



Water-Data Report 2012

372506076511701 Local number 56H 25 SOW 177A

Northern Atlantic Coastal Plain aquifer system
Patuxent Formation

James City County, VA

LOCATION.--Lat 37°24'51", long 76°51'33" referenced to North American Datum of 1927, James City County, VA, Hydrologic Unit 02080206, on the northwest side of State Highway 601, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

GROUNDWATER RECORDS

WELL CHARACTERISTICS.--Depth 929 ft. Upper casing diameter 4.00 in; top of first opening 888 ft, bottom of last opening 908 ft. Drilled observation water well, screened 888 to 908 ft.

DATUM.--Land-surface datum is 103 ft above National Geodetic Vertical Datum of 1929. Measuring point: TOP OF CASING, 1.00 ft above land-surface datum, Mar. 31, 1994, to present.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the USGS.

GAGE.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 28, 1995 to Sept. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sept. 25, 1991 to Sept. 28, 1995, monthly measurement with chalked tape. Apr. 20, 1988 to Sept. 25, 1991, occasional measurement with chalked tape. Prior to Apr. 20, 1988, digital recorder, 60-minute punch.

REMARKS.--Well is located in Lower Potomac aquifer of Cretaceous age. Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 158.21 ft below land-surface datum, Mar. 19, 20, 1986; lowest measured, 201.10 ft below land-surface datum, Aug. 13, 2012.

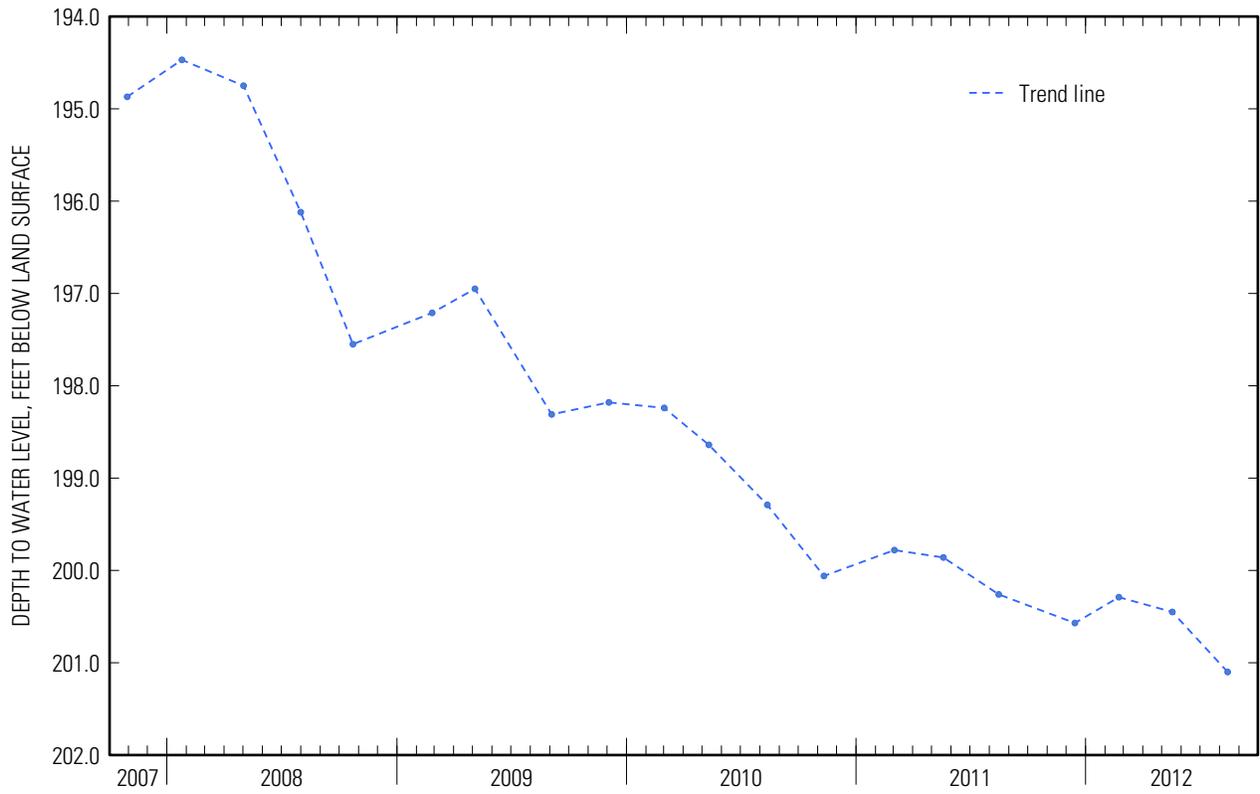
**WATER LEVELS IN FEET BELOW LAND-SURFACE DATUM
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

[Measurement method: S, steel tape. Water-level status: --, static.]

Date	Water level	Measure-ment method	Water-level status	Date	Water level	Measure-ment method	Water-level status
Dec 14	200.57	S	--	May 17	200.45	S	--
Feb 22	200.29	S	--	Aug 13	201.10	S	--

Water year 2012 highest: 200.29, Feb 22, 2012; lowest: 201.10, Aug 13, 2012

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WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 4

[CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; 217PTXN, Patuxent Formation]

Date	Sample start time	Medium name	Sample type	Geologic unit code	Depth to water level, ft below land surface (72019)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Flow rate, instantaneous, gallons per minute (00059)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)
05-02-2012	1300	Groundwater	Regular	217PTXN	199.67	<1.0	22.1	8.1	2,030	21.0

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 4

[CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; 217PTXN, Patuxent Formation]

Date	Sample start time	Depth to bottom of sample interval, feet below land surface datum (72016)	Depth to top of sample interval, feet below land surface datum (72015)	Sampling depth, ft (00003)	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)
05-02-2012	1300	908	888	230	1,210	21.1	6.06	1.46	6.28	477

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 4

[CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; 217PTXN, Patuxent Formation]

Date	Sample start time	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)	Carbonate, water, filtered, inflection-point, incremental titration method, field, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Silica, water, filtered, mg/L as SiO ₂ (00955)	Sulfate, water, filtered, mg/L (00945)
05-02-2012	1300	469	565	0.013	4	323	2.88	16.6	58.3

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WATER-QUALITY DATA**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

Part 4 of 4

[CaCO₃, calcium carbonate; SiO₂, silicon dioxide; ft, feet; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; 217PTXN, Patuxent Formation]

Date	Sample start time	Sulfide, water, unfiltered, field, milligrams per liter (99119)	Iron, water, filtered, µg/L (01046)	Manga- nese, water, filtered, µg/L (01056)
05-02-2012	1300	0.046	215	34.4