

**WATER-QUALITY MONITORING PROGRAM
CHATFIELD BASIN AND RESERVOIR
DENVER METROPOLITAN AREA
ANNUAL BASIC-DATA REPORT
JANUARY 1994-DECEMBER 1994**



ADVANCED
SCIENCES, INC.

**WATER-QUALITY MONITORING PROGRAM
CHATFIELD BASIN AND RESERVOIR
DENVER METROPOLITAN AREA
ANNUAL BASIC-DATA REPORT
JANUARY 1994-DECEMBER 1994**

Prepared For:

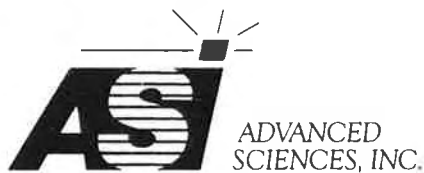
**Chatfield Basin Authority
Denver, Colorado**

Prepared By:

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

ASI Project No. 8969.40

**First Interim: May 18, 1994
Second Interim: July 26, 1994
Third Interim: December 21, 1994
Final: March 13, 1995**



March 10, 1995

Mr. Larry Moore
Chair, Chatfield Basin Authority
R.S. Wells Corporation
6200 S. Syracuse Way, #150
Greenwood Village, CO 80111

Subject: Water-Quality Monitoring Program, Chatfield Basin and Reservoir, Denver
Metropolitan Area: Annual Basic-Data Report, January 1994-December 1994
ASI Project No. 8969.40

Dear Mr. Moore:

The 1994 Annual Basic-Data Report is submitted in fulfillment of the subject program's contract requirements. The attached Tables 1 through 6 incorporate the field measurements and laboratory chemical data collected by Advanced Sciences, Inc. (ASI) and available to date in conjunction with the Chatfield Basin and Reservoir Monitoring Program (see Figure 1) for the January-through-December 1994 period. Chemical analyses were performed by ACZ Laboratories, Inc., Steamboat Springs, CO, and biological analyses were performed by the University of Colorado Limnological Center, Boulder, CO. A total of 12 duplicate samples were analyzed for chemical constituents in this year's program. No alluvial well (sites 1W, 2W, 3W, 4W, 5W, and 6W; Figure 2) or supplemental tributary (sites 2B, 3, 4, 4A, 4B, 6, 6A, 6B, and 6C; Figure 3) data were collected during the 1994 sampling program and the associated Tables 7 through 21 have been omitted from this report. No data are available for the November 11 in-reservoir and inflow/outflow sampling. These samples were lost in transit to ACZ Laboratories, Inc. in Steamboat Springs. Loss of the November 11 samples was not detected until after the December 1994 samples were collected and therefore no make-up survey could be completed.

In-Reservoir water-quality profiles for the March 24 through October 8 surveys are given in Figure series B-1A through F, B-2A through F, and B-3A through F for sites 7, 8, and 9, respectively. In-Reservoir chlorophyll-*a* concentrations and phytoplankton-species numbers are included with the chemical analyses (Tables 4 through 6). The detailed biological (phytoplankton-species) data for the July-through-September 1994 growing-season in-reservoir surveys are included as Appendix A to this Annual Basic-Data Report. Time series plots for the indicator in-reservoir variables (total phosphorus, chlorophyll-*a*, and Secchi depth) are given in Figures 4 through 6. Comparison of growing-season average total-phosphorus versus chlorophyll-*a* concentrations are shown in Figure 7; note that the 1994 data point falls in the lower right-hand end of the historical-period cluster of data points.. Time-series plots for 2 biological variables (*asterionella formosa* and *aphanizomenon flos-aquae*) as well as average total cells are provided in Figures 8 through 10, respectively. In-Reservoir water-column indicator-quality profiles for the 1994 season are presented in both graphic and tabular forms (Appendix B).

Mr. Larry Moore
March 10, 1995
Page 3

ASI appreciates having the opportunity to provide the Chatfield Basin Authority with continuing water-quality monitoring and data compilation services. This interim Basic-Data Report constitutes a deliverable under our 1994 calendar-year contract. If you have any questions, or need additional information, please give us a call.

Yours truly,


Tyler D. Smart, P.E.
Project Manager
Water-Resources/Physical-Sciences Department

File: 8969.40

Attachments - Monitoring Site Locations Figures 1 through 3
- Water-Quality Basic Data Tables 1 through 6, January - December 1994
- Appendices A and B, Additional ASI 1994 In-Reservoir Data

Distribution - See following page.

Mr. Larry Moore

March 10, 1995

Page 4

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

Centennial Water & Sanitation District
62 West Plaza Drive
Highlands Ranch, CO 80126
Attn: Mrs. Roberta Rivers

Holly I. Holder, P.C.
518 Seventeenth Street, Suite 1560
Denver, CO 80202
Attn: Ms. Holly I. Holder, Esq.

Perry Park Water and Sanitation District
5657 West Red Rock Drive
Larkspur, CO 80118
Attn: Ms. Bev Carson

Jefferson County Attorney's Office
100 Jefferson County Parkway
Golden, CO 80419
Attn: Ms. Jeannie Rossilon

Rocky Mountain Consultants, Inc. (RMC)
8301 E. Prentice Ave., Suite 101
Englewood, CO 80111
Attn: William T. Goetz, P.E.

ECC Construction Materials America, Inc.
(Cooley Sand and Gravel)
Support Services Group - Denver Region
3609 S. Wadsworth Blvd., Suite 300
Lakewood, CO 80235
Attn: Ms. Sherry Ference, Dir., Reg. Affairs

South JeffCo Environmental Council
7797 W. Crestone Park
Littleton, CO 80127
Attn: Ms. Sandra Eberhard (979-2916)

Martin Marietta Astronautics Group
P.O. Box 179
Denver, CO 80201
Attn: Ms. Robin Sandell
Mr. Gary Parham

Woodward-Clyde Consultants
Stanford Place 3, Suite 1000
4582 South Ulster Street Parkway
Denver, CO 80237
Attn: Mr. John Thackston

Plum Creek Wastewater Authority
482 Happy Canyon Road
Castle Rock, Colorado 80104
Attn: Mr. Tim Grotheer
Ms. Becky McMullen

Tri-County Health Department
7000 East Belleview Avenue, Suite 301
Englewood, CO 80111-1628
Attn: Mr. Warren S. Brown, P.E.

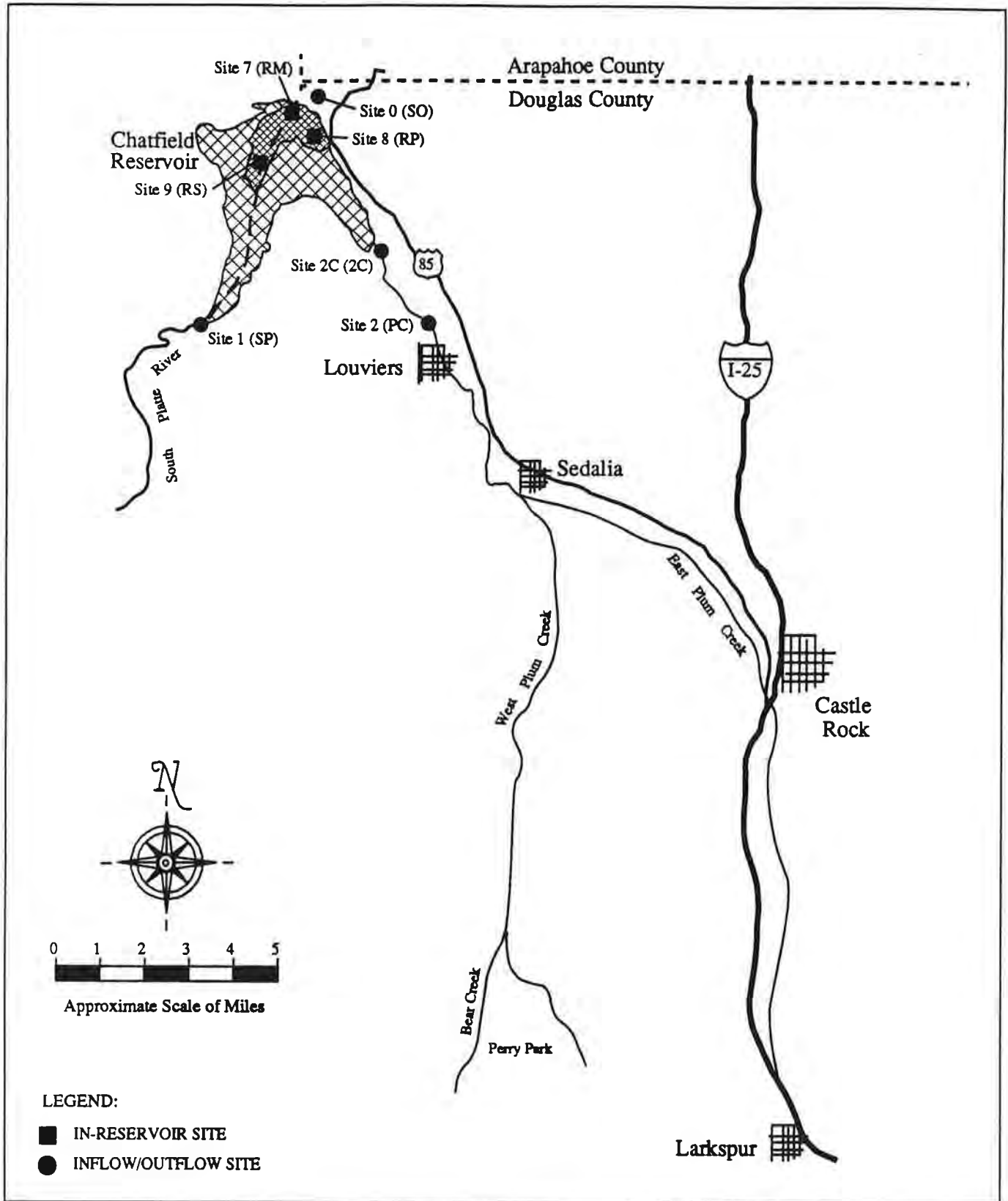
Denver Water Department
1600 West 12th Avenue
Denver, CO 80254
Attn: Mr. Steve Lohman

Douglas County Planning Division
118 Third Street
Castle Rock, CO 80104
Attn: Mr. Donald Moore, AICP

U.S. Army Corps of Engineers
CEMRO-ED-HF
215 N. 17th Street
Omaha, NE 68102-4978
Attn: Dr. John L. Andersen
Mr. Tom Curran

Carruth Development Corporation
10579 Bradford Rd., Suite #104
Littleton, CO 80127
Attn: Dennis Carruth (973-3344)

FIGURES

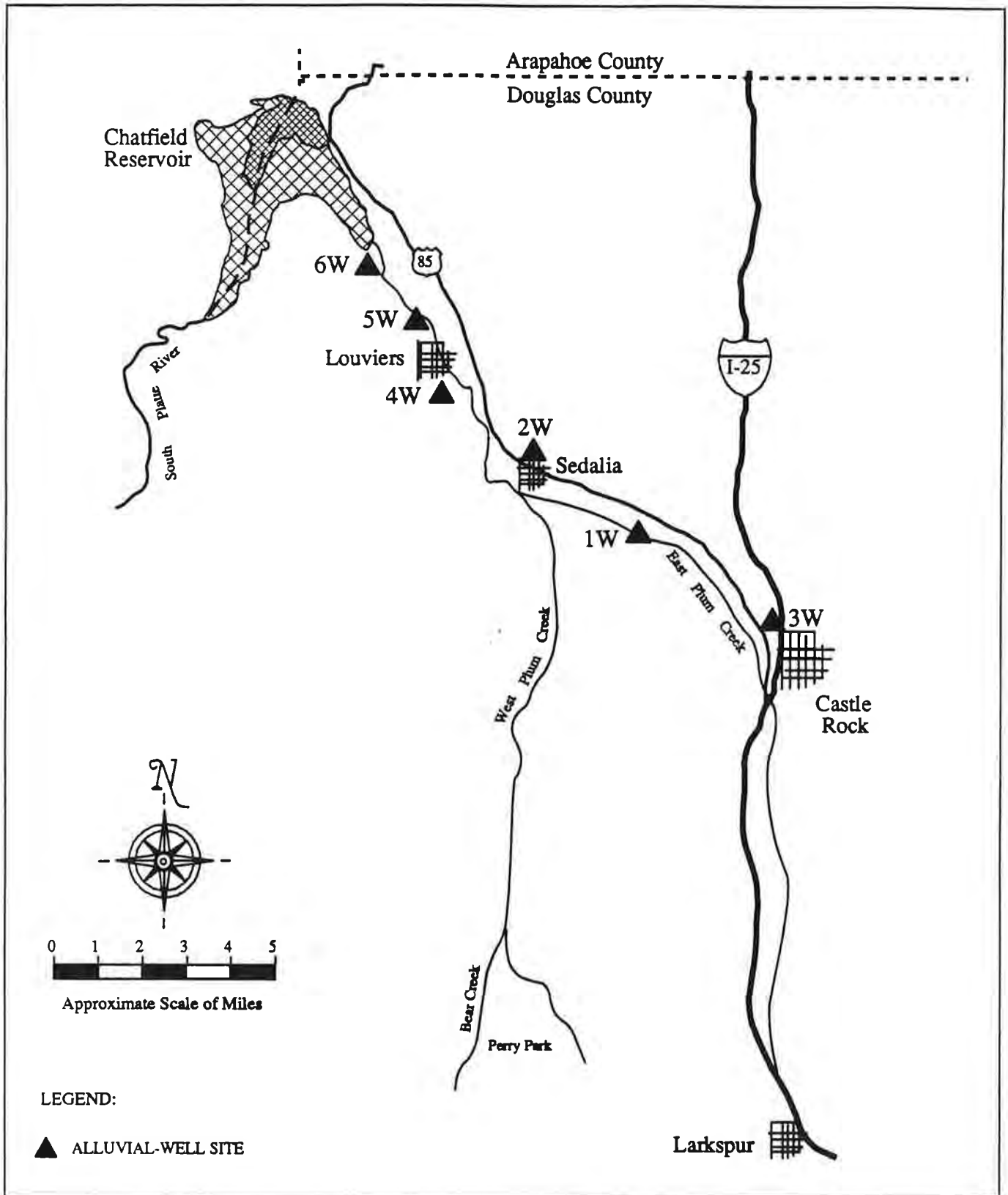


INFLOW/OUTFLOW AND IN-RESERVOIR
MONITORING LOCATIONS

CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM

PROJECT NO. 8969.40

FIGURE 1



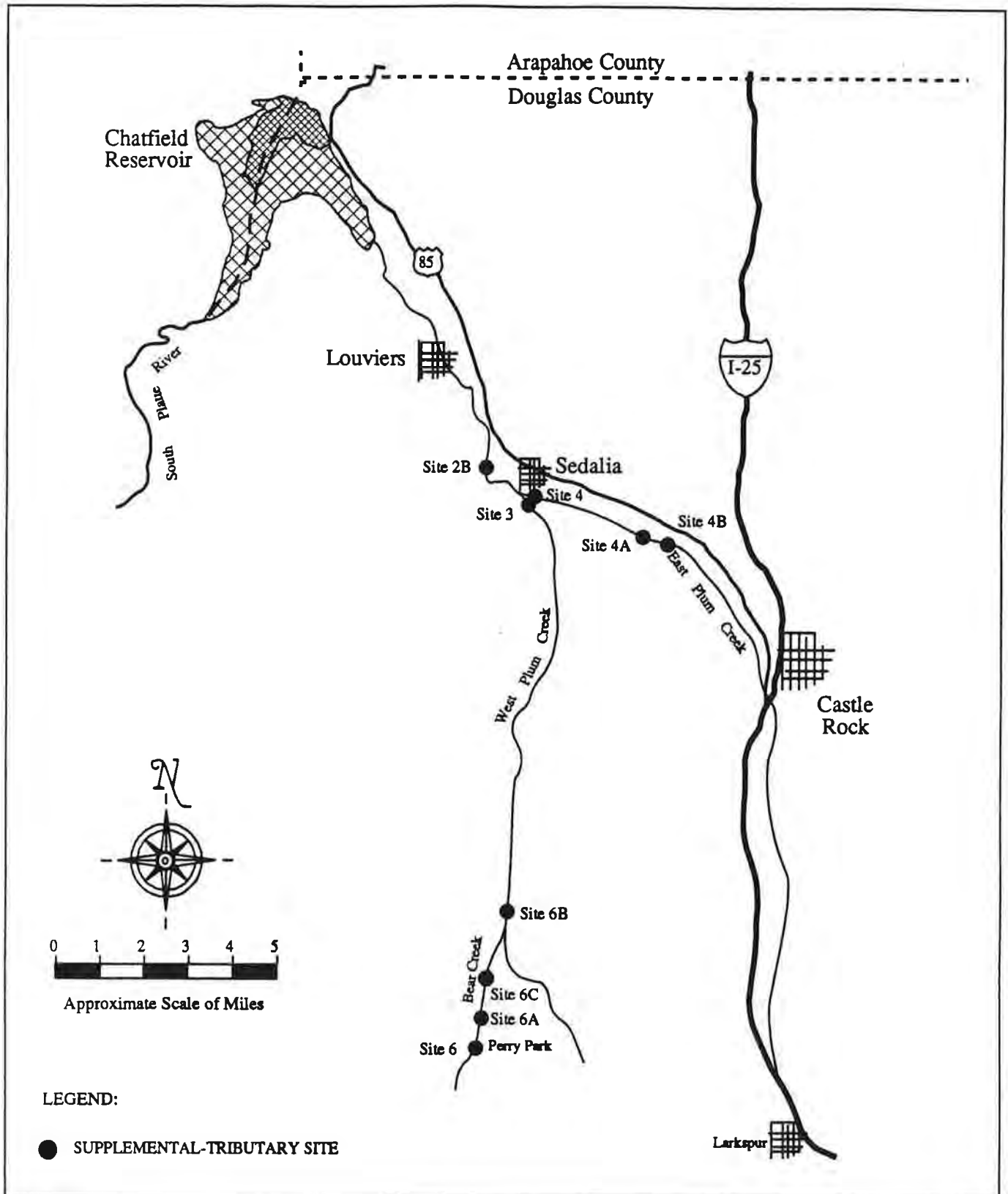
**ALLUVIAL-WELL
MONITORING LOCATIONS**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

PROJECT NO. 8969.40

FIGURE 2



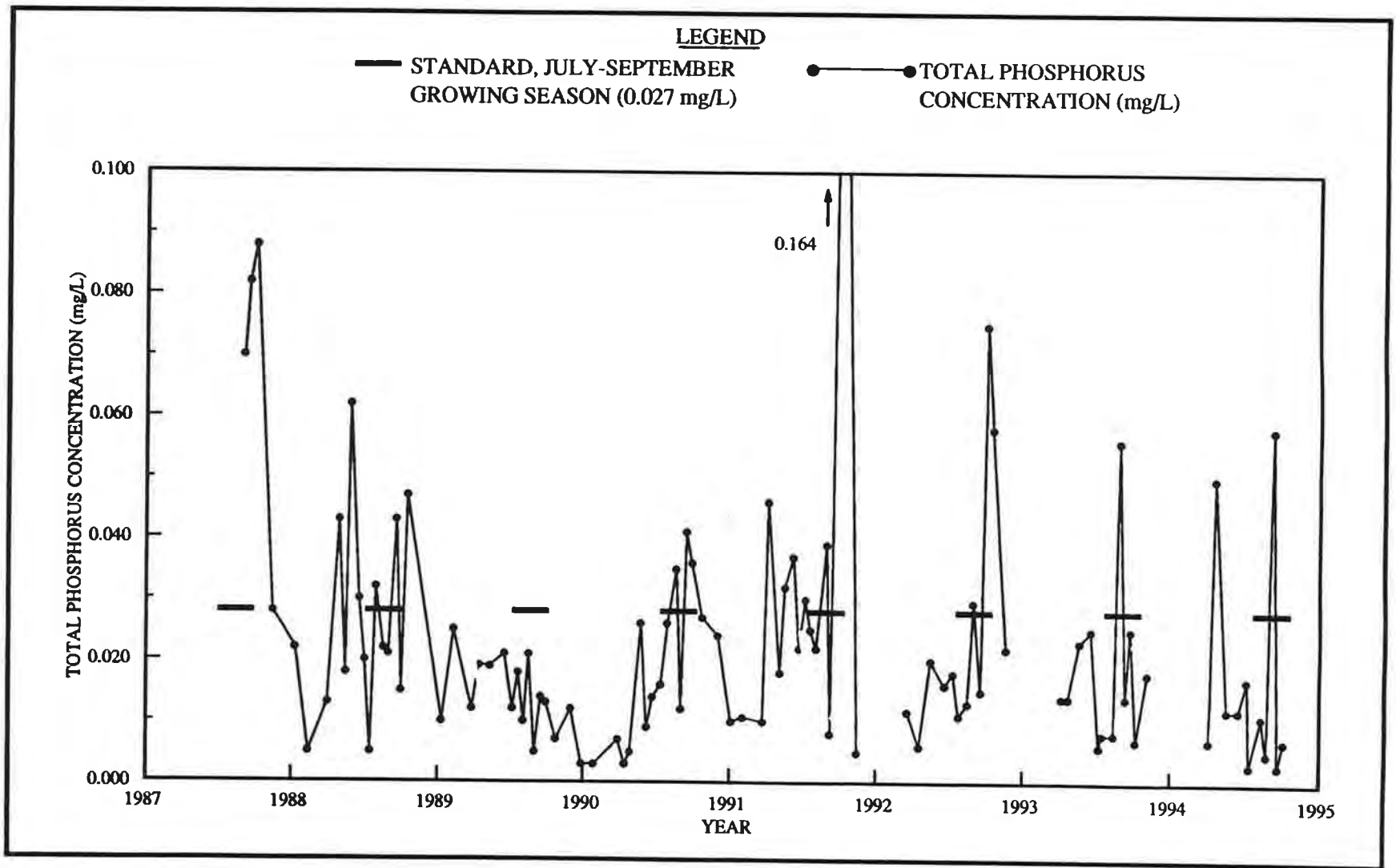
**MONITORING LOCATIONS
SUPPLEMENTAL-TRIBUTARY**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

PROJECT NO. 8969.40

FIGURE 3



**TIME SERIES OF AVERAGE TOTAL PHOSPHORUS CONCENTRATION
CHATFIELD RESERVOIR 1987 - 1994**



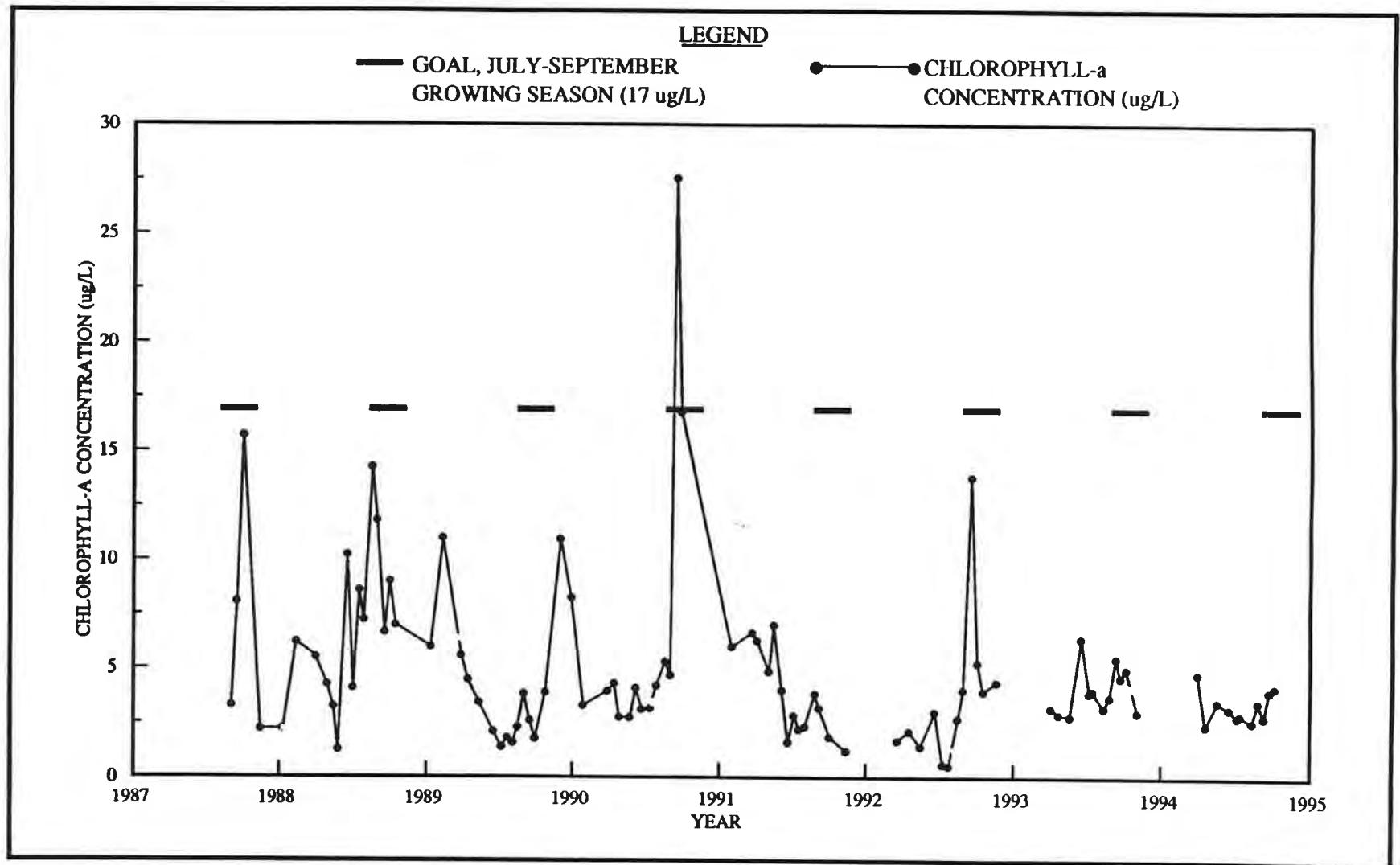
File: CHATFIG4.DRW

**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

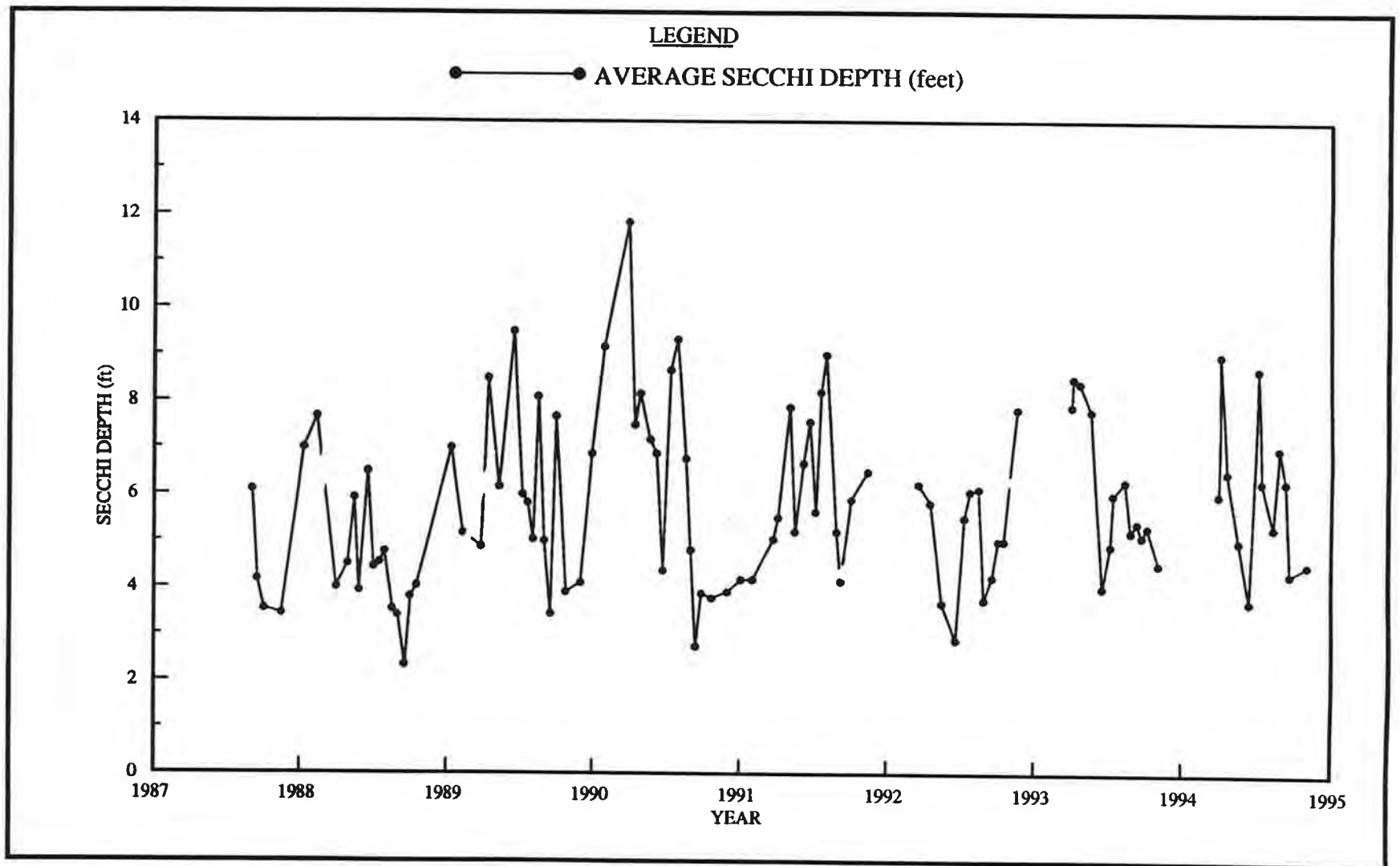
Figure 4

Status: 3/103/95



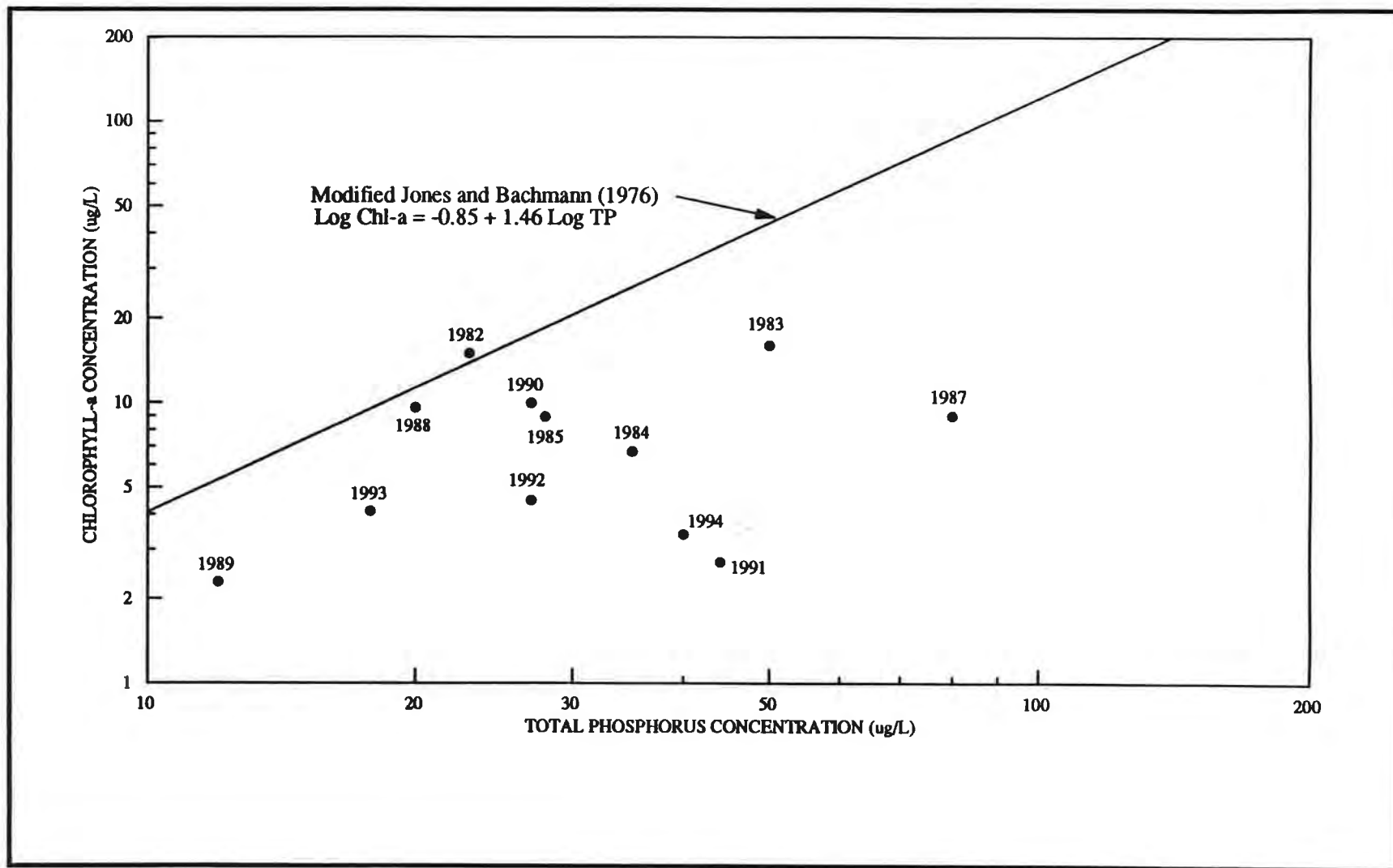
**TIME SERIES OF AVERAGE CHLOROPHYLL-a CONCENTRATION
CHATFIELD RESERVOIR 1987 - 1994**





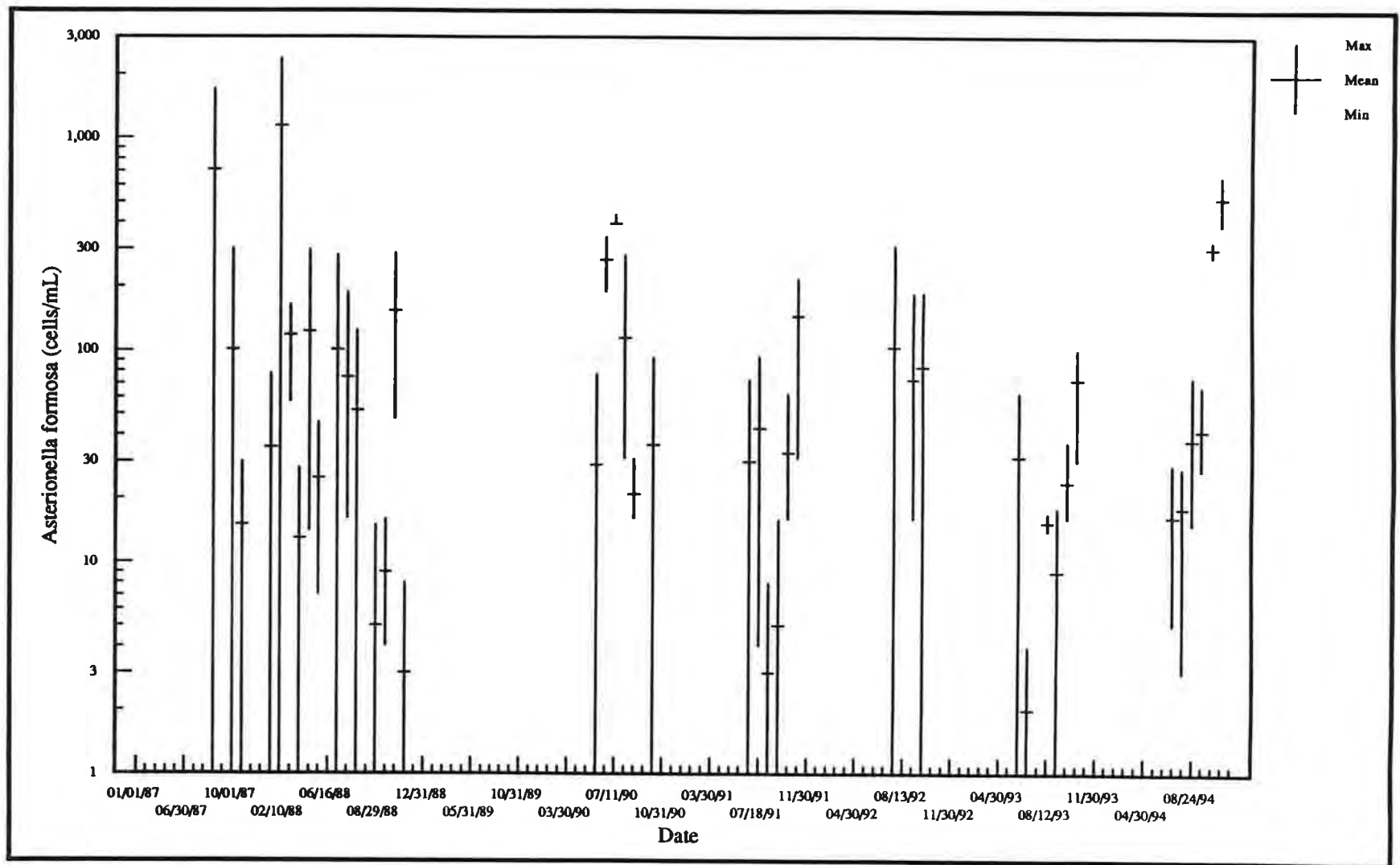
**TIME SERIES OF AVERAGE SECCHI DEPTH
CHATFIELD RESERVOIR 1987 - 1994**





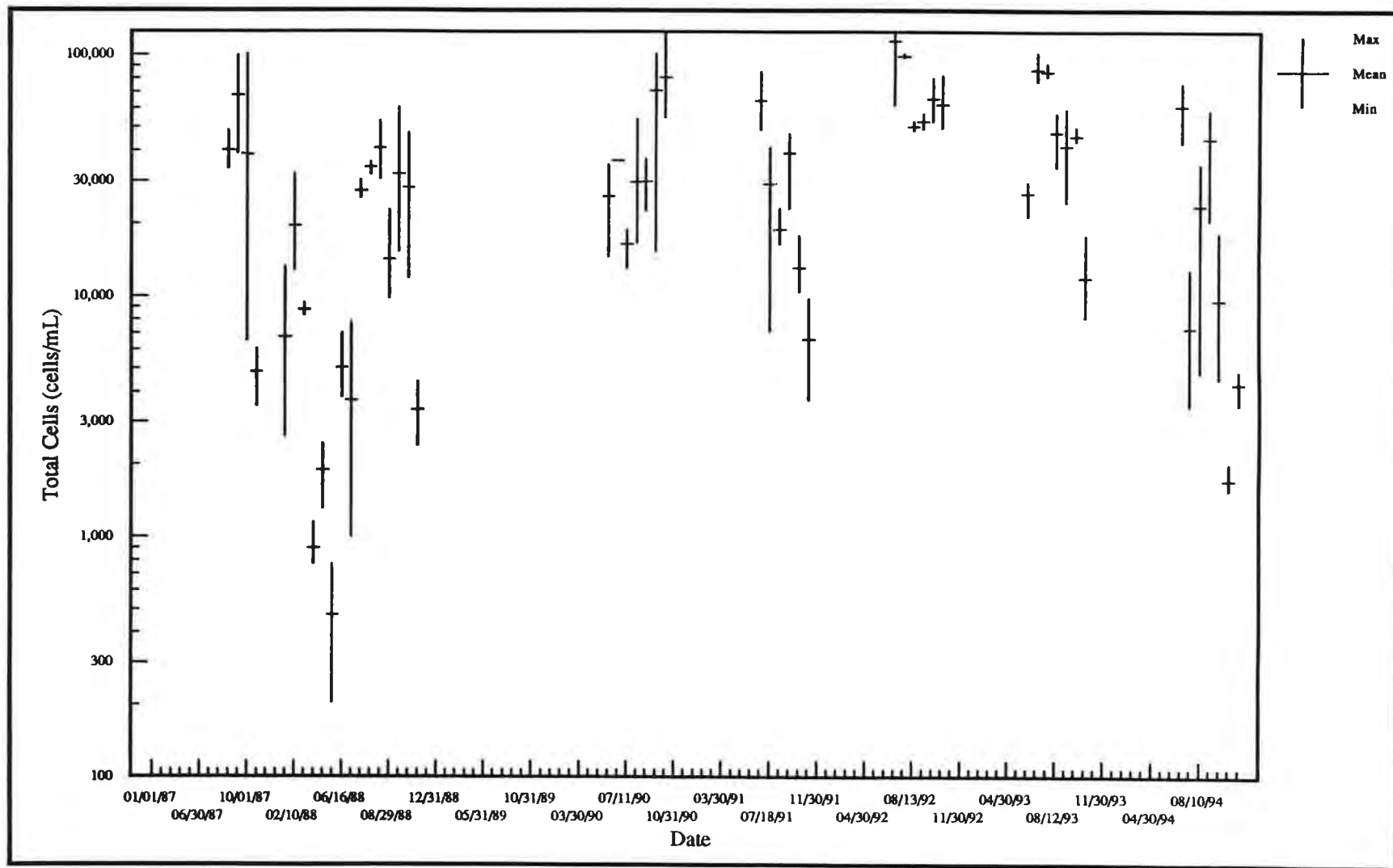
JULY THROUGH SEPTEMBER VALUES OF CHLOROPHYLL-a vs. TOTAL PHOSPHORUS
 CHATFIELD RESERVOIR 1982 - 1994





TIME SERIES OF MAXIMUM, MINIMUM, AND AVERAGE ASTERIONELLA FORMOSA
CHATFIELD RESERVOIR 1987 - 1994





TIME SERIES OF MAXIMUM, MINIMUM, AND AVERAGE TOTAL CELLS
CHATFIELD RESERVOIR 1987 - 1994



BASIC-DATA TABLES

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

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS STREAMFLOW (CFS) ¹⁾	SPECIFIC CONDUCTANCE FIELD (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	TURBIDITY (NTUS)	NITROGEN TOTAL (MG/L as N)	NITROGEN, AMMONIA TOTAL (MG/L as N)
19-Jan-94	1100	6.0	1.7	220	2)+	6.9			0.07
16-Feb-94	1200	7.5	1.4	260	2)+	6.9			-0.05
24-Mar-94	1140	9.0	37	230	2)+	8.0		-0.1	-0.05
20-Apr-94	1355	11.0	206	230	11.5	7.9		0.04	0.07
18-May-94	1240	15.5	263	320	10.9	7.2			0.06
15-Jun-94	1240	18.5	122	245	8.9	7.8	<10		-0.05
13-Jul-94	1055	20.0	15	260	8.5	7.9	24		0.06
10-Aug-94	1225	22.5	15	260	9.9	8.5	6		0.09
07-Sep-94	1145	21.0	20	260	9.6	8.5	3		0.05
08-Oct-94	1455	14.7	39	265	10.2	7.0	4		-0.05
11-Nov-94	1500	8.1	58	270	10.5	8.3	1		*
12-Dec-94	1500	6.8	15	295	9.3	8.3	3		0.06

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

DATE	TIME	NITROGEN, NITRITE TOTAL (MG/L. as N)	NITROGEN, NITRATE TOTAL (MG/L. as N)	PHOSPHORUS, TOTAL (MG/L. as P)	PHOSPHORUS ORTHO, TOTAL (MG/L. as P)	SUSPENDED SEDIMENT (MG/L.)	LABORATORY SAMPLE NUMBER
19-Jan-94	1100	-0.01	0.24	0.020	0.006	2.0	358
16-Feb-94	1200	-0.01	0.27	0.041 (Retest 0.005)	-0.005	-2.0	1035
24-Mar-94	1140	-0.01	0.02	0.006	0.006	3.0	2195
20-Apr-94	1355	-0.01	0.04	-0.005	-0.005	1.0	3038
18-May-94	1240	-0.01	-0.02	0.005	-0.005	42.0	4297
15-Jun-94	1240	-0.01	-0.02	0.011	-0.005	4.5	5537
13-Jul-94	1055	-0.01	0.03	0.024	0.014	25.0	6404
10-Aug-94	1225	-0.01	0.03	-0.005	-0.005	6.9	7209
07-Sep-94	1145	-0.01	0.03	0.042	-0.005	4.0	8134
08-Oct-94	1455	-0.01	0.02	-0.005	-0.005	4.3	9624
11-Nov-94	1500	*	*	*	*	*	*
12-Dec-94	1500			-0.005	-0.005	-5	L4103-01

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.

* = SAMPLE LOST IN SHIPMENT TO COMMERCIAL LABORATORY

1) STREAMFLOW DATA SOURCE: U.S. ARMY CORPS OF ENGINEERS (WRITTEN COMMENTS, JANUARY 21, 1994)

2) DO MEASUREMENTS SUSPECT; OMITTED FROM DATA MATRIX.

TABLE 2
06708000 SOUTH PLATTE RIVER AT WATERTON, CO (SITE 1),SP
WATER-QUALITY DATA

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS STREAMFLOW (CFS) ¹⁾	SPECIFIC CONDUCTANCE FIELD (USCM)	OXYGEN, DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	TURBIDITY (NTUS)	NITROGEN TOTAL (MG/L as N)	NITROGEN, AMMONIA TOTAL (MG/L as N)
19-Jan-94	1135	2.0	38	214	3)	7.9			-0.05
16-Feb-94	1200	1.5	35	210	3)	8.3			-0.05
24-Mar-94	1420	9.0	33	210	3)	8.3		-0.1	-0.05
07-Apr-94	732	3.0	26	220	12.3	8.3			0.05
14-Apr-94	730	6.0	39	180	3)	7.7			-0.05
20-Apr-94	1420	12.5	34	180	12.0	8.4			-0.05
27-Apr-94	1440	6.5	31	190	3)	7.6			0.06
03-May-94	1100	8.0	31	240	8.0	8.0			-0.05
10-May-94	1100	9.0	63	180	9.7	7.4			-0.05
18-May-94	1310	13.5	64	240	8.8	7.8			0.05
26-May-94	1120	10.5	742	260	8.6	7.9	45		0.09
01-Jun-94	1245	13.0	420 E	250	8.9	8.4	63		0.07
01-Jun-94	9999								-0.05
08-Jun-94	1355	16.5	100	230	9.0	8.1	9		0.10
15-Jun-94	1315	15.0	218	200	9.8	8.2	<10		-0.05
22-Jun-94	1120	14.0	474 E	200	10.6	7.5	24		0.05
30-Jun-94	1430	17.0	117	210	10.2	8.3	14		0.17
13-Jul-94	1035	14.0	65	220	10.6	8.3	2		-0.05
10-Aug-94	1200	18.0	63	205	9.6	8.5	1		0.05
07-Sep-94	1125	16.0	70	220	9.5	8.5	2		0.09
08-Oct-94	1530	14.4	33	250	9.8	7.7	0		-0.05
08-Oct-94	9999								-0.05
11-Nov-94	1430	6.3	29	290	11.3	7.9	1		*
11-Dec-94	1430	5.3	60	255	8.2	7.4	14		0.05

TABLE 2
06708000 SOUTH PLATTE RIVER AT WATERTON, CO (SITE 1),SP

DATE	TIME	NITROGEN, NITRITE TOTAL (MG/L. AS N)	NITROGEN, NITRATE TOTAL (MG/L. AS N)	PHOSPHORUS, TOTAL (MG/L. AS P)	PHOSPHORUS ORTHO, TOTAL (MG/L. AS P)	SUSPENDED SEDIMENT (MG/L.)	LABORATORY SAMPLE NUMBER
19-Jan-94	1135	-0.01	0.13	0.014	-0.005	-2	359
16-Feb-94	1200	-0.01	0.10	0.037	-0.005	-2	1038
24-Mar-94	1420	-0.01	0.08	0.005	-0.005	1	2196
07-Apr-94	732	-0.01	0.13	0.011	-0.005	3	2694
14-Apr-94	730	-0.01	0.12	0.006	-0.005	9	2903
20-Apr-94	1420	-0.01	0.09	-0.005	-0.005	3	3039
27-Apr-94	1440	-0.01	0.11	0.019	-0.005	-2	3277
03-May-94	1100	-0.01	0.08	-0.005	-0.005	-2	3515
10-May-94	1100	-0.01	0.08	-0.005	-0.005	17	3827
18-May-94	1310	-0.01	-0.02	-0.005	-0.005	44	4300
26-May-94	1120	-0.01	0.04	0.159	-0.005	137	4678
01-Jun-94	1245	-0.01	-0.02	0.010	-0.005	4	4913
01-Jun-94	9999	-0.01	0.09	0.009	-0.005	4	4914
08-Jun-94	1355	-0.01	-0.02	0.009	-0.005	2.6	5291
15-Jun-94	1315	-0.01	0.05	-0.005	-0.005	2.3	5538
22-Jun-94	1120	-0.01	0.07	0.016	-0.005	8	5788
30-Jun-94	1430	-0.01	0.02	0.011	-0.005	3	6142
13-Jul-94	1035	-0.01	0.04	-0.005	-0.005	-2	6403
10-Aug-94	1200	-0.01	0.04	-0.005	-0.005	1.1	7210
07-Sep-94	1125	-0.01	0.08	0.042	-0.005	2	8135
08-Oct-94	1530	-0.01	0.1	-0.005	-0.005	4.8	9625
08-Oct-94	9999	-0.01	0.08	-0.005	-0.005	5.1	9626
11-Nov-94	1430	*	*	*	*	*	*
11-Dec-94	1430	-0.01	0.13	-0.005	-0.005	-5	L4103-01

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE.

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

1) COLORADO STATE ENGINEERS OFFICE (PROVISIONAL DAILY STREAMFLOW DATA).

3) DO MEASUREMENTS SUSPECT; OMITTED FROM DATA MATRIX.

* - SAMPLES LOST IN SHIPMENT TO COMMERCIAL LAB.

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

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS STREAMFLOW (CFS) ¹⁾	SPECIFIC CONDUCTANCE FIELD (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	TURBIDITY (NTUS)	NITROGEN TOTAL (MG/L as N)	NITROGEN, AMMONIA TOTAL (MG/L as N)
19-Jan-94	1155	1.5	9	305	12.4	7.7			0.14
16-Feb-94	1240	3.5	13	290	3)	8.1			-0.05
24-Mar-94	1355	13.5	15	250	10.8	7.9		0.1	-0.05
07-Apr-94	705	3.5	60	260	10.2	8.2			0.07
14-Apr-94	640	7.0	59	200	3)	7.3			-0.05
20-Apr-94	1445	17.5	104	140	9.3	7.8			-0.05
27-Apr-94	1455	9.0	76	125	3)	7.6			0.06
27-Apr-94	9999								0.05
03-May-94	1040	9.0	60	220	10.6	7.7			-0.05
10-May-94	1100	13.5	92	160	8.6	7.3			0.07
18-May-94	1330	19.0	80	235	6.4	7.1			0.09
26-May-94	1145	14.0	25	220	7.2	7.6	96		-0.05
01-Jun-94	1305	24.5	58	190	6.7	7.8	40		-0.05
09-Jun-94	1355	25.0	35	190	6.9	7.9	33		0.08
15-Jun-94	1335	26.0	28	190	8.0	7.8			-0.05
22-Jun-94	1150	19.5	28	210	8.3	7.7	46		0.17
13-Jul-94	1125		DRY						
10-Aug-94	1145		DRY						
07-Sep-94	1110		DRY						
08-Oct-94	1550		DRY						
11-Nov-94	1400	7.7	0 ⁴⁾	325	9.9	7.7	2		*
11-Dec-94	1400	6.6	17	315	10.1	7.7	2		-0.05

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

DATE	TIME	NITROGEN, NITRITE TOTAL (MG/L as N)	NITROGEN, NITRATE TOTAL (MG/L as N)	PHOSPHORUS, TOTAL (MG/L as P) AS P)	PHOSPHORUS ORTHO, TOTAL (MG/L as P)	SUSPENDED SEDIMENT (MG/L)	LABORATORY SAMPLE NUMBER
19-Jan-94	1155	-0.01	1.19	0.075	0.005	30	360
16-Feb-94	1240	-0.01	1.12	0.194	0.007	74	1037
24-Mar-94	1355	-0.01	0.17	0.031	0.012	26	2197
07-Apr-94	705	-0.01	0.48	0.064	0.015	46	2693
14-Apr-94	640	-0.01	0.42	0.024	-0.005	3	2902
20-Apr-94	1445	0.01	0.05	0.131	0.030	169	3040
27-Apr-94	1455	0.02	0.26	0.112	0.036	145	3278
27-Apr-94	9999	0.02	0.26	0.112	0.036	322	3279
03-May-94	1040	-0.01	0.16	0.076	0.045	89	3514
10-May-94	1100	-0.01	0.11	0.110	0.037	187	3828
18-May-94	1330	-0.01	0.08	0.062	0.026	924	4298
26-May-94	1145	0.02	0.14	0.138	0.040	106	4679
01-Jun-94	1305	-0.01	0.18	0.082	0.035	56	4912
09-Jun-94	1355	-0.01	0.07	0.084	0.037	40	5290
15-Jun-94	1335	-0.01	0.10	0.039	0.018	21.2	5539
22-Jun-94	1150	-0.01	0.18	0.093	0.036	82	5789
13-Jul-94	1125						
10-Aug-94	1145						
07-Sep-94	1110						
08-Oct-94	1550						
11-Nov-94	1400	*	*	*	*	*	*
11-Dec-94	1400	-0.01	0.58	-0.005	-0.005	5	L4103-02

- 1) USGS (PROVISIONAL DAILY STREAMFLOW DATA)
- 3) DO MEASUREMENTS SUSPECT; OMITTED FROM DATA MATRIX.
- 4) EXTREMELY LOW FLOW AT TIME OF SAMPLING.
- B = ESTIMATED FROM USGS DAILY STREAMFLOW RECORDS
- * = SAMPLES LOST IN SHIPMENT TO COMMERCIAL LAB.

**TABLE 3A
393214105024201 PLUM CREEK ABOVE CHATFIELD RESERVOIR (SITE 2C)
WATER-QUALITY DATA (PAIRED SAMPLE)**

DATE	TIME	TEMPERATURE (DEG C)	INSTANTANEOUS STREAMFLOW (CFS)	SPECIFIC CONDUCTANCE FIELD (US/CM)	OXYGEN DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	NITROGEN AMMONIA TOTAL (MG/L AS N)	NITROGEN NITRITE TOTAL (MG/L AS N)	NITROGEN NITRATE TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P)	SUSPENDED SEDIMENT (MG/L)	LABORATORY SAMPLE NUMBER
16-Feb-94	1220	3.5		290		7.9	-0.05	-0.01	0.93	0.145 ³⁾	-0.005	15	1036
18-May-94	1225	6.8		260	6.8	7.3	0.08	-0.01	0.04	0.056	0.031	270	4299
10-Aug-94	1130	16.5		365	8	8	0.09	-0.01	0.05	0.036	0.028	1.7	7211
11-Nov-94	1215	9.1		295	10.7	8.2	*	*	*	*	*	*	*

MINUS SIGN MEANS "LESS THAN" INDICATED VALUE

BLANK SPACES INDICATE NO DATA WERE AVAILABLE

TIME - 9999 MEANS THE SAMPLE IS A DUPLICATE OR A SPLIT OF THE SAMPLE IMMEDIATELY ABOVE.

* - SAMPLES LOST IN SHIPMENT TO COMMERCIAL LAB.

1) 314, 30-MINUTE QA/QC CHECK

2) DO MEASUREMENT SUBJECT, OMITTED FROM DATA MATRIX

3) Reson 0.017 mg/L

TABLE 4
393319105033501 CHATFIELD RESERVOIR NEAR DAM (SITE 7), RM
WATER-QUALITY DATA

DATE	TIME	TOTAL DEPTH (FEET)	SAMPLING DEPTH (FEET)	TEMPERATURE (DEG C)	TRANSPARENCY SECCHI DISK (FEET)	SPECIFIC CONDUCTANCE FIELD (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	SOLIDS RESIDUE AT 105 SUSPENDED (MG/L)	NITROGEN TOTAL (MG/L, as N)
24-Mar-94	1300		3.7		7.4	240	12.0	8.2	-2	0.2
24-Mar-94	1305	35.0	33.0	7.5		240	12.1	7.8	-2	0.2
20-Apr-94	1220		5.5	11.0	11.0	240	11.5	8.1	-2	-0.1
20-Apr-94	1225	34.4	32.4	8.5		240	10.8	7.5	-2	-0.1
18-May-94	1100		3.0	16.0	6.0	345		7.4	2	0.2
18-May-94	1055	37.0	35.0	12.5		350		7.1	10	0.4
18-May-94	9999(CDH)		6.0						-2	0.2
15-Jun-94	1030			20.5	7.0	250	8.9	7.8	-2	0.2
15-Jun-94	1045	34.0	32.0	17.5		245	6.1	7.4	-2	0.2
14-Jul-94	915		2.0	20.0	4.0	260	7.5	7.5	2	0.2
14-Jul-94	905	40.0	38.0	19.0		250	4.5	7.3	72	0.4
26-Jul-94	1030		9.0	21.5	11.0	255	8.3	8.0	-2	0.3
26-Jul-94	1015	30.0	28.0	20.0		255	7.0	7.4	-2	0.3
10-Aug-94	1040			21.5	8.0	260	8.0	8.0	-2	0.3
10-Aug-94	1030	32.0	30.0	20.5		260	5.9	7.5	-2	0.3
24-Aug-94	910			21.0	5.0	260	8.2	8.2	-2	0.2
24-Aug-94	9999								-2	0.3
24-Aug-94	900	25.0	23.0	21.0		260	8.0	7.7	-2	0.2
07-Sep-94	930			20.0	9.0	260	8.4	8.5	6	0.3
07-Sep-94	9999								4	0.6
07-Sep-94	925	26.0	24.0	19.5		260	7.7	7.5	8	1.1
19-Sep-94	900			18.0	5.0	270	8.2	8.1	-2	-0.1
19-Sep-94	850	24.0	22.0	18.0		265	8.2	7.9	-2	-0.1
08-Oct-94	1325			15.5	4.0	265	8.6	7.2	-2	0.3
08-Oct-94	1340	25.0	23.0	14.4		265	8.8	7.0	-2	0.1
11-Nov-94	1020			8.1		275	10.1	8.3	*	*
11-Nov-94	1015	23.0	21.0	7.7	7.0	280	9.7	8.1	*	*

TABLE 4
393319105033501 CHATFIELD RESERVOIR NEAR DAM (SITE 7), RM
WATER-QUALITY DATA

DATE	TIME	PHOSPHORUS, TOTAL (MG/L. as P)	PHOSPHORUS ORTHO. TOTAL (MG/L. as P)	CHLOROPHYLL A CORR. (UG/L.)	PHYTOPLANKTON (SPECIES NUMBER)	LABORATORY SAMPLE NUMBER
24-Mar-94	1300	0.006	-0.005	4.9		2190
24-Mar-94	1305	0.006	-0.005			2191
20-Apr-94	1220	-0.005	-0.005	1.8		3035
20-Apr-94	1225	-0.005	-0.005			3036
18-May-94	1100	0.015	-0.005	3.8		4289
18-May-94	1055	0.015	-0.005			4290
18-May-94	9999(CDH)	-0.005	-0.005			4295
15-Jun-94	1030	0.007	-0.005	3.7	23	5533
15-Jun-94	1045	0.008	-0.005			5534
14-Jul-94	915	-0.005	-0.005	2.7	23	6407
14-Jul-94	905	0.05	0.022			6408
26-Jul-94	1030	-0.005	-0.005	3.4	11	6830
26-Jul-94	1015	-0.005	-0.005			6831
10-Aug-94	1040	0.011	-0.005	2.1	17	7204
10-Aug-94	1030	0.019	-0.005			7205
24-Aug-94	910	-0.005	-0.005		19	7697
24-Aug-94	9999	-0.005	-0.005	3.6		7701
24-Aug-94	900	0.011	-0.005			7698
07-Sep-94	930	0.075	0.010	2.7	16	8129
07-Sep-94	9999	0.072	-0.005			8130
07-Sep-94	925	0.024	-0.005			8133
19-Sep-94	900	-0.005	-0.005	4.2	12	8597
19-Sep-94	850	-0.005	-0.005			8598
08-Oct-94	1325	-0.005	-0.005	4.3	16	9620
08-Oct-94	1340	-0.005	-0.005			9621
11-Nov-94	1020	*	*	*		*
11-Nov-94	1015	*	*	*		*

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.
 @ = SAMPLER BROKEN DURING SURVEY;
 # NO SAMPLE COLLECTED.
 &# = LAB RE-RUNS
 # NO SAMPLE TAKEN ON THIS DATE.
 * = SAMPLE LOST IN SHIPMENT TO LABORATORY

TABLE 5
393248105030201 CHATFIELD RESERVOIR NEAR PLUM CREEK INFLOW (SITE 8), RP
WATER-QUALITY DATA

DATE	TIME	TOTAL DEPTH (FEET)	SAMPLING DEPTH (FEET)	TEMPERATURE (DEG C)	TRANSPARENCY SECCHI DISK (FEET)	SPECIFIC CONDUCTANCE FIELD (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	SOLIDS RESIDUE AT 105 SUSPENDED (MG/L)
24-Mar-94	1220		2.0	8.0	4.0	235	11.7	8.1	-2
24-Mar-94	9999								-2
24-Mar-94	1215	13.0	11.0	8.0		235	12.0	7.9	-2
20-Apr-94	1125		4.0	10.5	8.0	240	11.3	7.9	-2
20-Apr-94	1135	12.0	10.0	10.5		240	11.3	7.8	-2
18-May-94	1140		4.0	15.5	2.0	345		7.3	4
18-May-94	1135	11.0	9.0	14.0		300		7.1	6
18-May-94	9999(CDH)		6.0						
15-Jun-94	945		1.5	20.0	3.0	250	8.4	7.8	-2
15-Jun-94	930	14.0	12.0	16.5		250	8.2	7.7	14
14-Jul-94	1000		1.5	20.5	3.0	260	7.9	7.6	-2
14-Jul-94	945	15.0	13.0	20.0		260	7.4	7.4	116
26-Jul-94	930		3.5	21.5	7.0	260	8.1	8.1	-2
26-Jul-94	9999								-2
26-Jul-94	925	15.0	13.0	21.0		255	7.9	7.6	-2
10-Aug-94	1000			21.5	4.0	260	7.9	8.0	12
10-Aug-94	1015	11.0	9.0	21.0		260	7.8	7.5	-2
24-Aug-94	835			21.0	4.0	260	7.8	7.7	-2
24-Aug-94	830	10.0	8.0	21.0		260	7.8	7.7	-2
07-Sep-94	1010			19.5	6.0	260	7.9	8.5	4
07-Sep-94	1000	15.0	13.0	19.0		260	8.1	8.0	36
19-Sep-94	940			18.0	7.0	265	7.9	8.3	-2
19-Sep-94	930	14.0	12.0	18.0		265	7.7	8.1	-2
08-Oct-94	1250			15.2	4.0	265	8.8	7.1	-2
08-Oct-94	1230	11.0	9.0	14.4		265	9.1	7.0	74
11-Nov-94	940			8.2	4.0	275	10.3	8.5	*
11-Nov-94	935	10.0	8.0	8.2		275	10.3	8.4	*

TABLE 5
393248105030201 CHATFIELD RESERVOIR NEAR PLUM CREEK INFLOW (SITE 8), RP
WATER-QUALITY DATA

DATE	TIME	NITROGEN TOTAL (MG/L as N)	PHOSPHORUS, TOTAL (MG/L as P)	PHOSPHORUS ORTHO, TOTAL (MG/L as P)	CHLOROPHYLL A CORR. (UG/L)	PHYTOPLANKTON (SPECIES NUMBER)	LABORATORY SAMPLE NUMBER
24-Mar-94	1220	0.3	0.008	-0.005	4.7		2188
24-Mar-94	9999	0.3	0.008	-0.005	5.0		2194
24-Mar-94	1215	0.3	0.009	-0.005			2189
20-Apr-94	1125	-0.1	0.007	-0.005	3.0		3033
20-Apr-94	1135	-0.1	0.007	-0.005			3034
18-May-94	1140	0.2	0.009	-0.005	3.3		4291
18-May-94	1135	0.4	0.009	-0.005			4292
18-May-94	9999(CDH)	0.3	0.005	-0.005			4296
15-Jun-94	945	0.2	0.013	-0.005	3.3		5531
15-Jun-94	930	0.3	0.025	-0.005			5532
14-Jul-94	1000	0.2	-0.005	0.006	2.7	26	6405
14-Jul-94	945	0.2	0.006	-0.005			6406
26-Jul-94	930	0.1	-0.005	-0.005	2.7	7	6828
26-Jul-94	9999	0.2	-0.005	-0.005			6834
26-Jul-94	925	0.2	-0.005	-0.005			6829
10-Aug-94	1000	0.3	-0.005	-0.005	3.0	20	7202
10-Aug-94	1015	0.3	0.17	-0.005			7203
24-Aug-94	835	0.2	0.006	-0.005	4.4	14	7695
24-Aug-94	830	0.1	0.01	-0.005			7696
07-Sep-94	1010	0.3	0.065	0.022	3.1	18	8127
07-Sep-94	1000	0.5	0.101	0.023			8128
19-Sep-94	940	-0.1	-0.005	-0.005	4.0	15	8599
19-Sep-94	930	-0.1	-0.005	-0.005			8600
08-Oct-94	1250	-0.1	0.028	-0.005	4.2	16	9618
08-Oct-94	1230	0.7	-0.005	-0.005			9619
11-Nov-94	940	*	*	*			*
11-Nov-94	935	*	*	*			*

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.

* = SAMPLE LOST IN SHIPMENT TO LABORATORY.

● = SAMPLER BROKEN DURING SURVEY; NO SAMPLE COLLECTED.

TABLE 6
393212015042701 CHATFIELD RESERVOIR NEAR SOUTH PLATTE RIVER INFLOW (SITE 9), RS
WATER-QUALITY DATA

DATE	TIME	TOTAL DEPTH (FEET)	SAMPLING DEPTH (FEET)	TEMPERATURE (DEG C)	TRANSPARENCY SECCHI DISK (FEET)	SPECIFIC CONDUCTANCE FIELD (US/CM)	OXYGEN, DISSOLVED (MG/L)	pH, FIELD (STANDARD UNITS)	SOLIDS RESIDUE AT 105 SUSPENDED (MG/L)
24-Mar-94	1325		3.5	8.0	7.0	240	11.7	8.1	-2
24-Mar-94	1320	10.0	8.0	7.5		240	11.4	8.0	-2
20-Apr-94	No sample taken								
20-Apr-94	No sample taken								
18-May-94	1030		2.5	15.0	5.0	345		7.3	2
18-May-94	9999								-2
18-May-94	1025	10.0	8.0	14.5		330		7.2	14
18-May-94	9999(CDH)		6.0						4
16-Jun-94	1120		2.5	20.0	5.0	245	8.3	7.9	-2
16-Jun-94	1145	11.0	9.0	19.0		240	8.1	7.8	-2
14-Jul-94	840		2.0	20.5	4.0	250	7.5	7.6	-2
14-Jul-94	9999								-2
14-Jul-94	835	12.0	10.0	20.5		250	7.5	7.8	2
26-Jul-94	1050		4.0	22.5	8.0	255	8.1	7.8	-2
26-Jul-94	1040	12.0	10.0	22.0		255	8.2	7.8	20
10-Aug-94	920			21.5	7.0	255	7.7	8.0	2
10-Aug-94	9999								2
10-Aug-94	910	12.0	10.0	21.5		255	7.6	8.0	6
24-Aug-94	950			21.5	7.0	260	8.2	8.3	-2
24-Aug-94	940	12.0	10.0	21.0		260	8.0	7.9	-2
07-Sep-94	925			19.5	6.0	260	8.3	8.0	4
07-Sep-94	850	11.0	9.0	19.5		260	8.2	8.0	2
19-Sep-94	1005			18.0	7.0	260	8.6	8.5	-2
19-Sep-94	9999								-2
19-Sep-94	955	11.0	9.0	18.0		260	8.4	8.3	-2
08-Oct-94	1410			15.0	5.0	265	9.0	7.1	-2
08-Oct-94	1405	11.0	9.0	14.5		265	9.3	7.1	-2
11-Nov-94	1035			8.0	5.0	280	10.3	8.6	*
11-Nov-94	1040	11.0	9.0	8.0		280	10.2	8.4	*

TABLE 6
393212015042701 CHATFIELD RESERVOIR NEAR SOUTH PLATTE RIVER INFLOW (SITE 9), RS
WATER-QUALITY DATA

DATE	TIME	NITROGEN TOTAL (MG/L. ## N)	PHOSPHORUS, TOTAL (MG/L. ## P)	PHOSPHORUS ORTHO, TOTAL (MG/L. ## P)	CHLOROPHYLL A CORR. (UG/L)	PHYTOPLANKTON (SPECIES NUMBER)	LABORATORY SAMPLE NUMBER
24-Mar-94	1325	0.2	0.006	-0.005	4.5		2192
24-Mar-94	1320	0.2	0.006	-0.005			2193
20-Apr-94	No sample taken						
20-Apr-94	No sample taken						
18-May-94	1030	0.3	0.028	0.017	3.3		4287
18-May-94	9999	0.3	0.007	-0.005			4293
18-May-94	1025	0.3	0.017	0.005			4288
18-May-94	9999(CDH)	0.2	0.008	-0.005			4294
16-Jun-94	1120	0.2	0.006	-0.005	2.5		5535
16-Jun-94	1145	0.2	0.011	-0.005			5536
14-Jul-94	840	0.2	-0.005	-0.005	3.1	21	6409
14-Jul-94	9999	0.2	-0.005	-0.005			6411
14-Jul-94	835	0.2	-0.005	-0.005			6410
26-Jul-94	1050	0.2	-0.005	-0.005	2.7	16	6832
26-Jul-94	1040	-0.1	-0.005	-0.005			6833
10-Aug-94	920	0.3	0.007	-0.005	2.7	14	7206
10-Aug-94	9999	0.2	0.010	-0.005			7208
10-Aug-94	910	0.2	0.010	-0.005			7207
24-Aug-94	950	0.2	-0.005	-0.005	2.6	14	7699
24-Aug-94	940	0.3	-0.005	-0.005			7700
07-Sep-94	925	0.3	0.042	-0.005	2.7	15	8131
07-Sep-94	850	0.2	0.026	-0.005			8132
19-Sep-94	1005	-0.1	-0.005	-0.005	3.7	13	8601
19-Sep-94	9999	-0.1	-0.005	-0.005			8603
19-Sep-94	955	-0.1	-0.005	-0.005			8602
08-Oct-94	1410	0.3	-0.005	-0.005	4.2	16	9622
08-Oct-94	1405	0.2	-0.005	-0.005			9623
11-Nov-94	1035	*	*	*			*
11-Nov-94	1040	*	*	*			*

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.

* - SAMPLE LOST IN SHIPMENT TO LABORATORY

- SAMPLE LOST IN LABORATORY.

APPENDIX A

PHYTOPLANKTON SPECIES AND DENSITY - 1994 CY (with comparative chlorophyll-a results)

TABLE A-1

GROWING SEASON (JULY-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	0.080	9.0
1988	0.020	9.6
1989	0.012	2.3
1990	0.027	10
1991	0.044	2.7
1992	0.027	4.5
1993	0.018	4.1
1994	<u>0.04</u>	<u>3.4</u>
Mean	0.034	7.7
Std. Dev.	0.018	4.4
Maximum	0.080	16.0
Minimum	0.012	2.3
N	12	12

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

TABLE A-2
PHYTOPLANKTON, DATA 1994 SURVEY RESULTS
CHATFIELD RESERVOIR

Date (mm/dd/yy) Site Identification	07/15/94			07/26/94			08/10/94			08/24/94		
	RM	RP	RS	RM	RP	RS	RM	RP	RS	RM	RP	RS
BACILLARIOPHYTA												
Asterionella formosa	2	12	7	5	15	29	28	23	3	75	23	15
Cyclotella bodanica			1									
Fragilaria crotonensis	22	53	45	40		25		9	8	50	75	17
Gyrosigma spencerii												
Melosira granulata		3		19		15		23		108	32	113
Melosira granulata var. angustissima	53	17	36			14	10	38		50	66	45
Melosira italica		8										
Nitzschia acicularis		1	1									
Nitzschia palea		1								1		
Stephanodiscus (astrea) rotula	1	1					1	1		3	1	3
Synedra acus	1											
Synedra cyclopus	1	1	1			1	3	17	9	1	3	
CHLOROPHYTA												
Ankyra judayi	3	6	5			1	1	8		1		
Chlamydomonas sp.	125	63	125									
Chlorella sp.	375	1063	375	2000	2500		625	250	1250	3250	250	250
Chlorogonium sp.								2	1			
Closterium gracile		1										
Coccomyxa sp.	21438	38375	27688		7500	750	125	500	750			1250
Cosmarium sp.												
Eremosphaera gigas	2	4	15				6	6	6	4		
Eutetramorus sp.	42	18	18									
Gloeocystis sp.	3		2				2			2		
Kirchneriella lunaris	16											
Pediastrum duplex												
Scenedesmus ecornis			188									
Scenedesmus linearis		6										
Schroederia setigera	1											
Staurastrum paradoxum		1		2		1					1	
CHRYSOPHYTA												
Chromulina sp.					1250							
Dinobryon divergens		10	23	3		238	101	117	38			5
Epichrysis sp.							38					
Mallomonas akrokomos	1	1										
CRYPTOPHYTA												
Chroomonas acuta	625	1438	1083	1250	1250	4250	500	500	250	1250	1500	1000
Cryptomonas marsonii	21	21	15	6		23	2	39	5	28	11	5
Cryptomonas ovata												
Cryptomonas reflexa	25	25	16	14		11	4	37	11	5	6	1
Cryptomonas rostratiformis	9	5	14	2		5	6	17	7	9	14	
CYANOPHYTA												
Anabaena circinalis					80							
Anabaena flos-aquae	7			156		8						
Aphanizomenon flos-aquae					330	270	372	929	2436		20	49
Aphanothece sp.	19938	23500	46250				29000	32750		54000	18500	52500
Gomphosphaeria wichurae										10		
Merismopedia tenuissima										250		
Oscillatoria limnetica												
Planktolyngbya subtilis												
EUGLENOPHYTA												
Euglena sp.								5				
PYRROPHYTA												
Ceratium hirundinella	4	1	3			1	1	1	1	2		3
TOTAL DENSITY (cells/mL)	42715	84635	75891	3497	12925	5642	30825	35272	4775	59099	20502	55256
Number of Species	23	26	21	11	7	16	17	20	14	19	14	14

PHY PHYTOPLANKTON, DATA 1994 SURVEY RESULTS
CHATFIELD RESERVOIR

Date (mm/dd/yy) Site Identification	09/07/94			09/19/94			10/08/94			Species Total
	RM	RP	RS	RM	RP	RS	RM	RP	RS	
BACILLARIOPHYTA										
Asterionella formosa	27	68	30	306	326	274	386	680	512	2316
Cyclotella bodanica										1
Fragilaria crotonensis	38	2	3	122	142	62	63	52	44	828
Gyrosigma spencerii		1								1
Melosira granulata	470	1002	714	380	350	56	88	32	76	3405
Melosira granulata var. angustissima	130	112	55	48		54	6	25		759
Melosira italica										8
Nitzschia acicularis										2
Nitzschia palea				1	1				1	4
Stephanodiscus (astrea) rotula	3	2			1		5	15	1	37
Synedra acus										1
Synedra cyclopus	1			1	5					44
CHLOROPHYTA										
Ankyra judayi										25
Chlamydomonas sp.										313
Chlorella sp.	1000	3000	500	250	250		1000	1250	625	19438
Chlorogonium sp.		1							1	4
Closterium gracile										1
Coccomyxa sp.	1750	5750	250				125	188	725	106439
Cosmarium sp.				1						1
Eremosphaera gigas										43
Eutetramorus sp.	18									96
Gloeocystis sp.										9
Kirchneriella lunaris										16
Pediastrum duplex			36			36				72
Scenedesmus ecornis										188
Scenedesmus linearis		12								18
Schroederia setigera										1
Staurastrum paradoxum										5
CHRYSOPHYTA										
Chromulina sp.										1250
Dinobryon divergens							30	8	21	573
Epichrysis sp.										38
Mallomonas akrokomos										2
CRYPTOPHYTA										
Chroomonas acuta	1250	1000	250	63	125	500	625	625	250	19314
Cryptomonas marsonii	3	2	5	1	9	5	1	5	1	207
Cryptomonas ovata								2		2
Cryptomonas reflexa	4	14	4	8	18	9	2	24	16	238
Cryptomonas rostratiformis		7	3		8	4		1	3	111
CYANOPHYTA										
Anabaena circinalis							18			98
Anabaena flos-aquae	36	28	122			38	179		81	574
Aphanizomenon flos-aquae	1176	355	1925	830	17	392	1600	374	2175	11075
Aphanothece sp.		6750	625							283813
Gomphosphaeria wichurae		148			46	142		250		596
Merismopedia tenuissima										250
Oscillatoria limnetica	126									126
Planktolyngbya subtilis	48				250		750			1048
EUGLENOPHYTA										
Euglena sp.					1	2				8
PYRROPHYTA										
Ceratium hirundinella			1				1	2	3	21
TOTAL DENSITY (cells/mL)	6080	18254	4523	2013	1549	1574	4879	3513	4535	
Number of Species	16	18	15	12	15	13	16	16	16	47

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 24 March 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	4.9
RP-1	1.0	4.7
RS-1	1.0	4.5
RM-CDH	1.0	5.3
RP-CDH	1.0	5.6
RS-CDH	1.0	4.0
XXX	1.0	5.0

*Compare
Swamp net
to 2017
data*

RP-1

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 20 April 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RMCDH	1.0	1.8
RPCDH	1.0	3.0

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 18 May 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RSCDH	1.0	3.3
RMCDH	1.0	3.8
RPCDH	1.0	3.3

6/22/94

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 15 June 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-CDH	1.0	3.7
RP-CDH	1.0	3.3
RS-CDH	1.0	2.5
XXX	1.0	3.7

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 14 July 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	2.7
RP-1	1.0	2.7
RS-1	1.0	3.1

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 26 July 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	3.4
RP-1	1.0	2.7
RS-1	1.0	2.7

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 10 August 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	2.1
RP-1	1.0	3.0
RS-1	1.0	2.7

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 24 August 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	3.6
RP-1	1.0	4.4
RS-1	1.0	2.6

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 7 September 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	2.7
RP-1	1.0	3.1
RS-1	1.0	2.7

University of Colorado Center for Limnology

Client: ASI

Site: Chatfield Reservoir

Collection Date: 19 September 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM-1	1.0	4.2
RP-1	1.0	4.0
RS-1	1.0	3.7
XX1	1.0	3.6
XX2	1.0	3.4

University of Colorado Center for Limnology

Client: ASI

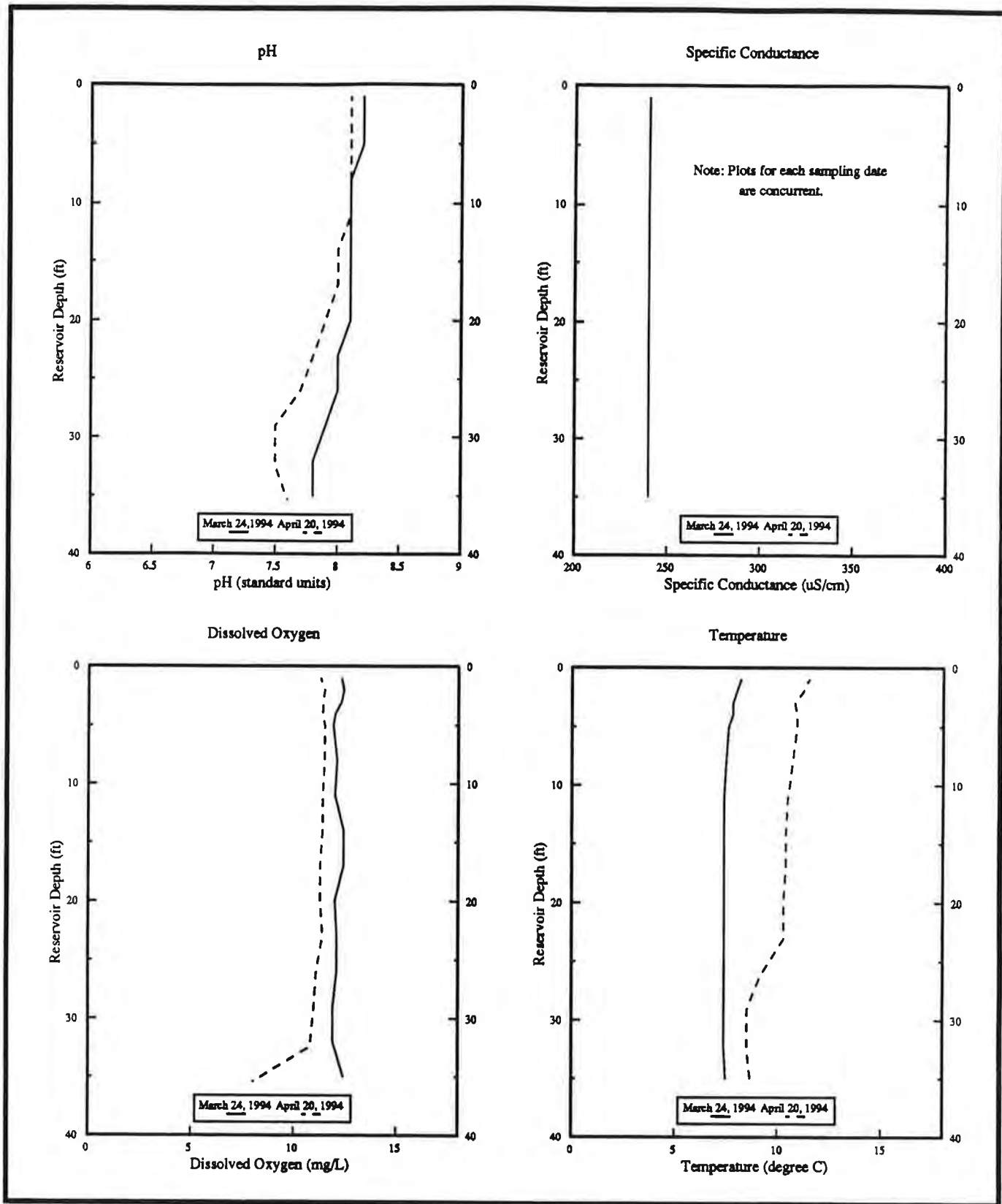
Site: Chatfield Reservoir

Collection Date: 8 October 1994

Sample Code	Volume Filtered, l	Chlorophyll a, $\mu\text{g/l}$
RM	1.0	4.3
RP	1.0	4.2
RS	1.0	4.2

APPENDIX B

WATER-COLUMN INDICATOR-VARIABLE PROFILES 1994 CY MONITORING PROGRAM



**IN-RESERVOIR DEPTH PROFILE DATA, SITE 7 (RM)
CHATFIELD RESERVOIR 1994**

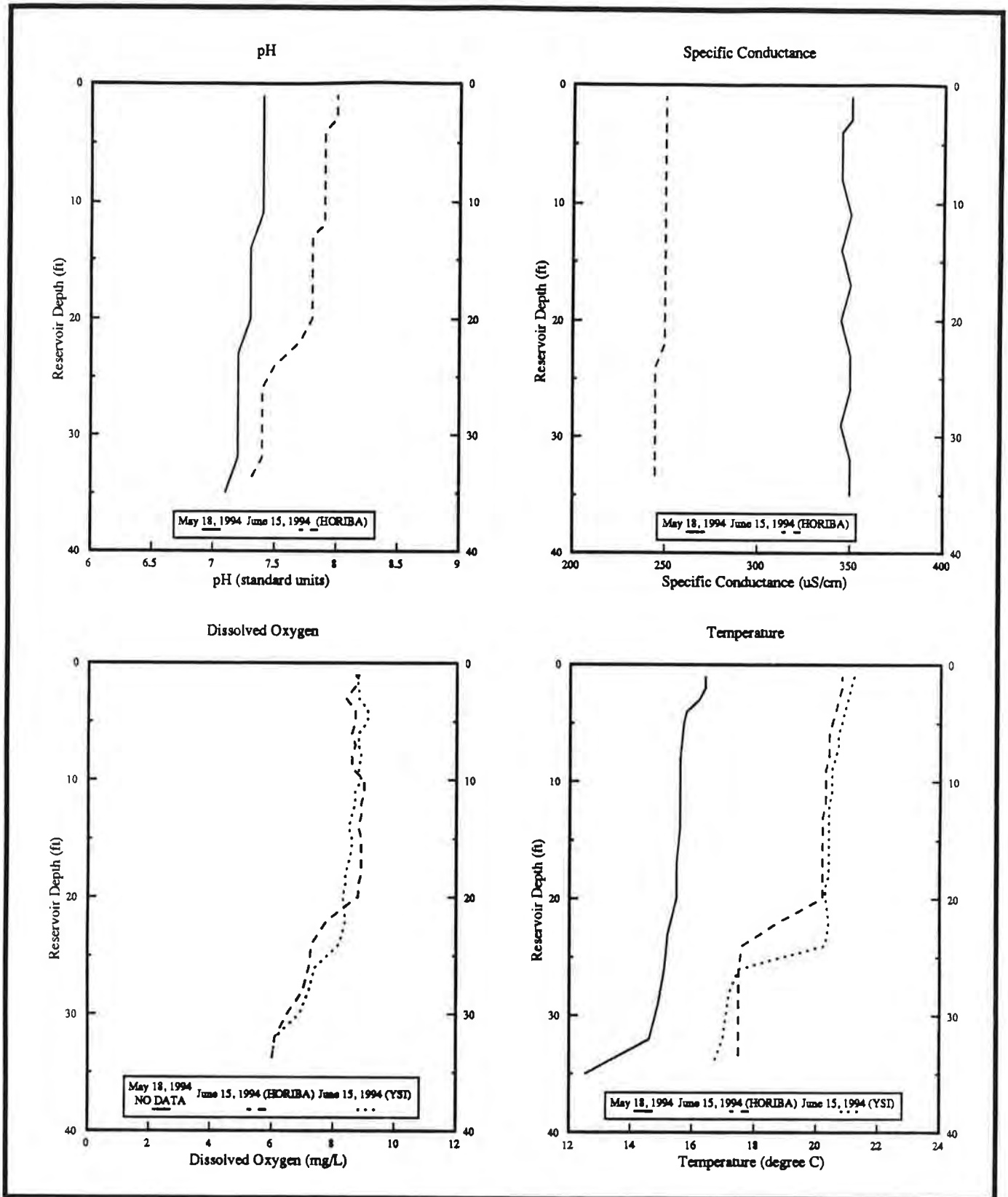


**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-1A

STATUS: March 10, 1995



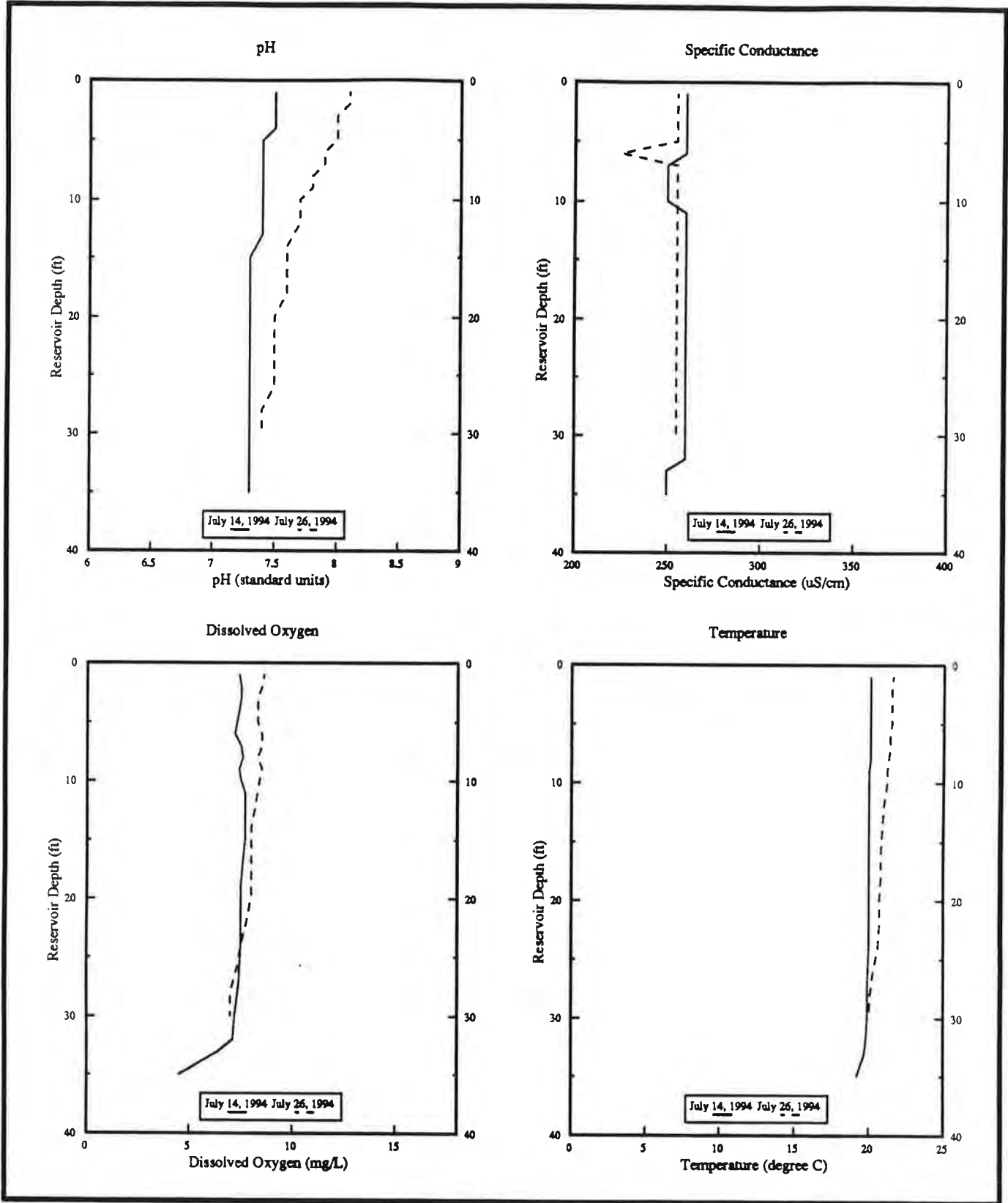
IN-RESERVOIR DEPTH PROFILE DATA, SITE 7 (RM)
CHATFIELD RESERVOIR 1994



CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM

Project No. 8969.40

Figure B-1B



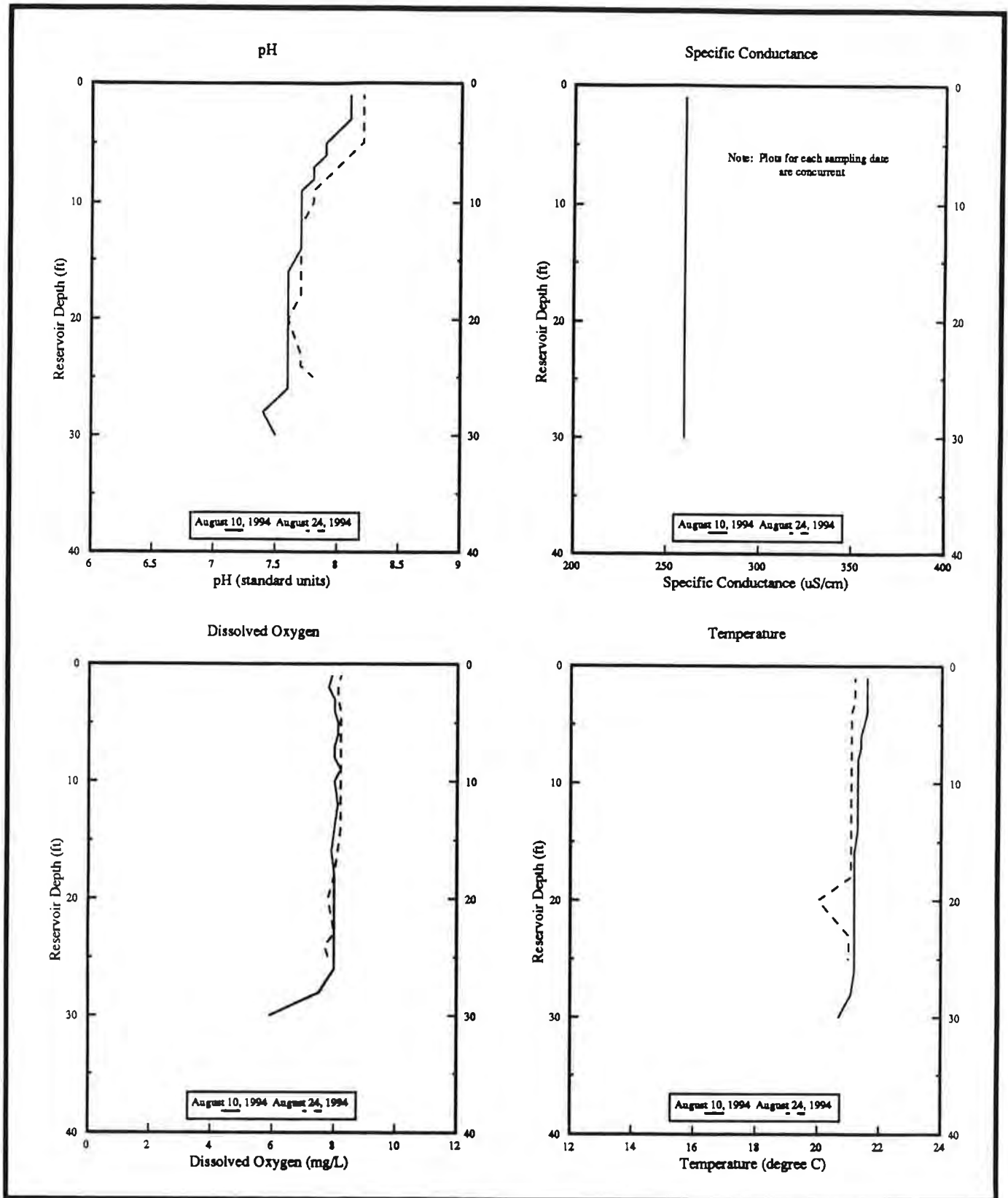
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 7 (RM)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-1C



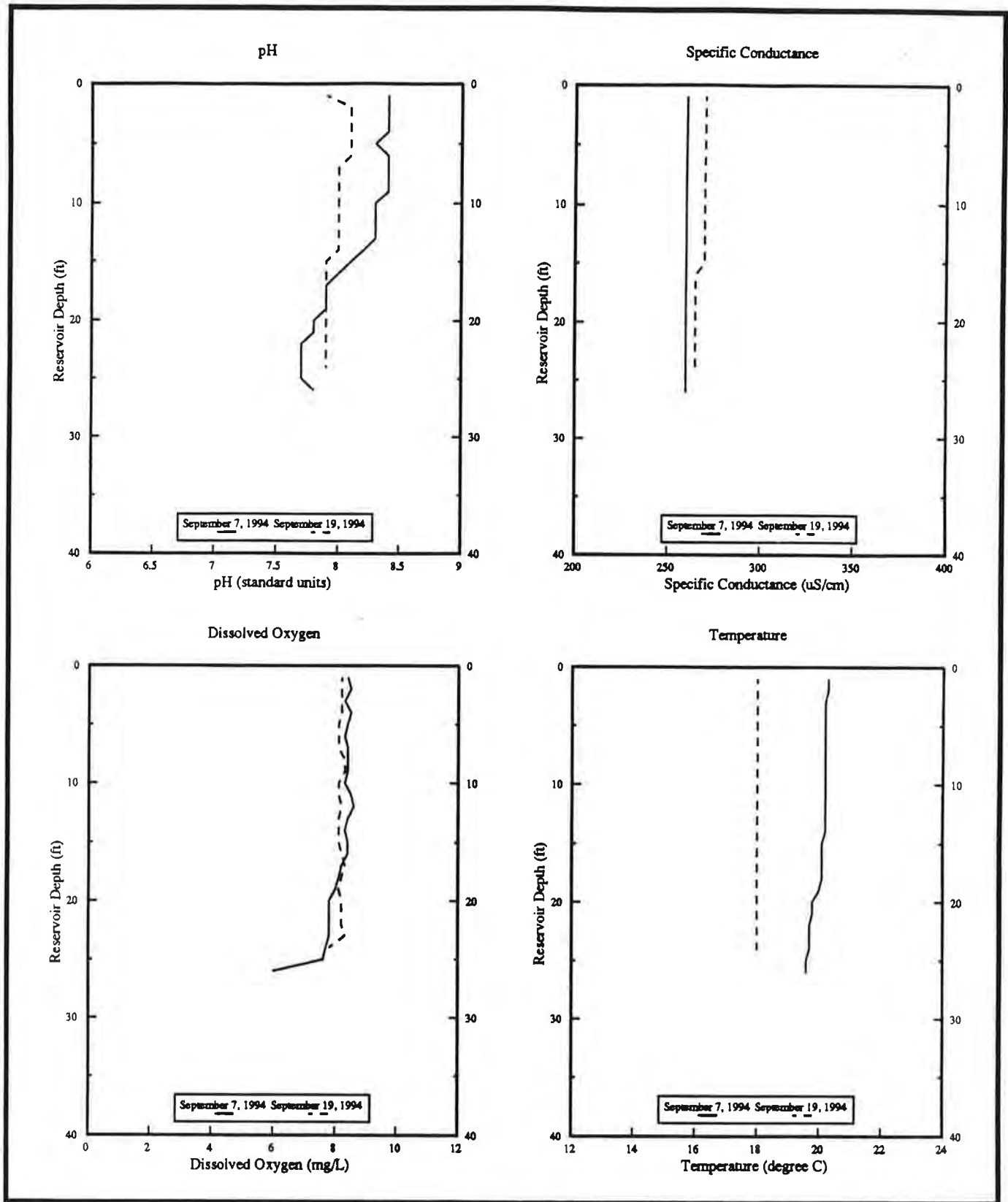
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 7 (RM)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-1D



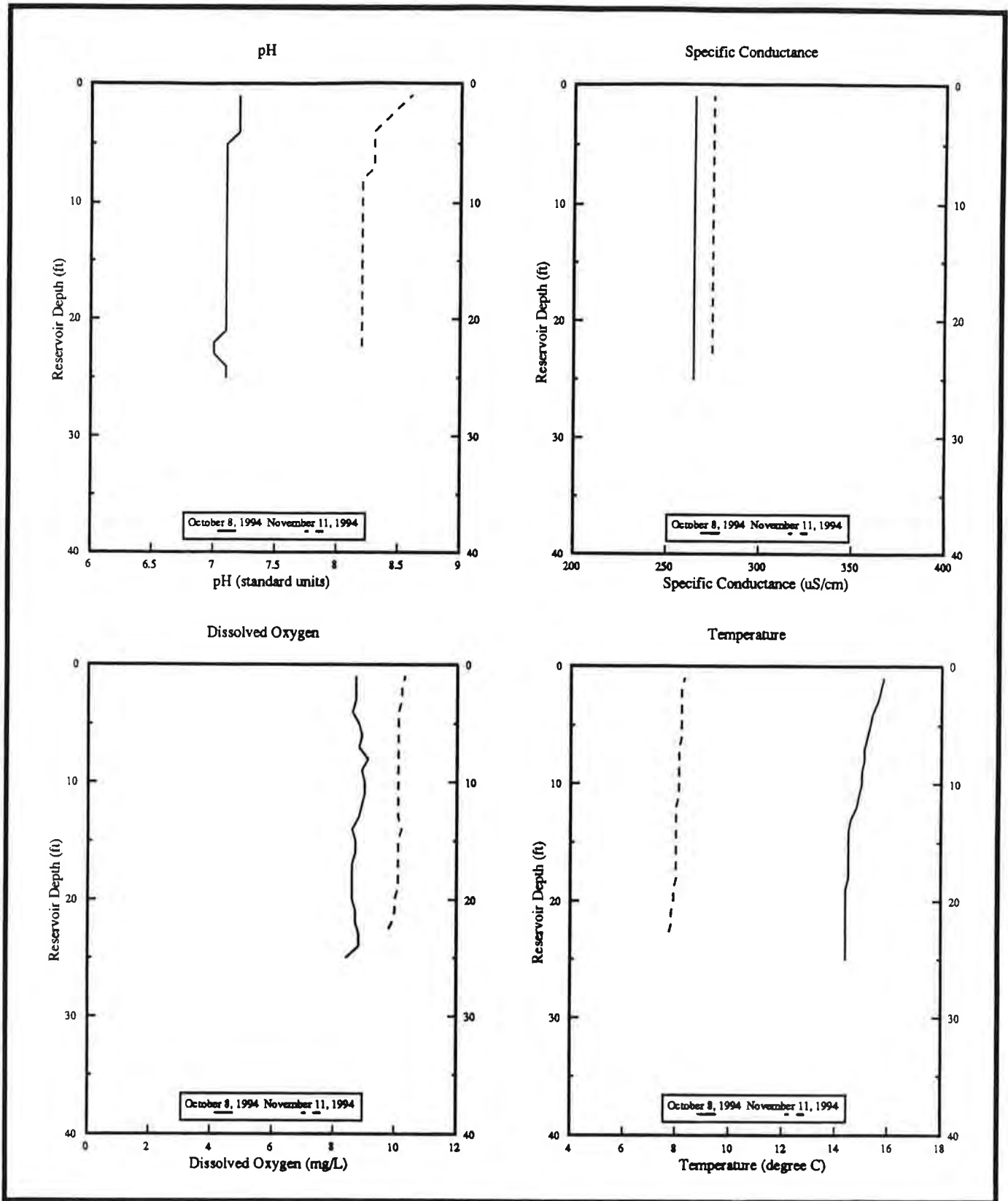
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 7 (RM)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-1E



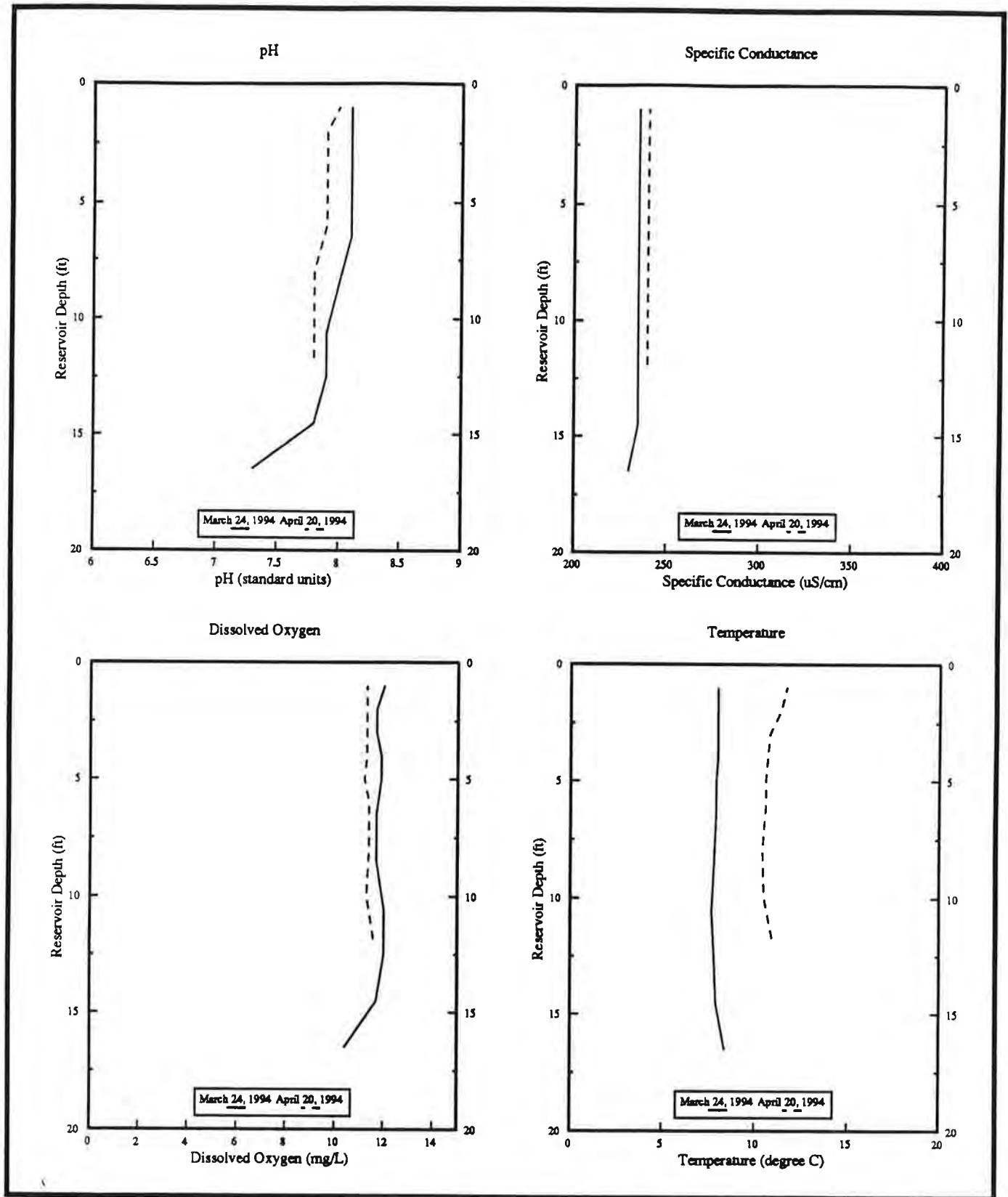
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 7 (RM)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-1F



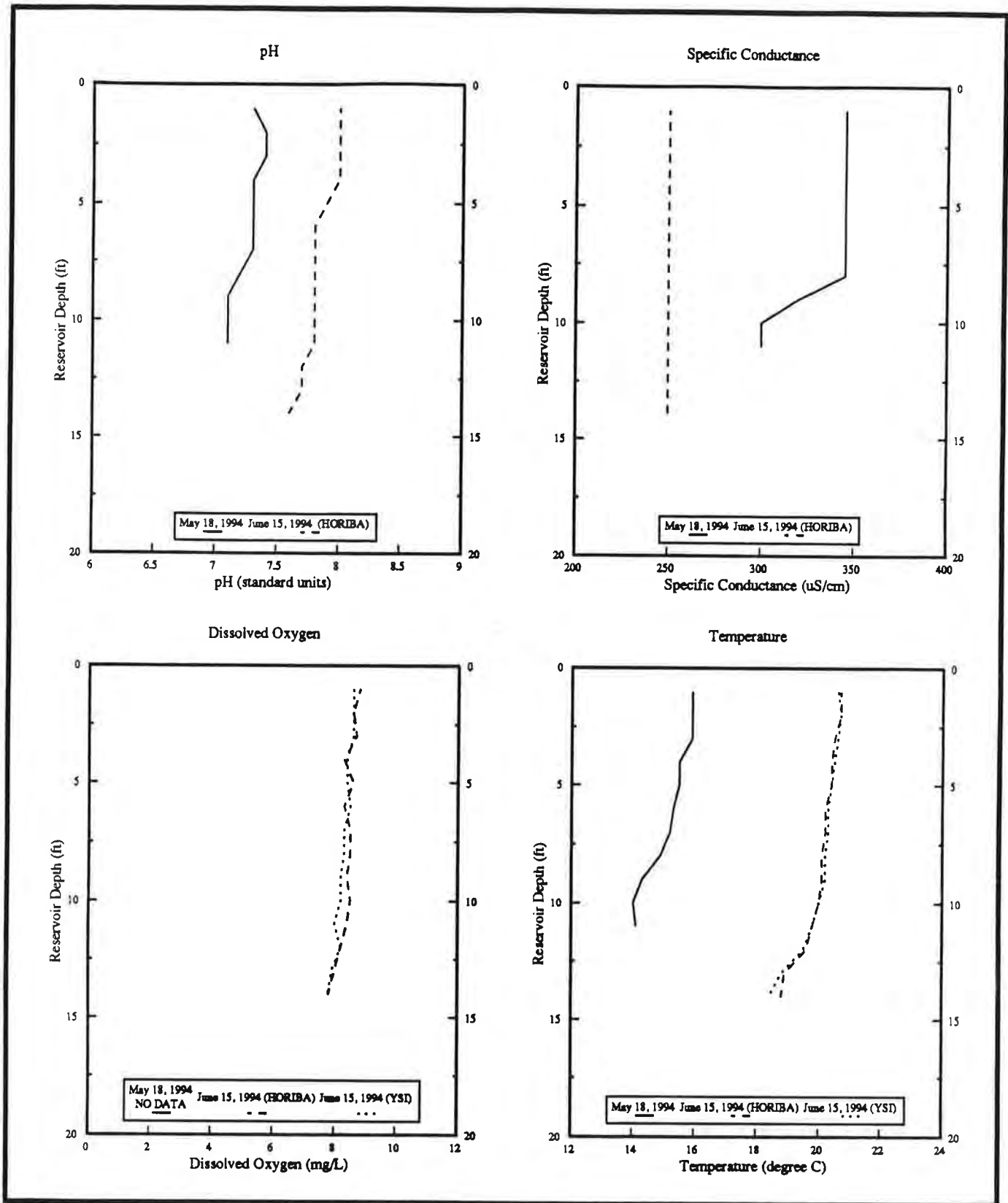
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 8 (RP)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-2A



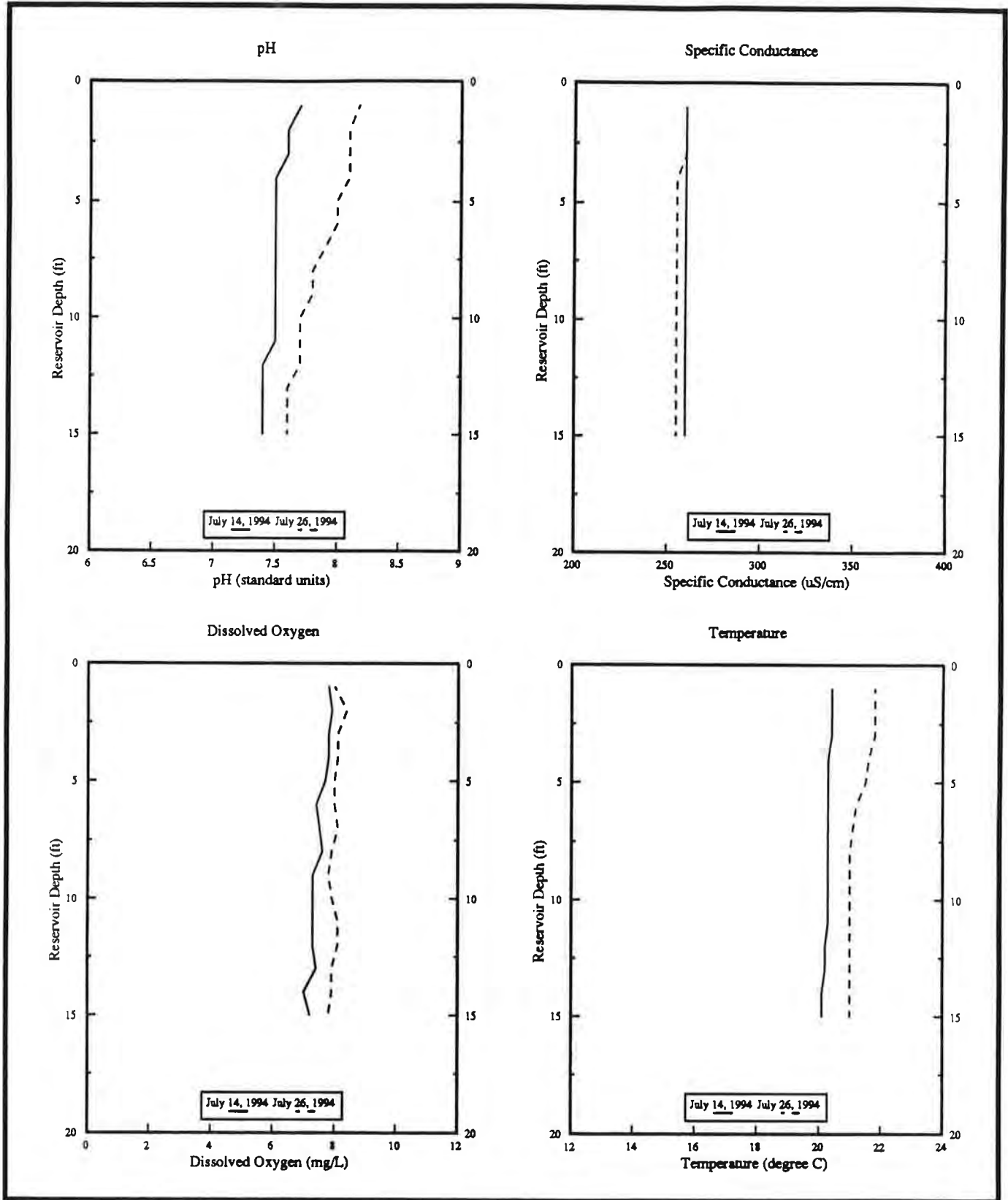
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 8 (RP)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-2B



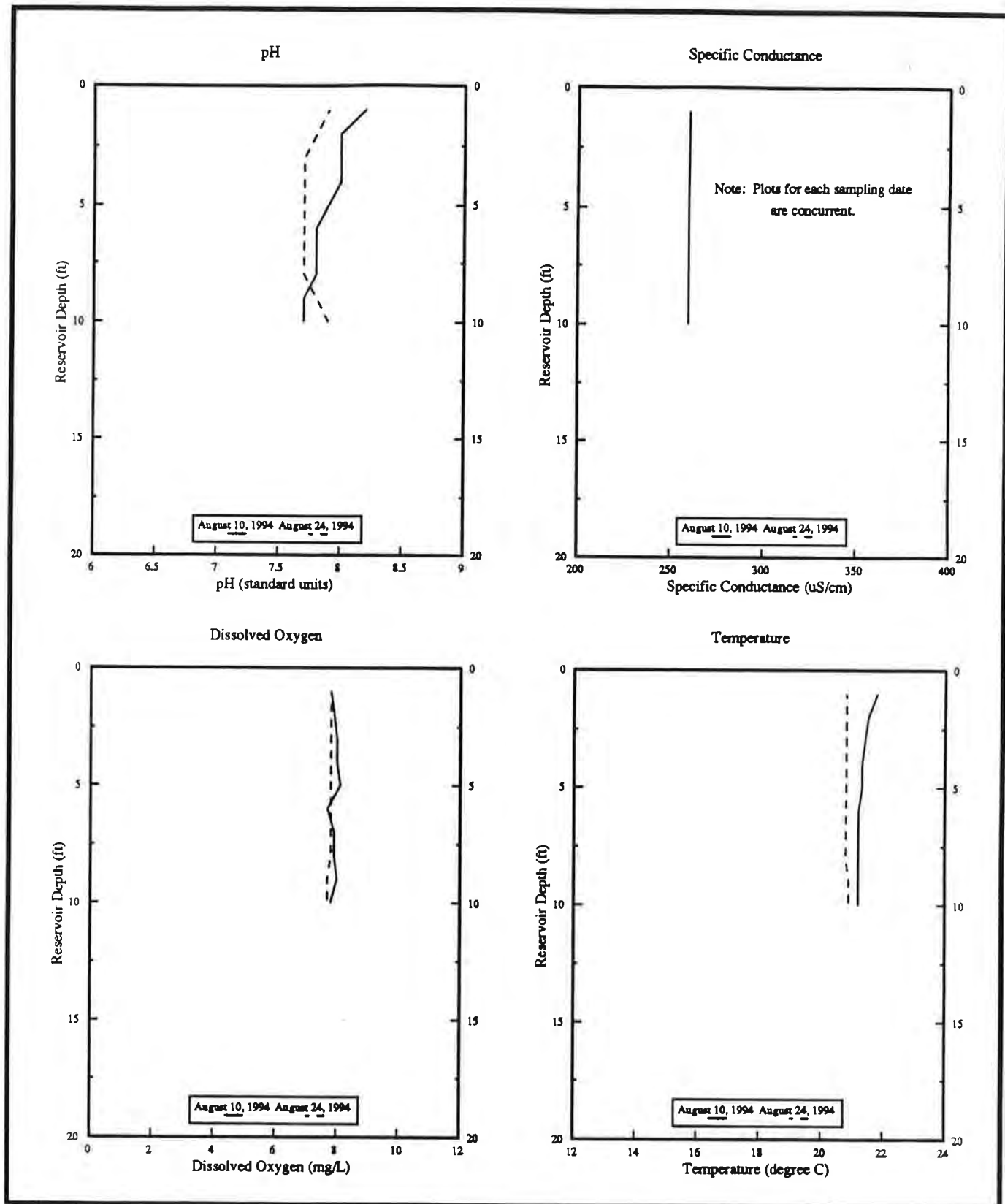
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 8 (RP)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-2C



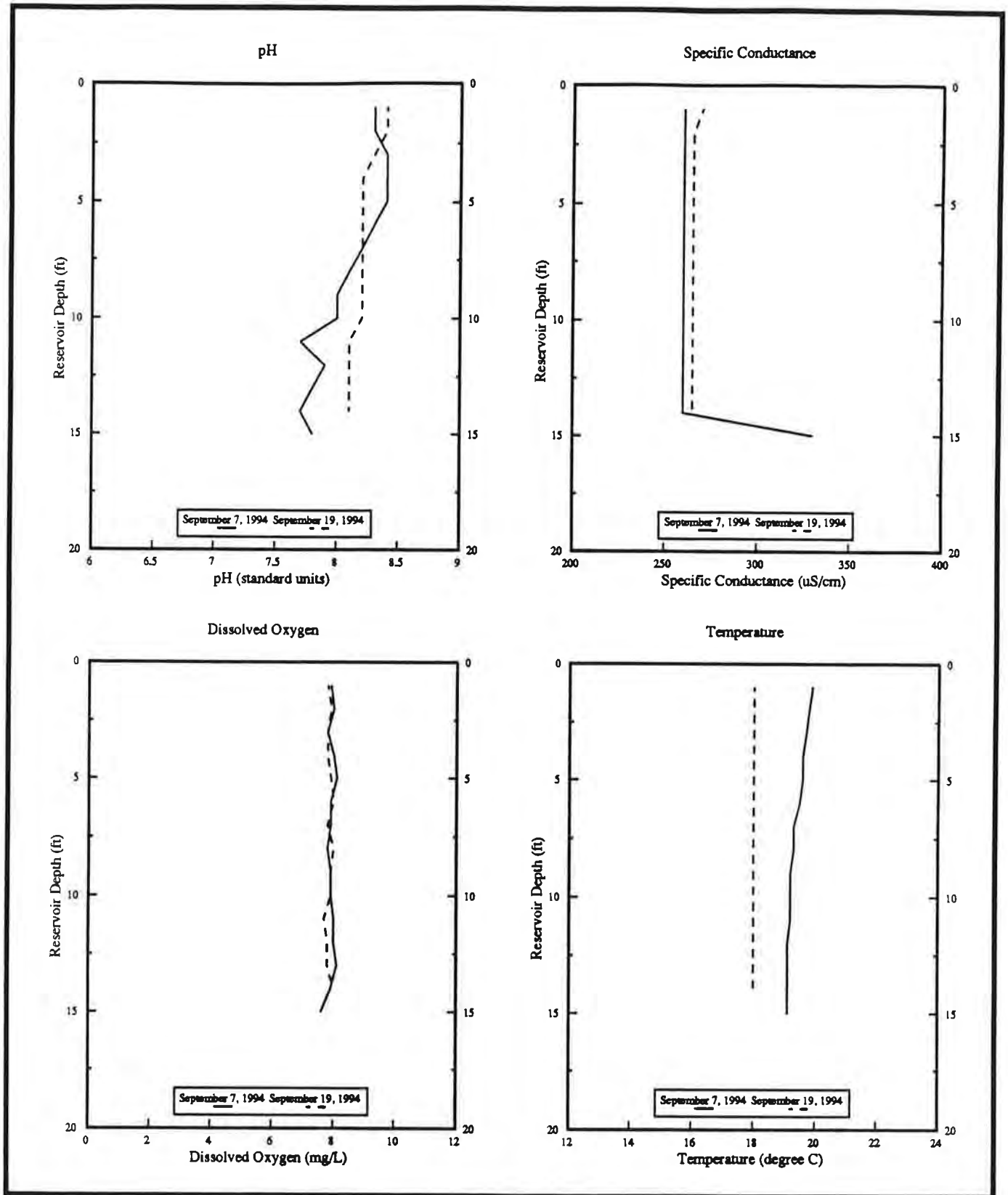
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 8 (RP)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-2D



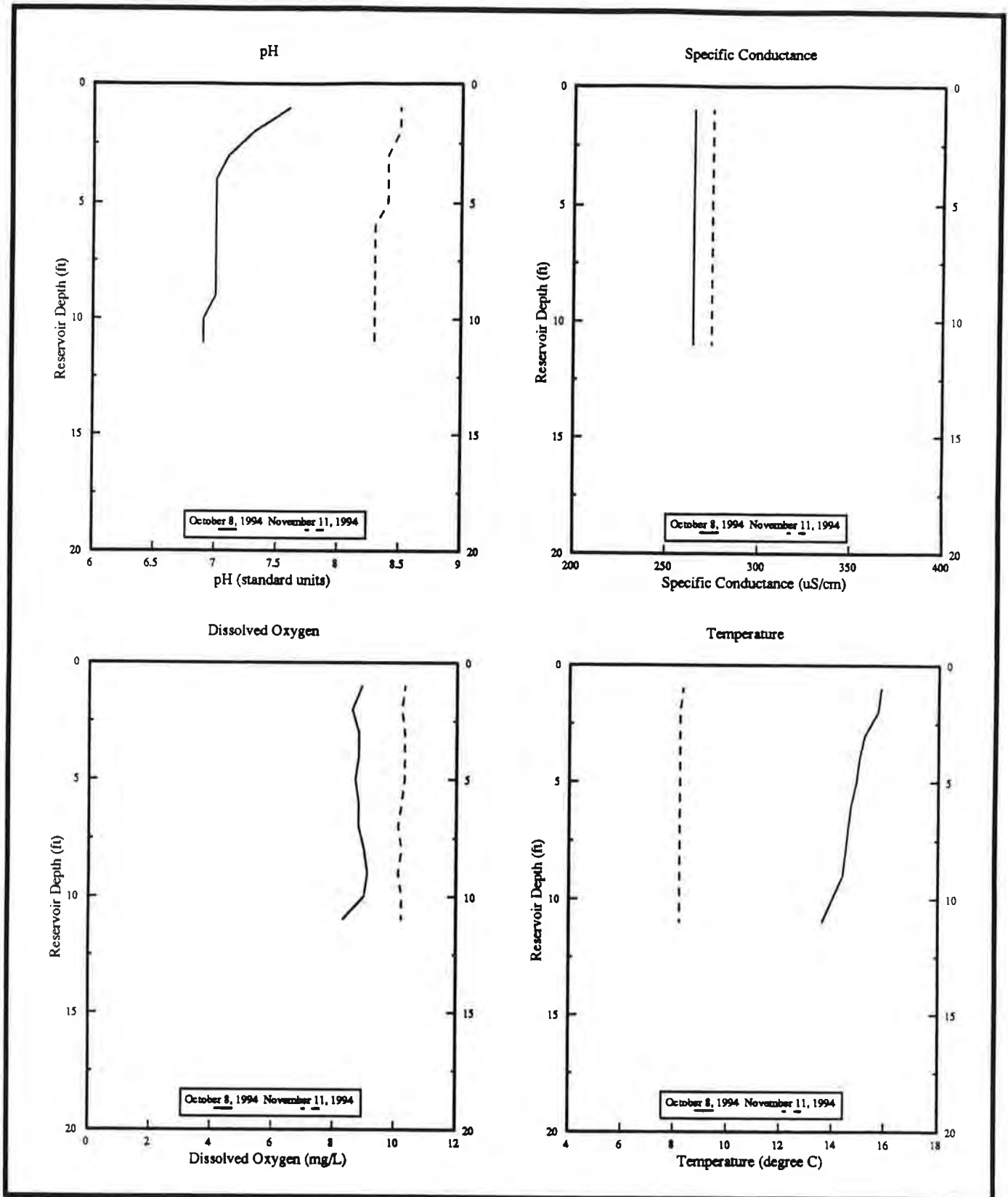
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 8 (RP)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-2E



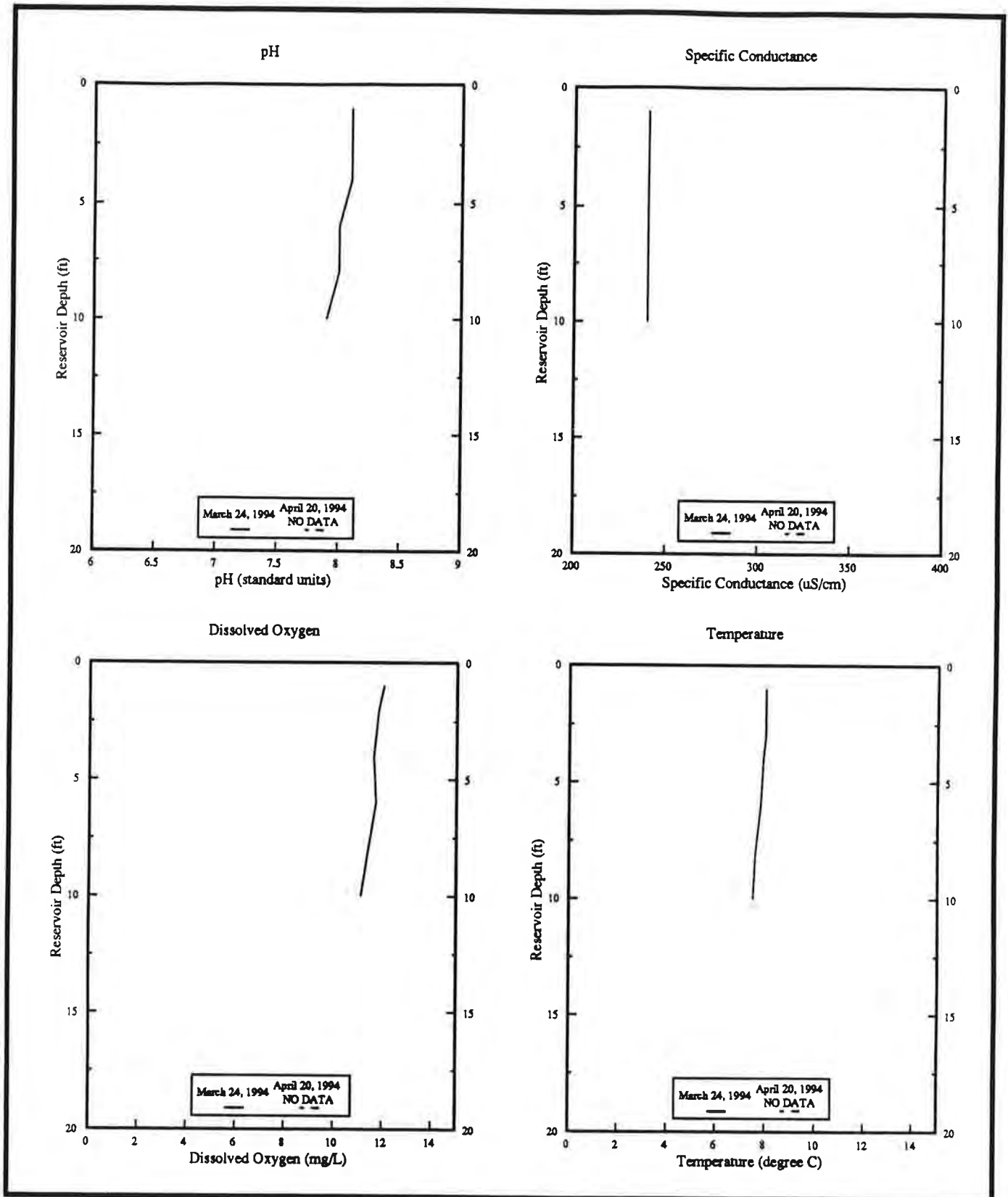
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 8 (RP)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-2F



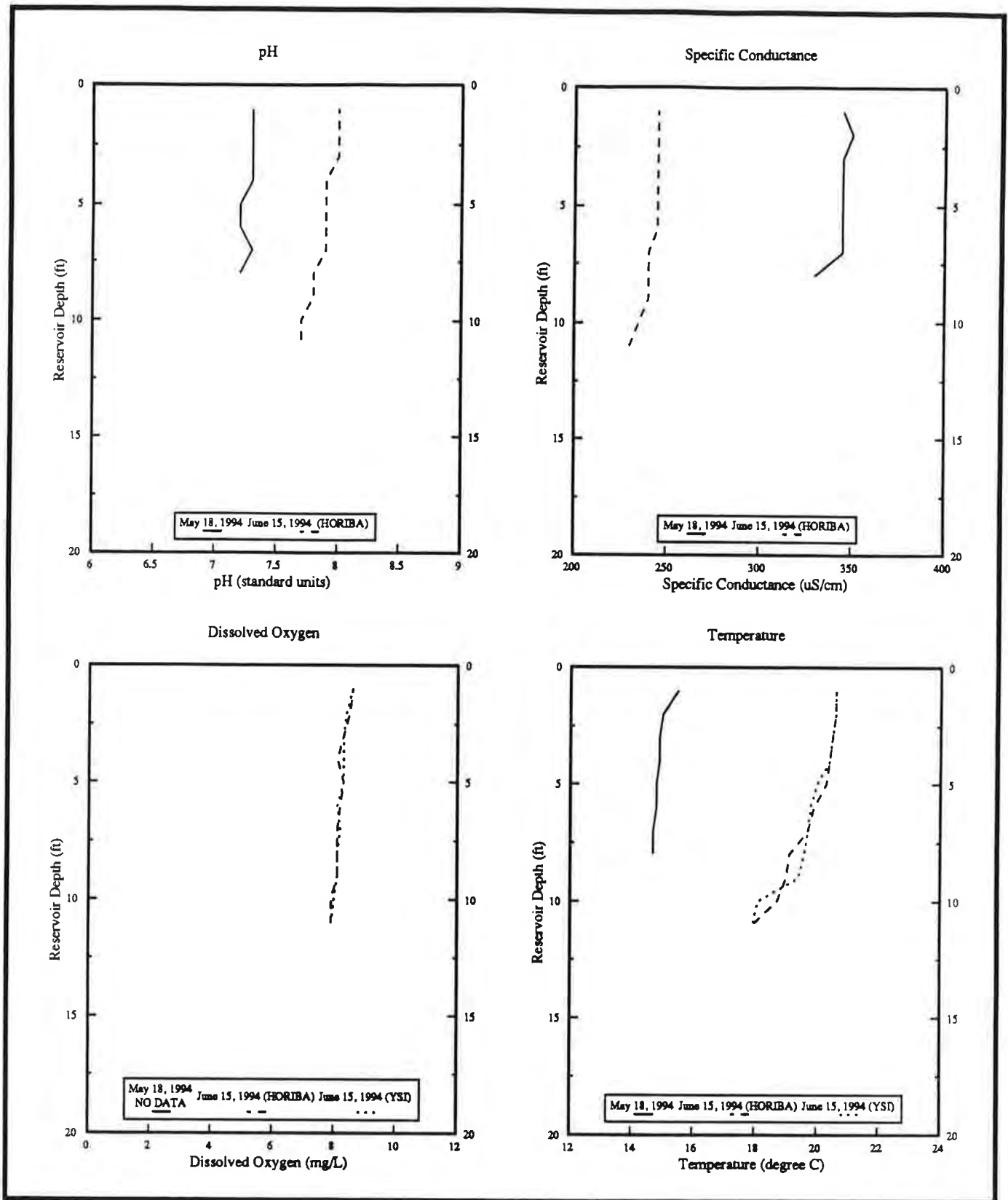
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 9 (RS)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-3A



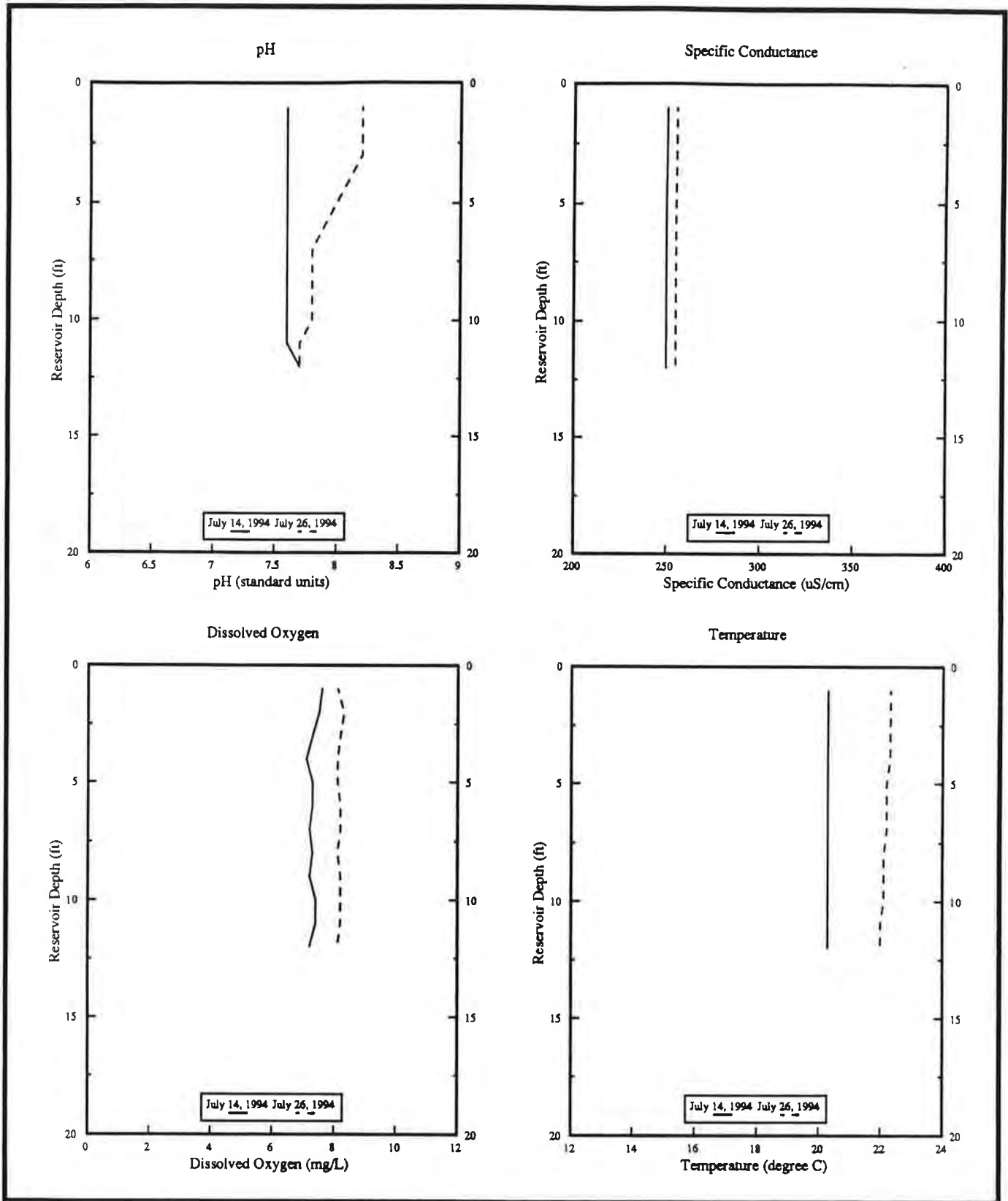
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 9 (RS)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-3B



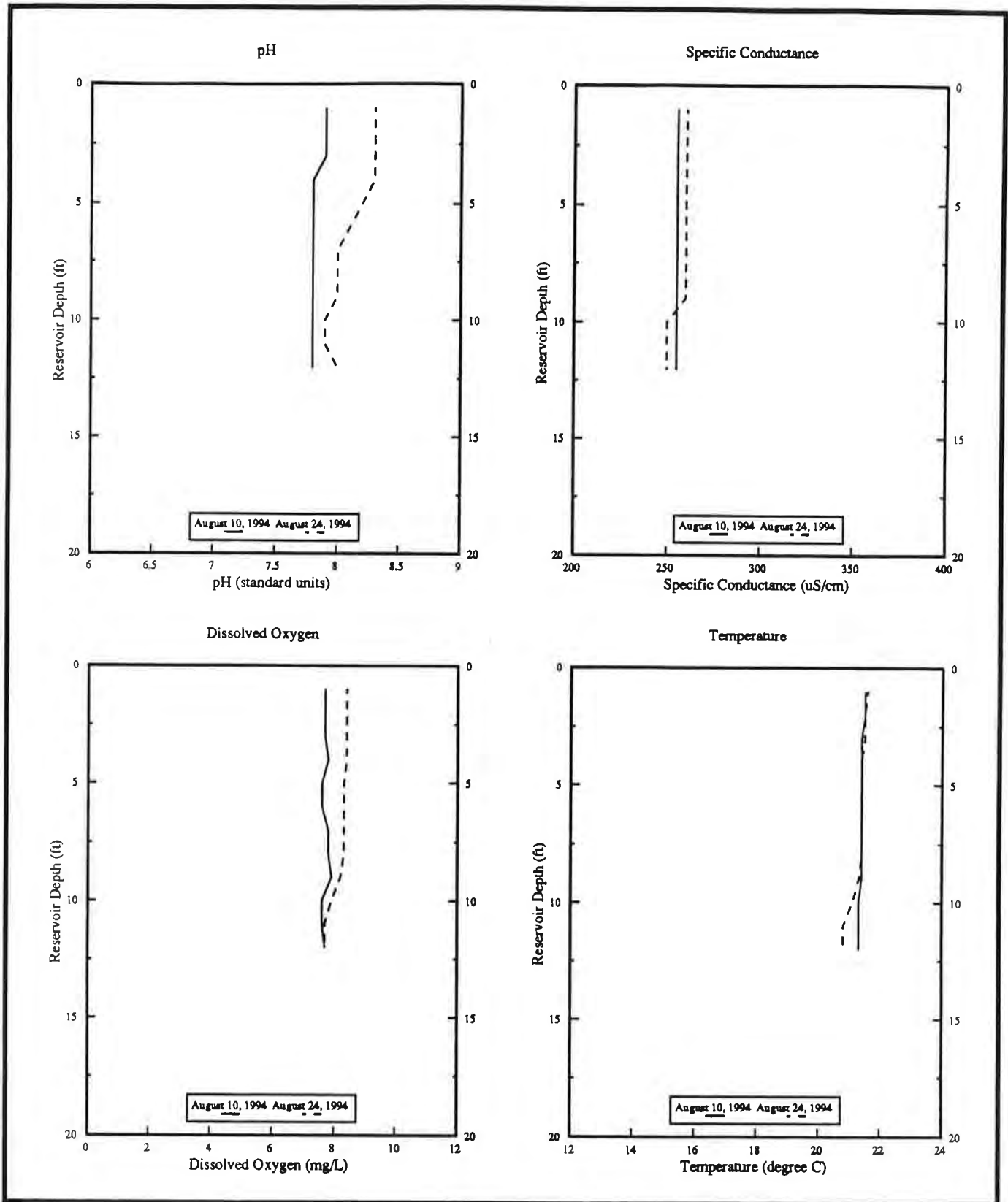
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 9 (RS)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-3C



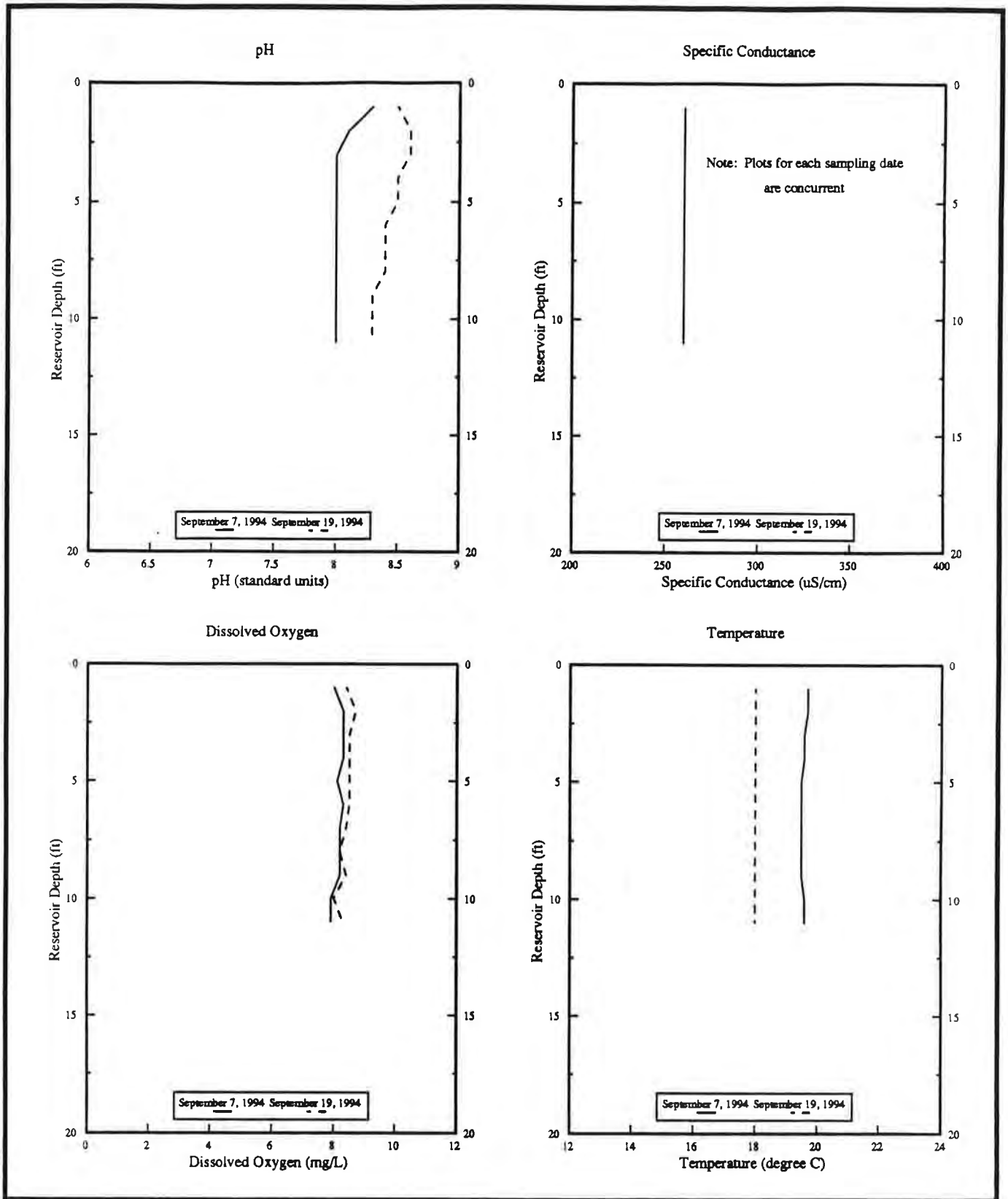
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 9 (RS)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-3D



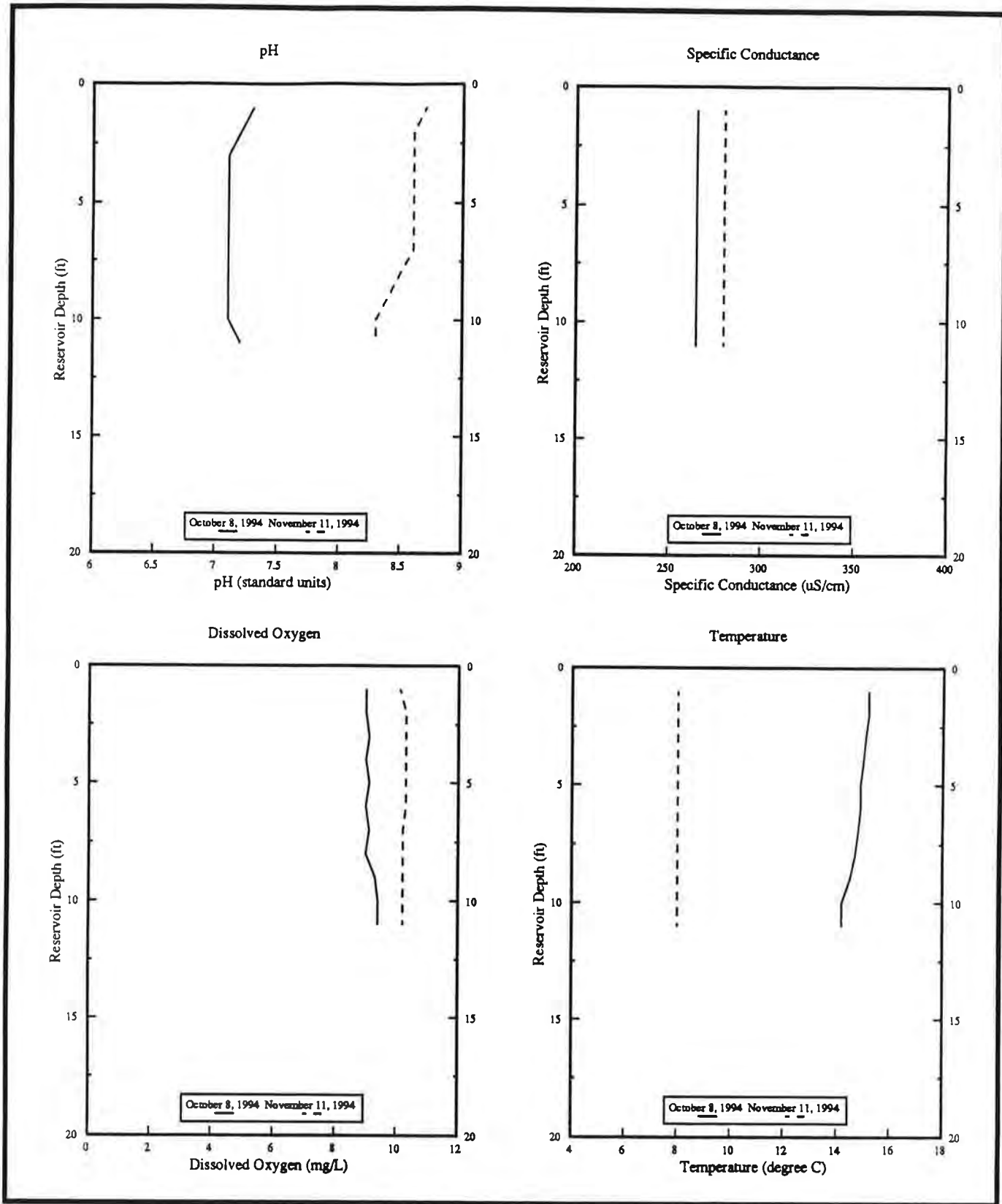
**IN-RESERVOIR DEPTH PROFILE DATA, SITE 9 (RS)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-3E



**IN-RESERVOIR DEPTH PROFILE DATA, SITE 9 (RS)
CHATFIELD RESERVOIR 1994**



**CHATFIELD BASIN AND RESERVOIR
WATER-QUALITY MONITORING PROGRAM**

Project No. 8969.40

Figure B-3F

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

March 24, 1994, 1307 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	8.2	240	12.3	8.2	
2.0	8.2	240	12.4	8.0	
3.0	8.2	240	12.3	7.8	
4.0	8.2	240	12.0	7.8	
5.0	8.2	240	11.9	7.6	
8.0	8.1	240	12.1	7.5	
11.0	8.1	240	12.0	7.4	
14.0	8.1	240	12.4	7.4	
17.0	8.1	240	12.4	7.4	
20.0	8.1	240	12.0	7.4	
23.0	8.0	240	12.1	7.4	
26.0	8.0	240	12.1	7.4	
29.0	7.9	240	11.9	7.4	
32.0	7.8	240	11.9	7.4	
35.0	7.8	240	12.4	7.5	

April 20, 1994, 1228 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	8.1	240	11.3	11.5	
2.0	8.1	240	11.5	11.2	
3.0	8.1	240	11.4	10.8	
4.0	8.1	240	11.4	10.9	
5.0	8.1	240	11.5	10.9	
8.0	8.1	240	11.5	10.7	
11.0	8.1	240	11.4	10.5	
14.0	8.0	240	11.4	10.4	
17.0	8.0	240	11.3	10.4	
20.0	7.9	240	11.3	10.3	
23.0	7.8	240	11.4	10.3	
26.0	7.7	240	11.1	9.2	
29.0	7.5	240	11.0	8.5	
32.4	7.5	240	10.8	8.5	
35.4	7.6	240	8.0	8.7	

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

May 18, 1994, 1055 hours				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.4	350	--	16.4
2	7.4	350	--	16.4
3	7.4	350	--	16.2
4	7.4	345	--	15.8
5	7.4	345	--	15.7
8	7.4	345	--	15.6
11	7.4	350	--	15.6
14	7.3	345	--	15.6
17	7.3	350	--	15.5
20	7.3	345	--	15.5
23	7.2	350	--	15.2
26	7.2	350	--	15.1
29	7.2	345	--	14.9
32	7.2	350	--	14.6
35	7.1	350	--	12.5

June 15, 1994, 1015 hours (HORIBA)				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.0	250	8.8	20.8
2	8.0	250	8.7	20.8
3	8.0	250	8.4	20.7
4	7.9	250	8.7	20.6
5	7.9	250	8.7	20.5
6	7.9	250	8.6	20.4
7	7.9	250	8.7	20.4
8	7.9	250	8.6	20.4
9	7.9	250	8.6	20.3
10	7.9	250	9.0	20.3
11	7.9	250	9.0	20.3
12	7.9	250	8.9	20.3
13	7.8	250	8.9	20.2
14	7.8	250	8.8	20.2
15	7.8	250	8.9	20.2
16	7.8	250	8.9	20.2
17	7.8	250	8.9	20.2
18	7.8	250	8.9	20.2
19	7.8	250	8.8	20.2
20	7.8	250	8.8	20.2
22	7.7	250	7.8	18.8
24	7.5	245	7.3	17.6
26	7.4	245	7.2	17.5
28	7.4	245	7.0	17.5
30	7.4	245	6.5	17.5
32	7.4	245	6.1	17.5
34	7.3	245	6.0	17.3

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

June 15, 1994, 1015 hours (YSI)				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	--	--	8.7	21.2
2	--	--	8.8	21.1
3	--	--	8.8	21.0
4	--	--	9.1	20.9
5	--	--	9.1	20.8
6	--	--	8.8	20.7
7	--	--	8.8	20.7
8	--	--	8.9	20.6
9	--	--	8.8	20.5
10	--	--	8.9	20.5
11	--	--	8.7	20.5
12	--	--	8.7	20.4
13	--	--	8.6	20.4
14	--	--	8.5	20.4
15	--	--	8.6	20.4
16	--	--	8.6	20.4
17	--	--	8.5	20.4
18	--	--	8.4	20.4
19	--	--	8.4	20.3
20	--	--	8.3	20.3
22	--	--	8.4	20.4
24	--	--	8.2	20.3
26	--	--	7.4	17.5
28	--	--	7.2	17.2
30	--	--	6.9	17.1
32	--	--	6.1	17.0
34	--	--	6.0	16.7

TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)

July 14, 1994, 0900 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	7.5	260	7.4	20.1	
2	7.5	260	7.5	20.1	
3	7.5	260	7.5	20.1	
4	7.5	260	7.4	20.1	
5	7.4	260	7.3	20.1	
6	7.4	260	7.2	20.1	
7	7.4	250	7.5	20.1	
8	7.4	250	7.6	20.1	
9	7.4	250	7.4	20.0	
10	7.4	250	7.5	20.0	
11	7.4	260	7.7	20.0	
13	7.4	260	7.7	20.0	
15	7.3	260	7.7	20.0	
17	7.3	260	7.6	20.0	
19	7.3	260	7.5	20.0	
21	7.3	260	7.5	20.0	
24	7.3	260	7.5	20.0	
27	7.3	260	7.4	19.9	
30	7.3	260	7.2	19.9	
32	7.3	260	7.1	19.8	
33	7.3	250	6.4	19.7	
35	7.3	250	4.5	19.2	

July 26, 1994, 0955 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.1	255	8.6	21.6	
2	8.1	255	8.5	21.5	
3	8.0	255	8.3	21.5	
4	8.0	255	8.3	21.5	
5	8.0	255	8.3	21.5	
6	7.9	225	8.5	21.4	
7	7.9	255	8.5	21.4	
8	7.8	255	8.3	21.3	
9	7.8	255	8.5	21.2	
10	7.7	255	8.4	21.2	
12	7.7	255	8.2	21.0	
14	7.6	255	8.0	20.9	
16	7.6	255	8.0	20.8	
18	7.6	255	8.0	20.8	
20	7.5	255	8.0	20.7	
22	7.5	255	7.8	20.7	
24	7.5	255	7.5	20.6	
26	7.5	255	7.3	20.3	
28	7.4	255	7.0	20.1	
30	7.4	255	7.0	20	

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

August 10, 1994, 1035 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.1	260	7.9	21.6	
2	8.1	260	7.8	21.6	
3	8.1	260	8.0	21.6	
4	8.0	260	8.0	21.6	
5	7.9	260	8.1	21.5	
6	7.9	260	8.1	21.4	
7	7.8	260	8.0	21.4	
8	7.8	260	8.0	21.3	
9	7.7	260	8.2	21.3	
10	7.7	260	8.0	21.3	
12	7.7	260	8.1	21.3	
14	7.7	260	8.0	21.3	
16	7.6	260	7.9	21.2	
18	7.6	260	8.0	21.2	
20	7.6	260	8.0	21.2	
22	7.6	260	8.0	21.2	
24	7.6	260	8.0	21.2	
26	7.6	260	8.0	21.2	
28	7.4	260	7.5	21.1	
30	7.5	260	5.9	20.7	

August 24, 1994, 0900 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.2	260	8.2	21.2	
2	8.2	260	8.1	21.2	
3	8.2	260	8.1	21.2	
4	8.2	260	8.2	21.1	
5	8.2	260	8.2	21.1	
6	8.1	260	8.2	21.1	
7	8.0	260	8.2	21.1	
8	7.9	260	8.2	21.1	
9	7.8	260	8.2	21.1	
10	7.8	260	8.2	21.1	
12	7.7	260	8.2	21.1	
14	7.7	260	8.2	21.1	
16	7.7	260	8.1	21.1	
18	7.7	260	8.0	21.1	
20	7.6	260	7.8	20.0	
23	7.7	260	8.0	21.0	
24	7.7	260	7.7	21.0	
25	7.8	260	7.8	21.0	

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

September 7, 1994, 0920 hours				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.4	260	8.4	20.3
2	8.4	260	8.5	20.3
3	8.4	260	8.3	20.2
4	8.4	260	8.5	20.2
5	8.3	260	8.4	20.2
6	8.4	260	8.3	20.2
7	8.4	260	8.4	20.2
8	8.4	260	8.4	20.2
9	8.4	260	8.4	20.2
10	8.3	260	8.3	20.2
11	8.3	260	8.5	20.2
12	8.3	260	8.6	20.2
13	8.3	260	8.4	20.2
14	8.2	260	8.3	20.2
15	8.1	260	8.4	20.1
16	8.0	260	8.4	20.1
17	7.9	260	8.2	20.1
18	7.9	260	8.1	20.1
19	7.9	260	8.0	20.0
20	7.8	260	7.8	19.8
21	7.8	260	7.8	19.8
22	7.7	260	7.8	19.7
23	7.7	260	7.8	19.7
24	7.7	260	7.7	19.7
25	7.7	260	7.6	19.6
26	7.8	260	6.0	19.6

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

September 19, 1994, 0840 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	7.9	270	8.2	18.0	
2	8.1	270	8.2	18.0	
3	8.1	270	8.2	18.0	
4	8.1	270	8.2	18.0	
5	8.1	270	8.1	18.0	
6	8.1	270	8.1	18.0	
7	8.0	270	8.1	18.0	
8	8.0	270	8.3	18.0	
9	8.0	270	8.3	18.0	
10	8.0	270	8.1	18.0	
11	8.0	270	8.1	18.0	
12	8.0	270	8.2	18.0	
13	8.0	270	8.1	18.0	
14	8.0	270	8.1	18.0	
15	7.9	270	8.1	18.0	
16	7.9	265	8.2	18.0	
17	7.9	265	8.3	18.0	
18	7.9	265	8.2	18.0	
19	7.9	265	8.1	18.0	
20	7.9	265	8.2	18.0	
21	7.9	265	8.2	18.0	
22	7.9	265	8.2	18.0	
23	7.9	265	8.3	18.0	
24	7.9	265	7.8	18.0	

**TABLE B-1
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 7 (RM)**

October 8, 1994, 1325 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	7.2	265	8.7	15.8	
2	7.2	265	8.7	15.7	
3	7.2	265	8.7	15.6	
4	7.2	265	8.6	15.4	
5	7.1	265	8.8	15.3	
6	7.1	265	8.9	15.2	
7	7.1	265	8.8	15.1	
8	7.1	265	9.1	15.1	
9	7.1	265	8.9	15.0	
10	7.1	265	9.0	15.0	
11	7.1	265	9.0	14.9	
12	7.1	265	8.9	14.8	
13	7.1	265	8.8	14.6	
14	7.1	265	8.6	14.5	
15	7.1	265	8.7	14.5	
16	7.1	265	8.7	14.5	
17	7.1	265	8.6	14.5	
18	7.1	265	8.6	14.5	
19	7.1	265	8.6	14.4	
20	7.1	265	8.6	14.4	
21	7.1	265	8.7	14.4	
22	7.0	265	8.7	14.4	
23	7.0	265	8.8	14.4	
24	7.1	265	8.8	14.4	
25	7.1	265	8.4	14.4	

November 11, 1994 1040hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.6	275	10.3	8.3	
2	8.5	275	10.2	8.2	
3	8.4	275	10.2	8.2	
4	8.3	275	10.1	8.2	
5	8.3	275	10.1	8.2	
6	8.3	275	10.1	8.2	
7	8.3	275	10.1	8.1	
8	8.2	275	10.1	8.1	
9	8.2	275	10.1	8.1	
10	8.2	275	10.1	8.1	
11	8.2	275	10.1	8.1	
12	8.2	275	10.1	8.0	
13	8.2	275	10.1	8.0	
14	8.2	275	10.2	8.0	
15	8.2	275	10.1	8.0	
16	8.2	275	10.1	8.0	
17	8.2	275	10.1	8.0	
18	8.2	275	10.1	8.0	
19	8.2	275	10.1	7.9	
20	8.2	275	10.0	7.9	
21	8.2	275	10.0	7.8	
22	8.2	275	9.9	7.8	
23	8.2	275	9.7	7.7	

**TABLE B-2
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 8 (RP)**

March 24, 1994, 1220 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	8.1	235	12.0	8.0	
2.0	8.1	235	11.7	8.0	
3.0	8.1	235	11.7	8.0	
4.0	8.1	235	11.9	8.0	
5.0	8.1	235	11.9	7.9	
6.5	8.1	235	11.7	7.9	
8.5	8.0	235	11.7	7.8	
10.6	7.9	235	12.0	7.7	
12.5	7.9	235	12.0	7.8	
14.5	7.8	235	11.7	7.9	
16.5	7.3	230	10.4	8.4	

April 20, 1994, 1120 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	8.0	240	11.3	11.7	
2.0	7.9	240	11.3	11.4	
3.0	7.9	240	11.3	10.8	
4.0	7.9	240	11.3	10.7	
5.0	7.9	240	11.2	10.6	
6.0	7.9	240	11.4	10.6	
8.0	7.8	240	11.4	10.4	
10.0	7.8	240	11.3	10.5	
12.0	7.8	240	11.6	11.0	

May 18, 1994, 1135 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	7.3	345	--	15.9	
2.0	7.4	345	--	15.9	
3.0	7.4	345	--	15.9	
4.0	7.3	345	--	15.5	
5.0	7.3	345	--	15.5	
6.0	7.3	345	--	15.3	
7.0	7.3	345	--	15.2	
8.0	7.2	345	--	14.9	
9.0	7.1	320	--	14.3	
10.0	7.1	300	--	14.0	
11.0	7.1	300	--	14.1	

**TABLE B-2
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 8 (RP)**

June 15, 1994, 0930 hours (HORIBA)					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	8.0	250	8.8	20.7	
2.0	8.0	250	8.6	20.7	
3.0	8.0	250	8.7	20.5	
4.0	8.0	250	8.3	20.4	
5.0	7.9	250	8.6	20.4	
6.0	7.8	250	8.3	20.2	
7.0	7.8	250	8.5	20.2	
8.0	7.8	250	8.5	20.1	
9.0	7.8	250	8.4	20.1	
10.0	7.8	250	8.5	20.0	
11.0	7.8	250	8.4	19.8	
12.0	7.7	250	8.2	19.6	
13.0	7.7	250	8.0	18.9	
14.0	7.6	250	7.8	18.8	

June 15, 1994, 0930 hours (YSI)					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1.0	--	--	8.6	20.6	
2.0	--	--	8.6	20.7	
3.0	--	--	8.6	20.6	
4.0	--	--	8.4	20.5	
5.0	--	--	8.4	20.4	
6.0	--	--	8.5	20.3	
7.0	--	--	8.3	20.3	
8.0	--	--	8.3	20.2	
9.0	--	--	8.2	20.2	
10.0	--	--	8.2	20.0	
11.0	--	--	8.0	19.8	
12.0	--	--	8.2	19.5	
13.0	--	--	7.9	18.8	
14.0	--	--	7.8	18.4	

**TABLE B-2
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 8 (RP)**

July 14, 1994, 0940 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	7.7	260	7.8	20.4	
2	7.6	260	7.9	20.4	
3	7.6	260	7.8	20.4	
4	7.5	260	7.8	20.3	
5	7.5	260	7.7	20.3	
6	7.5	260	7.4	20.3	
7	7.5	260	7.5	20.3	
8	7.5	260	7.6	20.3	
9	7.5	260	7.3	20.3	
10	7.5	260	7.3	20.3	
11	7.5	260	7.3	20.3	
12	7.4	260	7.3	20.2	
13	7.4	260	7.4	20.2	
14	7.4	260	7.0	20.1	
15	7.4	260	7.2	20.1	

July 26, 1994, 0915 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.2	260	8.0	21.8	
2	8.1	260	8.4	21.8	
3	8.1	260	8.1	21.8	
4	8.1	255	8.1	21.6	
5	8.0	255	8.0	21.5	
6	8.0	255	8.0	21.2	
7	7.9	255	8.1	21.1	
8	7.8	255	7.9	21.0	
9	7.8	255	7.8	21.0	
10	7.7	255	7.9	21.0	
11	7.7	255	8.1	21.0	
12	7.7	255	8.1	21.0	
13	7.6	255	7.9	21.0	
14	7.6	255	7.9	21.0	
15	7.6	255	7.8	21.0	

**TABLE B-2
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 8 (RP)**

August 10, 1994, 1010 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.2	260	7.8	21.8	
2	8.0	260	7.9	21.5	
3	8.0	260	8.0	21.4	
4	8.0	260	8.0	21.3	
5	7.9	260	8.1	21.3	
6	7.8	260	7.7	21.2	
7	7.8	260	7.9	21.2	
8	7.8	260	7.9	21.2	
9	7.7	260	8.0	21.2	
10	7.7	260	7.8	21.2	

August 24, 1994, 0830 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	7.9	260	7.8	20.8	
2	7.8	260	7.8	20.8	
3	7.7	260	7.8	20.8	
4	7.7	260	7.8	20.8	
5	7.7	260	7.8	20.8	
6	7.7	260	7.8	20.8	
7	7.7	260	7.8	20.8	
8	7.7	260	7.8	20.8	
9	7.8	260	7.7	20.9	
10	7.9	260	7.7	20.9	

**TABLE B-2
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 8 (RP)**

September 7, 1994, 0955 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.3	260	7.9	19.9	
2	8.3	260	8.0	19.8	
3	8.4	260	7.8	19.7	
4	8.4	260	8.0	19.6	
5	8.4	260	8.1	19.6	
6	8.3	260	7.9	19.5	
7	8.2	260	7.9	19.3	
8	8.1	260	7.8	19.3	
9	8.0	260	7.9	19.2	
10	8.0	260	7.9	19.2	
11	7.7	260	8.0	19.2	
12	7.9	260	8.0	19.1	
13	7.8	260	8.1	19.1	
14	7.7	260	7.9	19.1	
15	7.8	330	7.6	19.1	

September 19, 1994, 0915 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.4	270	7.8	18.0	
2	8.4	265	7.9	18.0	
3	8.3	265	7.8	18.0	
4	8.2	265	7.8	18.0	
5	8.2	265	7.9	18.0	
6	8.2	265	8.0	18.0	
7	8.2	265	7.8	18.0	
8	8.2	265	8.0	18.0	
9	8.2	265	7.9	18.0	
10	8.2	265	7.9	18.0	
11	8.1	265	7.7	18.0	
12	8.1	265	7.8	18.0	
13	8.1	265	7.8	18.0	
14	8.1	265	8.0	18.0	

**TABLE B-2
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 8 (RP)**

October 8, 1994, 1250 hours				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.6	265	8.9	15.8
2	7.3	265	8.6	15.7
3	7.1	265	8.8	15.2
4	7.0	265	8.8	15.0
5	7.0	265	8.7	14.9
6	7.0	265	8.8	14.7
7	7.0	265	8.8	14.6
8	7.0	265	9.0	14.5
9	7.0	265	9.1	14.4
10	6.9	265	9.0	14.0
11	6.9	265	8.3	13.6

November 11, 1994, 0935 hours				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.5	275	10.3	8.3
2	8.5	275	10.2	8.2
3	8.4	275	10.3	8.2
4	8.4	275	10.3	8.2
5	8.4	275	10.3	8.2
6	8.3	275	10.2	8.2
7	8.3	275	10.1	8.2
8	8.3	275	10.2	8.2
9	8.3	275	10.1	8.2
10	8.3	275	10.2	8.2
11	8.3	275	10.2	8.2

**TABLE B-3
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 9 (RS)**

March 24, 1994, 1300 hours

DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1.0	8.1	240	12.0	8.0
2.0	8.1	240	11.8	8.0
3.0	8.1	240	11.7	8.0
4.0	8.1	240	11.6	7.9
6.0	8.0	240	11.7	7.8
8.0	8.0	240	11.4	7.6
10.0	7.9	240	11.1	7.5

NOTE: NO DATA AVAILABLE FOR APRIL 20, 1994 DUE TO INCLEMENT WEATHER

May 18, 1994, 1015 hours

DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1.0	7.3	345	--	15.5
2.0	7.3	350	--	15.0
3.0	7.3	345	--	14.9
4.0	7.3	345	--	14.9
5.0	7.2	345	--	14.8
6.0	7.2	345	--	14.8
7.0	7.3	345	--	14.7
8.0	7.2	330	--	14.7

June 15, 1994, 1120 hours (HORIBA)

DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.0	245	8.6	20.6
2	8.0	245	8.5	20.6
3	8.0	245	8.3	20.5
4	7.9	245	8.1	20.4
5	7.9	245	8.3	20.3
6	7.9	245	8.2	19.9
7	7.9	240	8.1	19.7
8	7.8	240	8.1	19.1
9	7.8	240	8.1	19.0
10	7.7	235	7.9	18.7
11	7.7	230	7.9	17.9

**TABLE B-3
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 9 (RS)**

June 15, 1994, 1120 hours (YSI)				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	--	--	8.6	20.6
2	--	--	8.4	20.6
3	--	--	8.3	20.5
4	--	--	8.3	20.4
5	--	--	8.3	20.0
6	--	--	8.1	19.8
7	--	--	8.2	19.7
8	--	--	8.1	19.6
9	--	--	8.1	19.4
10	--	--	8.0	18.1
11	--	--	7.9	17.9

July 14, 1994, 0835 hours				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.6	250	7.6	20.3
2	7.6	250	7.5	20.3
3	7.6	250	7.3	20.3
4	7.6	250	7.1	20.3
5	7.6	250	7.3	20.3
6	7.6	250	7.3	20.3
7	7.6	250	7.2	20.3
8	7.6	250	7.3	20.3
9	7.6	250	7.2	20.3
10	7.6	250	7.4	20.3
11	7.6	250	7.4	20.3
12	7.7	250	7.2	20.3

July 26, 1994, 1030 hours				
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.2	255	8.1	22.3
2	8.2	255	8.3	22.3
3	8.2	255	8.2	22.3
4	8.1	255	8.1	22.3
5	8.0	255	8.1	22.2
6	7.9	255	8.2	22.2
7	7.8	255	8.2	22.2
8	7.8	255	8.1	22.1
9	7.8	255	8.2	22.1
10	7.8	255	8.2	22.1
11	7.7	255	8.2	22.0
12	7.7	255	8.1	22.0

**TABLE B-3
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 9 (RS)**

August 10, 1994, 0900 hours

DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	7.9	255	7.7	21.5
2	7.9	255	7.7	21.5
3	7.9	255	7.7	21.4
4	7.8	255	7.8	21.4
5	7.8	255	7.6	21.4
6	7.8	255	7.6	21.4
7	7.8	255	7.8	21.4
8	7.8	255	7.8	21.4
9	7.8	255	7.9	21.4
10	7.8	255	7.6	21.3
11	7.8	255	7.6	21.3
12	7.8	255	7.7	21.3

August 24, 1994, 0940 hours

DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.3	260	8.4	21.6
2	8.3	260	8.4	21.5
3	8.3	260	8.4	21.5
4	8.3	260	8.4	21.4
5	8.2	260	8.3	21.4
6	8.1	260	8.3	21.4
7	8.0	260	8.3	21.4
8	8.0	260	8.3	21.4
9	8.0	260	8.2	21.3
10	7.9	250	7.9	21.1
11	7.9	250	7.7	20.8
12	8.0	250	7.7	20.8

September 7, 1994, 0835 hours

DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)
1	8.3	260	8.0	19.7
2	8.1	260	8.3	19.7
3	8.0	260	8.3	19.6
4	8.0	260	8.3	19.6
5	8.0	260	8.1	19.5
6	8.0	260	8.3	19.5
7	8.0	260	8.2	19.5
8	8.0	260	8.2	19.5
9	8.0	260	8.2	19.5
10	8.0	260	7.9	19.6
11	8.0	260	7.9	19.6

**TABLE B-3
CHATFIELD IN-RESERVOIR DEPTH-PROFILE DATA
SITE 9 (RS)**

September 19, 1994, 0945 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.5	260	8.4	18.0	
2	8.6	260	8.7	18.0	
3	8.6	260	8.5	18.0	
4	8.5	260	8.5	18.0	
5	8.5	260	8.5	18.0	
6	8.4	260	8.5	18.0	
7	8.4	260	8.4	18.0	
8	8.4	260	8.2	18.0	
9	8.3	260	8.4	18.0	
10	8.3	260	8.0	18.0	
11	8.3	260	8.3	18.0	

October 8, 1994, 1405 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	7.3	265	9.0	15.2	
2	7.2	265	9.0	15.2	
3	7.1	265	9.1	15.1	
4	7.1	265	9.0	15.0	
5	7.1	265	9.1	14.9	
6	7.1	265	9.0	14.9	
7	7.1	265	9.1	14.8	
8	7.1	265	9.0	14.7	
9	7.1	265	9.3	14.5	
10	7.1	265	9.4	14.2	
11	7.2	265	9.4	14.2	

November 11, 1994 1040 hours					
DEPTH (ft)	pH (s.u.)	SC (uS/cm)	DO (mg/L)	TEMP. (deg C)	
1	8.7	280	10.1	8.0	
2	8.6	280	10.3	8.0	
3	8.6	280	10.3	8.0	
4	8.6	280	10.3	8.0	
5	8.6	280	10.3	8.0	
6	8.6	280	10.3	8.0	
7	8.6	280	10.2	8.0	
8	8.5	280	10.2	8.0	
9	8.4	280	10.2	8.0	
10	8.3	280	10.2	8.0	
11	8.3	280	10.2	8.0	