

Quality of Ground Water



Ground-water well water-quality sampling, 2003

MULTIPLE STATION ANALYSIS

Local identifier	Date	Time	Sample type	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
CARVER COUNTY										
Rain Garden lysimeter near Chanhassen, MN	08-22-03	0722	Environmental	--	--	--	--	593	--	--
Rain Garden outflow near Chanhassen, MN	08-22-03	0830	Environmental	744	5.3	62	6.8	--	789	--
	09-19-03	0936	Environmental	--	--	--	7.8	--	783	--
DAKOTA COUNTY										
Rain Garden background well near Lakeville, MN	10-18-02	1330	Environmental	--	4.3	42	7.0	1,290	1,220	--
	08-21-03	0848	Environmental	--	6.0	--	6.5	--	1,830	--
Rain Garden well near Lakeville, MN	08-21-03	1035	Environmental	--	8.7	--	8.0	--	334	--
Rain Garden lysimeter near Lakeville, MN	08-21-03	1000	Environmental	--	--	--	--	361	--	--
Rain Garden background lysimeter near Lakeville, MN	08-21-03	0750	Environmental	--	--	--	--	2,710	--	--
HENNEPIN COUNTY										
Rain Garden background well Near Minnetonka, MN	08-20-03	0841	Environmental	--	7.4	--	6.9	--	640	--
Rain Garden lysimeter near Minnetonka, MN	08-20-03	0920	Environmental	--	--	--	--	1,110	--	--
POLK COUNTY										
G13 149N44W28CADD	05-23-03	1000	Environmental	740	--	--	7.5	--	801	16.0
	06-26-03	1500	Environmental	--	8.4	77	7.1	--	785	--
	07-31-03	1350	Environmental	731	9.5	90	7.4	--	792	--
L032 150N45W25DDDD	05-22-03	1355	Environmental	739	3.0	26	7.4	--	548	18.0
	06-24-03	1050	Environmental	--	1.8	--	7.4	--	534	--
L043 150N45W29ADAA	06-24-03	1052	Blank	--	--	--	--	--	--	--
	05-22-03	1219	Environmental	738	6.0	54	7.6	--	547	19.0
	05-22-03	1221	Environmental	--	--	--	--	--	--	--
	05-22-03	1221	Replicate	--	--	--	--	--	--	--
	06-24-03	0930	Environmental	731	5.9	54	7.4	--	569	--
	07-30-03	1045	Environmental	734	6.6	59	7.8	--	550	--
	08-20-03	1320	Environmental	731	7.4	72	7.7	--	513	--
G01-R 149N44W30CAAD	09-23-03	0850	Environmental	--	7.2	64	7.6	--	499	--
	05-21-03	0845	Environmental	739	--	--	7.0	--	825	15.5
	06-26-03	1210	Environmental	--	0.2	--	6.8	--	823	--
G16 149N43W19DADD	07-30-03	1310	Environmental	732	0.1	0.0	6.9	--	890	--
	08-19-03	1050	Environmental	732	0.5	5	6.8	--	950	--
	09-23-03	1545	Environmental	--	0.1	5	6.7	--	1,040	--
	05-21-03	1510	Environmental	740	2.8	22	7.7	--	414	20.0
	06-25-03	1100	Environmental	740	3.0	26	7.3	--	414	--
	07-31-03	1630	Environmental	729	3.0	29	7.6	--	417	--
	07-31-03	1632	Replicate	--	--	--	--	--	--	--
E03-R 149N44W12BADA	08-19-03	1545	Environmental	731	3.9	38	7.6	--	414	--
	09-23-03	1130	Environmental	--	3.5	34	7.6	--	424	--
	05-22-03	1935	Environmental	738	--	--	7.2	--	727	17.5
	06-26-03	1650	Environmental	--	0.9	8	7.2	--	493	--
G15-R 148N44W10CCCC	07-31-03	0800	Environmental	730	94.0	8	7.2	--	739	--
	08-20-03	0800	Environmental	727	6.3	59	7.4	--	740	--
	09-23-03	1030	Environmental	--	1.0	9	7.5	--	738	--
	05-21-03	1240	Environmental	740	--	--	7.8	--	665	--
	05-21-03	1240	Environmental	740	--	--	7.8	--	665	--

QUALITY OF GROUND WATER
MULTIPLE STATION ANALYSIS—Continued

Local identifier	Date	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 180 deg C wat flt mg/L (70300)	Residue total at 105 deg C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
CARVER COUNTY											
Rain Garden lysimeter near Chanhassen, MN	08-22-03	--	--	--	--	24.1	--	--	--	0.71	0.10
Rain Garden outflow near Chanhassen, MN	08-22-03	22.2	--	--	--	17.3	490	<10	--	0.51	<0.04
	09-19-03	--	--	--	--	19.7	517	<10	--	0.56	<0.04
DAKOTA COUNTY											
Rain Garden background well near Lakeville, MN	10-18-02	13.2	--	--	--	190	--	--	--	0.14	<0.04
	08-21-03	12.8	--	--	--	262	--	--	--	0.28	<0.04
Rain Garden well near Lakeville, MN	08-21-03	20.2	--	--	--	6.65	--	--	--	0.56	<0.04
Rain Garden lysimeter near Lakeville, MN	08-21-03	--	--	--	--	8.89	--	--	--	0.55	<0.04
Rain Garden background lysimeter near Lakeville, MN	08-21-03	--	--	--	--	19.1	--	--	--	1.3	E.04
HENNEPIN COUNTY											
Rain Garden background well near Minnetonka, MN	08-20-03	13.9	--	--	--	7.46	--	--	--	0.29	<0.04
Rain Garden lysimeter near Minnetonka, MN	08-20-03	--	--	--	--	88.8	--	--	--	0.93	0.07
POLK COUNTY											
G13 149N44W2	05-23-03	7.6	470	573	0.0	--	--	--	0.25	--	<0.04
	06-26-03	9.4	373	455	0.0	--	--	--	0.24	--	<0.04
	07-31-03	11.3	438	534	0.0	--	--	--	0.27	--	<0.04
L032 150N45W2	05-22-03	6.1	268	326	0.0	--	--	--	0.12	--	<0.04
	06-24-03	8.2	255	312	0.0	--	--	--	0.13	--	<0.04
L043 150N45W2	06-24-03	--	--	--	--	--	--	--	<0.10	--	<0.04
	05-22-03	8.6	276	336	0.0	--	--	--	0.24	--	<0.04
	05-22-03	--	--	--	--	--	--	--	--	--	--
	05-22-03	--	--	--	--	--	--	--	0.23	--	<0.04
	06-24-03	9.2	284	346	0.0	--	--	--	0.20	--	<0.04
	07-30-03	8.7	268	326	0.0	--	--	--	0.18	--	<0.04
G01-R 149N44W3	08-20-03	12.9	276	337	0.0	--	--	--	0.18	--	<0.04
	09-23-03	8.4	260	316	0.0	--	--	--	0.17	--	<0.04
	05-21-03	5.6	446	544	0.0	--	--	--	0.94	--	0.18
	06-26-03	11.0	438	534	0.0	--	--	--	0.98	--	0.24
	07-30-03	14.4	487	594	0.0	--	--	--	1.0	--	0.20
	08-19-03	16.1	519	633	0.0	--	--	--	1.1	--	0.22
G16 149N43W1	09-23-03	15.2	535	653	0.0	--	--	--	1.0	--	0.25
	05-21-03	5.8	211	257	0.0	--	--	--	0.14	--	<0.04
	06-25-03	8.3	211	257	0.0	--	--	--	0.12	--	<0.04
E03-R 149N44W1	07-31-03	11.5	211	257	0.0	--	--	--	0.12	--	<0.04
	07-31-03	--	--	--	--	--	--	--	0.11	--	<0.04
	08-19-03	13.2	204	249	0.0	--	--	--	0.13	--	<0.04
	09-23-03	--	211	257	0.0	--	--	--	0.13	--	<0.04
	05-22-03	8.1	288	351	0.0	--	--	--	0.21	--	<0.04
	06-26-03	8.8	276	337	0.0	--	--	--	0.23	--	<0.04
G15-R 148N44W1	07-31-03	9.4	260	317	0.0	--	--	--	0.20	--	<0.04
	08-20-03	10.4	276	337	0.0	--	--	--	0.21	--	<0.04
	09-23-03	8.6	260	316	0.0	--	--	--	0.21	--	<0.04
	05-21-03	4.5	211	257	0.0	--	--	--	0.35	--	0.07

MULTIPLE STATION ANALYSIS—Continued

Local identifier	Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
CARVER COUNTY						
Rain Garden lysimeter near Chanhassen, MN	08-22-03	0.77	0.032	--	0.13	0.13
	08-22-03	0.29	E.004	--	0.04	0.05
Rain Garden outflow near Chanhassen, MN	09-19-03	0.66	E.006	--	E.03	0.04
DAKOTA COUNTY						
Rain Garden background well near Lakeville, MN	10-18-02	1.56	0.014	--	<0.04	<0.04
	08-21-03	2.55	<0.008	--	<0.04	E.03
Rain Garden well near Lakeville, MN	08-21-03	0.97	<0.008	--	E.02	E.04
Rain Garden lysimeter near Lakeville, MN	08-21-03	2.05	E.006	--	0.08	0.08
Rain Garden background lysimeter near Lakeville, MN	08-21-03	6.64	E.005	--	0.05	0.07
HENNEPIN COUNTY						
Rain Garden background well near Minnetonka, MN	08-20-03	2.82	<0.008	--	<0.04	<0.04
Rain Garden lysimeter near Minnetonka, MN	08-20-03	1.28	0.116	--	E.03	0.05
POLK COUNTY						
G13 149N44W2	05-23-03	0.10	<0.008	<0.02	<0.004	--
	06-26-03	0.25	<0.008	<0.02	E.002	--
	07-31-03	0.35	<0.008	<0.02	E.003	--
L032 150N45W2	05-22-03	2.61	<0.008	E.02	0.019	--
	06-24-03	2.17	E.004	E.01	0.019	--
	06-24-03	<0.06	<0.008	<0.02	<0.004	--
L043 150N45W2	05-22-03	2.81	0.028	<0.02	E.004	--
	05-22-03	--	--	--	--	--
	05-22-03	3.67	0.052	<0.02	<0.004	--
	06-24-03	3.25	0.011	<0.02	E.002	--
	07-30-03	3.29	E.006	<0.02	E.004	--
	08-20-03	2.56	0.010	<0.02	E.004	--
	09-23-03	2.79	0.016	<0.02	E.003	--
G01-R 149N44W3	05-21-03	<0.06	<0.008	<0.02	0.011	--
	06-26-03	<0.06	<0.008	<0.02	0.013	--
	07-30-03	<0.06	<0.008	<0.02	0.014	--
G16 149N43W1	08-19-03	<0.06	<0.008	E.01	0.017	--
	09-23-03	E.03	<0.008	E.01	0.017	--
	05-21-03	0.81	0.086	<0.02	E.002	--
	06-25-03	0.95	0.075	<0.02	<0.004	--
	07-31-03	0.91	0.059	<0.02	E.003	--
	07-31-03	0.90	0.058	<0.02	E.004	--
	08-19-03	0.80	0.043	<0.18	E.004	--
E03-R 149N44W1	09-23-03	0.89	0.022	<0.02	E.003	--
	05-22-03	9.95	0.079	<0.02	E.004	--
	06-26-03	--	0.103	<0.02	E.004	--
G15-R 148N44W1	07-31-03	12.1	0.084	<0.02	0.005	--
	08-20-03	8.95	0.091	<0.18	0.005	--
	09-23-03	12.6	0.072	<0.02	0.005	--
	05-21-03	10.3	0.814	<0.02	0.009	--
	05-21-03	10.3	0.814	<0.02	0.009	--

QUALITY OF GROUND WATER
MULTIPLE STATION ANALYSIS—Continued

Local identifier	Date	Time	Sample type	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd std units (00400)	Specif. conductance, wat unfltrd lab, uS/cm 25 deg C (90095)	Specif. conductance, wat unfltrd lab, uS/cm 25 deg C (00095)	Temperature, air, deg C (00020)
POLK COUNTY										
G15-R 148N44W10CCCC	06-25-03	1210	Environmental	--	0.2	--	7.6	--	679	--
	07-30-03	1555	Environmental	729	0.1	1	7.8	--	672	--
	08-19-03	1445	Environmental	729	0.2	2	7.8	--	654	--
	09-23-03	1330	Environmental	--	0.1	1	7.7	--	662	--
E01D-R 148N45W01CBDD	05-21-03	1130	Environmental	739	--	--	8.0	--	739	17.0
	06-26-03	1015	Environmental	--	0.5	5	7.7	--	740	--
	07-30-03	1500	Environmental	731	0.3	3	7.9	--	749	--
	08-19-03	1345	Environmental	732	0.2	2	7.8	--	736	--
G08-R 149N44W17ABAD	09-23-03	1500	Environmental	--	0.1	1	7.9	--	749	--
	05-23-03	0900	Environmental	740	--	--	7.3	--	1,310	15.0
	06-26-03	1530	Environmental	--	3.9	36	7.2	--	1,180	--
	07-31-03	1240	Environmental	732	9.9	100	7.5	--	1,290	--
E01S-R 148N45W01CBDD	08-20-03	1140	Environmental	727	1.9	20	7.4	--	1,290	--
	09-24-03	0950	Environmental	--	5.2	52	7.4	--	1,300	--
	05-21-03	1055	Environmental	739	--	--	7.5	--	720	17.0
	06-26-03	0955	Environmental	--	1.1	10	7.4	--	708	--
E02D 149N44W26DACD	07-30-03	1430	Environmental	731	4.9	46	7.5	--	731	--
	08-19-03	1320	Environmental	732	1.7	17	7.4	--	727	--
	09-23-03	1435	Environmental	--	4.6	45	7.3	--	716	--
	08-19-03	1020	Environmental	729	0.1	1	7.7	--	590	--
G09 149N44W26DDCA	08-19-03	1022	Replicate	--	--	--	--	--	--	--
	09-24-03	1240	Environmental	--	0.4	4	7.9	--	590	--
	07-31-03	1545	Environmental	--	9.7	91	7.6	--	528	--
	08-19-03	0945	Environmental	729	0.2	2	7.3	--	536	--
G22S-R 149N43W29CCBB	09-24-03	1130	Environmental	--	0.1	1	7.5	--	518	--
	08-20-03	0930	Environmental	726	3.6	35	7.5	--	1,460	--
	09-23-03	1215	Environmental	--	4.0	38	7.2	--	1,460	--
09-23-03	1217	Replicate	--	--	--	--	--	--	--	
WASHINGTON COUNTY										
Rain Garden well at Hugo, MN	08-18-03	1232	Environmental	--	9.9	103	6.1	--	121	--
Rain Garden background well at Hugo, MN	08-18-03	1009	Environmental	--	6.3	--	6.4	--	169	--
Rain Garden background lysimeter at Hugo, MN	08-18-03	0915	Environmental	--	--	--	--	148	--	--
Rain Garden background well near Woodbury, MN	10-18-02	1100	Environmental	--	7.4	71	6.5	1,130	695	--
	08-19-03	1351	Environmental	--	7.5	--	7.9	--	543	--
Rain Garden lysimeter near Woodbury, MN	08-19-03	1034	Environmental	--	--	--	--	2,020	--	--
Rain Garden background lysimeter near Woodbury, MN	08-19-03	1302	Environmental	--	--	--	--	422	--	--
Rain Garden well near Woodbury, MN	08-19-03	1130	Environmental	--	10.3	--	7.7	--	1,130	--

QUALITY OF GROUND WATER
 MULTIPLE STATION ANALYSIS—Continued

Local identifier	Date	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Carbonate, wat flt incm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
POLK COUNTY											
G15-R 148N44W1	06-25-03	9.0	--	262	0.0	--	0.35	--	0.08	11.6	0.840
	07-30-03	11.7	211	257	0.0	--	0.30	--	E.04	12.2	0.526
	08-19-03	13.4	195	237	0.0	--	0.30	--	E.03	11.7	0.358
	09-23-03	13.1	211	257	0.0	--	0.27	--	0.04	12.5	0.574
E01D-R 148N45W0	05-21-03	8.0	381	464	0.0	--	4.0	--	2.99	<0.06	<0.008
	06-26-03	11.0	389	475	0.0	--	4.0	--	3.23	<0.30	E.004
	07-30-03	12.5	389	475	0.0	--	3.8	--	3.14	E.03	<0.008
	08-19-03	16.1	389	475	0.0	--	4.0	--	3.20	<0.06	<0.008
	09-23-03	10.6	389	474	0.0	--	3.6	--	3.35	<0.06	<0.008
G08-R 149N44W1	05-23-03	7.2	535	653	0.0	--	1.1	--	0.12	33.1	0.074
	06-26-03	10.6	316	386	0.0	--	0.75	--	0.07	45.3	0.016
	07-31-03	13.8	357	435	0.0	--	0.93	--	0.04	52.6	0.041
	08-20-03	15.0	406	495	0.0	--	0.95	--	E.04	45.3	0.076
	09-24-03	12.6	406	494	0.0	--	0.90	--	0.04	46.6	0.116
E01S-R 148N45W0	05-21-03	7.0	373	455	0.0	--	1.4	--	0.95	1.28	<0.008
	06-26-03	10.1	370	451	0.0	--	0.50	--	0.19	1.81	0.018
	07-30-03	11.1	373	455	0.0	--	0.68	--	0.40	1.24	<0.008
	08-19-03	14.3	373	455	0.0	--	0.51	--	0.20	0.96	0.010
	09-23-03	12.8	357	435	0.0	--	0.64	--	0.35	0.96	<0.008
E02D 149N44W2	08-19-03	10.9	292	356	0.0	--	1.3	--	1.07	<0.06	<0.008
	08-19-03	--	--	--	--	--	1.3	--	1.00	<0.06	<0.008
	09-24-03	7.5	292	356	0.0	--	1.0	--	0.92	<0.06	<0.008
G09 149N44W2	07-31-03	10.6	260	317	0.0	--	0.52	--	<0.04	2.59	0.072
	08-19-03	12.4	260	317	0.0	--	0.68	--	0.05	3.41	0.055
	09-24-03	10.5	243	297	0.0	--	0.48	--	<0.04	3.23	0.071
G22S-R 149N43W2	08-20-03	12.6	308	376	0.0	--	0.63	--	E.03	97.1	0.108
	09-23-03	11.4	292	356	0.0	--	0.65	--	0.04	103	0.049
	09-23-03	--	--	--	--	--	0.57	--	0.04	96.0	0.040
WASHINGTON COUNTY											
Rain Garden well at Hugo, MN	08-18-03	17.3	--	--	--	1.37	--	0.16	<0.04	1.32	<0.008
Rain Garden background well at Hugo, MN	08-18-03	15.5	--	--	--	11.4	--	0.11	<0.04	2.01	<0.008
Rain Garden background lysimeter at Hugo, MN	08-18-03	--	--	--	--	3.89	--	0.28	<0.04	1.80	0.011
Rain Garden background well near Woodbury, MN	10-18-02	12.1	--	--	--	235	--	0.15	<0.04	0.45	E.007
	08-19-03	11.9	--	--	--	84.3	--	<0.10	<0.04	0.54	<0.008
Rain Garden lysimeter near Woodbury, MN	08-19-03	--	--	--	--	415	--	1.4	0.53	<0.06	<0.008
Rain Garden background lysimeter near Woodbury, MN	08-19-03	--	--	--	--	32.2	--	0.30	0.07	0.37	0.013
Rain Garden well near Woodbury, MN	08-19-03	17.2	--	--	--	231	--	E.07	<0.04	0.81	<0.008

QUALITY OF GROUND WATER
MULTIPLE STATION ANALYSIS—Continued

Local identifier	Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
POLK COUNTY				
G15-R 148N44W1	06-25-03	<0.02	0.010	--
	07-30-03	<0.02	0.011	--
	08-19-03	<0.18	0.013	--
E01D-R 148N45W0	09-23-03	<0.02	0.012	--
	05-21-03	0.27	0.31	--
	06-26-03	0.26	0.29	--
G08-R 149N44W1	07-30-03	0.28	0.28	--
	08-19-03	0.27	0.30	--
	09-23-03	0.29	0.27	--
E01S-R 148N45W0	05-23-03	<0.02	0.005	--
	06-26-03	<0.02	0.008	--
	07-31-03	<0.02	0.006	--
E02D 149N44W2	08-20-03	<0.02	E.004	--
	09-24-03	<0.02	E.004	--
	05-21-03	<0.02	0.010	--
G09 149N44W2	06-26-03	<0.02	0.015	--
	07-30-03	<0.02	0.017	--
	08-19-03	<0.18	0.008	--
G22S-R 149N43W2	09-23-03	<0.02	0.012	--
	08-19-03	<0.18	0.041	--
	08-19-03	<0.18	0.039	--
	09-24-03	0.03	0.042	--
	07-31-03	<0.02	0.007	--
	08-19-03	<0.18	0.013	--
	09-24-03	<0.02	0.006	--
	08-20-03	<0.02	E.004	--
	09-23-03	<0.02	E.003	--
	09-23-03	<0.02	E.002	--
WASHINGTON COUNTY				
Rain Garden well at Hugo, MN	08-18-03	--	0.06	0.07
Rain Garden background well at Hugo, MN	08-18-03	--	0.07	0.09
Rain Garden background lysimeter at Hugo, MN	08-18-03	--	<0.04	<0.04
Rain Garden background well near Woodbury, MN	10-18-02	--	<0.04	0.16
	08-19-03	--	0.04	0.04
Rain Garden lysimeter near Woodbury, MN	08-19-03	--	<0.04	0.05
RainGarden background lysimeter near Woodbury, MN	08-19-03	--	<0.04	<0.04
Rain Garden well near Woodbury, MN	08-19-03	--	E.02	E.02