



Water-Data Report 2011

**392057075443601 Local number Gb51-07**

Northern Atlantic Coastal Plain aquifer system  
Pleistocene-Pliocene Series

New Castle County, DE

LOCATION.--Lat 39°20'57", long 75°44'36" referenced to North American Datum of 1927, New Castle County, DE, Hydrologic Unit 02060002.

**WATER-QUALITY RECORDS**

WELL CHARACTERISTICS.--Depth 20.01 ft. Upper casing diameter 2.00 in; top of first opening 17.51 ft, bottom of last opening 20.01 ft.

PERIOD OF RECORD.--Intermittent records have been collected at this location, water year 1988 to current year.

**WATER-QUALITY DATA**

**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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 land 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)
07-07-2011	1100	Groundwater	Regular	765	28.0	3.34	.8	9	.10	4.3

**WATER-QUALITY DATA**

**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 2 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery (99995)	Diazinon-d10, surrogate, Schedule 2003, water, filtered, percent recovery (99994)
07-07-2011	1100	E 4.9	E 32.8	35	19.7	.6	111	125

## 392057075443601 Local number Gb51-07—Continued

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

Part 3 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Sampler type (84164)	Sampling method (82398)	Dissolved	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	Calcium, water, filtered, mg/L (00915)	Magne- sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)
				solids dried at 180 °C, water, filtered, mg/L (70300)				
07-07-2011	1100	Sbmrsbl pos pressure	Submersible pump	30	2.77	.250	.512	.952

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

Part 4 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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,	Bromide,	Chloride,	Fluoride,	Hydrogen	Silica,	Sulfate,	Ammonia,	Nitrate
		water, filtered, mg/L (00930)	water, filtered, mg/L (71870)	water, filtered, mg/L (00940)	water, filtered, mg/L (00950)	sulfide, water, unfiltered, mg/L (71875)	water, filtered, mg/L as SiO <sub>2</sub> (00955)	water, filtered, mg/L (00945)	water, filtered, mg/L as N (00608)	plus nitrite, water, filtered, mg/L as N (00631)
07-07-2011	1100	1.49	< .010	1.27	< .04	U	7.66	5.82	.0165	< .020

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

Part 5 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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,	Nitrite,	Organic	Orthophos-	Orthophos-	Total	Aluminum,	Barium,
		water, filtered, mg/L as N (00618)	water, filtered, mg/L as N (00613)	nitrogen, water, filtered, mg/L (00607)	phate, water, filtered, mg/L (00660)	phate, water, filtered, mg/L as P (00671)	nitrogen, water, analytically determined, mg/L (62854)	water, filtered, µg/L (01106)	water, filtered, µg/L (01005)
07-07-2011	1100	< .020	< .0010	< .20	.021	.00689	.213	973	37.4

## 392057075443601 Local number Gb51-07—Continued

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 6 of 17

[% , percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Beryllium, water, filtered, µg/L (01010)	Cadmium, water, filtered, µg/L (01025)	Chromium, water, filtered, µg/L (01030)	Cobalt, water, filtered, µg/L (01035)	Copper, water, filtered, µg/L (01040)	Iron, water, filtered, µg/L (01046)	Lead, water, filtered, µg/L (01049)	Lithium, water, filtered, µg/L (01130)	Manganese, water, filtered, µg/L (01056)
07-07-2011	1100	.127	.051	1.05	.726	2.33	1,440	.408	.319	21.2

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 7 of 17

[% , percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Molybdenum, water, filtered, µg/L (01060)	Nickel, water, filtered, µg/L (01065)	Silver, water, filtered, µg/L (01075)	Strontium, water, filtered, µg/L (01080)	Thallium, water, filtered, µg/L (01057)	Vanadium, water, filtered, µg/L (01085)	Zinc, water, filtered, µg/L (01090)	Antimony, water, filtered, µg/L (01095)	Arsenic, water, filtered, µg/L (01000)
07-07-2011	1100	< .014	.621	< .005	10.6	< .010	2.28	1.92	.0473	.173

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 8 of 17

[% , percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Boron, water, filtered, µg/L (01020)	Selenium, water, filtered, µg/L (01145)	1-Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49295)	2,6-Diethyl-aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2-Chloro-2',6'-diethyl-acetanilide, water, filtered, recoverable, µg/L (61618)	2-Chloro-4-isopropyl-amino-6-amino-s-triazine, water, filtered, recoverable, µg/L (04040)	2-Ethyl-6-methyl-aniline, water, filtered, recoverable, µg/L (61620)	3,4-Dichloro-aniline, water, filtered, recoverable, µg/L (61625)	3,5-Di-chloro-aniline, water, filtered, recoverable, µg/L (61627)
07-07-2011	1100	9.5	.061	< .036	< .0060	< .010	< .006	< .010	< .0042	< .0040

392057075443601 Local number Gb51-07—Continued

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

Part 9 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	4-Chloro-2-methyl-phenol, water, filtered, recoverable, µg/L (61633)	Aceto-chlor, water, filtered, recoverable, µg/L (49260)	Alachlor, water, filtered, recoverable, µg/L (46342)	alpha-Endo-sulfan, water, filtered, recoverable, µg/L (34362)	Atrazine, water, filtered, recoverable, µg/L (39632)	Azinphos-methyl oxygen analog, water, filtered, recoverable, µg/L (61635)	Azinphos-methyl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82686)	Benfluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82673)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82680)
07-07-2011	1100	< .0046	< .010	< .008	< .006	< .008	< .042	< .12	< .014	< .06

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

Part 10 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Carbofuran, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82674)	Chlorpyrifos oxygen analog, water, filtered, recoverable, µg/L (61636)	Chlorpyrifos, water, filtered, recoverable, µg/L (38933)	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	cis-Propiconazole, water, filtered, recoverable, µg/L (79846)	Cyanazine, water, filtered, recoverable, µg/L (04041)	Cyfluthrin, water, filtered, recoverable, µg/L (61585)	Cypermethrin, water, filtered, recoverable, µg/L (61586)
07-07-2011	1100	< .060	< .06	< .0036	< .010	< .008	< .022	< .016	< .020

## 392057075443601 Local number Gb51-07—Continued

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

Part 11 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82682)	Desulfinyl-fipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfinyl-fipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dichlorvos, water, filtered, recoverable, µg/L (38775)	Dicrotophos, water, filtered, recoverable, µg/L (38454)	Dieldrin, water, filtered, recoverable, µg/L (39381)	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82662)	Disulfoton sulfone, water, filtered, recoverable, µg/L (61640)
07-07-2011	1100	< .0076	< .029	< .012	< .0060	< .04	< .08	< .008	< .006	< .014

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

Part 12 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Disulfoton, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82677)	Endosulfan sulfate, water, filtered, recoverable, µg/L (61590)	EPTC, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82668)	Ethion monoxon, water, filtered, recoverable, µg/L (61644)	Ethion, water, filtered, recoverable, µg/L (82346)	Ethoprop, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82672)	Fenami-phos sulfone, water, filtered, recoverable, µg/L (61645)	Fenami-phos sulfoxide, water, filtered, recoverable, µg/L (61646)	Fenami-phos, water, filtered, recoverable, µg/L (61591)
07-07-2011	1100	< .040	< .016	< .0056	< .021	< .008	< .016	< .054	< .08	< .030

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

Part 13 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Fipronil sulfide, water, filtered, recoverable, µg/L (62167)	Fipronil sulfone, water, filtered, recoverable, µg/L (62168)	Fipronil, water, filtered, recoverable, µg/L (62166)	Fonofos, water, filtered, recoverable, µg/L (04095)	Hexazinone, water, filtered, recoverable, µg/L (04025)	Iprodione, water, filtered, recoverable, µg/L (61593)	Isofenphos, water, filtered, recoverable, µg/L (61594)	lambda-Cyhalothrin, water, filtered, recoverable, µg/L (61595)	Malaoxon, water, filtered, recoverable, µg/L (61652)
07-07-2011	1100	< .012	< .024	< .018	< .0082	< .008	< .014	< .006	< .010	< .022

## 392057075443601 Local number Gb51-07—Continued

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

Part 14 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Malathion,	Metalaxyl,	Methida-	Methyl	Methyl	Metola-	Metri-	Molinate,	Myclo-
		water, filtered, recover- able, µg/L (39532)	water, filtered, recover- able, µg/L (61596)	thion, water, filtered, recover- able, µg/L (61598)	paraoxon, water, filtered, recover- able, µg/L (61664)	parathion, water, filtered, recover- able, µg/L (82667)	chlor, water, filtered, recover- able, µg/L (39415)	buzin, water, filtered, recover- able, µg/L (82630)	water, filtered, glass fiber filter), recover- able, µg/L (82671)	butanil, water, filtered, recover- able, µg/L (61599)
07-07-2011	1100	< .016	< .014	< .012	< .014	< .008	< .020	< .012	< .0040	< .010

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

Part 15 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Oxy-	Pendi-	Phorate,	Phosmet	Phosmet,	Prometon,	Prometryn,	Propanil,	
		fluorfen, water, filtered, recover- able, µg/L (61600)	methalin, water, filtered, glass fiber filter), recover- able, µg/L (82683)	oxygen analog, water, filtered, recover- able, µg/L (61666)	water, filtered, glass fiber filter), recover- able, µg/L (82664)	oxygen analog, water, filtered, recover- able, µg/L (61668)	water, filtered, recover- able, µg/L (61601)	water, filtered, recover- able, µg/L (04037)	water, filtered, recover- able, µg/L (04036)	water, filtered, glass fiber filter), recover- able, µg/L (82679)
07-07-2011	1100	< .006	< .012	< .027	< .020	< .0511	< .14	< .012	< .006	< .010

## 392057075443601 Local number Gb51-07—Continued

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 16 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	Propargite, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82685)	Propyz-amide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82676)	Simazine, water, filtered, recoverable, µg/L (04035)	Tebu-thiuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82670)	Tefluthrin, water, filtered, recoverable, µg/L (61606)	Terbufos oxygen sulfone, water, filtered, recoverable, µg/L (61674)	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82675)	Terbuthyl-azine, water, filtered, recoverable, µg/L (04022)	Thioben-carb, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82681)
07-07-2011	1100	<.020	<.0036	<.006	<.028	<.010	<.045	<.018	<.0060	<.016

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 17 of 17

[%, percent; CaCO<sub>3</sub>, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; ft, feet; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °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	trans-Propicon-azole, water, filtered, recoverable, µg/L (79847)	Tribuphos, water, filtered, recoverable, µg/L (61610)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661)	Uranium (natural), water, filtered, µg/L (22703)
07-07-2011	1100	<.010	<.018	<.018	.0783