



Water-Data Report 2007

**353704079451204 Local number RA-164, DENR North Carolina Zoo Research Station MW-1D (Bedrock well)**

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

LOCATION.--Lat 35°37'04.07", long 79°45'11.90" referenced to North American Datum of 1983, Randolph County, NC, Hydrologic Unit 03030003, 6 mi southeast of Asheboro at the North Carolina Zoo, on Panther Creek Road. Owner: NCDENR (North Carolina Department of Environment and Natural Resources).

**GROUND-WATER RECORDS**

WELL CHARACTERISTICS.--Drilled observation well, depth 300 ft, diameter 6.25 in., cased to 85 ft, open hole from 85 to 300 ft.

DATUM.--Land-surface datum is 598.12 ft above National Geodetic Vertical Datum of 1929 (levels by NCDENR). Measuring point: top of protective steel casing, 3.01 ft above land-surface datum.

PERIOD OF RECORD.--April 2007 to September 2007.

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, 1.45 ft below land-surface datum, April 15, 2007; lowest water level recorded, 6.48 ft below land-surface datum, September 20, 2007.

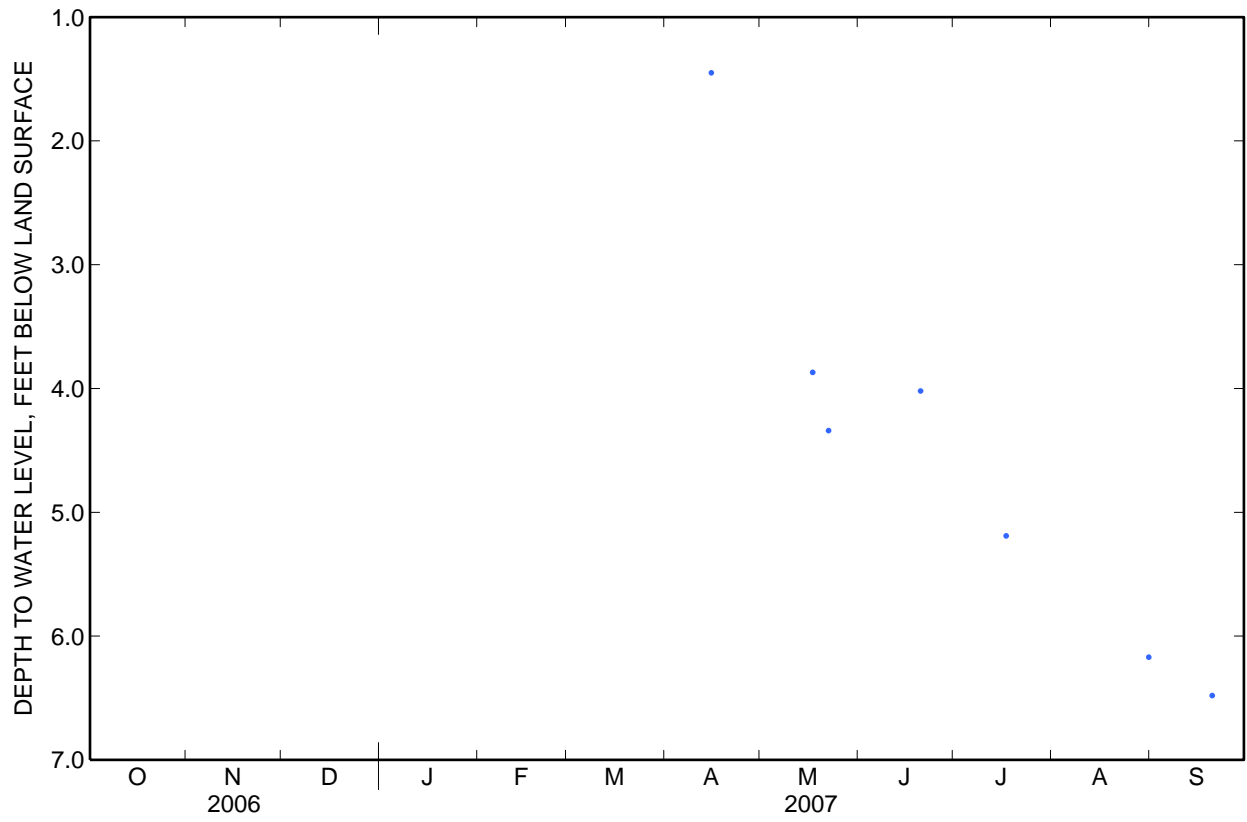
**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

Date	Water level	Date	Water level
Apr 15, 2007	1.45	Jul 17, 2007	5.19
May 17	3.87	Aug 31	6.17
22	4.34	Sep 20	6.48
Jun 20	4.02		

Highest: 1.45 Apr 15, 2007

Lowest: 6.48 Sep 20, 2007

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## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2007.

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

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Time	Depth of well, feet below LSD (72008)	Depth to top sample interval, feet below LSD (72015)	Water level, depth below MP, feet (61055)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd $\mu$ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
May 02...	1215	300	102.00	4.95	741	.5	5	7.8	239	17.3	42.9	7.20	3.68

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, incrm. titr., mg/L as CaCO3 (00419)	Bicarbonate, wat unfltrd, incrm. titr., mg/L (00450)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (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)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat flt by analysis, mg/L (62854)
May 02...	19.4	169	206	.15	4.20	.13	23.3	2.37	214	<.020	<.06	<.002	E.06

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, $\mu$ g/L (01106)	Antimony, water, fltrd, $\mu$ g/L (01095)	Arsenic water, fltrd, $\mu$ g/L (01000)	Barium, water, fltrd, $\mu$ g/L (01005)	Beryllium, water, fltrd, $\mu$ g/L (01010)	Boron, water, fltrd, $\mu$ g/L (01020)	Cadmium, water, fltrd, $\mu$ g/L (01025)	Chromium, water, fltrd, $\mu$ g/L (01030)	Cobalt, water, fltrd, $\mu$ g/L (01035)	Copper, water, fltrd, $\mu$ g/L (01040)	Iron, water, fltrd, $\mu$ g/L (01046)	Lead, water, fltrd, $\mu$ g/L (01049)
May 02...	.010	2.2	.16	1.1	23	<.06	8.6	E.02	<.12	.30	<.40	E6	<.12

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**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 4 of 4

[Remark codes: &lt;, less than; E, estimated.]

Date	Mangan- ese, water, fltrd, µg/L (01056)	Molyb- denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Selen- ium, water, fltrd, µg/L (01145)	Silver, water, fltrd, µg/L (01075)	Zinc, water, fltrd, µg/L (01090)	Uranium natural water, fltrd, µg/L (22703)
<b>May</b> 02...	371	3.9	.14	<.08	<.1	301	.08