



Water-Data Report 2008

353712079452703 Local number RA-170, NCDENR North Carolina Zoo Research Station MW-3D near Asheboro, NC (Bedrock)

Piedmont and Blue Ridge crystalline-rock aquifers
Mafic Metavolcanic Rock
Randolph County, NC

LOCATION.--Lat 35°37'11.78", long 79°45'27.34" referenced to North American Datum of 1983, Randolph County, NC, Hydrologic Unit 03030003, 6 mi southeast of Asheboro at the North Carolina Zoo. Owner: NCDENR (North Carolina Department of Environment and Natural Resources).

GROUND-WATER RECORDS

WELL CHARACTERISTICS.--Drilled observation well, depth 180 ft, diameter 6.25 in., cased to 74.9 ft, open hole from 74.9 ft to 180 ft.

DATUM.--Land-surface datum is 665.14 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of steel casing, 2.98 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, 27.43 ft below land-surface datum, May 17, 2007; lowest water level recorded, 35.57 ft below land-surface datum, September 30, 2008.

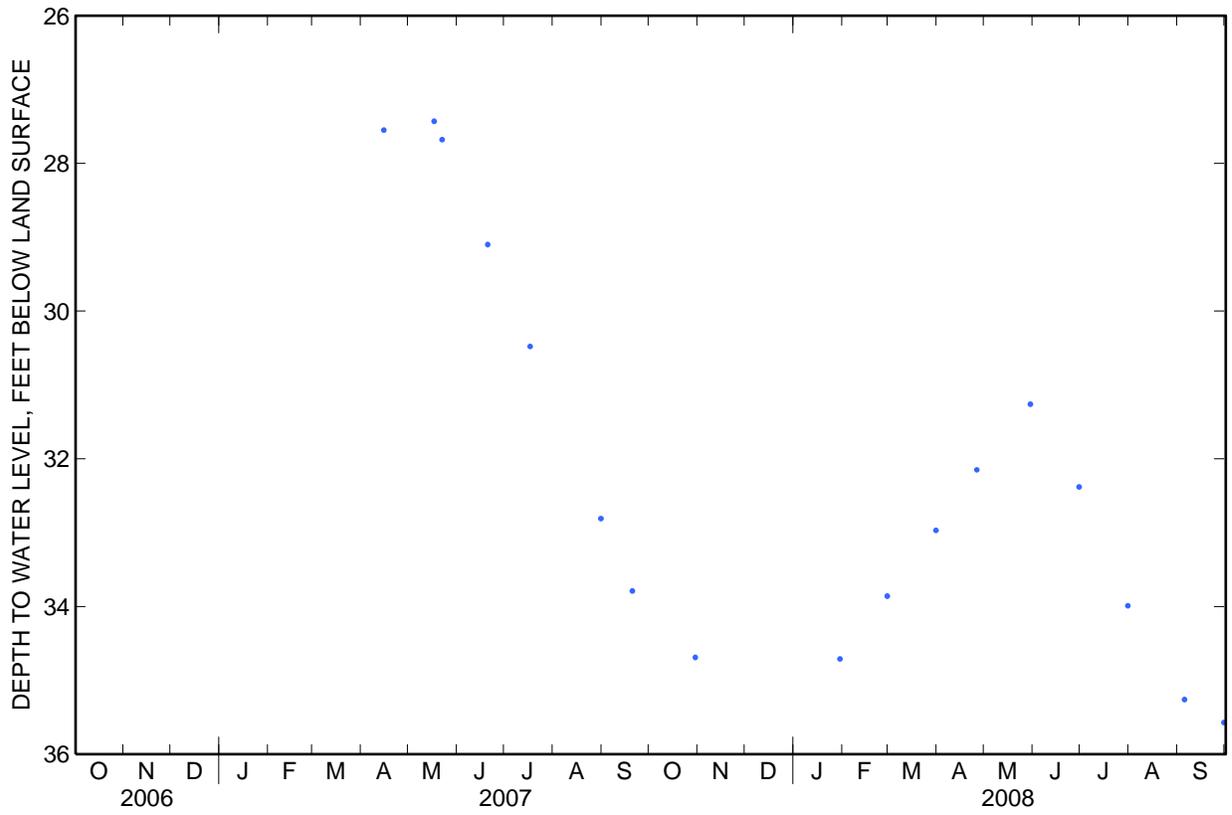
WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM

Date	Water level	Date	Water level
Oct 30, 2007	34.69	May 30, 2008	31.26
Jan 30, 2008	34.71	Jun 30	32.38
Feb 29	33.86	Jul 31	33.99
Mar 31	32.97	Sep 5	35.26
Apr 26	32.15	30	35.57

Highest: 31.26 May 30, 2008

Lowest: 35.57 Sep 30, 2008

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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; M, presence verified but not quantified.]

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 03...	1330	Ground water, regular	180.00	33.74	36.70	1.9	127	753	1.6
03...	1430	QC - Ground water, blank	180.00	--	--	--	--	--	--

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

Part 2 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, μS/cm 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, mg/L as CaCO3 (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 unfiltered, titr., mg/L as CaCO3 (00419)	Bicarbonate, wat unfiltered, titr., mg/L (00450)	Bromide, water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)
Mar 03...	17	6.9	172	18.1	57	14.8	4.95	5.11	16.0	90	109	E.01	2.96
03...	--	--	--	--	M	.12	E.014	.05	<.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; M, presence verified but not quantified.]

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, μg/L (01106)	Antimony, water, fltrd, μg/L (01095)	Arsenic, water, fltrd, μg/L (01000)	Barium, water, fltrd, μg/L (01005)
Mar 03...	.20	42.7	4.27	143	<.020	E.02	<.002	<.06	.021	<1.6	E.13	.23	6
03...	<.12	.03	<.18	<10	E.011	<.04	<.002	.21	<.006	E1.0	<.14	<.06	<.4

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 4 of 5

[QC, quality control sample. Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

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													
03...	.04	2.7	<.04	E.10	.10	<1.0	78	<.08	150	.4	.48	.11	<.1
03...	<.01	<1.2	<.04	<.12	<.02	E.54	<8	<.08	.5	<.2	.35	<.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; M, presence verified but not quantified.]

Date	Uranium		Data base number	Medium code
	Zinc, water, fltrd, µg/L (01090)	natural water, fltrd, µg/L (22703)		
Mar				
03...	645	.10	01	WG
03...	19.7	<.02	04	WGQ