



Water-Data Report 2011

383831075094601 Local number WCV-87-PW01

Northern Atlantic Coastal Plain aquifer system
Columbia Group

Sussex County, DE

LOCATION.--Lat 38°38'30.6", long 75°09'45.9" referenced to North American Datum of 1983, Sussex County, DE, Hydrologic Unit 02060010.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Depth 52 ft. Upper casing diameter 2 in; top of first opening 46 ft, bottom of last opening 52 ft.

PERIOD OF RECORD.--May 2011.

REMARKS.--The purpose of this project was to study the effects of suburban land use on the quality of shallow groundwater in the coastal plain of Delaware.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 5

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, water, unfiltered, laboratory, µS/cm at 25 °C (90095)
05-03-2011	1245	Groundwater	Regular	762	27.0	4.9	49	5.5	E 5.8	E 90.0

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 5

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Date	Sample start time	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	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)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)
05-03-2011	1245	89	15.4	63	11.3	3.01	.915	1.35	12.5	11

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 5

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Date	Sample start time	Bicarbonate, water, filtered, inflection-point, incremental titration method, field,	Bromide, water, filtered,	Chloride, water, filtered,	Fluoride, water, filtered,	Hydrogen sulfide, water, unfiltered,	Silica, water, filtered, mg/L as SiO ₂	Sulfate, water, filtered,	Ammonia plus organic nitrogen, water, filtered, mg/L as N	Ammonia, water, filtered, mg/L as N
		(00453)	(71870)	(00940)	(00950)	(71875)	(00955)	(00945)	(00623)	(00608)
05-03-2011	1245	13	.0520	14.8	< .04	U	21.9	.951	< .05	< .010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 5

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Date	Sample start time	Nitrate plus nitrite, water, filtered,	Nitrate, water, filtered,	Nitrite, water, filtered,	Organic nitrogen, water, filtered,	Orthophosphate, water, filtered,	Orthophosphate, water, filtered,	Phosphorus, water, filtered,	Total nitrogen, water, filtered,	Iron, water, filtered,
		mg/L as N (00631)	mg/L as N (00618)	mg/L as N (00613)	mg/L (00607)	mg/L (00660)	mg/L as P (00671)	mg/L as P (00666)	mg/L (00602)	µg/L (01046)
05-03-2011	1245	2.14	2.14	< .0010	< .05	.055	.0180	< .020	< 2.2	7.8

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 5 of 5

[%, percent; CaCO₃, calcium carbonate; N, nitrogen; P, phosphorus; SiO₂, silicon dioxide; mg/L, milligrams per liter; mm Hg, millimeters of mercury; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; U, analyzed for but not detected]

Date	Sample start time	Manganese, water, filtered, µg/L (01056)
05-03-2011	1245	.80