0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1988-91, 1994 to current year

REMARKS.--Station operated to define the impacts of various land-use development on surface-water quality in the Upper Neuse River basin.

COOPERATION.--For the period February 1988 through June 1989 the inorganic chemical data and trace metal data were analyzed by the city of Durham's Brown Water Treatment Plant Laboratory.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
03...	1100	.03	758	8.6	79	6.0	88	11.4	E.10	.14	<.04	--	E.04
DEC													
11...	1115	3.1	749	12.1	106	6.2	56	8.8	.94	.76	<.04	.50	.51
FEB													
20...	1100	1.0	759	14.8	118	6.0	63	5.6	.11	.13	<.04	--	E.05
APR													
08...	1100	.47	742	10.1	98	7.1	71	13.0	.12	.12	<.04	--	E.03
MAY													
03...	1045	7.2	755	9.8	97	6.6	49	14.7	.81	.67	<.04	--	E.06
JUN													
04...	1500	.35	756	7.8	85	7.3	94	19.0	.22	.36	.04	--	.26
JUL													
23...	1300	.03	751	6.6	79	7.2	93	23.4	.18	.27	<.04	--	.17
AUG													
30...	0930	1.4	754	7.4	85	7.2	68	21.9	.21	.64	<.04	--	.09

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Organic nitrogen, water, unfltrd mg/L (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water unfltrd ug/L (01002)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, unfltrd recoverable, ug/L (01037)
OCT													
03...	<.008	--	--	<.02	<.04	<.04	--	--	--	--	--	--	--
DEC													
11...	.008	--	--	E.01	.04	.11	1.4	1.3	--	--	--	--	--
FEB													
20...	<.008	--	--	<.02	<.04	E.03	--	--	--	--	--	--	--
APR													
08...	<.008	--	--	<.02	<.04	E.02	--	--	121	<2	<.04	<.8	.298
MAY													
03...	E.006	--	--	<.02	E.02	.06	--	--	763	<2	<.04	E.6	.777
JUN													
04...	E.007	.18	.32	<.02	<.04	.04	.47	.62	--	--	--	--	--
JUL													
23...	<.008	--	--	<.02	<.04	E.03	.35	.44	--	--	--	--	--
AUG													
30...	<.008	--	--	<.02	<.04	.11	.30	.73	--	--	--	--	--

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Copper, water, unfltrd recover -able, ug/L (01042)	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)	Molyb- denum, water, unfltrd recover -able, ug/L (01062)	Nickel, water, unfltrd recover -able, ug/L (01067)	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, unfltrd recover -able, ug/L (01077)	Zinc, water, unfltrd recover -able, ug/L (01092)	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)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	.6	450	.14	42	<.02	<.2	.31	<.4	<.16	<2	--	--	--
MAY													
03...	2.3	1,070	.84	80	E.02	<.2	.94	E.2	<.16	3	<.009	<.03	<.02
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	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)	3-Keto- carbo- furan, water, fltrd, ug/L (50295)	Aceto- chlor, water, fltrd, ug/L (49260)	Aci- fluor- fen, water, fltrd 0.7u GF ug/L (49315)	Ala- chlor, water, fltrd, ug/L (46342)	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)	Aldrin, water, unfltrd ug/L (39330)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.006	<.006	<.01	<.008	<.006	<.014	<.006	<.007	<.005	<.02	<.008	<.04	<.01
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	alpha- Endo- sulfan, water, unfltrd ug/L (39388)	alpha- HCH, water, fltrd, ug/L (34253)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio- carb, water, fltrd, ug/L (50299)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul- furon, 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)	Butyl- ate, water, fltrd, ug/L (04028)	Caf- feine, water, fltrd, ug/L (50305)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.03	<.005	.007	<.050	<.03	<.010	<.004	<.02	<.01	<.03	<.02	<.004	<.0096
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Carbaryl, water, fltrd 0.7u GF ug/L (49310)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Carbophenothion, water, unfltrd ug/L (39786)	Chloramben methyl ester, water, fltrd, ug/L (61188)	Chlordane, technical, water, unfltrd ug/L (39350)	Chlorimuron, water, fltrd, ug/L (50306)	Chloro-diamino-s-triazine, wat flt ug/L (04039)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos water, fltrd, ug/L (38933)	Chlorpyrifos water unfltrd ug/L (38932)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.03	<.041	<.006	<.020	<.02	<.02	<.1	<.010	<.04	<.04	<.005	<.01	<.006
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Dacthal monoacid, water, fltrd 0.7u GF ug/L (49304)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Diazinon, water, unfltrd ug/L (39570)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dieldrin, water, fltrd, ug/L (39381)	Dieldrin, water, unfltrd ug/L (39380)	Dinoseb water, fltrd 0.7u GF ug/L (49301)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.01	<.018	<.01	<.01	<.003	<.012	<.005	<.02	<.01	<.01	<.009	<.016	<.01
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Diphenamid, water, fltrd, ug/L (04033)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Disulfoton, water, unfltrd ug/L (39011)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Endrin, water, unfltrd ug/L (39390)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethion, water, unfltrd ug/L (39398)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulfinyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.03	<.02	<.10	<.01	<.01	<.004	<.009	<.01	<.005	<.03	<.029	<.013	<.024
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Fipronil, water, fltrd, ug/L (62166)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos water, fltrd, ug/L (04095)	Fonofos water unfltrd ug/L (82614)	Heptachlor epoxide water unfltrd ug/L (39420)	Heptachlor, water, unfltrd ug/L (39410)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)	Lindane water, fltrd, ug/L (39341)	Lindane water, unfltrd ug/L (39340)	Linuron water fltrd 0.7u GF ug/L (38478)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.016	<.01	<.03	<.003	<.01	<.009	<.01	<.02	<.02	<.007	<.004	<.014	<.01
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Malathion, water, unfltrd ug/L (39530)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Metalaxyl, water, fltrd, ug/L (50359)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Methyl parathion, water, unfltrd ug/L (39600)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.035	<.027	<.10	<.02	<.01	<.02	<.008	<.004	<.015	<.01	E.009	<.006	<.03
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Mirex, water, unfltrd ug/L (39755)	Molinate, water, fltrd 0.7u GF ug/L (82671)	N-(4-Chlorophenyl)-N-'methylurea, ug/L (61692)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p,p-'DDD, water, unfltrd ug/L (39360)	p,p-'DDE, water, fltrd, ug/L (34653)	p,p-'DDE, water, unfltrd ug/L (39365)	p,p-'DDT, water, unfltrd ug/L (39370)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.006	<.003	<.02	<.007	<.01	<.01	<.02	<.02	<.01	<.016	<.003	<.014	<.010
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

0208650112 FLAT RIVER TRIBUTARY NEAR WILLARDVILLE, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	p,p-' Meth-oxy-chlor, water, unfltrd ug/L (39480)	Para-thion, water, fltrd, ug/L (39542)	Para-thion, water, unfltrd ug/L (39540)	PCBs, water, unfltrd ug/L (39516)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Phorate water unfltrd ug/L (39023)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Prome-ton, water, fltrd, ug/L (04037)	Propy-zamide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.006	<.010	<.01	<.1	<.004	<.022	<.011	<.02	<.02	<.01	<.004	<.025	<.011
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	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)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terba-cil, water, fltrd, ug/L (04032)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Toxa-phene, water, unfltrd ug/L (39400)
OCT													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR													
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
03...	<.02	<.010	<.02	<.008	<.02	<.005	<.009	<.02	<.034	<.010	<.02	<.010	<1
JUN													
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL													
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
30...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tribu-phos, water, unfltrd ug/L (39040)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)
OCT						
03...	--	--	--	--	2	.00
DEC						
11...	--	--	--	--	21	.17
FEB						
20...	--	--	--	--	6	.02
APR						
08...	--	--	--	--	7	.01
MAY						
03...	<.002	<.02	<.02	<.009	136	2.6
JUN						
04...	--	--	--	--	30	.03
JUL						
23...	--	--	--	--	22	.00
AUG						
30...	--	--	--	--	152	.55