



Water-Data Report 2008

353704079451202 Local number RA-162, NCDENR North Carolina Zoo Research Station MW-1UI near Asheboro, NC (Transition Zone)

Piedmont and Blue Ridge crystalline-rock aquifers
Transition Zone

Randolph County, NC

LOCATION.--Lat 35°37'04.53", long 79°45'11.94" referenced to North American Datum of 1983, Randolph County, NC, Hydrologic Unit 03030003, 6 mi southeast of Asheboro, on Panther Creek Road at the North Carolina Zoo. Owner: NCDENR (North Carolina Department of Environment and Natural Resources).

GROUND-WATER RECORDS

WELL CHARACTERISTICS.--Drilled observation well, depth 43 ft, diameter 4 in., cased to 28 ft, screened from 28 ft to 43 ft.

DATUM.--Land-surface datum is 599.25 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of steel casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 2007 to current year.

GAGE.--Measured periodically with electric tape by NCDENR and USGS.

REMARKS.--Well is part of Piedmont/Mountains ground-water study.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.19 ft below land-surface datum, April 15, 2007; lowest water level recorded, 8.89 ft below land-surface datum, September 20, 2007.

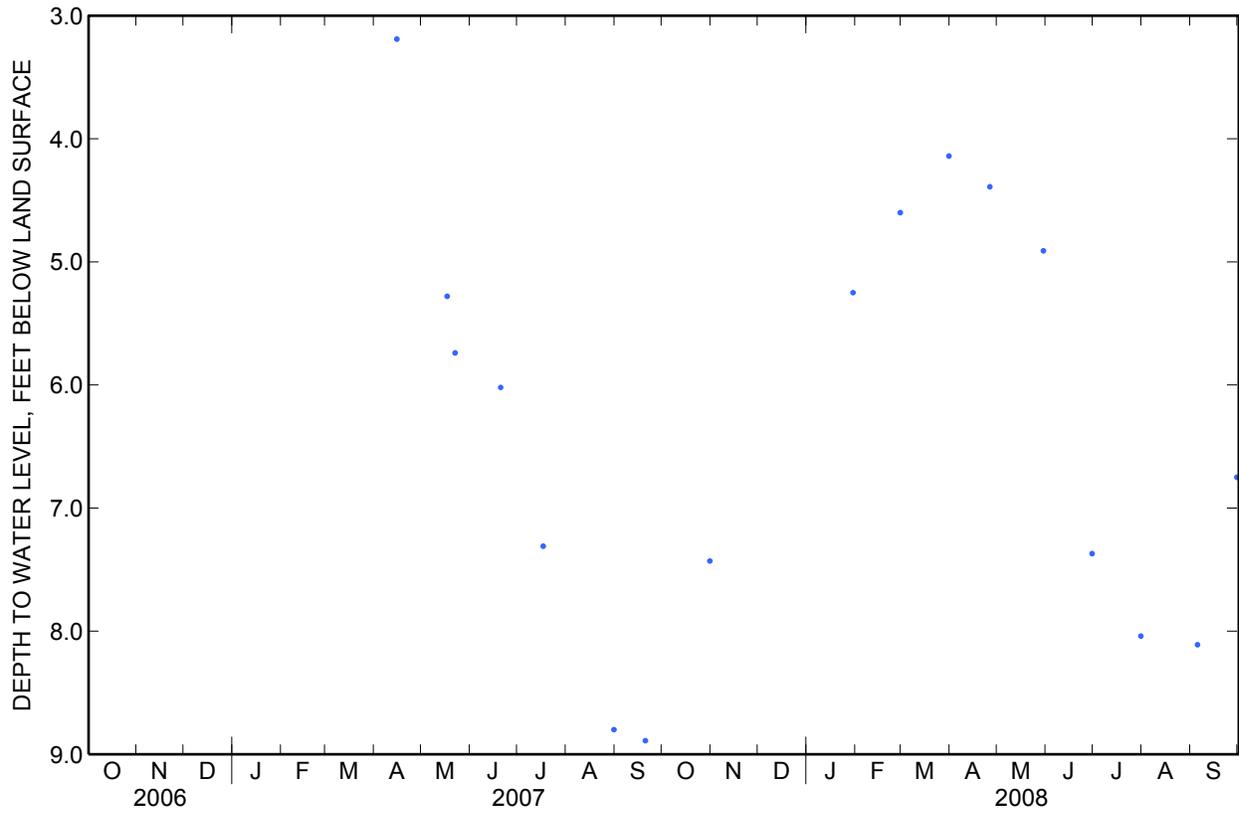
WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM

Date	Water level	Date	Water level
Oct 31, 2007	7.43	May 30, 2008	4.91
Jan 30, 2008	5.25	Jun 30	7.37
Feb 29	4.60	Jul 31	8.04
Mar 31	4.14	Sep 5	8.11
Apr 26	4.39	30	6.75

Highest: 4.14 Mar 31, 2008

Lowest: 8.11 Sep 05, 2008

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Continued



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Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 2008.

REMARKS.--Well is part of the Piedmont/Mountains ground-water study.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Time	Sample medium and type	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Water level, depth below MP, feet (61055)	Flow rate, instantaneous gal/min (00059)	Sampling depth, feet (00003)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)
Mar									
04...	1330	Ground water, regular	43.00	4.39	7.39	.50	38.0	748	2.9
04...	1445	QC - Artificial, blank	43.00	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd, μ S/cm 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, mg/L as CaCO ₃ (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, field, mg/L as CaCO ₃ (00419)	Bicarbonate, wat unfltrd, field, mg/L (00450)	Bromide, water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)
Mar													
04...	30	7.4	523	16.1	220	71.2	10.9	4.53	24.4	276	336	.16	3.79
04...	--	--	--	--	--	E.03	<.020	<.02	<.12	--	--	<.02	<.12

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 3 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO ₂ (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt, mg/L (70300)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrate + nitrite, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Total nitrogen, wat flt by analysis, mg/L (62854)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, μ g/L (01106)	Antimony, water, fltrd, μ g/L (01095)	Arsenic, water, fltrd, μ g/L (01000)	Barium, water, fltrd, μ g/L (01005)
Mar													
04...	E.10	28.0	2.02	318	E.011	<.04	<.002	<.06	.015	<1.6	<1.4	1.1	63
04...	<.12	<.02	<.18	<10	<.020	<.04	<.002	<.06	<.006	<1.6	<1.4	<.06	<.4

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Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Beryllium, water, fltrd, µg/L (01010)	Boron, water, fltrd, µg/L (01020)	Cadmium, water, fltrd, µg/L (01025)	Chromium, water, fltrd, µg/L (01030)	Cobalt, water, fltrd, µg/L (01035)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Manganese, water, fltrd, µg/L (01056)	Molybdenum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Selenium, water, fltrd, µg/L (01145)	Silver, water, fltrd, µg/L (01075)
Mar													
04...	E.01	4.9	<.04	<.12	.50	<1.0	<8	<.08	277	1.2	.39	E.04	<.1
04...	<.01	E.8	<.04	<.12	<.02	2.3	<8	.13	<.2	<.2	1.4	<.04	<.1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 5 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated.]

Date	Zinc, water, fltrd, µg/L (01090)	Uranium natural water, fltrd, µg/L (22703)	Data base number	Medium code
Mar				
04...	<1.8	.17	01	WG
04...	1.8	<.02	04	OAQ