Water-Data Report 2012

0163289788 SMITH CREEK AT ROUTE 620 AT ALPINE, VA

Potomac Basin
North Fork Shenandoah Subbasin

LOCATION.--Lat 38°40′32″, long 78°38′25″ referenced to North American Datum of 1983, Shenandoah County, VA, Hydrologic Unit 02070006.

DRAINAGE AREA.--90.4 mi^2.

SURFACE-WATER RECORDS

DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Date	Discharge, in ft^3/s
Dec 19, 2011	60.9
May 21, 2012	27.8

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 0163289788, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/0163289788.2012.pdf

0163289788 SMITH CREEK AT ROUTE 620 AT ALPINE, VA—Continued

WATER-QUALITY RECORDS

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 5

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; per mil, parts per thousand; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft^3/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
12-19-2011	**1345**	Surface water	Regular	739	12.0	61	12.9	104	7.9
05-21-2012	**1300**	Surface water	Regular	738	21.0	28	10.8	122	7.9

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 5

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Date	Sample start time	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, monochrome near infrared LED light, 780-900 nm, detection angle 90 +/- 2.5 degrees, FNU (63680)	Dissolved solids dried at 180°C, water, filtered, mg/L (70300)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)
12-19-2011	**1345**	507	5.1	2.5	288	78.6	17.0	2.33	9.46
05-21-2012	**1300**	469	19.6	2.9	269	65.2	19.3	2.53	9.18

0163289788 SMITH CREEK AT ROUTE 620 AT ALPINE, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 3 of 5

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; per mil, parts per thousand; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than]

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)
12-19-2011	**1345**	215	259	0.011	1	17.7	0.12	--	18.7
05-21-2012	**1300**	200	241	.018	1	17.7	.08	7.64	15.7

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 4 of 5

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Date	Sample start time	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)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, analytically determined, mg/L (62854)
12-19-2011	**1345**	0.051	3.33	3.32	0.005	0.032	0.029	0.044	3.37
05-21-2012	**1300**	.021	1.91	1.89	.016	.038	.045	.055	2.09

0163289788 SMITH CREEK AT ROUTE 620 AT ALPINE, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 5 of 5

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Date	Sample start time	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)	Iron, water, filtered, µg/L (01046)	Manganese, water, filtered, µg/L (01056)	Nitrogen-15/-Nitrogen-14 ratio in nitrate fraction, water, filtered, per mil (82690)	Oxygen-18/Oxygen-16 ratio in nitrate fraction, water, filtered, per mil (63041)
12-19-2011	**1345**	3.60	< 3.2	17.0	8.65	3.68
05-21-2012	**1300**	2.13	17.4	14.5	12.06	3.95