



Water-Data Report 2009

**355428080493002 Local number IR-166, NCDENR ALLISON WOODS RESEARCH STATION MW-2I NEAR
TURNERSBURG, NC (TRANSITION ZONE)**

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

LOCATION.--Lat 35°54'28.19", 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.

GROUNDWATER RECORDS

WELL CHARACTERISTICS.--Drilled observation well, depth 73 ft, diameter 4 in., cased to 60 ft, screened interval from 60 ft to 70 ft, sand filter packed from 45 ft to 50 ft, natural fill from 50 to 73 ft.

DATUM.--Land-surface datum is 870 ft above sea level. Measuring point: Top of instrument shelter floor, 2.76 ft above land-surface datum, June 14, 2007 to present.

PERIOD OF RECORD.--May 2006 to September 2009 (discontinued). Continuous record January 2008 to September 2008.

GAGE.--Measured periodically with electric tape (by USGS and NCDENR, Division of Water Quality). Water-level recorder collecting data at 60-minute intervals. Satellite telemetry at station.

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

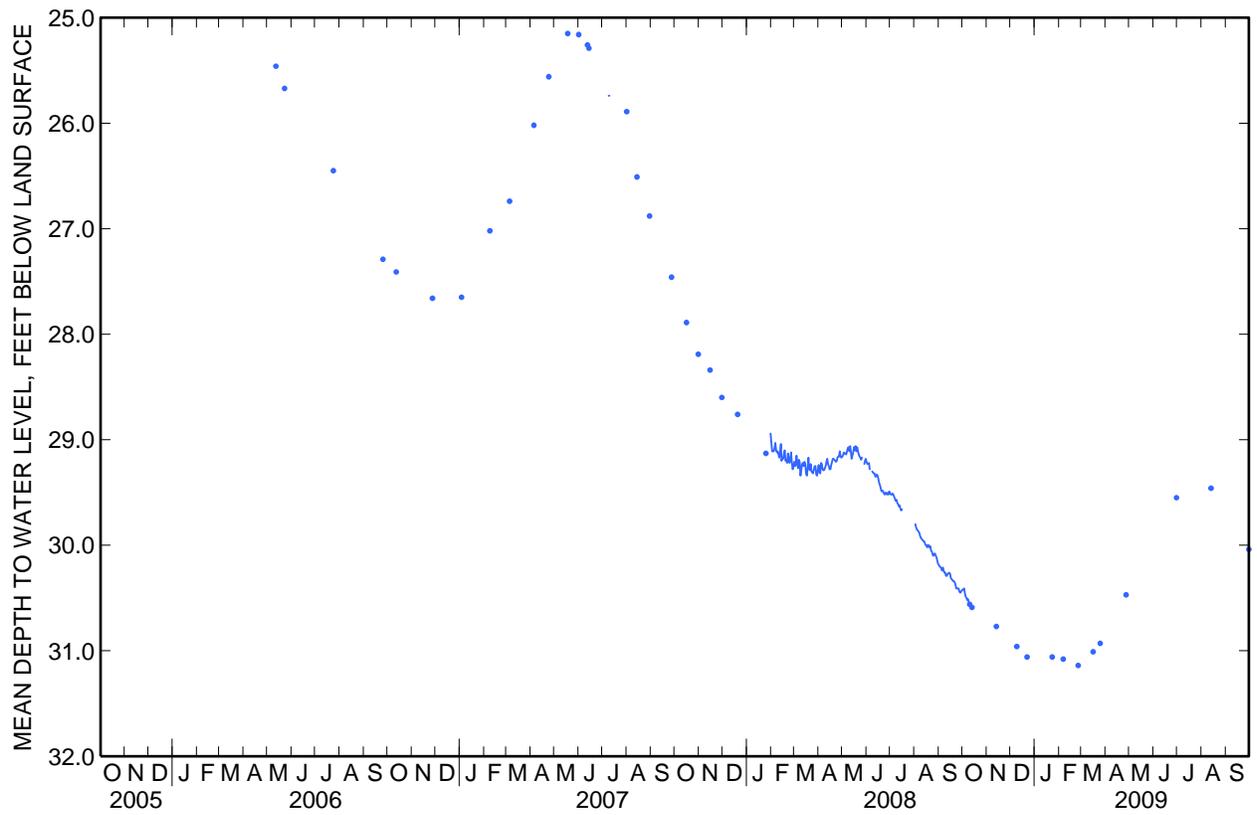
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.15 ft below land-surface datum, May 18, 2007; lowest water level measured, 31.14 ft below land-surface datum, February 12, 2009.

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**DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	30.42	30.75	30.96	30.90	30.93	32.39	---	---	---	---	---	---
2	30.42	30.76	30.97	30.89	30.91	32.50	---	---	---	---	---	---
3	30.41	30.77	30.96	30.93	30.92	32.52	---	---	---	---	---	---
4	30.46	30.76	30.94	30.94	30.95	32.54	---	---	---	---	---	---
5	30.49	30.76	30.94	30.93	30.92	32.59	---	---	---	---	---	---
6	30.50	30.78	30.91	30.92	30.90	32.60	---	---	---	---	---	---
7	30.52	30.79	30.90	30.87	30.91	32.65	---	---	---	---	---	---
8	30.51	30.79	30.92	30.95	30.95	32.69	---	---	---	---	---	---
9	30.54	30.82	30.91	30.98	31.06	32.73	---	---	---	---	---	---
10	30.57	30.83	30.88	30.92	31.11	32.75	---	---	---	---	---	---
11	---	30.84	30.86	30.91	31.18	32.78	---	---	---	---	---	---
12	---	30.85	30.93	30.95	31.24	32.79	---	---	---	---	---	---
13	---	30.83	30.95	30.91	31.32	32.78	---	---	---	---	---	---
14	30.63	30.85	30.95	30.89	31.48	32.73	---	---	---	---	---	---
15	---	30.85	30.94	30.88	31.61	32.72	---	---	---	---	---	---
16	---	30.90	30.94	30.89	31.93	---	---	---	---	---	---	---
17	30.61	30.91	30.95	30.85	32.03	---	---	---	---	---	---	---
18	30.60	30.93	30.96	30.80	32.03	32.75	---	---	---	---	---	---
19	30.66	30.92	30.91	30.81	32.13	32.80	---	---	---	---	---	---
20	30.69	30.90	30.92	30.87	32.17	32.79	---	---	---	---	---	---
21	30.68	30.94	30.93	30.89	32.11	32.85	---	---	---	---	---	---
22	30.71	30.97	30.96	30.89	32.10	32.80	---	---	---	---	---	---
23	30.71	30.95	30.92	30.89	32.20	32.83	---	---	---	---	---	---
24	30.68	30.93	30.86	30.91	31.81	32.89	---	---	---	---	---	---
25	30.67	30.96	30.87	30.88	31.64	---	---	---	---	---	---	---
26	30.71	30.98	30.90	30.91	31.80	---	---	---	---	---	---	---
27	30.73	30.94	30.88	30.91	32.10	---	---	---	---	---	---	---
28	30.76	30.90	30.85	30.87	32.34	---	---	---	---	---	---	---
29	30.75	30.93	30.89	30.90	---	---	---	---	---	---	---	---
30	30.77	30.90	30.88	30.92	---	---	---	---	---	---	---	---
31	30.79	---	30.89	30.94	---	---	---	---	---	---	---	---
Mean	---	30.87	30.92	30.90	31.53	---	---	---	---	---	---	---
Max	---	30.98	30.97	30.98	32.34	---	---	---	---	---	---	---
Min	---	30.75	30.85	30.80	30.90	---	---	---	---	---	---	---

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 2008 to March 2009 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2008 to September 2008.

pH: January 2008 to September 2008.

WATER TEMPERATURE: January 2008 to March 2009.

DISSOLVED OXYGEN: January 2008 to September 2008.

DISSOLVED OXYGEN, PERCENT SATURATION: January 2008 to September 2008.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

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

COOPERATION.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Resources.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 88 microsiemens, March 4, 5, May 11, 12, 2008; minimum recorded, 52 microsiemens, September 28, 29, 30, 2008.

pH: Maximum recorded, 6.3 standard units, on many days during the period; minimum recorded, 5.8 standard units, September 26, 27, 28, 29, 30, 2008.

WATER TEMPERATURE: Maximum recorded, 14.4°C, on many days during the period; minimum recorded, 14.3°C, on many days during the period.

DISSOLVED OXYGEN: Maximum recorded, 1.2 mg/L, January 31, February 1, 2008; minimum recorded, 0.0 mg/L, on many days during the period.

DISSOLVED OXYGEN, PERCENT SATURATION: Maximum recorded, 12%, January 31, February 1, 2008; minimum recorded, 0%, on many days during the period.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum recorded, 14.4°C on several days; minimum recorded, 14.3°C on many days.

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
2	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
4	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
5	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
6	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
7	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
8	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
9	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
10	---	---	---	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
11	---	---	---	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
12	---	---	---	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
13	---	---	---	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
14	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
15	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
16	---	---	---	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
17	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
18	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
19	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
20	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
21	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
22	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	14.3	14.3	14.3
23	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
24	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
25	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
26	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
27	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
28	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
29	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
30	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
31	14.3	14.3	14.3	---	---	---	14.3	14.3	14.3	14.3	14.3	14.3
Month	---	---	---	14.3	14.3	14.3	---	---	---	14.3	14.3	14.3

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
2	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
3	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
4	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
5	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
6	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
7	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
8	14.3	14.3	14.3	14.3	14.3	14.3	---	---	---	---	---	---
9	14.3	14.3	14.3	14.4	14.3	14.3	---	---	---	---	---	---
10	14.3	14.3	14.3	14.4	14.3	14.3	---	---	---	---	---	---
11	14.3	14.3	14.3	14.4	14.3	14.3	---	---	---	---	---	---
12	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
13	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
14	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
15	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
16	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---
17	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---
18	14.3	14.3	14.3	14.4	14.4	14.4	---	---	---	---	---	---
19	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
20	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
21	14.3	14.3	14.3	14.4	14.4	14.4	---	---	---	---	---	---
22	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
23	14.3	14.3	14.3	14.4	14.3	14.4	---	---	---	---	---	---
24	14.3	14.3	14.3	14.4	14.4	14.4	---	---	---	---	---	---
25	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---
26	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---
27	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---
28	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	14.3	14.3	14.3	---	---	---	---	---	---	---	---	---

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TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---