



Water-Data Report 2006

**01407012 GRAVELLY BROOK AT CHURCH STREET, AT MATAWAN, NJ**

MATAWAN RIVER BASIN

LOCATION.--Lat 40°24'27", long 74°13'43" referenced to North American Datum of 1983, Matawan Borough, Monmouth County, NJ, Hydrologic Unit 02030104, at bridge on Church Street, 115 ft upstream of Lake Matawan, and 0.4 mi east of intersection of State Highway 34, and Main Street in Matawan.

DRAINAGE AREA.--2.36 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2005 to current year.

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia plus organic nitrogen (00623), filtered nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570). Bacteria samples were collected synoptically over a 30-day period during the summer.

COOPERATIVE NETWORK SITE DESCRIPTOR: Statewide Status, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 12.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of 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 5

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

Date	Time	Turbidity 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)	Calcium water, fltrd, mg/L (00915)
<b>Nov</b>													
16...	0900	.6	.160	.147	763	6.2	62	3.2	615	20.0	15.3	67	16.6
<b>Feb</b>													
22...	1000	.7	.063	.053	766	10.4	78	3.8	522	3.8	3.3	66	16.6
<b>May</b>													
24...	0900	.9	.156	.157	762	9.0	83	3.4	560	16.0	11.5	65	16.5
<b>Aug</b>													
24...	1000	7.8	.344	.292	763	7.1	75	3.4	633	19.0	18.0	66	17.0

01407012 GRAVELLY BROOK AT CHURCH STREET, AT MATAWAN, NJ—Continued

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

Part 2 of 5

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Particulate nitrogen, susp, water, mg/L (49570)
Nov 16...	6.25	5.10	22.3	44.4	E.09	23.1	143	250	2	.27	.163	.10	.06
Feb 22...	5.88	3.72	31.7	57.7	.12	20.7	127	244	3	.40	.283	.40	.03
May 24...	5.82	4.03	22.8	44.4	.10	22.6	139	237	6	.50	.315	.18	.03
Aug 24...	5.64	4.79	20.5	39.4	E.07	23.3	152	273	7	1.3	.662	.44	.06

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

Part 3 of 5

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

Date	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd, mg/L (00600)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd, ug/L (01002)
Nov 16...	.37	.43	.010	.004	.007	.3	<.1	.3	3.9	<1.0	--	--	--
Feb 22...	.80	.83	E.009	.009	.016	.2	<.1	.2	1.2	E2.2	5,080	1.2	1.7
May 24...	.68	.71	E.007	.004	.006	.1	<.1	.1	1.5	<1.0	--	--	--
Aug 24...	1.8	1.8	.025	.020	.035	1.1	<.1	1.1	6.6	<1.2	8,180	1.3	2.3

01407012 GRAVELLY BROOK AT CHURCH STREET, AT MATAWAN, NJ—Continued

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

Part 4 of 5

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

Date	Barium, water, unfltrd recover- -able, ug/L (01007)	Beryll- ium, water, unfltrd recover- -able, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Boron, water, unfltrd recover- -able, ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover- -able, ug/L (01034)	Copper, water, unfltrd recover- -able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- -able, ug/L (01045)	Lead, water, unfltrd recover- -able, ug/L (01051)	Mangan- ese, water, unfltrd recover- -able, ug/L (01055)	Mercury water, unfltrd recover- -able, ug/L (71900)	Nickel, water, unfltrd recover- -able, ug/L (01067)
Nov 16...	--	--	48	--	--	--	--	--	--	--	--	--	--
Feb 22...	35.2	1.41	36	41	.22	1.8	3.8	16,100	16,300	1.05	385	<.010	27.2
May 24...	--	--	43	--	--	--	--	--	--	--	--	--	--
Aug 24...	36.9	1.49	49	44	.23	1.8	9.1	9,810	10,200	4.05	387	<.010	28.8

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

Part 5 of 5

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

Date	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, unfltrd recover- -able, ug/L (01077)	Zinc, water, unfltrd recover- -able, ug/L (01092)
Nov 16...	--	--	--
Feb 22...	.24	<.16	87
May 24...	--	--	--
Aug 24...	.33	<.16	120

## 01407012 GRAVELLY BROOK AT CHURCH STREET, AT MATAWAN, NJ—Continued

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

Part 1 of 5

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

Date	Time	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd, 0.7u GF ug/L (38746)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	OIET, water, fltrd, ug/L (50355)	3-Hydroxy carbo-furan, wat flt, 0.7u GF ug/L (49308)	Aci-fluor-fen, water, fltrd, 0.7u GF ug/L (49315)	Aldi-carb sulfone, water, fltrd, 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt, 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd, 0.7u GF ug/L (49312)	Atra-zine, water, fltrd, ug/L (39632)
May 24...	0900	<.190	<.04	<.02	<.03	<.08	<.032	<.008	<.028	<.02	<.100	<.15	<.008

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

Part 2 of 5

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

Date	Bendio-carb, water, fltrd, ug/L (50299)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon-methyl, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd, 0.7u GF ug/L (38711)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd, 0.7u GF ug/L (49311)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd, 0.7u GF ug/L (49310)	Carbo-furan, water, fltrd, 0.7u GF ug/L (49309)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt, ug/L (04039)	Clopyr-alid, water, fltrd, 0.7u GF ug/L (49305)
May 24...	<.08	<.022	<.02	<.02	<.02	<.04	.056	<.02	<.016	<.02	<.032	<.04	<.07

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

Part 3 of 5

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

Date	Cyclo-ate, water, fltrd, ug/L (04031)	Dacthal mono-acid, water, fltrd, 0.7u GF ug/L (49304)	Dicamba water, fltrd, 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd, 0.7u GF ug/L (49302)	Dinoseb water, fltrd, 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd, 0.7u GF ug/L (49300)	Fenuron water, fltrd, 0.7u GF ug/L (49297)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon, water, fltrd, 0.7u GF ug/L (38811)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid, water, fltrd, ug/L (61695)
May 24...	<.01	<.03	<.04	<.03	<.04	<.01	<.02	<.10	<.04	<.02	<.04	<.04	<.020

01407012 GRAVELLY BROOK AT CHURCH STREET, AT MATAWAN, NJ—Continued

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

Part 4 of 5

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

Date	Linuron water, fltrd 0.7u GF ug/L (38478)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta- laxyl, water, fltrd, ug/L (50359)	Methio- carb, water, fltrd 0.7u GF ug/L (38501)	Meth- omyl, water, fltrd 0.7u GF ug/L (49296)	Metsul- furon, water, fltrd, ug/L (61697)	N-(4- Chloro- phenyl)- N'- methyl- urea, ug/L (61692)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico- sul- furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory- zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)
May 24...	<.01	<.07	<.10	<.03	<.034	<.070	<.07	<.04	<.01	<.04	<.02	<.02	<.05

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

Part 5 of 5

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

Date	Pic- loram, water, fltrd 0.7u GF ug/L (49291)	Propham water, fltrd 0.7u GF ug/L (49236)	Propi- cona- zole, water, fltrd, ug/L (50471)	Pro- poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sulfo- met- ruron, water, fltrd, ug/L (50337)	Tebu- thiuron water, fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd, ug/L (04032)	Tri- clopyr, water, fltrd 0.7u GF ug/L (49235)
May 24...	<.03	<.030	<.01	<.008	E.01	<.090	<.026	<.026	<.03

**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, ECbroth water, MPN/ 100 mL (31615)
Jun					
15...	1005	16.2	30	190	500
22...	1015	15.5	20	30	40
Jul					
13...	1020	19.2	600	400	800
20...	1020	18.5	--	--	1,300
27...	1020	18.0	<10	<10	20