



Water-Data Report 2007

**355429080492303 Local number IR-163, DENR Allison Woods Research Station MW-1D (Bedrock well)**

Piedmont and Blue Ridge crystalline-rock aquifers  
Mafic Gneiss  
Iredell County, NC

LOCATION.--Lat 35°54'29.70", long 80°49'23.16" referenced to North American Datum of 1983, Iredell County, NC, Hydrologic Unit 03040102, 1.7 mi east of U.S. Interstate 77, 0.4 mi north of U.S. Highway 21 on Allison Woods Foundation property. Owner: NCDENR (North Carolina Department of Environment and Natural Resources), Division of Water Quality.

**GROUND-WATER RECORDS**

WELL CHARACTERISTICS.--Drilled observation well, depth 400 ft, diameter 6.25 in., cased to 90 ft, open hole from 90 ft to 400 ft.

DATUM.--Land-surface datum is 900 ft above North American Vertical Datum of 1988. Measuring point: mark on PVC, 3.06 ft above land-surface datum, May 12, 2006, to present.

PERIOD OF RECORD.--May 2006 to current year.

GAGE.--Measured periodically with electric tape (by USGS and NCDENR, Division of Water Quality).

REMARKS.--Well is part of Piedmont/Mountains groundwater project.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.44 ft below land-surface datum, April 24, 2007; lowest water level measured, 68.24 ft below land-surface datum, September 27, 2007.

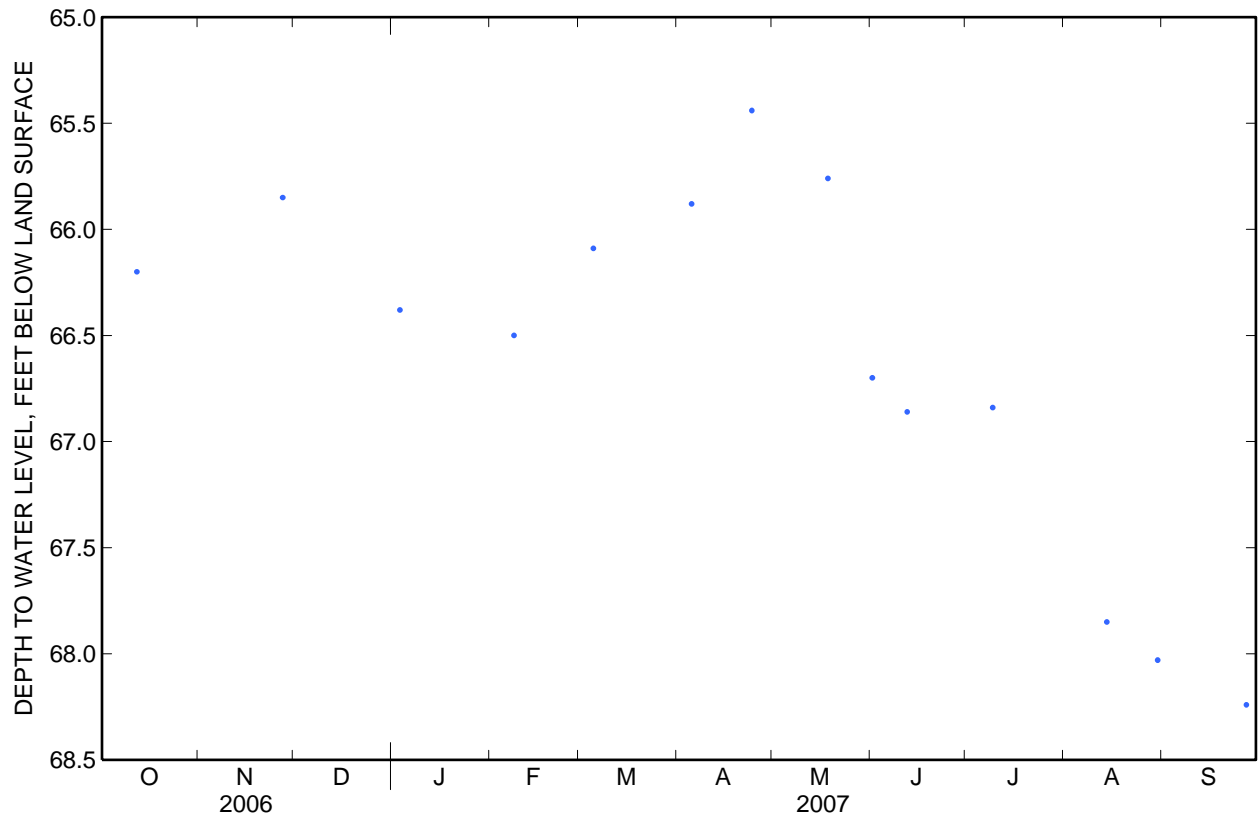
**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

Date	Water level	Date	Water level
Oct 12, 2006	66.20	May 18, 2007	65.76
Nov 27	65.85	Jun 1	66.70
Jan 3, 2007	66.38	12	66.86
Feb 8	66.50	Jul 9	66.84
Mar 5	66.09	Aug 14	67.85
Apr 5	65.88	30	68.03
24	65.44	Sep 27	68.24

Highest: 65.44 Apr 24, 2007

Lowest: 68.24 Sep 27, 2007

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## 355429080492303 Local number IR-163, DENR Allison Woods Research Station MW-1D (Bedrock well)—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 2007.

REMARKS.--Well is part of Piedmont/Mountains groundwater project.

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

Part 1 of 4

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	Time	Sample type	Depth of well, feet below LSD (72008)	Depth to top sample interval, feet below LSD (72015)	Depth to water level, feet below LSD (72019)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Temperature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)
<b>Nov</b>												
28...	1000	Blank	400	--	--	--	--	--	.04	.017	<.04	<.20
28...	1210	Environmental	400	209.00	65.77	.2	2	16.8	--	--	--	--
<b>Jul</b>												
09...	1345	Environmental	400	209.00	66.84	--	--	17.5	--	--	--	--

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

Part 2 of 4

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, µg/L (01106)	Antimony, water, fltrd, µg/L (01095)
<b>Nov</b>													
28...	<.02	E.12	<.10	.02	<.18	<.10	<.020	<.06	<.002	<.06	<.006	<.16	<.06
28...	--	--	--	--	--	--	<.020	<.06	<.002	<.06	.009	--	--
<b>Jul</b>													
09...	--	--	--	--	--	--	<.020	<.06	<.002	<.06	.011	--	--

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

Part 3 of 4

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	Arsenic water, fltrd, µg/L (01000)	Barium, water, fltrd, µg/L (01005)	Beryll- ium, water, fltrd, µg/L (01010)	Boron, water, fltrd, µg/L (01020)	Cadmium water, fltrd, µg/L (01025)	Chrom- ium, 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)	Mangan- ese, water, fltrd, µg/L (01056)	Molyb- denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)
Nov 28...	<.12	M	<.06	<1.8	<.04	.20	<.04	E.32	E4	<.12	E.1	E.1	.25
28...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jul 09...	--	--	--	--	--	--	--	--	--	--	--	--	--

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

Part 4 of 4

[Remark codes: &lt;, less than; E, estimated; M, presence verified but not quantified.]

Date	Selen- ium, water, fltrd, µg/L (01145)	Silver, water, fltrd, µg/L (01075)	Zinc, water, fltrd, µg/L (01090)	Rn-222 2-sigma water, unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, µg/L (22703)	Data base number
Nov 28...	<.08	<.1	.88	--	--	<.04	04
28...	--	--	--	--	--	1.40	01
Jul 09...	--	--	--	36	1,430	1.05	01