

01464504 CROSSWICKS CREEK AT GROVEVILLE ROAD, AT GROVEVILLE, NJ

DELAWARE RIVER BASIN

LOCATION.--Lat 40°10'02", long 74°40'39" referenced to North American Datum of 1983, Hamilton Township, Mercer County, NJ, Hydrologic Unit 02040201, at bridge on Groveville Road (Main Street) in Groveville, 1.2 mi upstream of Doctors Creek, and 2.2 mi northeast of Bordentown.

DRAINAGE AREA.--98.0 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1966, 1998 to current year.

GAGE.--Staff gage.

**DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Date	Discharge, in ft³/s
Dec 14, 2005	108
Feb 15, 2006	162
May 24, 2006	76.2
Aug 8, 2006	43.4

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1998 to current year.

REMARKS.--Site is at head of tide, infrequently affected, but sampled at low tide. Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570). Bacteria samples were collected synoptically over a 30-day period during the summer. The accuracy of continuous water-quality data is routinely verified through inspections for fouling and calibration drift. The New Jersey Water Science Center requires that either constant or prorated adjustments be made to the continuous water-quality record when the difference between a sensor's response and a known value exceeds the following criteria: Water Temperature, 0.2 degrees Celsius (+ or -); Specific Conductance, the greater of 5 microsiemens/cm (+ or -) or 5% of the measured value; Dissolved Oxygen, the greater of 0.3 mg/L (+ or -) or 5% of the measured value; pH, 0.3 units (+ or -); Turbidity, the greater of 0.5 FNU (+ or -) or 5% of the measured value. If the difference between a sensor's response and a known value is within specified criteria, the data are considered to be reliable and are not adjusted. Data from the following period(s) were adjusted - NONE.

COOPERATIVE NETWORK SITE DESCRIPTOR: Watershed Integrator and Watershed Reconnaissance, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 20.

COOPERATION.--Samples were collected in cooperation with the NJDEP. Bacteria samples were provided by the local county health department under the direction of the NJDEP through the County Environmental Health Act. Determinations of filtered ammonia, filtered orthophosphorus, BOD, total suspended residue, fecal coliform, E. coli, and enterococcus bacteria were performed by the NJ Department of Health and Senior Services.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)
Dec 14...	0940	108	7.7	.159	.125	770	14.6	99	7.2	174	-4.0	.0	53
Feb 15...	1320	162	8.2	.123	.098	768	13.4	100	6.7	248	11.0	3.4	55
May 24...	1000	76	12	.241	.192	766	9.3	91	6.9	171	18.0	14.4	52
Aug 08...	1110	43	20	.249	.200	763	7.5	88	7.0	216	--	23.7	70

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
Dec 14...	15.4	3.50	2.68	11.5	18	23.7	.12	9.5	24.7	106	115	2	.23
Feb 15...	15.9	3.69	2.67	21.7	19	39.0	.11	9.4	25.4	134	145	6	.19
May 24...	15.5	3.20	2.53	9.11	22	19.3	.14	9.4	21.2	97	115	16	.30
Aug 08...	21.3	4.19	4.01	11.4	37	23.6	.20	10.6	22.9	125	142	15	.31

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd mg/L (00600)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
Dec 14...	.079	.88	.05	1.1	1.2	E.007	.013	.064	.6	<.1	.6	3.7	E1.1
Feb 15...	.091	1.06	.06	1.3	1.3	E.008	.010	.070	.6	<.1	.6	2.7	E1.4
May 24...	.073	.71	.10	1.0	1.1	.048	.032	.123	.8	<.1	.8	4.3	<1.0
Aug 08...	.050	.97	.07	1.3	1.4	.049	.056	.157	.5	<.1	.5	4.4	E1.7

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**WATER-QUALITY
DATA
WATER YEAR
OCTOBER 2005 TO
SEPTEMBER 2006**

Part 4 of 4
[Remark codes:
<, less than;
E, estimated.]

Date	Boron, water, fltrd, ug/L (01020)
Dec 14...	22
Feb 15...	19
May 24...	--
Aug 08...	32

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

[Remark codes: <, less than.]

Date	Time	Temper- ature, water, deg C (00010)	Entero- cocci, m-E MF, water, col/ 100 mL (31649)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, EChroth water, MPN/ 100 mL (31615)
May 03...	0740	12.0	40	90	20
10...	0900	14.3	60	40	<20
17...	1125	15.8	1,800	730	3,000
24...	0746	14.2	80	40	130
30...	0845	21.5	230	40	70

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WATERSHED RECONNAISSANCE STUDY
HOURLY WATER-QUALITY-MONITOR VALUES
SEPTEMBER 13, 2006 to SEPTEMBER 20, 2006

