

02099238 BULL RUN AT NC 29/70 NEAR JAMESTOWN, NC—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 2002 to November 2003 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August 2002 to November 2003.

INSTRUMENTATION.--Logging pressure transducer with water temperature probe.

REMARKS.--Station operated as part of NAWQA Urban Land Use Gradient study.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 28.1°C, July 28, 2003; minimum recorded, 0.1°C, Dec. 4, 5, 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Medium code	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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
FEB 20...	1030	9	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	1400	9	E7.8	747	12.7	106	7.5	185	6.6	25.6	11.0	0.41	E.04
MAY 15...	0830	D	E1.4	--	7.6	--	7.0	164	16.2	--	--	--	--
JUN 10...	1430	9	--	--	7.3	--	6.8	90	22.8	--	--	--	--
JUL 01...	0830	9	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	1430	9	5.7	743	6.8	85	6.9	117	25.4	6.05	5.2	0.60	<0.04

Date	Nitrate water, fltrd, mg/L (71851)	Nitrate water, fltrd, mg/L as N (00618)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L (71856)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd total, mg/L (00688)	Organic carbon, suspnd total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	0.31	--	<0.008	<0.02	0.14	0.046	0.72	0.8	<0.1	0.8	4.3
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	0.536	0.12	0.14	0.053	0.016	<0.02	0.12	0.070	0.74	0.6	<0.1	0.6	6.7

Date	Biomass periphyton, ashfree drymass g/m2 (49954)	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	E coli, modif. m-TEC, water, col/100 mL (90902)	Chlorophyll a periphyton, chromo-fluoro, mg/m2 (70957)	1-Naphthol, water, fltrd 0.7u GF (49295)	2,6-Diethyl-aniline water, fltrd 0.7u GF (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2Chloro-2,6-' diethyl acetanilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)
FEB 20...	--	--	--	--	--	160	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	<0.09	<0.006	<0.1	<0.005	<0.006	<0.004
MAY 15...	1.0	11	12.30	294	1.5	--	3.4	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	110	--	--	--	--	--	--	--
JUL 08...	--	--	--	--	--	--	--	<0.09	<0.006	<0.1	<0.005	<0.006	<0.004

02099238 BULL RUN AT NC 29/70 NEAR JAMESTOWN, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	3,4-Di-chloro-aniline water fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	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)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyflu-thrin, water, fltrd, ug/L (61585)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	<0.004	E.005	<0.006	<0.004	0.007	<0.02	<0.050	<0.010	E.003	<0.06	<0.005	<0.006	<0.008
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	<0.004	<0.006	<0.006	<0.004	E.007	<0.02	<0.050	<0.010	E.029	<0.06	<0.005	<0.006	<0.008
Date	Cypermethrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diaz-inon oxon, water, fltrd, ug/L (61638)	Diazi-non, water, fltrd, ug/L (39572)	Dicro-tophos, water, fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-oate, water, fltrd, 0.7u GF (82662)	Ethion monoxon, water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	<0.009	<0.003	<0.004	<0.04	<0.005	<0.08	<0.005	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	<0.009	<0.003	<0.004	<0.01	0.044	<0.08	<0.005	<0.006	<0.03	<0.004	<0.031	<0.03	<0.03
Date	Desulf-inyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Hexa-zinone, water, fltrd, ug/L (04025)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Malax-on, water, fltrd, ug/L (61652)	Malathion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion water, fltrd, ug/L (61598)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	<0.009	<0.005	<0.005	E.005	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	0.008	<0.006
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	<0.009	<0.005	<0.006	E.006	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
Date	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd 0.7u GF (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Myclo-butanil water, fltrd, ug/L (61599)	Pendi-meth-alin, water, fltrd 0.7u GF (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Pron-amide, water, fltrd 0.7u GF (82676)
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	<0.03	<0.006	<0.013	<0.006	E.007	<0.022	<0.10	<0.011	<0.06	<0.008	E.01	<0.005	<0.004
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 08...	<0.03	<0.006	E.011	0.030	0.019	<0.022	<0.10	<0.011	<0.06	<0.008	0.03	<0.005	0.018

02099238 BULL RUN AT NC 29/70 NEAR JAMESTOWN, NC—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Ter- bufos oxon sulfone water, fltrd, ug/L (61674)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Ter- buthyl- azine, water, fltrd, ug/L (04022)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
FEB 20...	--	--	--	--	--	--	--	--	--	--
20...	0.428	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	88	6	--
MAY 15...	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--
JUL 01...	--	--	--	--	--	--	--	--	--	--
08...	0.010	<0.02	<0.07	<0.02	0.13	<0.009	<0.01	95	16	0.25

Remark codes used in this table:

- < -- Less than
- E -- Estimated value

Medium codes used in this table:

- 9 -- Surface water
- D -- Plant tissue

TEMPERATURE, WATER, DEGREES CELSIUS
AUGUST TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	SEPTEMBER		
										MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	---	---	---	---	---	---	21.0	19.8	20.6
2	---	---	---	---	---	---	---	---	---	21.1	20.1	20.6
3	---	---	---	---	---	---	---	---	---	22.1	19.3	20.7
4	---	---	---	---	---	---	---	---	---	23.6	20.7	22.0
5	---	---	---	---	---	---	---	---	---	23.0	20.8	21.9
6	---	---	---	---	---	---	24.6	22.2	23.3	22.0	18.8	20.4
7	---	---	---	---	---	---	22.2	19.5	21.0	21.8	19.0	20.3
8	---	---	---	---	---	---	21.0	17.5	19.5	20.9	18.0	19.4
9	---	---	---	---	---	---	21.2	17.2	19.3	20.7	18.1	19.3
10	---	---	---	---	---	---	21.6	17.2	19.5	20.9	18.9	19.8
11	---	---	---	---	---	---	22.2	17.8	20.2	21.3	18.5	19.9
12	---	---	---	---	---	---	23.9	19.7	21.8	20.3	17.5	18.4
13	---	---	---	---	---	---	24.1	20.2	22.2	19.2	16.4	17.8
14	---	---	---	---	---	---	24.2	20.6	22.4	22.4	18.8	19.9
15	---	---	---	---	---	---	24.1	22.7	23.3	22.5	20.9	21.8
16	---	---	---	---	---	---	24.1	22.3	23.1	23.2	21.9	22.5
17	---	---	---	---	---	---	24.7	22.5	23.5	22.9	21.3	22.1
18	---	---	---	---	---	---	24.8	22.3	23.6	23.9	21.6	22.3
19	---	---	---	---	---	---	24.9	22.1	23.5	23.1	22.3	22.6
20	---	---	---	---	---	---	24.9	21.9	23.4	22.9	21.6	22.1
21	---	---	---	---	---	---	24.6	21.5	23.0	22.8	21.0	21.8
22	---	---	---	---	---	---	25.1	22.2	23.6	22.8	21.2	22.0
23	---	---	---	---	---	---	25.9	22.6	24.3	22.2	20.3	21.3
24	---	---	---	---	---	---	25.8	22.6	24.3	20.3	18.1	19.1
25	---	---	---	---	---	---	24.8	21.9	23.5	19.2	18.3	18.6
26	---	---	---	---	---	---	23.1	21.7	22.4	20.1	18.0	18.9
27	---	---	---	---	---	---	21.9	20.7	21.3	22.0	20.1	21.1
28	---	---	---	---	---	---	20.7	19.6	20.0	21.7	20.2	20.9
29	---	---	---	---	---	---	20.3	19.1	19.7	20.2	18.6	19.4
30	---	---	---	---	---	---	20.3	19.9	20.1	19.6	16.9	18.3
31	---	---	---	---	---	---	20.7	19.8	20.2	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	23.9	16.4	20.5

02099238 BULL RUN AT NC 29/70 NEAR JAMESTOWN, NC—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.7	18.1	19.1	11.2	9.6	10.5	6.8	3.9	5.3	11.4	9.0	9.9
2	21.6	18.6	19.9	10.0	8.4	9.2	5.3	2.5	4.0	10.2	9.1	9.7
3	21.8	19.4	20.5	9.9	8.6	9.2	6.7	4.1	5.3	9.9	8.6	9.6
4	22.1	19.8	20.9	11.3	9.5	10.3	4.9	0.1	2.6	8.6	6.4	7.5
5	22.4	20.4	21.3	11.5	10.8	11.1	---	---	---	7.3	5.5	6.4
6	21.4	18.5	19.4	12.2	11.0	11.5	---	---	---	7.1	5.6	6.4
7	19.4	17.5	18.5	11.0	9.7	10.4	---	---	---	5.8	4.0	5.0
8	18.7	15.8	16.7	10.7	8.3	9.7	---	---	---	7.1	4.7	5.9
9	16.0	15.0	15.6	12.3	9.3	10.9	---	---	---	8.7	5.9	7.3
10	17.0	15.3	16.1	14.8	11.9	13.2	---	---	---	8.5	6.4	7.4
11	19.3	17.0	18.7	16.0	14.8	15.4	---	---	---	6.4	4.3	5.2
12	19.9	18.8	19.3	15.6	14.2	14.9	---	---	---	4.9	3.1	4.0
13	20.7	19.4	19.8	14.2	11.9	13.4	7.0	6.1	6.4	4.5	2.0	3.3
14	19.7	16.5	17.9	12.4	10.1	11.4	7.6	6.3	6.8	5.4	2.5	4.0
15	16.5	14.7	15.3	12.3	9.8	11.2	7.1	5.2	6.2	5.2	2.5	3.8
16	15.9	14.6	15.2	12.5	12.2	12.3	7.8	5.5	6.6	4.0	2.1	2.9
17	15.3	14.1	14.7	12.3	11.1	12.0	7.3	5.7	6.6	4.8	1.9	3.2
18	14.5	12.6	13.6	11.1	9.5	10.4	7.8	6.5	7.1	2.4	0.8	1.3
19	14.3	12.2	13.3	10.7	8.6	9.6	8.4	7.5	7.9	2.2	0.7	1.1
20	15.5	13.9	14.6	10.8	8.5	9.7	11.6	8.4	9.6	4.9	1.0	2.6
21	15.6	14.2	15.1	11.6	10.2	10.7	8.7	7.1	7.9	4.1	2.8	3.5
22	14.2	13.3	13.8	10.3	8.9	9.9	9.2	6.6	7.8	5.0	1.6	3.1
23	14.3	12.5	13.3	9.1	7.3	8.3	8.4	6.4	7.5	3.2	0.7	1.5
24	13.7	12.9	13.2	9.6	6.8	8.2	7.8	7.3	7.6	1.5	0.6	0.8
25	13.2	12.6	12.7	9.8	7.2	8.7	7.7	6.3	7.2	2.1	0.7	1.0
26	14.2	12.4	13.2	9.4	7.4	8.5	6.7	5.4	6.1	2.3	0.7	1.3
27	14.4	13.5	14.0	8.6	6.5	8.0	6.0	4.2	5.1	2.1	0.7	1.1
28	14.8	14.1	14.3	6.5	4.4	5.4	6.0	3.7	4.9	2.5	0.7	1.4
29	14.1	12.6	13.1	5.9	3.1	4.6	6.5	4.2	5.3	5.4	1.9	3.6
30	12.7	12.0	12.2	8.4	5.6	6.8	7.0	4.4	5.8	5.7	4.4	4.9
31	12.1	11.1	11.6	---	---	---	9.0	5.6	7.0	5.1	4.2	4.6
MONTH	22.4	11.1	16.0	16.0	3.1	10.2	---	---	---	11.4	0.6	4.3
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.6	4.9	5.6	7.2	5.4	6.1	---	---	---	20.7	18.3	19.6
2	6.9	4.0	5.3	9.0	6.5	7.5	---	---	---	22.0	18.2	19.7
3	8.2	4.7	6.6	9.7	6.2	7.8	---	---	---	20.3	17.7	18.7
4	10.3	7.4	9.0	10.4	6.0	8.2	---	---	---	17.7	15.0	16.4
5	7.7	5.4	6.7	12.9	9.3	11.0	---	---	---	15.0	13.8	14.3
6	6.6	4.6	5.7	12.5	10.8	11.7	---	---	---	17.1	14.3	15.9
7	6.9	4.1	5.7	11.6	7.7	9.7	---	---	---	19.2	16.1	17.4
8	6.3	4.4	5.3	11.6	6.2	8.9	---	---	---	22.9	17.2	19.4
9	6.6	3.9	5.1	13.5	9.1	11.3	---	---	---	24.1	18.4	20.6
10	6.7	5.3	5.9	12.1	8.9	10.5	---	---	---	24.3	19.4	21.4
11	7.1	3.6	5.4	9.5	7.3	8.4	---	---	---	23.5	19.5	21.0
12	7.6	4.3	5.7	12.5	6.5	9.5	---	---	---	23.1	17.0	19.2
13	6.7	2.7	4.7	14.2	9.2	11.9	---	---	---	22.9	13.9	17.3
14	6.0	4.1	5.1	13.8	11.6	12.7	---	---	---	22.2	12.8	16.7
15	7.6	6.0	6.8	11.6	9.8	10.4	---	---	---	18.7	14.8	16.7
16	6.2	0.8	3.5	11.7	9.6	10.9	---	---	---	18.9	17.4	18.0
17	2.9	0.8	1.7	13.6	11.5	12.5	18.7	14.8	16.7	18.9	16.4	17.8
18	5.7	2.9	4.1	13.7	12.6	13.2	15.9	11.8	13.1	16.4	15.2	15.7
19	7.1	3.7	5.2	13.2	11.2	12.5	12.7	11.8	12.3	15.4	14.8	15.1
20	8.0	5.7	6.8	---	---	---	15.4	12.2	13.5	17.2	14.0	15.6
21	7.6	6.2	7.0	---	---	---	15.1	13.8	14.4	17.3	15.9	16.6
22	8.1	7.1	7.5	---	---	---	17.1	14.2	15.3	17.3	15.9	16.4
23	9.7	7.6	8.6	---	---	---	17.2	11.6	14.0	16.2	15.6	15.9
24	10.7	6.7	8.5	---	---	---	15.5	10.7	13.2	17.0	15.8	16.3
25	9.2	7.4	8.5	---	---	---	14.2	13.5	13.9	19.2	16.5	17.5
26	8.2	5.6	6.8	---	---	---	17.2	14.1	15.4	20.2	17.9	19.0
27	5.7	4.5	5.1	---	---	---	19.0	15.9	17.2	19.7	17.8	18.8
28	5.5	4.8	5.1	---	---	---	19.9	14.8	17.1	18.9	16.3	17.6
29	---	---	---	---	---	---	20.4	15.2	17.5	18.1	16.8	17.5
30	---	---	---	---	---	---	21.0	16.1	18.2	19.2	16.4	17.7
31	---	---	---	---	---	---	---	---	---	19.3	17.0	18.0
MONTH	10.7	0.8	6.0	---	---	---	---	---	---	24.3	12.8	17.7

