

Water-Data Report 2011

355932079115301 Local number OR-689 CAN-1

Piedmont and Blue Ridge crystalline-rock aquifers
Transition Zone

Orange County, NC

LOCATION.--Lat 35°59'31.79", long 79°11'53.11" referenced to North American Datum of 1983, Orange County, NC, Hydrologic Unit 03030002, near Oaks, NC. Owner: NCDENR (North Carolina Department of Environment and Natural Resources).

GROUNDWATER RECORDS

WELL CHARACTERISTICS.--Depth 41 ft. Upper casing diameter 4 in; top of first opening 26 ft, bottom of last opening 41 ft.

DATUM.--Land-surface datum is 555 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of casing, 3.05 ft above land-surface datum.

PERIOD OF RECORD.--May to September 2011.

REMARKS.--Measured quarterly by U. S. Geological Survey and/or NCDENR personnel.

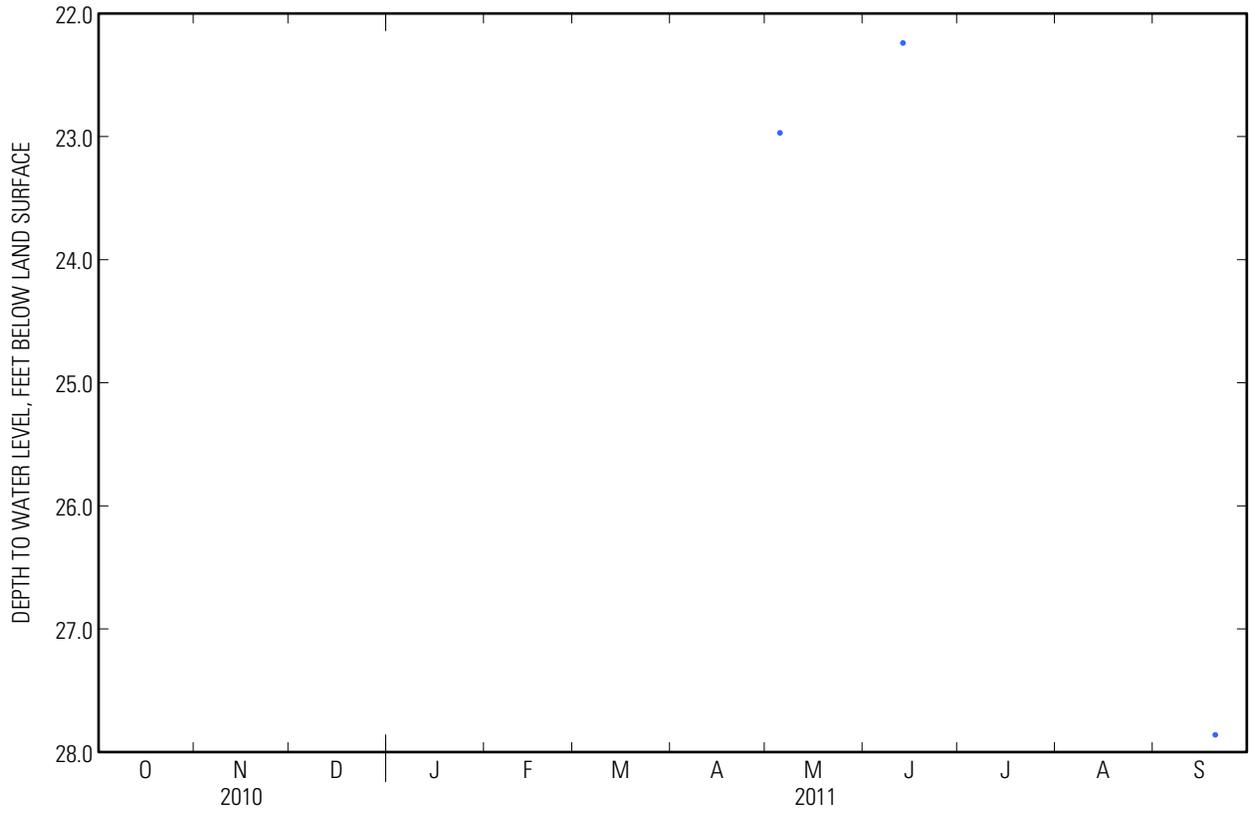
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.24 ft below land-surface datum, June 13, 2011; lowest water level measured, 27.86 ft below land-surface datum, September 20, 2011.

WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM

[Measurement method: T, electric tape; V, calibrated electric tape--accuracy of instrument has been checked.
Water-level status: - - , static.]

| Date | Water level | Measure-ment method | Water-level status | Date | Water level | Measure-ment method | Water-level status |
|-------------|-------------|---------------------|--------------------|--------------|-------------|---------------------|--------------------|
| May 5, 2011 | 22.97 | T | -- | Sep 20, 2011 | 27.86 | V | -- |
| Jun 13 | 22.24 | V | -- | | | | |

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--June to September 2011.

REMARKS.--Station operated to evaluate effects of land-applied municipal biosolids on water quality.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 1 of 3

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date | Sample start time | Medium name | Sample type | Depth to water level, ft below land surface (72019) | Dissolved oxygen, unfiltered, mg/L (00300) | pH, water, unfiltered, field, standard units (00400) | Specific conductance, water, unfiltered, µS/cm at 25 °C (00095) | Temperature, water, °C (00010) | Sampling depth, ft (00003) | Dissolved solids, water, filtered, sum of constituents, mg/L (70301) |
|------------|-------------------|-------------|-------------|---|--|--|---|--------------------------------|----------------------------|--|
| 06-13-2011 | 0945 | Groundwater | Regular | 22.24 | 7.48 | 6.7 | 259 | 14.5 | 40.0 | 133 |
| 09-20-2011 | 1045 | Groundwater | Regular | 27.86 | 5.9 | 6.7 | 285 | 14.8 | 39.0 | 132 |

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 2 of 3

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date | Sample start time | Hardness, water, mg/L as CaCO ₃ (00900) | Calcium, water, filtered, mg/L (00915) | Magnesium, water, filtered, mg/L (00925) | Potassium, water, filtered, mg/L (00935) | Sodium, water, filtered, mg/L (00930) | ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (00419) | Chloride, water, filtered, mg/L (00940) | Fluoride, water, filtered, mg/L (00950) | Sulfate, water, filtered, mg/L (00945) |
|------------|-------------------|--|--|--|--|---------------------------------------|--|---|---|--|
| 06-13-2011 | 0945 | 107 | 31.7 | 6.65 | .48 | 7.35 | 98 | 6.40 | .09 | 11.1 |
| 09-20-2011 | 1045 | 108 | 32.7 | 6.33 | .45 | 7.34 | 99 | 5.63 | .06 | 10.5 |

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 3

[ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

| Date | Sample start time | Ammonia, water, filtered, mg/L as N (00608) | Nitrate plus nitrite, water, filtered, mg/L as N (00631) | Orthophosphate, water, filtered, mg/L as P (00671) | Phosphorus, water, filtered, mg/L as P (00666) | Total nitrogen, water, filtered, analytically determined, mg/L (62854) | Iron, water, filtered, µg/L (01046) |
|-------------|--------------------------|--|---|---|---|---|--|
| 06-13-2011 | 0945 | < .010 | 2.42 | .050 | .053 | 2.51 | 12 |
| 09-20-2011 | 1045 | < .010 | 2.15 | .045 | .043 | 2.20 | 10 |