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Water-Data Report 2012

355932079115301 Local number OR-689 CAN-1 NEAR ORANGE GROVE, NC (TRANSITION ZONE)

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 an 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 2011 to current year.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.51 ft below land-surface datum, March 19, 2012; 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. Water-level status: - - , static.]

Date	Water level	Measurement method	Water-level status	Date	Water level	Measurement method	Water-level status
Dec 12, 2011	25.03	T	--	Jun 26, 2012	22.66	T	--
Mar 19, 2012	19.51	T	--	Sep 14	25.59	T	--

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 355932079115301, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/355932079115301.2012.pdf

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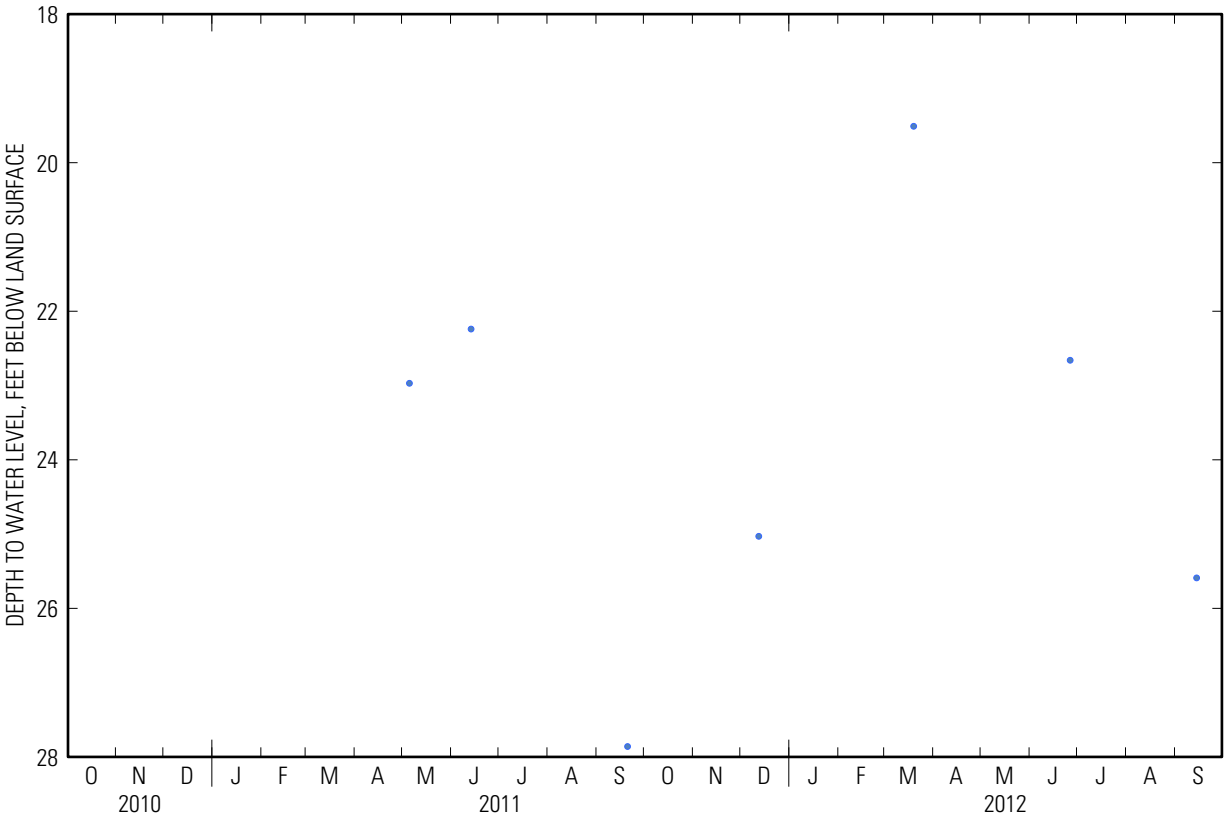

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2011 to current year.

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 4

[ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; MF, membrane filter; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft, feet; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Medium name	Sample type	Depth to water level, ft below land surface (72019)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, field, standard units (00400)	Specific conduc-tance, water, unfiltered, µS/cm at 25°C (00095)	Tempera-ture, water, °C (00010)
12-12-2011	**1035**	Groundwater	Regular	25.03	4.5	6.6	276	14.5
03-19-2012	**1215**	Groundwater	Regular	19.51	5.1	6.4	274	14.7
03-19-2012	***1216***	*QC sample - Groundwater*	*Duplicate*	--	--	--	--	--
06-26-2012	***1000***	*QC sample - Artificial*	*Blank*	--	--	--	--	--
06-26-2012	**1105**	Groundwater	Regular	22.66	4.8	6.5	275	14.5
09-24-2012	**1050**	Groundwater	Regular	25.59	6.3	5.4	272	14.7

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 4

[ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; MF, membrane filter; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft, feet; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Calcium, water, filtered, mg/L (00915)	Magne-sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as $CaCO_3$ (90410)	ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as $CaCO_3$ (00419)	Alkalinity, water, filtered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as $CaCO_3$ (29801)
12-12-2011	**1035**	73	35.5	6.70	0.47	7.75	--	94	103
03-19-2012	**1215**	31	34.8	6.99	.41	7.72	--	92	102
03-19-2012	***1216***	--	--	--	--	--	--	--	--
06-26-2012	***1000***	--	*.033*	*< .011*	*< .03*	*< .06*	*< 4.0*	--	*< 4.6*
06-26-2012	**1105**	180	44.1	7.11	.51	8.62	119	--	117
09-24-2012	**1050**	130	38.1	7.10	.47	8.32	--	102	113

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 4

[ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; MF, membrane filter; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft, feet; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Sulfate, water, filtered, mg/L (00945)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophos-phate, water, filtered, mg/L as P (00671)	Phos-phorus, water, filtered, mg/L as P (00666)	Total nitrogen, water, filtered, analytically determined, mg/L (62854)
12-12-2011	**1035**	6.09	0.07	10.5	< .010	2.35	0.042	0.041	2.40
03-19-2012	**1215**	6.36	.10	9.83	< .010	2.50	.050	.045	2.48
03-19-2012	***1216***	--	--	--	--	--	--	--	--
06-26-2012	***1000***	*< .06*	*< .04*	*< .09*	*< .010*	*< .040*	*< .004*	*< .004*	*< .05*
06-26-2012	**1105**	5.93	.10	11.6	< .010	2.28	.036	.034	2.31
09-24-2012	**1050**	6.22	.09	10.2	< .010	2.42	.045	.040	2.42

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 4 of 4

[ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; MF, membrane filter; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft, feet; mg/L, milligrams per liter; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; --, no data; <, less than]

Date	Sample start time	Escherichia coli, Defined Substrate Tech-nology, water, MPN/100 mL (50468)	Fecal coliform, M-FC MF (0.45 micron) method, water, col/100 mL (31616)	Iron, water, filtered, µg/L (01046)
12-12-2011	**1035**	< 1	3	23.4
03-19-2012	**1215**	< 2	< 1	8.9
03-19-2012	***1216***	--	*< 1*	--
06-26-2012	***1000***	*< 1*	*< 1*	*< 3.2*
06-26-2012	**1105**	< 1	< 4	< 3.2
09-24-2012	**1050**	< 10	< 4	6.1