Water-Data Report 2012

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA

Potomac Basin
Middle Potomac-Catoctin Subbasin

LOCATION.--Lat 38°59'06.6", long 77°17'19.1" referenced to North American Datum of 1983, Fairfax County, VA, Hydrologic Unit 02070008, on right bank, 750 ft upstream from State Highway 681, 0.9 mi south of Great Falls, and 0.4 mi upstream from mouth.

DRAINAGE AREA.--1.38 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 2008 to current year.

GAGE.--Crest-stage gage April 2008 to September 2011. Datum of gage is 220.8 ft NAVD of 1988.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,060 ft^3/s, Sept. 8, 2011, gage height, 22.91 ft.

DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Date	Discharge, in ft^3/s	Gage height, in ft
Nov 9, 2011	1.23	18.08
Apr 4, 2012	1.18	---
Jul 5, 2012	1.64	---

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 01645940, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/01645940.2012.pdf

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2008 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 1 of 6

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft, feet; 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; --, no data; <, less than; E, estimated]

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)
10-11-2011	**1800**	Surface water	Regular	757	22.0	--	9.7	98	7.0
11-08-2011	**1030**	Surface water	Regular	763	15.5	--	11.2	99	7.0
12-04-2011	**1720**	Surface water	Regular	763	8.1	1.2	11.5	98	7.1
12-13-2011	**1630**	Surface water	Regular	765	5.5	--	11.6	95	7.0
01-10-2012	**1100**	Surface water	Regular	757	6.5	--	13.0	105	7.0
02-14-2012	**1215**	Surface water	Regular	755	9.0	--	14.2	116	7.2
03-13-2012	**1300**	Surface water	Regular	757	22.5	--	12.0	119	7.2
04-04-2012	**0930**	Surface water	Regular	746	13.6	1.2	11.2	106	6.3
04-10-2012	**1230**	Surface water	Regular	750	20.5	--	12.2	117	7.2
05-08-2012	**0745**	Surface water	Regular	754	18.0	--	8.3	84	7.0
06-12-2012	**1115**	Surface water	Regular	755	21.5	--	7.9	86	7.0
07-05-2012	**0900**	Surface water	Regular	750	35.5	1.6	7.0	81	6.8
07-10-2012	**1230**	Surface water	Regular	756	34.0	--	7.5	87	6.7
08-14-2012	**0900**	Surface water	Regular	754	25.0	--	7.5	85	6.7
09-11-2012	**1245**	Surface water	Regular	764	23.0	--	8.6	90	7.2

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 6

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft, feet; 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; --, no data; <, less than; E, estimated]

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)	Gage height, ft (00065)	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)
10-11-2011	**1800**	193	16.0	0.6	18.04	--	--	--	--
11-08-2011	**1030**	190	9.8	.7	18.09	--	--	--	--
12-04-2011	**1720**	133	8.6	.7	18.08	113	13.3	6.08	2.21
12-13-2011	**1630**	182	6.8	1.3	18.10	--	--	--	--
01-10-2012	**1100**	188	6.1	.7	18.10	--	--	--	--
02-14-2012	**1215**	191	6.5	.7	18.09	--	--	--	--
03-13-2012	**1300**	185	14.8	1.3	18.21	--	--	--	--
04-04-2012	**0930**	191	12.1	1.1	18.16	112	13.5	6.35	1.93
04-10-2012	**1230**	128	12.8	.5	18.15	--	--	--	--
05-08-2012	**0745**	199	15.2	1.0	18.11	--	--	--	--
06-12-2012	**1115**	196	19.1	2.0	18.08	--	--	--	--
07-05-2012	**0900**	202	21.9	1.4	18.04	144	14.4	6.53	2.43
07-10-2012	**1230**	204	22.5	1.1	18.04	--	--	--	--
08-14-2012	**0900**	203	21.0	1.4	18.03	--	--	--	--
09-11-2012	**1245**	220	17.4	.9	18.03	--	--	--	--

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 3 of 6

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft, feet; 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; --, no data; <, less than; E, estimated]

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)	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)
10-11-2011	1800	--	--	--	--	--	--	--	--
11-08-2011	1030	--	--	--	--	--	--	--	--
12-04-2011	1720	12.3	25	31	.046	<1.0	24.9	< .04	--
12-13-2011	1630	--	--	--	--	--	--	--	--
01-10-2012	1100	--	--	--	--	--	--	--	--
02-14-2012	1215	--	--	--	--	--	--	--	--
03-13-2012	1300	--	--	--	--	--	--	--	--
04-04-2012	0930	12.8	27	33	.047	<1.0	25.9	< .04	14.2
04-10-2012	1230	--	--	--	--	--	--	--	--
05-08-2012	0745	--	--	--	--	--	--	--	--
06-12-2012	1115	--	--	--	--	--	--	--	--
07-05-2012	0900	12.0	--	--	.039	--	25.3	.06	16.6
07-10-2012	1230	--	--	--	--	--	--	--	--
08-14-2012	0900	--	--	--	--	--	--	--	--
09-11-2012	1245	--	--	--	--	--	--	--	--

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 4 of 6

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft, feet; 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; --, no data; <, less than; E, estimated]

Date	Sample start time	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	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)	Nitrate, water, in situ, milligrams per liter as nitrogen (99137)	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)
10-11-2011	**1800**	--	< .20	< .20	< .100	4.84	--	--	--	E .015
11-08-2011	**1030**	--	< .20	< .20	< .100	4.53	--	--	--	< .050
12-04-2011	**1720**	4.00	--	--	.012	4.87	4.87	--	.003	.006
12-13-2011	**1630**	--	< .20	< .20	< .100	4.90	--	--	--	E .007
01-10-2012	**1100**	--	< .20	< .20	< .100	4.94	--	--	--	E .015
02-14-2012	**1215**	--	< .20	< .20	< .100	5.02	--	--	--	< .050
03-13-2012	**1300**	--	< .20	< .20	< .100	4.76	--	--	--	< .050
04-04-2012	**0930**	3.86	--	--	< .010	5.21	5.21	--	.005	.004
04-10-2012	**1230**	--	< .20	< .20	< .100	5.07	--	--	--	< .050
05-08-2012	**0745**	--	< .20	< .20	< .100	5.22	--	--	--	E .010
06-12-2012	**1115**	--	< .20	< .20	< .100	4.96	--	--	--	E .011
07-05-2012	**0900**	4.90	--	--	< .010	4.61	4.60	4.5	.004	.014
07-10-2012	**1230**	--	< .20	< .20	< .100	4.72	--	--	--	E .016
08-14-2012	**0900**	--	< .20	< .20	< .100	4.26	--	--	--	E .017
09-11-2012	**1245**	--	.27	.28	< .100	3.67	--	--	--	E .031

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
Part 5 of 6

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft, feet; 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; --, no data; <, less than; E, estimated]

Date	Sample start time	Phosphorus, suspended sediment, total, milligrams per liter as phosphorus (00667)	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)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)	Total nitrogen, suspended sediment, total, milligrams per liter (00601)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)
10-11-2011	**1800**	< .030	E .015	E .009	--	--	< .20	4.8	4.8
11-08-2011	**1030**	< .030	< .030	< .030	--	--	< .20	4.6	4.5
12-04-2011	**1720**	--	.004	.012	4.94	4.92	--	--	--
12-13-2011	**1630**	< .030	< .030	E .012	--	--	< .20	4.9	4.9
01-10-2012	**1100**	< .030	< .030	E .007	--	--	< .20	4.9	4.9
02-14-2012	**1215**	E .007	< .030	E .007	--	--	< .20	5.0	5.0
03-13-2012	**1300**	< .030	< .030	E .007	--	--	< .20	4.8	4.8
04-04-2012	**0930**	--	.004	.008	4.97	4.94	--	--	--
04-10-2012	**1230**	< .030	< .030	< .030	--	--	< .20	5.1	5.1
05-08-2012	**0745**	< .030	E .009	E .012	--	--	< .20	5.2	5.3
06-12-2012	**1115**	< .030	E .009	E .015	--	--	< .20	5.0	5.0
07-05-2012	**0900**	--	.014	.017	4.86	4.76	--	--	--
07-10-2012	**1230**	< .030	E .017	E .022	--	--	< .20	4.7	4.7
08-14-2012	**0900**	< .030	E .014	E .017	--	--	< .20	4.3	4.3
09-11-2012	**1245**	< .030	E .014	E .016	--	--	< .20	3.9	3.9

01645940 CAPTAIN HICKORY RUN AT ROUTE 681 NEAR GREAT FALLS, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 6 of 6

[%, percent; $CaCO_3$, calcium carbonate; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; SiO_2, silicon dioxide; ft, feet; 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; --, no data; <, less than; E, estimated]

Date	Sample start time	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)	Suspended sediment concentration, mg/L (80154)
10-11-2011	**1800**	--	--	--	--	2
11-08-2011	**1030**	--	--	--	--	< .5
12-04-2011	**1720**	52.5	16.4	7.11	1.57	--
12-13-2011	**1630**	--	--	--	--	2
01-10-2012	**1100**	--	--	--	--	1
02-14-2012	**1215**	--	--	--	--	1
03-13-2012	**1300**	--	--	--	--	1
04-04-2012	**0930**	18.4	9.85	7.36	1.92	--
04-10-2012	**1230**	--	--	--	--	5
05-08-2012	**0745**	--	--	--	--	< .5
06-12-2012	**1115**	--	--	--	--	5
07-05-2012	**0900**	13.6	6.72	8.84	2.85	--
07-10-2012	**1230**	--	--	--	--	6
08-14-2012	**0900**	--	--	--	--	1
09-11-2012	**1245**	--	--	--	--	1