



Water-Data Report 2007

**355429080492302 Local number IR-162, DENR Allison Woods Research Station MW-11 (Transition Zone)**

Piedmont and Blue Ridge crystalline-rock aquifers  
Transition Zone  
Iredell County, NC

LOCATION.--Lat 35°54'29.90", 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 70 ft, diameter 4 in., cased to 55 ft, screened interval from 55 ft to 70 ft, sand filter packed from 46 ft to 70 ft.

DATUM.--Land-surface datum is 900 ft above North American Vertical Datum of 1988. Measuring point: top of PVC casing, 2.75 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, 41.58 ft below land-surface datum, May 12, 2006; lowest water level measured, 44.03 ft below land-surface datum, March 5, 2007.

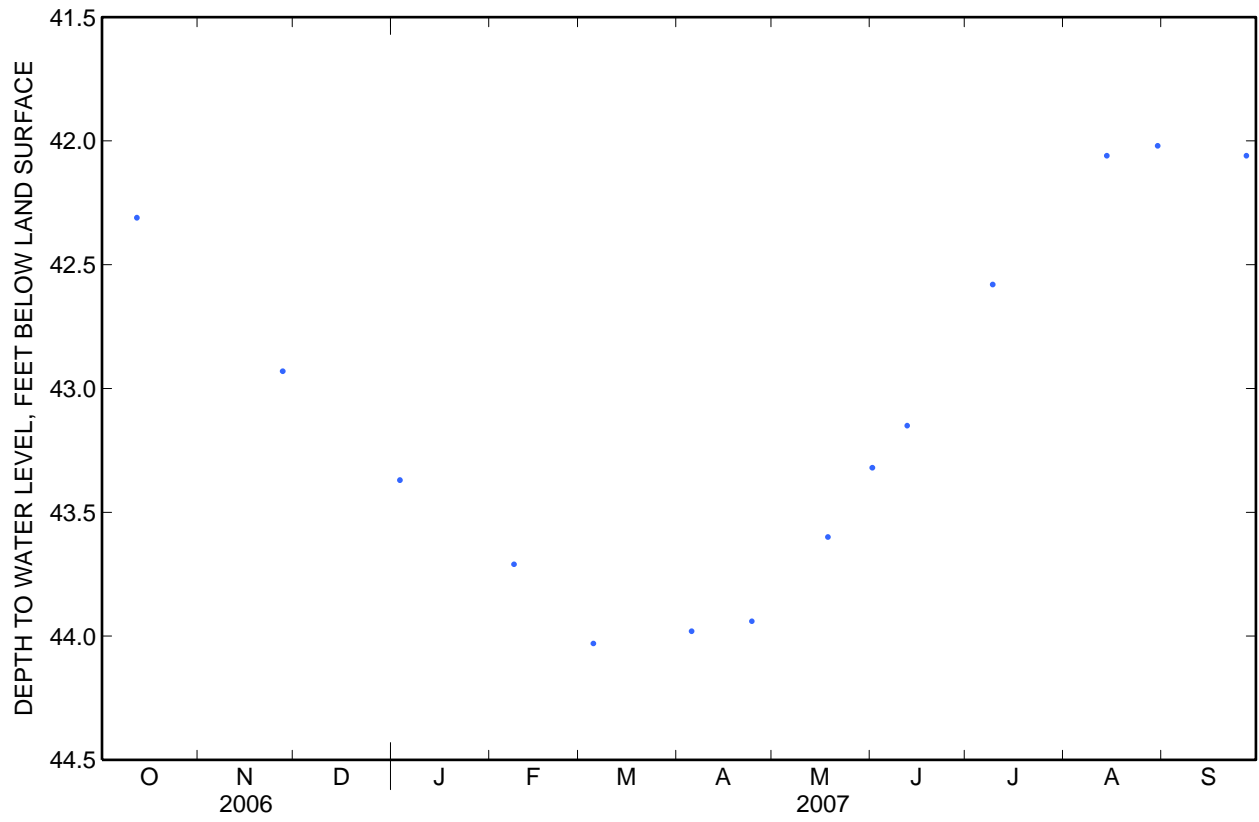
**WATER LEVELS IN FEET BELOW LAND SURFACE DATUM**

<b>Date</b>	<b>Water level</b>	<b>Date</b>	<b>Water level</b>
Oct 12, 2006	42.31	May 18, 2007	43.60
Nov 27	42.93	Jun 1	43.32
Jan 3, 2007	43.37	12	43.15
Feb 8	43.71	Jul 9	42.58
Mar 5	44.03	Aug 14	42.06
Apr 5	43.98	30	42.02
24	43.94	Sep 27	42.06

Highest: 42.02 Aug 30, 2007

Lowest: 44.03 Mar 05, 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: &lt;, 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)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd $\mu$ 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)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd, titr., field, mg/L as CaCO <sub>3</sub> (00419)
Nov 28...	1305	70	65.00	42.45	4.7	6.0	102	15.3	6.87	2.69	3.97	8.67	40
Jul 09...	1430	70	65.00	42.58	--	6.3	86	16.1	6.43	2.57	2.95	6.32	33

WATER-QUALITY DATA  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

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

Date	Bicarbonate, wat unfltrd, titr., 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 fltrd 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 fltrd by analysis, mg/L (62854)	Orthophosphate, water, fltrd, mg/L as P (00671)	Aluminum, water, fltrd, $\mu$ g/L (01106)
Nov 28...	49	E.01	2.82	<.10	15.2	7.85	67	<.020	.22	.003	.25	.008	46.0
Jul 09...	40	E.01	2.41	E.06	15.5	5.87	63	<.020	.17	<.002	.17	.009	3.4

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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.]

Date	Anti- mony, water, fltrd, µg/L (01095)	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)
<b>Nov</b> <b>28...</b>	<.06	<.12	85	<.06	3.8	.04	.34	3.1	E.36	E3	.26	177	.5
<b>Jul</b> <b>09...</b>	<.06	<.12	63	<.06	2.5	E.03	.38	1.3	E.39	<6	<.12	88.1	.4

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

Part 4 of 4

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

Date	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)	Rn-222 2-sigma water, unfltrd pCi/L (76002)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, µg/L (22703)
<b>Nov</b> <b>28...</b>	4.5	.32	<.1	10.4	--	--	E.02
<b>Jul</b> <b>09...</b>	3.0	.22	<.1	5.1	24	470	<.04