



Water-Data Report 2007

**360152079110301 Local number OR-683, Piedmont Major Aquifer Study, Site 43**

Piedmont and Blue Ridge crystalline-rock aquifers  
Phyllite  
Orange County, NC

LOCATION.--Lat 36°01'51.8", long 79°11'02.5" referenced to North American Datum of 1983, Orange County, NC, Hydrologic Unit 03020201, private residence, Efland, NC.

**WATER-QUALITY RECORDS**

WELL CHARACTERISTICS.--Depth 160 ft. Upper casing diameter undefined, top of first opening 30 ft, bottom of last opening 160 ft.

PERIOD OF RECORD.--September 2007.

REMARKS.--Well is part of the National Water Quality Assessment Program (NAWQA).

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

Part 1 of 18

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Time	Depth to water level, feet below LSD (72019)	Water level, depth below MP, feet (61055)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
Sep 24...	1215	62.50	62.75	756	3.5	36	7.1	469	16.2	230	72.0	10.9	.21

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

Part 2 of 18

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	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 flt 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 flt by analysis, mg/L (62854)
Sep 24...	15.2	233	285	.05	6.06	E.07	27.2	3.51	280	<.020	.35	<.002	.40

## 360152079110301 Local number OR-683, Piedmont Major Aquifer Study, Site 43—Continued

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

Part 3 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Organic carbon, water, fltrd, mg/L (00681)	Colipge F-spec, 2-step, pres or absence /L (99335)	Colipge som, Ec CN13hst, 2-step, pres or absence /L (99332)	E coli, MI MF, water, col/ 100 mL (90901)	Total coli-form, MI MF, water, col/ 100 mL (90900)	Alum-inum, water, fltrd, µg/L (01106)	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)
Sep 24...	.039	E.3	U	U	<1	<1	E.8	<.06	.31	20	<.06	<8	<.04

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

Part 4 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Chrom-ium, water, fltrd, µg/L (01030)	Cobalt, water, fltrd, µg/L (01035)	Copper, water, fltrd, µg/L (01040)	Hydro-gen sulfide, water, unfltrd, mg/L (71875)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lithium, water, fltrd, µg/L (01130)	Mangan-ese, water, fltrd, µg/L (01056)	Molyb-denum, water, fltrd, µg/L (01060)	Nickel, water, fltrd, µg/L (01065)	Selen-ium, water, fltrd, µg/L (01145)	Silver, water, fltrd, µg/L (01075)	Stront-ium, water, fltrd, µg/L (01080)
Sep 24...	<.12	E.03	11.6	U	<6	.49	1.1	E.1	<.1	.31	.17	<.1	185

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

Part 5 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Thall-ium, water, fltrd, µg/L (01057)	Vanad-ium, water, fltrd, µg/L (01085)	Zinc, water, fltrd, µg/L (01090)	1-Naph-thol, water, fltrd, 0.7u GF µg/L (49295)	2,6-Di-ethyl-aniline, water, fltrd, 0.7u GF µg/L (82660)	2Chloro -2',6'-diethyl acet-anilide, water, fltrd, µg/L (61618)	CIAT, water, fltrd, µg/L (04040)	2-Ethyl -6-methyl-aniline, water, fltrd, µg/L (61620)	3,4-Di-chloro-aniline, water, fltrd, µg/L (61625)	3,5-Di-chloro-aniline, water, fltrd, µg/L (61627)	4-Chloro-2methyl phenol, water, fltrd, µg/L (61633)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)
Sep 24...	<.04	1.6	22.8	<.09	<.006	<.006	<.014	<.010	<.004	<.012	<.005	<.006	<.005

## 360152079110301 Local number OR-683, Piedmont Major Aquifer Study, Site 43—Continued

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 6 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	alpha-Endosulfan, water, fltrd, µg/L (34362)	Atrazine, water, fltrd, µg/L (39632)	Azin-phos-methyl oxon, water, fltrd, µg/L (61635)	Azin-phos-methyl, fltrd, 0.7u GF (82686)	Ben-flur-alin, water, fltrd, 0.7u GF (82673)	Carbaryl, water, fltrd, 0.7u GF (82680)	Carbofuran, water, fltrd, 0.7u GF (82674)	Chlorpyrifos oxon, water, fltrd, µg/L (61636)	Chlorpyrifos, water, fltrd, µg/L (38933)	cis-Permethrin, water, fltrd, 0.7u GF (82687)	cis-Propiconazole, water, fltrd, µg/L (79846)	Cyana-zine, water, fltrd, µg/L (04041)	Cyfluthrin, water, fltrd, µg/L (61585)
Sep 24...	<.011	<.007	<.04	<.080	<.010	<.060	<.020	<.06	<.005	<.010	<.013	<.018	<.053

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 7 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	lambda-Cyhalothrin, water, fltrd, µg/L (61595)	Cypermethrin, water, fltrd, µg/L (61586)	DCPA, water, fltrd, 0.7u GF (82682)	Desulf-inyl-fipro-nil, water, fltrd, µg/L (62170)	Diazinon, water, fltrd, µg/L (39572)	Dicrotophos, water, fltrd, µg/L (38454)	Dieldrin, water, fltrd, µg/L (39381)	Dimethoate, water, fltrd, 0.7u GF (82662)	Disulfoton sulfone, water, fltrd, µg/L (61640)	Disulfoton, water, fltrd, 0.7u GF (82677)	Endosulfan sulfate, water, fltrd, µg/L (61590)	EPTC, water, fltrd, 0.7u GF (82668)	Ethion monoxon, water, fltrd, µg/L (61644)
Sep 24...	<.014	<.046	<.003	<.012	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 8 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Ethion, water, fltrd, µg/L (82346)	Ethoprop, water, fltrd, 0.7u GF (82672)	Fenamiphos sulfone, water, fltrd, µg/L (61645)	Fenamiphos sulf-oxide, water, fltrd, µg/L (61646)	Fenamiphos, water, fltrd, µg/L (61591)	Desulf-inyl-fipro-nil amide, wat flt µg/L (62169)	Fipro-nil sulfide, water, fltrd, µg/L (62167)	Fipro-nil sulfone, water, fltrd, µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Fonofos, water, fltrd, µg/L (04095)	Hexazinone, water, fltrd, µg/L (04025)	Iprodione, water, fltrd, µg/L (61593)	Isofenphos, water, fltrd, µg/L (61594)
Sep 24...	<.016	<.012	<.053	<.04	<.03	<.029	<.013	<.024	<.016	<.006	<.026	<.026	<.011

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

Part 9 of 18

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Mala-oxon, water, fltrd, µg/L (61652)	Mala-thion, water, fltrd, µg/L (39532)	Meta-laxyl, water, fltrd, µg/L (61596)	Methi-althion, water, fltrd, µg/L (61598)	Methyl para-oxon, water, fltrd, µg/L (61664)	Methyl para-thion, water, fltrd, 0.7u GF µg/L (82667)	Metola-chlor, water, fltrd, µg/L (39415)	Metri-buzin, water, fltrd, µg/L (82630)	Moli-nate, water, fltrd, 0.7u GF µg/L (82671)	Myclo-butanil, water, fltrd, µg/L (61599)	Oxy-fluor-fen, water, fltrd, µg/L (61600)	Pendi-meth-alin, water, fltrd, 0.7u GF µg/L (82683)	Phorate oxon, water, fltrd, µg/L (61666)
Sep 24...	<.039	<.016	<.007	<.009	<.02	<.008	<.010	<.012	<.003	<.033	<.017	<.020	<.03

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

Part 10 of 18

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Phorate water, fltrd, 0.7u GF µg/L (82664)	Phosmet oxon, water, fltrd, µg/L (61668)	Phosmet, water, fltrd, µg/L (61601)	Prome-ton, water, fltrd, µg/L (04037)	Prome-tryn, water, fltrd, µg/L (04036)	Propy-zamide, water, fltrd, 0.7u GF µg/L (82676)	Pro-panil, water, fltrd, 0.7u GF µg/L (82679)	Propar-gite, water, fltrd, 0.7u GF µg/L (82685)	Sima-zine, water, fltrd, µg/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF µg/L (82670)	Teflu-thrin, water, fltrd, µg/L (61606)	Ter-bufos oxon sulfone, water, fltrd, µg/L (61674)	Terbu-fos, water, fltrd, 0.7u GF µg/L (82675)
Sep 24...	<.020	<.05	<.008	<.01	<.006	<.004	<.011	<.02	<.006	<.02	<.003	<.04	<.01

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

Part 11 of 18

[Remark codes: <, less than; E, estimated; U, analyzed for but not detected.]

Date	Ter-buthyl-azine, water, fltrd, µg/L (04022)	Thio-bencarb water, fltrd, 0.7u GF µg/L (82681)	trans-Propi-conazole, water, fltrd, µg/L (79847)	Tribu-phos, water, fltrd, µg/L (61610)	Tri-fluralin, water, fltrd, 0.7u GF µg/L (82661)	1,1,1,2-Tetra-chloro-ethane, water, unfltrd, µg/L (77562)	1,1,1-Tri-chloro-ethane, water, unfltrd, µg/L (34506)	1,1,2,2-Tetra-chloro-ethane, water, unfltrd, µg/L (34516)	CFC-113, water, unfltrd, µg/L (77652)	1,1,2-Tri-chloro-ethane, water, unfltrd, µg/L (34511)	1,1-Di-chloro-ethane, water, unfltrd, µg/L (34496)	1,1-Di-chloro-ethene, water, unfltrd, µg/L (34501)	1,1-Di-chloro-propene, water, unfltrd, µg/L (77168)
Sep 24...	<.01	<.010	<.03	<.035	<.009	<.04	<.04	<.10	<.04	<.04	<.06	<.02	<.04

## 360152079110301 Local number OR-683, Piedmont Major Aquifer Study, Site 43—Continued

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 12 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	1,2,3,4 -Tetra- methyl- benzene water, unfltrd µg/L (49999)	1,2,3,5 -Tetra- methyl- benzene water, unfltrd µg/L (50000)	1,2,3- Tri- chloro- benzene water, unfltrd µg/L (77613)	1,2,3- Tri- chloro- propane water, unfltrd µg/L (77443)	1,2,3- Tri- methyl- benzene water, unfltrd µg/L (77221)	1,2,4- Tri- chloro- benzene water, unfltrd µg/L (34551)	1,2,4- Tri- methyl- benzene water, unfltrd µg/L (77222)	Dibromo chloro- propane water, unfltrd µg/L (82625)	1,2-Di- bromo- ethane, water, unfltrd µg/L (77651)	1,2-Di- chloro- benzene water, unfltrd µg/L (34536)	1,2-Di- chloro- ethane, water, unfltrd µg/L (32103)	1,2-Di- chloro- propane water, unfltrd µg/L (34541)	1,3,5- Tri- methyl- benzene water, unfltrd µg/L (77226)
Sep 24...	<.1	<.1	<.1	<.12	<.1	<.1	E.05	<.5	<.04	<.04	<.1	<.02	<.04

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 13 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	1,3-Di- chloro- benzene water, unfltrd µg/L (34566)	1,3-Di- chloro- propane water, unfltrd µg/L (77173)	1,4-Di- chloro- benzene water, unfltrd µg/L (34571)	2,2-Di- chloro- propane water, unfltrd µg/L (77170)	2- Chloro- toluene water, unfltrd µg/L (77275)	2- Ethyl- toluene water, unfltrd µg/L (77220)	3- Chloro- propene water, unfltrd µg/L (78109)	4- Chloro- toluene water, unfltrd µg/L (77277)	4-Iso- propyl- toluene water, unfltrd µg/L (77356)	Acetone water, unfltrd µg/L (81552)	Acrylo- nitrile water, unfltrd µg/L (34215)	Benzene water, unfltrd µg/L (34030)	Bromo- benzene water, unfltrd µg/L (81555)
Sep 24...	<.04	<.1	<.04	<.06	<.04	<.04	<.08	<.04	<.08	<6	<.4	<.02	<.02

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 14 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Bromo- chloro- methane water, unfltrd µg/L (77297)	Bromo- di- chloro- methane water, unfltrd µg/L (32101)	Bromo- ethene, water, unfltrd µg/L (50002)	Bromo- methane water, unfltrd µg/L (34413)	Carbon di- sulfide water, unfltrd µg/L (77041)	Chloro- benzene water, unfltrd µg/L (34301)	Chloro- ethane, water, unfltrd µg/L (34311)	Chloro- methane water, unfltrd µg/L (34418)	cis- 1,2-Di- chloro- ethene, water, unfltrd µg/L (77093)	cis- 1,3-Di- chloro- propene water, unfltrd µg/L (34704)	Di- bromo- chloro- methane water, unfltrd µg/L (32105)	Di- bromo- methane water, unfltrd µg/L (30217)	Di- chloro- di- fluoro- methane wat unf µg/L (34668)
Sep 24...	<.06	<.04	<.1	<.4	<.06	<.02	<.1	<.1	<.02	<.06	<.1	<.04	<.14

## 360152079110301 Local number OR-683, Piedmont Major Aquifer Study, Site 43—Continued

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

Part 15 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Di-chloro-methane water, unfltrd µg/L (34423)	Di-ethyl ether, water, unfltrd µg/L (81576)	Diiso-propyl ether, water, unfltrd µg/L (81577)	Ethyl methacrylate, water, unfltrd µg/L (73570)	Ethyl methyl ketone, water, unfltrd µg/L (81595)	Ethyl-benzene water, unfltrd µg/L (34371)	Hexa-chloro-butadiene, water, unfltrd µg/L (39702)	Hexa-chloro-ethane, water, unfltrd µg/L (34396)	Iodo-methane water, unfltrd µg/L (77424)	Iso-butyl methyl ketone, water, unfltrd µg/L (78133)	Iso-propyl-benzene water, unfltrd µg/L (77223)	Methyl acrylonitrile water, unfltrd µg/L (81593)	Methyl acrylate, water, unfltrd µg/L (49991)
Sep 24...	<.04	<.1	<.06	<.1	<1.6	<.02	<.1	<.1	<.40	<.2	<.04	<.4	<.4

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

Part 16 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Methyl methacrylate, water, unfltrd µg/L (81597)	Methyl tert-pentyl ether, water, unfltrd µg/L (50005)	meta- + para-Xylene, water, unfltrd µg/L (85795)	Naphthalene, water, unfltrd µg/L (34696)	Methyl n-butyl ketone, water, unfltrd µg/L (77103)	n-Butyl benzene water, unfltrd µg/L (77342)	n-propyl-benzene water, unfltrd µg/L (77224)	o-Xylene, water, unfltrd µg/L (77135)	sec-Butyl-benzene water, unfltrd µg/L (77350)	Styrene water, unfltrd µg/L (77128)	t-Butyl ethyl ether, water, unfltrd µg/L (50004)	Methyl t-butyl ether, water, unfltrd µg/L (78032)	tert-Butyl-benzene water, unfltrd µg/L (77353)
Sep 24...	<.2	<.04	<.08	<.4	<.4	<.1	<.04	<.04	<.04	<.04	<.04	<.1	<.08

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

Part 17 of 18

[Remark codes: &lt;, less than; E, estimated; U, analyzed for but not detected.]

Date	Tetra-chloro-ethene, water, unfltrd µg/L (34475)	Tetra-chloro-methane water, unfltrd µg/L (32102)	Tetra-hydrofuran, water, unfltrd µg/L (81607)	Toluene water, unfltrd µg/L (34010)	trans-1,2-Di-chloro-ethene, water, unfltrd µg/L (34546)	trans-1,3-Di-chloro-propene water, unfltrd µg/L (34699)	trans-1,4-Di-chloro-2-butene, water, unfltrd µg/L (73547)	Tri-bromo-methane water, unfltrd µg/L (32104)	Tri-chloro-ethene, water, unfltrd µg/L (39180)	Tri-chloro-fluoro-methane water, unfltrd µg/L (34488)	Tri-chloro-methane water, unfltrd µg/L (32106)	Vinyl chloride, water, unfltrd µg/L (39175)	Di-chloro-vos, water, fltrd, µg/L (38775)
Sep 24...	<.04	<.08	<1	<.02	<.02	<.10	<.6	<.08	<.02	<.08	E.04	<.1	<.01

**360152079110301 Local number OR-683, Piedmont Major Aquifer Study, Site 43—Continued**

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

Part 18 of 18

[Remark codes: <, less than; E, estimated;  
U, analyzed for but not detected.]

<b>Date</b>	<b>Rn-222 2-sigma water, unfltrd pCi/L (76002)</b>	<b>Rn-222, water, unfltrd pCi/L (82303)</b>	<b>Uranium natural water, fltrd, µg/L (22703)</b>
<b>Sep 24...</b>	16	60	.07