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BASELINE WATER-QUALITY DATA FOR SAND-PLAIN AQUIFERS IN HUBBARD, MORRISON, OTTER TAIL, AND WADENA COUNTIES, MINNESOTA

By C. F. Myette

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SOIL AND WATER CONSERVATION DISTRICTS OF
HUBBARD, MORRISON, OTTER TAIL, AND WADENA COUNTIES,
and the MINNESOTA DEPARTMENT OF NATURAL RESOURCES

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ILLUSTRATIONS

CONVERSION FACTORS

Multiply inch-pound unit	By	To obtain SI (metric) unit
inch	25.40	millimeter
foot	0.3048	meter
mile	1.609	kilometer
acre	0.4047	hectare
square mile	2.590	square kilometer
gallon	3.785	liter
gallon per minute	0.06309	liter per second
foot squared per day	0.0929	meter squared per day
cubic foot per second	0.02832	cubic meter per second
degree Fahrenheit (^{o}F)	^{o}F - 32 x 1.8	degree Celsius (^{o}C)

BASELINE WATER-QUALITY DATA FOR SAND-PLAIN AQUIFERS IN HUBBARD, MORRISON, OTTER TAIL, AND WADENA COUNTIES, MINNESOTA

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ABSTRACT

Development of water supplies from surficial sand-plain aquifers in west-central Minnesota has aroused public awareness of the possibility for degradation of water quality. The sand-plain areas are generally underlain by sandy soils that permit rapid infiltration of precipitation and, possibly, of surface contaminants. One hundred twenty-three wells were sampled in Hubbard, Morrison, Otter Tail, and Wadena Counties during 1979-81 to establish regional baseline water quality. The wells were chosen to provide optimum areal coverage based on geology, direction of ground-water flow, and extent of aquifer development.

Water from the sand-plain aquifers is of the calcium bicarbonate type. The water is hard to very hard with disolved solids ranging from about 100 to 700 milligrams per liter. Locally, concentrations of dissolved solids, iron, manganese, and nitrate exceeded limits recommended by the Minnesota Pollution Control Agency for drinking water.

INTRODUCTION

Background

Rapid development of agricultural lands in sand-plain areas has raised questions concerning the infiltration of agricultural chemicals to the ground-water system. According to the University of Minnesota Agriculture Extension Service, irrigated acreage increased in Otter Tail County from 4,328 acres in 1970 to 45,878 acres in 1977. Similar increases are occurring in most of the sand-plain areas.

Citizens associated with agriculture in west-central Minnesota became concerned about the lack of water-quality information in their area. As a result, a group comprised of personnel from the local Soil and Water Conservation Districts, the local Irrigation Association, and the Staples Irrigation Center requested technical assistance to establish a network for monitoring the regional water quality of sand-plain aquifers.

Purpose and Scope

This report contains the baseline water-quality data from a 3-year study that began in May 1979 and is scheduled for completion in September 1982. A separate interpretive report will be published after completion of the study. The purpose of the study is to (1) assess the areal and seasonal variability in the quality of water in the surficial aquifers, (2) determine long-term

changes in ground-water quality by comparing current and previous chemical analyses, and (3) determine the characteristics of chemical movement in sand-plain aquifers. The purpose of this report is to publish the results of chemical analyses of water from the representative wells.

Samples of water were collected from 123 wells to determine regional baseline water quality. The wells were chosen to provide optimum areal coverage based on geology, direction of ground-water flow, and extent of aquifer development. Frequency of sampling varied, depending on location of the well. Sampling dates are included in the tables.

Location of Study Area

The study area is in west-central Minnesota within the counties of Hubbard, Morrison, Otter Tail, and Wadena (fig. 1). The principal aquifers are surficial outwash of glacial origin. The total areal extent of the sand plains in all 4 counties is about 1,850 square miles. The soils are generally thin sandy loams or loamy sands. Mean annual precipitation is 26.4 inches, evapotranspiration is 22.5 inches, and runoff is 3.9 inches (Lindholm and others, 1972). Mean annual recharge to the aquifer is 5.1 inches (Helgesen and others, 1975; Helgesen, 1977). The area is comprised of three major river watersheds: the Otter Tail, the Crow Wing, and the Mississippi-Sauk.

Wells are identified by a unique 15-digit station number. The first 13 digits are based on the latitude and longitude cordinates, the last two digits are sequential numbers used to differentiate between stations having the same latitude and longitude. The wells can be located either by the latitude-longitude coordinates or the local well-location number, which is based on the township, range, and section system. That is, each well can be located by numbers and letters that consist of township, range, and section; three letters designating quarter-quarter-quarter section, and a two-digit sequential number that differentiates between stations having the same quarter-quarter-quarter section. The example in figure 2 shows site 139N34W20ADC01 to be in SW<SE<NE< sec. 20, T. 139 N., R. 34 W. The sequence number shows it to be the first well.

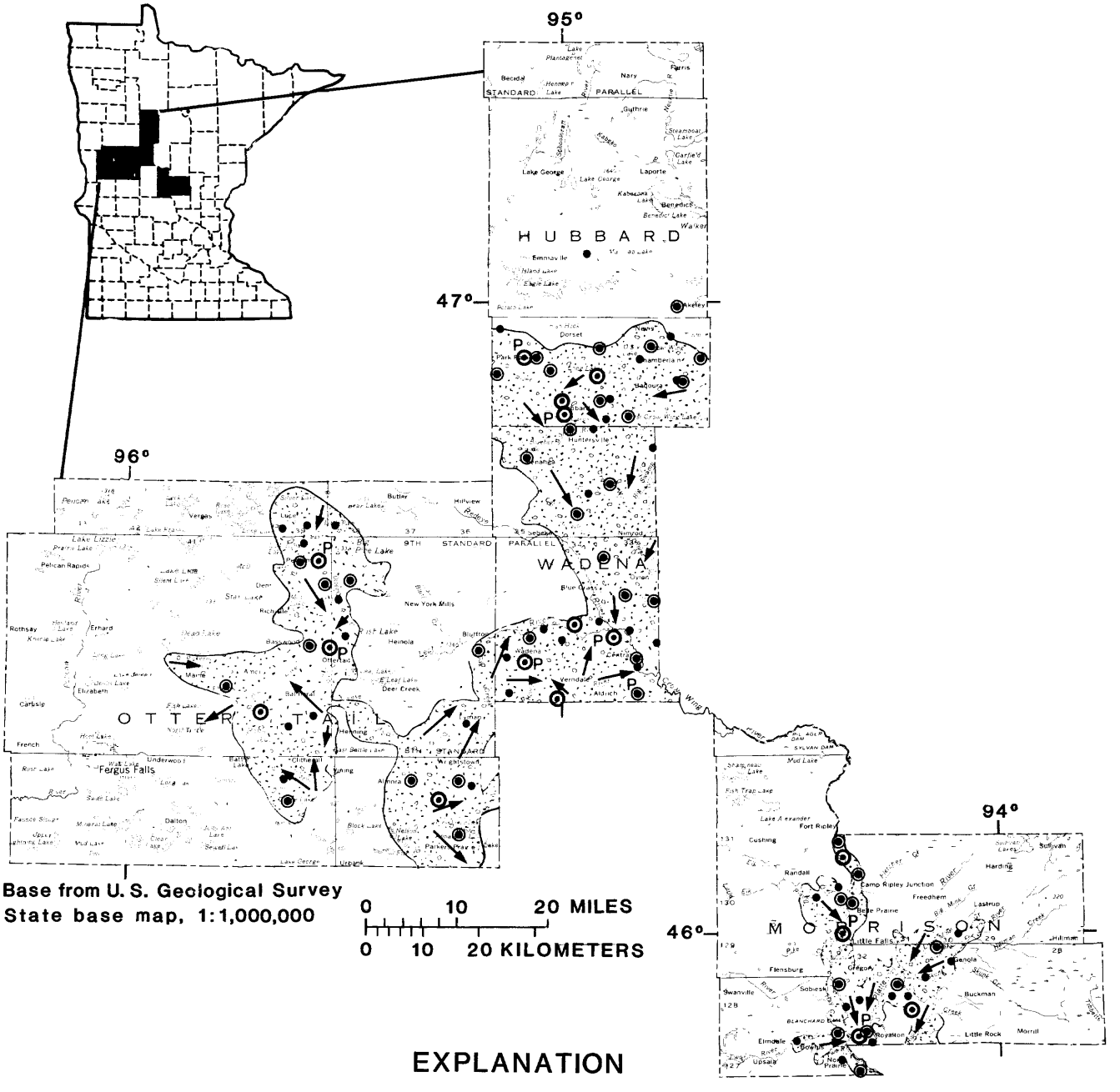

Figure 1.--Areal extent of the sand plains and approximate location of the wells sampled in Hubbard, Morrison, Otter Tail, and Wadena Counties, Minnesota

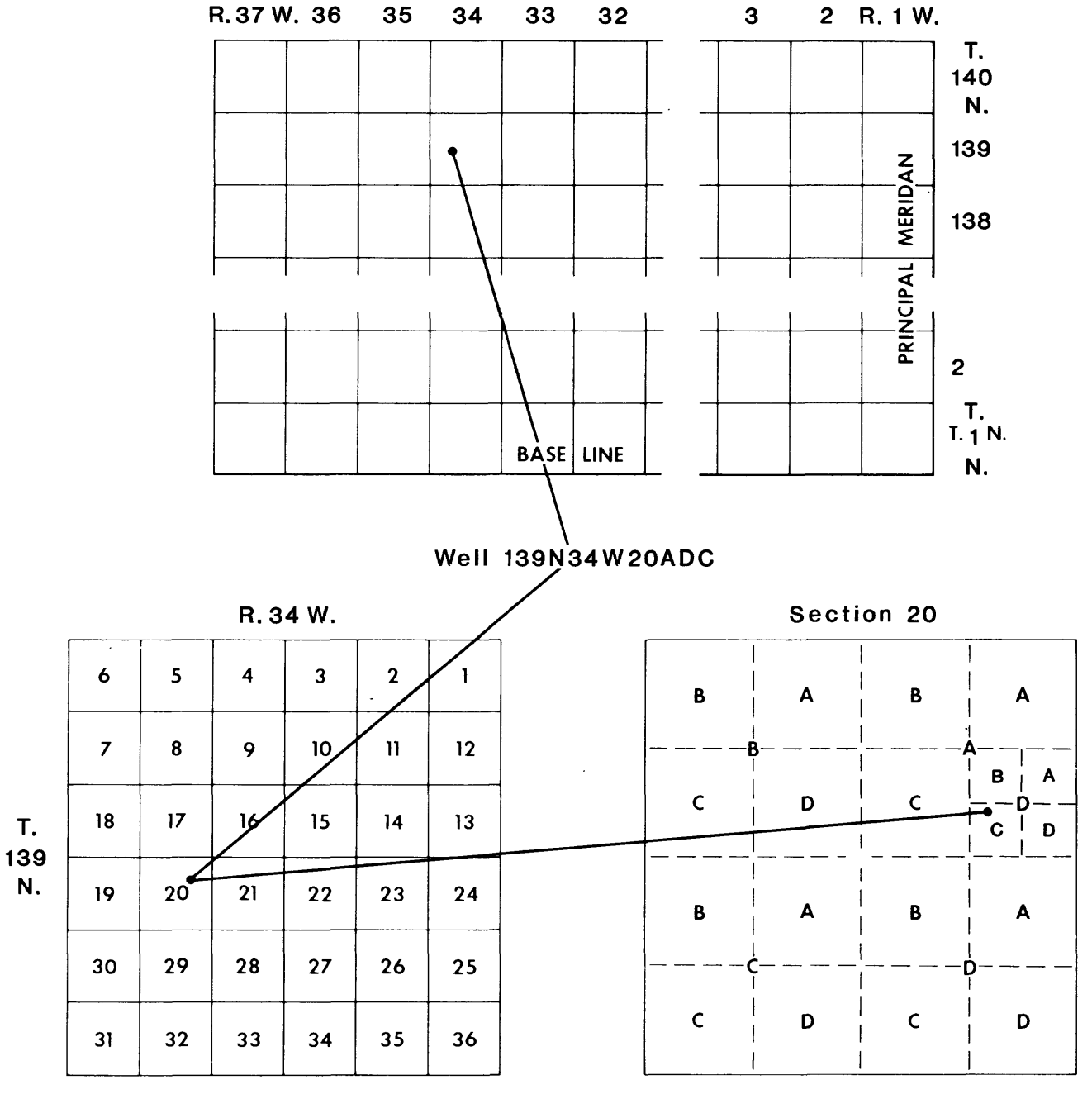

Figure 2.--Test-hole and well-numbering system

BASIC-DATA TABLES

Table 1.—Chemical analyses of water for common major constituents collected during 1979–80 from the baseline network wells

A baseline network of 123 wells was established in the 4-county area to determine the regional water quality. Table 1 contains results of chemical analyses of the first samples collected from each well. All samples were analyzed by the U.S. Geological Survey. The analyses are listed by county and station number. The concentrations of dissolved constituents are generally expressed in milligrams per liter unless otherwise stated. Figure 1 shows the approximate location of the wells in the baseline network. Water samples were collected and analyzed according to methods described by Brown and others (1970). All wells were pumped until values of pH, temperature, and specific conductance stablized. Field measurements of water temperature, pH, and specific conductivity were collected at each well. Laboratory analyses included those constituents in table 1. Results of analyses are stored in the U.S. Geological Survey National Water Data Storage and Retrieval System (WASTORE) data base.

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells

HUBBARD COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
464900094520000	79-10-04	46 49 15	094 54 15	01	139N33W30CDC01	1330	30	380	7.3
464925094505501	79-07-17	46 49 25	094 50 55	01	139N33W28DDA01	1100	30	330	7.5
464940094593001	79-08-07	46 49 40	094 59 30	01	139N34W28BCC01	1400	16	410	7.9
465035095000001	79-07-27	46 50 35	095 00 00	01	139N34W20ADC01	1030	40	600	7.5
465100094543001	79-07-16	46 51 00	094 54 30	01	139N33W18CCC01	1425	45	550	7.5
465100094550000	79-10-04	46 51 00	094 55 00	01	139N34W13DCD01	1300	45	540	7.1
465245094433001	79-07-13	46 52 45	094 43 30	01	139N32W04DCA01	1350	80	900	7.3
465315094554001	79-07-17	46 53 15	094 55 40	01	139N34W01BCA01	0945	80	440	7.7
465340095020001	79-07-27	46 53 40	095 02 00	01	140N34W31CCC01	1130	42	428	7.7
465355095094001	79-07-12	46 53 55	095 09 40	01	139N35W06BBB01	1500	42	510	7.4
465500094473000	79-08-08	46 54 45	094 47 35	01	140N33W25DAC01	1300	20	400	7.5
465515094411001	79-07-13	46 55 15	094 41 10	01	140N32W26ABA01	1245	101	390	7.6
465515095061501	79-07-31	46 55 15	095 06 15	01	140N35W28AAA01	1045	30	530	7.5
465525095050001	79-07-09	46 55 25	095 05 00	01	140N35W22DDD01	1250	27	370	7.8
465550094552001	79-07-27	46 55 50	094 55 20	01	140N34W24BDA01	1345	67	340	7.6
465600094483000	79-07-16	46 56 00	094 48 15	01	140N33W24BBB01	1330	42	370	7.5
465630095173000	79-07-30	46 56 30	095 17 30	01	140N37W13ACB01	1300	100	500	7.5
465700094450000	79-07-13	46 57 05	094 45 30	01	140N32W17BBA01	1205	22	320	7.6
465700095090000	79-07-31	46 57 05	095 08 50	01	140N35W07DDD01	1130	42	520	7.4
465900095213000	79-07-30	46 59 00	095 21 30	01	141N37W33DBA01	1100	52	520	7.6
465935094441501	79-07-13	46 59 35	094 44 15	01	141N32W33BAC01	1105	80	630	6.9
470430094570000	79-07-27	47 04 45	094 56 50	01	142N34W35BAA01	1245	42	384	7.7

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM, DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SODIUM+POTASSIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
464900094520000	79-10-04	8.5	200	19	63	10	2.2	2	.1	2.6	.4
464925094505501	79-07-17	8.0	170	2	54	9.1	2.4	3	.1	2.8	.4
464940094593001	79-08-07	8.5	200	0	55	15	5.1	5	.2	6.5	1.4
465035095000001	79-07-27	10.0	300	110	89	19	6.7	5	.2	8.5	1.8
465100094543001	79-07-16	9.5	250	45	74	17	5.3	4	.1	14	9.0
465100094550000	79-10-04	8.5	270	67	79	17	4.1	3	.1	11	7.1
465245094433001	79-07-13	10.0	410	170	130	21	23	11	.5	24	.8
465315094554001	79-07-17	8.0	220	17	62	15	1.5	1	.0	2.4	.9
465340095020001	79-07-27	11.0	220	26	60	16	2.8	3	.1	3.5	.7
465355095094001	79-07-12	9.0	260	36	71	19	2.6	2	.1	3.6	1.0
465500094473000	79-08-08	12.0	190	0	56	11	7.3	8	.2	8.6	1.3
465515094411001	79-07-13	11.0	200	13	60	13	1.7	2	.1	2.8	1.1
465515095061501	79-07-31	8.5	260	33	74	19	4.6	4	.1	5.1	.5
465525095050001	79-07-09	12.0	180	19	52	12	3.5	4	.1	4.4	.9
465550094552001	79-07-27	19.0	160	7	38	15	3.7	5	.1	5.4	1.7
465600094483000	79-07-16	10.0	190	0	58	12	2.0	2	.1	2.5	.5
465630095173000	79-07-30	7.0	250	0	67	20	4.5	4	.1	6.0	1.5
465700094450000	79-07-13	10.0	160	11	48	10	1.7	2	.1	2.2	.5
465700095090000	79-07-31	9.0	260	16	76	16	4.4	3	.1	24	20
465900095213000	79-07-30	10.0	270	0	73	22	2.3	2	.1	4.3	2.0
465935094441501	79-07-13	8.5	340	0	100	23	5.4	3	.1	8.2	2.8
470430094570000	79-07-27	10.0	190	0	48	17	3.8	4	.1	5.7	1.9

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

HUBBARD COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	ALKALINITY, FIELD (MG/L AS CACO3)	CARBON DIOXIDE, DISSOLVED (MG/L AS CO2)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	DISSOLVED SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	DISSOLVED SOLIDS, SUM OF CONSTITUENTS, (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
464900094520000	79-10-04	180	18	12	3.5	.1	16	244	225	.33	2.2
464925094505501	79-07-17	170	10	4.1	2.9	.1	14	218	201	.30	2.6
464940094593001	79-08-07	210	5.2	3.8	.5	.1	26	231	234	.31	.06
465035095000001	79-07-27	190	12	8.4	25	.1	13	438	379	.60	23
465100094543001	79-07-16	210	13	4.8	7.0	.1	12	331	340	.45	19
465100094550000	79-10-04	200	32	14	6.9	.1	11	343	339	.47	18
465245094433001	79-07-13	240	23	15	42	<.1	16	684	569	.93	40
465315094554001	79-07-17	200	7.8	7.6	7.2	.1	12	254	254	.35	6.3
465340095020001	79-07-27	190	7.4	4.1	1.3	.1	14	198	225	.27	2.7
465355095094001	79-07-12	220	17	8.9	4.6	.1	13	316	289	.43	8.2
465500094473000	79-08-08	200	12	1.4	1.1	.1	17	220	221	.30	.17
465515094411001	79-07-13	190	9.3	3.6	1.3	.1	13	246	221	.33	2.9
465515095061501	79-07-31	230	14	12	16	<.1	14	317	298	.43	4.4
465525095050001	79-07-09	160	4.9	4.7	11	<.1	9.8	235	201	.32	2.5
465550094552001	79-07-27	150	7.4	1.4	1.5	.1	9.4	160	161	.22	<.10
465600094483000	79-07-16	200	12	1.6	.7	.1	14	213	210	.29	.24
465630095173000	79-07-30	250	15	3.1	4.1	.1	17	268	270	.36	.06
465700094450000	79-07-13	150	7.4	6.5	.9	.1	13	198	175	.27	1.0
465700095090000	79-07-31	240	19	9.5	8.3	.1	13	340	323	.46	7.1
465900095213000	79-07-30	280	14	1.4	1.9	.1	16	286	289	.39	<.10
465935094441501	79-07-13	360	88	11	7.9	.1	12	400	383	.54	.16
470430094570000	79-07-27	190	7.4	7.3	6.3	.1	6.7	191	207	.26	.02

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
464900094520000	79-10-04	.25	2.5	.020	2	10	2
464925094505501	79-07-17	.11	2.7	.020	6	<10	<10
464940094593001	79-08-07	.68	.74	.080	<20	170	50
465035095000001	79-07-27	<.10	23	.020	<20	<10	<10
465100094543001	79-07-16	.46	19	<.010	<20	<10	2
465100094550000	79-10-04	1.1	19	.000	10	20	2
465245094433001	79-07-13	<.10	40	<.010	<20	40	4
465315094554001	79-07-17	<.10	6.3	<.010	7	<10	<10
465340095020001	79-07-27	.05	2.8	.010	<20	<10	<10
465355095094001	79-07-12	.17	8.4	.010	9	<10	<10
465500094473000	79-08-08	.65	.82	.080	7	4900	160
465515094411001	79-07-13	.11	3.0	<.010	6	<10	<10
465515095061501	79-07-31	.26	4.7	.010	4	<10	1
465525095050001	79-07-09	.23	2.7	.010	<20	<10	3
465550094552001	79-07-27	—	—	<.010	4	40	1
465600094483000	79-07-16	.05	.29	<.010	<20	<10	2
465630095173000	79-07-30	.64	.70	.070	<20	2400	140
465700094450000	79-07-13	.25	1.3	<.010	7	<10	2
465700095090000	79-07-31	.20	7.3	.010	<20	<10	<10
465900095213000	79-07-30	.34	.34	.040	<20	2100	190
465935094441501	79-07-13	.05	.21	.010	7	3200	430
470430094570000	79-07-27	.18	.20	.010	2	1700	50

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

MORRISON COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
454705094190001	79-09-10	45 47 15	094 19 05	01	127N29W27BAD01	1440	65	480	7.5
454830094220000	79-06-13	45 48 15	094 21 35	01	127N29W20BAA01	1130	87	445	7.5
454930094173000	79-06-12	45 49 45	094 17 20	01	039N32W35DBA01	1500	108	460	7.4
455000094273000	79-06-13	45 50 00	094 27 30	01	127N30W04DCD01	1200	15	540	7.5
455030094173000	79-06-12	45 50 30	094 19 15	02	039N32W27CBB02	1430	17	285	8.2
455030094191501	79-09-10	45 50 30	094 19 15	01	039N32W27CBB01	1100	17	300	8.2
455045094172501	79-09-11	45 50 55	094 17 31	01	039N32W26ABC01	1430	25	310	7.8
455045094221501	79-06-14	45 50 45	094 22 15	01	127N29W06AAC01	1100	31	393	7.2
455215094121501	79-08-03	45 52 15	094 12 15	01	039N31W16DAC01	1415	25	190	8.0
455230094210000	79-08-03	45 52 45	094 21 00	01	039N32W17ABD01	1130	22	140	6.6
455330094150000	79-06-13	45 53 30	094 15 00	01	039N31W07ABB01	0945	45	262	8.1
455400094123000	79-08-03	45 54 00	094 12 30	01	039N31W04CDD01	1250	22	220	8.1
455400094190000	79-06-13	45 53 45	094 19 00	01	039N32W03CDC01	0900	66	300	7.8
455500094142001	79-09-11	45 54 45	094 14 25	02	040N31W32CCC02	1530	30	270	7.8
455530094210001	79-06-12	45 55 30	094 21 00	01	040N32W32ABA01	1630	15	334	7.8
455600094103000	79-06-12	45 55 50	094 10 45	01	040N31W27DAD01	1200	25	200	6.3
455730094070000	79-06-12	45 57 40	094 06 50	01	040N30W17CBC01	1100	28	850	6.4
455900094083001	79-06-12	45 59 00	094 08 30	01	040N31W12ABB01	0945	20	180	6.9
460030094050000	79-06-11	46 00 30	094 05 00	01	041N30W25BCB01	1430	73	315	6.5
460030094210001	79-06-13	46 00 30	094 21 00	01	041N32W26BCA01	1700	21	307	7.8

460200094223000	79-06-14	46 02 00	094 22 20	01	130N29W31AAB01	1315	16	336	7.2
460330094193001	79-06-13	46 03 30	094 19 30	01	041N32W01CDD01	1515	14	322	7.8
460345094215001	79-09-06	46 03 55	094 22 10	02	130N29W18DDD02	1200	12	250	6.6
460400094220000	79-06-14	46 03 45	094 21 45	01	130N29W20BBA01	1400	18	302	6.6
460400094250000	79-06-14	46 03 45	094 25 05	01	130N30W23ABB01	1500	28	260	7.8
460500094223000	79-06-14	46 05 50	094 22 30	01	130N29W07DDA01	1410	17	458	6.3
460600094191501	79-06-14	46 06 00	094 19 15	01	042N32W24DCC01	0930	30	1040	7.7
460725094211501	79-09-06	46 07 28	094 21 15	01	042N32W14BBC01	1530	21	340	7.6
460915094220001	79-06-14	46 09 15	094 22 00	01	042N32W02CCB01	0845	45	189	7.7

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM, DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SODIUM+POTASSIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
454705094190001	79-09-10	10.5	240	12	64	20	6.8	6	.2	9.8	3.0
454830094220000	79-06-13	9.0	230	45	66	17	3.4	3	.1	4.6	1.2
454930094173000	79-06-12	9.0	230	10	64	17	11	9	.3	12.4	1.4
455000094273000	79-06-13	9.5	290	95	78	22	8.1	6	.2	9.0	.9
455030094173000	79-06-12	7.5	150	76	42	9.9	2.6	4	.1	3.0	.4
455030094191501	79-09-10	10.0	140	65	40	8.6	2.7	4	.1	3.1	.4
455045094172501	79-09-11	10.0	160	28	45	11	2.9	4	.1	3.6	.7
455045094221501	79-06-14	9.0	200	49	55	15	2.9	3	.1	4.6	1.7
455215094121501	79-08-03	9.0	85	15	24	6.0	2.7	6	.1	3.3	.6
455230094210000	79-08-03	10.5	52	16	16	3.0	2.7	10	.2	3.6	.9
455330094150000	79-06-13	10.0	130	69	35	9.8	3.6	6	.1	3.9	.3
455400094123000	79-08-03	9.0	93	35	29	5.0	2.5	5	.1	3.1	.6
455400094190000	79-06-13	9.0	150	0	41	12	6.1	8	.2	6.8	.7
455500094142001	79-09-11	12.0	110	4	35	6.5	7.5	12	.3	8.2	.7
455530094210001	79-06-12	9.0	130	24	38	9.6	3.6	5	.1	4.1	.5
455600094103000	79-06-12	11.0	80	43	21	6.7	3.8	9	.2	4.5	.7
455730094070000	79-06-12	9.5	300	240	79	25	47	25	1.2	48.8	1.8
455900094083001	79-06-12	9.0	74	7	17	7.6	3.4	9	.2	4.3	.9
460030094050000	79-06-11	13.0	160	26	41	13	5.0	6	.2	7.2	2.2
460030094210001	79-06-13	8.5	67	30	17	5.9	8.1	13	.4	46	38

460200094223000	79-06-14	9.0	170	28	46	13	3.8	5	.1	4.8	1.0
460330094193001	79-06-13	8.0	140	46	39	11	6.5	9	.2	9.3	2.8
460345094215001	79-09-06	10.0	100	29	27	8.3	3.3	7	.1	4.4	1.1
460400094220000	79-06-14	9.0	150	23	43	11	2.5	3	.1	3.4	.9
460400094250000	79-06-14	11.0	120	15	33	7.9	2.6	5	.1	3.5	.9
460500094223000	79-06-14	8.5	220	35	62	17	7.5	7	.2	8.8	1.3
460600094191501	79-06-14	11.5	430	170	110	37	45	19	.9	48	2.8
460725094211501	79-09-06	10.0	170	54	50	12	2.3	3	.1	2.8	.5
460915094220001	79-06-14	8.5	91	19	24	7.6	2.7	6	.1	3.8	1.1

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	ALKALINITY, FIELD (MG/L AS CACO3)	CARBON DIOXIDE, DISSOLVED (MG/L AS CO2)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	DISSOLVED SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	DISSOLVED SOLIDS, SUM OF CONSTITUENTS, (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
454705094190001	79-09-10	230	14	19	6.9	.1	15	293	274	.40	.01
454830094220000	79-06-13	190	12	26	3.2	.1	15	268	275	.36	6.6
454930094173000	79-06-12	220	17	18	15	.1	18	294	286	.40	2.0
455000094273000	79-06-13	190	12	21	13	.1	20	329	280	.45	.67
455030094173000	79-06-12	70	.9	6.9	13	.1	14	218	197	.30	15
455030094191501	79-09-10	70	.9	5.2	13	<.1	15	205	185	.28	13
455045094172501	79-09-11	130	4.0	12	5.6	.1	16	193	188	.26	3.7
455045094221501	79-06-14	150	18	21	7.7	.1	16	258	233	.35	5.3
455215094121501	79-08-03	70	1.4	6.1	1.7	.1	21	115	110	.16	1.2
455230094210000	79-08-03	36	18	6.0	2.6	<.1	20	102	87	.14	3.3
455330094150000	79-06-13	59	.9	6.0	8.9	.2	25	223	191	.30	15
455400094123000	79-08-03	58	.9	7.1	6.3	.1	13	142	120	.19	4.9
455400094190000	79-06-13	170	5.2	1.6	.5	.2	18	173	184	.24	.45
455500094142001	79-09-11	110	3.4	4.3	3.2	.1	19	165	156	.22	3.1
455530094210001	79-06-12	110	3.4	13	13	.1	12	160	157	.22	.05
455600094103000	79-06-12	37	36	8.8	7.8	<.1	20	150	133	.20	9.5
455730094070000	79-06-12	58	45	20	180	.1	20	709	518	.96	25
455900094083001	79-06-12	67	17	7.9	2.7	.2	16	98	102	.13	.65
460030094050000	79-06-11	130	82	16	9.4	.1	27	217	216	.30	5.4
460030094210001	79-06-13	37	1.1	11	25	.1	15	232	196	.32	12

460200094223000	79-06-14	140	17	14	2.2	.1	19	207	203	.28	4.4
460330094193001	79-06-13	97	3.0	14	8.2	.1	9.8	187	192	.25	9.6
460345094215001	79-09-06	73	36	18	14	.1	14	166	135	.23	.04
460400094220000	79-06-14	130	64	11	2.1	.1	16	183	179	.25	3.2
460400094250000	79-06-14	100	3.1	13	1.7	.1	11	143	132	.19	.11
460500094223000	79-06-14	190	186	14	20	.1	15	281	263	.38	2.6
460600094191501	79-06-14	260	10	89	140	.2	14	544	595	.74	.16
460725094211501	79-09-06	120	5.9	9.8	1.5	.1	13	234	219	.32	13
460915094220001	79-06-14	72	2.8	14	2.2	.1	15	120	114	.16	.77

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
454705094190001	79-09-10	.32	.33	.010	4	670	320
454830094220000	79-06-13	.11	6.7	<.010	—	<10	8
454930094173000	79-06-12	.07	2.1	.030	—	<10	260
455000094273000	79-06-13	—	—	<.010	—	<10	30
455030094173000	79-06-12	<.10	15	.020	—	<10	2
455030094191501	79-09-10	.01	13	.030	<20	<10	3
455045094172501	79-09-11	.03	3.7	.040	<20	<10	7
455045094221501	79-06-14	.47	5.8	.030	--	<10	2
455215094121501	79-08-03	.07	1.3	.030	<20	<10	1
455230094210000	79-08-03	<.10	3.3	.020	<20	20	3
455330094150000	79-06-13	.05	15	.040	—	<10	4
455400094123000	79-08-03	.02	4.9	.030	<20	20	20
455400094190000	79-06-13	<.10	.45	.100	—	<10	1
455500094142001	79-09-11	.80	3.9	.040	<20	<10	40
455530094210001	79-06-12	.03	.08	.050	—	440	140
455600094103000	79-06-12	.30	9.8	<.010	—	270	30
455730094070000	79-06-12	.17	25	.010	—	20	4
455900094083001	79-06-12	.10	.75	.010	—	3100	280
460030094050000	79-06-11	.02	5.4	.040	—	<10	3
460030094210001	79-06-13	.83	13	.170	—	250	90

460200094223000	79-06-14	.09	4.5	.030	—	<10	1
460330094193001	79-06-13	.02	9.6	.020	—	<10	250
460345094215001	79-09-06	.58	.62	.080	<20	5200	140
460400094220000	79-06-14	<.10	3.2	.030	—	<10	4
460400094250000	79-06-14	.11	.22	.040	—	760	210
460500094223000	79-06-14	.08	2.7	.010	—	40	4
460600094191501	79-06-14	.37	.53	.020	—	80	210
460725094211501	79-09-06	<.10	13	.020	<20	<10	2
460915094220001	79-06-14	.10	.87	.010	—	60	150

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

OTTER TAIL COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
460900095150001	79-10-01	46 09 00	095 15 00	01	131N36W19AAA01	1230	18	620	7.4
461235095162501	79-10-01	46 12 35	095 16 25	01	132N37W25DDC01	1410	20	470	7.5
461255095373001	79-07-05	46 12 55	095 37 30	01	132N39W29CBB01	1440	45	440	7.4
461400095123000	79-07-05	46 14 15	095 12 40	01	132N36W21AAB01	1115	25	750	7.3
461445095150001	79-07-05	46 14 45	095 15 00	01	132N36W18ADD01	1155	22	490	7.4
461445095201501	79-10-01	46 14 45	095 20 15	01	132N37W16ADC01	1020	79	500	7.5
461500095373000	79-07-05	46 15 00	095 37 30	01	132N39W18ADA01	1300	90	1050	7.1
461600095410000	79-07-02	46 16 00	095 41 00	01	132N40W11BBA01	1135	32	510	7.3
461930095130000	79-07-06	46 19 30	095 13 10	01	133N36W21AAB01	0945	30	570	7.2
461930095373000	79-07-03	46 19 35	095 37 30	01	133N39W17CDD01	1235	38	580	7.1
462100095343000	79-07-03	46 20 50	095 34 40	01	133N39W10ADC01	1415	83	440	7.7
462100095414501	79-07-02	46 21 00	095 41 45	01	133N40W11BCC01	1300	20	422	7.5
462320095463001	79-07-02	46 23 20	095 46 30	01	134N40W30CAB01	1350	70	650	7.2
462500095410000	79-08-14	46 25 05	095 40 50	01	134N40W14DAA01	1300	68	500	7.6
462500095483000	79-07-03	46 25 00	095 48 30	01	134N41W14CAA01	1130	16	500	7.6
462500095520000	79-08-14	46 25 00	095 52 00	01	134N41W16CBB01	1030	75	497	7.5
462600095540000	79-08-14	46 26 00	095 54 00	01	134N41W07CAA01	1130	80	540	7.5
462625095112001	79-08-15	46 26 25	095 11 20	01	134N36W02CCD01	1020	20	380	7.7
462710095351501	79-09-28	46 27 10	095 35 02	02	134N39W03BAD02	1315	25	520	7.5
462715095323001	79-09-27	46 26 56	095 32 22	02	134N39W01ACD02	1000	60	500	6.9

462800095300000	79-07-06	46 28 00	095 29 50	01	135N38W32ABC01	1100	16	440	7.6
463130095320000	79-06-29	46 31 30	095 31 15	01	135N38W07BAD01	1345	18	570	7.4
463245095331501	79-09-27	46 32 48	095 33 15	02	136N39W35DAD02	1200	68	550	7.3
463320095254501	79-08-15	46 33 20	095 25 45	01	136N38W32ABB01	1230	20	450	6.9
463450095382001	79-09-27	46 34 56	095 38 34	02	136N39W19ABD02	1230	90	640	7.4
463500095331501	79-09-27	46 35 00	095 33 15	01	136N39W14DDD01	1045	40	490	7.6
463700095360000	79-06-28	46 37 00	095 36 00	01	136N39W04CCD01	1500	90	470	7.6
463800095390000	79-06-28	46 38 25	095 39 00	01	137N39W31ADA01	1100	50	470	7.5
463830095320000	79-06-29	46 38 40	095 31 25	01	137N38W31AAB01	1230	40	530	7.2
463900095360000	79-06-28	46 39 07	095 35 45	01	137N39W27BDD01	1400	68	590	7.4

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM, DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SODIUM+POTASSIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
460900095150001	79-10-01	9.0	320	65	85	25	4.1	3	.1	5.7	1.6
461235095162501	79-10-01	12.0	250	40	67	20	2.3	2	.1	3.3	1.0
461255095373001	79-07-05	9.5	220	1	54	21	1.6	2	.0	4.9	3.3
461400095123000	79-07-05	8.0	360	110	100	27	4.4	3	.1	8.0	3.6
461445095150001	79-07-05	10.0	260	28	72	19	3.2	3	.1	5.1	1.9
461445095201501	79-10-01	8.5	250	16	64	21	4.0	3	.1	5.2	1.2
461500095373000	79-07-05	9.0	480	180	130	38	7.3	3	.1	10.2	2.9
461600095410000	79-07-02	9.0	300	18	78	25	1.1	1	.0	2.6	1.5
461930095130000	79-07-06	11.0	310	15	93	20	2.9	2	.1	4.2	1.3
461930095373000	79-07-03	10.0	320	0	77	30	4.8	3	.1	7.2	2.9
462100095343000	79-07-03	11.0	230	33	62	19	3.1	3	.1	4.5	1.4
462100095414501	79-07-02	11.0	240	53	66	19	2.4	2	.1	3.9	1.5
462320095463001	79-07-02	9.0	370	19	95	32	3.3	2	.1	6.0	2.7
462500095410000	79-08-14	9.5	280	68	75	22	2.0	2	.1	3.6	1.6
462500095483000	79-07-03	8.0	270	71	74	21	1.7	1	.0	2.9	1.2
462500095520000	79-08-14	11.0	260	23	69	22	1.2	1	.0	3.1	1.9
462600095540000	79-08-14	8.5	300	32	78	26	1.4	1	.0	3.7	2.3
462625095112001	79-08-15	10.0	200	18	56	14	5.1	5	.2	6.0	.9
462710095351501	79-09-28	14.0	270	37	79	17	2.6	2	.1	4.1	1.5
462715095323001	79-09-27	8.0	250	8	73	16	2.2	2	.1	3.5	1.3

462800095300000	79-07-06	8.0	230	68	65	16	2.1	2	.1	2.9	.8
463130095320000	79-06-29	9.5	280	110	76	21	2.1	2	.1	3.4	1.3
463245095331501	79-09-27	8.5	300	19	80	24	1.5	1	.0	2.6	1.1
463320095254501	79-08-15	10.0	210	23	54	19	8.5	8	.3	11	2.1
463450095382001	79-09-27	9.0	350	89	92	29	3.5	2	.1	5.1	1.6
463500095331501	79-09-27	9.5	250	58	68	19	7.1	6	.2	8.9	1.8
463700095360000	79-06-28	10.0	220	37	59	17	1.6	2	.0	2.4	.8
463800095390000	79-06-28	10.0	270	56	72	21	2.2	2	.1	2.9	.7
463830095320000	79-06-29	8.0	290	30	78	23	3.0	2	.1	3.7	.7
463900095360000	79-06-28	9.0	270	11	74	21	3.3	3	.1	4.5	1.2

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	ALKALINITY, FIELD (MG/L AS CACO3)	CARBON DIOXIDE, DISSOLVED (MG/L AS CO2)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	DISSOLVED SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	DISSOLVED SOLIDS, SUM OF CONSTITUENTS, (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
460900095150001	79-10-01	250	19	9.1	11	.1	20	388	373	.53	15
461235095162501	79-10-01	210	13	3.3	3.5	.1	14	290	280	.39	9.5
461255095373001	79-07-05	220	17	1.1	2.1	.1	22	240	239	.33	.04
461400095123000	79-07-05	250	24	10	18	.1	16	445	453	.61	28
461445095150001	79-07-05	230	18	11	2.4	.1	18	300	288	.41	5.0
461445095201501	79-10-01	230	14	15	18	.2	16	292	279	.40	.02
461500095373000	79-07-05	300	48	40	52	.1	25	646	622	.88	33
461600095410000	79-07-02	280	27	9.7	4.6	.1	21	345	315	.47	.94
461930095130000	79-07-06	300	37	10	3.5	.1	21	367	340	.50	.13
461930095373000	79-07-03	330	52	.7	3.7	.1	33	374	361	.51	.72
462100095343000	79-07-03	200	7.8	30	.9	.1	23	275	261	.37	.04
462100095414501	79-07-02	190	12	11	4.8	.1	21	282	282	.38	9.4
462320095463001	79-07-02	350	43	19	5.0	.1	26	430	401	.58	.15
462500095410000	79-08-14	210	10	51	5.0	.1	22	343	321	.47	3.7
462500095483000	79-07-03	200	9.8	22	7.9	.1	23	345	324	.47	12
462500095520000	79-08-14	240	15	18	3.2	.1	25	317	308	.43	5.3
462600095540000	79-08-14	270	17	26	2.9	.1	26	365	350	.50	5.6
462625095112001	79-08-15	180	7.0	8.7	13	.1	19	243	233	.33	1.8
462710095351501	79-09-28	230	14	8.3	7.7	.1	20	330	306	.45	7.2
462715095323001	79-09-27	240	59	17	8.5	.2	26	316	297	.43	.01

462800095300000	79-07-06	160	7.8	23	11	.1	19	297	271	.40	8.4
463130095320000	79-06-29	170	13	3.7	31	.1	20	353	333	.48	17
463245095331501	79-09-27	280	27	5.0	3.0	.2	24	348	329	.47	4.9
463320095254501	79-08-15	190	47	32	14	.1	17	281	265	.38	.71
463450095382001	79-09-27	260	20	23	15	.1	22	427	405	.58	14
463500095331501	79-09-27	190	9.3	19	12	.1	19	322	303	.44	9.7
463700095360000	79-06-28	180	8.8	14	1.0	.1	19	275	261	.37	9.1
463800095390000	79-06-28	210	13	13	6.0	.1	22	330	307	.45	9.8
463830095320000	79-06-29	260	32	24	4.2	.1	22	334	313	.45	.01
463900095360000	79-06-28	260	20	9.9	2.4	.1	26	310	297	.42	.04

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
460900095150001	79-10-01	.02	15	.020	10	10	4
461235095162501	79-10-01	.42	9.9	.010	9	<10	2
461255095373001	79-07-05	1.3	1.3	.080	<20	610	350
461400095123000	79-07-05	.12	28	<.010	<20	<10	3
461445095150001	79-07-05	.35	5.4	.080	<20	30	2
461445095201501	79-10-01	.19	.21	.020	20	720	800
461500095373000	79-07-05	.34	33	<.010	<20	<10	2
461600095410000	79-07-02	.18	1.1	<.010	<20	1100	630
461930095130000	79-07-06	.67	.80	.020	<20	7200	360
461930095373000	79-07-03	1.8	2.5	.010	40	6800	430
462100095343000	79-07-03	.10	.14	.010	<20	1100	110
462100095414501	79-07-02	.09	9.5	.010	<20	<10	3
462320095463001	79-07-02	.76	.91	.030	30	5400	960
462500095410000	79-08-14	.01	3.7	<.010	<20	<10	50
462500095483000	79-07-03	.06	12	<.010	<20	<10	2
462500095520000	79-08-14	.10	5.4	.010	30	<10	9
462600095540000	79-08-14	.23	5.8	.020	<20	230	140
462625095112001	79-08-15	.17	2.0	<.010	<20	<10	<10
462710095351501	79-09-28	.07	7.3	.010	<20	20	6
462715095323001	79-09-27	.07	.08	.100	<20	8300	360

462800095300000	79-07-06	.09	8.5	.010	<20	<10	150
463130095320000	79-06-29	.10	17	<.010	<20	20	1
463245095331501	79-09-27	.09	5.0	.030	2	30	<10
463320095254501	79-08-15	.44	1.2	.010	<20	640	150
463450095382001	79-09-27	.01	14	.010	7	20	9
463500095331501	79-09-27	.02	9.7	<.010	30	<10	30
463700095360000	79-06-28	<.10	9.1	<.010	30	<10	1
463800095390000	79-06-28	.07	9.9	<.010	7	<10	3
463830095320000	79-06-29	.27	.28	.100	30	800	340
463900095360000	79-06-28	.38	.42	.030	<20	2200	210

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

WADENA COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462215094591501	79-09-18	46 22 22	094 59 58	02	134N34W32DCB02	0920	42	660	7.2
462300094500001	79-09-13	46 22 55	094 49 56	02	134N33W34BAA02	1400	18	400	7.7
462300095070000	79-06-21	46 23 00	095 06 45	01	134N35W32AAA01	1000	25	867	7.3
462315094480001	80-05-08	46 23 15	094 48 00	01	134N33W35ACB01 S-1	1130	28	620	6.9
462315094480002	80-05-08	46 23 15	094 48 00	02	134N33W35ACB02 S-2	1100	21	575	7.3
462315094480003	80-05-08	46 23 15	094 48 00	03	134N33W35ACB03 S-3	1030	14	450	7.1
462315094480004	80-05-08	46 23 15	094 48 00	04	134N33W35ACB04 S-4	1230	28	520	6.9
462315094480005	80-05-08	46 23 15	094 48 00	05	134N33W35ACB05 S-5	1315	21	664	7.2
462315094480006	80-05-08	46 23 15	094 48 00	06	134N33W35ACB06 S-6	1400	14	605	7.3
462315094480007	80-05-08	46 23 15	094 48 00	07	134N33W35ACB07 S-7	1520	28	575	7.2
462315094480008	80-05-08	46 23 15	094 48 00	08	134N33W35ACB08 S-8	1445	21	585	7.0
462315094480009	80-05-08	46 23 15	094 48 00	09	134N33W35ACB09 S-9	1420	14	725	7.1
462315094480010	80-05-09	46 23 15	094 48 00	10	134N33W35ACB10 S-10	1055	28	595	7.1
462315094480011	80-05-09	46 23 15	094 48 00	11	134N33W35ACB11 S-11	1030	21	640	7.2
462315094480012	80-05-09	46 23 15	094 48 00	12	134N33W35ACB12 S-12	0915	14	700	7.3
462315094480013	80-05-09	46 23 15	094 48 00	13	134N33W35ACB13 S-13	1215	28	555	7.0
462315094480014	80-05-09	46 23 15	094 48 00	14	134N33W35ACB14 S-14	1135	21	640	7.1
462315094480015	80-05-09	46 23 15	094 48 00	15	134N33W35ACB15 S-15	1120	14	670	7.3
462315094480016	80-05-09	46 23 15	094 48 00	16	134N33W35ABD01 S-16	1335	28	585	6.9
462315094480017	80-05-09	46 23 15	094 48 00	17	134N33W35ABD02 S-17	1320	21	545	6.9

462315094480018	80-05-09	46	23	15	094	48	00	18	134N33W35ABD03 S-18		1300	17	680	6.6
462530094493000	79-06-15	46	25	30	094	49	30	01	134N33W15ABC01		1500	24	511	7.3
462530095050001	79-09-14	46	25	33	095	05	00	01	134N35W10CDC01		1000	24	605	7.4
462600095070000	79-08-06	46	25	30	095	06	45	01	134N35W08DDD01		1045	54	450	7.7
462605094493001	79-09-13	46	26	05	094	49	30	01	134N33W10ACC01		1330	75	510	7.4
462800094470000	79-06-20	46	27	55	094	46	50	01	135N33W36ADB01		1100	24	345	7.6
462800095003000	79-06-19	46	28	00	095	00	30	01	135N34W31AAA01		1530	15	440	7.4
462815094532001	79-09-13	46	28	14	094	53	20	01	135N33W30DCD01		1240	87	470	7.6
462830095041501	79-06-19	46	28	23	095	04	18	02	135N35W27CBC01		1400	12	492	7.2
462900094510000	79-06-20	46	29	00	094	51	05	01	135N33W28ABB01		1000	21	—	7.5
462900095023000	79-06-19	46	29	00	095	02	20	01	135N35W24CDD01		1500	23	560	7.5
463000094563000	79-06-15	46	30	00	094	56	30	01	135N34W14CCC01		1130	10	532	7.4
463000094583001	79-09-13	46	30	05	094	58	30	01	135N34W16DBC01		1130	65	460	7.5
463145094480001	79-06-20	46	31	45	094	48	00	01	135N33W01CCC01		1140	26	228	7.9
463210094525001	79-06-20	46	32	10	094	52	50	01	135N33W05BCC01		1230	30	163	8.0
463530094553001	79-06-22	46	46	20	094	47	05	01	138N32W18BCC01		1115	82	380	7.0
463545094553001	79-06-22	46	35	45	094	55	30	01	136N34W13BCC01		1000	18	425	7.2
463945094580001	79-06-19	46	39	45	094	58	00	01	137N34W22CCD01		1215	12	525	6.8
464130094563000	79-06-19	46	41	20	094	56	30	01	137N34W14ABB01		1130	15	175	8.3
464300094533001	79-06-19	46	43	00	094	53	30	01	137N33W06AAA01		1100	13	350	7.3
464420095030001	79-08-07	46	44	20	095	03	00	01	138N35W25CAA01		1100	16	180	7.9
464800094533000	79-08-06	46	48	00	094	56	30	01	138N34W02ACC01		1320	40	530	7.7
464800094583001	79-06-20	46	48	00	094	58	30	01	138N34W04ADC01		1230	30	385	8.0

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM, DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM ADSORPTION RATIO	SODIUM+POTASSIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)
462215094591501	79-09-18	11.0	320	41	94	21	7.5	5	.2	13	5.3
462300094500001	79-09-13	9.5	210	0	57	16	5.3	5	.2	6.6	1.3
462300095070000	79-06-21	10.0	400	120	110	31	17	8	.4	28	11
462315094480001	80-05-08	9.5	320	28	91	22	2.4	2	.1	3.6	1.2
462315094480002	80-05-08	8.5	280	85	76	23	2.5	2	.1	3.7	1.2
462315094480003	80-05-08	7.5	250	50	67	20	2.2	2	.1	3.3	1.1
462315094480004	80-05-08	9.0	240	14	63	21	3.8	3	.1	5.0	1.2
462315094480005	80-05-08	8.0	310	69	81	26	2.9	2	.1	4.0	1.1
462315094480006	80-05-08	7.5	290	45	80	23	2.8	2	.1	3.8	1.0
462315094480007	80-05-08	9.0	270	9	73	21	6.4	5	.2	7.7	1.3
462315094480008	80-05-08	8.0	300	1	81	24	2.5	2	.1	3.7	1.2
462315094480009	80-05-08	7.5	350	120	93	28	3.1	2	.1	3.7	.6
462315094480010	80-05-09	9.0	290	0	79	22	3.2	2	.1	4.1	.9
462315094480011	80-05-09	8.0	320	37	84	26	2.9	2	.1	3.9	1.0
462315094480012	80-05-09	7.5	340	110	91	28	3.6	2	.1	4.2	.6
462315094480013	80-05-09	8.5	280	0	79	21	2.9	2	.1	3.9	1.0
462315094480014	80-05-09	8.0	310	99	81	26	3.0	2	.1	4.5	1.5
462315094480015	80-05-09	7.5	320	83	85	27	3.4	2	.1	4.2	.8
462315094480016	80-05-09	9.5	270	0	76	19	3.3	3	.1	4.3	1.0
462315094480017	80-05-09	8.0	270	21	74	21	2.8	2	.1	3.7	.9

462315094480018	80-05-09	8.0	320	84	87	26	3.3	2	.1	4.0	.7
462530094493000	79-06-15	14.0	190	0	53	15	4.8	4	.2	33	28
462530095050001	79-09-14	12.0	340	41	97	24	5.9	4	.1	6.6	.7
462600095070000	79-08-06	11.0	260	26	73	18	1.9	2	.1	3.1	1.2
462605094493001	79-09-13	17.0	280	6	79	19	4.4	3	.1	5.5	1.1
462800094470000	79-06-20	9.0	190	0	53	14	3.6	4	.1	5.0	1.4
462800095003000	79-06-19	9.0	230	39	62	18	3.0	3	.1	5.0	2.0
462815094532001	79-09-13	9.0	240	54	68	18	2.9	3	.1	3.7	.8
462830095041501	79-06-19	8.0	280	6	79	19	3.1	2	.1	4.2	1.1
462900094510000	79-06-20	—	190	0	52	14	2.2	2	.1	3.1	.9
462900095023000	79-06-19	6.5	270	40	70	23	20	14	.5	21	1.2
463000094563000	79-06-15	10.0	280	25	81	20	3.7	3	.1	5.0	1.3
463000094583001	79-09-13	9.5	240	0	66	19	5.4	5	.2	6.7	1.3
463145094480001	79-06-20	9.5	120	7	32	9.0	2.1	4	.1	2.5	.4
463210094525001	79-06-20	7.5	77	4	25	3.5	1.8	5	.1	2.2	.4
463530094553001	79-06-22	10.0	110	13	29	8.0	5.4	10	.2	6.7	1.3
463545094553001	79-06-22	8.0	110	0	35	5.3	50	49	2.1	54	4.2
463945094580001	79-06-19	10.0	230	0	60	19	17	13	.5	24	7.3
464130094563000	79-06-19	10.0	81	17	25	4.4	1.8	5	.1	2.1	.3
464300094533001	79-06-19	9.0	190	0	59	10	2.6	3	.1	4.2	.6
464420095030001	79-08-07	10.0	85	8	26	4.9	1.6	4	.1	2.2	.6
464800094533000	79-08-06	9.0	270	71	82	16	2.1	2	.1	2.7	.6
464800094583001	79-06-20	7.5	210	36	61	13	2.5	3	.1	3.2	.7

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	ALKALINITY, FIELD (MG/L AS CACO3)	CARBON DIOXIDE, DISSOLVED (MG/L AS CO2)	SULFATE, DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	DISSOLVED SOLIDS, RESIDUE AT 180 DEG. C (MG/L)	DISSOLVED SOLIDS, SUM OF CONSTITUENTS, (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)
462215094591501	79-09-18	280	34	21	19	.1	14	390	380	.53	6.0
462300094500001	79-09-13	210	8.2	6.0	1.7	.1	23	233	238	.32	.02
462300095070000	79-06-21	280	27	17	46	.1	16	524	518	.71	23
462315094480001	80-05-08	290	28	2.0	9.6	.1	14	339	320	.46	.04
462315094480002	80-05-08	200	50	14	14	.1	6.9	285	266	.39	1.7
462315094480003	80-05-08	200	32	13	13	.1	13	323	329	.44	18
462315094480004	80-05-08	230	58	8.5	11	.1	8.9	280	263	.38	.63
462315094480005	80-05-08	240	29	17	17	.1	6.9	315	333	.43	7.5
462315094480006	80-05-08	250	24	18	18	.1	12	349	354	.47	11
462315094480007	80-05-08	260	32	9.0	15	.1	13	326	302	.44	.10
462315094480008	80-05-08	300	59	3.5	7.7	.1	7.1	328	309	.45	.08
462315094480009	80-05-08	230	36	13	36	.1	14	467	329	.64	.64
462315094480010	80-05-09	300	48	4.9	9.0	.1	13	344	323	.47	1.1
462315094480011	80-05-09	280	34	13	12	.1	6.6	358	316	.49	.14
462315094480012	80-05-09	230	22	16	22	.1	13	453	330	.62	3.8
462315094480013	80-05-09	300	59	1.7	7.4	.1	13	337	314	.46	.34
462315094480014	80-05-09	210	33	13	12	.1	8.0	355	273	.48	.11
462315094480015	80-05-09	240	23	15	20	.1	11	442	395	.60	20
462315094480016	80-05-09	290	73	1.6	4.6	.1	15	314	301	.43	.24
462315094480017	80-05-09	250	63	12	18	.1	11	320	293	.44	.09

462315094480018	80-05-09	240	117	15	21	.1	11	434	428	.59	27
462530094493000	79-06-15	200	20	25	2.7	.1	16	299	277	.41	2.5
462530095050001	79-09-14	300	23	37	12	.1	15	345	375	.47	.21
462600095070000	79-08-06	230	9.0	19	3.1	.1	20	291	277	.40	.34
462605094493001	79-09-13	270	21	17	4.5	.1	18	306	306	.42	.09
462800094470000	79-06-20	200	9.8	4.3	.9	.1	19	222	217	.30	.02
462800095003000	79-06-19	190	15	9.1	6.6	.1	19	280	267	.38	7.5
462815094532001	79-09-13	190	9.3	5.6	8.5	.1	15	278	277	.38	9.8
462830095041501	79-06-19	270	33	11	4.8	.1	17	317	300	.43	.08
462900094510000	79-06-20	190	12	4.9	1.5	.1	16	210	208	.29	.33
462900095023000	79-06-19	230	14	32	15	.1	13	320	349	.44	8.1
463000094563000	79-06-15	260	20	20	4.5	.1	19	342	306	.47	.07
463000094583001	79-09-13	250	15	8.4	1.4	.1	15	256	268	.35	.09
463145094480001	79-06-20	110	2.7	5.2	.5	.1	12	151	143	.21	3.4
463210094525001	79-06-20	73	1.4	6.1	.3	.1	8.7	98	90	.13	.07
463530094553001	79-06-22	92	18	15	.9	.1	11	132	127	.18	.10
463545094553001	79-06-22	130	16	39	13	.1	13	279	265	.38	6.0
463945094580001	79-06-19	250	77	6.3	20	.1	13	333	301	.45	.05
464130094563000	79-06-19	64	.6	3.4	4.3	.1	12	109	101	.15	2.6
464300094533001	79-06-19	200	20	2.1	1.3	.1	14	224	215	.30	<.10
464420095030001	79-08-07	77	1.9	4.7	.3	.1	12	107	99	.15	.52
464800094533000	79-08-06	200	7.8	11	11	.1	14	330	299	.45	9.5
464800094583001	79-06-20	170	3.3	15	3.6	.1	9.7	233	213	.32	.94

Table 1.—Chemical analyses of water for common major constituents collected during 1979-80 from the baseline network wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, DISSOLVED (MG/L AS N)	PHOSPHORUS, DISSOLVED (MG/L AS P)	BORON, DISSOLVED (UG/L AS B)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
462215094591501	79-09-18	1.2	7.2	.020	40	2500	510
462300094500001	79-09-13	.37	.39	.020	<20	940	90
462300095070000	79-06-21	.84	24	<.010	<20	130	20
462315094480001	80-05-08	.98	1.0	.000	30	1300	1500
462315094480002	80-05-08	.19	1.9	.000	20	30	820
462315094480003	80-05-08	.13	18	.000	10	20	60
462315094480004	80-05-08	1.2	1.8	.000	30	3500	670
462315094480005	80-05-08	.22	7.7	.000	30	2300	760
462315094480006	80-05-08	.15	11	.000	30	10	70
462315094480007	80-05-08	1.5	1.6	.010	20	6200	480
462315094480008	80-05-08	.32	.40	.000	20	450	640
462315094480009	80-05-08	.12	.76	.000	50	10	30
462315094480010	80-05-09	.87	2.0	.080	30	5400	520
462315094480011	80-05-09	.31	.45	.000	30	150	1500
462315094480012	80-05-09	.29	4.1	.010	30	20	40
462315094480013	80-05-09	.95	1.3	.020	40	5900	560
462315094480014	80-05-09	.06	.17	.000	30	1500	520
462315094480015	80-05-09	.13	20	.000	30	140	70
462315094480016	80-05-09	.65	.89	.000	30	3900	590
462315094480017	80-05-09	.19	.28	.020	30	2200	350

462315094480018	80-05-09	.10	27	.000	10	130	250
462530094493000	79-06-15	.71	3.2	.020	—	60	960
462530095050001	79-09-14	.48	.69	.010	<20	1900	560
462600095070000	79-08-06	.21	.55	<.010	4	750	310
462606094493001	79-09-13	.49	.58	.000	10	40	20
462800094470000	79-06-20	.20	.22	.050	80	380	140
462800094470000	79-06-19	.05	7.6	.040	7	100	3
462815094532001	79-09-13	.04	9.8	.010	<20	20	4
462830095041501	79-06-19	.32	.40	<.010	<20	2100	420
462900094510000	79-06-20	.05	.38	.010	<20	590	90
462900095023000	79-06-19	.06	8.2	<.010	140	<10	4
463000094563000	79-06-15	.15	.22	<.010	—	100	20
463000094583001	79-09-13	.08	.17	.020	<20	760	140
463145094480001	79-06-20	.03	3.4	.010	5	1	<10
463210094525001	79-06-20	.01	.08	.070	5	220	70
463530094553001	79-06-22	.25	.35	.050	<20	30	80
463545094553001	79-06-22	.87	6.9	1.70	90	<10	110
463945094580001	79-06-19	5.0	5.1	.020	60	5500	2000
464130094563000	79-06-19	.04	2.6	.010	3	<10	3
464300094533001	79-06-19	.63	.63	.050	40	4400	540
464420095030001	79-08-07	.10	.62	.020	2	<10	110
464800094533000	79-08-06	<.10	9.5	.020	<20	<10	<10
464800094583001	79-06-20	.29	1.2	<.010	6	740	530

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Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979–81 from selected baseline wells

Water samples were collected periodically from 56 wells for specific indicator constituents. Each well was sampled several times between 1979–81 to establish seasonal variations in chemical quality. The specific constituents sampled were chosen as indicators because of their sensitivity to changes brought about by agricultural contamination. The analyses are listed by county and station number. Figure 1 shows the approximate location of wells sampled periodically. The samples were collected and analyzed following the methods of Brown and others (1970). Field measurements were the same as those in table 1.

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells

HUBBARD COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
464925094505501	79-07-17	46 49 25	094 50 55	01	139N33W28DDA01	1100	30	330	7.5
	80-09-29					1320	30	560	7.1
	81-05-19					1345	30	570	7.5
	81-09-28					1400	30	540	7.3
464940094593001	79-08-07	46 49 40	094 59 30	01	139N34W28BCC01	1400	16	410	7.9
	79-10-04					1200	16	475	7.0
	79-11-20					1145	16	500	7.7
	80-02-26					1055	16	485	7.6
	80-05-27					0945	16	555	6.9
	80-06-26					0945	16	578	7.5
	80-07-31					1015	16	565	7.4
	80-08-21					1000	16	595	7.4
	80-09-29					1145	16	600	7.2
	80-11-07					1150	16	585	7.5
	81-02-23					1100	16	570	7.6
	81-05-15					1045	16	600	7.2
	81-06-24					1045	16	650	6.8
	81-07-23					1130	16	650	—
	81-08-31					1130	16	615	7.5
	81-09-23					1100	16	665	7.4
	81-12-02					1100	16	560	7.3

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
464925094505501	79-07-17	8.0	54	2.9	2.6	<10
	80-09-29	8.5	81	8.4	25	<10
	81-05-19	9.0	77	10	15	20
	81-09-28	8.5	77	11	20	<10
464940094593001	79-08-07	8.5	55	.5	.06	170
	79-10-04	9.0	70	23	4.9	<10
	79-11-20	9.5	71	22	4.1	<10
	80-02-26	9.0	77	28	17	<10
	80-05-27	9.5	87	21	1.7	20
	80-06-26	9.5	90	20	11	10
	80-07-31	9.0	90	18	13	20
	80-08-21	12.0	91	19	16	10
	80-09-29	10.0	92	20	18	<10
	80-11-07	8.0	97	24	19	<10
	81-02-23	10.0	92	20	15	20
	81-05-15	10.0	86	24	11	20
	81-06-24	11.5	100	22	19	40
	81-07-23	10.5	100	21	22	10
	81-08-31	12.5	93	22	12	10
	81-09-23	10.0	100	29	16	<10
	81-12-02	11.5	82	24	11	30

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

HUBBARD COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
465035095000001	79-07-27	46 50 35	095 00 00	01	139N34W20ADC01	1030	40	600	7.5
	79-10-04					1235	40	560	7.2
	79-11-20					1200	40	540	7.4
	80-02-26					1115	40	575	7.5
	80-05-27					1020	40	640	6.4
	80-06-26					1010	40	596	7.4
	80-07-31					1100	40	600	7.3
	80-08-21					1100	40	625	7.3
	80-09-29					1245	40	570	7.2
	80-11-07					1230	40	—	7.6
	81-02-23					1130	40	560	7.5
	81-05-15					1115	40	580	7.4
	81-06-24					1130	40	675	6.8
	81-07-23					1200	40	780	—
	81-08-31					1200	40	915	7.3
	81-09-23					1130	40	940	7.3
	81-12-02					1130	40	870	7.4
465100094543001	79-07-16	46 51 00	094 54 30	01	139N33W18CCC01	1425	45	550	7.5
	80-09-29					1345	45	340	7.2
	81-05-19					1500	45	340	7.5
	81-09-28					1500	45	365	7.2

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
465035095000001	79-07-27	10.0	89	25	23	<10
	79-10-04	9.0	85	24	22	10
	79-11-20	9.0	87	23	25	<10
	80-02-26	9.5	92	18	19	10
	80-05-27	10.5	92	17	19	40
	80-06-26	10.5	92	18	19	10
	80-07-31	10.5	89	17	18	30
	80-08-21	11.5	91	16	20	20
	80-09-29	10.5	92	17	18	<10
	80-11-07	9.5	93	18	18	<10
	81-02-23	9.0	82	25	17	20
	81-05-15	10.0	87	28	11	<10
	81-06-24	10.5	98	40	21	30
	81-07-23	10.5	120	51	33	60
	81-08-31	11.5	120	75	23	30
	81-09-23	10.5	120	75	34	20
	81-12-02	10.0	120	80	30	10
465100094543001	79-07-16	9.5	74	7.0	19	<10
	80-09-29	9.0	53	2.5	2.3	<10
	81-05-19	9.5	58	2.0	2.0	20
	81-09-28	9.0	64	4.6	4.5	<10

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

HUBBARD COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
465245094433001	79-07-13	46 52 45	094 43 30	01	139N32W04DCA01	1350	80	900	7.3
	79-10-05					1305	80	350	7.7
	80-05-28					0930	80	375	6.3
	80-09-30					1000	80	370	7.3
	81-05-19					1000	80	340	7.3
	81-09-28					1045	80	340	7.5
465315094554001	79-07-17	46 53 15	094 55 40	01	139N34W01BCA01	0945	80	440	7.7
	79-10-11					1230	80	470	7.5
	79-11-20					1300	80	480	7.5
	80-02-26					1210	80	—	—
	80-05-28					1140	80	480	6.5
	80-06-26					1215	80	445	7.4
	80-07-31					1300	80	480	7.4
	80-08-21					0120	80	480	7.3
	80-09-30					1300	80	450	6.6
	80-11-07					1400	80	—	7.8
	81-02-23					1400	80	445	7.6
	81-05-19					1300	80	470	7.4
	81-06-24					1300	80	460	6.7
	81-07-23					1330	80	460	—
	81-08-31					1400	80	430	7.4
	81-09-28					1330	80	455	7.4
	81-12-02					1300	80	410	6.9

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
465245094433001	79-07-13	10.0	130	42	40	40
	79-10-05	8.0	54	6.4	.90	10
	80-05-28	10.5	62	6.9	1.4	20
	80-09-30	10.5	50	9.1	32	<10
	81-05-19	9.0	56	15	2.3	10
	81-09-28	9.0	52	12	2.4	10
465315094554001	79-07-17	8.0	62	7.2	6.3	<10
	79-10-11	10.0	—	6.4	4.4	—
	79-11-20	9.0	71	6.3	4.6	<10
	80-02-26	—	74	4.6	3.3	30
	80-05-28	11.5	76	3.1	4.0	10
	80-06-26	11.0	76	3.2	3.9	10
	80-07-31	10.5	72	9.1	4.3	10
	80-08-21	11.5	74	7.9	4.7	10
	80-09-30	11.5	69	9.9	15	<10
	80-11-07	9.0	77	8.6	5.0	<10
	81-02-23	10.0	71	7.7	5.0	10
	81-05-19	11.0	73	7.8	4.2	10
	81-06-24	10.5	74	9.3	2.9	20
	81-07-23	12.5	75	10	6.5	50
	81-08-31	13.0	73	10	4.2	10
	81-09-28	11.0	75	10	5.1	<10
	81-12-02	10.0	74	12	5.0	20

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

HUBBARD COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
465340095020001	79-07-27	46 53 40	095 02 00	01	140N34W31CCC01	1130	42	428	7.7
	79-10-10					1310	42	380	7.7
	80-05-27					1300	42	395	6.2
	80-09-25					1330	42	355	7.6
	81-05-15					1400	42	470	7.4
	81-09-23					1200	42	385	7.5
465355095094001	79-07-12	46 53 55	095 09 40	01	139N35W06BBB01	1500	42	510	7.4
	79-10-10					1230	42	454	7.8
	80-05-27					1110	42	625	6.3
	80-09-25					1100	42	500	7.5
	81-05-15					1200	42	500	7.4
	81-09-23					1330	42	535	7.3
465515094411001	79-07-13	46 55 15	094 41 10	01	140N32W26ABA01	1245	101	390	7.6
	79-10-05					1055	101	390	7.5
	80-05-28					0950	101	415	6.6
	80-09-30					1045	101	380	7.2
	81-05-19					1040	101	375	7.5
	81-09-28					1115	101	360	7.6
465515095061501	79-07-31	46 55 15	095 06 15	01	140N35W28AAA01	1045	30	530	7.5
	79-11-20					1330	30	490	7.5
	80-02-26					1145	30	540	7.5
	80-05-27					1140	30	585	6.6
	80-06-26					1045	30	575	7.3

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

HUBBARD COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
465515095061501	80-07-31	46 55 15	095 06 15	01	140N35W28AAA01	1140	30	535	7.2
	80-08-21					1130	30	500	7.3
	80-09-25					1130	30	460	7.5
	80-11-07					1300	30	430	7.8
	81-02-23					1230	30	420	7.6
	81-05-15					1230	30	480	7.5
	81-06-24					1200	30	575	6.5
	81-07-23					1230	30	480	—
	81-08-31					1300	30	480	7.4
	81-09-23					1300	30	455	7.4
	81-12-02					1200	30	400	6.8
465525095050001	79-07-09	46 55 25	095 05 00	01	140N35W22DDD01	1250	27	370	7.8
	79-10-10					1045	27	360	7.7
	80-05-27					1200	27	355	6.3
	80-09-25					1200	27	340	7.7
	81-05-15					1300	27	300	7.6
	81-09-23					1230	27	315	7.7
465550094552001	79-07-27	46 55 50	094 55 20	01	140N34W24BDA01	1345	67	340	7.6
	79-10-11					1350	67	320	8.0
	80-05-27					1330	67	340	6.3
	80-09-30					1200	67	300	6.8
	81-05-19					1215	67	325	7.5
	81-09-28					1230	67	320	7.4

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
465340095020001	79-07-27	11.0	60	1.3	2.7	<10
	79-10-10	8.5	54	5.4	1.7	<10
	80-05-27	9.0	59	2.2	.99	80
	80-09-25	8.5	56	2.5	1.6	20
	81-05-15	8.5	69	9.7	3.5	10
	81-09-23	8.5	63	4.9	3.1	<10
465355095094001	79-07-12	9.0	71	4.6	8.2	<10
	79-10-10	9.0	67	2.8	6.4	<10
	80-05-27	10.0	90	16	9.0	10
	80-09-25	9.5	80	11	—	10
	81-05-15	10.5	78	14	5.0	20
	81-09-23	9.0	83	24	9.2	<10
465515094411001	79-07-13	11.0	60	1.3	2.9	<10
	79-10-05	9.0	59	1.8	2.8	<10
	80-05-28	10.0	68	2.1	2.8	10
	80-09-30	9.5	57	1.3	6.1	10
	81-05-19	9.5	64	2.1	2.6	30
	81-09-28	8.0	64	1.8	2.1	<10
465515095061501	79-07-31	8.5	74	16	4.4	<10
	79-11-20	11.0	72	10	4.9	<10
	80-02-26	8.5	82	5.8	2.7	10
	80-05-27	12.0	81	18	4.3	50
	80-06-26	12.5	88	18	4.3	10

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
465515095061501	80-07-31	13.5	80	16	2.3	10
	80-08-21	12.0	78	4.7	2.4	10
	80-09-25	10.0	73	3.9	2.2	10
	80-11-07	8.5	72	3.7	2.1	<10
	81-02-23	9.0	65	5.5	2.4	10
	81-05-15	11.0	67	24	3.7	10
	81-06-24	10.5	87	59	6.4	30
	81-07-23	11.5	77	13	5.0	10
	81-08-31	13.0	72	5.1	3.0	10
	81-09-23	11.5	74	3.7	2.6	<10
	81-12-02	9.0	73	8.1	4.7	<10
465525095050001	79-07-09	12.0	52	11	2.5	<10
	79-10-10	10.0	50	14	2.5	10
	80-05-27	12.0	51	12	2.2	10
	80-09-25	14.0	49	16	3.5	10
	81-05-15	9.5	40	7.4	2.1	10
	81-09-23	14.0	46	6.2	4.3	<10
465550094552001	79-07-27	19.0	38	1.5	<.10	40
	79-10-11	12.0	69	1.4	.09	<10
	80-05-27	18.5	39	1.6	.17	30
	80-09-30	15.0	39	1.9	1.1	<10
	81-05-19	12.5	41	1.8	.02	30
	81-09-28	16.5	44	2.2	.73	<10

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

HUBBARD COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
465935094441501	79-07-13	46 59 35	094 44 15	01	141N32W33BAC01	1105	80	630	6.9
	79-10-05					1145	80	725	6.9
	80-05-28					1030	80	780	6.4
	80-09-30					1130	80	690	6.8
	81-05-19					1115	80	580	7.0
	81-09-28					1145	80	535	7.1

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
465935094441501	79-07-13	8.5	100	7.9	.16	3200
	79-10-05	9.0	110	13	.06	4300
	80-05-28	10.0	120	9.2	.52	2900
	80-09-30	9.0	120	5.9	.25	4000
	81-05-19	8.5	95	1.3	.07	700
	81-09-28	10.0	95	1.5	.09	2300

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

MORRISON COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
454705094190001	79-09-10	45 47 15	094 19 05	01	127N29W27BAD01	1440	65	480	7.5
	80-05-06					1415	65	450	7.2
	80-09-04					1200	65	610	7.7
	81-05-07					0900	65	470	7.5
	81-09-17					1100	65	470	7.4
455030094191501	79-09-10	45 50 30	094 19 15	01	039N32W27CBB01	1100	17	300	8.2
	79-11-14					1230	17	280	8.1
	80-02-27					1045	17	310	8.1
	80-05-06					1330	17	274	7.5
	80-06-23					1400	17	300	8.1
	80-07-28					1000	17	300	8.1
	80-08-18					0900	17	250	8.1
	80-09-02					1200	17	260	8.2
	80-11-10					1420	17	145	8.1
	81-02-17					1200	17	230	8.2
	81-05-06					1000	17	235	8.4
	81-06-22					1350	17	235	6.8
	81-07-21					1200	17	255	—
	81-08-27					1130	17	250	8.2
	81-09-15					1200	17	245	8.2
	81-11-24					1300	17	235	7.2

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
454705094190001	79-09-10	10.5	64	6.9	.01	670
	80-05-06	10.5	73	7.6	.14	690
	80-09-04	11.5	62	7.4	.15	610
	81-05-07	11.0	67	7.4	.01	670
	81-09-17	11.0	67	7.5	.04	810
455030094191501	79-09-10	10.0	40	13	13	<10
	79-11-14	12.0	37	11	14	<10
	80-02-27	6.0	43	14	12	<10
	80-05-06	7.0	40	13	18	30
	80-06-23	9.0	37	11	15	<10
	80-07-28	10.5	35	9.4	16	10
	80-08-18	10.5	37	8.5	15	10
	80-09-02	12.0	34	9.1	2.8	30
	80-11-10	10.0	34	8.4	15	20
	81-02-17	7.5	30	7.2	10	50
	81-05-06	7.5	54	6.4	3.8	20
	81-06-22	9.0	33	7.2	12	20
	81-07-21	10.0	33	7.9	15	10
	81-08-27	12.5	34	8.1	13	10
	81-09-15	11.5	34	7.6	15	10
	81-11-24	11.5	30	5.7	13	10

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
455045094172501	79-09-11	45 50 55	094 17 31	01	039N32W26ABC01	1430	25	310	7.8
	80-05-06					1200	25	320	7.3
	80-09-02					1430	25	345	7.9
	81-05-06					1045	25	340	7.9
	81-09-15					1230	25	350	7.8
455045094221501	79-06-14	45 50 45	094 22 15	01	127N29W06AAC01	1100	31	393	7.2
	80-09-04					1100	31	345	7.5
	81-05-07					1000	31	360	7.7
	81-09-17					1130	31	340	7.2
455215094121501	79-08-03	45 52 15	094 12 15	01	039N31W16DAC01	1415	25	190	8.0
	79-09-11					1300	25	175	7.9
	79-11-14					1300	25	170	7.8
	80-02-27					1010	25	180	8.0
	80-05-06					1130	25	190	7.4
	80-06-23					1300	25	200	7.9
	80-07-28					1100	25	180	7.7
	80-08-18					0945	25	170	7.9
	80-09-02					1240	25	180	8.1
	80-11-10					1515	25	—	7.9
	81-02-17					1130	25	180	7.7
	81-05-06					1130	25	170	8.0
	81-06-22					1430	25	175	6.6
	81-07-21					1300	25	185	--
	81-08-27					1215	25	165	7.9

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
455045094172501	79-09-11	10.0	45	5.6	3.7	<10
	80-05-06	9.0	47	2.0	3.5	20
	80-09-02	11.0	51	12	8.3	30
	81-05-06	9.0	47	14	6.2	20
	81-09-15	10.5	48	13	12	<10
455045094221501	79-06-14	9.0	55	7.7	5.3	<10
	80-09-04	11.0	24	1.5	2.1	20
	81-05-07	8.0	31	6.9	7.1	10
	81-09-17	11.5	50	5.8	4.9	20
455215094121501	79-08-03	9.0	24	1.7	1.2	<10
	79-09-11	10.0	24	1.6	1.0	30
	79-11-14	9.0	24	1.5	.61	10
	80-02-27	8.0	25	1.3	.47	<10
	80-05-06	8.0	25	1.3	1.3	10
	80-06-23	8.5	48	1.2	1.2	10
	80-07-28	11.0	25	1.4	1.6	20
	80-08-18	10.5	26	1.1	3.2	10
	80-09-02	9.0	46	5.7	4.9	20
	80-11-10	9.5	24	1.2	2.1	<10
	81-02-17	9.0	25	8.3	1.8	70
	81-05-06	8.5	24	1.6	1.9	30
	81-06-22	10.0	24	1.5	1.9	20
	81-07-21	12.0	26	1.4	1.8	20
	81-08-27	11.0	23	1.1	—	20

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
455215094121501	81-09-15	45 52 15	094 12 15	01	039N31W16DAC01	1300	25	175	8.0
	81-11-24					1345	25	170	7.1
455500094142001	79-09-11	45 54 45	094 14 25	02	040N31W32CCC02	1530	30	270	7.8
	80-05-06					1200	30	500	7.3
	80-09-02					1330	30	530	7.7
	81-05-06					1200	30	690	7.9
	81-09-15					1400	30	540	7.5
455530094210001	79-06-12	45 55 30	094 21 00	01	040N32W32ABA01	1630	15	334	7.8
	79-09-07					1510	15	310	7.7
	80-05-07					1030	15	360	7.3
	80-09-02					1125	15	390	7.5
	81-05-06					0915	15	350	7.9
	81-09-15					1130	15	365	7.3
455900094083001	79-06-12	45 59 00	094 08 30	01	040N31W12ABB01	0945	20	180	6.9
	79-09-11					1130	20	185	7.1
	80-05-06					1030	20	200	7.5
	80-09-04					0930	20	200	7.0
	81-05-06					1330	20	190	7.6
	81-09-15					1500	20	235	7.2
460030094210001	79-06-13	46 00 30	094 21 00	01	041N32W26BCA01	1700	21	307	7.8
	79-09-07					1300	21	270	8.0
	79-11-14					1200	21	330	7.9
	80-02-21					0950	21	330	7.9
	80-05-05					1130	21	265	7.4

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
455215094121501	81-09-15	11.0	25	1.6	2.0	<10
	81-11-24	9.5	23	1.4	1.6	20
455500094142001	79-09-11	12.0	35	3.2	3.1	<10
	80-05-06	8.0	66	21	18	20
	80-09-02	13.0	64	35	13	30
	81-05-06	9.5	81	49	9.6	10
	81-09-15	13.0	58	32	3.2	20
455530094210001	79-06-12	9.0	38	13	.05	440
	79-09-07	9.0	40	18	.09	<10
	80-05-07	8.0	54	15	.07	560
	80-09-02	14.0	38	12	2.0	20
	81-05-06	8.5	58	22	.02	30
	81-09-15	12.5	61	6.5	3.8	20
455900094083001	79-06-12	9.0	17	2.7	.65	3100
	79-09-11	9.0	18	3.2	.97	2600
	80-05-06	9.0	20	10	.76	3100
	80-09-04	10.0	21	12	1.9	3000
	81-05-06	9.5	21	11	.03	4300
	81-09-15	10.0	24	18	.90	3800
460030094210001	79-06-13	8.5	17	25	12	250
	79-09-07	12.5	40	18	.45	<10
	79-11-14	12.0	44	12	2.6	<10
	80-02-21	10.5	40	6.4	1.3	10
	80-05-05	10.0	36	7.6	4.0	30

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
460030094210001	80-06-23	46 00 30	094 21 00	01	041N32W26BCA01	1215	21	290	7.9
	80-07-28					1400	21	345	7.8
	80-08-18					1030	21	300	7.8
	80-09-03					1400	21	300	7.9
	80-11-12					1330	21	350	7.8
	81-02-17					1300	21	410	7.7
	81-05-06					1430	21	390	7.9
	81-06-22					1530	21	365	6.8
	81-07-21					1345	21	355	--
	81-08-27					1515	21	350	7.8
	81-09-17					1200	21	340	7.7
	81-11-24					1200	21	340	7.4
460330094193001	79-06-13	46 03 30	094 19 30	01	041N32W01CDD01	1515	14	322	7.8
	79-09-07					1350	14	225	7.7
	80-05-05					1245	14	230	7.3
	80-09-03					1200	14	222	7.4
	81-05-07					1300	14	235	7.9
	81-09-17					1230	14	305	7.7
460345094215001	79-09-06	46 03 55	094 22 10	02	130N29W18DDD02	1200	12	250	6.6
	80-05-07					0930	12	210	6.9
	80-09-03					0845	12	210	6.4
	81-05-07					1230	12	220	7.0

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
460030094210001	80-06-23	14.0	39	10	4.0	10
	80-07-28	13.5	40	13	3.6	40
	80-08-18	12.0	43	12	2.7	10
	80-09-03	14.5	57	9.9	1.5	520
	80-11-12	12.5	47	23	4.0	20
	81-02-17	10.0	49	26	4.1	40
	81-05-06	10.0	51	24	3.5	20
	81-06-22	11.0	49	22	12	40
	81-07-21	14.0	54	14	8.1	10
	81-08-27	14.5	47	13	—	20
	81-09-17	16.0	46	13	5.9	20
	81-11-24	12.5	44	14	4.3	20
460330094193001	79-06-13	8.0	39	8.2	9.6	<10
	79-09-07	9.5	32	14	.04	530
	80-05-05	7.0	32	1.3	.04	550
	80-09-03	12.0	30	1.7	.06	490
	81-05-07	8.0	37	1.8	.02	760
	81-09-17	11.5	46	6.1	.04	1100
460345094215001	79-09-06	10.0	27	14	.04	5200
	80-05-07	8.5	24	2.7	.06	5700
	80-09-03	10.5	25	3.3	.35	5000
	81-05-07	8.5	27	3.7	.03	7700

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
460600094191501	79-06-14	46 06 00	094 19 15	01	042N32W24DCC01	0930	30	1040	7.7
	79-09-06					1330	30	200	7.9
	80-05-05					1345	30	370	7.3
	80-09-03					1130	30	300	7.3
	81-05-07					1345	30	305	7.8
	81-10-02					0800	30	315	7.4
460725094211501	79-09-06	46 07 28	094 21 15	01	042N32W14BBC01	1530	21	340	7.6
	79-11-14					1100	21	340	7.9
	80-02-21					1030	21	350	7.8
	80-05-05					1400	21	360	7.3
	80-06-23					1500	21	360	7.7
	80-07-28					0900	21	430	7.6
	80-08-18					1115	21	400	7.7
	80-09-03					1100	21	360	7.3
	80-11-12					1000	21	—	7.7
	81-02-17					1330	21	340	7.8
	81-05-07					1500	21	360	7.8
	81-06-22					1615	21	330	6.6
	81-07-21					1430	21	385	—
	81-08-27					1345	21	360	7.7
	81-09-17					1400	21	340	7.5
	81-11-24					1130	21	340	7.3

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
460600094191501	79-06-14	11.5	110	140	.16	80
	79-09-06	8.5	29	6.2	.15	<10
	80-05-05	9.0	51	1.2	2.6	40
	80-09-03	14.0	46	1.5	2.8	30
	81-05-07	9.5	47	1.3	2.3	10
	81-10-02	6.5	51	2.2	3.2	10
460725094211501	79-09-06	10.0	50	1.5	13	<10
	79-11-14	10.0	46	5.6	2.9	<10
	80-02-21	9.0	51	7.9	3.3	10
	80-05-05	9.0	50	8.0	10	30
	80-06-23	9.5	26	9.1	9.9	10
	80-07-28	11.5	56	14	16	20
	80-08-18	10.0	58	12	16	20
	80-09-03	12.0	49	12	18	40
	80-11-12	10.5	50	9.4	15	<10
	81-02-17	10.5	51	9.6	13	50
	81-05-07	10.0	53	12	10	10
	81-06-22	11.0	50	14	12	10
	81-07-21	13.0	58	11	16	20
	81-08-27	11.0	52	11	9.1	20
	81-09-17	10.5	54	11	10	10
	81-11-24	9.5	50	12	8.9	40

Table 2.--Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

MORRISON COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
460915094220001	79-06-14	46 09 15	094 22 00	01	042N32W02CCB01	0845	45	189	7.7
	79-09-07					1030	45	300	7.9
	80-05-05					1530	45	310	7.4
	80-09-03					0915	45	280	7.4
	81-05-07					1415	45	290	7.9
	81-09-17					1330	45	280	7.7

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
460915094220001	79-06-14	8.5	24	2.2	.77	60
	79-09-07	8.0	43	1.5	3.0	<10
	80-05-05	8.5	50	8.6	4.6	20
	80-09-03	11.5	42	2.1	5.0	30
	81-05-07	9.0	41	2.2	3.0	10
	81-09-17	9.5	43	1.8	3.1	20

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Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

OTTER TAIL COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
460900095150001	79-10-01	46 09 00	095 15 00	01	131N36W19AAA01	1230	18	620	7.4
	80-05-20					1335	18	595	7.0
	80-09-17					1300	18	530	7.8
	81-05-21					1245	18	515	7.0
	81-10-01					1330	18	490	7.3
461235095162501	79-10-01	46 12 35	095 16 25	01	132N37W25DDC01	1410	20	470	7.5
	79-11-16					1400	20	550	7.4
	80-05-20					1410	20	595	6.3
	80-06-25					1230	20	616	7.3
	80-07-30					1300	20	545	7.3
	80-08-20					1200	20	615	7.1
	80-09-26					1100	20	600	7.3
	80-11-06					1330	20	—	7.7
	81-02-20					1500	20	620	7.4
	81-05-21					1330	20	515	7.1
	81-06-25					1330	20	550	6.5
	81-07-24					1400	20	550	—
	81-08-28					1400	20	535	7.3
	81-10-01					1400	20	480	7.2
	81-12-03					1330	20	560	6.6

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
460900095150001	79-10-01	9.0	85	11	15	10
	80-05-20	10.0	86	10	11	20
	80-09-17	9.0	75	8.8	9.4	10
	81-05-21	7.5	70	9.3	5.9	10
	81-10-01	8.5	81	13	9.7	<10
461235095162501	79-10-01	12.0	67	3.5	9.5	<10
	79-11-16	10.0	80	3.7	8.8	10
	80-05-20	10.0	83	5.1	8.8	20
	80-06-25	10.0	91	5.7	11	10
	80-07-30	10.0	85	4.0	9.4	30
	80-08-20	12.0	91	5.1	13	20
	80-09-26	11.5	91	6.5	16	20
	80-11-06	11.5	95	8.1	16	<10
	81-02-20	8.5	97	8.4	11	40
	81-05-21	9.0	76	7.7	8.1	20
	81-06-25	10.0	80	7.4	10	50
	81-07-24	11.5	80	7.9	15	10
	81-08-28	10.5	78	7.3	7.9	140
	81-10-01	9.5	82	6.5	5.4	800
	81-12-03	8.0	80	8.4	7.3	880

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
461255095373001	79-07-05	46 12 55	095 37 30	01	132N39W29CBB01	1440	45	440	7.4
	79-10-01					1140	45	410	7.4
	80-05-20					1225	45	460	6.3
	80-09-17					1145	45	420	7.8
	81-05-21					1200	45	400	7.1
	81-09-30					1400	45	385	7.2
461445095150001	79-07-05	46 14 45	095 15 00	01	132N36W18ADD01	1155	22	490	7.4
	79-10-01					1445	22	560	7.3
	80-05-20					1500	22	510	6.6
	80-09-17					1000	22	485	7.5
	81-05-21					1500	22	445	7.2
	81-10-01					1200	22	470	7.4
461445095201501	79-10-01	46 14 45	095 20 15	01	132N37W16ADC01	1020	79	500	7.5
	80-05-20					1430	79	525	6.6
	80-09-17					1030	79	475	7.5
	81-05-21					1400	79	480	7.1
	81-10-01					1230	79	455	7.2
462100095414501	79-07-02	46 21 00	095 41 45	01	133N40W11BCC01	1300	20	422	7.5
	79-09-28					1110	20	400	7.2
	79-11-16					1315	20	440	7.5
	80-05-20					1130	20	485	6.4
	80-06-25					1100	20	456	7.4

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
461255095373001	79-07-05	9.5	54	2.1	.04	610
	79-10-01	9.0	50	2.3	.00	450
	80-05-20	12.5	54	1.9	.07	520
	80-09-17	11.5	50	1.9	.01	830
	81-05-21	12.0	49	1.4	<.01	660
	81-09-30	10.0	57	2.3	.09	410
461445095150001	79-07-05	10.0	72	2.4	5.0	30
	79-10-01	10.0	73	11	4.8	40
	80-05-20	12.0	70	2.4	4.1	30
	80-09-17	13.0	67	2.7	5.9	20
	81-05-21	11.5	65	1.8	4.9	<10
	81-10-01	13.5	73	4.6	3.8	10
461445095201501	79-10-01	8.5	64	18	.02	720
	80-05-20	9.5	68	15	.19	1400
	80-09-17	10.0	64	15	.69	1200
	81-05-21	9.0	65	16	.09	1100
	81-10-01	9.0	74	14	.04	1000
462100095414501	79-07-02	11.0	66	4.8	9.4	<10
	79-09-28	11.0	58	2.4	5.0	20
	79-11-16	11.5	59	3.2	5.5	10
	80-05-20	12.0	64	4.0	5.8	30
	80-06-25	10.0	65	4.6	5.8	10

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979–81 from selected baseline wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462100095414501	80-07-30	46 21 00	095 41 45	01	133N40W11BCC01	1200	20	425	7.4
	80-08-20					1100	20	425	7.0
	80-09-16					1200	20	415	7.7
	80-11-06					1230	20	—	7.8
	81-02-20					1330	20	440	7.5
	81-05-21					1030	20	385	7.1
	81-06-25					1215	20	390	6.5
	81-07-24					1245	20	360	—
	81-08-28					1230	20	385	7.5
	81-09-30					1245	20	375	7.3
	81-12-03					1230	20	360	6.8
462320095463001	79-07-02	46 23 20	095 46 30	01	134N40W30CAB01	1350	70	650	7.2
	79-09-28					1210	70	650	6.7
	80-05-20					1100	70	735	6.6
	80-09-16					1300	70	700	7.3
	81-05-21					1100	70	660	7.1
	81-09-30					1330	70	650	7.1
462625095112001	79-08-15	46 26 25	095 11 20	01	134N36W02CCD01	1020	20	380	7.7
	79-09-28					0915	20	372	7.5
	80-05-19					1330	20	415	6.4
	80-09-16					0945	20	410	7.6
	81-05-20					1015	20	400	7.3
	81-09-29					1400	20	400	7.3

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462100095414501	80-07-30	11.5	60	3.7	4.9	10
	80-08-20	11.5	63	3.4	5.0	10
	80-09-16	13.0	59	3.6	5.3	10
	80-11-06	11.5	62	4.0	5.7	<10
	81-02-20	11.0	67	8.0	7.2	10
	81-05-21	11.5	52	2.8	3.8	20
	81-06-25	11.0	58	2.9	3.0	10
	81-07-24	11.0	59	2.7	6.3	10
	81-08-28	12.0	54	2.4	3.7	30
	81-09-30	12.0	60	2.6	3.7	10
	81-12-03	12.0	55	2.1	3.7	40
462320095463001	79-07-02	9.0	95	5.0	.15	5400
	79-09-28	8.5	94	5.4	.39	5400
	80-05-20	9.0	100	6.1	.08	5300
	80-09-16	9.0	96	6.2	1.0	5300
	81-05-21	9.5	90	5.3	.20	5500
	81-09-30	9.0	100	6.0	.10	5000
462625095112001	79-08-15	10.0	56	13	1.8	<10
	79-09-28	9.5	56	12	2.0	<10
	80-05-19	10.0	58	13	2.3	20
	80-09-16	10.0	58	16	2.5	50
	81-05-20	11.0	60	21	1.8	10
	81-09-29	10.5	62	18	1.9	<10

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462710095351501	79-09-28	46 27 10	095 35 02	02	134N39W03BAD02	1315	25	520	7.5
	80-05-19					1245	25	450	6.2
	80-09-16					1130	25	415	7.6
	81-05-20					1330	25	470	7.5
	81-09-30					1200	25	490	7.4
462715095323001	79-09-27	46 26 56	095 32 22	02	134N39W01ACD02	1000	60	500	6.9
	79-11-16					1250	60	460	7.2
	80-05-19					1215	60	510	6.3
	80-06-25					1030	60	520	7.2
	80-07-30					1100	60	500	7.1
	80-08-20					1015	60	455	6.8
	80-09-16					1040	60	490	7.4
	80-11-06					1130	60	450	7.6
	81-02-20					1230	60	420	7.4
	81-05-20					1300	60	410	7.1
	81-06-25					1130	60	470	6.7
	81-07-24					1200	60	480	—
	81-08-28					1200	60	470	7.3
	81-09-29					1300	60	470	7.2
	81-12-03					1130	60	500	6.6

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462710095351501	79-09-28	14.0	79	7.7	7.2	20
	80-05-19	11.0	69	4.0	4.7	20
	80-09-16	10.0	61	5.9	4.0	20
	81-05-20	11.0	62	11	8.2	10
	81-09-30	10.5	81	10	12	10
462715095323001	79-09-27	8.0	73	8.5	.01	8300
	79-11-16	8.5	76	9.9	.01	780
	80-05-19	9.5	75	7.3	.16	6500
	80-06-25	9.5	77	6.7	.28	8200
	80-07-30	9.0	74	6.9	.32	6400
	80-08-20	9.0	77	6.6	1.4	6200
	80-09-16	9.0	71	6.5	3.1	7000
	80-11-06	9.0	77	7.0	.16	6900
	81-02-20	9.0	74	7.1	.08	7100
	81-05-20	10.0	68	6.9	.13	7100
	81-06-25	9.5	70	7.8	.09	7200
	81-07-24	9.5	75	7.7	.37	7100
	81-08-28	9.5	74	8.0	.02	7000
	81-09-29	9.5	79	9.1	.22	5600
	81-12-03	9.0	74	9.1	.05	7100

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
463245095331501	79-09-27	46 32 48	095 33 15	02	136N39W35DAD02	1200	68	500	7.4
	80-05-19					1140	68	595	6.3
	80-09-12					1245	68	585	7.0
	81-05-20					1230	68	480	7.2
	81-09-30					1130	68	550	7.3
463320095254501	79-08-15	46 33 20	095 25 45	01	136N38W32ABB01	1230	20	450	6.9
	79-09-27					1320	20	470	6.8
	80-05-19					1000	20	545	6.6
	80-09-12					1045	20	520	6.8
	81-05-20					1100	20	515	7.0
	81-09-29					1100	20	590	6.9
463450095382001	79-09-27	46 34 56	095 38 34	02	136N39W19ABD02	1230	90	640	7.4
	80-05-19					1105	90	720	6.4
	80-09-12					1200	90	635	7.0
	81-05-20					1200	90	655	7.3
	81-09-29					1200	90	640	7.3
463500095331501	79-09-27	46 35 00	095 33 15	01	136N39W14DDD01	1045	40	490	7.6
	79-11-16					1150	40	490	7.6
	80-05-19					1030	40	540	6.4
	80-06-25					0945	40	525	7.5
	80-07-30					1015	40	510	7.4

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
463245095331501	79-09-27	8.5	80	3.0	4.9	30
	80-05-19	9.0	89	3.5	5.7	20
	80-09-12	9.0	86	4.4	6.9	30
	81-05-20	9.0	80	4.1	6.0	10
	81-09-30	9.0	90	4.0	5.7	<10
463320095254501	79-08-15	10.0	54	14	.71	640
	79-09-27	10.5	58	14	.74	730
	80-05-19	9.5	73	11	.10	800
	80-09-12	10.0	54	25	.22	1000
	81-05-20	14.0	66	22	.07	1600
	81-09-29	12.0	74	24	1.1	1000
463450095382001	79-09-27	9.0	92	15	14	20
	80-05-19	8.5	97	16	14	20
	80-09-12	9.0	85	14	19	40
	81-05-20	9.0	83	16	12	10
	81-09-29	9.5	94	15	14	<10
463500095331501	79-09-27	9.5	68	12	9.7	<10
	79-11-16	9.0	67	11	10	<10
	80-05-19	9.5	71	11	12	130
	80-06-25	9.0	71	10	10	30
	80-07-30	9.0	68	10	11	50

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

OTTER TAIL COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
463500095331501	80-08-20	46 35 00	095 33.15	01	136N39214DDD01	0930	40	490	7.3
	80-09-12					1115	40	485	7.2
	80-11-06					1030	40	485	7.7
	81-02-20					1130	40	460	7.7
	81-05-20					1130	40	490	7.2
	81-06-25					1045	40	505	6.4
	81-07-24					1130	40	500	—
	81-08-28					1130	40	500	7.5
	81-09-29					1130	40	500	7.4
	81-12-03					1030	40	465	8.0

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
463500095331501	80-08-20	11.5	72	11	11	60
	80-09-12	9.0	67	4.4	6.9	110
	80-11-06	9.0	69	22	10	20
	81-02-20	11.0	69	12	11	10
	81-05-20	9.5	66	13	9.1	30
	81-06-25	10.0	66	14	12	20
	81-07-24	10.0	70	12	14	20
	81-08-28	10.0	70	12	9.4	30
	81-09-29	9.5	75	13	11	10
	81-12-03	9.0	68	12	11	40

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462215094591501	79-09-18	46 22 22	094 59 58	02	134N34W32DCB02	0920	42	660	7.2
	79-11-15					1055	42	670	7.2
	80-02-22					1020	42	635	7.2
	80-05-13					0940	42	710	7.2
	80-06-24					0930	42	715	7.1
	80-07-29					0950	42	640	7.1
	80-08-19					0915	42	595	7.1
	80-09-05					0930	42	550	7.2
	80-11-11					1045	42	—	7.5
	81-02-24					1130	42	595	7.3
	81-05-13					1000	42	650	7.1
	81-06-23					1015	42	620	6.6
	81-07-22					1030	42	560	—
	81-09-01					1145	42	525	7.2
	81-09-18					1115	42	540	7.2
	81-11-27					1200	42	515	6.9
462300094500001	79-09-13	46 22 55	094 49 56	02	134N33W34BAA02	1400	18	400	7.7
	80-05-12					1030	18	410	6.6
	80-09-08					0915	18	390	7.1
	81-05-13					1400	18	390	7.3
	81-09-18					1400	18	385	7.5

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462215094591501	79-09-18	11.0	94	19	6.0	2500
	79-11-15	12.0	93	19	2.6	1900
	80-02-22	9.5	100	19	21	2400
	80-05-13	9.5	110	21	3.8	30000
	80-06-24	13.5	110	20	4.1	2000
	80-07-29	11.5	98	17	5.7	2700
	80-08-19	12.5	90	15	3.4	2100
	80-09-05	11.5	76	23	3.8	2400
	80-11-11	10.5	87	16	4.1	2500
	81-02-24	8.0	93	18	4.8	2400
	81-05-13	8.0	97	22	.76	3400
	81-06-23	9.5	94	20	2.7	2800
	81-07-22	11.0	92	15	5.0	2200
	81-09-01	12.0	84	13	3.8	2300
	81-09-18	11.5	83	16	3.0	2500
	81-11-27	10.5	84	14	3.3	2000
462300094500001	79-09-13	9.5	57	1.7	.02	940
	80-05-12	9.0	60	1.7	.00	960
	80-09-08	10.0	54	2.4	.16	890
	81-05-13	9.0	54	2.0	.16	1300
	81-09-18	10.0	60	1.9	.07	890

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480001	80-05-08	46 23 15	094 48 00	01	134N33W35ACB01 S-1	1130	28	620	6.9
	80-05-15					1040	28	615	6.3
	80-05-22					0945	28	640	6.7
	80-06-27					0945	28	585	6.9
	80-08-01					1000	28	595	7.0
	80-08-22					1025	28	565	6.9
	80-09-10					1130	28	525	7.1
	80-09-23					1100	28	535	7.2
	80-10-01					1030	28	—	6.9
	80-11-04					1330	28	—	7.2
	81-02-18					0930	28	560	7.4
	81-05-08					1100	28	515	7.5
462315094480002	80-05-08	46 23 15	094 48 00	02	134N33W35ACB02 S-2	1100	21	575	7.3
	80-05-15					1015	21	595	7.0
	80-05-22					0930	21	610	6.7
	80-06-27					1030	21	625	7.1
	80-08-01					1515	21	685	7.1
	80-08-22					1000	21	625	7.2
	80-09-10					1115	21	580	7.2
	80-09-23					1030	21	580	7.4
	80-10-01					1015	21	—	7.2
	80-11-04					1300	21	—	7.1

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480001	80-05-08	9.5	91	9.6	.04	1300
	80-05-15	9.5	91	4.6	.02	4300
	80-05-22	10.5	91	4.4	.03	11000
	80-06-27	10.0	88	3.7	.01	13000
	80-08-01	11.5	86	3.4	.04	14000
	80-08-22	10.5	81	3.3	.65	12000
	80-09-10	11.0	32	1.4	5.4	40
	80-09-23	9.5	79	3.5	.00	13000
	80-10-01	10.5	79	3.8	15	13000
	80-11-04	9.0	84	3.8	.05	13000
	81-02-18	9.0	83	4.4	.03	17000
	81-05-08	8.5	84	4.1	.04	17000
462315094480002	80-05-08	8.5	76	14	1.7	30
	80-05-15	8.5	83	13	2.3	70
	80-05-22	10.0	85	13	.00	80
	80-06-27	9.0	93	14	3.9	180
	80-08-01	11.0	70	15	5.0	1700
	80-08-22	10.5	89	15	6.3	1200
	80-09-10	11.5	76	14	46	1500
	80-09-23	10.0	86	14	2.7	1800
	80-10-01	11.0	88	15	2.3	1900
	80-11-04	9.5	78	10	.33	5700

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480002	81-02-18	46 23 15	094 48 00	02	134N33W35ACB02 S-2	0915	21	400	7.5
	81-05-08					1030	21	580	7.7
462315094480003	80-05-08	46 23 15	094 48 00	03	134N33W35ACB03 S-3	1030	14	450	7.1
	80-05-15					0930	14	520	6.3
	80-05-22					0900	14	540	6.2
	80-06-27					1000	14	555	7.2
	80-08-01					0930	14	630	7.3
	80-08-22					0935	14	615	7.2
	80-09-10					1100	14	585	7.3
	80-09-23					1000	14	600	7.2
	80-10-01					0950	14	—	7.3
	80-11-03					1400	14	—	7.5
	81-02-18					0900	14	560	7.6
	81-05-08					1000	14	480	7.6
462315094480004	80-05-08	46 23 15	094 48 00	04	134N33W35ACB04 S-4	1230	28	520	6.9
	80-05-15					1130	28	571	6.8
	80-05-22					1055	28	572	6.6
	80-06-27					1215	28	562	6.9
	80-08-22					1100	28	445	6.9

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480002	81-02-18	9.0	69	6.8	.16	6900
	81-05-08	8.0	85	17	5.4	2400
462315094480003	80-05-08	7.5	67	13	18	20
	80-05-15	8.0	71	16	11	50
	80-05-22	9.0	75	14	9.8	30
	80-06-27	9.0	79	19	14	90
	80-08-01	11.5	90	21	15	400
	80-08-22	11.5	88	8.3	.41	200
	80-09-10	12.0	78	18	3.7	330
	80-09-23	10.5	87	20	10	290
	80-10-01	11.0	92	20	9.0	220
	80-11-03	10.0	88	24	11	210
	81-02-18	8.0	74	14	11	1100
	81-05-08	8.0	72	16	5.9	1000
462315094480004	80-05-08	9.0	63	11	.63	3500
	80-05-15	9.0	88	4.9	.02	8200
	80-05-22	10.5	84	4.7	.04	12000
	80-06-27	10.5	83	4.6	.06	8700
	80-08-22	10.5	80	4.5	.28	7900

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480004	80-09-10	46 23 15	094 48 00	04	134N33W35ACB04 S-4	1300	28	525	6.7
	80-09-24					1030	28	520	6.7
	80-10-01					1145	28	—	7.3
	80-11-04					1430	28	—	7.5
	81-02-18					1030	28	510	7.4
	81-05-08					1230	28	525	7.6
462315094480005	80-05-08	46 23 15	094 48 00	05	134N33W35ACB05 S-5	1315	21	664	7.2
	80-05-15					1120	21	660	6.8
	80-05-22					1030	21	634	6.6
	80-06-27					1145	21	600	7.0
	80-08-01					1300	21	630	7.2
	80-08-22					1045	21	615	7.2
	80-09-10					1245	21	560	7.0
	80-09-24					1015	21	560	6.9
	80-10-01					1130	21	—	7.3
	80-11-04					1500	21	—	7.5
	81-02-18					1015	21	540	7.5
	81-05-08					1200	21	560	7.5
462315094480006	80-05-08	46 23 15	094 48 00	06	134N33W35ACB06 S-6	1400	14	605	7.3
	80-05-15					1100	14	625	6.5
	80-05-22					1015	14	625	6.3
	80-06-27					1100	14	605	7.1
	80-08-01					1230	14	584	7.3

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480004	80-09-10	10.5	74	4.5	12	8000
	80-09-24	9.5	79	4.6	.25	9500
	80-10-01	10.0	79	4.9	31	9100
	80-11-04	9.0	81	7.3	2.0	23000
	81-02-18	9.0	79	4.3	<.01	13000
	81-05-08	9.0	81	4.7	.05	14000
462315094480005	80-05-08	8.0	81	17	7.5	2300
	80-05-15	9.0	92	15	.41	3400
	80-05-22	10.0	94	14	.00	3400
	80-06-27	9.5	92	15	.20	390
	80-08-01	14.0	93	15	.10	4900
	80-08-22	11.0	90	15	.05	4000
	80-09-10	11.0	81	15	.05	4600
	80-09-24	10.0	86	16	.05	6600
	80-10-01	10.5	88	15	.09	5900
	80-11-04	9.0	90	14	.01	7000
	81-02-18	8.5	87	11	.06	9300
	81-05-08	9.0	85	7.9	.01	11000
462315094480006	80-05-08	7.5	80	18	11	10
	80-05-15	8.0	90	18	8.2	40
	80-05-22	9.5	89	15	1.2	30
	80-06-27	9.5	87	15	11	60
	80-08-01	13.5	85	16	14	500

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480006	80-08-22	46 23 15	094 48 00	06	134N33W35ACB06 S-6	1030	14	585	7.3
	80-09-10					1230	14	545	7.2
	80-09-24					1000	14	580	7.1
	80-10-01					1115	14	—	7.3
	80-11-04					1400	14	—	7.4
	81-02-18					1000	14	500	7.5
	81-05-08					1130	14	580	7.5
462315094480007	80-05-08	46 23 15	094 48 00	07	134N33W35ACB07 S-7	1520	28	575	7.2
	80-05-15					1315	28	610	6.7
	80-05-22					1200	28	624	6.9
	80-06-27					1300	28	594	7.0
	80-08-01					1450	28	630	7.0
	80-08-22					1200	28	600	7.0
	80-09-10					1400	28	550	7.0
	80-09-24					1400	28	560	7.2
	80-10-02					1230	28	—	7.0
	80-11-05					1415	28	—	7.2
	81-02-18					1200	28	515	7.4
	81-05-11					1500	28	515	7.5

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480006	80-08-22	11.5	86	16	13	420
	80-09-10	12.0	76	15	1.8	330
	80-09-24	11.0	85	28	16	380
	80-10-01	11.5	85	22	15	370
	80-11-04	9.5	89	21	11	470
	81-02-18	8.0	86	16	6.5	1200
	81-05-08	8.5	89	24	8.0	1300
462315094480007	80-05-08	9.0	73	15	.10	6200
	80-05-15	9.5	91	5.0	.24	14000
	80-05-22	11.0	94	4.1	.00	14000
	80-06-27	10.5	96	3.5	.05	11000
	80-08-01	10.5	87	3.3	.75	13000
	80-08-22	11.0	89	3.1	.16	8900
	80-09-10	10.5	78	2.9	.00	6800
	80-09-24	10.0	85	2.7	.00	8500
	80-10-02	8.5	87	3.1	32	7100
	80-11-05	9.5	90	3.4	.21	7500
	81-02-18	9.0	88	2.6	.09	10000
	81-05-11	9.5	74	2.6	.01	9000

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480008	80-05-08	46 23 15	094 48 00	08	134N33W35ACB08 S-8	1445	21	585	7.0
	80-05-15					1300	21	595	6.7
	80-05-22					1145	21	600	6.8
	80-06-27					1400	21	610	6.9
	80-08-01					1430	21	610	7.1
	80-08-22					1145	21	585	7.2
	80-09-10					1345	21	535	6.9
	80-09-24					1345	21	560	7.4
	80-10-02					1215	21	—	7.1
	80-11-05					1415	21	—	7.4
	81-02-18					1115	21	540	7.3
	81-05-11					1430	21	525	7.6
462315094480009	80-05-08	46 23 15	094 48 00	09	134N33W35ACB09 S-9	1420	14	725	7.1
	80-05-15					1230	14	690	6.4
	80-05-22					1120	14	750	6.5
	80-06-27					1330	14	630	7.2
	80-08-01					1400	14	565	7.2
	80-08-22					1130	14	565	7.2
	80-09-10					1330	14	560	6.9
	80-09-24					1330	14	570	7.6
	80-10-02					1200	14	—	7.3
	80-11-05					1400	14	—	7.4
	81-02-18					1100	14	670	7.5
	81-05-11					1415	14	695	7.8

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480008	80-05-08	8.0	81	7.7	.08	450
	80-05-15	8.5	90	7.0	.08	1700
	80-05-22	10.5	89	6.9	.01	1800
	80-06-27	10.5	90	5.7	.12	1700
	80-08-01	11.0	92	15	1.8	2800
	80-08-22	11.0	86	19	13	2700
	80-09-10	11.5	75	4.7	.04	2900
	80-09-24	10.5	84	11	.05	3600
	80-10-02	9.0	88	13	.03	3600
	80-11-05	9.5	87	13	.82	3800
	81-02-18	8.5	82	12	.11	4900
	81-05-11	9.0	76	17	.09	5300
462315094480009	80-05-08	7.5	93	36	.64	10
	80-05-15	8.0	98	29	18	20
	80-05-22	10.0	100	35	21	20
	80-06-27	10.0	89	20	18	70
	80-08-01	11.0	76	17	14	80
	80-08-22	11.5	81	18	15	150
	80-09-10	12.0	78	18	19	310
	80-09-24	11.5	81	17	19	370
	80-10-02	9.5	81	18	29	310
	80-11-05	9.5	82	22	18	260
	81-02-18	8.0	99	35	25	910
	81-05-11	9.0	91	31	13	510

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480010	80-05-09	46 23 15	094 48 00	10	134N33W35ACB10 S-10	1055	28	595	7.1
	80-05-15					1415	28	593	6.7
	80-05-23					0945	28	610	6.7
	80-06-28					0945	28	605	7.3
	80-08-01					1545	28	620	7.0
	80-08-22					1300	28	595	6.9
	80-09-11					1045	28	550	7.0
	80-09-24					1300	28	545	7.1
	80-10-02					1100	28	—	6.7
	80-11-05					1315	28	550	7.2
	81-02-18					1330	28	540	7.3
	81-05-11					1345	28	560	7.3
462315094480011	80-05-09	46 23 15	094 48 00	11	134N33W35ACB11 S-11	1030	21	640	7.2
	80-05-15					1350	21	660	6.8
	80-05-23					1000	21	685	7.1
	80-06-28					0930	21	695	7.2
	80-08-01					0945	21	620	7.2
	80-08-11					1030	21	600	7.1
	80-08-22					1245	21	650	7.2
	80-09-24					1245	21	600	7.2
	80-10-02					1045	21	580	6.9
	80-11-05					1300	21	—	7.4
	81-02-18					1315	21	580	7.4
	81-05-11					1330	21	780	7.5

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480010	80-05-09	9.0	79	9.0	1.1	5400
	80-05-15	9.0	90	4.1	.10	6500
	80-05-23	10.5	91	4.0	.01	8900
	80-06-28	9.5	93	3.4	.01	13000
	80-08-01	10.0	90	4.7	.73	11000
	80-08-22	10.5	85	5.6	.70	9000
	80-09-11	10.0	78	3.8	.09	7100
	80-09-24	10.0	82	3.1	.74	8800
	80-10-02	8.5	87	3.7	.09	7900
	80-11-05	9.0	—	1.3	.01	7000
	81-02-18	9.0	83	4.0	.11	13000
	81-05-11	10.0	74	5.1	.17	11000
462315094480011	80-05-09	8.0	84	12	.14	150
	80-05-15	8.5	96	12	4.7	460
	80-05-23	11.0	97	10	4.3	620
	80-06-28	9.5	110	13	4.9	1000
	80-08-01	11.0	100	13	5.7	2700
	80-08-11	10.5	86	17	.89	1400
	80-08-22	10.5	90	21	8.3	1200
	80-09-24	10.5	86	16	5.4	1600
	80-10-02	9.5	91	16	5.0	1800
	80-11-05	10.0	92	17	6.6	1600
	81-02-18	9.0	85	18	4.8	2800
	81-05-11	9.5	110	46	—	2200

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480012	80-05-09	46 23 15	094 48 00	12	134N33W35ACB12 S-12	0915	14	700	7.3
	80-05-15					1340	14	690	6.6
	80-05-23					0930	14	725	6.5
	80-06-28					0910	14	730	7.2
	80-08-01					1530	14	640	7.1
	80-08-22					1230	14	645	7.4
	80-09-11					1010	14	560	6.9
	80-09-24					1230	14	570	7.2
	80-10-02					1030	14	—	6.9
	80-11-05					1245	14	—	7.5
	81-02-18					1300	14	570	7.4
	81-05-11					1315	14	735	7.5
462315094480013	80-05-09	46 23 15	094 48 00	13	134N33W35ACB13 S-13	1215	28	555	7.0
	80-05-16					1015	28	601	6.7
	80-05-23					1100	28	610	6.9
	80-06-28					1030	28	590	7.1
	80-08-01					1630	28	595	7.0
	80-08-22					1400	28	575	6.9
	80-09-11					1200	28	560	7.0
	80-09-25					1200	28	555	6.6
	80-10-02					1015	28	—	6.8
	80-11-05					1230	28	—	7.4
	81-02-18					1430	28	550	7.3
	81-05-11					1300	28	560	7.3

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480012	80-05-09	7.5	91	22	3.8	20
	80-05-15	9.0	98	23	23	100
	80-05-23	10.0	100	22	24	100
	80-06-28	10.0	100	27	23	90
	80-08-01	10.5	100	34	.29	130
	80-08-22	11.0	89	21	18	300
	80-09-11	10.5	78	17	4.8	350
	80-09-24	11.0	79	18	15	440
	80-10-02	9.5	82	20	28	370
	80-11-05	10.0	85	17	19	550
	81-02-18	8.5	88	25	15	910
	81-05-11	9.0	110	38	17	430
462315094480013	80-05-09	8.5	79	7.4	.34	5900
	80-05-16	9.0	89	5.0	.04	11000
	80-05-23	11.5	89	4.6	.15	13000
	80-06-28	10.5	89	4.2	.20	11000
	80-08-01	10.0	89	4.6	.01	14000
	80-08-22	10.0	86	4.5	.33	7600
	80-09-11	9.5	76	4.1	2.3	9000
	80-09-25	10.0	81	5.0	.45	10000
	80-10-02	8.5	85	5.2	15	9200
	80-11-05	10.0	90	6.1	.15	15000
	81-02-18	8.0	86	3.9	.06	12000
	81-05-11	9.5	86	4.6	.11	10000

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480014	80-05-09	46 23 15	094 48 00	14	134N33W35ACB14 S-14	1135	21	640	7.1
	80-05-16					1000	21	670	6.6
	80-05-23					1045	21	675	6.8
	80-06-28					1015	21	681	7.0
	80-08-01					1315	21	585	7.2
	80-08-01					1610	21	615	7.1
	80-08-22					1345	21	675	7.0
	80-09-11					1145	21	600	7.1
	80-09-24					1145	21	610	6.7
	80-10-02					1000	21	—	6.3
	80-11-05					1215	21	—	7.4
	81-02-18					1415	21	600	7.5
	81-05-11					1245	21	580	7.6
462315094480015	80-05-09	46 23 15	094 48 00	15	134N33W35ACB15 S-15	1120	14	670	7.3
	80-05-16					0930	14	690	6.4
	80-05-23					1030	14	685	7.1
	80-06-28					1000	14	680	7.2
	80-08-01					1555	14	575	7.2
	80-08-22					1330	14	660	7.2
	80-09-11					1130	14	690	7.3
	80-09-24					0113	14	690	6.9
	80-10-02					0945	14	—	7.2
	80-11-05					1200	14	660	7.5

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480014	80-05-09	8.0	81	12	.11	1500
	80-05-16	8.5	98	13	.10	2000
	80-05-23	11.5	99	12	.67	2300
	80-06-28	10.0	110	14	.09	1600
	80-08-01	13.0	90	13	.13	5900
	80-08-01	10.0	82	5.0	.00	15000
	80-08-22	10.5	100	14	2.9	4600
	80-09-11	10.0	86	13	.37	4400
	80-09-24	10.5	85	15	.68	5800
	80-10-02	8.5	94	16	1.3	6000
	80-11-05	10.0	97	19	1.1	6600
	81-02-18	9.0	90	16	.81	8100
	81-05-11	9.0	86	14	.36	8600
462315094480015	80-05-09	7.5	85	20	20	140
	80-05-16	8.0	95	21	17	90
	80-05-23	10.5	94	18	17	140
	80-06-28	10.0	98	17	15	1900
	80-08-01	10.5	100	18	13	920
	80-08-22	11.0	90	22	22	520
	80-09-11	10.5	96	31	18	570
	80-09-24	11.0	97	32	26	470
	80-10-02	9.0	100	30	25	600
	80-11-05	10.5	95	32	24	910

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480015	81-02-18	46 23 15	094 48 00	15	134N33W35ACB15 S-15	1400	14	—	7.5
	81-05-11					1215	14	690	7.4
462315094480016	80-05-09	46 23 15	094 48 00	16	134N33W35ABD01 S-16	1335	28	585	6.9
	80-05-16					1200	28	575	6.7
	80-05-23					1200	28	554	7.1
	80-06-28					1130	28	554	7.2
	80-08-01					1730	28	500	7.1
	80-08-22					1500	28	525	6.9
	80-09-11					1400	28	520	7.1
	80-09-23					1400	28	510	7.2
	80-10-01					1400	28	—	7.2
	80-11-05					1130	28	—	7.3
	81-02-18					1700	28	515	7.5
	81-05-08					1400	28	—	7.4
462315094480017	80-05-09	46 23 15	094 48 00	17	134N33W35ABD02 S-17	1320	21	545	6.9
	80-05-16					1125	21	555	6.7
	80-05-23					1115	21	565	6.3
	80-06-28					1115	21	609	7.1
	80-08-01					1700	21	545	7.2

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480015	81-02-18	8.5	100	47	28	430
	81-05-11	9.0	96	35	17	450
462315094480016	80-05-09	9.5	76	4.6	.24	3900
	80-05-16	9.0	87	3.2	.19	6200
	80-05-23	12.0	89	2.9	.25	9300
	80-06-28	10.0	86	2.2	.07	13000
	80-08-01	10.0	77	2.1	.02	8000
	80-08-22	10.5	81	2.4	.34	6600
	80-09-11	9.5	79	2.1	8.8	6400
	80-09-23	9.0	78	1.9	.62	7600
	80-10-01	10.5	79	2.0	25	7100
	80-11-05	9.5	83	2.1	.01	6700
	81-02-18	9.0	82	2.5	.03	8800
	81-05-08	9.0	92	2.2	.01	10000
462315094480017	80-05-09	8.0	74	18	.09	2200
	80-05-16	8.5	82	18	.38	2600
	80-05-23	11.0	81	17	.00	3100
	80-06-28	10.0	84	21	11	1500
	80-08-01	10.0	83	19	.63	1800

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480017	80-08-22	46 23 15	094 48 00	17	134N33W35ABD02 S-17	1445	21	545	7.3
	80-09-11					1345	21	510	7.3
	80-09-23					1330	21	500	7.3
	80-10-01					1345	21	—	7.4
	80-11-05					1100	21	—	7.5
	81-02-18					1645	21	—	—
	81-05-08					1300	21	515	7.7
462315094480018	80-05-09	46 23 15	094 48 00	18	134N33W35ABD03 S-18	1300	17	680	6.6
	80-05-16					1100	17	686	6.3
	80-05-23					1130	17	710	7.1
	80-06-28					1100	17	543	7.0
	80-08-01					1645	17	650	7.2
	80-08-22					1430	17	710	7.1
	80-09-11					1320	17	645	7.2
	80-09-23					1300	17	665	7.5
	80-10-01					1330	17	650	7.4
	80-11-05					1030	17	—	7.4
	81-02-18					1630	17	550	7.4
	81-05-08					1300	17	580	7.4

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462315094480017	80-08-22	11.0	82	18	1.1	1400
	80-09-11	10.0	76	19	.11	2500
	80-09-23	9.5	77	20	.10	2800
	80-10-01	11.0	78	21	13	2800
	80-11-05	10.5	80	22	.02	3400
	81-02-18	—	79	17	.08	5200
	81-05-08	8.5	84	18	.04	6900
462315094480018	80-05-09	8.0	87	21	27	130
	80-05-16	8.0	98	22	20	260
	80-05-23	10.5	100	21	19	490
	80-06-28	10.0	98	16	.06	320
	80-08-01	10.0	93	21	.11	890
	80-08-22	11.5	91	23	25	460
	80-09-11	10.5	94	21	26	650
	80-09-23	10.0	98	22	30	850
	80-10-01	11.5	100	22	23	750
	80-11-05	10.5	94	25	16	1000
	81-02-18	8.5	89	20	12	1900
	81-05-08	8.5	86	19	6.7	2300

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462530095050001	79-09-14	46 25 33	095 05 00	01	134N35W10CDC01	1000	24	605	7.4
	79-11-15					1125	24	640	7.1
	80-02-22					1100	24	650	7.1
	80-05-13					1050	24	710	7.3
	80-06-24					1015	24	698	7.2
	80-07-29					1100	24	730	7.1
	80-08-19					1000	24	670	7.2
	80-09-05					1030	24	620	7.2
	80-11-11					1130	24	620	7.7
	81-02-24					1200	24	600	7.5
	81-05-13					1030	24	630	7.2
	81-06-23					1100	24	605	6.7
	81-07-22					1130	24	605	—
	81-09-01					1115	24	600	7.2
	81-09-18					1200	24	630	7.1
	81-11-27					1300	24	605	7.0
462605094493001	79-09-13	46 26 05	094 49 30	01	134N33W10ACC01	1330	75	510	7.4
	80-06-24					1200	75	692	7.5
462815094532001	79-09-13	46 28 14	094 53 20	01	135N33W30DCD01	1240	87	470	7.6
	79-11-15					1300	87	490	7.1
	80-02-22					1200	87	475	7.7
	80-05-12					1140	87	450	6.6
	80-06-24					1130	87	525	7.4

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462530095050001	79-09-14	12.0	97	12	.21	1900
	79-11-15	14.0	90	9.8	.04	1300
	80-02-22	11.0	100	10	.01	1800
	80-05-13	9.0	110	10	.08	2000
	80-06-24	11.5	110	12	.86	1600
	80-07-29	11.5	110	12	.10	1500
	80-08-19	14.0	99	13	.07	1800
	80-09-05	13.0	89	38	.72	1400
	80-11-11	12.0	97	15	.10	2000
	81-02-24	13.0	93	11	.29	1500
	81-05-13	11.0	100	11	.29	1400
	81-06-23	11.0	93	10	12	2500
	81-07-22	13.0	95	11	.06	3100
	81-09-01	13.5	98	10	.01	2200
	81-09-18	12.5	100	11	.09	1800
	81-11-27	13.0	100	9.9	.18	2500
462605094493001	79-09-13	17.0	79	4.5	.09	40
	80-06-24	16.5	100	15	.05	<10
462815094532001	79-09-13	9.0	68	8.5	9.8	20
	79-11-15	12.0	65	8.9	2.9	10
	80-02-22	9.5	68	8.2	12	10
	80-05-12	9.0	68	9.4	11	40
	80-06-24	10.0	71	9.4	12	<10

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462815094532001	80-07-29	46 28 14	094 53 20	01	135N33W30DCD01	1200	87	525	7.4
	80-08-19					1100	87	485	7.5
	80-09-05					1400	87	440	7.5
	80-11-11					1245	87	450	7.7
	81-02-24					1300	87	455	7.5
	81-05-13					1300	87	460	7.3
	81-06-23					1215	87	455	6.5
	81-07-22					1300	87	435	—
	81-09-01					1245	87	460	7.4
	81-09-18					1330	87	460	7.4
	81-11-27					1400	87	445	7.0
462830095041501	79-06-19	46 28 23	095 04 18	02	135N35W27CBC01	1400	12	492	7.2
	79-09-14					1200	12	525	7.0
	80-05-13					1125	12	480	7.4
	80-09-05					1130	12	505	7.1
	81-05-13					1130	12	515	7.2
	81-09-18					1230	12	500	7.0
463000094583001	79-09-13	46 30 05	094 58 30	01	135N34W16DBC01	1130	65	460	7.5
	79-11-15					1210	65	460	7.5
	80-02-22					1130	65	540	7.5
	80-05-13					1245	65	470	6.8
	80-06-24					1045	65	470	6.8

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
462815094532001	80-07-29	9.5	68	9.4	12	20
	80-08-19	10.0	70	9.4	12	20
	80-09-05	11.5	61	10	16	40
	80-11-11	8.0	71	9.3	13	<10
	81-02-24	10.0	66	10	11	10
	81-05-13	9.5	65	10	8.0	10
	81-06-23	9.5	65	10	13	10
	81-07-22	9.5	69	12	14	10
	81-09-01	9.5	68	9.7	11	10
	81-09-18	9.5	69	13	13	20
	81-11-27	8.5	66	9.3	12	10
462830095041501	79-06-19	8.0	79	4.8	.08	2100
	79-09-14	10.0	78	3.1	<.10	3900
	80-05-13	7.0	78	1.8	.06	4700
	80-09-05	13.0	74	11	.12	4700
	81-05-13	8.0	82	3.3	.04	5200
	81-09-18	10.5	84	3.1	.04	4600
463000094583001	79-09-13	9.5	66	1.4	.09	760
	79-11-15	9.0	62	1.7	.04	410
	80-02-22	8.0	69	1.7	.06	<10
	80-05-13	13.0	70	3.1	.08	1900
	80-06-24	14.0	70	1.9	.00	3000

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
463000094583001	80-07-29	46 30 05	094 58 30	01	135N34W16DBC01	1100	65	520	7.3
	80-08-19					1030	65	480	7.4
	80-09-05					1330	65	528	7.4
	80-11-11					1210	65	—	7.9
	81-02-24					1230	65	460	7.6
	81-05-13					1200	65	460	7.3
	81-06-23					1145	65	440	6.8
	81-07-22					1230	65	455	—
	81-09-01					1215	65	455	7.3
	81-09-18					1300	65	445	7.3
	81-11-27					1330	65	390	6.8
463145094480001	79-06-20	46 31 45	094 48 00	01	135N33W01CCC01	1140	26	228	7.9
	79-10-04					1445	26	260	7.8
	80-05-12					1220	26	260	6.5
	80-09-08					1050	26	245	7.7
	81-05-14					1030	26	220	7.9
	81-09-22					1030	26	200	8.1
463210094525001	79-06-20	46 32 10	094 52 50	01	135N33W05BCC01	1230	30	163	8.0
	79-09-25					1340	30	180	7.9
	80-05-14					0945	30	160	6.3
	80-09-08					1330	30	210	8.5
	81-05-13					1230	30	150	7.5
	81-09-23					1000	30	175	7.9

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
463000094583001	80-07-29	10.0	70	2.1	.16	1300
	80-08-19	9.5	71	1.9	.00	1200
	80-09-05	10.0	64	6.7	.01	1800
	80-11-11	8.0	69	1.8	.00	1700
	81-02-24	4.0	66	1.8	.12	2900
	81-05-13	8.5	62	1.7	1.2	2300
	81-06-23	9.0	69	2.2	.09	1800
	81-07-22	9.5	69	1.8	.16	1700
	81-09-01	10.0	64	1.6	.08	1900
	81-09-18	10.5	71	1.9	.02	2300
	81-11-27	8.0	64	1.7	.03	2000
463145094480001	79-06-20	9.5	32	.5	3.4	<10
	79-10-04	10.0	38	.7	5.2	10
	80-05-12	9.5	36	.5	4.6	10
	80-09-08	12.0	32	1.4	5.4	<10
	81-05-14	12.0	30	1.8	3.0	20
	81-09-22	14.5	28	1.9	2.0	<10
463210094525001	79-06-20	7.5	25	.3	.07	220
	79-09-25	8.0	27	.7	.02	270
	80-05-14	7.5	26	.2	.00	190
	80-09-08	11.5	33	.4	.01	150
	81-05-13	8.0	24	.3	.01	190
	81-09-23	9.0	29	.7	.05	210

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
463530094553001	79-06-22	46 46 20	094 47 05	01	138N32W18BCC01	1000	18	425	7.2
	79-06-22					1115	18	380	7.0
	79-09-14					1420	18	430	7.1
	80-09-08					1230	18	415	7.5
	81-05-14					1130	18	460	7.1
	81-09-22					1115	18	430	6.9
463945094580001	79-06-19	46 39 45	094 58 00	01	137N34W22CCD01	1215	12	525	6.8
	79-09-25					1245	12	450	6.7
	80-05-13					1410	12	488	6.5
	80-09-09					1400	12	450	6.8
	81-05-14					1215	12	410	6.9
	81-09-22					1200	12	360	6.9
464300094533001	79-06-19	46 43 00	094 53 30	01	137N33W06AAA01	1100	13	350	7.3
	79-09-25					1145	13	370	7.3
	80-05-14					1110	13	640	6.8
	80-09-09					1230	13	630	6.3
	81-05-14					1430	13	600	6.5
	81-09-22					1400	13	780	6.5
464420095030001	79-08-07	46 44 20	095 03 00	01	138N35W25CAA01	1100	16	180	7.9
	79-09-25					1000	16	270	7.7
	80-05-14					1145	16	260	6.6
	80-09-09					1145	16	300	6.9
	81-05-22					1130	16	280	7.1
	81-09-22					1245	16	320	7.5

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C)	CALCIUM, DISSOLVED (MG/L AS CA)	CHLORIDE, DISSOLVED (MG/L AS CL)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	IRON, DISSOLVED (UG/L AS FE)
463545094553001	79-06-22	8.0	35	13	6.0	<10
	79-06-22	10.0	29	.9	.10	30
	79-09-14	12.0	33	9.7	7.1	<10
	80-09-08	15.0	16	12	6.6	880
	81-05-14	11.0	19	9.7	3.3	10
	81-09-22	14.0	20	27	6.1	40
463945094580001	79-06-19	10.0	60	20	.05	5500
	79-09-25	9.5	48	16	.15	3500
	80-05-13	9.0	44	23	11	1600
	80-09-09	10.5	40	21	7.4	1400
	81-05-14	8.5	36	18	2.9	700
	81-09-22	12.0	36	13	2.3	870
464300094533001	79-06-19	9.0	59	1.3	<.10	4400
	79-09-25	11.5	62	1.3	<.10	5800
	80-05-14	16.0	130	20	.10	16000
	80-09-09	13.0	39	110	1.8	2300
	81-05-14	12.0	38	130	1.2	4200
	81-09-22	13.0	45	170	1.7	4700
464420095030001	79-08-07	10.0	26	.3	.52	<10
	79-09-25	10.0	43	.7	.05	50
	80-05-14	6.5	40	.6	.00	90
	80-09-09	11.0	47	.8	.00	250
	81-05-22	9.0	42	.6	.06	1700
	81-09-22	12.0	53	1.0	.14	1700

Table 2.—Chemical analyses of water for specific index constituents collected periodically during 1979-81 from selected baseline wells--Continued

WADENA COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
464800094583001	79-06-20	46 48 00	094 58 30	01	138N34W04ADC01	1230	30	385	8.0
	79-10-04					1100	30	435	6.9
	80-05-14					1230	30	490	6.6
	80-09-09					1030	30	380	7.3
	81-05-14					1300	30	340	7.1
	81-09-22					1330	30	375	7.3

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C)	CALCIUM, DIS-SOLVED (MG/L AS CA)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	IRON, DIS-SOLVED (UG/L AS FE)
464800094583001	79-06-20	7.5	61	3.6	.94	740
	79-10-04	10.0	67	4.6	4.7	390
	80-05-14	12.0	770	6.4	3.2	670
	80-09-09	10.0	57	2.8	2.3	3700
	81-05-14	10.0	53	3.6	.08	4800
	81-09-22	9.5	59	3.5	.18	5100

Table 3.—Chemical analyses of pesticides in water collected in 1980 from selected baseline wells

Water samples were collected from nine wells in November 1980 for pesticide analyses. The constituents and their concentrations are listed in table 3 by county and station number. Samples were collected and analyzed following the procedures outlined by Goerlitz and Brown (1972). Field parameters were the same as those outlined in table 1.

Table 3.—Chemical analyses of pesticides in water collected in 1980 from selected baseline wells

HUBBARD COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)
464940094593001	80-11-07	46 49 40	094 59 30	01	139N34W28BCC01	1150	16	585	7.5
465515095061501	80-11-07	46 55 15	095 06 15	01	140N35W28AAA01	1300	30	430	7.8

STATION NUMBER	DATE OF SAMPLE	TEMPERATURE (DEG C) (00010)	PERTHANE, TOTAL (UG/L) (39034)	ENDOSULFAN, TOTAL (UG/L) (39388)	ALDRIN, TOTAL (UG/L) (39330)	CHLORDANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DIELDRIN, TOTAL (UG/L) (39380)	ENDRIN, TOTAL (UG/L) (39390)
464940094593001	80-11-07	8.0	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
465515095061501	80-11-07	8.5	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

STATION NUMBER	DATE OF SAMPLE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE, TOTAL (UG/L)	LINDANE, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	PCB, TOTAL (UG/L)	POLYCHLOR. NAPHTHALENES, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PROPAZINE, TOTAL (UG/L)	SIMETRYNE, TOTAL (UG/L)
464940094593001	80-11-07	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.1
465515095061501	80-11-07	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.1

STATION NUMBER	DATE OF SAMPLE	SIMAZINE, TOTAL (UG/L)	PROMETONE, TOTAL (UG/L)	PROMETRYNE, TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE, TOTAL (UG/L)	AMETRYNE, TOTAL	ATRATONE, TOTAL (UG/L)	CYPRAZINE, TOTAL (UG/L)	SIMETONE, TOTAL (UG/L)
464940094593001	80-11-07	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01
465515095061501	80-11-07	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01

Table 3.--Chemical analyses of pesticides in water collected in 1980 from selected baseline wells--Continued

MORRISON COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
455030094191501	80-11-10	45 50 30	094 19 15	01	039N32W27CBB01	1420	17	145	8.1
460030094210001	80-11-12	46 00 30	094 21 00	01	041N32W26BCA01	1330	21	350	7.8

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C) (00010)	PER-THANE, TOTAL (UG/L) (39034)	ENDO-SULFAN, TOTAL (UG/L) (39388)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR-DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI-ELDRIN, TOTAL (UG/L) (39380)	ENDRIN, TOTAL (UG/L) (39390)
455030094191501	80-11-10	10.0	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
460030094210001	80-11-12	12.5	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

STATION NUMBER	DATE OF SAMPLE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE, TOTAL (UG/L)	LINDANE, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	PCB, TOTAL (UG/L)	POLYCHLOR. NAPHTHALENES, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PROPAZINE, TOTAL (UG/L)	SIMETRYNE, TOTAL (UG/L)
455030094191501	80-11-10	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
460030094210001	80-11-12	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

STATION NUMBER	DATE OF SAMPLE	SIMAZINE, TOTAL (UG/L)	PROMETONE, TOTAL (UG/L)	PROMETRYNE, TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE, TOTAL (UG/L)	AMETRYNE, TOTAL	ATRATONE, TOTAL (UG/L)	CYPRAZINE, TOTAL (UG/L)	SIMETONE, TOTAL (UG/L)
455030094191501	80-11-10	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01
460030094210001	80-11-12	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01

Table 3.—Chemical analyses of pesticides in water collected in 1980 from selected baseline wells—Continued

OTTER TAIL COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462715095323001	80-11-06	46 26 56	095 32 22	02	134N39W01ACD02	1130	60	450	7.6
463500095331501	80-11-06	46 35 00	095 33 15	01	136N39W14DDD01	1030	40	485	7.7

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C) (00010)	PER-THANE, TOTAL (UG/L) (39034)	ENDO-SULFAN, TOTAL (UG/L) (39388)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR-DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI-ELDRIN, TOTAL (UG/L) (39380)	ENDRIN, TOTAL (UG/L) (39390)
462715095323001	80-11-06	9.0	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
463500095331501	80-11-06	9.0	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

STATION NUMBER	DATE OF SAMPLE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE, TOTAL (UG/L)	LINDANE, TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)	PCB, TOTAL (UG/L)	POLYCHLOR. NAPHTHALENES, TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PROPAZINE, TOTAL (UG/L)	SIMETRYNE, TOTAL (UG/L)
462715095323001	80-11-06	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
463500095331501	80-11-06	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

STATION NUMBER	DATE OF SAMPLE	SIMAZINE, TOTAL (UG/L)	PROMETONE, TOTAL (UG/L)	PROMETRYNE, TOTAL (UG/L)	ATRAZINE, TOTAL (UG/L)	CYANAZINE, TOTAL (UG/L)	AMETRYNE, TOTAL	ATRATONE, TOTAL (UG/L)	CYPRAZINE, TOTAL (UG/L)	SIMETONE, TOTAL (UG/L)
462715095323001	80-11-06	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01
463500095331501	80-11-06	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01

Table 3.—Chemical analyses of pesticides in water collected in 1980 from selected baseline wells—Continued

WADENA COUNTY

STATION NUMBER	DATE OF SAMPLE	LAT-I-TUDE	LONG-I-TUDE	SEQ. NO.	WELL-LOCATION NUMBER	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)
462315094480015	80-11-05	46 23 15	094 48 00	15	134N33W35ACB15 S-15	1200	17	660	7.5
462530095050001	80-11-11	46 25 33	095 05 00	01	134N35W10CDC01	1130	24	620	7.7
462815094532001	80-11-11	46 28 14	094 53 20	01	135N33W30DCD01	1245	87	450	7.7

STATION NUMBER	DATE OF SAMPLE	TEMPER-ATURE (DEG C) (00010)	PER-THANE, TOTAL (UG/L) (39034)	ENDO-SULFAN, TOTAL (UG/L) (39388)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR-DANE, TOTAL (UG/L) (39350)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DI-ELDRIN, TOTAL (UG/L) (39380)	ENDRIN, TOTAL (UG/L) (39390)
462315094480015	80-11-05	10.5	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
462530095050001	80-11-11	12.0	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01
462815094532001	80-11-11	8.0	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01

STATION NUMBER	DATE OF SAMPLE	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE, TOTAL (UG/L)	LINDANE, TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)	PCB, TOTAL (UG/L)	POLY-CHLOR. NAPH-THA-LENES, TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PRO-PAZINE, TOTAL (UG/L)	SIME-TRYNE, TOTAL (UG/L)
462315094480015	80-11-05	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.1
462530095050001	80-11-11	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	—	—
462815094532001	80-11-11	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.1

STATION NUMBER	DATE OF SAMPLE	SIMA-ZINE TOTAL (UG/L)	PROME-TONE TOTAL (UG/L)	PROME-TRYNE TOTAL (UG/L)	ATRA-ZINE, TOTAL (UG/L)	CYAŃ-AZINE TOTAL (UG/L)	AME-TRYNE TOTAL	ATRA-TONE TOTAL (UG/L)	CYPRA-ZINE TOTAL (UG/L)	SIME-TONE TOTAL (UG/L)
462315094480015	80-11-05	<.19	<.1	<.1	.20	<.01	<.01	<.01	<.01	<.01
462530095050001	80-11-11	—	—	—	—	—	—	—	—	—
462815094532001	80-11-11	<.01	<.1	<.1	<.01	<.01	<.01	<.01	<.01	<.01

APPENDIX

Selected References

Reports describing previous investigations and other literature pertaining to the geology and hydrology of the region are listed in the following tabulation.

Brown, E., Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A1, 160 p.

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