.22	.10 1245	.00 0045	.22	
04-28	12.37 1045	12.36 0000	.01	.01 1045	.00 0045	.01	
04-29	12.66 1545	12.37 0000	.29	.09 1145	.00 0045	.29	
04-30	12.68 0945	12.66 0000	.02	.02 0945	.00 0045	.02	
05-01	12.75 1645	12.68 0000	.07	.07 1645	.00 0045	.07	
05-02	12.81 1845	12.75 0000	.06	.06 1845	.00 0045	.06	
05-03	12.81 0000	12.81 0000	.00	.00 0045	.00 0045	.00	
05-04	12.81 0000	12.81 0000	.00	.00 0045	.00 0045	.00	
05-05	12.81 0000	12.81 0000	.00	.00 0045	.00 0045	.00	
05-06	12.81 0000	12.81 0000	.00	.00 0045	.00 0045	.00	
05-07	12.81 0000	12.81 0000	.00	.00 0045	.00 0045	.00	
05-08	12.81 0000	12.81 0000	.00	.00 0045	.00 0045	.00	
05-09	13.19 2345	12.81 0000	.38	.17 1745	.00 0045	.38	
05-10	13.20 1145	13.19 0000	.01	.01 1145	.00 0045	.01	
05-11	13.20 0000	13.20 0000	.00	.00 0045	.00 0045	.00	
05-12	13.20 0000	13.20 0000	.00	.00 0045	.00 0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1994 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	13.39 2045	13.20 0000	.19	.08 2045	.00 0045	.19	
05-14	13.39 0000	13.39 0000	.00	.00 0045	.00 0045	.00	
05-15	13.39 0000	13.39 0000	.00	.00 0045	.00 0045	.00	
05-16	13.39 0000	13.39 0000	.00	.00 0045	.00 0045	.00	
05-17	13.39 0000	13.39 0000	.00	.00 0045	.00 0045	.00	
05-18	13.39 0000	13.39 0000	.00	.00 0045	.00 0045	.00	
05-19	13.39 2400	13.39 0000	.00	.00 2400	.00 0045	.00	
05-20	13.40 0045	13.39 0000	.01	.01 0045	.00 0145	.01	
05-21	13.40 0000	13.40 0000	.00	.00 0045	.00 0045	.00	
05-22	13.40 0000	13.40 0000	.00	.00 0045	.00 0045	.00	
05-23	13.40 0000	13.40 0000	.00	.00 0045	.00 0045	.00	
05-24	13.42 1745	13.40 0000	.02	.01 1645	.00 0045	.02	
05-25	13.48 2400	~~1.34~~ 13.40 1345	12.14	12.09 1445	.00 0045	~~12.14~~ .08	
05-26	13.99 1045	13.48 0000	.51	.13 0245	.00 1145	.51	
05-27	13.99 0000	13.99 0000	.00	.00 0045	.00 0045	.00	
05-28	14.02 1445	13.99 0000	.03	.03 1445	.00 0045	.03	
05-29	14.02 0000	14.02 0000	.00	.00 0045	.00 0045	.00	
05-30	14.02 0000	14.02 0000	.00	.00 0045	.00 0045	.00	
05-31	14.03 1645	14.02 0000	.01	.01 1645	.00 0045	.01	
06-01	14.45 2400	14.03 0000	.43	.20 2045	.00 0045	.43	
06-02	14.53 1845	14.45 0000	.07	.03 1645	.00 0145	.07	
06-03	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-04	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-05	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-06	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-07	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-08	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-09	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-10	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-11	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-12	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-13	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-14	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-15	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-16	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-17	14.53 0000	14.53 0000	.00	.00 0045	.00 0045	.00	
06-18	14.69 2145	~~14.68~~ 1245	10.01	10.00 1345	.00 0045	~~10.01~~	
06-19	14.81 2045	14.69 0000	.12	.08 1845	.00 0045	.12	
06-20	15.33 2145	14.81 0000	.52	.29 1845	.00 0045	.52	
06-21	15.44 2145	15.33 0000	.11	.08 2045	.00 0045	.11	
06-22	15.47 1245	15.44 0000	.03	.02 1245	.00 0045	.03	
06-23	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1994 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
06-25	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
06-26	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
06-27	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
06-28	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
06-29	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
06-30	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
07-01	15.47 0000	15.47 0000	.00	.00 0045	.00 0045	.00	
07-02	15.51 2245	15.47 0000	.04	.03 2145	.00 0045	.04	
07-03	15.51 0000	.08 1245	15.43	13.96 1445	.00 0045	15.43	
07-04	15.51 0000	15.51 0000	.00	.00 0045	.00 0045	.00	
07-05	15.59 1445	15.51 0000	.08	.08 1445	.00 0045	.08	
07-06	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-07	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-08	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-09	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-10	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-11	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-12	15.59 0000	15.59 0000	.00	.00 0045	.00 0045	.00	
07-13	15.74 2045	15.59 0000	.15	.12 1945	.00 0045	.15	
07-14	15.79 2245	15.74 0000	.05	.03 2245	.00 0045	.05	
07-15	16.07 1845	.07 1945	16.00	16.00 2045	.00 0045	16.28	
07-16	16.15 1445	.01 1245	16.14	16.13 1345	.00 0045	56.70	P
07-17	16.15 0045	.16 1145	15.99	15.99 1245	.00 0045	15.99	P
07-18	16.15 0000	.01 0745	16.14	16.14 0845	.00 0045	32.13	
07-19	16.15 0000	.16 0545	15.99	15.99 0645	.00 0045	15.99	P
07-20	16.15 0000	.01 1445	16.14	16.14 1545	.00 0045	16.14	P
07-21	16.15 0145	16.15 0145	.00	.00 0145	.00 0145	.00	P
07-22	16.15 0000	16.15 0000	.00	.00 0045	.00 0045	.00	
07-23	16.15 0000	16.15 0000	.00	.00 0045	.00 0045	.00	
07-24	16.19 1645	16.15 0000	.04	.04 1645	.00 0045	.04	
07-25	16.19 0000	16.19 0000	.00	.00 0045	.00 0045	.00	P
07-26	16.19 0000	16.19 0000	.00	.00 0045	.00 0045	.00	
07-27	16.19 0000	16.19 0000	.00	.00 0045	.00 0045	.00	
07-28	16.19 0000	16.19 0000	.00	.00 0045	.00 0045	.00	
07-29	16.19 0000	16.19 0000	.00	.00 0045	.00 0045	.00	
07-30	16.19 0000	16.19 0000	.00	.00 0045	.00 0045	.00	
07-31	16.20 2045	16.19 0000	.01	.01 2045	.00 0045	.01	
08-01	16.23 2045	16.20 0000	.03	.02 1945	.00 0045	.03	
08-02	16.23 0000	16.23 0000	.00	.00 0045	.00 0045	.00	
08-03	16.23 0000	1.62 0145	14.61	14.61 0245	.00 0045	14.61	
08-04	16.23 0000	16.23 0000	.00	.00 0045	.00 0045	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)
DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

06709000
PLUM CREEK NEAR SEDALIA, CO.
(00045) PRECIPITATION STORE STATISTIC(S) 00006
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1994

TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX TIME	MIN TIME	RANGE	SUM RAINFALL, INCHES MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	16.23 0000	16.23 0000	.00	.00 0045	.00 0045	.00	
08-06	16.23 0000	16.23 0000	.00	.00 0045	.00 0045	.00	
08-07	16.23 0000	.01 2345	16.22	4.05 2400	.00 0045	4.05	
08-08	16.23 0045	.01 2345	16.22	12.16 0045	.00 0145	16.22	
08-09	16.27 1745	.16 0145	16.11	16.07 0245	.00 0145	28.27	
08-10	16.51 2345	16.27 0000	.24	.17 2145	.00 0045	.24	
08-11	16.51 0000	16.51 0000	.00	.00 0045	.00 0045	.00	
08-12	16.51 0000	16.51 0000	.00	.00 0045	.00 0045	.00	
08-13	16.56 2045	1.65 0245	14.91	14.86 0345	.00 0045	14.91	P
08-14	16.56 0345	16.56 0345	.00	.00 0345	.00 0345	.00	P
08-15	16.56 0000	16.56 0000	.00	.00 0045	.00 0045	.00	
08-16	16.56 0000	16.56 0000	.00	.00 0045	.00 0045	.00	
08-17	16.56 0000	16.56 0000	.00	.00 0045	.00 0045	.00	
08-18	16.56 0000	16.56 0000	.00	.00 0045	.00 0045	.00	
08-19	16.68 2045	16.56 0000	.12	.02 0245	.00 0045	.12	
08-20	16.69 0745	16.68 0000	.01	.01 0745	.00 0045	.01	
08-21	16.69 0000	16.69 0000	.00	.00 0045	.00 0045	.00	
08-22	16.69 0000	16.69 0000	.00	.00 0045	.00 0045	.00	
08-23	16.69 0000	16.69 0000	.00	.00 0045	.00 0045	.00	
08-24	16.71 1445	16.69 0000	.02	.02 1445	.00 0045	.02	
08-25	16.71 0000	16.71 0000	.00	.00 0045	.00 0045	.00	
08-26	16.71 0000	16.71 0000	.00	.00 0045	.00 0045	.00	
08-27	16.71 0000	16.71 0000	.00	.00 0045	.00 0045	.00	
08-28	16.83 1645	16.71 0000	.12	.09 1545	.00 0045	.12	
08-29	16.83 0000	16.83 0000	.00	.00 0045	.00 0045	.00	
08-30	16.83 0000	16.83 0000	.00	.00 0045	.00 0045	.00	
08-31	17.15 1845	.16 0145	16.99	16.67 0245	.00 0045	16.99	
09-01	17.22 2400	17.15 0000	.07	.07 1545	.00 0045	.07	
09-02	17.23 0045	17.22 0000	.01	.01 0045	.00 0145	.01	
09-03	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-04	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-05	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-06	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-07	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-08	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-09	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-10	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-11	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-12	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-13	17.23 0000	17.23 0000	.00	.00 0045	.00 0045	.00	
09-14	17.26 1545	17.23 0000	.03	.03 1545	.00 0045	.03	
09-15	17.26 0000	17.26 0000	.00	.00 0045	.00 0045	.00	

ITED ES I MEN: INTE - GE CAL EY - R RE: ES D ON STA: DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:01 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1994 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	17.26 0000	17.26 0000	.00	.00 0045	.00 0045	.00	
09-17	17.27 1445	17.26 0000	.01	.01 1445	.00 0045	.01	
09-18	17.27 0000	17.27 0000	.00	.00 0045	.00 0045	.00	
09-19	17.27 0000	17.27 0000	.00	.00 0045	.00 0045	.00	
09-20	17.27 0000	17.27 0000	.00	.00 0045	.00 0045	.00	
09-21	17.40 2245	17.27 0000	.13	.07 1645	.00 0045	.13	
09-22	17.56 1145	17.40 0000	.16	.07 1045	.00 0045	.16	
09-23	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-24	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-25	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-26	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-27	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-28	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-29	17.56 0000	17.56 0000	.00	.00 0045	.00 0045	.00	
09-30	17.62 1745	17.56 0000	.06	.04 1745	.00 0045	.06	
PERIOD	17.62	.01		16.67	.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY

ITED ES L MEN INTE - GE CAL Y - RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:02 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1995 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	.71 0000	.71 0000	.00	.00 0045	.00 0045	.00	
04-02	.79 2145	.71 0000	.08	.07 2145	.00 0045	.08	P
04-03	.80 0845	.79 0000	.01	.01 0845	.00 0045	.01	
04-04	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	
04-05	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	
04-06	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	
04-07	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	
04-08	.80 0000	.80 0000	.00	.00 0045	.00 0045	.00	
04-09	.89 1845	.80 0000	.09	.04 1745	.00 0045	.09	
04-10	.89 0000	.89 0000	.00	.00 0045	.00 0045	.00	
04-11	1.26 2045	.89 0000	.37	.08 1545	.00 0045	.37	
04-12	1.54 1345	1.26 0000	.28	.10 1245	.00 0045	.28	
04-13	1.54 0000	1.54 0000	.00	.00 0045	.00 0045	.00	
04-14	1.54 0000	1.54 0000	.00	.00 0045	.00 0045	.00	
04-15	1.54 0000	1.54 0000	.00	.00 0045	.00 0045	.00	
04-16	1.65 2145	1.54 0000	.11	.06 1845	.00 0045	.11	
04-17	1.70 1845	1.65 0000	.05	.05 1845	.00 0045	.05	
04-18	1.95 2045	1.70 0000	.25	.06 1045	.00 0045	.25	
04-19	2.14 1345	1.95 0000	.19	.09 1045	.00 0045	.19	
04-20	2.14 0000	2.14 0000	.00	.00 0045	.00 0045	.00	
04-21	2.23 1945	2.14 0000	.09	.02 1245	.00 0045	.09	
04-22	2.24 1545	2.23 0000	.01	.01 1545	.00 0045	.01	
04-23	2.27 1945	2.24 0000	.03	.02 1745	.00 0045	.03	
04-24	2.61 1345	2.27 0000	.34	.14 1145	.00 0045	.34	
04-25	2.82 2345	2.61 0000	.21	.11 2245	.00 0045	.21	
04-26	2.92 1645	2.82 0000	.10	.04 1445	.00 0045	.10	
04-27	2.92 0000	2.92 0000	.00	.00 0045	.00 0045	.00	
04-28	3.00 2400	2.92 0000	.08	.04 2400	.00 0045	.08	
04-29	3.13 0845	3.00 0000	.13	.11 0045	.00 0245	.13	
04-30	3.22 1745	3.13 0000	.09	.03 0945	.00 0045	.09	
05-01	3.22 0000	3.22 0000	.00	.00 0045	.00 0045	.00	
05-02	3.27 2345	3.22 0000	.05	.03 2245	.00 0045	.05	
05-03	3.37 1945	3.27 0000	.10	.05 1645	.00 0045	.10	
05-04	3.39 2145	3.37 0000	.02	.01 0745	.00 0045	.02	
05-05	3.43 1845	3.39 0000	.04	.02 1745	.00 0045	.04	
05-06	3.43 0000	3.43 0000	.00	.00 0045	.00 0045	.00	
05-07	3.50 2245	3.43 0000	.07	.04 2245	.00 0045	.07	
05-08	3.50 0000	3.50 0000	.00	.00 0045	.00 0045	.00	
05-09	3.50 0000	3.50 0000	.00	.00 0045	.00 0045	.00	
05-10	3.50 0000	3.50 0000	.00	.00 0045	.00 0045	.00	
05-11	3.50 0000	3.50 0000	.00	.00 0045	.00 0045	.00	
05-12	3.50 0000	3.50 0000	.00	.00 0045	.00 0045	.00	

UITED ES I IMEN' INTE - GE ICAL EY - R RE ES D ON STA' DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:02 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1995

TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX	TIME	MIN	TIME	RANGE	SUM RAINFALL, INCHES MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
05-13	3.50	0000	3.50	0000	.00	.00	0045	.00	0045	.00	
05-14	3.50	0000	3.50	0000	.00	.00	0045	.00	0045	.00	
05-15	3.50	0000	3.50	0000	.00	.00	0045	.00	0045	.00	
05-16	3.78	2400	3.50	0000	.28	.08	2145	.00	0045	.28	
05-17	4.95	1945	3.78	0000	1.17	.13	0645	.00	0245	1.17	
05-18	4.95	0000	4.95	0000	.00	.00	0045	.00	0045	.00	P
05-19											M
05-20											M
05-21											
05-22											M
05-23											M
05-24	5.14	2045	3.92	1515	1.22	1.13	1630	.00	1115	1.32	M
05-25	5.16	1800	5.14	0000	.02	.01	1100	.00	0015	.02	P
05-26	5.27	2400	5.16	0000	.11	.03	2015	.00	0015	.11	
05-27	5.46	1400	5.27	0000	.19	.03	0200	.00	0015	.19	
05-28	5.51	1600	5.46	0000	.05	.01	0800	.00	0015	.05	
05-29	5.52	0145	5.51	0000	.01	.01	0145	.00	0015	.01	
05-30	5.54	2330	5.52	0000	.02	.01	2045	.00	0015	.02	
05-31	5.54	0000	5.54	0000	.00	.00	0015	.00	0015	.00	
06-01	5.54	0000	5.54	0000	.00	.00	0015	.00	0015	.00	
06-02	5.70	2245	5.54	0000	.16	.07	1915	.00	0015	.16	
06-03	5.70	0000	5.70	0000	.00	.00	0015	.00	0015	.00	
06-04	5.80	2000	5.70	0000	.10	.06	1730	.00	0015	.10	
06-05	5.80	0000	5.80	0000	.00	.00	0015	.00	0015	.00	
06-06	5.80	0000	5.80	0000	.00	.00	0015	.00	0015	.00	
06-07	5.80	0000	5.80	0000	.00	.00	0015	.00	0015	.00	
06-08	5.97	2315	5.80	0000	.17	.02	1530	.00	0015	.17	
06-09	6.08	0530	5.97	0000	.11	.03	0515	.00	0015	.11	
06-10	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-11	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-12	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-13	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-14	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-15	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-16	6.08	0000	6.08	0000	.00	.00	0015	.00	0015	.00	
06-17	6.14	2200	6.08	0000	.06	.02	2015	.00	0015	.06	
06-18	6.14	0000	6.14	0000	.00	.00	0015	.00	0015	.00	
06-19	6.14	0000	6.14	0000	.00	.00	0015	.00	0015	.00	
06-20	6.14	0000	6.14	0000	.00	.00	0015	.00	0015	.00	
06-21	6.14	0000	6.14	0000	.00	.00	0015	.00	0015	.00	
06-22	6.16	2330	6.14	0000	.02	.01	1930	.00	0015	.02	
06-23	6.18	1645	6.16	0000	.02	.01	1600	.00	0015	.02	

UITED TES I IMEN INTE - GE ICAL EY - R RE. ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:02 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1995 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	6.19 2030	6.18 0000	.01	.01 2030	.00 0015	.01	
06-25	6.19 0000	6.19 0000	.00	.00 0015	.00 0015	.00	
06-26	6.19 0000	6.19 0000	.00	.00 0015	.00 0015	.00	
06-27	6.19 0000	6.19 0000	.00	.00 0015	.00 0015	.00	
06-28	6.77 1845	6.19 0000	.58	.14 1500	.00 0015	.58	
06-29	7.20 1730	6.77 0000	.43	.03 0400	.00 0015	.43	
06-30	7.32 1845	7.20 0000	.12	.03 1815	.00 0015	.12	P
07-01	7.33 1315	7.32 0000	.01	.01 1315	.00 0015	.01	
07-02	7.33 0000	7.33 0000	.00	.00 0015	.00 0015	.00	
07-03	7.35 1730	7.33 0000	.02	.01 1715	.00 0015	.02	
07-04	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-05	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-06	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-07	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-08	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-09	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-10	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-11	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-12	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-13	7.35 0000	7.35 0000	.00	.00 0015	.00 0015	.00	
07-14	7.53 1845	7.35 0000	.18	.05 1845	.00 0015	.18	
07-15	7.53 0000	7.53 0000	.00	.00 0015	.00 0015	.00	
07-16	7.62 2400	7.53 0000	.09	.03 2215	.00 0015	.09	
07-17	7.62 0000	7.62 0000	.00	.00 0015	.00 0015	.00	
07-18	7.62 0000	7.62 0000	.00	.00 0015	.00 0015	.00	
07-19	7.64 1930	7.62 0000	.02	.01 1900	.00 0015	.02	
07-20	7.85 1515	7.64 0000	.21	.20 1500	.00 0015	.21	
07-21	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-22	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-23	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-24	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-25	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-26	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-27	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-28	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-29	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-30	7.85 0000	7.85 0000	.00	.00 0015	.00 0015	.00	
07-31	7.87 1115	7.85 0000	.02	.01 0945	.00 0015	.02	
08-01	7.87 0000	7.87 0000	.00	.00 0015	.00 0015	.00	
08-02	7.87 0000	7.87 0000	.00	.00 0015	.00 0015	.00	
08-03	7.87 0000	7.87 0000	.00	.00 0015	.00 0015	.00	
08-04	7.90 1330	7.87 0000	.03	.02 1315	.00 0015	.03	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:02 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1995 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	7.90 0000	7.90 0000	.00	.00 0015	.00 0015	.00	
08-06	7.90 0000	7.90 0000	.00	.00 0015	.00 0015	.00	
08-07	7.90 0000	7.90 0000	.00	.00 0015	.00 0015	.00	
08-08	7.90 0000	7.90 0000	.00	.00 0015	.00 0015	.00	
08-09	7.94 1445	7.90 0000	.04	.02 1430	.00 0015	.04	
08-10	7.94 0000	7.94 0000	.00	.00 0015	.00 0015	.00	
08-11	7.96 2230	7.94 0000	.02	.01 2230	.00 0015	.02	
08-12	7.98 2215	7.96 0000	.02	.01 2215	.00 0015	.02	
08-13	7.98 0000	7.98 0000	.00	.00 0015	.00 0015	.00	
08-14	7.99 1545	7.98 0000	.01	.01 1545	.00 0015	.01	
08-15	7.99 0000	7.99 0000	.00	.00 0015	.00 0015	.00	
08-16	7.99 0000	2.52 0800	5.47	.00 0015	.00 0015	.00	
08-17	2.52 0000	2.52 0000	.00	.00 0015	.00 0015	.00	
08-18	2.59 2045	2.52 0000	.07	.04 2015	.00 0015	.07	
08-19	2.73 0515	2.59 0000	.14	.03 0045	.00 0015	.14	
08-20	2.73 0000	2.73 0000	.00	.00 0015	.00 0015	.00	
08-21	2.73 0000	2.73 0000	.00	.00 0015	.00 0015	.00	
08-22	2.73 0000	2.73 0000	.00	.00 0015	.00 0015	.00	
08-23	2.76 1600	2.73 0000	.03	.01 1530	.00 0015	.03	
08-24	2.79 2230	2.76 0000	.03	.01 2130	.00 0015	.03	
08-25	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
08-26	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
08-27	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
08-28	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
08-29	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
08-30	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
08-31	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
09-01	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
09-02	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
09-03	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
09-04	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
09-05	2.79 0000	2.79 0000	.00	.00 0015	.00 0015	.00	
09-06	2.88 2100	2.79 0000	.09	.02 1945	.00 0015	.09	
09-07	2.88 0000	2.88 0000	.00	.00 0015	.00 0015	.00	
09-08	2.88 0000	2.88 0000	.00	.00 0015	.00 0015	.00	
09-09	2.91 1815	2.88 0000	.03	.02 1800	.00 0015	.03	
09-10	3.18 1945	2.91 0000	.27	.21 1930	.00 0015	.27	
09-11	3.19 1100	2.56 1145	.63	.01 1100	.00 0015	.01	
09-12	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
09-13	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
09-14	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
09-15	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	

UNITED STATES DEPARTMENT OF THE INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION STATISTICS DIVISION

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:02 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1995 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX	TIME	MIN	TIME	RANGE	SUM RAINFALL, INCHES MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
09-16	2.57	1745	2.56	0000	.01	.01	1745	.00	0015	.01	
09-17	2.57	0000	2.57	0000	.00	.00	0015	.00	0015	.00	
09-18	2.57	0000	2.57	0000	.00	.00	0015	.00	0015	.00	
09-19	2.66	0530	2.57	0000	.09	.01	0300	.00	0015	.09	
09-20	2.70	1830	2.66	0000	.04	.01	1245	.00	0015	.04	
09-21	2.75	1830	2.70	0000	.05	.01	1415	.00	0015	.05	
09-22	2.84	1345	2.75	0000	.09	.01	0900	.00	0015	.09	
09-23	2.84	0000	2.84	0000	.00	.00	0015	.00	0015	.00	
09-24	2.87	1530	2.84	0000	.03	.01	0745	.00	0015	.03	
09-25	2.87	0000	2.87	0000	.00	.00	0015	.00	0015	.00	
09-26	2.87	0000	2.87	0000	.00	.00	0015	.00	0015	.00	
09-27	2.87	0000	2.87	0000	.00	.00	0015	.00	0015	.00	
09-28	2.87	0000	2.87	0000	.00	.00	0015	.00	0015	.00	
09-29	2.88	1845	2.87	0000	.01	.01	1845	.00	0015	.01	
09-30	2.90	0545	2.88	0000	.02	.01	0345	.00	0015	.02	
PERIOD	7.99		.71			1.13		.00			

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY
M - NO UNIT VALUES AVAILABLE FOR THIS DAY

ITEI PES T TMEN INTE - GI ICAL EY - R RE ES I ION STA . . . DI . . 3

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:03 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1996 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX TIME	MIN TIME	RANGE	SUM RAINFALL, INCHES MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-02	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-03	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-04	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-05	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-06	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-07	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-08	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-09	3.57 0000	3.57 0000	.00	.00 0015	.00 0015	.00	
04-10	3.57 0000	.10 1600	3.47	.00 0015	.00 0015	.00	reset
04-11	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-12	.11 2245	.10 0000	.01	.01 2245	.00 0015	.01	
04-13	.11 0000	.11 0000	.00	.00 0015	.00 0015	.00	
04-14	.16 1215	.11 0000	.05	.02 1045	.00 0015	.05	
04-15	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-16	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-17	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-18	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-19	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-20	.17 1900	.16 0000	.01	.01 1900	.00 0015	.01	
04-21	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-22	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-23	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-24	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-25	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-26	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-27	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-28	.21 1230	.17 0000	.04	.02 1230	.00 0015	.04	
04-29	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
04-30	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-01	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-02	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-03	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-04	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-05	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-06	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-07	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-08	.21 0000	.21 0000	.00	.00 0015	.00 0015	.00	
05-09	.42 2130	.21 0000	.21	.05 1845	.00 0015	.21	
05-10	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-11	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-12	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:03 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1996 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-14	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-15	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-16	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-17	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-18	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-19	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-20	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-21	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-22	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-23	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-24	.42 0000	.42 0000	.00	.00 0015	.00 0015	.00	
05-25	.63 2000	.42 0000	.21	.03 1600	.00 0015	.21	
05-26	1.13 1915	.63 0000	.50	.04 0845	.00 0015	.50	
05-27	1.13 0000	1.13 0000	.00	.00 0015	.00 0015	.00	
05-28	1.15 1545	1.13 0000	.02	.01 1300	.00 0015	.02	
05-29	1.15 0000	1.15 0000	.00	.00 0015	.00 0015	.00	
05-30	1.15 0000	1.15 0000	.00	.00 0015	.00 0015	.00	
05-31	1.16 2100	1.15 0000	.01	.01 2100	.00 0015	.01	
06-01	1.17 0515	1.16 0000	.01	.01 0515	.00 0015	.01	
06-02	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-03	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-04	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-05	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-06	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-07	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-08	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-09	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-10	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-11	1.17 0000	1.17 0000	.00	.00 0015	.00 0015	.00	
06-12	1.22 1800	1.17 0000	.05	.02 1500	.00 0015	.05	
06-13	1.22 0000	1.22 0000	.00	.00 0015	.00 0015	.00	
06-14	1.22 0000	1.22 0000	.00	.00 0015	.00 0015	.00	
06-15	1.30 1645	1.22 0000	.08	.02 0845	.00 0015	.08	
06-16	1.30 0000	1.30 0000	.00	.00 0015	.00 0015	.00	
06-17	1.30 0000	1.30 0000	.00	.00 0015	.00 0015	.00	
06-18	1.30 0000	1.30 0000	.00	.00 0015	.00 0015	.00	
06-19	1.30 0000	1.30 0000	.00	.00 0015	.00 0015	.00	
06-20	1.30 0000	1.30 0000	.00	.00 0015	.00 0015	.00	
06-21	1.31 1515	1.30 0000	.01	.01 1515	.00 0015	.01	
06-22	1.31 0000	1.31 0000	.00	.00 0015	.00 0015	.00	
06-23	1.31 0000	1.31 0000	.00	.00 0015	.00 0015	.00	

ITED ES I TMEN INTE - GE CAL SY - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:03 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1996 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	1.31 0000	1.31 0000	.00	.00 0015	.00 0015	.00	
06-25	1.31 0000	1.31 0000	.00	.00 0015	.00 0015	.00	
06-26	1.31 0000	1.31 0000	.00	.00 0015	.00 0015	.00	
06-27	1.31 0000	1.31 0000	.00	.00 0015	.00 0015	.00	
06-28	1.32 1445	1.31 0000	.01	.01 1445	.00 0015	.01	
06-29	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
06-30	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
07-01	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
07-02	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
07-03	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
07-04	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
07-05	1.32 0000	1.32 0000	.00	.00 0015	.00 0015	.00	
07-06	1.33 1830	1.32 0000	.01	.01 1830	.00 0015	.01	
07-07	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-08	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-09	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-10	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-11	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-12	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-13	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-14	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-15	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-16	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-17	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-18	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-19	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-20	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-21	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-22	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-23	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-24	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-25	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-26	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-27	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-28	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-29	1.33 0000	1.33 0000	.00	.00 0015	.00 0015	.00	
07-30	1.40 1200	1.33 0000	.07	.07 1200	.00 0015	.07	
07-31	1.40 0000	1.40 0000	.00	.00 0015	.00 0015	.00	
08-01	1.40 0000	1.40 0000	.00	.00 0015	.00 0015	.00	
08-02	1.48 2000	1.40 0000	.08	.07 1845	.00 0015	.08	
08-03	1.48 0000	1.48 0000	.00	.00 0015	.00 0015	.00	
08-04	1.48 0000	1.48 0000	.00	.00 0015	.00 0015	.00	

ITED ES I MEN INTE - GE CAL EY - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:03 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1996 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	1.48 0000	1.48 0000	.00	.00 0015	.00 0015	.00	
08-06	1.48 0000	1.48 0000	.00	.00 0015	.00 0015	.00	
08-07	1.56 1700	1.48 0000	.08	.02 1530	.00 0015	.08	
08-08	1.56 0000	1.56 0000	.00	.00 0015	.00 0015	.00	
08-09	1.56 0000	1.56 0000	.00	.00 0015	.00 0015	.00	
08-10	1.56 0000	1.56 0000	.00	.00 0015	.00 0015	.00	
08-11	1.56 0000	1.56 0000	.00	.00 0015	.00 0015	.00	
08-12	1.56 0000	1.56 0000	.00	.00 0015	.00 0015	.00	
08-13	1.56 0000	1.56 0000	.00	.00 0015	.00 0015	.00	
08-14	1.57 2130	1.56 0000	.01	.01 2130	.00 0015	.01	
08-15	1.58 2145	1.57 0000	.01	.01 2145	.00 0015	.01	
08-16	1.59 0045	1.58 0000	.01	.01 0045	.00 0015	.01	
08-17	1.59 0000	1.59 0000	.00	.00 0015	.00 0015	.00	
08-18	1.59 0000	1.59 0000	.00	.00 0015	.00 0015	.00	
08-19	1.59 0000	1.59 0000	.00	.00 0015	.00 0015	.00	
08-20	1.59 0000	1.59 0000	.00	.00 0015	.00 0015	.00	
08-21	1.62 1830	1.59 0000	.03	.02 1815	.00 0015	.03	
08-22	1.62 0000	1.62 0000	.00	.00 0015	.00 0015	.00	
08-23	1.79 1815	1.62 0000	.17	.05 1745	.00 0015	.17	
08-24	1.79 0000	1.79 0000	.00	.00 0015	.00 0015	.00	
08-25	1.79 0000	1.79 0000	.00	.00 0015	.00 0015	.00	
08-26	1.79 0000	1.79 0000	.00	.00 0015	.00 0015	.00	
08-27	1.84 1515	1.79 0000	.05	.03 1445	.00 0015	.05	
08-28	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
08-29	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
08-30	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
08-31	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
09-01	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
09-02	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
09-03	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
09-04	1.84 0000	1.84 0000	.00	.00 0015	.00 0015	.00	
09-05	2.11 1945	1.84 0000	.27	.18 1930	.00 0015	.27	
09-06	2.25 2345	2.11 0000	.14	.04 1615	.00 0015	.14	
09-07	2.25 0000	2.25 0000	.00	.00 0015	.00 0015	.00	
09-08	2.25 0000	2.25 0000	.00	.00 0015	.00 0015	.00	
09-09	2.25 0000	2.25 0000	.00	.00 0015	.00 0015	.00	
09-10	2.25 0000	2.25 0000	.00	.00 0015	.00 0015	.00	
09-11	2.96 2300	2.25 0000	.71	.27 1915	.00 0015	.71	
09-12	2.97 0445	2.96 0000	.01	.01 0445	.00 0015	.01	
09-13	2.99 1700	2.97 0000	.02	.01 1430	.00 0015	.02	
09-14	3.01 1645	2.99 0000	.02	.01 0815	.00 0015	.02	
09-15	3.01 0000	3.01 0000	.00	.00 0015	.00 0015	.00	

ITED ES I MEN INTE - GE CAL EY - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:03 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1996 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	3.01 0000	3.01 0000	.00	.00 0015	.00 0015	.00	
09-17	3.45 2100	3.01 0000	.44	.06 1745	.00 0015	.44	
09-18	3.75 2315	3.45 0000	.30	.12 2100	.00 0015	.30	
09-19	3.76 0130	3.75 0000	.01	.01 0130	.00 0015	.01	
09-20	3.76 0000	3.76 0000	.00	.00 0015	.00 0015	.00	
09-21	3.76 0000	3.76 0000	.00	.00 0015	.00 0015	.00	
09-22	3.76 0000	3.76 0000	.00	.00 0015	.00 0015	.00	
09-23	3.76 0000	3.76 0000	.00	.00 0015	.00 0015	.00	
09-24	3.76 0000	3.76 0000	.00	.00 0015	.00 0015	.00	
09-25	3.76 0000	3.76 0000	.00	.00 0015	.00 0015	.00	
09-26	3.93 2345	3.76 0000	.17	.04 1145	.00 0015	.17	
09-27	4.22 1315	3.93 0000	.29	.08 1200	.00 0015	.29	
09-28	4.22 0000	4.22 0000	.00	.00 0015	.00 0015	.00	
09-29	4.22 0000	4.22 0000	.00	.00 0015	.00 0015	.00	
09-30	4.22 0000	4.22 0000	.00	.00 0015	.00 0015	.00	
PERIOD	4.22	.10		.27	.00		

ITED ES I MEN INTE - GE CAL EY - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:04 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1997 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	.40 0000	.40 0000	.00	.00 0015	.00 0015	.00	
04-02	.43 1815	.00 2315	.43	.43 2330	.00 0015	.46	
04-03	.61 1030	.43 0000	.18	.04 0900	.00 0015	.18	
04-04	.90 1830	.61 0000	.29	.08 1200	.00 0015	.29	P
04-05	.92 1630	.90 0200	.02	.01 1500	.00 0200	.02	P
04-06	1.02 1830	.92 0000	.10	.01 1230	.00 0015	.10	
04-07	1.04 1230	1.02 0000	.02	.01 1115	.00 0015	.02	
04-08	1.04 0000	1.04 0000	.00	.00 0015	.00 0015	.00	
04-09	1.04 0000	1.04 0000	.00	.00 0015	.00 0015	.00	
04-10	1.04 0000	1.04 0000	.00	.00 0015	.00 0015	.00	
04-11	1.04 0000	1.04 0000	.00	.00 0015	.00 0015	.00	
04-12	1.04 0000	1.04 0000	.00	.00 0015	.00 0015	.00	
04-13	1.06 1200	1.04 0000	.02	.01 0945	.00 0015	.02	
04-14	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-15	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-16	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-17	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-18	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-19	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-20	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-21	1.06 0000	1.06 0000	.00	.00 0015	.00 0015	.00	
04-22	1.09 2300	1.06 0000	.03	.01 2200	.00 0015	.03	
04-23	1.10 2315	1.09 0000	.01	.01 2315	.00 0015	.01	
04-24	1.79 2300	1.10 0000	.69	.04 1530	.00 0015	.69	
04-25	2.47 1445	1.79 0000	.68	.06 1045	.00 0015	.68	
04-26	2.56 1045	2.47 0000	.09	.02 0930	.00 0015	.09	
04-27	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
04-28	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
04-29	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
04-30	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-01	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-02	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-03	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-04	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-05	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-06	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-07	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-08	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-09	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-10	2.56 0000	2.56 0000	.00	.00 0015	.00 0015	.00	
05-11	2.58 2100	2.56 0000	.02	.01 2015	.00 0015	.02	
05-12	2.61 0015	2.58 0000	.03	.03 0015	.00 0030	.03	

ITED ES D MENI INTEI - GE CAL Y - : RES ES D: ON STAT DI:

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:04 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1997 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	2.63 2130	2.61 0000	.02	.01 2130	.00 0015	.02	
05-14	2.68 2100	2.63 0000	.05	.02 1815	.00 0015	.05	
05-15	2.68 0000	2.68 0000	.00	.00 0015	.00 0015	.00	
05-16	2.68 0000	2.60 0145	.08	.08 0200	.00 0015	.08	
05-17	2.70 1700	2.68 0000	.02	.02 1700	.00 0015	.02	
05-18	2.71 1845	2.70 0000	.01	.01 1845	.00 0015	.01	
05-19	2.71 0000	2.71 0000	.00	.00 0015	.00 0015	.00	
05-20	2.71 0000	2.71 0000	.00	.00 0015	.00 0015	.00	
05-21	2.86 2315	2.71 0000	.15	.06 2245	.00 0015	.15	
05-22	3.67 2300	2.86 0000	.81	.21 1445	.00 0015	.81	
05-23	3.67 0000	3.67 0000	.00	.00 0015	.00 0015	.00	
05-24	3.67 0000	3.67 0000	.00	.00 0015	.00 0015	.00	
05-25	3.67 0000	3.67 0000	.00	.00 0015	.00 0015	.00	
05-26	3.69 0415	3.67 0000	.02	.01 0415	.00 0015	.02	
05-27	3.69 0000	3.69 0000	.00	.00 0015	.00 0015	.00	
05-28	3.69 0000	3.69 0000	.00	.00 0015	.00 0015	.00	
05-29	3.69 0000	3.69 0000	.00	.00 0015	.00 0015	.00	
05-30	3.69 0000	3.69 0000	.00	.00 0015	.00 0015	.00	
05-31	3.69 0000	3.69 0000	.00	.00 0015	.00 0015	.00	
06-01	3.71 1430	3.69 0000	.02	.01 1430	.00 0015	.02	
06-02	3.81 1530	3.71 0000	.10	.04 1500	.00 0015	.10	
06-03	3.81 0000	3.81 0000	.00	.00 0015	.00 0015	.00	
06-04	3.81 0000	3.81 0000	.00	.00 0015	.00 0015	.00	
06-05	3.81 0000	3.81 0000	.00	.00 0015	.00 0015	.00	
06-06	5.12 2400	3.81 0000	1.31	.18 1800	.00 0015	1.31	
06-07	5.14 0645	5.12 0000	.02	.01 0030	.00 0015	.02	
06-08	5.14 0000	5.14 0000	.00	.00 0015	.00 0015	.00	
06-09	5.16 2015	5.14 0000	.02	.01 2015	.00 0015	.02	
06-10	5.55 1445	5.16 0000	.39	.24 1415	.00 0015	.39	
06-11	5.55 0000	5.55 0000	.00	.00 0015	.00 0015	.00	
06-12	5.72 2345	5.55 0000	.17	.10 1415	.00 0015	.17	
06-13	5.85 1900	5.72 0000	.13	.13 1900	.00 0015	.13	
06-14	6.06 1715	5.85 0000	.21	.13 1715	.00 0015	.21	
06-15	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-16	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-17	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-18	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-19	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-20	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-21	6.14 2345	6.06 0000	.08	.06 2245	.00 0015	.08	
06-22	6.14 0000	6.14 0000	.00	.00 0015	.00 0015	.00	
06-23	6.26 2315	6.14 0000	.12	.03 1700	.00 0015	.12	

ITED ES D MENT NTEI - GE CAL Y - RES ES D ON STAT DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:04 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1997 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	6.60 1500	6.26 0000	.34	.31 1445	.00 0015	.34	
06-25	6.62 1400	6.60 0000	.02	.02 1400	.00 0015	.02	
06-26	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
06-27	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
06-28	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
06-29	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
06-30	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-01	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-02	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-03	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-04	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-05	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-06	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-07	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-08	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-09	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-10	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-11	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-12	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-13	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-14	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-15	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-16	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-17	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-18	6.62 0000	6.62 0000	.00	.00 0015	.00 0015	.00	
07-19	7.60 1800	6.62 0000	.98	.59 1745	.00 0015	.98	
07-20	7.60 0000	7.60 0000	.00	.00 0015	.00 0015	.00	
07-21	7.60 0000	7.60 0000	.00	.00 0015	.00 0015	.00	
07-22	7.60 0000	7.60 0000	.00	.00 0015	.00 0015	.00	
07-23	7.74 1730	~~.00~~ 0315	7.74	7.60 0530	.00 0015	~~7.74~~	
07-24	7.76 2100	7.74 0000	.02	.02 2100	.00 0015	.02	
07-25	7.76 0000	7.76 0000	.00	.00 0015	.00 0015	.00	
07-26	7.76 0000	7.76 0000	.00	.00 0015	.00 0015	.00	
07-27	8.86 2400	7.76 0000	1.10	.43 1430	.00 0015	1.10	
07-28	9.17 2245	8.86 0000	.31	.12 2045	.00 0015	.31	
07-29	9.26 2400	9.17 0000	.09	.05 2345	.00 0015	.09	
07-30	9.67 2030	9.26 0000	.41	.17 1930	.00 0145	.41	
07-31	10.24 2400	~~.00~~ 1115	10.24	10.10 1815	.00 0015	~~10.30~~	
08-01	10.64 2400	10.24 0000	.40	.22 2330	.00 0015	.40	
08-02	10.72 1530	10.64 0000	.08	.02 0045	.00 0015	.08	
08-03	10.72 0000	10.72 0000	.00	.00 0015	.00 0015	.00	
08-04	11.16 2400	10.72 0000	.44	.09 1815	.00 0015	.44	

---ITED --- -ES D------MENT -- INTE - GE CAL Y - R RES ES D: ON STAT DI:

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:04 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1997 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	11.51 2130	11.16 0000	.35	.17 2100	.00 0030	.35	
08-06	11.92 1415	11.51 0000	.41	.03 0645	.00 0015	.41	
08-07	11.92 0000	11.92 0000	.00	.00 0015	.00 0015	.00	
08-08	11.92 0000	11.92 0000	.00	.00 0015	.00 0015	.00	
08-09	12.00 1945	11.92 0000	.08	.03 1900	.00 0015	.08	
08-10	12.29 2015	12.00 0000	.29	.14 1400	.00 0015	.29	
08-11	12.44 1730	12.29 0000	.15	.11 1700	.00 0015	.15	
08-12	12.74 2045	12.44 0000	.30	.21 1700	.00 0015	.30	
08-13	12.75 0215	12.74 0000	.01	.01 0215	.00 0015	.01	
08-14	12.75 0000	12.75 0000	.00	.00 0015	.00 0015	.00	
08-15	12.75 0000	12.75 0000	.00	.00 0015	.00 0015	.00	
08-16	12.75 0000	12.75 0000	.00	.00 0015	.00 0015	.00	
08-17	12.82 2345	12.75 0000	.07	.03 2245	.00 0015	.07	
08-18	12.84 1600	12.82 0000	.02	.01 0145	.00 0015	.02	
08-19	12.88 1645	12.84 0000	.04	.02 1615	.00 0015	.04	
08-20	12.88 0000	12.88 0000	.00	.00 0015	.00 0015	.00	
08-21	12.88 0000	12.88 0000	.00	.00 0015	.00 0015	.00	
08-22	12.88 0000	12.88 0000	.00	.00 0015	.00 0015	.00	
08-23	12.88 0000	12.88 0000	.00	.00 0015	.00 0015	.00	
08-24	13.05 2100	12.88 0000	.17	.14 1845	.00 0015	.17	
08-25	13.05 0000	13.05 0000	.00	.00 0015	.00 0015	.00	
08-26	13.48 2400	13.05 0000	.43	.17 1630	.00 0015	.43	
08-27	13.48 0000	13.48 0000	.00	.00 0015	.00 0015	.00	
08-28	13.52 2200	13.48 0000	.04	.01 0215	.00 0015	.04	
08-29	13.53 0630	13.52 0000	.01	.01 0630	.00 0015	.01	
08-30	13.53 0000	13.53 0000	.00	.00 0015	.00 0015	.00	
08-31	13.55 2145	13.53 0000	.02	.01 1945	.00 0015	.02	
09-01	13.57 1545	13.55 0000	.02	.01 0345	.00 0015	.02	
09-02	13.58 1045	13.57 0000	.01	.01 1045	.00 0015	.01	
09-03	13.59 1445	13.58 0000	.01	.01 1445	.00 0015	.01	
09-04	13.59 0000	13.59 0000	.00	.00 0015	.00 0015	.00	
09-05	13.60 1000	13.59 0000	.01	.01 1000	.00 0015	.01	
09-06	13.60 0000	13.60 0000	.00	.00 0015	.00 0015	.00	
09-07	13.61 1245	13.60 0000	.01	.01 1245	.00 0015	.01	P
09-08	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-09	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-10	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-11	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-12	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-13	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-14	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-15	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	

ITED ES D MENT NTEI - GE CAL Y - : RES ES D: ON STAT DIS

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:04 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1997 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-17	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-18	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-19	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-20	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-21	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-22	13.61 0000	13.61 0000	.00	.00 0015	.00 0015	.00	
09-23	13.62 1945	13.61 0000	.01	.01 1945	.00 0015	.01	
09-24	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
09-25	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
09-26	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
09-27	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
09-28	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
09-29	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
09-30	13.62 0000	13.62 0000	.00	.00 0015	.00 0015	.00	
PERIOD	13.62	.00		10.10	.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY

ITED ES I MEN INTE - GE CAL EY - R RE ES D ON STA DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:05 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1998 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	.30 0000	.30 0000	.00	.00 0015	.00 0015	.00	
04-02	.31 2330	.30 0000	.01	.01 2330	.00 0015	.01	
04-03	.70 1145	.31 0000	.39	.04 1000	.00 0030	.39	
04-04	.70 0000	.70 0000	.00	.00 0015	.00 0015	.00	
04-05	.70 0000	.70 0000	.00	.00 0015	.00 0015	.00	
04-06	.77 1830	.70 0000	.07	.02 1730	.00 0015	.07	
04-07	.80 2245	.77 0000	.03	.01 2215	.00 0015	.03	
04-08	.94 2330	.80 0000	.14	.01 0800	.00 0015	.14	
04-09	1.02 1030	.94 0000	.08	.02 0930	.00 0015	.08	
04-10	1.02 0000	1.02 0000	.00	.00 0015	.00 0015	.00	
04-11	1.02 0000	1.02 0000	.00	.00 0015	.00 0015	.00	
04-12	1.02 0000	1.02 0000	.00	.00 0015	.00 0015	.00	
04-13	1.02 0000	1.02 0000	.00	.00 0015	.00 0015	.00	
04-14	1.22 2330	1.02 0000	.20	.03 1930	.00 0015	.20	
04-15	1.46 1715	1.22 0000	.24	.05 1345	.00 0015	.24	
04-16	1.84 1900	1.46 0000	.38	.02 1515	.00 0015	.38	
04-17	1.97 2130	1.84 0000	.13	.02 1145	.00 0015	.13	
04-18	2.37 1400	1.97 0000	.40	.10 1245	.00 0015	.40	
04-19	2.39 2245	2.37 0000	.02	.01 2215	.00 0015	.02	
04-20	2.49 1800	2.39 0000	.10	.01 0215	.00 0015	.10	
04-21	2.49 0000	2.49 0000	.00	.00 0015	.00 0015	.00	
04-22	2.49 0000	2.49 0000	.00	.00 0015	.00 0015	.00	
04-23	2.49 0000	2.49 0000	.00	.00 0015	.00 0015	.00	
04-24	2.49 0000	2.49 0000	.00	.00 0015	.00 0015	.00	
04-25	2.53 2400	2.49 0000	.04	.01 0445	.00 0015	.04	
04-26	3.25 1645	2.53 0000	.72	.10 1030	.00 0345	.72	
04-27	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
04-28	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
04-29	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
04-30	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
05-01	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
05-02	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
05-03	3.25 0000	3.25 0000	.00	.00 0015	.00 0015	.00	
05-04	3.28 2400	3.25 0000	.03	.02 2345	.00 0015	.03	
05-05	4.62 2400	3.28 0000	1.34	.35 2045	.00 0030	1.34	
05-06	5.10 2400	4.62 0000	.48	.06 1415	.00 0045	.48	
05-07	5.41 0630	5.10 0000	.31	.06 0100	.00 0245	.31	
05-08	5.57 2315	5.41 0000	.16	.02 1915	.00 0015	.16	
05-09	5.57 0000	5.57 0000	.00	.00 0015	.00 0015	.00	
05-10	5.57 0000	5.57 0000	.00	.00 0015	.00 0015	.00	
05-11	5.57 0000	5.57 0000	.00	.00 0015	.00 0015	.00	
05-12	5.57 0000	5.57 0000	.00	.00 0015	.00 0015	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:05 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1998 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	------(00045) RAINFALL READING-------			----------SUM RAINFALL, INCHES----------			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	5.57 0000	5.57 0000	.00	.00 0015	.00 0015	.00	
05-14	5.57 0000	5.57 0000	.00	.00 0015	.00 0015	.00	
05-15	5.59 0215	5.57 0000	.02	.01 0215	.00 0015	.02	
05-16	5.59 0000	5.59 0000	.00	.00 0015	.00 0015	.00	
05-17	5.59 0000	5.59 0000	.00	.00 0015	.00 0015	.00	
05-18	5.59 0000	5.59 0000	.00	.00 0015	.00 0015	.00	
05-19	5.59 0000	5.59 0000	.00	.00 0015	.00 0015	.00	
05-20	5.59 0000	5.59 0000	.00	.00 0015	.00 0015	.00	
05-21	5.59 0000	5.59 0000	.00	.00 0015	.00 0015	.00	
05-22	5.60 1415	5.59 0000	.01	.01 1415	.00 0015	.01	
05-23	5.76 0215	5.60 0000	.16	.11 0130	.00 0015	.16	
05-24	6.04 2230	5.76 0000	.28	.06 1400	.00 0015	.28	
05-25	6.06 2245	6.04 0000	.02	.01 1115	.00 0015	.02	
05-26	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
05-27	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
05-28	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
05-29	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
05-30	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
05-31	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-01	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-02	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-03	6.06 0000	6.06 0000	.00	.00 0015	.00 0015	.00	
06-04	6.17 2330	6.06 0000	.11	.05 2200	.00 0015	.11	
06-05	6.37 1545	6.17 0000	.20	.03 0845	.00 0015	.20	
06-06	6.37 0000	6.37 0000	.00	.00 0015	.00 0015	.00	
06-07	6.37 0000	6.37 0000	.00	.00 0015	.00 0015	.00	
06-08	6.84 2100	6.37 0000	.47	.16 1930	.00 0015	.47	
06-09	6.85 0100	1.86 1345	4.99	.01 0100	.00 0015	.01	
06-10	1.86 0000	1.86 0000	.00	.00 0015	.00 0015	.00	
06-11	1.86 0000	1.86 0000	.00	.00 0015	.00 0015	.00	
06-12	1.86 0000	1.86 0000	.00	.00 0015	.00 0015	.00	
06-13	1.86 0000	1.86 0000	.00	.00 0015	.00 0015	.00	
06-14	2.15 2115	1.86 0000	.29	.18 1600	.00 0015	.29	
06-15	2.35 0515	2.15 0000	.20	.04 0145	.00 0015	.20	
06-16	2.35 0000	2.35 0000	.00	.00 0015	.00 0015	.00	
06-17	2.35 0000	2.35 0000	.00	.00 0015	.00 0015	.00	
06-18	2.35 0000	2.35 0000	.00	.00 0015	.00 0015	.00	
06-19	2.35 0000	2.35 0000	.00	.00 0015	.00 0015	.00	
06-20	2.35 0000	2.35 0000	.00	.00 0015	.00 0015	.00	
06-21	2.54 2400	2.35 0000	.19	.08 2345	.00 0015	.19	
06-22	2.55 0300	2.54 0000	.01	.01 0300	.00 0015	.01	
06-23	2.55 0000	2.55 0000	.00	.00 0015	.00 0015	.00	

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY - WATER RESOURCES DIVISION - STATE DISTRICT

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:05 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1998 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	6.37 0000	6.37 0000	.00	.00 0015	.00 0015	.00	
08-06	6.37 0000	6.37 0000	.00	.00 0015	.00 0015	.00	
08-07	6.37 0000	6.37 0000	.00	.00 0015	.00 0015	.00	
08-08	6.37 0000	6.37 0000	.00	.00 0015	.00 0015	.00	
08-09	6.38 2100	6.37 0000	.01	.01 2100	.00 0015	.01	
08-10	6.38 0000	6.38 0000	.00	.00 0015	.00 0015	.00	
08-11	6.38 0000	6.38 0000	.00	.00 0015	.00 0015	.00	
08-12	6.38 0000	6.38 0000	.00	.00 0015	.00 0015	.00	
08-13	6.38 0000	6.38 0000	.00	.00 0015	.00 0015	.00	
08-14	6.38 0000	6.38 0000	.00	.00 0015	.00 0015	.00	
08-15	6.39 1745	6.38 0000	.01	.01 1745	.00 0015	.01	
08-16	6.40 1500	6.39 0000	.01	.01 1500	.00 0015	.01	
08-17	6.40 0000	6.40 0000	.00	.00 0015	.00 0015	.00	
08-18	6.55 2045	6.40 0000	.15	.05 2030	.00 0015	.15	
08-19	6.59 2400	6.55 0000	.04	.03 2400	.00 0015	.04	
08-20	6.62 1630	6.59 0000	.03	.01 0045	.00 0030	.03	
08-21	6.75 1745	6.62 0000	.13	.06 1700	.00 0015	.13	
08-22	6.75 0000	6.75 0000	.00	.00 0015	.00 0015	.00	
08-23	6.75 0000	6.75 0000	.00	.00 0015	.00 0015	.00	
08-24	6.76 1615	6.75 0000	.01	.01 1615	.00 0015	.01	
08-25	6.81 1645	6.76 0000	.05	.02 1630	.00 0015	.05	
08-26	6.81 0000	6.81 0000	.00	.00 0015	.00 0015	.00	
08-27	6.81 0000	6.81 0000	.00	.00 0015	.00 0015	.00	
08-28	6.81 0000	6.81 0000	.00	.00 0015	.00 0015	.00	
08-29	6.81 0000	6.81 0000	.00	.00 0015	.00 0015	.00	
08-30	6.81 0000	6.81 0000	.00	.00 0015	.00 0015	.00	
08-31	6.81 0000	6.81 0000	.00	.00 0015	.00 0015	.00	
09-01	6.87 0730	6.81 0000	.06	.02 0630	.00 0015	.06	
09-02	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-03	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-04	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-05	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-06	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-07	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-08	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-09	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-10	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-11	6.87 0000	6.87 0000	.00	.00 0015	.00 0015	.00	
09-12	7.44 1730	6.87 0000	.57	.45 1530	.00 0015	.57	
09-13	7.44 0000	7.44 0000	.00	.00 0015	.00 0015	.00	
09-14	7.44 0000	7.44 0000	.00	.00 0015	.00 0015	.00	
09-15	7.44 0000	7.44 0000	.00	.00 0015	.00 0015	.00	

UNITED STATES DEPARTMENT OF INTE[illegible] - GE[illegible]CAL [illegible]Y - [illegible] RES[illegible]ES D[illegible] ON STAT DI[illegible]

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:05 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1998 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	------(00045) RAINFALL READING-------			----------SUM RAINFALL, INCHES----------			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	7.44 0000	7.44 0000	.00	.00 0015	.00 0015	.00	
09-17	7.44 0000	7.44 0000	.00	.00 0015	.00 0015	.00	
09-18	7.44 0000	7.44 0000	.00	.00 0015	.00 0015	.00	
09-19	7.51 2315	7.44 0000	.07	.06 2315	.00 0015	.07	
09-20	7.51 0000	7.51 0000	.00	.00 0015	.00 0015	.00	
09-21	7.52 1630	7.51 0000	.01	.01 1630	.00 0015	.01	
09-22	7.52 0000	7.52 0000	.00	.00 0015	.00 0015	.00	
09-23	7.61 2345	7.52 0000	.09	.05 2045	.00 0015	.09	
09-24	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
09-25	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
09-26	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
09-27	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
09-28	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
09-29	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
09-30	7.61 0000	7.61 0000	.00	.00 0015	.00 0015	.00	
PERIOD	7.61	.30		.45	.00		

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:06 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1999 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-02	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-03	.24 1715	.10 0000	.14	.01 1400	.00 0015	.14	
04-04	.44 1515	.24 0000	.20	.02 1330	.00 0015	.20	
04-05	.48 1000	.44 0000	.04	.02 0930	.00 0015	.04	
04-06	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-07	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-08	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-09	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-10	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-11	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-12	.48 0000	.48 0000	.00	.00 0015	.00 0015	.00	
04-13	1.14 2400	.48 0000	.66	.09 2300	.00 0015	.66	
04-14	1.77 1215	1.14 0000	.63	.09 0400	.00 0130	.63	
04-15	1.93 1600	1.77 0000	.16	.05 1345	.00 0015	.16	
04-16	1.94 1415	1.93 0000	.01	.01 1415	.00 0015	.01	
04-17	2.10 1300	1.94 0000	.16	.05 1200	.00 0015	.16	
04-18	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
04-19	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
04-20	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
04-21	2.26 2400	2.10 0000	.16	.02 2000	.00 0015	.16	
04-22	3.15 2000	2.26 0000	.89	.05 1400	.00 0145	.89	
04-23	3.45 1930	3.15 0000	.30	.02 1615	.00 0030	.30	
04-24	3.57 1345	3.45 0000	.12	.02 1200	.00 0015	.12	
04-25	3.64 1800	3.57 0000	.07	.02 1800	.00 0015	.07	
04-26	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
04-27	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
04-28	3.84 2400	3.64 0000	.20	.06 2315	.00 0015	.20	
04-29	4.60 2315	3.84 0000	.76	.08 0045	.00 0300	.76	
04-30	5.48 1715	4.60 0000	.88	.04 1100	.00 0015	.88	
05-01	5.82 1930	5.48 0000	.34	.05 1515	.00 0015	.34	
05-02	5.85 1345	5.82 0000	.03	.01 0645	.00 0015	.03	
05-03	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-04	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-05	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-06	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-07	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-08	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-09	5.85 0000	5.85 0000	.00	.00 0015	.00 0015	.00	
05-10	5.88 0630	5.85 0000	.03	.01 0530	.00 0015	.03	
05-11	5.88 0000	5.88 0000	.00	.00 0015	.00 0015	.00	
05-12	5.88 0000	5.88 0000	.00	.00 0015	.00 0015	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:06 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1999 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	5.88 0000	5.88 0000	.00	.00 0015	.00 0015	.00	
05-14	5.88 0000	.00 1630	5.88	.00 0015	.00 0015	.00	
05-15	.00 0000	.00 0000	.00	.00 0015	.00 0015	.00	
05-16	.12 2145	.00 0000	.12	.02 1430	.00 0015	.12	
05-17	.12 0000	.12 0000	.00	.00 0015	.00 0015	.00	
05-18	.12 0000	.12 0000	.00	.00 0015	.00 0015	.00	
05-19	.12 0000	.12 0000	.00	.00 0015	.00 0015	.00	
05-20	.12 0000	.12 0000	.00	.00 0015	.00 0015	.00	
05-21	.12 0000	.12 0000	.00	.00 0015	.00 0015	.00	
05-22	.16 2345	.12 0000	.04	.02 2330	.00 0015	.04	
05-23	.17 0100	.16 0000	.01	.01 0100	.00 0015	.01	
05-24	.18 1715	.17 0000	.01	.01 1715	.00 0015	.01	
05-25	1.24 1730	.18 0000	1.06	.08 0630	.00 0015	1.06	
05-26	1.24 0000	1.24 0000	.00	.00 0015	.00 0015	.00	
05-27	1.37 1845	1.24 0000	.13	.03 1815	.00 0015	.13	
05-28	1.38 0600	1.37 0000	.01	.01 0600	.00 0015	.01	
05-29	1.57 1530	1.38 0000	.19	.16 1445	.00 0015	.19	
05-30	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
05-31	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-01	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-02	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-03	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-04	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-05	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-06	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-07	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-08	1.57 0000	1.57 0000	.00	.00 0015	.00 0015	.00	
06-09	1.97 2300	1.57 0000	.40	.07 2115	.00 0015	.40	
06-10	2.30 2030	1.97 0000	.33	.12 1615	.00 0015	.33	
06-11	2.54 2300	2.30 0000	.24	.13 1430	.00 0015	.24	
06-12	2.54 0000	2.54 0000	.00	.00 0015	.00 0015	.00	
06-13	2.54 0000	2.54 0000	.00	.00 0015	.00 0015	.00	
06-14	2.56 1545	2.54 0000	.02	.02 1545	.00 0015	.02	
06-15	2.65 1315	2.56 0000	.09	.02 0930	.00 0015	.09	
06-16	2.66 1645	2.65 0000	.01	.01 1645	.00 0015	.01	
06-17	2.67 1415	2.66 0000	.01	.01 1415	.00 0015	.01	
06-18	2.67 0000	2.67 0000	.00	.00 0015	.00 0015	.00	
06-19	2.67 0000	2.67 0000	.00	.00 0015	.00 0015	.00	
06-20	2.67 0000	2.67 0000	.00	.00 0015	.00 0015	.00	
06-21	2.67 0000	2.67 0000	.00	.00 0015	.00 0015	.00	
06-22	2.69 1415	2.67 0000	.02	.01 1400	.00 0015	.02	
06-23	2.69 0000	2.69 0000	.00	.00 0015	.00 0015	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)
DATE PROCESSED: 11-27-2000 @ 17:06 BY gboneill

06709000
PLUM CREEK NEAR SEDALIA, CO.
(00045) PRECIPITATION STORE STATISTIC(S) 00006
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1999

TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	2.69 0000	2.69 0000	.00	.00 0015	.00 0015	.00	
06-25	2.80 1400	2.69 0000	.11	.11 1400	.00 0015	.11	
06-26	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
06-27	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
06-28	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
06-29	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
06-30	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
07-01	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
07-02	2.80 0000	2.80 0000	.00	.00 0015	.00 0015	.00	
07-03	2.81 1545	2.80 0000	.01	.01 1545	.00 0015	.01	
07-04	2.81 0000	2.81 0000	.00	.00 0015	.00 0015	.00	
07-05	2.81 0000	2.81 0000	.00	.00 0015	.00 0015	.00	
07-06	2.81 0000	2.81 0000	.00	.00 0015	.00 0015	.00	
07-07	2.81 0000	2.81 0000	.00	.00 0015	.00 0015	.00	
07-08	3.02 1415	2.81 0000	.21	.08 1300	.00 0015	.21	
07-09	3.02 0000	3.02 0000	.00	.00 0015	.00 0015	.00	
07-10	3.02 0000	3.02 0000	.00	.00 0015	.00 0015	.00	
07-11	3.06 2400	3.02 0000	.04	.02 2330	.00 0015	.04	
07-12	3.06 0000	3.06 0000	.00	.00 0015	.00 0015	.00	
07-13	3.06 0000	3.06 0000	.00	.00 0015	.00 0015	.00	
07-14	3.08 1230	3.06 0000	.02	.02 1230	.00 0015	.02	
07-15	3.08 0000	3.08 0000	.00	.00 0015	.00 0015	.00	
07-16	3.08 0000	3.08 0000	.00	.00 0015	.00 0015	.00	
07-17	3.08 0000	3.08 0000	.00	.00 0015	.00 0015	.00	
07-18	3.12 1630	3.08 0000	.04	.02 1545	.00 0015	.04	
07-19	3.24 1800	3.12 0000	.12	.10 1800	.00 0015	.12	
07-20	3.24 0000	3.24 0000	.00	.00 0015	.00 0015	.00	
07-21	3.24 0000	3.24 0000	.00	.00 0015	.00 0015	.00	
07-22	3.24 0000	3.24 0000	.00	.00 0015	.00 0015	.00	
07-23	3.24 0000	3.24 0000	.00	.00 0015	.00 0015	.00	
07-24	3.31 1830	3.24 0000	.07	.05 1830	.00 0015	.07	
07-25	3.33 1715	3.31 0000	.02	.01 1700	.00 0015	.02	
07-26	3.33 0000	3.33 0000	.00	.00 0015	.00 0015	.00	
07-27	3.33 0000	3.33 0000	.00	.00 0015	.00 0015	.00	
07-28	3.35 1945	3.33 0000	.02	.02 1945	.00 0015	.02	
07-29	3.35 0000	3.35 0000	.00	.00 0015	.00 0015	.00	
07-30	3.44 2300	3.35 0000	.09	.03 2215	.00 0015	.09	
07-31	3.80 2015	3.44 0000	.36	.17 1330	.00 0015	.36	
08-01	4.17 0700	3.80 0000	.37	.07 0330	.00 0015	.37	
08-02	4.17 0000	4.17 0000	.00	.00 0015	.00 0015	.00	
08-03	4.17 0000	4.17 0000	.00	.00 0015	.00 0015	.00	
08-04	6.25 2345	4.17 0000	2.08	.42 1830	.00 0015	2.08	

ITED ES I MENT INTE - GE CAL SY - R RE: ES D ON STA: DI.

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:06 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1999 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	6.31 1830	6.25 0000	.06	.01 0015	.00 0030	.06	
08-06	6.33 1700	6.31 0000	.02	.01 1630	.00 0015	.02	
08-07	6.77 2200	6.33 0000	.44	.32 1515	.00 0015	.44	
08-08	6.77 0000	6.77 0000	.00	.00 0015	.00 0015	.00	
08-09	6.78 2030	6.77 0000	.01	.01 2030	.00 0015	.01	
08-10	6.79 0030	6.78 0000	.01	.01 0030	.00 0015	.01	
08-11	6.79 0000	6.79 0000	.00	.00 0015	.00 0015	.00	
08-12	6.79 0000	6.79 0000	.00	.00 0015	.00 0015	.00	
08-13	6.79 0000	6.79 0000	.00	.00 0015	.00 0015	.00	
08-14	6.79 0000	6.79 0000	.00	.00 0015	.00 0015	.00	
08-15	6.79 0000	6.79 0000	.00	.00 0015	.00 0015	.00	
08-16	6.79 0000	6.79 0000	.00	.00 0015	.00 0015	.00	
08-17	6.82 1700	6.79 0000	.03	.01 1630	.00 0015	.03	
08-18	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-19	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-20	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-21	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-22	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-23	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-24	6.82 0000	6.82 0000	.00	.00 0015	.00 0015	.00	
08-25	6.85 1945	6.82 0000	.03	.01 1615	.00 0015	.03	
08-26	6.85 0000	6.85 0000	.00	.00 0015	.00 0015	.00	
08-27	6.98 2400	6.85 0000	.13	.08 2315	.00 0015	.13	
08-28	7.30 1330	6.98 0000	.32	.28 1330	.00 0045	.32	
08-29	7.34 1715	7.30 0000	.04	.03 1530	.00 0015	.04	
08-30	7.34 0000	7.34 0000	.00	.00 0015	.00 0015	.00	
08-31	7.42 2145	7.34 0000	.08	.04 1930	.00 0015	.08	
09-01	7.45 1630	7.42 0000	.03	.02 1630	.00 0015	.03	
09-02	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-03	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-04	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-05	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-06	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-07	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-08	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-09	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-10	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-11	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-12	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-13	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-14	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-15	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:06 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1999 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-17	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-18	7.45 0000	7.45 0000	.00	.00 0015	.00 0015	.00	
09-19	7.65 1715	7.45 0000	.20	.03 1500	.00 0015	.20	
09-20	7.66 1115	7.65 0000	.01	.01 1115	.00 0015	.01	
09-21	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-22	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-23	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-24	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-25	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-26	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-27	7.66 0000	7.66 0000	.00	.00 0015	.00 0015	.00	
09-28	7.93 1345	7.66 0000	.27	.03 1245	.00 0015	.27	
09-29	7.94 1015	7.93 0000	.01	.01 1015	.00 0015	.01	
09-30	7.94 0000	7.94 0000	.00	.00 0015	.00 0015	.00	
PERIOD	7.94	.00		.42	.00		

'ITED 'ES I 'MEN' INTE - GE 'CAL 3Y - R RE ES D 'ON STA' DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:07 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2000 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
04-01	.69 1245	.50 0000	.19	.02 1030	.00 0015	.19	
04-02	.78 1515	.00 1900	.78	.06 1345	.00 0015	.09	
04-03	.10 1315	.00 0000	.10	.05 1215	.00 0015	.14	P reset
04-04	.10 1030	.00 0300	.10	.10 1030	.00 0300	.10	P
04-05	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	P
04-06	.10 0300	.10 0300	.00	.00 0300	.00 0300	.00	P
04-07	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-08	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-09	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-10	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-11	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-12	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-13	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-14	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
04-15	.14 1530	.10 0000	.04	.01 1530	.00 0015	.04	
04-16	.16 0915	.14 0000	.02	.01 0900	.00 0015	.02	
04-17	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-18	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-19	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-20	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-21	.16 0000	.16 0000	.00	.00 0015	.00 0015	.00	
04-22	.17 1445	.16 0000	.01	.01 1445	.00 0015	.01	
04-23	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-24	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-25	.17 0000	.17 0000	.00	.00 0015	.00 0015	.00	
04-26	.17 0000	.00 1500	.17	.00 0015	.00 0015	.00	
04-27	.00 0000	.00 0000	.00	.00 0015	.00 0015	.00	
04-28	.00 0000	.00 0000	.00	.00 0015	.00 0015	.00	
04-29	.49 2400	.00 0000	.49	.08 2215	.00 0015	.49	
04-30	.85 1200	.00 1930	.85	.05 0045	.00 0330	.36	
05-01	.00 0000	.00 0000	.00	.00 0015	.00 0015	.00	
05-02	.10 1145	.00 0000	.10	.10 1145	.00 0015	.10	
05-03	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
05-04	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
05-05	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
05-06	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
05-07	.10 0000	.10 0000	.00	.00 0015	.00 0015	.00	
05-08	.66 2130	.10 0000	.56	.04 1845	.00 0015	.56	
05-09	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-10	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-11	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-12	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	

ITED ES I MEN INTE - GE CAL EY - R RE: ES D ON STA: DI

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:07 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2000 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
05-13	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-14	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-15	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-16	.66 0000	.66 0000	.00	.00 0015	.00 0015	.00	
05-17	.91 1700	.66 0000	.25	.03 1530	.00 0015	.25	
05-18	1.19 0915	.91 0000	.28	.02 0445	.00 0015	.28	
05-19	1.19 0000	1.19 0000	.00	.00 0015	.00 0015	.00	
05-20	1.19 0000	1.19 0000	.00	.00 0015	.00 0015	.00	
05-21	1.19 0000	1.19 0000	.00	.00 0015	.00 0015	.00	
05-22	1.19 0000	1.19 0000	.00	.00 0015	.00 0015	.00	
05-23	1.19 0000	1.19 0000	.00	.00 0015	.00 0015	.00	
05-24	1.24 2230	1.19 0000	.05	.04 2230	.00 0015	.05	
05-25	1.28 1500	1.24 0000	.04	.02 1445	.00 0015	.04	
05-26	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
05-27	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
05-28	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
05-29	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
05-30	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
05-31	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-01	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-02	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-03	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-04	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-05	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-06	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-07	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-08	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-09	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-10	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-11	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-12	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-13	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-14	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-15	1.28 0000	1.28 0000	.00	.00 0015	.00 0015	.00	
06-16	1.29 2330	1.28 0000	.01	.01 2330	.00 0015	.01	
06-17	1.44 0945	1.29 0000	.15	.01 0230	.00 0015	.15	
06-18	1.44 0000	1.44 0000	.00	.00 0015	.00 0015	.00	
06-19	1.44 0000	1.44 0000	.00	.00 0015	.00 0015	.00	
06-20	1.45 0230	1.44 0000	.01	.01 0230	.00 0015	.01	
06-21	1.45 0000	1.45 0000	.00	.00 0015	.00 0015	.00	
06-22	1.45 0000	1.45 0000	.00	.00 0015	.00 0015	.00	
06-23	1.45 0000	1.45 0000	.00	.00 0015	.00 0015	.00	

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PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:07 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2000 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
06-24	1.45 0000	1.45 0000	.00	.00 0015	.00 0015	.00	
06-25	1.71 2345	1.45 0000	.26	.10 1530	.00 0015	.26	
06-26	~~83.00~~ 0430	1.71 0000	81.29	81.17 0430	.00 0030	~~159.73~~	
06-27	2.10 1930	2.09 0000	.01	.01 1930	.00 0015	.01	
06-28	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
06-29	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
06-30	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
07-01	2.10 0000	2.10 0000	.00	.00 0015	.00 0015	.00	
07-02	2.22 1845	2.10 0000	.12	.10 1630	.00 0015	.12	
07-03	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-04	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-05	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-06	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-07	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-08	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-09	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-10	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-11	2.22 0000	2.22 0000	.00	.00 0015	.00 0015	.00	
07-12	2.32 1730	2.22 0000	.10	.03 1615	.00 0015	.10	
07-13	2.34 1445	2.32 0000	.02	.02 1445	.00 0015	.02	
07-14	2.34 0000	2.34 0000	.00	.00 0015	.00 0015	.00	
07-15	2.36 1815	2.34 0000	.02	.01 1800	.00 0015	.02	
07-16	3.01 2345	2.36 0000	.65	.18 2200	.00 0015	.65	
07-17	3.27 1515	3.01 0000	.26	.15 1445	.00 0030	.26	
07-18	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-19	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-20	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-21	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-22	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-23	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-24	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-25	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-26	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-27	~~27.00~~ 0515	3.27 0000	23.73	23.73 0515	.00 0015	~~47.46~~	
07-28	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-29	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-30	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
07-31	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
08-01	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
08-02	3.27 0000	3.27 0000	.00	.00 0015	.00 0015	.00	
08-03	3.63 1900	3.27 0000	.36	.23 1545	.00 0015	.36	
08-04	3.64 2130	3.63 0000	.01	.01 2130	.00 0015	.01	

ITED ES D MENT INTE - GE CAL Y - RES ES D...ON STAT .. DIS ..

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:07 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2000 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
08-05	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-06	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-07	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-08	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-09	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-10	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-11	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-12	3.64 0000	3.64 0000	.00	.00 0015	.00 0015	.00	
08-13	4.07 2145	3.64 0000	.43	.27 1915	.00 0015	.43	
08-14	4.07 0000	4.07 0000	.00	.00 0015	.00 0015	.00	
08-15	4.07 0000	4.07 0000	.00	.00 0015	.00 0015	.00	
08-16	4.09 2000	4.07 0000	.02	.01 2000	.00 0015	.02	
08-17	4.66 2400	4.09 0000	.57	.08 1815	.00 0015	.57	
08-18	4.97 1800	4.66 0000	.31	.08 1600	.00 0045	.31	
08-19	5.03 2245	4.97 0000	.06	.05 2245	.00 0015	.06	
08-20	5.07 1645	5.03 0000	.04	.04 1645	.00 0015	.04	
08-21	5.26 1615	5.07 0000	.19	.11 1515	.00 0015	.19	
08-22	5.26 0000	5.26 0000	.00	.00 0015	.00 0015	.00	
08-23	5.26 0000	5.26 0000	.00	.00 0015	.00 0015	.00	
08-24	5.26 0000	5.26 0000	.00	.00 0015	.00 0015	.00	
08-25	5.43 2345	5.26 0000	.17	.03 2300	.00 0015	.17	
08-26	5.55 1645	5.43 0000	.12	.10 1630	.00 0015	.12	
08-27	5.56 0330	5.55 0000	.01	.01 0330	.00 0015	.01	
08-28	5.82 2345	5.56 0000	.26	.13 1700	.00 0015	.26	
08-29	6.19 2000	5.82 0000	.37	.10 0145	.00 0300	.37	
08-30	6.19 0000	6.19 0000	.00	.00 0015	.00 0015	.00	
08-31	6.32 1915	6.19 0000	.13	.02 1730	.00 0015	.13	
09-01	6.33 0745	6.32 0000	.01	.01 0745	.00 0015	.01	
09-02	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-03	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-04	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-05	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-06	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-07	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-08	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-09	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-10	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-11	6.33 0000	6.33 0000	.00	.00 0015	.00 0015	.00	
09-12	6.34 1315	6.33 0000	.01	.01 1315	.00 0015	.01	
09-13	6.34 0000	6.34 0000	.00	.00 0015	.00 0015	.00	
09-14	6.34 0000	6.34 0000	.00	.00 0015	.00 0015	.00	
09-15	6.34 0000	6.34 0000	.00	.00 0015	.00 0015	.00	

ITED ES D MENT INTE - GE CAL Y - RES ES D ON STAT DIS

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 17:07 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 2000 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

	(00045) RAINFALL READING			SUM RAINFALL, INCHES			
DATE	MAX TIME	MIN TIME	RANGE	MAX TIME	MIN TIME	TOTAL	-ERROR CODES-
09-16	6.34 0000	6.34 0000	.00	.00 0015	.00 0015	.00	
09-17	6.34 0000	6.34 0000	.00	.00 0015	.00 0015	.00	
09-18	6.34 0000	6.34 0000	.00	.00 0015	.00 0015	.00	
09-19	6.42 2400	6.34 0000	.08	.05 2330	.00 0015	.08	
09-20	6.74 0515	6.42 0000	.32	.05 0030	.00 0145	.32	
09-21	6.85 2000	6.74 0000	.11	.04 1730	.00 0015	.11	
09-22	6.90 2400	6.85 0000	.05	.01 1030	.00 0015	.05	
09-23	7.04 1830	6.90 0000	.14	.01 0230	.00 0015	.14	
09-24	7.37 1645	7.04 0000	.33	.03 1015	.00 0015	.33	
09-25	7.37 0000	7.37 0000	.00	.00 0015	.00 0015	.00	
09-26	7.37 0000	7.37 0000	.00	.00 0015	.00 0015	.00	
09-27	7.37 0000	7.37 0000	.00	.00 0015	.00 0015	.00	
09-28	7.37 0000	7.37 0000	.00	.00 0015	.00 0015	.00	
09-29	7.37 0000	7.37 0000	.00	.00 0015	.00 0015	.00	
09-30	7.37 0000	7.37 0000	.00	.00 0015	.00 0015	.00	
PERIOD	83.00	.00		81.17	.00		

NOTE. SYMBOLS USED ABOVE HAVE THE FOLLOWING MEANINGS --
P - DAILY SUMMARY IS FOR AN INCOMPLETE DAY

Attachment 6
Denver Water Department, SW Monitoring-Site Descriptions
and Chemical-Constituent List

[Source: Steve Lohman, DWD]

NAME	DESCRIPTION
LATITUDE	LONGITUDE
WS-LP-002	S. Platte below Chatfield Res.
39.56458	-105.06
WS-LP-003	S. Platte below Dutch Ck. (1 bl
k. W. of Santa Fe & Church)	
39.61182	-105.0257
WS-LP-004	S. Platte N. of Dartmouth Ave.
@ guaging station	
39.66525	-105.0048
WS-LP-005	S. Platte S. of Florida Ave. @
dam	
39.6877	-105.0001
WS-LP-006	S. Platte below Cherry Ck. conf
luence (near 19th & Grinell)	
39.75903	-105.004
WS-LP-007	S. Platte below Sand Ck. conflu
ence	
39.81645	-104.9514
WS-LP-008	S. Platte at Henderson (W. of 1
23rd & Brighton Blvd.)	
39.9213	-104.8678

ANALYSIS
==========

COLI-MPN
TEMP
PH
HARD
ALK
COND
TURB
DO-TITR
NH3-HACH
FLOW
TOC
TSS
FE
FE-D
MN
MN-D
P
ANIONS
TKN

Attachment 7
Lockheed-Martin Site SP4 Monitoring-Location Map
(Note: Other SPx sites' information given in earlier ASI report.)

[Source: Thomas Giordano, Lockheed-Martin]

RECORD OF EVAPORATION AND CLIMATOLOGICAL OBSERVATIONS

STATION: Chatfield Dam | COUNTY: Jefferson | STATE: Colorado | Month/Day/Yea

TIME OF COMPLETE OBSERVATION (local time): 0700 | STANDARD TIME IN USE: MDT | OBSERVER: US Army Corps

DATE	AIR TEMPERATURE				Relative Humidity % at Observation	Precipitation						Pan Evaporation (Inches & Thousandths)			Pan Wind		Pan Water Temp. °F		Relative Humidi		
	24 Hours Ending at Observation		At Observation			24 Hour Amounts				At Observation							24 Hrs. Ending at Observation				
	Max.	Min.	Dry bulb	Wet Bulb		Non-recording Gage (In. & hundreths)	Recording Gage (In. & hundreths)	Snow (Unmelted) (In. & Tenths)	Form/Rain, Snow, Sleet, Hail, Freezing Rain, etc..	Snow & Ice on Ground (Inches)	Water Equivalent of Snow & Ice on Ground (In. & Tenths)	Gage Reading of Amount Added +	Reading when Tank Filled or Amount Removed -	Amount of Evaporation	Anemometer Dial Reading (Miles)	24 Hour Movement	Max.	Min.	Midnight CST	6:00 A.M. CST	
1																0					
2																0					
3	86	60	64		56											0					
4																0					22
5	90	51	56		68										9563				38	63	52
6	88	56	58		90														38	90	
7	98	56	65										1.631		9685.3						
8																					
9																0					
10	93	58	60									3.26			9829.6						32
11	94	58	59										2.818		9878.6	49			85	100	42
12	92	59	66		78								2.401		9924.8	46.2			64	86	44
13	88	56	74		56	0.05	0.03		Rain				2.291		4.5	79.7			80	100	34
14	95	59	68		70							3.444	1.745		51.2	46.7			60	100	
15																					
16																0					62
17	97	58	59		100	1.39	1.49		Rain				3.625		229.3				100	100	72
18	79	57	62		76	0.17	0.13		Rain				3.528		276.3	47			56	100	
19																-276.3					42
20	92	57	59		100								2.849		380				100	100	
21																					
22																0					
23																0					
24																0					
25																0					
26																0					
27																0					
28																0					
29																0					
30																0					X
31	95	53	57		93							3.446			905.4				X	X	

TOTALS: | Adjusted Totals:

WATER QUALITY FIELD DATA

Name of Lake or Stream & Location: CHATFIELD LAKE NR DAM

STORET Station No. 08CHL1

Year	Month	Day	2. Time of Sampling Begin Time	Ending Time

SURFACE DATA

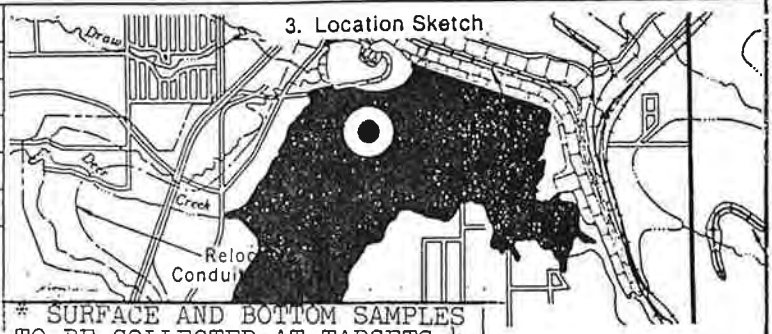
4. Air Temp.	P20	°C
5. Cloud Cover	P32	%
6. Trans. Secchi Disc.	P78	m
7. Wind Direction	P36	°
8. Wind Velocity	P35	mph
9. Ice Thickness	P82131	m

10. SAMPLE IDENTIFIER

0 8 C H L 1 — — — T

STORET Station No. | YEAR | TARGET | TYPE

3. Location Sketch



* SURFACE AND BOTTOM SAMPLES TO BE COLLECTED AT TARGETS 4, 5 AND 6 (NUTRIENTS, METALS AND GENERAL CHEMISTY.

		SAMPLING	INFORMATION	target	1	2	3	4	5	6
container type	must be refrigerated	Preservative	Sample Type	Month	F	M	J	J	A	O
plastic qt	yes	none	General Chemistry		X	X	X	X	X	X
plastic qt	yes	H2SO4	Nutrients		X	X	X	X	X	X
plastic qt	no	HNO3	Metals			X		X		X
glass qt	yes	none	PCBs and Pesticides				X			X
glass pint	no	HNO3	Mercury				X			X
test tube	yes	MgCO3	Chlorophyll					X	X	X

DEPTH PROFILE

WATER QUALITY FIELD DATA

Name of Lake or Stream & Location: Releases Chatfield Dam

STORET Station No. 08CHR1

Year	Month	Day	2. Time of Sampling Begin Time

SURFACE DATA

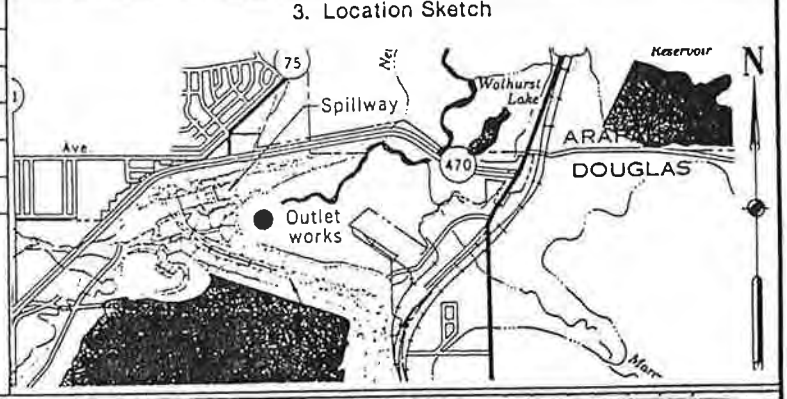
4. Air Temp.	P20	°C
5. Cloud Cover	P32	%
6. Trans. Secchi Disc.	P78	m
7. Wind Direction	P36	°
8. Wind Velocity	P35	mph
9. Ice Thickness	P82131	m

10. SAMPLE IDENTIFIER

0 8 C H R 1 — — — G

STORET Station No. | YEAR | TARGET | TYPE

3. Location Sketch



		SAMPLING	INFORMATION	target	1	2	3	4	5	6

WATER QUALITY FIELD DATA

Name of Lake or Stream & Location: CHATFIELD LAKE NR DAM

STORET Station No. 08CHL1

Year	Month	Day	2. Time of Sampling Begin Time	Ending Time

SURFACE DATA

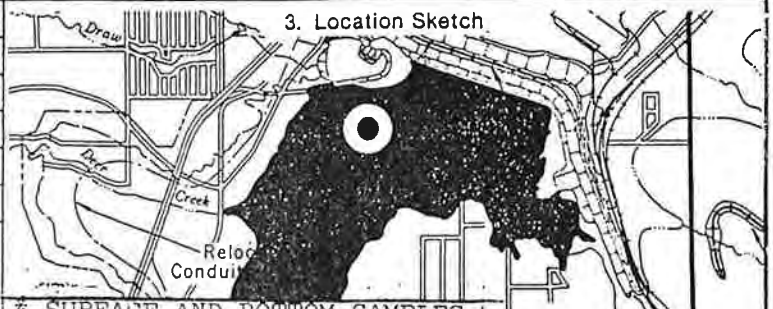
4. Air Temp.	P20	°C
5. Cloud Cover	P32	%
6. Trans. Secchi Disc.	P78	m
7. Wind Direction	P36	°
8. Wind Velocity	P35	mph
9. Ice Thickness	P82131	m

10. SAMPLE IDENTIFIER

0 8 C H L 1 — — — T

STORET Station No. | YEAR | TARGET | TYPE

3. Location Sketch



* SURFACE AND BOTTOM SAMPLES TO BE COLLECTED AT TARGETS 4, 5 AND 6 (NUTRIENTS, METALS AND GENERAL CHEMISTY.

container type	must be refrigerated	SAMPLING Preservative	INFORMATION Sample Type	target Month	1 F	2 M	3 J	4 J	5 A	6 O
plastic qt	yes	none	General Chemistry		X	X	X	X	X	X
plastic qt	yes	H2SO4	Nutrients		X	X	X	X	X	X
plastic qt	no	HNO3	Metals			X		X		X
glass qt	yes	none	PCBs and Pesticides				X			X
glass pint	no	HNO3	Mercury				X			X
test tube	yes	MgCO3	Chlorophyll					X	X	X

DEPTH PROFILE

WATER QUALITY FIELD DATA

Name of Lake or Stream & Location: Releases Chatfield Dam

STORET Station No. 08CHR1

Year	Month	Day	2. Time of Sampling Begin Time

SURFACE DATA

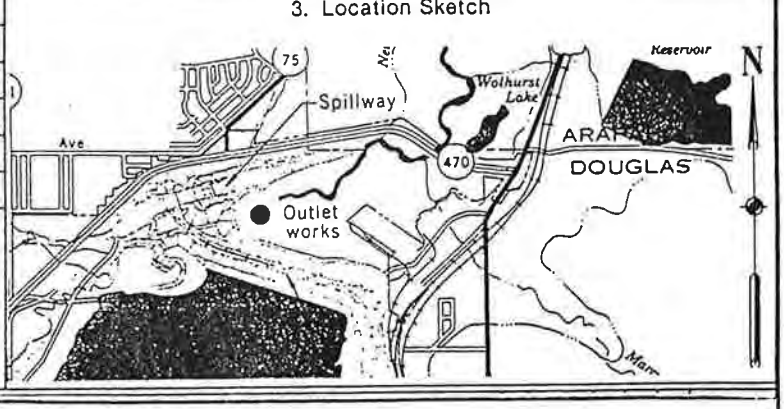
4. Air Temp.	P20	°C
5. Cloud Cover	P32	%
6. Trans. Secchi Disc.	P78	m
7. Wind Direction	P36	°
8. Wind Velocity	P35	mph
9. Ice Thickness	P82131	m

10. SAMPLE IDENTIFIER

0 8 C H R 1 — — — G

STORET Station No. | YEAR | TARGET | TYPE

3. Location Sketch



		SAMPLING	INFORMATION	target	1	2	3	4	5	6
container	must be									

Attachment 5
USGS Precipitation Data, Plum Creek near Sedalia, CO
(in association with streamflow-gaging station)

[Source: Gregg O'Neill and Bob Brandle, USGS Lakewood Office]

ITED 'ES I TMEN INTE - GE CAL SY - R RE: ES D ...ON STA1 ... DI... ..

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)

06709000 DATE PROCESSED: 11-27-2000 @ 16:58 BY gboneill

PLUM CREEK NEAR SEDALIA, CO.

(00045) PRECIPITATION STORE STATISTIC(S) 00006

PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1990 TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX	TIME	MIN	TIME	RANGE	SUM RAINFALL, INCHES MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
04-01											M
04-02											M
04-03											M
04-04											M
04-05											M
04-06											M
04-07											M
04-08											M
04-09											M
04-10											M
04-11											M
04-12											M
04-13											M
04-14											M
04-15											M
04-16											M
04-17											M
04-18											M
04-19											M
04-20											M
04-21											M
04-22											M
04-23											M
04-24											M
04-25											M
04-26											M
04-27											M
04-28											M
04-29											M
04-30											M
05-01											M
05-02											M
05-03											M
05-04											M
05-05											M
05-06											M
05-07											M
05-08											M
05-09											M
05-10											M
05-11											M
05-12											M

PRELIMINARY DATA
Subject to revision

This data has not been reviewed by USGS.

Use with Caution.

"ITED "ES I" TMEN" INTE - GE :CAL EY - R RE: ES D ON STA: DI_

PRIMARY COMPUTATIONS OF RAINFALL (INCHES)
DATE PROCESSED: 11-27-2000 @ 16:58 BY gboneill

06709000
PLUM CREEK NEAR SEDALIA, CO.
(00045) PRECIPITATION STORE STATISTIC(S) 00006
PROVISIONAL DATA FOR WATER YEAR ENDING SEPT. 30, 1990

TEST DIFF:****** PUNCH INTERVAL: 60 MIN

DATE	(00045) RAINFALL READING MAX	TIME	MIN	TIME	RANGE	SUM RAINFALL, INCHES MAX	TIME	MIN	TIME	TOTAL	-ERROR CODES-
05-13											M
05-14											M
05-15											M
05-16											
05-17											M
05-18											M
05-19											M
05-20											M
05-21											M
05-22											M
05-23											M
05-24											M
05-25											M
05-26											
05-27											M
05-28											M
05-29											M
05-30											M
05-31											M
06-01											M
06-02											M
06-03											M
06-04											M
06-05											M
06-06											M
06-07											M
06-08											M
06-09											M
06-10											M
06-11											M
06-12											M
06-13											M
06-14											M
06-15											M
06-16											M
06-17											M
06-18											M
06-19											M
06-20											M
06-21											M
06-22											M
06-23											M

Attachment 6
Denver Water Department, SW Monitoring-Site Descriptions
and Chemical-Constituent List

[Source: Steve Lohman, DWD]

NAME	DESCRIPTION
LATITUDE	LONGITUDE
WS-LP-002	S. Platte below Chatfield Res.
39.56458	-105.06
WS-LP-003	S. Platte below Dutch Ck. (1 bl
k. W. of Santa Fe & Church)	
39.61182	-105.0257
WS-LP-004	S. Platte N. of Dartmouth Ave.
@ guaging station	
39.66525	-105.0048
WS-LP-005	S. Platte S. of Florida Ave. @
dam	
39.6877	-105.0001
WS-LP-006	S. Platte below Cherry Ck. conf
luence (near 19th & Grinell)	
39.75903	-105.004
WS-LP-007	S. Platte below Sand Ck. conflu
ence	
39.81645	-104.9514
WS-LP-008	S. Platte at Henderson (W. of 1
23rd & Brighton Blvd.)	
39.9213	-104.8678

ANALYSIS
==========

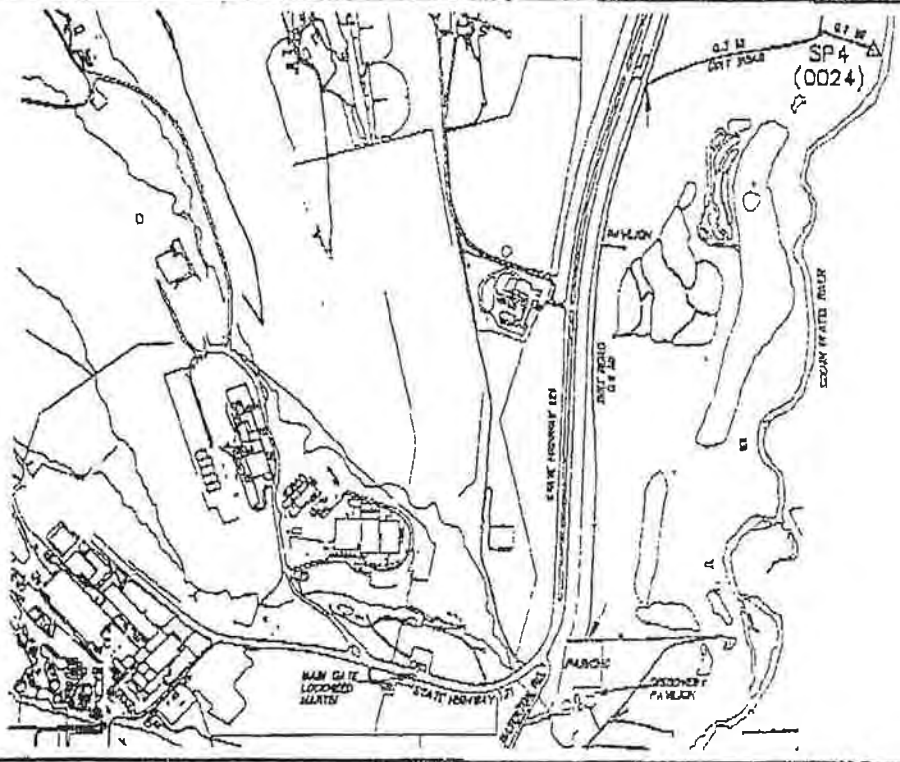
COLI-MPN
TEMP
PH
HARD
ALK
COND
TURB
DO-TITR
NH3-HACH
FLOW
TOC
TSS
FE
FE-D
MN
MN-D
P
ANIONS
TKN

Attachment 7
Lockheed-Martin Site SP4 Monitoring-Location Map
(Note: Other SPx sites' information given in earlier ASI report.)

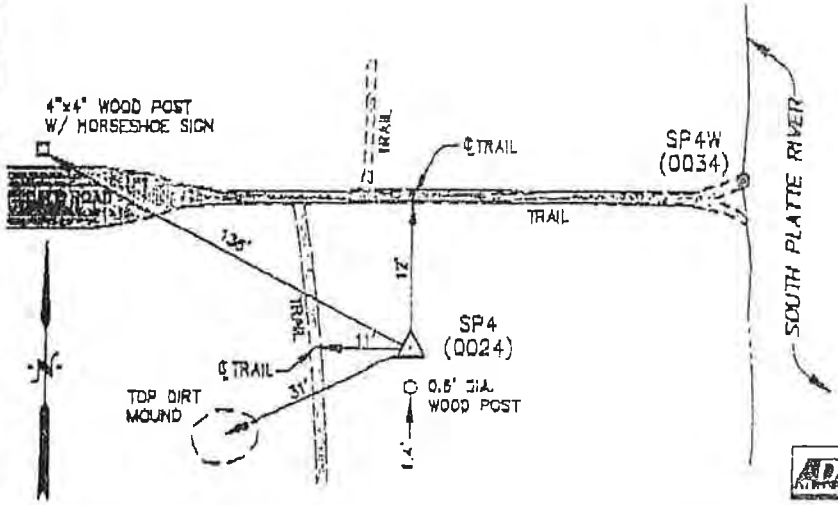
[Source: Thomas Giordano, Lockheed-Martin]

LOCKHEED MARTIN ASTRONAUTICS
SOUTH PLATTE RIVER SURFACE WATER PROGRAM
STATION LOCATION RECORD

STATION NAME:	SP4	PROJECT: SOUTH PLATTE RIVER SURFACE WATER PROGRAM	
STATION NUMBER:	0024	DATE: APRIL 22, 1998	
MONUMENT DESCRIPTION:	SET 30" LONG #5 REBAR WITH 2-1/2" ALUMINUM CAP MARKED "SP4 1998 PLS 24305"		
LATITUDE (NAD27):	39 30 29.50074	SCALE FACTOR:	0.99996111
LONGITUDE (NAD27):	105 04 57.55025	ELEVATION FACTOR:	0.99973917
ELEVATION (NGVD29):	5454.4	COMBINED PROJECT FACTOR:	0.99963710
HORZ/VERT METHOD:	GPS / GPS	CONVERGENCE:	0 15 47.58
NORTHING (CO SPC ZONE 502 USFT):	610246.724	MODIFIED PROJECT NORTHING:	610468.263
EASTING (CO SPC ZONE 502 USFT):	2117757.800	MODIFIED PROJECT EASTING:	2118526.613



VICINITY MAP
SCALE: 1"=1500'



STAMPING ON CAP

ADP ALBERS, DREXEL & POHLY, INC.
A Full Service Land Surveying Company
3334 Main Street, Longmont, Colorado 80501 Phone: (303) 682-1131