



Water-Data Report 2007

355428080493003 Local number IR-167, DENR Allison Woods Research Station MW-2D (Bedrock well)

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

LOCATION.--Lat 35°54'28.29", long 80°49'30.19" 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.--Depth 400 ft. Upper casing diameter 6.25 in, top of first opening 87 ft, bottom of last opening 400 ft. Drilled observation well, depth 400 ft, diameter 6 in., cased to 87 ft, open hole from 87 ft to 400 ft.

DATUM.--Land-surface datum is 870 ft above North American Vertical Datum of 1988. Measuring point: DIVOT ON OUTER STEEL PROTECTIVE CASING, 2.62 ft above land-surface datum, May 12, 2006, to present. Drilled observation well, depth 400 ft, diameter 6 in., cased to 87 ft, open hole from 87 ft to 400 ft.

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, 37.21 ft below land-surface datum, April 24, 2007; lowest water level measured, 40.14 ft below land-surface datum, September 27, 2007.

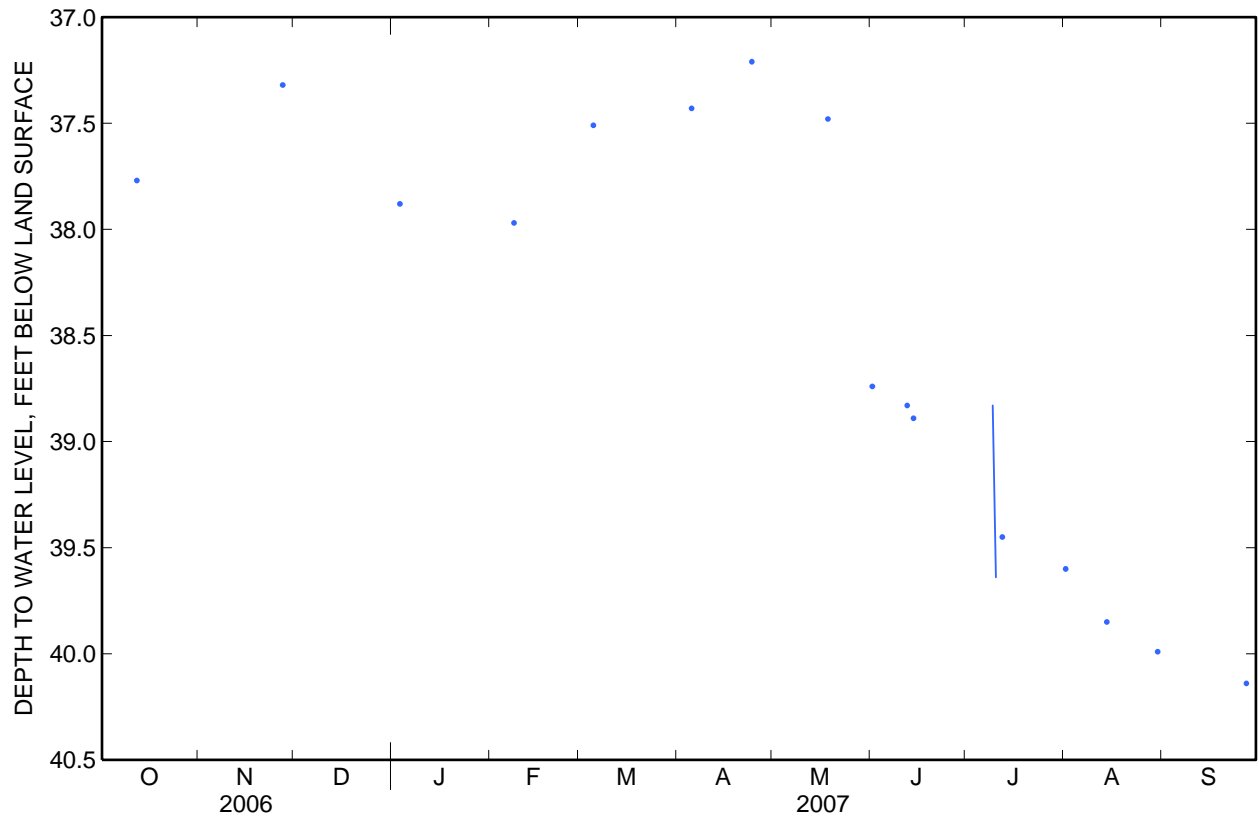
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

Date	Water level	Date	Water level
Oct 12, 2006	37.77	Jun 12, 2007	38.83
Nov 27	37.32	14	38.89
Jan 3, 2007	37.88	Jul 9	38.83
Feb 8	37.97	10	39.64
Mar 5	37.51	12	39.45
Apr 5	37.43	Aug 1	39.60
24	37.21	14	39.85
May 18	37.48	30	39.99
Jun 1	38.74	Sep 27	40.14

Highest: 37.21 Apr 24, 2007

Lowest: 40.14 Sep 27, 2007

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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; E, estimated.]

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)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd, μ S/cm 25 degC (00095)	Temperature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
Nov												
28...	1300	Environmental	400	194.00	38.57	.7	7.6	144	16.7	17.3	4.07	4.86
28...	1301	Replicate	400	--	--	.7	7.6	144	16.7	17.7	4.15	5.02
28...	1515	Blank	400	--	--	--	--	--	--	<.02	<.014	<.04
Jul												
09...	1500	Environmental	400	194.00	42.73	2.2	7.2	125	15.4	14.2	3.57	4.51

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

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

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, field, mg/L as CaCO3 (00419)	Bicarbonate, wat unfltrd, field, 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)
Nov													
28...	4.43	65	--	E.01	1.15	E.06	26.1	7.50	95	<.020	<.06	<.002	<.06
28...	4.53	--	--	E.01	1.14	<.10	26.6	7.54	96	<.020	<.06	<.002	<.06
28...	<.20	--	--	<.02	<.12	<.10	<.02	<.18	<10	<.020	<.06	<.002	<.06
Jul													
09...	4.09	57	70	E.01	1.12	E.07	25.6	7.45	97	<.020	<.06	<.002	<.06

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

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

Date	Ortho-phosphate, 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)	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)
Nov													
28...	.007	3.0	<.06	E.11	83	<.06	2.5	<.04	.17	.15	<.40	27	.31
28...	.007	2.9	<.06	.12	84	<.06	2.6	<.04	.17	.15	<.40	28	<.12
28...	<.006	<1.6	<.06	<.12	<.08	<.06	<1.8	<.04	<.12	<.04	<.40	<6	<.12
Jul													
09...	.008	3.0	E.03	E.09	83	<.06	3.5	<.04	.27	.54	E.29	14	.36

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

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

Date	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)	Zinc, water, fltrd, µg/L (01090)	Rn-222, 2-sigma, unfltrd, pCi/L (76002)	Rn-222, unfltrd, pCi/L (82303)	Uranium, natural, fltrd, µg/L (22703)	Data base number
Nov										
28...	10.1	.6	2.0	.27	<.1	66.3	--	--	1.75	01
28...	9.8	.7	1.9	.27	<.1	66.4	--	--	1.77	04
28...	<.2	<.1	<.06	<.08	<.1	<.60	--	--	<.04	04
Jul										
09...	9.5	.5	4.5	.28	<.1	48.8	49	2,880	1.88	01