



Water-Data Report 2007

355428080493001 Local number IR-165, DENR Allison Woods Research Station MW-2S (Regolith well)

Piedmont and Blue Ridge crystalline-rock aquifers

Regolith

Iredell County, NC

LOCATION.--Lat 35°54'28.09", 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.--Drilled observation well, depth 38 ft, diameter 4 in., cased to 23 ft, screened interval from 23 ft to 38 ft, sand filter packed from 20 ft to 38 ft.

DATUM.--Land-surface datum is 870 ft above North American Vertical Datum of 1988. Measuring point: Top of protective steel casing, 2.78 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, 24.29 ft below land-surface datum, June 1, 2007; lowest water level measured, 27.21 ft below land-surface datum, November 27, 2006.

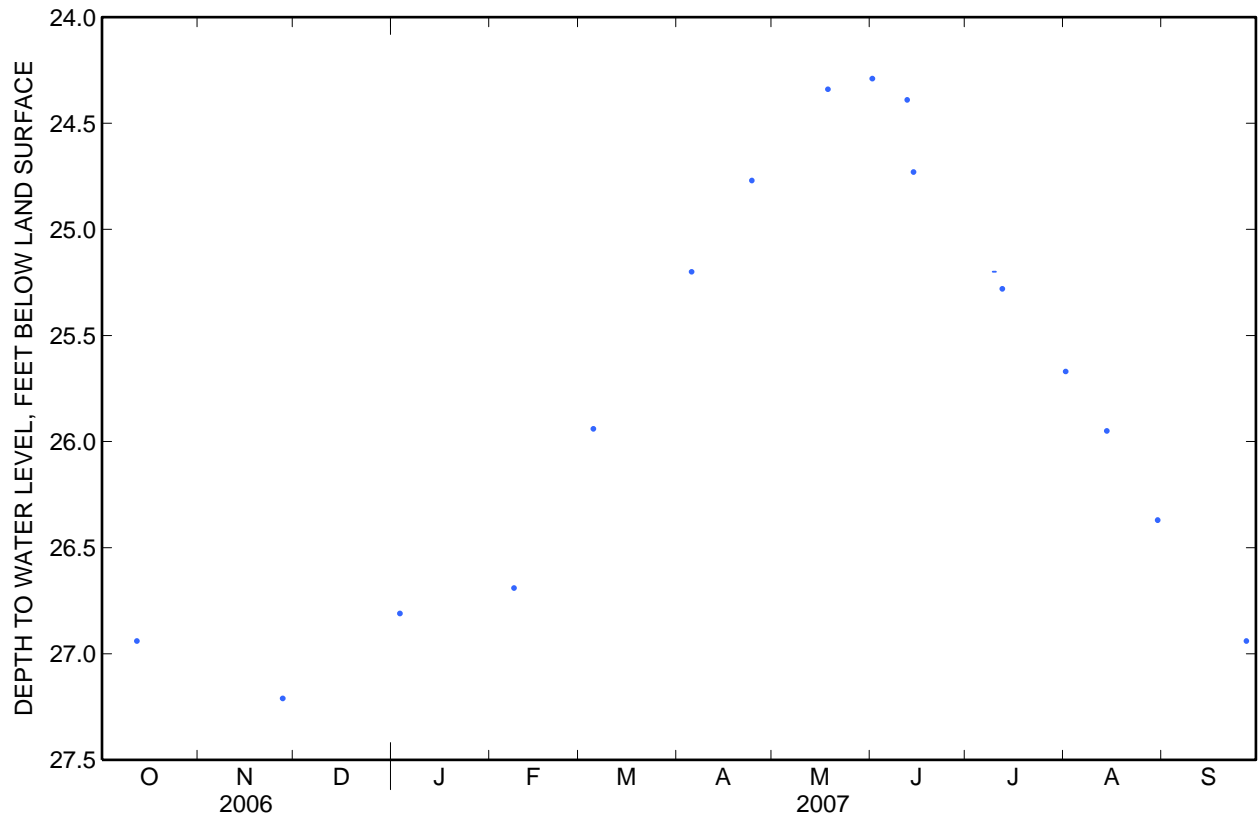
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

Date	Water level	Date	Water level
Oct 12, 2006	26.94	Jun 12, 2007	24.39
Nov 27	27.21	14	24.73
Jan 3, 2007	26.81	Jul 9	25.2
Feb 8	26.69	10	25.20
Mar 5	25.94	12	25.28
Apr 5	25.20	Aug 1	25.67
24	24.77	14	25.95
May 18	24.34	30	26.37
Jun 1	24.29	Sep 27	26.94

Highest: 24.29 Jun 01, 2007

Lowest: 27.21 Nov 27, 2006

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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	Depth of well, feet below LSD (72008)	Depth to top sample interval, feet below LSD (72015)	Depth to water level, feet below LSD (72019)	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, μ 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)
Nov 28...	1435	38.00	36.00	27.21	--	6.0	--	5.3	27	14.8	.44	.598	1.12
Jul 10...	1000	38.00	36.00	25.20	746	9.4	95	5.2	15	14.8	.42	.609	1.18

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, incrm. field, mg/L as CaCO3 (00419)	Bicarbonate, wat unfltrd, incrm. 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...	1.09	5	--	E.01	1.06	<.10	7.60	.24	12	<.020	<.06	<.002	<.06
Jul 10...	.59	4	4	E.01	1.23	<.10	7.58	.18	11	<.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...	<.006	7.5	<.06	<.12	33	.10	2.2	E.02	E.10	.66	<.40	<6	<.12
Jul 10...	E.004	6.5	<.06	<.12	33	.12	E1.5	E.02	E.11	.26	E.34	<6	.40

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, water, unfltrd, pCi/L (76002)	Rn-222, water, unfltrd, pCi/L (82303)	Uranium, natural, water, fltrd, µg/L (22703)
Nov 28...	19.8	<.1	.47	<.08	<.1	7.2	--	--	<.04
Jul 10...	11.0	<.1	.44	<.08	<.1	8.5	38	1,530	<.04