

GROUND-WATER LEVELS

IREDELL COUNTY—Continued

353135080524202. County number, IR-131; DENR Langtree Research Station MW-2I (Transition zone well).

LOCATION.--Lat 35°31'35.62", long 80°52'42.25", Hydrologic Unit 03050101, 2.5 mi northwest of Davidson, .1 mi north of Langtree Road at Davidson College Lake Campus. Owner: DENR (North Carolina Department of Environment and Natural Resources), Division of Water Quality.

WATER-LEVEL RECORDS

AQUIFER.--Transition zone (weathered and competent quartz diorite).

WELL CHARACTERISTICS.--Drilled observation well, depth 48 ft, diameter 4 in., cased to 33 ft, screened interval from 33 ft to 48 ft.

INSTRUMENTATION.--Water-level recorder collecting data at 60-minute intervals. Satellite telemetry at station.

DATUM.--Land-surface datum is 802.67 ft above NGVD of 1929 (levels by DENR). Measuring point: Top of instrument shelter floor, 0.67 ft above land-surface datum.

REMARKS.--Well is part of Piedmont/Mountains ground-water project.

PERIOD OF RECORD.--March 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.85 ft below land-surface datum, June 19, 2003; lowest water level recorded 25.38 ft below land-surface datum, Nov. 3, 5, 6, 2002.

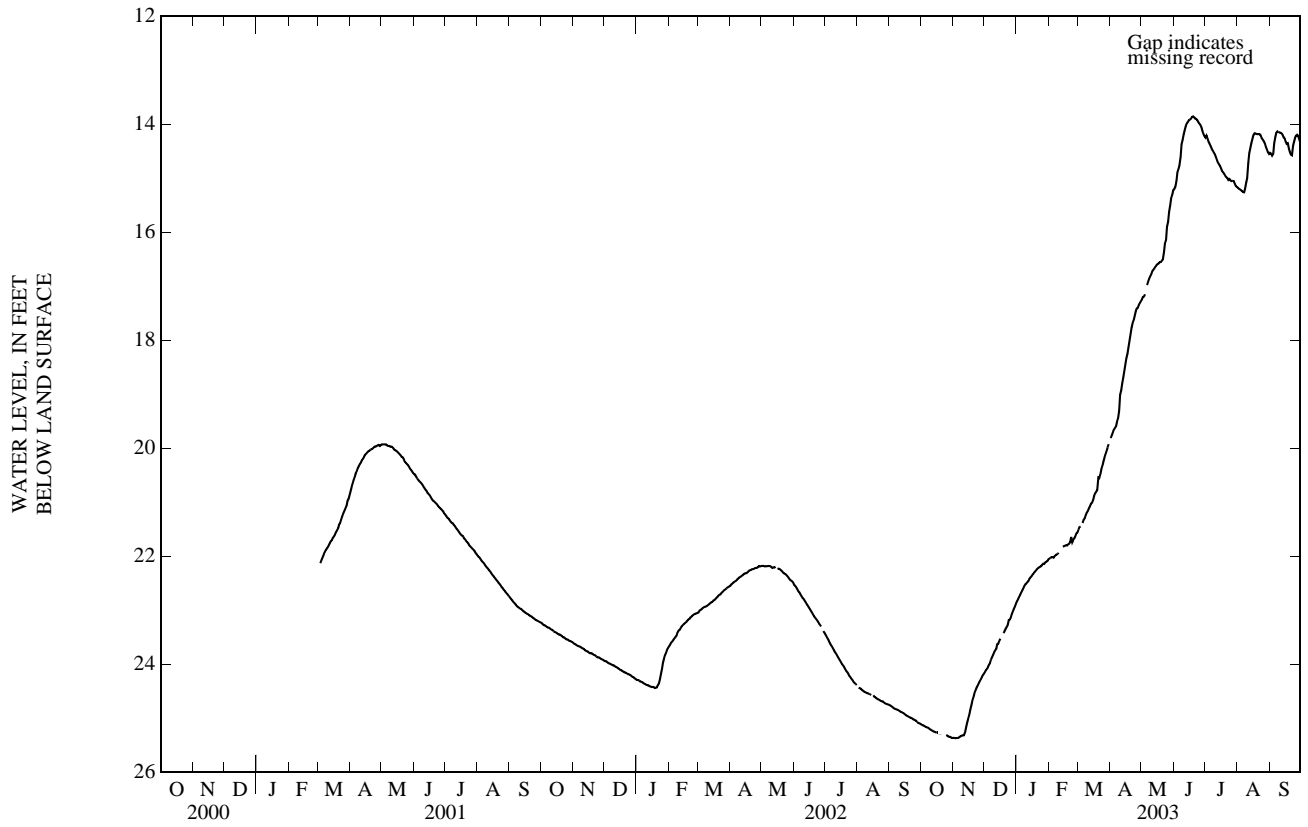
DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 25.11 | 25.36 | 24.15 | 22.83 | 22.04 | 21.51 | 19.81 | 17.24 | 15.20 | 14.25 | 15.17 | 14.53 |
| 2 | 25.12 | 25.37 | 24.11 | 22.80 | 22.03 | 21.46 | 19.76 | 17.20 | 15.17 | 14.21 | 15.20 | 14.55 |
| 3 | 25.13 | 25.37 | 24.09 | 22.75 | 22.02 | 21.45 | 19.71 | 17.19 | 15.06 | 14.27 | 15.21 | 14.58 |
| 4 | 25.14 | 25.37 | 24.06 | 22.72 | 22.01 | --- | 19.66 | 17.15 | 14.90 | 14.33 | 15.22 | 14.55 |
| 5 | 25.16 | 25.36 | 24.01 | 22.67 | 22.03 | 21.39 | 19.62 | --- | 14.84 | 14.37 | 15.24 | 14.36 |
| 6 | 25.17 | 25.36 | 23.98 | 22.64 | 22.00 | 21.33 | 19.60 | 16.98 | 14.76 | 14.40 | 15.26 | 14.24 |
| 7 | 25.17 | 25.34 | 23.92 | 22.60 | 21.98 | 21.30 | 19.51 | 16.91 | 14.61 | 14.45 | 15.27 | 14.16 |
| 8 | 25.18 | 25.33 | 23.87 | 22.55 | 21.97 | 21.24 | 19.45 | 16.86 | 14.37 | 14.49 | 15.20 | 14.14 |
| 9 | 25.20 | 25.32 | 23.83 | 22.52 | 21.96 | 21.19 | 19.31 | 16.81 | 14.29 | 14.53 | 15.08 | 14.14 |
| 10 | 25.21 | 25.31 | 23.78 | 22.50 | 21.94 | 21.16 | 19.01 | 16.77 | 14.20 | 14.56 | 15.00 | 14.16 |
| 11 | 25.22 | 25.31 | 23.75 | 22.48 | --- | 21.12 | 18.93 | 16.72 | 14.11 | 14.61 | 14.72 | 14.16 |
| 12 | 25.23 | 25.26 | 23.71 | 22.45 | --- | 21.08 | 18.80 | 16.70 | 14.04 | 14.67 | 14.54 | 14.17 |
| 13 | 25.25 | 25.17 | 23.63 | 22.41 | --- | 21.03 | 18.69 | 16.67 | 13.99 | 14.71 | 14.44 | 14.20 |
| 14 | 25.25 | 25.08 | 23.62 | 22.39 | 21.82 | 21.01 | 18.57 | 16.64 | 13.96 | 14.75 | 14.36 | 14.24 |
| 15 | 25.26 | 25.02 | 23.57 | 22.37 | 21.82 | 20.96 | 18.45 | 16.61 | 13.93 | 14.78 | 14.28 | 14.27 |
| 16 | 25.26 | 24.94 | 23.53 | 22.33 | 21.81 | 20.88 | 18.34 | 16.59 | 13.92 | 14.82 | 14.20 | 14.33 |
| 17 | 25.26 | 24.85 | --- | 22.32 | 21.79 | 20.84 | 18.25 | 16.58 | 13.90 | 14.87 | 14.17 | 14.37 |
| 18 | --- | 24.76 | --- | 22.29 | 21.80 | 20.80 | 18.14 | 16.56 | 13.87 | 14.90 | 14.17 | 14.36 |
| 19 | 25.29 | 24.68 | 23.42 | 22.27 | 21.78 | 20.77 | 18.01 | 16.55 | 13.86 | 14.92 | 14.18 | 14.45 |
| 20 | --- | 24.62 | 23.39 | 22.24 | 21.77 | 20.54 | 17.89 | 16.53 | 13.87 | 14.96 | 14.19 | 14.52 |
| 21 | --- | 24.54 | 23.35 | 22.22 | 21.74 | 20.55 | 17.77 | 16.51 | 13.90 | 14.98 | 14.18 | 14.57 |
| 22 | --- | 24.49 | 23.31 | 22.21 | 21.65 | 20.48 | 17.69 | 16.37 | 13.90 | 15.00 | 14.19 | 14.58 |
| 23 | --- | 24.44 | 23.28 | 22.19 | 21.74 | 20.39 | 17.63 | 16.22 | 13.92 | 15.04 | 14.21 | 14.40 |
| 24 | --- | 24.40 | 23.18 | 22.19 | 21.70 | 20.32 | 17.55 | 16.15 | 13.96 | 15.02 | 14.26 | 14.33 |
| 25 | 25.31 | 24.36 | 23.18 | 22.16 | 21.67 | 20.24 | 17.46 | 15.90 | 13.99 | 15.04 | 14.29 | 14.25 |
| 26 | 25.32 | 24.32 | 23.14 | 22.14 | 21.64 | 20.17 | 17.41 | 15.81 | 14.01 | 15.06 | 14.32 | 14.22 |
| 27 | 25.34 | 24.28 | 23.07 | 22.14 | 21.58 | 20.11 | 17.40 | 15.63 | 14.05 | 15.05 | 14.36 | 14.20 |
| 28 | 25.34 | 24.25 | 23.02 | 22.12 | 21.56 | 20.05 | 17.35 | 15.51 | 14.12 | 15.05 | 14.42 | 14.22 |
| 29 | 25.34 | 24.21 | 22.98 | 22.10 | --- | 19.99 | 17.31 | 15.38 | 14.18 | 15.10 | 14.47 | 14.29 |
| 30 | 25.36 | 24.18 | 22.93 | 22.09 | --- | 19.93 | 17.28 | 15.31 | 14.22 | 15.14 | 14.52 | 14.34 |
| 31 | 25.36 | --- | 22.88 | 22.06 | --- | --- | --- | 15.22 | --- | 15.16 | 14.55 | --- |

WTR YR 2003 MEAN 19.14 HIGH 13.86 LOW 25.37

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 2002, March 2003.

REMARKS.--Station operated in cooperation with North Carolina Department of Environment and Natural Resources, Water Resources Division as part of the Piedmont/Mountains ground-water project.

WATER-QUALITY DATA, MARCH 2003

| Date | Time | pH, water, unfltrd field, std units (00400) | Specif. conduc-tance, wat unf uS/cm 25 degC (00095) | Temper-ature, water, deg C (00010) | Hard-ness, water, unfltrd mg/L as CaCO3 (00900) | Calcium water, fltrd, mg/L (00915) | Magnes-ium, water, fltrd, mg/L (00925) | Potas-sium, water, fltrd, mg/L (00935) | Sodium, water, fltrd, mg/L (00930) | ANC, wat unf incrm. titr., field, mg/L as CaCO3 (00419) | Bicar-bonate, wat unf incrm. titr., field, mg/L (00450) | Bromide water, fltrd, mg/L (71870) | Chlor-ide, water, fltrd, mg/L (00940) |
|-----------|---|--|---|--|--|---|--|---|---|---|---|------------------------------------|--|
| MAR 04... | 1200 | 7.3 | 118 | 17.9 | 43 | 9.10 | 4.98 | 2.57 | 6.63 | 54 | 66 | 0.03 | 1.42 |
| Date | Fluor-ide, 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 + org-N, water, fltrd, mg/L as N (00623) | 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) | Ortho-phos-phate, water, fltrd, mg/L as P (00671) | Arsenic water, fltrd, ug/L (01000) | Boron, water, fltrd, ug/L (01020) | Iron, water, fltrd, ug/L (01046) | Mangan-ese, water, fltrd, ug/L (01056) |
| MAR 04... | 0.17 | 28.6 | 1.8 | 95 | <0.10 | <0.04 | 1.18 | 0.015 | 0.03 | <2 | <13 | <10 | 6.0 |
| Date | Alpha radio-activty water, fltrd, Th-230, pCi/L (04126) | Gross beta radioac water, fltrd, Cs-137, pCi/L (03515) | Rn-222, water, unfltrd pCi/L (82303) | | | | | | | | | | |
| MAR 04... | 0.1 | 2.8 | 270 | | | | | | | | | | |