



Water-Data Report 2011

383842075101403 Local number WCV-230-GP03

Northern Atlantic Coastal Plain aquifer system
Columbia Group

Sussex County, DE

LOCATION.--Lat 38°38'42", long 75°10'14" referenced to North American Datum of 1983, Sussex County, DE, Hydrologic Unit 02060010.

WATER-QUALITY RECORDS

WELL CHARACTERISTICS.--Depth 16 ft. Upper casing diameter 1 in; top of first opening 12 ft, bottom of last opening 16 ft.

PERIOD OF RECORD.--April 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. This temporary well was installed using direct push technology. This well was developed, sampled, and then removed.

**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; ft, feet; 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)	Depth to water level, ft below surface (72019)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	Flow rate, instantaneous, gallons per minute (00059)	pH, water, unfiltered, field, standard units (00400)
04-14-2011	1330	Groundwater	Regular	755	18.5	11.50	4.8	49	.10	5.3

**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; ft, feet; 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	pH, water, unfiltered, laboratory, standard units (00403)	Specific conductance, water, unfiltered, laboratory, µS/cm at 25 °C (90095)	Specific conductance, water, unfiltered, laboratory, 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)
04-14-2011	1330	E 5.5	E 90.3	91	15.9	50	26.7	5.63	3.06	1.50

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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; ft, feet; 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	Sodium, water, filtered, mg/L (00930)	Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO ₃ (39086)	Bicarbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00453)	Bromide, water, filtered, mg/L (71870)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Hydrogen sulfide, water, unfiltered, mg/L (71875)	Silica, water, filtered, mg/L as SiO ₂ (00955)
04-14-2011	1330	3.36	4	5	.0348	8.69	< .04	U	5.71

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; ft, feet; 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	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrate, water, filtered, mg/L as N (00618)	Nitrite, water, filtered, mg/L as N (00613)	Organic nitrogen, water, filtered, mg/L (00607)	Orthophosphate, water, filtered, mg/L (00660)	Orthophosphate, water, filtered, mg/L as P (00671)
04-14-2011	1330	16.6	.077	< .010	1.88	1.88	.00103	< .08	.014	.00467

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; ft, feet; 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	Phosphorus, water, filtered, mg/L as P (00666)	Total nitrogen, water, filtered, mg/L (00602)	Iron, water, filtered, µg/L (01046)	Manganese, water, filtered, µg/L (01056)
04-14-2011	1330	< .020	2.0	846	26.7