



Water-Data Report 2007

355422080493103 Local number IR-171, DENR Allison Woods Research Station MW-3D (Bedrock well)

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

LOCATION.--Lat 35°54'22.97", long 80°49'31.27" 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 372 ft, diameter 6.25 in., cased to 45 ft, open hole from 45 ft to 372 ft.

DATUM.--Land-surface datum is 840 ft above North American Vertical Datum of 1988. Measuring point: mark on PVC, 3.48 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, 2.32 ft below land-surface datum, April 5, 2007; lowest water level measured, 8.59 ft below land-surface datum, June 1, 2007.

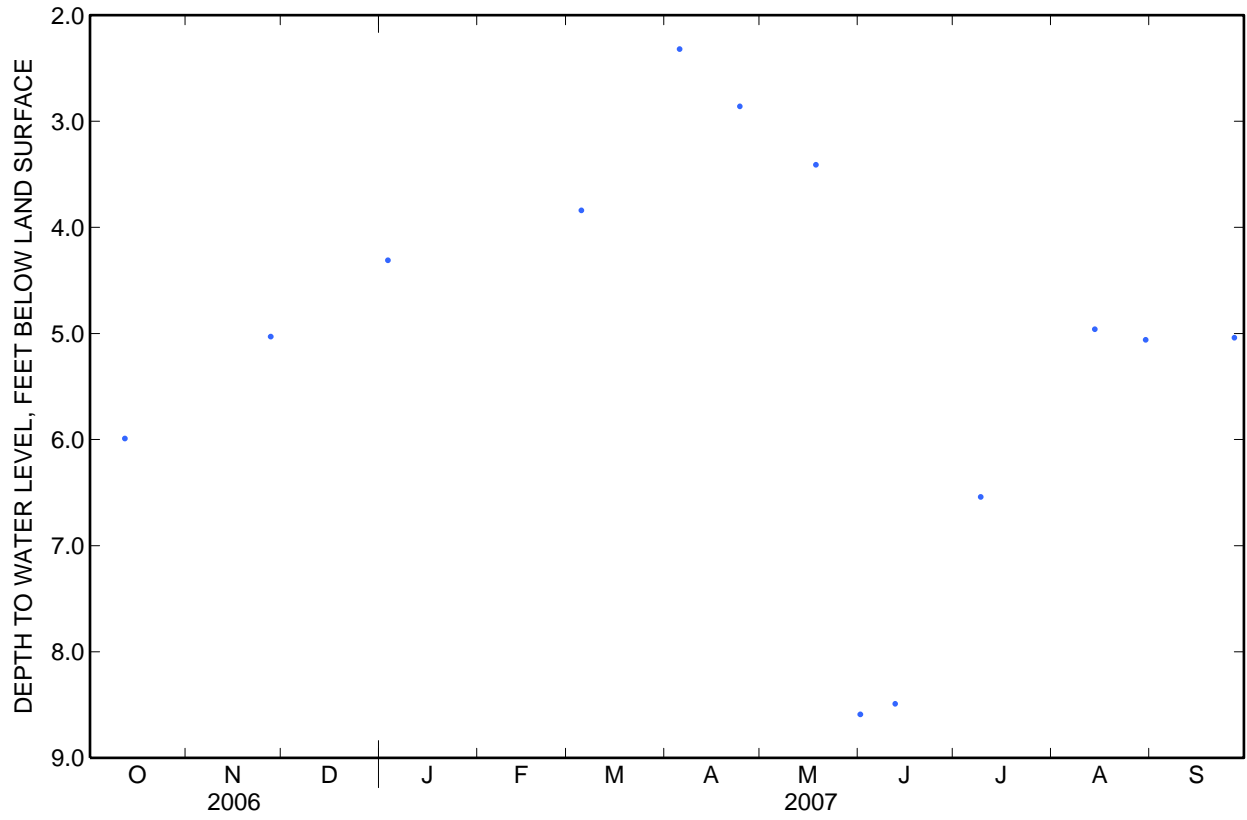
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

Date	Water level	Date	Water level
Oct 12, 2006	5.99	Jun 1, 2007	8.59
Nov 27	5.03	12	8.49
Jan 3, 2007	4.31	Jul 9	6.54
Mar 5	3.84	Aug 14	4.96
Apr 5	2.32	30	5.06
24	2.86	Sep 27	5.04
May 18	3.41		

Highest: 2.32 Apr 05, 2007

Lowest: 8.59 Jun 01, 2007

355422080493103 Local number IR-171, DENR Allison Woods Research Station MW-3D (Bedrock well)—Continued



355422080493103 Local number IR-171, DENR Allison Woods Research Station MW-3D (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: <, less than; 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)	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)	Bromide water, fltrd, mg/L (71870)
Nov 29...	1045	Environmental	372.00	87.50	5.15	.5	15.3	--	--	--	--	--
Jul 10...	1145	Environmental	372.00	87.50	6.54	.4	18.5	--	--	--	--	--
Jul 10...	1330	Blank	372.00	--	--	--	--	.02	<.014	<.04	<.20	<.02

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

[Remark codes: <, less than; M, presence verified but not quantified.]

Date	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)	Arsenic water, fltrd, µg/L (01000)
Nov 29...	--	--	--	--	--	<.020	<.06	<.002	<.06	.006	--	--	--
Jul 10...	--	--	--	--	--	<.020	<.06	<.002	<.06	.009	--	--	--
Jul 10...	<.12	<.10	<.02	<.18	<.10	<.020	<.06	<.002	.07	<.006	<1.6	<.06	<.12

355422080493103 Local number IR-171, DENR Allison Woods Research Station MW-3D (Bedrock well)—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

[Remark codes: <, less than; M, presence verified but not quantified.]

Date	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)	Selen- ium, water, fltrd, µg/L (01145)
Nov 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jul 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	M	<.06	<1.8	<.04	<.12	<.04	2.8	<6	.22	<.2	<.1	.16	<.08

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

[Remark codes: <, less than; M, presence verified but not quantified.]

Date	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 29...	--	--	--	--	.15	01
Jul 10...	--	--	30	950	.08	01
10...	<.1	5.1	--	--	<.04	04