

01404400 OAKEYS BROOK NEAR PATRICKS CORNER, NJ

LOCATION.--Lat 40°25'06", long 74°29'52", Middlesex County, Hydrologic Unit 02030105, at bridge on Davidson Mill Road, 600 ft southeast of State Route 130, 0.4 mi north of Davidsons Millpond, and 0.6 mi upstream of Farrington Lake.

DRAINAGE AREA.--4.75 mi².

PERIOD OF RECORD.--October 2004 to August 2005.

REMARKS.--Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

COOPERATION.--Field data and samples for laboratory analyses were provided by the New Jersey Department of Environmental Protection. Concentrations of ammonia in samples collected during November to December and August to September; orthophosphate in every sampling period except February to March; and nitrite, biochemical oxygen demand, total suspended residue, total ammonia + organic nitrogen in bed sediment, total phosphorus in bed sediment, fecal coliform, E. coli, and enterococcus bacteria were determined by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services.

COOPERATIVE NETWORK SITE DESCRIPTOR.--Statewide Status, New Jersey Department of Environmental Protection Watershed Management Area 9.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 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)	
OCT 28...	0930	1.7	.136	.108	767	7.4	65	7.4	444	9.5	10.0	110	30.7	
FEB 10...	0900	11	.302	.234	747	11.6	86	6.8	518	4.0	2.3	63	16.7	
MAY 04...	0930	2.6	.250	.190	769	8.9	78	7.1	405	11.5	10.0	69	17.1	
AUG 08...	1030	6.3	.133	.103	764	6.1	69	7.1	494	26.5	21.4	98	25.5	
Date		Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfixed end pt, lab, mg/L as CaCO3 (90410)	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 water, fltrd, sum of constituents mg/L (70301)	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)
OCT 28...	8.88	3.87	39.3	71	73.0	.2	11.7	22.5	234	243	3	.27	E.008	
FEB 10...	5.06	2.13	67.6	20	129	E.1	9.0	12.1	255	275	--	.43	E.038	
MAY 04...	6.47	2.26	49.5	41	86.7	.1	9.2	12.5	209	228	--	.36	<.04	
AUG 08...	8.31	3.67	54.1	64	101	.2	13.9	12.7	260	304	2	.33	.048	
Date		Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, fltrd, mg/L (49570)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, 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, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
OCT 28...	.23	.003	<.02	.50	--	.010	.017	.033	.2	<.1	.2	4.2	<1.0	
FEB 10...	.33	--	.09	.77	.85	<.006	.012	.039	.8	<.1	.8	6.7	--	
MAY 04...	.16	--	.07	.52	.59	E.008	.013	.037	.5	<.1	.5	5.6	--	
AUG 08...	.39	--	.12	.72	.84	.014	.016	.019	1.0	<.1	.9	3.0	<1.0	

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	Boron, water, ftrd, ug/L (01020)	Sus- pended sediment concentration mg/L (80154)
OCT 28...	53	--
FEB 10...	27	6
MAY 04...	--	1
AUG 08...	50	--

Remark codes used in this table:

< -- Less than.

E -- Estimated.

WATER-COLUMN AND BED-SEDIMENT TRACE-ELEMENT ANALYSES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	pH bed sedimnt std units (70310)	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Phos- phorus, bed sedimnt total, mg/kg (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Inor- ganic carbon, bed sedimnt total, g/kg (00686)	Arsenic water, ftrd, ug/L (01000)	Arsenic water unftrd ug/L (01002)	Barium, water, unftrd recover- able, ug/L (01007)	Beryll- ium, water, unftrd recover- able, ug/L (01012)	Boron, water, unftrd recover- able, ug/L (01022)	Cadmium water, unftrd ug/L (01027)	Chrom- ium, water, unftrd recover- able, ug/L (01034)	
FEB 10...	0900	--	--	--	--	--	.3	<2	62.1	.06	29	.18	1.0	
AUG 08...	1030	--	--	--	--	--	.5	<2	67.7	<.06	42	E.03	<.8	
08...	1030	6.74	70	1,400	3.3	<.2	--	--	--	--	--	--	--	
Date		Copper, water, unftrd recover- able, ug/L (01042)	Iron, water, unftrd recover- able, ug/L (01045)	Lead, water, unftrd recover- able, ug/L (01051)	Mangan- ese, water, unftrd recover- able, ug/L (01055)	Mercury water, unftrd recover- able, ug/L (71900)	Nickel, water, unftrd recover- able, ug/L (01067)	Selen- ium, water, unftrd ug/L (01147)	Silver, water, unftrd recover- able, ug/L (01077)	Zinc, water, unftrd recover- able, ug/L (01092)	Arsenic bed sedimnt recover- able, ug/g (64847)	Cadmium bed sedimnt recover- able, ug/g (01028)	Chrom- ium, bed sedimnt recover- able, ug/g (01029)	Cobalt bed sedimnt recover- able, ug/g (01038)
FEB 10...	5.3	610	1.75	163	E.01	2.90	.4	<.16	30	--	--	--	--	--
AUG 08...	1.5	510	.19	114	<.01	1.81	.5	<.16	4	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	.8	.070	6.7	1.7	--
Date		Copper, bed sedimnt recover- able, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recover- able, ug/g (01052)	Mangan- ese, bed sedimnt recover- able, ug/g (01053)	Mercury bed sedimnt recover- able, ug/g (71921)	Nickel, bed sedimnt recover- able, ug/g (01068)	Selen- ium, bed sedimnt recover- able, ug/g (64848)	Zinc, bed sedimnt recover- able, ug/g (01093)	1,2-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49403)	1,6-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49404)	1Methyl -9H- fluor- ene, bed sed <2 mm, ug/kg (49398)	1- Methyl- phenan- threne, bed sed <2 mm, ug/kg (49410)	1- Methyl- pyrene, bed sed <2 mm, wsv nat ug/kg (49388)
FEB 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	5	4,300	5.5	54	<.007	2.5	<.1	23	E26	E30	E30	E37	E37	E37

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005—CONTINUED

Date	236Tri- methyl- naphth- alene, bed sed <2 mm, ug/kg (49405)	2,6-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49406)	2-Ethyl- naphth- alene bed sed <2 mm wsv nat ug/kg (49948)	2- Methyl- anthra- cene, bed sed <2 mm, ug/kg (49435)	45Meth- ylene- phenan- threne, bed sed <2 mm, ug/kg (49411)	9H- Fluor- ene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace- naphth- ene, bed sed <2 mm, wsv nat ug/kg (49429)	Ace- naphth- ylene, bed sed <2 mm, wsv nat ug/kg (49428)	Anthra- cene, bed sed <2 mm, wsv nat field, ug/kg (49434)	Benzo- [a]- anthra- cene, bed sed <2 mm, ug/kg (49436)	Benzo- [a]- pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzo- [b]- fluor- anthene bed sed <2 mm ug/kg (49458)	Benzo- [ghi]- peryl- ene, bed sed <2 mm, ug/kg (49408)
FEB 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	E26	E31	E23	E30	E45	E36	E30	E28	56	140	120	120	E70
Date	Benzo- [k]- fluor- anthene bed sed <2 mm ug/kg (49397)	Chry- sene, bed sed <2 mm, wsv nat field, ug/kg (49450)	Dibenzo -[a,h]- anthra- cene, bed sed <2 mm, ug/kg (49461)	Fluor- anthene bed sed <2 mm wsv nat field, ug/kg (49466)	Indeno- [1,2,- 3-cd]- pyrene, bed sed <2 mm ug/kg (49390)	Iso- phorone bed sed <2 mm, wsv nat field, ug/kg (49400)	Naphth- alene, bed sed <2 mm wsv nat ug/kg (49402)	PCBs, bed sedimnt ug/kg (39519)	p- Cresol, bed sed <2 mm, wsv nat field, ug/kg (49451)	Phenan- threne, bed sed <2 mm, wsv nat field, ug/kg (49409)	Phenan- thri- dine, bed sed <2 mm, wsv nat ug/kg (49393)	Pyrene, bed sed <2 mm, wsv nat field, ug/kg (49387)	Bed sedi- ment, dry svd sve dia percent <.063mm (80164)
FEB 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	120	150	E25	360	E84	<55	E24	<5.00	58	210	E25	280	.4

Remark codes used in this table:

< -- Less than.

E -- Estimated.

01404400 OAKEYS BROOK NEAR PATRICKS CORNER, NJ—Continued

WATER-COLUMN PESTICIDE ANALYSES

The following were determined using laboratory schedule 2001 (listed in its entirety, with laboratory reporting levels, in "Laboratory Measurements" in the Explanation of Water-Quality Records section of this report). Only pesticides detected in one or more surface-water samples are listed in the following table.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	CIAT, water, fltrd, ug/L (04040)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd, 0.7u GF ug/L (82673)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd, 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diazi- non, water, fltrd, ug/L (39572)
MAY 04...	0930	E.007	<.006	<.005	.031	<.050	<.010	<.041	E.020	<.005	<.003	E.002	<.005
Date	Time	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Linuron water fltrd 0.7u GF ug/L (82666)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Prome- ton, water, fltrd, ug/L (04037)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)
MAY 04...	<.009	E.002	E.002	E.007	E.017	<.035	.010	<.006	<.007	E.018	E.01	<.004	E.004
Date	Time					Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)					
MAY 04...						<.02	<.034	E.001					
Remark codes used in this table:													
< -- Less than.													
E -- Estimated.													

WATER-COLUMN BACTERIA ANALYSES

Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Time	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 08...	0945	4,200	1,100	1,300
15...	0925	250	400	500
22...	0936	150	500	300
29...	0930	580	1,800	1,100
JUL 06...	1000	2,100	600	1,700