



Water-Data Report 2011

421145088194801 Local number 17-ALG-S

Sand and gravel aquifers (glaciated regions)
Quaternary System

McHenry County, IL

LOCATION.--Lat 42°11'45", long 88°19'48" referenced to North American Datum of 1983, in NW ¼ NE ¼ NW ¼ sec.20, T.43 N., R.8 E., McHenry County, IL, Hydrologic Unit 07120006, about 1 mile north of Lake in the Hills, in Lake in the Hills Fen Park, 15 feet east of Jefferson Street, and 20 feet south of trail going east. Owner: McHenry County.

GROUNDWATER RECORDS

WELL CHARACTERISTICS.--Depth 47.3 ft. Upper casing diameter 2 in; top of first opening 42.3 ft, bottom of last opening 46.8 ft. Well casing includes schedule 40 PVC pipe, 8 in. diameter borehole with bentonite seal, observation well, artesian with packer.

DATUM.--Land-surface datum is 880.03 ft above North American Vertical Datum of 1988. Measuring point: Mark on top of PVC well casing, 2.45 ft above land-surface datum, October 1, 2010 to present.

PERIOD OF RECORD.--

GROUND-WATER LEVELS: October 2010 to current year. Prior to October 2010 (periodic).

GROUND-WATER QUALITY:

CHEMICAL: Water year 2010.

GAGE.--Water level recorder and satellite telemeter.

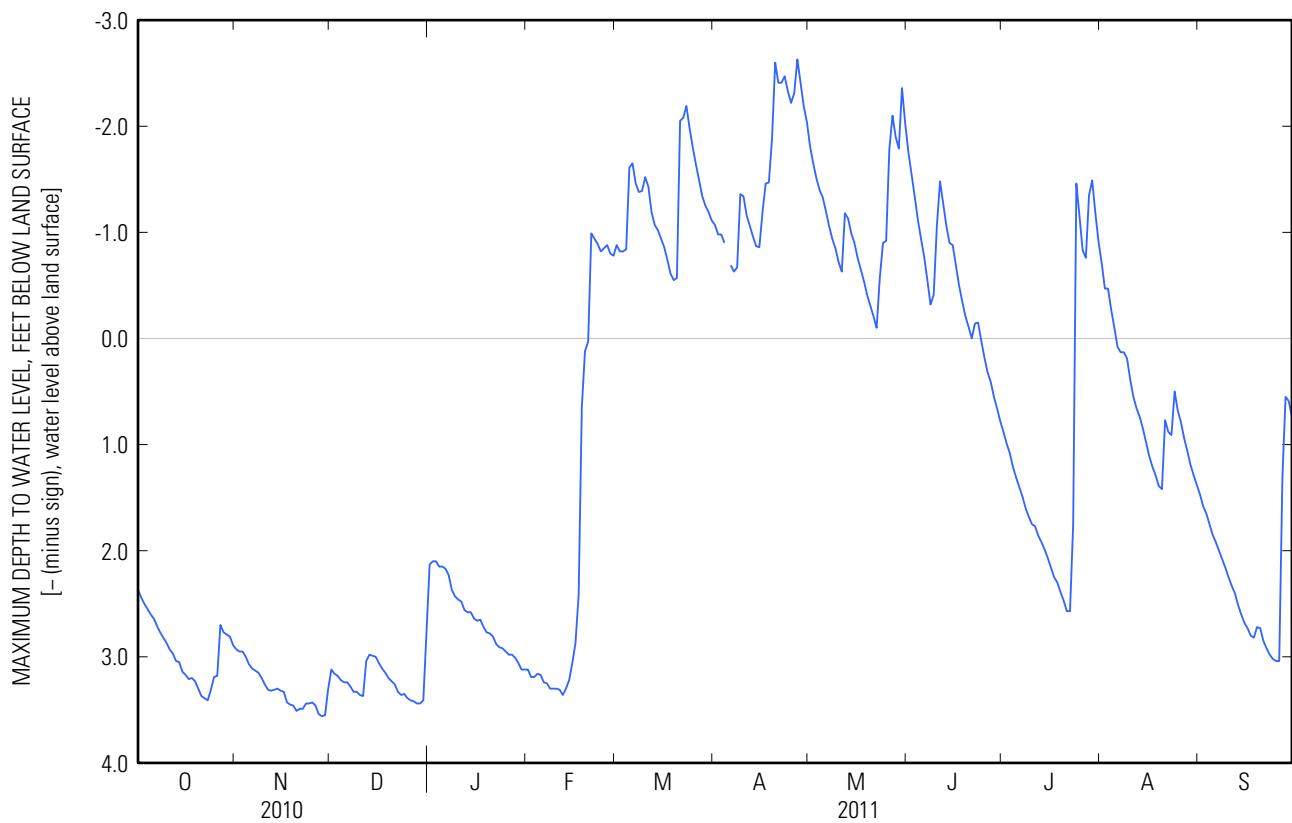
EXTREMES FOR PERIOD OF RECORD.--Highest water level, -2.86 ft below land-surface datum, April 20, 2011; lowest, 3.56 ft below land-surface datum, November 28, 2010.

EXTREMES FOR CURRENT YEAR.--Highest water level, -2.86 ft below land-surface datum, April 20; lowest 3.56 ft below land-surface datum, November 28.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MAXIMUM VALUES

[- (minus sign), value is water level above land surface]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.37	2.93	3.12	2.13	3.12	-0.88	-1.07	-1.81	-1.76	0.88	-0.71	1.47
2	2.44	2.95	3.16	2.10	3.19	-0.82	-0.98	-1.65	-1.55	0.99	-0.47	1.58
3	2.50	2.95	3.18	2.10	3.19	-0.82	-0.98	-1.51	-1.34	1.08	-0.47	1.65
4	2.55	3.00	3.22	2.15	3.16	-0.84	-0.90	-1.40	-1.12	1.21	-0.27	1.75
5	2.60	3.07	3.24	2.15	3.17	-1.61	---	-1.33	-0.94	1.31	-0.10	1.85
6	2.64	3.11	3.24	2.17	3.24	-1.65	-0.69	-1.20	-0.77	1.40	0.08	1.92
7	2.71	3.13	3.28	2.23	3.25	-1.46	-0.63	-1.06	-0.55	1.49	0.13	2.00
8	2.77	3.15	3.33	2.37	3.30	-1.38	-0.67	-0.94	-0.32	1.60	0.13	2.08
9	2.82	3.20	3.33	2.43	3.30	-1.39	-1.36	-0.85	-0.41	1.68	0.19	2.16
10	2.87	3.26	3.36	2.46	3.30	-1.52	-1.34	-0.72	-1.06	1.75	0.39	2.25
11	2.93	3.31	3.37	2.48	3.31	-1.43	-1.16	-0.63	-1.48	1.77	0.55	2.33
12	2.97	3.32	3.04	2.56	3.36	-1.19	-1.06	-1.18	-1.27	1.86	0.66	2.40
13	3.04	3.31	2.98	2.58	3.30	-1.07	-0.96	-1.13	-1.06	1.92	0.74	2.51
14	3.05	3.30	2.99	2.58	3.22	-1.02	-0.87	-0.99	-0.90	1.99	0.85	2.60
15	3.14	3.32	3.00	2.64	3.06	-0.94	-0.86	-0.90	-0.88	2.07	0.98	2.68
16	3.17	3.33	3.06	2.66	2.87	-0.86	-1.19	-0.76	-0.69	2.16	1.11	2.73
17	3.21	3.43	3.11	2.65	2.42	-0.74	-1.46	-0.65	-0.50	2.25	1.21	2.80
18	3.20	3.45	3.15	2.72	0.65	-0.61	-1.47	-0.54	-0.35	2.30	1.29	2.82
19	3.23	3.46	3.20	2.77	0.12	-0.55	-1.88	-0.41	-0.21	2.39	1.39	2.72
20	3.30	3.51	3.23	2.78	0.03	-0.57	-2.60	-0.31	-0.11	2.47	1.42	2.73
21	3.37	3.49	3.26	2.81	-0.99	-2.05	-2.41	-0.21	0.00	2.57	0.77	2.85
22	3.39	3.49	3.33	2.88	-0.94	-2.08	-2.41	-0.10	-0.14	2.57	0.88	2.92
23	3.41	3.44	3.36	2.91	-0.89	-2.19	-2.47	-0.57	-0.15	1.75	0.91	2.98
24	3.31	3.44	3.35	2.92	-0.82	-1.98	-2.33	-0.90	0.02	-1.46	0.50	3.02
25	3.19	3.43	3.39	2.95	-0.85	-1.80	-2.22	-0.92	0.18	-1.15	0.68	3.04
26	3.18	3.46	3.41	2.98	-0.88	-1.64	-2.31	-1.78	0.32	-0.83	0.79	3.04
27	2.70	3.54	3.42	2.98	-0.80	-1.49	-2.63	-2.10	0.41	-0.76	0.94	1.31
28	2.77	3.56	3.44	3.01	-0.78	-1.34	-2.41	-1.90	0.55	-1.35	1.06	0.55
29	2.79	3.55	3.44	3.06	---	-1.25	-2.19	-1.79	0.66	-1.49	1.19	0.59
30	2.81	3.30	3.41	3.12	---	-1.19	-2.04	-2.36	0.78	-1.18	1.29	0.74
31	2.89	---	2.77	3.12	---	-1.11	---	-2.03	---	-0.91	1.38	---
Mean	2.95	3.31	3.23	2.63	1.70	-1.27	---	-1.12	-0.49	1.04	0.63	2.20
Max	3.41	3.56	3.44	3.12	3.36	-0.55	---	-0.10	0.78	2.57	1.42	3.04
Min	2.37	2.93	2.77	2.10	-0.99	-2.19	---	-2.36	-1.76	-1.49	-0.71	0.55



WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Depth of well, feet below land surface datum (72008)	1,2-Dichloroethane-d4, surrogate, Schedule 2090, water, unfiltered, percent recovery (99832)
09-22-2010 1600	740	23.1	0.3	7.3	863	15.6	14	47.30	132

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 9

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Sample date-time	1-Bromo-4-fluoro-benzene, surrogate, VOC schedules, percent recovery (99834)	Toluene-d8, surrogate, Schedule 2090, percent recovery (99833)	Dissolved solids, dried at 180°C, water, unfiltered, percent recovery (70300)	Magnesium, Calcium, water, filtered, mg/L (00915)	Sodium, Potassium, water, filtered, mg/L (00925)	Bromide, water, filtered, mg/L (00930)	Chloride, water, filtered, mg/L (71870)
09-22-2010 1600	73.0	96.0	500	86.8	46.1	1.32	E .025

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	Fluoride, water, filtered, mg/L (00950)	Hydrogen sulfide, water, unfiltered, mg/L (71875)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)	Sulfide, water, unfiltered, milligrams per liter (99119)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)
09-22-2010 1600	0.31	U	15.8	41.9	0.011	0.488	0.71	0.006	0.017

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	Total nitrogen, water, filtered, analytically determined, mg/L (62854)	Aluminum, water, filtered, µg/L (01106)	Barium, water, filtered, µg/L (01005)	Beryllium, water, filtered, µg/L (01010)	Cadmium, water, filtered, µg/L (01025)	Chromium, water, filtered, µg/L (01030)	Cobalt, water, filtered, µg/L (01035)	Copper, water, filtered, µg/L (01040)	Iron(II), water, field, filtered, milligrams per liter (99114)
09-22-2010 1600	1.28	E 1.9	120	< .012	< .020	0.36	0.122	< 1.0	0.950

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	Iron, water, filtered, µg/L (01046)	Lead, water, filtered, µg/L (01049)	Manganese, water, filtered, µg/L (01056)	Molybdenum, water, filtered, µg/L (01060)	Nickel, water, filtered, µg/L (01065)	Silver, water, filtered, µg/L (01075)	Zinc, water, filtered, µg/L (01090)	Antimony, water, filtered, µg/L (01095)	Arsenic, water, filtered, µg/L (01000)
09-22-2010 1600	902	< .030	30.2	3.73	0.72	< .010	< 2.8	0.074	0.35

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 6 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	1,2-Dichloroethane, water, unfiltered, filtered, µg/L (01145)	1,2-Dichloropropane, water, unfiltered, recoverable, µg/L (32103)	1,4-Dichlorobenzene, water, unfiltered, recoverable, µg/L (34541)	1,1,1-Trichloroethane, water, unfiltered, recoverable, µg/L (34571)	1,2,2-Trifluoroethane, water, unfiltered, recoverable, µg/L (34506)	1,1-Dichloroethane, water, unfiltered, recoverable, µg/L (77652)	1,1-Dichloroethene, water, unfiltered, recoverable, µg/L (34496)	1,2-Dichlorobenzene, water, unfiltered, recoverable, µg/L (34501)	1,1,2-Tri-chloro-
									chloro-
09-22-2010 1600	0.05	<.08	<.026	<.026	<.030	<.034	<.044	<.022	<.028

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 7 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	1,3-Dichlorobenzene, water, unfiltered, recoverable, µg/L (34566)	Benzene, water, unfiltered, recoverable, µg/L (34030)	Bromo-dichloromethane, water, unfiltered, recoverable, µg/L (32101)	Chloro-benzene, water, unfiltered, recoverable, µg/L (34301)	cis-1,2-Dichloroethene, water, unfiltered, recoverable, µg/L (77093)	Dibromo-chloromethane, water, unfiltered, recoverable, µg/L (32105)	Dichlorodifluoromethane, water, unfiltered, recoverable, µg/L (34668)	Dichloro-ether, water, unfiltered, recoverable, µg/L (34423)	Diethyl ether, water, unfiltered, recoverable, µg/L (81576)
									chloro-
09-22-2010 1600	<.024	<.026	<.034	<.016	<.022	<.12	<.10	<.04	<.1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 8 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	Diisopropyl ether, water, unfiltered, recoverable, µg/L (81577)	Ethylbenzene, water, unfiltered, recoverable, µg/L (34371)	Methyl tert-butyl ether, water, unfiltered, recoverable, µg/L (78032)	Methyl tert-pentyl ether, water, unfiltered, recoverable, µg/L (50005)	m-Xylene plus p-xylene, water, unfiltered, recoverable, µg/L (85795)	o-Xylene, water, unfiltered, recoverable, µg/L (77135)	Styrene, water, unfiltered, recoverable, µg/L (77128)	tert-Butyl ethyl ether, water, unfiltered, recoverable, µg/L (50004)	Tetra-chloro-ethene, water, unfiltered, recoverable, µg/L (34475)
									chloro-
09-22-2010 1600	<.06	<.036	<.10	<.06	<.08	<.032	<.030	<.032	<.026

421145088194801 Local number 17-ALG-S—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 9 of 9

[N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Sample date-time	Tetra- chloro- methane, unfiltered, recover- able, µg/L (32102)	trans-1,2- Dichloro- Toluene, unfiltered, recover- able, µg/L (34010)	ethene, unfiltered, recover- able, µg/L (34546)	Tribromo- methane, unfiltered, recover- able, µg/L (32104)	Trichloro- ethene, unfiltered, recover- able, µg/L (39180)	fluoro- methane, unfiltered, recover- able, µg/L (34488)	Trichloro- methane, unfiltered, recover- able, µg/L (32106)	Vinyl chloride, unfiltered, recover- able, µg/L (39175)	Uranium (natural), water, filtered, µg/L (22703)
09-22-2010 1600	< .05	< .018	< .018	< .10	< .022	< .08	E .014	< .06	1.35