Nutrient, Sediment, and Pesticide Data Collected at Four Small Agricultural Basins in the Beaver Creek Watershed, West Tennessee, 1990-1995

By SHANNON D. WILLIAMS and ROBIN M. HARRIS

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
acre	0.4047	hectare
pounds per acre (lb/acre)	1.1204	kilograms per hectare

Sea level: In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

Nutrient, Sediment, and Pesticide Data Collected at Four Small Agricultural Basins in the Beaver Creek Watershed, West Tennessee, 1990-1995

By Shannon D. Williams *and* Robin M. Harris

Abstract

In 1989, the U.S. Geological Survey began a cooperative study with the Tennessee Department of Agriculture to assess the impact of agricultural activities on water quality in the Beaver Creek watershed in West Tennessee. Quantification of the transport of nutrients, sediment, and pesticides from agricultural fields was one of the objectives of the study. This report presents nutrient, sediment, and pesticide data collected during selected storm events from 1990 through 1995 at four relatively small, agricultural basins (28 to 422 acres) in the Beaver Creek watershed.

Approximately 3,000 water samples (500 to 1,000 at each site) were analyzed for nitrogen and phosphorus species. Total nitrogen (N) concentrations ranged from 0.2 to 41.2 milligrams per liter (mg/L). Median concentrations for samples from each site ranged from 2.0 to 2.7 mg/L for total nitrogen, 1.2 to 1.9 mg/L for organic nitrogen, 0.05 to 0.14 mg/L for ammonia (measured as N), and 0.2 to 0.8 mg/L for nitrate plus nitrite (measured as N). Total phosphorus (P) concentrations ranged from 0.03 to 16.0 mg/L. Median concentrations for samples from each site ranged from 0.80 to 1.2 mg/L for total phosphorus and 0.15 to 0.72 for orthophosphate (measured as P).

Approximately 6,000 water samples (1,300 to 1,800 at each site) were analyzed for suspended sediment. Suspended-sediment concentrations ranged from 8.0 to 98,353 mg/L. Concentrations exceeded 1,000 mg/L in 33 percent of the samples collected and exceeded 10,000 mg/L in 6 percent of the samples. Median concentrations ranged from 347 to 713 mg/L at the four sites.

Several herbicides and insecticides were detected in water samples. Maximum concentrations detected were 37 micrograms per liter (µg/L) for metolachlor, 3.2 µg/L for trifluralin, 150 µg/L for fluometuron, and 430 µg/L for aldicarb. Aldicarb metabolites were also detected in several samples. The maximum aldicarb sulfoxide and aldicarb sulfone concentrations detected were 68.4 and 14.3 µg/L, respectively.

INTRODUCTION

Agriculture activities are major contributors of nonpoint-source pollution. Waters draining agricultural fields transport nutrients, sediment, and pesticides to receiving streams and lakes. This transport then affects the suitability of the streams and lakes for designated uses. In Tennessee, agriculture has been cited as one of the leading causes of water impairment (U.S. Environmental Protection Agency, 1994).

In 1989, the U.S. Geological Survey (USGS) began a cooperative study with the Tennessee Department of Agriculture to assess the impact of agricultural activities on water quality in the Beaver Creek watershed in West Tennessee. One of the study's objectives was quantification of the transport of nutrients, sediment, and pesticides from agricultural fields. About 70 percent of the 95,000 acres in the Beaver Creek watershed is under row crop cultivation. Cotton, soybeans, corn, and winter wheat are the major crops. Nutrient, sediment, and pesticide data were collected from 1990 through 1995 at four small streams draining agricultural fields in the Beaver Creek watershed. The drainage area of the streams ranged from 28 to 422 acres.

ACKNOWLEDGMENTS

The USGS would like to thank the area farm owners for allowing water-quality monitoring to be conducted on their property. The USGS also thanks the farming community in general for its support and cooperation in the Beaver Creek project.

STUDY SITES

Four agricultural basins (table 1) representative of the various agricultural practices, physiographic conditions, and soil types in the Beaver Creek watershed were identified and selected for the collection of water-quality data (fig. 1). The drainage networks in the four basins consist of natural streams and drainage ditches with ephemeral flow and some perennial pools.

The largest site, the Middle Beaver Creek canal tributary at Wilson farm (station 07030249), is a bottomland site with elevations 280 to 340 feet above sea level. The principal soil type in the basin is Falaya silt loam, which is a somewhat poorly drained, silty, nearly level soil normally found on first-order bottoms. The basin also contains Calloway and Henry silt loams which are also poorly drained, nearly level soils, and Grenada and Loring silt loams which are moderately well-drained soils. The Grenada soils are located on sides of ridges (2 to 8 percent slopes) and the Loring soils on ridge tops (U.S. Department of Agriculture, 1970). About 90 percent of the basin is under cultivation while the remaining 10 percent is grass waterways and woodland.

The East Beaver Creek canal tributary at Williams farm (station 07030242) is also a bottomland site. Elevations range from 310 to 340 feet above sea level. The soils along the streams are classified as Falaya silt loam-local alluvium which is material washed from nearby Calloway, Grenada, and Henry soils. The Calloway soils in this basin are silt loams with 2- to 5-percent slopes. The Grenada soils are well drained with eroded or severely eroded 2- to 8-percent slopes. The Henry silt loams are deep, poorly drained and have slow to very slow runoff (U.S. Department of Agriculture, 1964). About 85 percent of the basin is under cultivation.

The West Beaver Creek canal tributary at Moffatt farm (station 070302481) is an upland site with elevations of 335 to 405 feet above sea level. The basin contains Falaya silt loam along the streams, Memphis silt loam with slopes of 2 to 30 percent on hillsides, and Loring silt loam with slopes of 2 to 5 percent on ridgetops. The basin also contains some soils which were originally Memphis and Loring soils but are now classified as gullied soils (U.S. Department of Agriculture, 1970). About 80 percent of the basin is under cultivation.

The smallest site, the East Beaver Creek canal tributary at Tritt farm (station 07030241), is located in the uplands of the watershed. Elevations range from 365 to 390 feet above sea level. Soils in this basin are classified as eroded and severely eroded Grenada, Loring, and Memphis silt loams with slopes of 1 to 8 percent. Almost all of the 28 acres in the basin are under cultivation (U.S. Department of Agriculture, 1993).

Commercial fertilizers are essential to producing row crops in the study area. General fertilizer application recommendations are 80 pounds per acre (lb/acre) of nitrogen for cotton and wheat crops and 125 lb/acre for corn. Urea and ammonium-nitrate are

Table 1. Description of water-quality-monitoring sites in the Beaver Creek watershed, West Tennessee

Site	Station number	Drainage area (acres)	Physiography	Major crop(s)
Middle Beaver Creek canal tributary at Wilson farm near Madge.	07030249	422	Bottomland	Cotton, soybeans, and corn
East Beaver Creek canal tributary at Williams farm near Belmont.	07030242	108	Bottomland	Soybeans, cotton
West Beaver Creek canal tributary at Moffatt farm near Madge.	070302481	67	Upland	Soybeans, wheat, and cotton
East Beaver Creek canal tributary at Tritt farm near Keeling.	07030241	28	Upland	Cotton (1990-93) Soybeans and wheat (1994-1995)

the most common nitrogen sources used. Legumes like soybeans have the ability to produce nitrogen through natural processes (nitrogen fixation). The general recommended phosphate (P_2O_5) application is 60, 50, 20, and 40 lbs/acre for cotton, corn, soybeans and wheat, respectively. The general recommended potash (K_2O) application rate is 60, 50, 40, and 20 lbs/acre for cotton, corn, soybeans and wheat, respectively (Gerloff and Maxey, 1996).

Many types of pesticides are used on row crops in the study area to control weeds and insects (table 2). Carbamates are the most commonly used insecticides, and triazines and substituted amides are the most commonly used herbicides (table 2). Typical application rates for pesticides range from 0.09 to 4 pounds per acre (Patrick, 1994; Roberts and Lentz, 1995, 1996; Rhodes and others, 1996).

DATA COLLECTION AND WATER-QUALITY ANALYSIS

Water samples were collected using automatic samplers, normally at 5- to 15-minute sample intervals. Samples were analyzed for nitrogen and phosphorus species, suspended sediment, and selected pesticides and pesticide metabolites. Nitrogen and phosphorus analyses were conducted by USGS Water-Quality Laboratories in Arvada, Colorado, and Ocala, Florida, using methods described in Fishman and Friedman (1989). Suspended-sediment analyses were conducted by the USGS Sediment Laboratory in Tuscaloosa, Alabama, using standard methods described in Guy (1969), Matthes and others (1991), and Knott and others (1992).

Pesticide analyses of water samples collected in 1990 were conducted by the USGS National Water-Quality laboratory in Arvada, Colorado, using methods described in Wershaw and others (1987). Chemical analysis were conducted for several of the herbicides and carbamate compounds used in the watershed and for some of the metabolites of these compounds. Method detection limits ranged from 0.1 to 0.5 micrograms per liter (µg/L). Most of the water samples analyzed for pesticides in 1990 were flow-weighted composite samples which were prepared by combining discrete samples in equivalent proportion to the volume of storm runoff represented by the water sample.

Additional analysis for a few pesticides were conducted for water samples collected from 1991 through 1995. Analyses of samples collected from 1991 through 1993 were conducted at The Institute of Wildlife and Environmental Toxicology (TIWET) at Clemson University, South Carolina. Extraction of samples were performed using TIWET standard operational procedures 401-53-01 and 401-54-01. (The Institute of Wildlife and Environmental Toxicology, 1991). Extracted samples were analyzed using reverse phase high pressure liquid chromatography (HPLC) with detection limits ranging from 0.1 to 1.3 µg/L. Analyses of samples collected in 1995 were conducted by the USGS Water-Quality Laboratory in Ocala, Florida, using enzyme linked immunosorbent assay (ELISA) methods that have an estimated detection limit of 0.25 µg/L for aldicarb.

WATER-QUALITY DATA

Nitrogen and Phosphorus Data

Approximately 3,000 water samples (500 to 1,000 at each site) were analyzed for nitrogen and phosphorus species (tables 3-6). Nitrogen and phosphorus concentrations varied during individual storm events and from storm to storm. Total nitrogen concentrations ranged from 0.2 to 41.2 milligrams per liter (mg/L), and median total nitrogen concentrations ranged from 2.0 to 2.7 mg/L for samples from each site.

The maximum concentrations detected for organic nitrogen (N), ammonia (measured as N), and nitrate plus nitrite (measured as N) were 36.0, 18.0, and 15.0 mg/L, respectively. Median concentrations for samples from each site ranged from 1.2 to 1.9 mg/L for organic nitrogen, 0.05 to 0.14 mg/L for ammonia, and 0.2 to 0.8 mg/L for nitrate plus nitrite. Nitrate plus nitrite concentrations exceeded 1.0 mg/L in 25 percent of the samples collected and exceeded 2.0 mg/L in 8 percent of the samples collected.

Total phosphorus (P) concentrations ranged from 0.03 to 16.0 mg/L. The maximum orthophosphate concentration (measured as P) detected was 12.0 mg/L. Total phosphorus concentrations exceeded 1.0 mg/L in 49 percent of the samples collected and exceeded 5.0 mg/L in 3 percent of the samples. Median concentrations for samples from each site ranged from 0.80 to 1.2 mg/L for total phosphorus and 0.15 to 0.72 for orthophosphate.

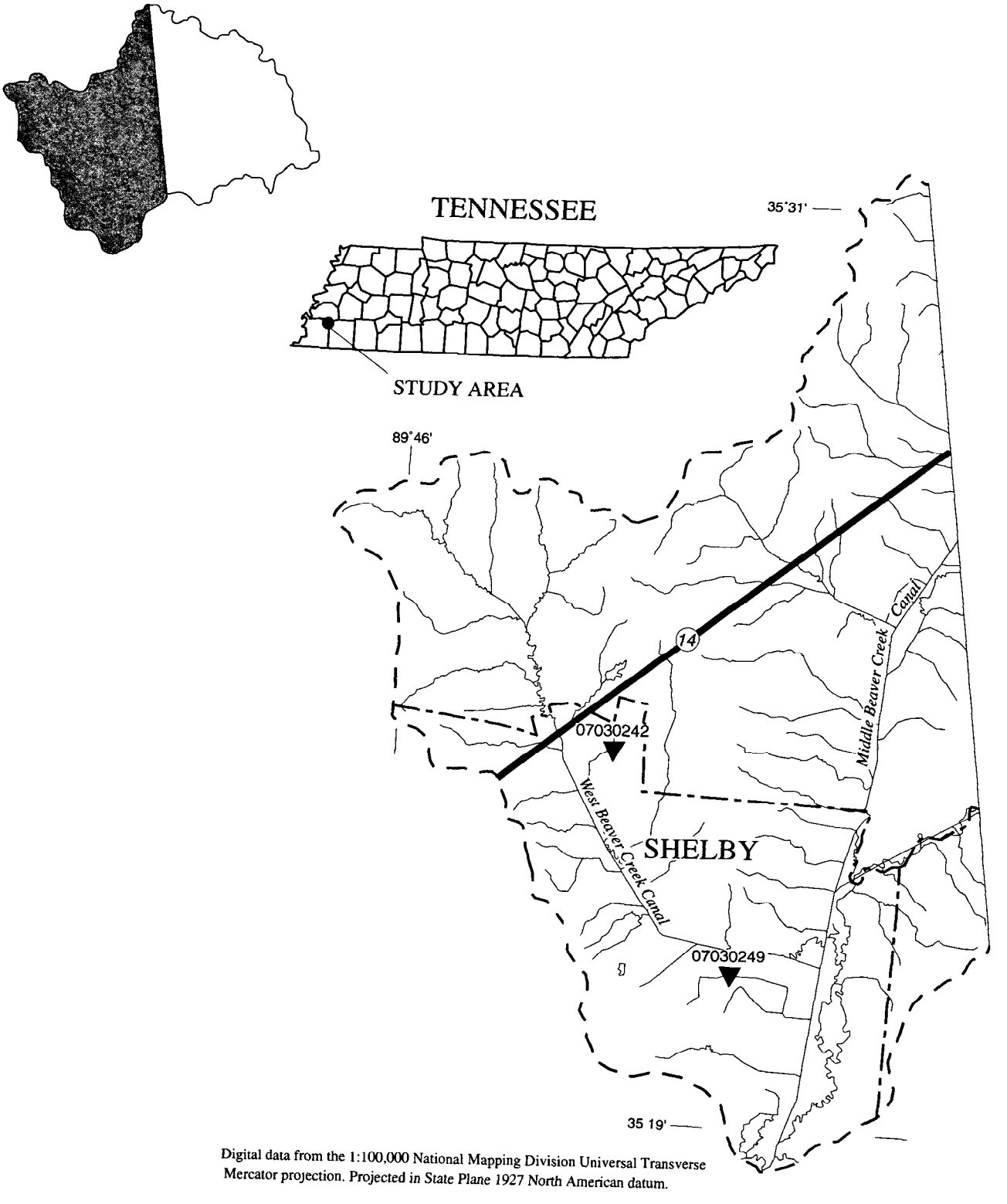

Figure 1. Location of small agricultural basins monitored in the Beaver Creek watershed, West Tennessee.

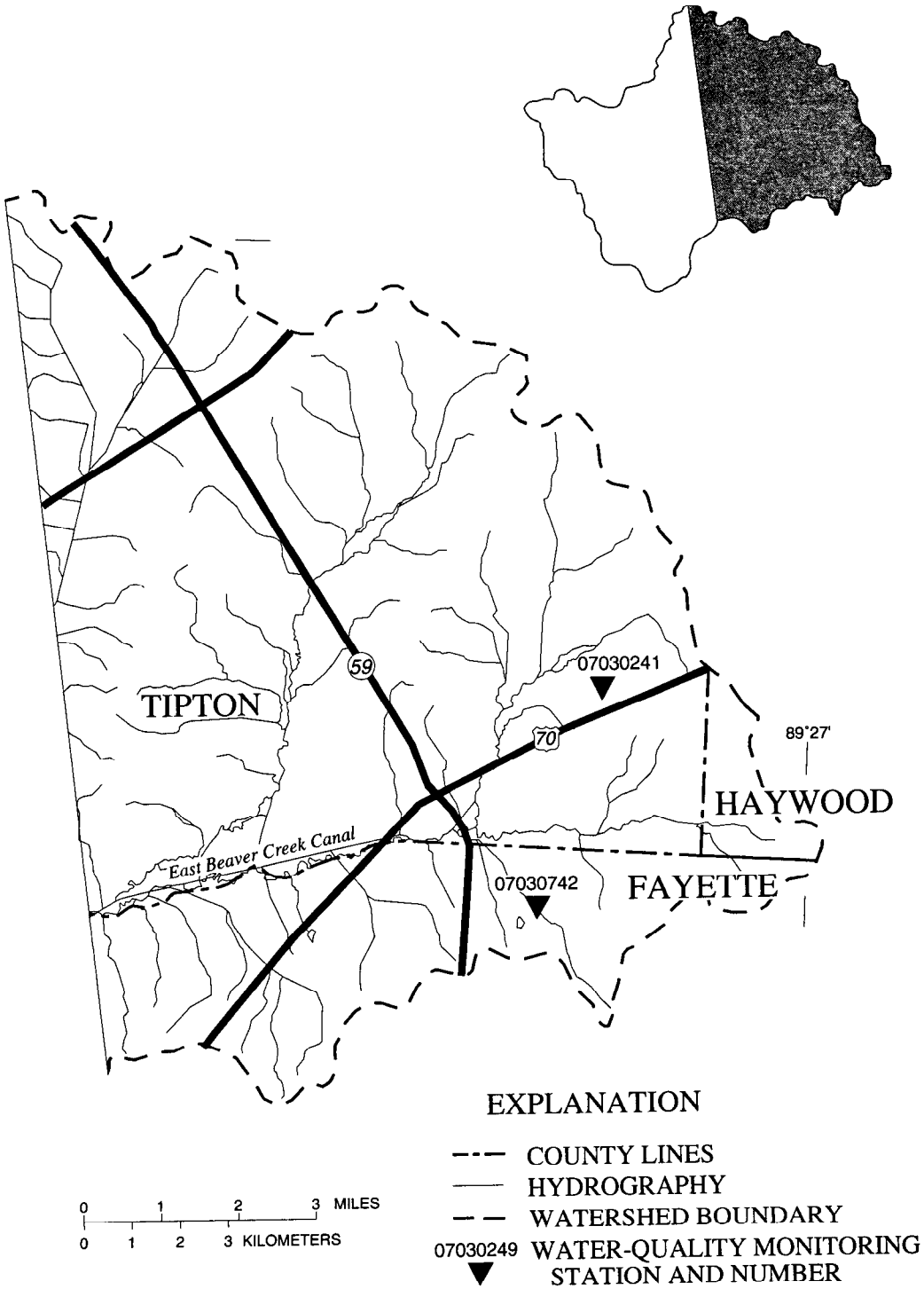

Figure 1. Location of small agricultural basins monitored in the Beaver Creek watershed, West Tennessee—Continued.

Table 2. Commonly used pesticides in the Beaver Creek watershed, West Tennessee

[all application rates are in pounds per acre]

Name	Trade name(s)	Type of compound	Type of pesticide	Crops treated	Application rate
Acifluorfen	Blazer	diphenyl ether	herbicide	soybeans	0.75 - 1.0
Alachlor	Lasso	substituted amide	herbicide	soybeans, corn	1.75 - 3.0
Aldicarb	Temic	carbamate	insecticide	cotton	0.525
Atrazine	AAtrex	triazine	herbicide	corn	1.6 - 2.0
Azinphos-methyl	Guthion	organophosphate	insecticide	cotton	0.5
Bentazon	Basagran	benzothiadiazole	herbicide	corn, soybeans	0.75 - 1.0
Carbaryl	Sevin	carbamate	insecticide	soybeans, wheat	0.5 - 1.5
Carbofuran	Furadan	carbamate	insecticide	soybeans, wheat	0.125 - 0.25
Cyanazine	Bladex	triazine	herbicide	cotton	0.6 - 1.0
2,4-D	several	phenoxy	herbicide	wheat	0.33 - 1.0
Fluazifop-P-butyl	Fusilade	diphenyl ether	herbicide	cotton, soybeans	0.94 - 0.188
Fluometuron	Cotoran	urea	herbicide	cotton	1.0 - 2.0
Glyphosate	Roundup	organophosphate	herbicide	cotton, corn	1.0 - 4.0
Imazaquin	Sceptor	imidazole	herbicide	soybeans	0.09 - 0.125
Oxamyl	Vydate	carbamate	insecticide	cotton	0.13 - 0.26
Paraquat	Gramoxone Extra	bypyriday	herbicide	cotton, soybeans, corn	0.25 - 0.75
Pendimethalin	Prowl	dinitroaniline	herbicide	cotton, corn	0.5 - 1.5
Prometryn	Caparol	triazine	herbicide	cotton	0.5 - 2.0
Malathion	Cythion	organophosphate	insecticide	cotton, wheat	1.25
Metolachlor	Dual	substituted amide	herbicide	cotton, corn, soybeans	1.5 - 2.5
Methomyl	Lannate, Nudrin	carbamate	insecticide	cotton, soybeans, wheat	0.125 - 0.25
Metribuzin	Sencor, Lexone	organophosphate	herbicide	wheat, soybeans	0.25 - 0.6
Simazine	Princep	triazine	herbicide	corn	1.0 - 1.5
Trifluralin	Treflan	dinitroaniline	herbicide	cotton, soybeans	0.5 - 1.0

Suspended-Sediment Data

Approximately 6,000 water samples (1,300 to 1,800 at each site) were analyzed for suspended sediment (tables 7-10). Suspended-sediment concentrations also varied during individual storm events and from storm to storm. Suspended-sediment concentrations ranged from 8.0 to 98,353 mg/L. Concentrations exceed 1,000 mg/L in 33 percent of the samples and exceeded 10,000 mg/L in 6 percent of the samples collected. Median concentrations detected in samples were 347 mg/L for the West Beaver Creek canal tributary, 382 mg/L for the Middle Beaver Creek canal tributary, 563 mg/L for the East Beaver Creek canal tributary at Williams farm, and 713 mg/L for the East Beaver Creek canal tributary at Tritt farm.

Pesticide Data

Several herbicides and carbamate insecticides were detected in composite samples collected in 1990 (table 11). Metolachlor was detected in composite samples from the East Beaver Creek canal tributary at Williams farm at concentrations of 0.3 to 37 µg/L and in composite samples from the Middle Beaver Creek canal tributary at concentrations of 0.4 to 11.0 µg/L. Water samples collected during two storms in 1993 at the East Beaver Creek canal tributary at Williams farm were also analyzed for metolachlor (table 12). Metolachlor was detected in all samples collected on August 2, 1993, at concentrations ranging from 1.4 to 3.5 µg/L and in two of the samples collected on September 24, 1993, at concentrations of 1.2 and 0.7 µg/L.

Trifluralin was detected in composite samples collected in 1990 from the East Beaver Creek canal tributaries and the West Beaver Creek canal tributary at concentrations ranging from 0.1 to 3.2 µg/L. Fluometuron was detected in two composite samples from the East Beaver Creek canal tributary at Tritt farm at concentrations of 18.0 and 150 µg/L and in two composite samples from the East Beaver Creek canal tributary at Williams farm at concentrations of 56.3 and 9.1 µg/L (table 11). Trifluralin and fluometuron analyses were conducted for samples collected during two storms in 1993 at the West Beaver Creek canal tributary (table 12). Trifluralin was not detected in any of the samples. Fluometuron was detected at concentrations of 1.5 to 4.5 µg/L during the August 2, 1993 storm and was not detected in any samples collected during the September 24, 1993 storm.

Aldicarb, aldicarb sulfoxide, and aldicarb sulfone were detected in several of the composite samples collected in 1990 from the East Beaver Creek canal tributaries at concentrations of 0.7 to 5.1 µg/L (table 11). Aldicarb sulfone was also detected in one sample from the Middle Beaver Creek canal tributary at a concentration of 2.9 µg/L. Samples collected during several storms from 1991 through 1993 at the East Beaver Creek canal tributary at Tritt and the Middle Beaver Creek canal tributary were analyzed for aldicarb and its metabolites (table 12). Aldicarb was not detected in any of the samples collected from the East Beaver Creek canal tributary at the Tritt farm; however, the metabolites were detected in several samples. The maximum aldicarb sulfoxide and aldicarb sulfone concentrations detected were 9.0 and 6.4 µg/L, respectively.

Aldicarb and its metabolites were detected in several of the samples collected at the Middle Beaver Creek canal tributary from 1991 through 1993 (table 12). The maximum concentrations detected were 430, 68.4, and 14.3 µg/L for aldicarb, aldicarb sulfoxide, and aldicarb sulfone, respectively. Aldicarb concentrations of 3.4 to 36.0 µg/L were detected in samples collected during several storms in 1995. These samples were analyzed using enzyme-linked immunosorbent assay kits for aldicarb which cannot distinguish between aldicarb and its metabolites.

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Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
05/19/90	17:45	14.0	12.5	12.0	0.50	1.90	2.90	0.59
05/19/90	17:50	17.0	13.3	13.0	0.29	4.30	5.90	0.11
05/19/90	18:05	16.0	13.2	13.0	0.21	3.30	6.30	0.14
05/19/90	18:35	6.4	3.6	3.4	0.21	2.80	5.60	0.16
05/20/90	02:15	4.3	2.1	1.9	0.17	2.20	2.50	0.50
05/20/90	02:20	5.0	3.5	3.5	0.04	1.50	3.40	0.13
05/20/90	02:35	4.2	3.2	3.1	0.05	1.00	3.80	0.12
05/20/90	03:05	5.7	4.6	4.5	0.06	1.10	6.30	0.15
05/20/90	03:35	14.0	13.1	13.0	0.05	1.30	6.00	0.10
06/14/90	17:30	2.7	1.2	1.0	0.19	1.50	4.10	0.03
06/14/90	17:35	7.0	5.6	5.4	0.23	1.40	9.20	0.15
06/14/90	17:45	1.7	0.5	0.3	0.17	1.20	2.40	0.05
06/14/90	18:00	3.6	2.3	2.2	0.14	1.30	6.70	0.06
06/22/90	01:30	8.1	3.3	3.0	0.27	4.80	0.11	0.04
06/22/90	01:35	8.9	5.1	4.8	0.27	3.80	0.71	0.06
06/22/90	01:40	3.5	1.1	0.9	0.25	2.40	0.11	0.05
06/22/90	01:45	4.5	2.7	2.5	0.19	1.80	0.13	0.05
06/22/90	02:15	17.5	16.1	16.0	0.13	1.40	0.70	0.04
07/11/90	22:35	3.3	2.3	2.0	0.34	1.00	0.88	0.71
07/11/90	22:45	2.7	1.8	1.4	0.35	0.90	0.81	0.67
10/03/90	20:30	2.6	2.1	1.9	0.20	0.50	0.71	0.26
10/03/90	20:35	2.1	1.7	1.5	0.19	0.40	0.78	0.44
10/03/90	20:40	1.9	1.5	1.4	0.14	0.40	0.78	0.45
10/03/90	20:45	1.9	1.5	1.3	0.16	0.40	0.93	0.60
10/03/90	21:00	1.6	1.4	1.3	0.10	0.20	0.78	0.38
10/03/90	21:15	1.7	1.5	1.4	0.08	0.20	0.97	0.48
10/04/90	01:45	1.9	1.6	1.6	0.04	0.30	1.10	0.86
10/04/90	01:50	2.0	1.8	1.6	0.16	0.20	0.47	0.17
10/04/90	01:55	2.0	1.8	1.7	0.13	0.20	0.52	0.24
10/04/90	02:00	2.0	1.8	1.7	0.12	0.20	0.59	0.20
10/04/90	02:15	1.4	1.2	1.1	0.09	0.20	0.50	0.19
10/04/90	02:30	1.1	1.0	0.9	0.07	0.10	0.48	0.19
02/05/91	03:55	4.3	3.4	3.2	0.17	0.90	1.50	0.07
02/05/91	04:00	3.8	3.2	3.1	0.12	0.60	2.10	0.08
02/05/91	04:05	2.9	2.4	2.3	0.11	0.50	0.99	0.08
02/05/91	04:20	3.5	3.1	3.0	0.09	0.40	0.78	0.08
02/05/91	04:35	3.5	3.1	3.0	0.09	0.40	1.90	0.11
02/05/91	05:35	3.5	3.3	3.2	0.05	0.20	1.90	0.08
02/05/91	06:05	2.4	2.1	2.0	0.05	0.30	0.95	0.12
02/05/91	07:05	2.0	1.7	1.7	0.04	0.30	0.98	0.11
02/05/91	08:05	2.1	1.8	1.8	0.02	0.30	0.92	0.10
02/05/91	09:05	2.8	2.6	2.6	0.03	0.20	1.60	0.10
02/05/91	16:00	1.4	1.2	1.2	0.01	0.20	0.51	0.09
02/05/91	16:30	1.2	1.0	1.0	0.01	0.20	0.80	0.21
02/05/91	16:35	1.1	0.9	0.9	0.01	0.20	0.44	0.18
02/05/91	16:40	1.3	1.1	1.1	0.01	0.20	0.51	0.09
02/05/91	16:55	1.0	0.8	0.8	0.01	0.20	0.36	0.11
02/05/91	17:10	3.3	3.1	3.1	0.02	0.20	0.75	0.09
02/05/91	17:35	2.6	2.4	2.4	0.01	0.20	0.94	0.08
02/05/91	18:05	2.3	2.1	2.1	0.01	0.20	1.80	0.09

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
02/05/91	19:05	2.4	2.3	2.3	0.02	0.10	0.84	0.07
02/05/91	20:05	1.3	1.2	1.2	0.01	0.10	0.58	0.11
02/05/91	21:05	1.1	0.9	0.9	0.02	0.20	0.57	0.10
03/28/91	20:05	2.3	1.4	1.1	0.29	0.88	0.75	0.34
03/28/91	15:00	29.7	27.2	26.0	1.20	2.50	7.10	5.50
03/28/91	15:05	41.2	39.7	36.0	3.70	1.50	14.00	0.37
03/28/91	15:15	37.5	35.7	33.0	2.70	1.80	0.93	1.00
03/28/91	15:30	21.1	18.6	10.0	8.60	2.50	12.00	12.00
03/28/91	15:45	16.9	14.0	8.4	5.60	2.90	7.00	6.50
03/28/91	16:15	17.6	14.2	13.0	1.20	3.40	6.10	1.70
05/25/91	09:35	16.6	3.6	2.4	1.20	13.00	4.30	0.10
05/25/91	09:40	1.2	1.0	0.9	0.14	0.17	0.25	0.04
05/25/91	09:45	13.2	2.2	1.1	1.10	11.00	6.70	1.30
05/25/91	09:50	9.7	4.3	3.4	0.93	5.40	1.10	1.10
05/25/91	10:00	4.9	1.5	1.3	0.18	3.40	6.60	0.17
05/25/91	10:30	16.4	14.1	14.0	0.12	2.30	7.90	1.40
05/25/91	11:00	6.2	4.1	4.0	0.11	2.10	9.70	0.10
05/25/91	11:55	4.2	1.9	1.0	0.94	2.30	4.20	1.50
05/25/91	15:35	4.5	1.8	1.6	0.19	2.70	5.90	0.13
06/23/91	20:10	21.6	20.1	20.0	0.09	1.50	9.60	0.07
06/23/91	20:15	3.1	1.9	1.8	0.08	1.20	7.20	0.07
06/23/91	20:20	6.7	5.5	5.4	0.07	1.20	6.30	0.08
06/23/91	20:30	7.8	6.5	6.5	0.02	1.30	5.40	0.11
06/23/91	21:40	9.3	8.1	7.7	0.36	1.20	4.30	0.06
06/23/91	21:50	1.8	1.0	1.0	0.02	0.76	2.10	0.11
08/09/91	02:25	4.1	2.8	2.6	0.21	1.30	0.62	0.18
08/09/91	02:30	5.5	4.7	4.5	0.19	0.84	2.20	0.15
08/09/91	02:40	3.0	2.2	2.1	0.07	0.79	0.86	0.16
08/09/91	02:45	4.0	3.2	3.2	0.04	0.81	0.93	0.18
08/09/91	02:50	3.1	2.2	2.2	0.04	0.89	1.00	0.17
08/09/91	03:05	1.9	1.3	1.3	0.04	0.62	0.50	0.11
08/09/91	03:20	3.7	3.1	3.1	0.03	0.62	0.22	0.13
08/09/91	03:35	2.4	1.7	1.7	0.02	0.71	0.84	0.11
08/09/91	04:05	2.0	1.5	1.5	0.02	0.49	4.70	0.10
08/09/91	04:10	11.1	9.9	9.9	0.04	1.20	1.90	0.03
08/09/91	04:20	1.5	1.0	1.0	0.02	0.54	0.58	0.11
08/28/91	12:45	3.1	2.7	2.6	0.06	0.46	0.87	0.08
08/28/91	13:00	1.8	1.2	1.2	0.02	0.58	0.53	0.22
08/28/91	13:15	1.7	1.2	1.2	0.04	0.50	0.91	0.32
08/28/91	14:30	1.7	1.2	1.2	0.03	0.42	0.52	0.03
08/28/91	14:45	2.4	2.1	2.1	0.01	0.32	0.78	0.11
08/28/91	15:00	1.4	1.1	1.1	0.01	0.29	0.66	0.15
08/28/91	16:00	2.2	2.1	2.1	0.02	0.10	0.66	0.03
08/28/91	16:15	1.6	1.5	1.5	0.01	0.09	0.63	0.11
08/28/91	16:30	1.9	1.5	1.5	0.04	0.38	0.88	0.27
08/28/91	16:45	1.9	1.3	1.3	0.01	0.58	0.85	0.35
10/29/91	23:45	3.9	2.8	2.5	0.32	1.10	2.30	1.70
10/29/91	24:00	2.7	2.1	1.9	0.24	0.56	1.50	0.97
10/30/91	00:15	2.1	1.6	1.4	0.22	0.43	1.30	0.94
10/30/91	00:30	2.1	1.7	1.5	0.24	0.39	1.40	1.00

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
10/30/91	20:00	2.5	2.1	2.0	0.07	0.45	1.30	0.04
10/30/91	20:05	1.8	1.4	1.3	0.08	0.40	0.85	0.09
10/30/91	20:20	1.4	1.0	1.0	0.05	0.37	0.71	0.19
10/30/91	20:35	1.4	1.0	1.0	0.05	0.38	0.76	0.18
10/30/91	21:00	1.5	1.1	1.0	0.05	0.41	0.82	0.19
02/17/92	21:20	1.3	0.8	0.7	0.06	0.46	0.64	0.21
02/17/92	21:25	1.9	1.5	1.3	0.15	0.48	1.30	0.67
03/18/92	03:25	1.7	1.5	1.4	0.10	0.24	1.10	0.06
03/18/92	03:35	1.5	1.3	1.2	0.05	0.21	1.00	0.10
03/18/92	05:55	0.9	0.8	0.8	0.04	0.14	0.69	0.13
03/18/92	06:00	1.0	0.9	0.9	0.04	0.13	0.83	0.12
03/18/92	06:20	2.0	1.9	1.8	0.14	0.14	1.40	0.18
06/03/92	04:40	2.3	1.1	0.9	0.24	1.20	0.74	0.12
06/03/92	04:45	2.2	1.2	0.9	0.30	0.99	0.69	0.08
06/03/92	04:50	2.4	1.3	0.7	0.56	1.10	0.44	0.08
06/03/92	05:00	2.1	0.9	0.4	0.47	1.20	0.32	0.07
06/03/92	05:05	3.3	2.0	1.5	0.47	1.30	1.50	0.08
06/03/92	05:15	3.7	2.4	2.0	0.42	1.30	1.80	0.07
06/03/92	05:20	3.5	2.3	1.9	0.36	1.20	2.00	0.08
06/03/92	05:25	1.8	0.6	0.3	0.33	1.20	0.30	0.08
06/03/92	05:30	2.1	0.9	0.6	0.30	1.20	0.61	0.08
06/03/92	05:35	1.8	0.6	0.3	0.27	1.20	0.38	0.09
06/03/92	05:40	2.0	0.9	0.7	0.25	1.10	0.90	0.10
06/03/92	05:45	2.1	1.0	0.8	0.25	1.10	0.83	0.10
06/03/92	05:50	3.0	1.7	1.4	0.26	1.30	1.50	0.09
06/03/92	05:55	2.0	0.7	0.4	0.29	1.30	0.36	0.09
06/03/92	06:00	2.2	1.1	0.8	0.27	1.10	0.87	0.11
06/03/92	06:05	2.1	1.0	0.7	0.27	1.10	0.74	0.10
06/03/92	06:10	2.0	1.0	0.7	0.29	1.00	0.68	0.10
06/03/92	06:15	1.9	0.9	0.6	0.28	0.96	0.63	0.10
06/03/92	06:20	1.7	0.8	0.5	0.28	0.92	0.62	0.10
06/03/92	06:25	2.2	1.3	1.0	0.27	0.89	0.64	0.10
06/03/92	06:30	1.6	0.7	0.4	0.26	0.85	0.39	0.10
06/03/92	06:35	1.7	0.8	0.5	0.26	0.86	0.60	0.10
06/03/92	07:10	1.4	0.7	0.5	0.24	0.74	0.54	0.08
06/03/92	07:15	3.1	2.4	2.2	0.22	0.70	2.00	0.09
06/03/92	07:20	2.8	2.1	1.9	0.24	0.65	1.90	0.08
06/03/92	07:25	1.7	1.0	0.8	0.22	0.65	0.84	0.10
06/03/92	07:30	1.7	1.0	0.8	0.21	0.66	0.96	0.10
06/03/92	07:35	1.8	1.2	1.0	0.19	0.64	1.20	0.10
06/03/92	07:40	2.2	1.6	1.4	0.22	0.61	1.50	0.09
06/03/92	07:45	1.6	1.0	0.8	0.23	0.64	0.87	0.11
06/03/92	07:50	1.9	1.3	1.1	0.21	0.58	1.20	0.10
06/03/92	07:55	2.7	2.1	1.9	0.21	0.58	1.90	0.09
06/03/92	08:00	1.8	1.2	1.0	0.20	0.57	1.10	0.10
06/03/92	08:05	1.7	1.1	0.9	0.20	0.57	1.10	0.10
06/03/92	08:10	2.3	1.6	1.4	0.19	0.65	1.60	0.11
06/03/92	08:15	1.6	1.0	0.8	0.18	0.62	1.10	0.11
06/03/92	08:20	1.7	1.1	0.9	0.18	0.63	1.10	0.11
06/03/92	08:25	1.5	0.8	0.6	0.19	0.65	0.75	0.11
06/03/92	08:30	1.8	1.2	1.0	0.19	0.61	1.10	0.11
06/03/92	08:35	2.4	1.8	1.6	0.18	0.58	1.60	0.10
06/03/92	08:40	1.5	0.9	0.7	0.23	0.59	0.68	0.08

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
06/03/92	08:45	1.7	1.1	0.9	0.23	0.56	1.10	0.09
06/03/92	08:50	1.6	1.0	0.8	0.25	0.59	0.80	0.08
06/03/92	08:55	2.0	1.5	1.2	0.29	0.54	1.20	0.11
06/26/92	01:55	3.4	1.4	1.2	0.21	2.00	0.66	0.05
06/26/92	02:00	4.0	2.2	2.1	0.13	1.80	1.10	0.06
06/26/92	02:05	5.0	3.2	3.1	0.13	1.80	1.90	0.06
06/26/92	03:10	3.1	2.0	1.9	0.13	1.10	1.10	0.07
06/26/92	03:15	2.2	1.5	1.4	0.13	0.77	0.81	0.06
06/26/92	03:20	2.5	1.8	1.7	0.10	0.77	1.20	0.07
06/26/92	03:25	2.6	1.8	1.7	0.10	0.84	1.20	0.08
06/26/92	03:55	4.4	2.8	2.7	0.14	1.60	2.20	0.11
06/26/92	04:00	4.3	2.6	2.5	0.14	1.70	2.00	0.11
06/26/92	04:10	4.6	2.9	2.8	0.14	1.70	2.10	0.11
06/26/92	04:35	4.6	3.0	2.9	0.14	1.60	2.10	0.10
06/26/92	04:50	4.0	2.4	2.3	0.12	1.60	1.80	0.12
07/17/92	03:50	1.5	1.1	1.0	0.12	0.41	0.53	0.06
07/17/92	03:55	1.3	1.0	0.9	0.09	0.28	0.52	0.05
07/17/92	04:00	2.5	2.3	2.2	0.06	0.22	1.50	0.05
07/17/92	04:05	0.7	0.5	0.5	0.05	0.22	0.30	0.08
07/17/92	04:10	0.9	0.7	0.7	0.05	0.20	0.48	0.08
07/17/92	04:15	0.7	0.6	0.6	0.04	0.17	0.51	0.09
07/17/92	04:25	0.8	0.7	0.7	0.03	0.18	0.50	0.12
07/17/92	04:30	0.7	0.6	0.6	0.03	0.19	0.45	0.12
07/17/92	04:35	0.7	0.5	0.5	0.03	0.21	0.42	0.14
07/17/92	04:40	0.9	0.8	0.8	0.03	0.18	0.61	0.15
07/17/92	04:45	0.9	0.8	0.8	0.05	0.16	0.50	0.08
07/17/92	04:50	0.8	0.7	0.7	0.05	0.12	0.47	0.07
07/17/92	04:55	1.3	1.2	1.1	0.05	0.12	0.93	0.10
07/17/92	05:00	0.5	0.4	0.4	0.03	0.11	0.41	0.11
07/17/92	05:05	0.7	0.6	0.6	0.03	0.11	0.56	0.13
07/17/92	05:10	1.3	1.1	1.1	0.03	0.12	0.93	0.15
07/17/92	05:15	0.6	0.5	0.5	0.02	0.12	0.51	0.16
07/17/92	05:20	0.8	0.7	0.7	0.03	0.12	0.63	0.16
07/17/92	05:25	0.8	0.7	0.7	0.03	0.13	0.57	0.16
07/17/92	05:30	1.1	1.0	1.0	0.02	0.11	0.77	0.15
07/17/92	05:35	0.7	0.6	0.6	0.03	0.12	0.56	0.16
07/17/92	05:40	0.9	0.8	0.8	0.03	0.12	0.73	0.17
07/17/92	05:45	0.7	0.6	0.6	0.03	0.12	0.53	0.17
09/22/92	02:30	2.5	2.1	1.8	0.27	0.36	1.10	0.54
09/22/92	02:35	3.1	2.9	2.7	0.19	0.20	1.20	0.44
09/22/92	02:40	2.3	2.2	2.0	0.15	0.12	0.92	0.42
09/22/92	02:45	2.0	1.9	1.7	0.15	0.12	0.89	0.49
09/22/92	02:50	1.9	1.8	1.7	0.13	0.14	0.89	0.53
09/22/92	02:55	2.0	1.9	1.8	0.14	0.12	0.89	0.52
09/22/92	03:00	1.8	1.7	1.6	0.13	0.08	0.95	0.50
09/22/92	03:05	1.3	1.2	1.1	0.12	0.07	0.77	0.53
09/22/92	03:10	1.6	1.5	1.4	0.12	0.07	0.80	0.55
09/22/92	03:15	1.3	1.2	1.1	0.10	0.06	0.74	0.55
09/22/92	03:20	1.3	1.2	1.1	0.12	0.05	0.79	0.55
09/22/92	03:25	1.6	1.5	1.4	0.11	0.05	0.76	0.52
09/22/92	03:30	1.5	1.4	1.3	0.10	0.05	0.79	0.48
09/22/92	03:35	1.2	1.1	1.0	0.08	0.05	0.67	0.49
09/22/92	03:40	1.4	1.3	1.2	0.08	0.05	0.71	0.50

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
09/22/92	03:45	1.3	1.2	1.1	0.10	0.05	0.69	0.51
09/22/92	03:50	1.5	1.4	1.3	0.07	0.05	0.65	0.51
09/22/92	03:55	1.3	1.2	1.1	0.07	0.05	0.73	0.52
09/22/92	04:00	1.2	1.1	1.0	0.07	0.05	0.67	0.53
09/22/92	04:05	1.3	1.2	1.1	0.07	0.05	0.72	0.54
09/22/92	04:10	1.2	1.1	1.0	0.06	0.05	0.68	0.52
09/22/92	04:15	1.3	1.2	1.1	0.05	0.05	0.68	0.50
09/22/92	04:20	1.1	1.0	1.0	0.03	0.05	0.67	0.49
09/22/92	04:25	1.2	1.1	1.0	0.05	0.05	0.69	0.49
09/22/92	04:50	1.1	1.0	1.0	0.04	0.05	0.66	0.53
09/22/92	04:55	1.0	0.9	0.9	0.03	0.05	0.66	0.52
09/22/92	05:00	1.2	1.1	1.1	0.03	0.05	0.69	0.53
09/22/92	05:05	0.9	0.8	0.8	0.03	0.05	0.70	0.53
09/22/92	05:10	1.1	1.0	1.0	0.03	0.05	0.68	0.54
09/22/92	05:15	1.0	0.9	0.9	0.04	0.05	0.67	0.54
09/22/92	05:20	1.1	1.0	1.0	0.04	0.05	0.68	0.55
09/22/92	05:25	1.1	1.0	1.0	0.04	0.05	0.70	0.55
09/22/92	05:30	1.1	1.0	1.0	0.04	0.05	0.70	0.56
09/22/92	05:35	1.1	1.0	1.0	0.03	0.05	0.68	0.56
09/22/92	05:40	1.0	0.9	0.9	0.04	0.05	0.68	0.57
09/22/92	05:45	1.2	1.1	1.1	0.04	0.05	0.71	0.57
09/22/92	05:50	0.9	0.8	0.8	0.03	0.05	0.70	0.58
11/22/92	00:30	3.0	2.0	1.6	0.41	1.00	1.00	0.54
11/22/92	00:35	2.2	1.6	1.3	0.32	0.64	0.86	0.24
11/22/92	00:40	2.3	1.7	1.4	0.29	0.63	0.91	0.34
11/22/92	00:45	2.5	1.9	1.6	0.29	0.61	1.00	0.34
11/22/92	00:50	2.5	1.9	1.6	0.27	0.61	1.10	0.35
11/22/92	01:00	2.6	2.0	1.7	0.27	0.58	1.20	0.35
11/22/92	01:05	3.4	2.8	2.5	0.26	0.57	1.80	0.36
11/22/92	01:10	1.7	1.4	1.1	0.25	0.60	0.81	0.41
11/22/92	01:15	1.8	1.2	1.0	0.25	0.60	0.81	0.42
11/22/92	01:20	2.4	1.8	1.6	0.24	0.63	1.30	0.45
11/22/92	01:25	1.9	1.3	1.0	0.25	0.60	0.91	0.46
11/22/92	01:30	1.9	1.3	1.1	0.23	0.57	0.90	0.46
11/22/92	01:35	2.3	1.7	1.5	0.23	0.58	1.20	0.46
11/22/92	01:40	3.2	2.6	2.4	0.24	0.59	2.60	0.43
11/22/92	01:45	2.0	1.4	1.2	0.23	0.62	0.92	0.38
11/22/92	01:50	2.2	1.6	1.4	0.23	0.61	1.20	0.39
11/22/92	01:55	1.6	1.0	0.8	0.23	0.57	0.69	0.41
11/22/92	02:00	1.9	1.3	1.1	0.22	0.58	0.98	0.40
11/22/92	02:05	2.1	1.5	1.3	0.24	0.60	1.00	0.40
11/22/92	03:35	1.7	1.2	1.1	0.12	0.49	0.94	0.44
11/22/92	03:40	1.9	1.3	1.1	0.15	0.59	0.98	0.48
11/22/92	03:45	2.6	2.0	1.7	0.25	0.60	1.30	0.37
11/22/92	03:50	1.8	1.3	1.0	0.28	0.51	0.73	0.29
11/22/92	03:55	1.8	1.3	1.0	0.32	0.50	0.75	0.25
11/22/92	04:00	1.8	1.4	1.2	0.24	0.35	0.62	0.16
11/22/92	04:05	1.5	1.0	0.7	0.31	0.46	0.52	0.26
11/22/92	04:10	1.8	1.3	1.0	0.30	0.48	0.83	0.31
11/22/92	04:15	1.7	1.2	0.9	0.30	0.49	0.81	0.36
11/22/92	04:20	1.7	1.2	0.9	0.29	0.54	0.87	0.36
11/22/92	04:25	1.8	1.3	1.0	0.29	0.48	0.99	0.36
11/22/92	04:30	2.0	1.5	1.2	0.27	0.46	1.20	0.38
11/22/92	04:35	2.1	1.6	1.3	0.28	0.48	1.40	0.39
11/22/92	04:40	1.7	1.2	0.9	0.27	0.51	0.96	0.40
11/22/92	04:45	1.5	1.1	0.9	0.23	0.44	0.91	0.42

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
11/22/92	04:50	1.9	1.4	1.2	0.22	0.45	1.10	0.43
11/22/92	04:55	1.5	1.1	0.9	0.21	0.42	0.92	0.44
11/22/92	05:00	1.5	1.1	0.9	0.20	0.44	0.96	0.44
11/22/92	05:05	1.8	1.3	1.1	0.18	0.45	1.10	0.46
11/22/92	05:10	1.5	1.1	0.9	0.17	0.44	1.00	0.45
04/14/93	20:55	--	--	--	--	0.00	--	0.01
04/14/93	21:00	--	--	--	--	0.02	--	0.13
04/14/93	21:05	--	--	--	--	0.07	--	0.02
04/14/93	21:10	--	--	--	--	0.08	--	0.04
04/14/93	21:15	--	--	--	--	0.09	--	0.05
04/14/93	21:20	--	--	--	--	0.21	--	0.08
04/14/93	21:25	--	--	--	--	0.27	--	0.09
04/14/93	21:30	--	--	--	--	0.22	--	0.10
04/14/93	21:35	--	--	--	--	0.15	--	0.11
04/14/93	21:40	--	--	--	--	0.06	--	0.04
04/14/93	21:45	--	--	--	--	0.09	--	0.03
04/14/93	21:50	--	--	--	--	0.16	--	0.04
04/14/93	21:55	--	--	--	--	0.14	--	0.06
04/14/93	22:00	--	--	--	--	0.14	--	0.09
04/14/93	22:05	--	--	--	--	0.14	--	0.09
04/14/93	22:10	--	--	--	--	0.00	--	0.00
04/14/93	22:15	--	--	--	--	0.12	--	0.10
04/14/93	22:16	--	--	--	--	0.14	--	0.10
04/14/93	22:17	--	--	--	--	0.14	--	0.10
04/14/93	22:18	--	--	--	--	0.14	--	0.10
04/14/93	22:19	--	--	--	--	0.14	--	0.10
04/14/93	22:20	--	--	--	--	0.12	--	0.10
04/14/93	22:21	--	--	--	--	0.14	--	0.09
04/14/93	22:22	--	--	--	--	0.12	--	0.10
04/14/93	22:23	--	--	--	--	0.12	--	0.10
04/14/93	22:24	--	--	--	--	0.12	--	0.13
04/14/93	22:25	--	--	--	--	0.11	--	0.10
04/14/93	22:26	--	--	--	--	0.12	--	0.10
04/14/93	22:30	--	--	--	--	0.10	--	0.11
04/14/93	22:35	--	--	--	--	0.09	--	0.12
04/14/93	22:40	--	--	--	--	0.08	--	0.11
04/14/93	22:45	--	--	--	--	0.07	--	0.12
04/14/93	22:50	--	--	--	--	0.16	--	0.03
04/14/93	22:55	--	--	--	--	0.05	--	0.12
04/14/93	23:00	--	--	--	--	0.05	--	0.13
04/14/93	23:05	--	--	--	--	0.04	--	0.12
04/14/93	23:10	--	--	--	--	0.03	--	0.12
04/14/93	23:15	--	--	--	--	0.01	--	0.13
04/14/93	23:20	--	--	--	--	0.09	--	0.03
04/14/93	23:25	--	--	--	--	0.10	--	0.02
04/14/93	23:30	--	--	--	--	0.00	--	0.16
04/14/93	23:35	--	--	--	--	0.01	--	0.16
04/14/93	23:40	--	--	--	--	0.00	--	0.15
04/14/93	23:45	--	--	--	--	0.00	--	0.15
04/14/93	23:50	--	--	--	--	0.00	--	0.16
04/14/93	23:55	--	--	--	--	0.00	--	0.17
04/14/93	24:00	--	--	--	--	0.01	--	0.17
04/15/93	00:05	--	--	--	--	0.01	--	0.15
04/15/93	00:10	--	--	--	--	0.03	--	0.13
04/15/93	00:15	--	--	--	--	0.03	--	0.12

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
04/15/93	00:20	--	--	--	--	0.02	--	0.10
04/15/93	00:25	--	--	--	--	0.02	--	0.08
04/15/93	00:30	--	--	--	--	0.01	--	0.08
04/15/93	00:35	--	--	--	--	0.01	--	0.10
04/15/93	00:40	--	--	--	--	0.01	--	0.11
04/15/93	00:45	--	--	--	--	0.01	--	0.12
04/15/93	00:50	--	--	--	--	0.01	--	0.13
04/15/93	00:55	--	--	--	--	0.01	--	0.13
04/15/93	01:00	--	--	--	--	0.01	--	0.13
04/15/93	01:05	--	--	--	--	0.01	--	0.13
04/15/93	01:10	--	--	--	--	0.01	--	0.14
04/15/93	01:15	--	--	--	--	0.00	--	0.14
04/15/93	01:20	--	--	--	--	0.00	--	0.15
04/15/93	01:25	--	--	--	--	0.01	--	0.15
04/15/93	01:30	--	--	--	--	0.00	--	0.15
04/15/93	01:35	--	--	--	--	0.01	--	0.15
04/15/93	01:40	--	--	--	--	0.00	--	0.15
04/15/93	01:45	--	--	--	--	0.02	--	0.15
04/15/93	01:50	--	--	--	--	0.07	--	0.15
04/15/93	01:55	--	--	--	--	0.01	--	0.15
04/15/93	02:00	--	--	--	--	0.01	--	0.15
04/15/93	02:05	--	--	--	--	0.02	--	0.16
04/15/93	02:10	--	--	--	--	0.02	--	0.15
04/15/93	02:15	--	--	--	--	0.02	--	0.15
04/15/93	02:20	--	--	--	--	0.02	--	0.15
04/15/93	02:25	--	--	--	--	0.02	--	0.16
04/15/93	02:30	--	--	--	--	0.03	--	0.16
04/15/93	02:35	--	--	--	--	0.03	--	0.16
04/15/93	02:40	--	--	--	--	0.03	--	0.15
04/15/93	02:45	--	--	--	--	0.03	--	0.13
04/15/93	02:50	--	--	--	--	0.03	--	0.12
04/15/93	02:55	--	--	--	--	0.01	--	0.12
04/15/93	03:00	--	--	--	--	0.01	--	0.13
04/15/93	03:05	--	--	--	--	0.01	--	0.15
04/15/93	03:10	--	--	--	--	0.01	--	0.13
04/15/93	03:15	--	--	--	--	0.01	--	0.11
04/15/93	03:20	--	--	--	--	0.01	--	0.14
04/15/93	03:25	--	--	--	--	0.01	--	0.15
04/15/93	03:30	--	--	--	--	0.01	--	0.14
04/15/93	03:35	--	--	--	--	0.01	--	0.16
04/15/93	03:40	--	--	--	--	0.01	--	0.16
04/15/93	03:45	--	--	--	--	0.01	--	0.16
04/15/93	03:50	--	--	--	--	0.00	--	0.16
04/15/93	03:55	--	--	--	--	0.01	--	0.16
04/15/93	04:00	--	--	--	--	0.01	--	0.16
04/15/93	04:05	--	--	--	--	0.00	--	0.16
04/15/93	04:10	--	--	--	--	0.01	--	0.16
04/15/93	04:15	--	--	--	--	0.01	--	0.17
04/15/93	04:20	--	--	--	--	0.02	--	0.15
04/15/93	04:25	--	--	--	--	0.02	--	0.16
04/15/93	04:30	--	--	--	--	0.02	--	0.18
04/15/93	04:35	--	--	--	--	0.00	--	0.00
04/15/93	04:40	--	--	--	--	0.02	--	0.17
04/15/93	04:45	--	--	--	--	0.02	--	0.18
04/15/93	04:50	--	--	--	--	0.03	--	0.19
08/02/93	00:45	--	3.8	--	--	--	1.30	--

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
08/02/93	00:50	--	7.6	--	--	--	6.20	--
08/02/93	00:55	--	4.1	--	--	--	4.40	--
08/02/93	01:00	--	4.1	--	--	--	2.20	--
08/02/93	01:05	--	3.6	--	--	--	3.60	--
08/02/93	01:10	--	2.7	--	--	--	1.80	--
08/02/93	01:15	--	6.8	--	--	--	2.80	--
08/02/93	01:20	--	2.4	--	--	--	3.00	--
08/02/93	01:25	--	3.6	--	--	--	1.80	--
08/02/93	01:30	--	3.2	--	--	--	2.50	--
08/02/93	01:35	--	2.2	--	--	--	2.20	--
08/02/93	01:40	--	3.0	--	--	--	2.50	--
08/02/93	01:45	--	2.2	--	--	--	1.10	--
08/02/93	01:50	--	2.4	--	--	--	1.10	--
08/02/93	01:55	--	3.0	--	--	--	2.20	--
08/02/93	02:00	--	3.3	--	--	--	2.10	--
08/02/93	02:05	--	3.4	--	--	--	1.90	--
08/02/93	02:10	--	4.3	--	--	--	1.10	--
08/02/93	02:15	--	2.9	--	--	--	1.10	--
08/02/93	02:20	--	6.0	--	--	--	1.70	--
08/02/93	02:25	--	3.1	--	--	--	1.80	--
08/02/93	02:30	--	3.1	--	--	--	1.80	--
08/02/93	02:35	--	3.0	--	--	--	1.70	--
08/02/93	02:40	--	3.2	--	--	--	1.70	--
08/02/93	03:35	--	2.6	--	--	--	1.60	--
08/02/93	03:40	--	2.7	--	--	--	1.60	--
08/02/93	03:45	--	2.8	--	--	--	1.60	--
08/02/93	03:50	--	2.8	--	--	--	1.60	--
08/02/93	03:55	--	3.0	--	--	--	1.50	--
08/02/93	04:00	--	2.8	--	--	--	1.50	--
08/02/93	04:05	--	2.5	--	--	--	1.50	--
08/02/93	04:10	--	2.9	--	--	--	1.60	--
08/02/93	04:15	--	2.7	--	--	--	1.50	--
08/02/93	04:20	--	2.6	--	--	--	1.50	--
08/02/93	04:25	--	2.4	--	--	--	1.50	--
08/02/93	04:30	--	2.6	--	--	--	1.60	--
08/02/93	04:35	--	2.4	--	--	--	1.60	--
08/02/93	04:40	--	2.6	--	--	--	1.50	--
08/02/93	04:45	--	2.3	--	--	--	1.50	--
11/13/93	09:00	--	2.4	--	--	1.60	1.50	1.00
11/13/93	09:05	--	2.3	--	--	1.80	1.50	1.00
11/13/93	09:10	--	2.5	--	--	1.70	1.80	0.87
11/13/93	09:15	--	2.6	--	--	1.60	2.00	0.80
11/13/93	09:20	--	3.5	--	--	1.60	2.10	0.86
11/13/93	09:25	--	3.2	--	--	1.50	2.00	0.91
11/13/93	09:30	--	2.0	--	--	1.40	1.70	0.94
11/13/93	09:35	--	3.7	--	--	1.30	1.90	1.10
11/13/93	09:40	--	3.5	--	--	1.40	2.30	1.10
11/13/93	09:45	--	3.9	--	--	2.00	2.40	1.70
11/13/93	09:50	--	4.7	--	--	2.20	2.20	2.00
11/13/93	09:55	--	5.0	--	--	1.80	2.10	2.00
11/13/93	10:00	--	5.2	--	--	1.20	2.80	2.00
11/13/93	10:05	--	4.8	--	--	1.30	2.80	2.10
11/13/93	10:10	--	4.8	--	--	0.47	2.20	2.20
11/13/93	10:15	--	4.9	--	--	0.36	2.80	2.10
11/13/93	10:20	--	4.9	--	--	0.23	2.70	2.20
11/13/93	10:25	--	5.1	--	--	0.25	2.80	2.20

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
11/13/93	10:30	--	4.4	--	--	0.06	3.30	2.40
11/13/93	10:35	--	5.2	--	--	0.19	2.90	2.40
11/13/93	10:40	--	5.2	--	--	0.17	2.90	2.40
11/13/93	10:45	--	5.4	--	--	0.10	2.90	2.50
11/13/93	10:50	--	4.2	--	--	0.04	2.70	2.70
11/13/93	10:55	--	4.5	--	--	0.02	2.70	2.60
11/13/93	12:55	--	5.1	--	--	0.02	3.20	2.80
11/13/93	13:00	--	5.0	--	--	0.02	3.30	2.90
11/13/93	13:05	--	4.4	--	--	0.02	3.20	2.80
11/13/93	13:10	--	5.4	--	--	0.02	3.10	2.60
11/13/93	13:15	--	4.9	--	--	0.03	3.00	2.00
11/13/93	13:20	--	4.8	--	--	0.02	3.10	2.20
11/13/93	13:25	--	5.0	--	--	0.02	3.00	2.20
11/13/93	13:30	--	4.1	--	--	0.02	4.90	2.20
11/13/93	13:35	--	4.9	--	--	0.05	2.90	2.20
11/13/93	13:45	--	4.7	--	--	0.03	2.80	2.20
11/13/93	13:50	--	4.6	--	--	0.02	2.60	0.92
11/13/93	13:55	--	4.2	--	--	0.05	2.70	0.22
11/13/93	14:00	--	4.0	--	--	0.05	2.60	2.20
11/13/93	14:05	--	7.3	--	--	0.03	2.50	0.97
11/13/93	14:10	--	4.2	--	--	0.10	2.70	2.20
11/13/93	14:15	--	4.2	--	--	0.06	2.60	2.10
11/13/93	14:20	--	3.9	--	--	0.04	2.60	0.88
11/13/93	14:25	--	4.2	--	--	0.08	2.60	2.20
11/13/93	14:30	--	3.6	--	--	0.42	2.50	2.20
11/13/93	14:35	--	3.4	--	--	0.47	2.50	2.20
11/13/93	14:40	--	4.2	--	--	0.03	2.60	0.78
11/13/93	14:45	--	3.8	--	--	0.03	2.70	0.89
11/13/93	14:50	--	4.2	--	--	0.06	2.60	0.58
11/16/93	14:50	--	2.7	--	--	0.53	1.30	0.97
11/16/93	14:55	--	1.9	--	--	0.31	1.70	1.20
11/16/93	15:00	--	2.8	--	--	0.38	3.30	0.78
11/16/93	15:05	--	3.0	--	--	0.55	3.20	0.86
11/16/93	15:10	--	3.5	--	--	0.44	3.10	0.88
11/16/93	15:15	--	3.7	--	--	0.39	2.10	0.99
11/16/93	15:20	--	3.0	--	--	0.35	1.90	1.00
11/16/93	15:25	--	1.8	--	--	0.30	2.00	1.00
11/16/93	15:30	--	2.3	--	--	0.29	1.90	1.10
11/16/93	15:35	--	2.5	--	--	0.26	1.90	1.10
11/16/93	15:40	--	2.2	--	--	0.24	1.80	1.10
11/16/93	15:45	--	2.1	--	--	0.23	1.70	1.00
11/16/93	15:50	--	2.0	--	--	0.23	1.70	1.00
11/16/93	15:55	--	1.8	--	--	0.23	1.60	1.00
11/16/93	16:00	--	2.3	--	--	0.21	1.60	0.99
11/16/93	16:05	--	2.1	--	--	0.21	1.60	0.97
11/16/93	16:10	--	1.8	--	--	0.20	1.50	0.91
11/16/93	16:15	--	1.7	--	--	0.19	1.50	0.89
11/16/93	16:20	--	1.4	--	--	0.19	1.90	0.86
11/16/93	16:25	--	1.7	--	--	0.18	1.70	0.84
11/16/93	16:30	--	2.4	--	--	0.20	3.20	0.74
11/16/93	16:35	--	2.3	--	--	0.17	2.00	0.71
11/16/93	16:40	--	1.6	--	--	0.15	2.00	0.68
11/16/93	16:45	--	1.6	--	--	0.13	1.90	0.68
11/16/93	17:00	--	1.2	--	--	0.09	1.60	0.52
11/16/93	17:05	--	1.3	--	--	0.11	1.50	0.72
11/16/93	17:10	--	1.6	--	--	0.08	1.30	0.32

Table 3. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Tritt farm near Keeling (station 07030241), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
11/16/93	17:15	--	1.6	--	--	0.07	1.30	0.27
11/16/93	17:20	--	1.1	--	--	0.08	1.20	0.34
11/16/93	17:25	--	1.5	--	--	0.11	1.20	0.76
11/16/93	17:30	--	1.2	--	--	0.11	1.20	0.80
11/16/93	17:35	--	1.0	--	--	0.07	1.30	0.34
11/16/93	17:40	--	1.2	--	--	0.11	1.20	0.80
11/16/93	17:45	--	1.3	--	--	0.10	1.10	0.71
11/16/93	17:50	--	1.1	--	--	0.11	1.10	0.74
11/16/93	17:55	--	1.3	--	--	0.13	1.20	0.85
11/16/93	18:00	--	1.3	--	--	0.11	1.20	0.48
11/16/93	18:05	--	1.3	--	--	0.13	1.10	0.58
11/16/93	18:10	--	1.2	--	--	0.15	1.20	0.80
11/16/93	18:15	--	1.2	--	--	0.10	1.20	0.35
11/16/93	18:20	--	1.2	--	--	0.14	1.10	0.66
11/16/93	18:25	--	1.1	--	--	0.15	1.10	0.86
11/16/93	18:30	--	1.2	--	--	0.16	1.10	0.88
11/16/93	18:35	--	1.2	--	--	0.16	1.10	0.88
11/16/93	18:40	--	1.9	--	--	0.16	1.10	0.82
11/16/93	18:45	--	1.1	--	--	0.16	1.10	0.86
11/16/93	18:50	--	1.1	--	--	0.15	0.93	0.80
11/16/93	18:55	--	1.2	--	--	0.17	1.10	0.89
11/16/93	19:00	--	1.1	--	--	0.17	1.20	0.92
11/16/93	19:05	--	1.4	--	--	0.16	1.10	0.82
11/16/93	19:10	--	1.1	--	--	0.17	1.10	0.90
11/16/93	19:15	--	1.2	--	--	0.17	1.20	0.92
11/16/93	19:20	--	1.1	--	--	0.17	1.20	0.92
11/16/93	19:25	--	1.0	--	--	0.17	1.20	0.90
11/16/93	19:30	--	1.2	--	--	0.18	1.20	0.92
11/16/93	19:35	--	0.8	--	--	0.10	1.10	0.74
11/16/93	19:40	--	1.3	--	--	0.18	1.30	0.94
11/16/93	19:45	--	1.1	--	--	0.18	1.20	0.94
11/16/93	19:50	--	1.9	--	--	0.18	1.20	0.93
11/16/93	19:55	--	1.1	--	--	0.18	1.20	0.96
11/16/93	20:00	--	1.1	--	--	0.18	1.20	0.95
11/16/93	20:05	--	1.0	--	--	0.17	1.20	0.87
11/16/93	20:10	--	1.2	--	--	0.14	1.00	0.73
11/16/93	20:15	--	1.2	--	--	0.20	1.20	0.97
11/16/93	20:20	--	1.4	--	--	0.20	1.20	0.98
11/16/93	20:25	--	1.5	--	--	0.21	1.20	0.97
11/16/93	20:30	--	1.4	--	--	0.21	1.30	0.94
11/16/93	20:35	--	1.4	--	--	0.22	1.40	0.95
11/16/93	21:00	--	1.5	--	--	0.28	1.70	0.92
11/16/93	21:15	--	1.9	--	--	0.24	1.80	0.94
11/16/93	21:30	--	1.9	--	--	0.18	1.60	0.92
11/16/93	21:45	--	1.7	--	--	0.14	1.50	1.00
11/16/93	22:00	--	1.5	--	--	0.14	1.40	1.00
11/16/93	22:15	--	1.2	--	--	0.14	1.40	1.00
11/16/93	22:30	--	1.4	--	--	0.13	1.40	1.10
11/16/93	22:45	--	1.3	--	--	0.14	1.40	1.10
11/17/93	08:35	--	1.1	--	--	0.22	1.20	1.00

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
05/19/90	19:05	9.7	1.3	3.2	4.50	5.20	1.00	0.13
05/20/90	03:50	3.5	2.0	1.6	0.40	1.50	0.77	0.02
05/20/90	04:20	3.5	2.1	1.6	0.47	1.40	0.81	0.07
05/20/90	04:50	3.2	2.0	1.6	0.40	1.20	0.89	0.02
06/09/90	15:40	5.4	4.3	4.2	0.14	1.10	0.21	0.07
06/09/90	15:55	24.0	13.0	13.0	0.12	11.00	5.50	0.01
06/09/90	16:10	13.0	4.7	4.6	0.09	8.30	3.70	0.01
06/09/90	16:40	11.3	5.4	5.2	0.17	5.90	6.00	0.01
06/14/90	14:00	13.4	9.4	9.0	0.44	4.00	5.40	0.12
06/14/90	14:15	2.6	0.5	0.2	0.29	2.10	5.50	0.18
06/14/90	14:30	1.9	0.2	0.1	0.13	1.70	5.40	0.01
06/14/90	15:00	2.1	0.4	0.3	0.12	1.70	4.70	0.01
06/14/90	17:05	2.9	0.9	0.8	0.15	2.00	3.60	0.01
06/14/90	17:50	2.3	0.5	0.3	0.17	1.80	4.40	0.01
06/14/90	18:05	3.1	0.6	0.2	0.41	2.50	6.30	0.08
06/14/90	18:20	2.0	0.3	0.1	0.21	1.70	5.20	0.01
06/14/90	18:35	2.0	0.8	0.7	0.13	1.20	4.60	0.01
06/22/90	02:05	21.6	17.6	17.0	0.55	4.00	9.10	0.02
06/22/90	02:20	15.9	12.8	12.0	0.77	3.10	8.40	0.09
06/22/90	02:35	36.6	33.7	33.0	0.65	2.90	14.00	0.08
06/22/90	03:05	19.4	16.7	16.0	0.72	2.70	8.30	0.19
07/11/90	22:25	4.1	3.2	2.8	0.35	0.90	0.50	0.26
07/11/90	22:40	8.3	6.6	6.2	0.38	1.70	1.30	0.10
07/11/90	22:55	7.0	5.5	5.2	0.31	1.50	1.40	0.07
07/11/90	23:10	6.5	4.9	4.6	0.30	1.60	1.40	0.09
10/03/90	21:15	2.6	2.3	2.1	0.18	0.30	1.70	0.18
10/03/90	22:00	2.7	2.1	1.6	0.45	0.60	0.30	0.11
10/03/90	22:30	1.9	1.7	1.5	0.16	0.20	0.38	0.15
10/04/90	02:00	1.2	1.0	0.9	0.09	0.20	0.27	0.06
10/04/90	02:15	1.3	1.1	1.0	0.09	0.20	0.37	0.26
10/04/90	02:30	1.8	1.6	1.5	0.14	0.20	0.61	0.06
10/04/90	03:00	2.1	1.9	1.7	0.18	0.20	0.46	0.05
10/04/90	03:30	1.4	1.2	1.0	0.16	0.20	0.32	0.05
01/06/91	04:35	1.6	1.3	1.2	0.13	0.30	0.42	0.03
01/06/91	04:45	1.4	1.1	1.0	0.11	0.30	0.57	0.05
01/06/91	05:15	1.4	1.3	1.2	0.09	0.10	0.54	0.04
01/06/91	06:45	1.4	1.3	1.2	0.08	0.10	0.40	0.05
01/06/91	09:45	1.1	0.9	0.8	0.09	0.20	0.42	0.08
01/06/91	10:45	1.0	0.9	0.8	0.06	0.10	0.32	0.05
01/06/91	17:20	1.1	0.9	0.9	0.05	0.20	0.28	0.04
01/06/91	17:30	0.9	0.8	0.7	0.06	0.10	0.31	0.03
01/06/91	19:00	0.8	0.7	0.7	0.05	0.10	0.29	0.04
01/06/91	20:00	0.9	0.8	0.8	0.05	0.10	0.30	0.07
01/06/91	21:00	0.9	0.8	0.8	0.05	0.10	0.33	0.04
01/06/91	22:00	0.9	0.8	0.8	0.05	0.10	0.28	0.04
01/06/91	23:00	0.8	0.7	0.7	0.05	0.10	0.34	0.03
01/06/91	24:00	0.7	0.6	0.6	0.04	0.10	0.32	0.03
01/07/91	13:30	1.1	0.7	0.7	0.04	0.40	0.28	0.05

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
05/25/91	09:40	14.4	1.4	0.8	0.60	13.00	5.00	0.39
05/25/91	09:45	0.9	0.7	0.6	0.10	0.15	0.66	0.15
05/25/91	09:50	1.1	0.9	0.7	0.21	0.19	0.49	0.22
05/25/91	09:55	1.4	1.3	0.7	0.64	0.11	2.40	1.20
05/25/91	10:00	1.9	1.8	1.4	0.36	0.05	1.00	0.83
05/25/91	10:05	2.2	2.1	1.8	0.33	0.07	2.40	0.39
05/25/91	10:20	1.4	1.2	0.9	0.34	0.16	0.67	0.69
05/25/91	10:35	2.0	1.8	1.3	0.50	0.15	0.64	0.47
05/25/91	10:50	2.0	1.9	1.7	0.24	0.12	0.74	0.62
05/25/91	11:05	1.8	1.7	1.3	0.42	0.14	0.61	0.40
05/25/91	11:20	0.9	0.7	0.3	0.37	0.15	0.58	0.35
05/25/91	11:35	1.1	1.0	0.6	0.39	0.12	0.52	0.28
05/25/91	12:20	1.5	1.4	1.2	0.23	0.13	0.42	0.24
06/11/91	15:40	1.4	1.2	1.2	0.02	0.13	0.13	0.08
06/11/91	15:45	1.0	0.7	0.6	0.06	0.32	0.47	0.42
06/11/91	15:50	1.6	1.3	1.0	0.33	0.34	0.60	0.43
06/11/91	15:55	4.1	3.2	3.2	0.04	0.81	0.68	0.09
06/11/91	16:00	5.0	4.2	4.1	0.11	0.78	3.10	0.05
06/11/91	16:05	3.0	2.5	2.5	0.02	0.44	0.76	0.77
06/11/91	16:20	1.8	1.4	1.0	0.43	0.37	0.63	0.55
06/11/91	16:35	1.5	1.1	0.8	0.30	0.35	0.55	0.51
06/11/91	16:50	1.5	1.1	0.8	0.29	0.39	0.51	0.39
06/11/91	17:05	2.5	2.1	1.8	0.27	0.47	0.42	0.14
06/11/91	17:20	2.0	1.4	1.1	0.32	0.61	0.60	0.48
06/11/91	17:35	2.4	1.7	1.7	0.01	0.68	0.77	0.11
06/11/91	18:20	1.9	1.2	1.0	0.24	0.70	0.54	0.44
06/12/91	14:05	2.4	2.0	1.8	0.17	0.43	0.59	0.37
06/22/91	15:05	4.5	4.1	4.1	0.03	0.36	1.20	0.04
06/22/91	15:10	5.0	4.2	2.9	1.30	0.75	8.70	0.92
06/22/91	15:45	15.4	14.0	12.7	1.30	1.40	16.00	0.15
06/22/91	19:50	7.8	6.9	6.3	0.63	0.87	8.90	0.33
06/22/91	20:00	15.9	15.0	14.1	0.90	0.90	7.90	0.11
06/22/91	20:10	22.0	21.0	20.5	0.54	0.95	8.80	0.08
06/22/91	23:35	5.6	4.4	4.1	0.28	1.20	2.40	0.08
06/23/91	19:50	7.8	6.9	6.3	0.63	0.87	8.90	0.33
06/23/91	20:00	15.8	14.9	14.0	0.90	0.90	7.90	0.11
06/23/91	20:10	21.5	20.5	20.0	0.54	0.95	8.80	0.08
06/23/91	23:35	5.6	4.4	4.1	0.28	1.20	2.40	0.08
08/09/91	02:45	5.2	4.5	4.5	0.02	0.69	0.96	0.26
08/09/91	02:50	2.8	1.8	1.8	0.04	0.99	0.76	0.15
08/09/91	02:55	3.2	2.4	2.3	0.06	0.87	0.94	0.08
08/09/91	03:00	9.3	8.0	8.0	0.01	1.30	3.40	0.04
08/09/91	03:40	4.6	3.5	3.4	0.08	1.10	0.97	0.05
08/09/91	04:10	11.1	9.7	9.7	0.04	1.40	2.90	0.06
08/09/91	04:25	11.1	9.9	9.9	0.04	1.20	1.90	0.03
02/17/92	20:00	1.3	1.0	0.9	0.11	0.25	0.30	0.12
02/17/92	20:05	2.6	2.4	2.2	0.15	0.22	0.96	0.18
02/17/92	20:10	3.7	3.5	3.4	0.11	0.24	1.70	0.12
02/17/92	20:15	4.0	3.7	3.6	0.06	0.28	2.10	0.03
02/17/92	20:20	2.3	2.0	1.9	0.06	0.26	1.10	0.03

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
02/17/92	20:25	1.7	1.4	1.3	0.07	0.27	0.74	0.03
02/17/92	20:30	1.6	1.3	1.1	0.22	0.26	0.48	0.21
02/17/92	20:35	1.6	1.3	1.2	0.08	0.28	0.57	0.02
02/17/92	20:40	1.3	1.1	1.0	0.07	0.23	0.52	0.02
02/17/92	20:45	1.6	1.4	1.3	0.06	0.24	0.57	0.02
02/17/92	20:50	1.3	1.1	1.0	0.06	0.22	0.50	0.02
02/17/92	20:55	3.2	3.0	2.8	0.21	0.22	1.30	0.26
02/17/92	21:05	1.8	1.5	1.4	0.05	0.26	0.66	0.03
02/17/92	21:10	1.5	1.3	1.2	0.05	0.23	0.62	0.02
02/17/92	21:15	1.8	1.6	1.5	0.05	0.23	0.62	0.03
02/17/92	21:20	1.8	1.6	1.5	0.06	0.23	0.77	0.02
02/17/92	21:25	1.4	1.2	1.0	0.21	0.24	0.56	0.23
02/17/92	21:30	1.4	1.1	1.0	0.05	0.27	0.44	0.02
02/17/92	21:35	1.7	1.4	1.3	0.05	0.27	0.61	0.03
02/17/92	21:40	2.0	1.7	1.6	0.06	0.26	0.83	0.03
02/17/92	21:45	1.4	1.1	1.0	0.06	0.26	0.44	0.02
02/17/92	21:50	2.1	1.8	1.6	0.21	0.26	0.75	0.20
02/17/92	21:55	1.3	1.0	0.8	0.17	0.27	0.41	0.19
02/17/92	22:40	2.1	1.8	1.8	0.04	0.29	0.78	0.03
02/17/92	22:45	1.9	1.6	1.5	0.05	0.31	0.62	0.03
02/17/92	22:50	1.2	0.9	0.8	0.15	0.31	0.36	0.17
02/17/92	22:55	1.3	1.0	1.0	0.05	0.34	0.37	0.04
02/17/92	23:00	2.2	1.9	1.8	0.07	0.32	0.77	0.04
02/18/92	11:10	1.5	1.0	0.9	0.13	0.53	0.35	0.12
03/18/92	02:30	3.4	2.9	2.9	0.02	0.53	1.70	0.01
03/18/92	02:35	3.3	2.8	2.8	0.01	0.47	1.50	0.01
03/18/92	02:45	3.1	2.7	2.7	0.01	0.42	1.60	0.01
03/18/92	02:50	4.1	3.6	3.6	0.01	0.51	1.90	0.01
03/18/92	02:55	5.2	4.7	4.7	0.02	0.50	2.60	0.01
03/18/92	03:00	4.7	4.3	4.3	0.01	0.39	1.70	0.01
03/18/92	03:30	4.4	4.1	4.1	0.01	0.30	1.70	0.01
03/18/92	03:35	5.1	0.0	4.8	4.80	0.28	1.80	0.01
03/18/92	03:45	5.0	4.8	4.8	0.01	0.24	1.40	0.01
03/18/92	03:50	3.2	3.0	3.0	0.01	0.22	1.10	0.01
03/18/92	04:00	2.1	1.9	1.9	0.02	0.23	0.97	0.01
03/18/92	04:15	3.5	3.3	3.3	0.01	0.21	1.80	0.01
03/18/92	04:20	2.5	2.3	2.3	0.02	0.23	1.20	0.01
03/18/92	04:25	2.6	2.4	2.4	0.01	0.22	1.20	0.01
03/18/92	04:30	2.1	1.9	1.9	0.02	0.23	0.90	0.01
03/18/92	04:35	2.1	1.9	1.9	0.02	0.23	0.88	0.01
03/18/92	04:45	2.0	1.8	1.8	0.02	0.23	0.79	0.02
03/18/92	05:00	3.1	2.8	2.8	0.01	0.27	1.60	0.02
03/18/92	05:05	3.1	2.8	2.8	0.02	0.27	1.60	0.01
03/18/92	05:10	3.4	3.1	3.1	0.01	0.30	1.70	0.01
03/18/92	05:20	2.5	2.2	2.2	0.01	0.34	1.20	0.01
03/18/92	05:25	3.6	3.2	3.2	0.01	0.41	1.60	0.01
03/18/92	05:30	4.0	3.6	3.6	0.01	0.41	2.00	0.01
03/18/92	05:35	3.8	3.4	3.4	0.01	0.41	2.00	0.01
03/18/92	05:40	3.4	3.0	3.0	0.02	0.36	1.70	0.01
04/20/92	05:50	2.0	1.5	1.3	0.19	0.50	0.44	0.04
04/20/92	05:55	1.9	1.4	1.1	0.25	0.49	0.49	0.09
04/20/92	06:00	2.7	2.0	1.5	0.47	0.70	0.74	0.11
04/20/92	06:05	3.0	2.3	1.3	1.00	0.67	0.74	0.10
04/20/92	06:10	4.0	3.3	2.3	0.99	0.71	1.50	0.10

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
04/20/92	06:15	3.3	2.8	2.3	0.54	0.51	1.30	0.03
04/20/92	06:20	1.6	1.1	0.8	0.35	0.52	0.37	0.01
04/20/92	06:25	1.3	0.7	0.3	0.36	0.62	0.12	0.01
04/20/92	06:30	2.0	1.1	0.7	0.43	0.90	0.26	0.02
04/20/92	06:35	2.3	1.4	0.9	0.47	0.89	0.42	0.02
04/20/92	06:40	2.7	1.7	1.2	0.51	0.96	0.55	0.03
04/20/92	06:45	3.2	2.2	1.6	0.56	0.96	0.98	0.04
04/20/92	06:50	2.8	2.7	2.1	0.64	1.00	1.20	0.04
04/20/92	06:55	3.8	2.8	2.1	0.69	1.00	1.20	0.05
04/20/92	07:00	3.4	2.3	1.6	0.72	1.10	0.80	0.05
04/20/92	07:05	4.3	3.2	2.5	0.73	1.10	1.50	0.05
04/20/92	07:10	3.7	2.6	1.9	0.69	1.10	1.10	0.04
04/20/92	07:15	4.4	3.3	2.6	0.72	1.10	1.50	0.09
04/20/92	07:20	3.6	2.4	1.7	0.74	1.20	0.92	0.13
04/20/92	07:25	3.9	2.7	2.0	0.67	1.20	1.20	0.04
04/20/92	07:30	5.7	4.5	3.9	0.64	1.20	1.20	0.05
04/20/92	07:35	3.7	2.5	1.9	0.64	1.20	1.10	0.04
04/20/92	07:40	4.2	3.2	2.5	0.67	1.00	1.50	0.04
04/20/92	08:15	4.5	3.4	2.7	0.71	1.10	1.60	0.08
04/20/92	08:40	4.2	3.2	2.5	0.66	1.00	1.50	0.07
04/20/92	08:45	4.5	3.4	2.8	0.55	1.10	1.70	0.04
04/20/92	08:50	4.5	3.5	3.0	0.52	0.97	1.70	0.04
04/20/92	08:55	3.4	2.4	1.9	0.48	0.97	1.00	0.03
04/20/92	09:00	3.5	2.5	2.0	0.55	1.00	1.20	0.13
04/20/92	09:10	4.1	3.1	2.6	0.48	0.97	1.50	0.05
04/20/92	09:15	4.0	3.0	2.5	0.48	1.00	1.40	0.04
04/20/92	09:20	4.3	3.2	2.7	0.52	1.10	1.50	0.06
04/20/92	09:25	3.7	2.7	2.1	0.56	1.00	1.30	0.05
04/20/92	09:30	4.5	3.5	2.9	0.62	1.00	1.60	0.06
04/20/92	09:35	4.4	3.3	2.7	0.63	1.10	1.60	0.05
04/20/92	09:40	4.6	3.6	3.0	0.59	1.00	1.70	0.05
04/20/92	09:45	4.5	3.5	2.9	0.56	0.98	1.60	0.05
04/20/92	09:50	4.5	3.5	3.0	0.52	0.96	1.70	0.05
04/20/92	09:55	4.1	3.1	2.6	0.45	1.00	1.50	0.03
04/20/92	10:00	4.2	3.3	2.8	0.48	0.94	1.60	0.05
04/20/92	10:05	4.6	3.6	3.1	0.46	0.95	1.70	0.04
04/20/92	11:35	3.1	2.3	1.8	0.49	0.84	0.78	0.06
04/20/92	11:40	3.3	2.5	2.0	0.51	0.84	0.81	0.07
05/29/92	08:20	2.5	1.5	1.5	0.04	1.00	1.20	0.05
05/29/92	08:25	4.6	3.3	3.2	0.06	1.30	1.90	0.02
05/29/92	08:30	4.7	3.5	3.4	0.06	1.20	3.10	0.01
05/29/92	08:35	1.8	0.7	0.6	0.06	1.10	0.37	0.01
05/29/92	08:40	2.6	1.5	1.4	0.06	1.10	0.79	0.01
05/29/92	08:45	3.4	2.0	1.9	0.06	1.40	1.20	0.01
05/29/92	08:50	4.6	3.3	3.2	0.07	1.30	1.80	0.01
05/29/92	08:55	3.7	2.5	2.4	0.06	1.20	1.40	0.01
05/29/92	09:00	4.0	2.8	2.7	0.06	1.20	1.60	0.01
05/29/92	09:05	3.4	2.3	2.2	0.06	1.10	1.40	0.02
05/29/92	09:10	3.6	2.6	2.5	0.05	1.00	1.50	0.03
05/29/92	09:15	3.0	2.0	1.9	0.06	1.00	1.30	0.03
05/29/92	09:20	1.8	0.8	0.7	0.06	0.98	0.44	0.02
05/29/92	09:25	2.9	1.9	1.8	0.06	0.96	1.10	0.01
05/29/92	09:30	4.2	3.3	3.2	0.06	0.92	1.80	0.01
05/29/92	09:35	4.8	3.8	3.7	0.07	0.95	2.80	0.01
05/29/92	09:40	2.3	1.3	1.2	0.07	1.00	0.61	0.01
05/29/92	09:55	2.4	1.3	1.2	0.07	1.10	0.62	0.01

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
05/29/92	10:00	3.9	2.9	2.8	0.06	0.98	1.60	0.02
05/29/92	10:05	3.0	2.1	2.0	0.10	0.86	1.10	0.02
05/29/92	10:10	3.9	2.9	2.8	0.08	1.00	1.50	0.01
05/29/92	10:15	2.9	0.8	0.7	0.11	2.10	0.31	0.10
05/29/92	10:40	6.3	4.3	4.0	0.29	2.00	5.30	0.02
05/29/92	10:45	4.9	2.7	2.4	0.31	2.20	1.60	0.02
05/29/92	10:50	3.8	3.0	2.8	0.20	0.81	1.80	0.03
05/29/92	10:55	6.6	3.9	3.5	0.35	2.70	3.90	0.05
05/29/92	11:00	6.1	3.4	3.1	0.33	2.70	3.10	0.02
05/29/92	11:05	7.0	4.4	4.0	0.35	2.60	4.60	0.04
05/29/92	11:10	6.6	4.1	3.7	0.35	2.50	4.60	0.02
05/29/92	11:15	4.9	2.5	2.1	0.35	2.40	3.00	0.01
05/29/92	11:20	5.4	3.1	2.7	0.36	2.30	1.80	0.01
05/29/92	11:25	6.6	4.3	3.9	0.40	2.30	4.40	0.03
05/29/92	11:30	7.3	4.9	4.5	0.36	2.40	4.00	0.02
05/29/92	11:35	6.3	3.9	3.5	0.36	2.40	3.40	0.02
05/29/92	11:40	5.5	3.1	2.7	0.39	2.40	3.10	0.03
05/29/92	11:45	5.2	2.8	2.4	0.39	2.40	1.70	0.04
05/29/92	11:50	6.4	4.0	3.7	0.34	2.40	3.60	0.02
05/29/92	11:55	6.7	4.3	3.9	0.35	2.40	4.20	0.01
05/29/92	12:00	7.1	4.8	4.4	0.38	2.30	3.60	0.02
05/29/92	12:05	7.9	5.5	5.1	0.38	2.40	5.10	0.01
05/29/92	12:10	6.1	3.5	3.1	0.40	2.60	2.70	0.02
05/29/92	12:15	5.4	2.7	2.3	0.39	2.70	1.60	0.02
05/29/92	12:20	7.0	4.2	3.8	0.38	2.80	3.60	0.01
05/29/92	12:25	6.2	3.5	3.1	0.40	2.70	2.60	0.02
05/29/92	12:30	7.4	4.9	4.5	0.37	2.50	3.70	0.02
05/29/92	12:35	8.3	5.9	5.5	0.38	2.40	4.70	0.01
05/29/92	12:45	8.3	6.1	5.7	0.36	2.20	4.80	0.01
05/29/92	17:00	3.2	2.4	2.2	0.19	0.82	1.30	0.04
05/29/92	17:05	2.9	2.1	1.9	0.21	0.82	1.20	0.03
05/29/92	17:10	1.8	0.2	2.0	0.81	1.20	0.03	
06/03/92	03:00	5.7	2.9	2.4	0.46	2.80	2.60	0.30
06/03/92	03:20	6.1	4.3	3.5	0.76	1.80	5.30	0.07
06/03/92	03:25	3.6	1.6	0.9	0.68	2.00	0.38	0.08
06/03/92	03:30	4.7	2.7	1.9	0.81	2.00	1.10	0.12
06/03/92	03:35	7.2	4.9	4.3	0.56	2.30	4.70	0.06
06/03/92	03:40	4.8	3.6	3.4	0.23	1.20	3.80	0.03
06/03/92	03:45	4.1	1.8	1.1	0.73	2.30	0.14	0.06
06/03/92	04:00	5.1	3.7	3.5	0.19	1.40	3.30	0.03
06/03/92	04:05	4.8	3.6	3.3	0.26	1.20	3.10	0.06
06/03/92	04:10	5.1	3.9	3.6	0.27	1.20	3.10	0.07
06/03/92	04:15	3.7	2.3	2.1	0.15	1.40	1.40	0.04
06/03/92	04:20	3.7	2.5	2.3	0.23	1.20	1.50	0.03
06/03/92	04:25	3.3	2.0	1.8	0.22	1.30	1.80	0.03
06/03/92	04:30	4.9	1.2	1.0	0.22	3.70	0.72	0.65
06/03/92	04:35	3.3	2.0	1.8	0.21	1.30	2.20	0.03
06/03/92	04:40	3.8	2.4	2.2	0.19	1.40	1.40	0.04
06/03/92	04:45	3.2	1.9	1.7	0.17	1.30	1.20	0.07
06/03/92	08:00	3.2	2.2	2.1	0.12	1.00	1.20	0.03
06/03/92	08:05	2.5	1.5	1.4	0.11	1.00	0.82	0.03
06/03/92	08:10	2.1	1.1	1.0	0.11	1.00	0.64	0.03
06/03/92	08:15	2.3	1.3	1.2	0.11	1.00	0.78	0.03
06/03/92	08:20	2.7	1.7	1.6	0.11	1.00	0.91	0.03
06/03/92	08:25	4.3	3.3	3.2	0.12	1.00	1.90	0.03
06/03/92	08:30	1.7	0.7	0.6	0.11	1.00	0.37	0.03

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
06/03/92	08:35	2.6	1.6	1.5	0.10	1.00	0.91	0.03
06/03/92	08:40	2.7	1.7	1.6	0.11	1.00	0.95	0.03
06/03/92	08:45	4.4	3.4	3.3	0.11	1.00	1.90	0.03
06/03/92	08:50	4.0	3.0	2.9	0.12	1.00	1.60	0.03
06/03/92	08:55	2.5	1.5	1.4	0.12	1.00	0.84	0.03
06/03/92	09:00	2.9	1.9	1.8	0.12	1.00	1.10	0.03
06/03/92	09:05	5.4	4.3	4.2	0.14	1.10	3.60	0.03
06/03/92	09:10	2.2	1.1	1.0	0.13	1.10	0.55	0.03
06/03/92	09:15	2.3	1.2	1.1	0.14	1.10	0.62	0.02
06/03/92	09:20	2.7	1.6	1.4	0.16	1.10	0.86	0.03
06/03/92	09:25	3.9	2.7	2.5	0.16	1.20	1.50	0.03
06/03/92	09:30	2.8	1.7	1.5	0.15	1.20	0.85	0.03
06/03/92	09:35	2.9	1.7	1.6	0.14	1.20	0.98	0.03
06/03/92	09:40	2.2	1.0	0.8	0.16	1.20	0.48	0.02
06/03/92	09:45	3.1	1.9	1.7	0.17	1.20	1.00	0.02
06/03/92	09:50	3.5	2.4	2.2	0.16	1.10	1.40	0.02
06/03/92	09:55	3.8	2.7	2.5	0.15	1.10	1.70	0.02
06/26/92	03:05	3.6	3.0	2.9	0.12	0.58	1.60	0.05
06/26/92	03:10	2.4	2.0	1.9	0.08	0.37	1.40	0.03
06/26/92	03:15	2.8	2.5	2.4	0.08	0.31	1.90	0.04
06/26/92	03:20	2.6	2.3	2.2	0.06	0.31	1.90	0.03
06/26/92	03:25	3.8	3.4	3.3	0.07	0.38	2.50	0.02
06/26/92	03:30	3.8	3.2	3.1	0.09	0.58	2.00	0.02
06/26/92	03:35	3.9	3.3	3.2	0.11	0.57	1.80	0.01
06/26/92	03:40	3.3	2.8	2.7	0.14	0.50	1.60	0.01
06/26/92	03:45	3.6	3.1	3.0	0.12	0.46	1.80	0.02
06/26/92	03:50	4.1	3.6	3.5	0.10	0.45	2.70	0.01
07/17/92	04:00	2.4	2.2	2.1	0.09	0.24	0.96	0.06
07/17/92	04:05	1.7	1.5	1.4	0.10	0.18	0.92	0.04
07/17/92	04:10	2.1	1.9	1.8	0.07	0.18	1.20	0.03
07/17/92	04:15	2.4	2.2	2.1	0.05	0.17	1.30	0.04
07/17/92	04:20	2.6	2.3	2.2	0.06	0.25	1.10	0.02
07/17/92	04:25	2.3	2.1	2.0	0.05	0.21	1.10	0.01
07/17/92	04:30	1.7	1.5	1.4	0.06	0.20	0.82	0.02
07/17/92	04:35	1.9	1.7	1.7	0.04	0.22	0.95	0.01
07/17/92	04:40	1.6	1.4	1.4	0.04	0.21	0.77	0.01
07/17/92	04:50	2.5	2.2	2.2	0.03	0.25	1.20	0.01
07/17/92	04:55	2.8	2.5	2.5	0.03	0.26	1.20	0.01
07/17/92	05:00	1.9	1.6	1.6	0.02	0.29	0.82	0.01
07/17/92	05:05	1.6	1.3	1.3	0.02	0.31	0.70	0.01
07/17/92	05:10	2.1	1.8	1.8	0.02	0.33	0.96	0.01
07/17/92	05:15	2.0	1.7	1.7	0.03	0.32	0.92	0.01
07/17/92	05:20	1.5	1.2	1.2	0.02	0.30	0.62	0.01
07/17/92	05:25	1.7	1.4	1.4	0.02	0.30	0.77	0.01
07/17/92	05:30	1.7	1.4	1.4	0.02	0.29	0.73	0.01
07/17/92	05:35	2.0	1.7	1.7	0.04	0.31	0.97	0.03
07/17/92	05:40	1.8	1.5	1.5	0.02	0.31	0.81	0.01
07/17/92	05:45	1.4	1.1	1.1	0.02	0.32	0.60	0.01
07/17/92	05:50	1.7	1.4	1.4	0.01	0.33	0.76	0.01
07/17/92	05:55	0.7	0.3	0.3	0.02	0.35	0.06	0.01
09/21/92	16:45	1.2	1.1	1.1	0.04	0.05	0.38	0.08
09/21/92	16:50	1.5	1.4	1.4	0.01	0.05	0.41	0.08
09/21/92	16:55	1.4	1.3	1.3	0.01	0.05	0.42	0.09

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
09/22/92	02:15	1.9	1.8	1.7	0.06	0.05	1.10	0.14
09/22/92	02:20	2.0	1.9	1.8	0.06	0.05	1.20	0.39
09/22/92	02:25	1.2	1.1	1.1	0.04	0.07	0.90	0.52
09/22/92	02:30	1.9	1.8	1.8	0.03	0.05	1.30	0.46
09/22/92	02:35	1.2	1.1	1.1	0.03	0.05	0.85	0.40
09/22/92	02:40	1.8	1.7	1.7	0.03	0.05	1.40	0.28
09/22/92	02:45	1.9	1.8	1.8	0.03	0.05	1.30	0.23
09/22/92	02:50	1.7	1.6	1.6	0.03	0.06	1.10	0.15
09/22/92	02:55	1.3	1.2	1.2	0.02	0.05	0.66	0.11
09/22/92	03:00	1.2	1.1	1.1	0.01	0.05	0.51	0.11
09/22/92	03:05	1.1	1.0	1.0	0.02	0.05	0.50	0.12
09/22/92	03:10	0.9	0.8	0.8	0.01	0.05	0.40	0.12
09/22/92	03:15	0.9	0.8	0.8	0.01	0.05	0.34	0.13
09/22/92	03:20	1.0	0.9	0.9	0.02	0.05	0.39	0.13
09/22/92	03:25	1.0	0.9	0.9	0.01	0.05	0.42	0.14
09/22/92	03:30	1.1	1.0	1.0	0.02	0.05	0.42	0.14
09/22/92	03:35	1.1	1.0	1.0	0.01	0.05	0.51	0.14
09/22/92	03:40	1.0	0.9	0.9	0.01	0.05	0.42	0.14
09/22/92	03:45	0.9	0.8	0.8	0.01	0.05	0.40	0.14
09/22/92	03:50	0.9	0.8	0.8	0.01	0.05	0.40	0.15
09/22/92	03:55	0.8	0.7	0.7	0.02	0.05	0.35	0.15
09/22/92	04:00	1.0	0.9	0.9	0.01	0.05	0.39	0.15
09/22/92	04:05	1.2	1.1	1.1	0.01	0.05	0.52	0.16
09/22/92	04:10	1.1	1.0	1.1	0.01	0.05	0.40	0.16
09/22/92	04:25	1.0	0.9	0.8	0.06	0.05	0.47	0.18
09/22/92	04:30	1.1	1.0	0.9	0.06	0.05	0.52	0.18
09/22/92	04:35	1.0	0.9	0.8	0.06	0.05	0.42	0.18
09/22/92	04:40	1.0	0.9	0.8	0.06	0.05	0.47	0.18
09/22/92	04:45	0.9	0.8	0.7	0.06	0.05	0.41	0.18
09/22/92	04:50	1.3	1.2	1.1	0.06	0.05	0.55	0.18
09/22/92	04:55	1.0	0.9	0.8	0.06	0.06	0.45	0.18
09/22/92	05:00	1.2	1.1	1.0	0.06	0.05	0.48	0.18
09/22/92	05:05	1.3	1.2	1.1	0.05	0.05	0.56	0.17
09/22/92	05:10	2.3	2.2	2.1	0.06	0.05	0.48	0.17
09/22/92	05:15	1.2	1.1	1.0	0.05	0.05	0.51	0.17
09/22/92	05:20	1.2	1.1	1.0	0.05	0.05	0.48	0.16
09/22/92	05:25	1.2	1.1	1.0	0.06	0.05	0.49	0.17
09/22/92	05:30	1.1	1.0	1.0	0.05	0.05	0.43	0.16
09/22/92	05:35	1.0	0.9	0.9	0.05	0.05	0.40	0.16
09/22/92	05:40	1.2	1.1	1.0	0.06	0.05	0.45	0.17
09/22/92	05:45	1.1	1.0	0.9	0.06	0.05	0.47	0.16
09/22/92	05:50	1.2	1.1	1.0	0.05	0.05	0.42	0.16
09/22/92	05:55	1.2	1.1	1.0	0.05	0.05	0.40	0.16
09/22/92	06:00	0.9	0.8	0.8	0.05	0.05	0.33	0.16
09/22/92	06:05	0.9	0.9	0.9	0.05	0.05	0.35	0.16
09/22/92	06:10	1.1	1.0	1.0	0.05	0.05	0.39	0.15
09/22/92	06:15	1.0	0.9	0.9	0.04	0.05	0.33	0.15
09/22/92	06:20	1.2	1.1	1.0	0.05	0.05	0.41	0.15
09/22/92	06:35	1.0	0.9	0.9	0.04	0.05	0.31	0.14
09/22/92	06:40	0.9	0.8	0.8	0.04	0.05	0.30	0.15
09/22/92	06:45	1.4	1.3	1.3	0.04	0.05	0.42	0.14
09/22/92	06:50	1.7	1.6	1.6	0.04	0.05	0.48	0.14
09/22/92	06:55	1.3	1.2	1.2	0.03	0.05	0.40	0.14
09/22/92	07:00	1.1	1.0	1.0	0.04	0.05	0.36	0.13
09/22/92	07:05	1.2	1.1	1.1	0.03	0.05	0.39	0.13
09/22/92	07:10	1.2	1.1	1.1	0.03	0.05	0.40	0.13
09/22/92	07:15	1.0	0.9	0.9	0.03	0.05	0.29	0.13

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
09/22/92	07:20	1.2	1.1	1.1	0.03	0.05	0.38	0.13
09/22/92	07:25	1.6	1.5	1.5	0.04	0.05	0.44	0.13
09/22/92	07:30	1.0	0.9	0.9	0.03	0.05	0.30	0.13
09/22/92	07:35	1.3	1.2	1.2	0.04	0.05	0.33	0.14
09/22/92	07:40	1.3	1.2	1.2	0.04	0.05	0.41	0.13
09/22/92	07:45	1.3	1.2	1.2	0.04	0.05	0.41	0.13
09/22/92	07:50	1.1	1.0	1.0	0.04	0.05	0.32	0.14
09/22/92	07:55	1.4	1.3	1.2	0.05	0.05	0.40	0.14
09/22/92	08:00	1.1	1.0	1.0	0.05	0.05	0.33	0.14
09/22/92	08:05	1.3	1.2	1.1	0.05	0.05	0.39	0.14
09/22/92	08:10	1.5	1.4	1.3	0.06	0.05	0.39	0.14
09/22/92	08:15	1.1	1.0	0.9	0.06	0.05	0.33	0.14
09/22/92	08:20	1.3	1.2	1.1	0.06	0.05	0.40	0.15
09/22/92	08:25	1.0	0.9	0.8	0.06	0.05	0.31	0.15
09/22/92	08:30	1.2	1.1	1.0	0.07	0.05	0.34	0.15
10/30/92	06:50	1.1	1.0	1.0	0.02	0.08	0.51	0.31
10/30/92	06:55	1.9	1.7	1.7	0.02	0.23	0.66	0.27
10/30/92	07:00	1.1	1.0	1.0	0.02	0.06	0.48	0.30
10/30/92	07:05	1.1	1.0	1.0	0.02	0.09	0.64	0.50
10/30/92	07:10	1.3	1.1	1.1	0.02	0.16	0.83	0.64
10/30/92	07:15	1.4	1.2	1.2	0.02	0.23	0.93	0.76
10/30/92	07:20	1.7	1.5	1.5	0.02	0.24	1.00	0.80
10/30/92	07:25	1.7	1.4	1.4	0.02	0.25	1.10	0.85
10/30/92	07:30	2.0	1.7	1.7	0.02	0.26	1.20	0.91
10/30/92	07:35	1.9	1.6	1.6	0.03	0.25	1.20	0.90
10/30/92	07:40	1.9	1.6	1.6	0.03	0.26	1.40	0.77
10/30/92	07:45	2.9	2.5	2.5	0.03	0.35	3.10	0.44
10/30/92	07:50	2.9	2.6	2.6	0.02	0.33	2.50	0.39
10/30/92	07:55	3.9	3.6	3.6	0.04	0.27	2.90	0.36
10/30/92	08:00	2.4	2.2	2.2	0.02	2.20	1.50	0.28
10/30/92	08:05	1.1	0.9	0.9	0.02	0.19	0.56	0.22
10/30/92	08:10	1.6	1.4	1.4	0.03	0.22	0.98	0.23
10/30/92	08:15	2.2	2.0	2.0	0.02	0.23	0.98	0.23
10/30/92	08:20	1.9	1.7	1.7	0.03	0.22	0.99	0.23
10/30/92	08:25	2.1	1.9	1.9	0.02	0.20	0.97	0.22
10/30/92	08:30	2.5	2.3	2.3	0.02	0.21	1.10	0.23
10/30/92	08:35	1.9	1.7	1.7	0.02	0.20	0.88	0.22
10/30/92	08:40	2.2	2.0	2.0	0.02	0.19	1.00	0.23
10/30/92	08:45	2.0	1.8	1.8	0.01	0.19	0.94	0.24
10/30/92	08:50	1.6	1.4	1.4	0.01	0.18	0.80	0.26
10/30/92	09:20	1.8	1.6	1.6	0.03	0.19	0.97	0.28
10/30/92	09:25	1.7	1.5	1.5	0.03	0.02	0.93	0.29
10/30/92	09:30	2.0	1.7	1.7	0.03	0.25	0.98	0.29
10/30/92	09:35	1.8	1.6	1.6	0.03	0.21	0.98	0.29
10/30/92	09:40	2.0	1.7	1.7	0.03	0.25	0.92	0.30
10/30/92	09:45	2.2	2.0	2.0	0.04	0.23	1.10	0.31
10/30/92	09:50	1.9	1.7	1.7	0.03	0.24	1.10	0.31
10/30/92	09:55	2.0	1.8	1.8	0.02	0.20	0.94	0.30
10/30/92	10:00	1.7	1.5	1.5	0.03	0.22	0.71	0.32
10/30/92	10:05	1.8	1.6	1.6	0.03	0.22	0.81	0.31
10/30/92	10:10	1.8	1.6	1.6	0.02	0.21	0.89	0.31
10/30/92	10:15	1.8	1.5	1.5	0.02	0.25	0.88	0.31
10/30/92	10:20	2.0	1.8	1.8	0.03	0.21	0.84	0.30
10/30/92	10:25	1.9	1.7	1.7	0.02	0.21	0.85	0.30
10/30/92	10:30	1.8	1.6	1.6	0.03	0.21	0.79	0.29
10/30/92	10:35	2.0	1.8	1.8	0.02	0.22	0.85	0.29

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
10/30/92	10:40	1.6	1.4	1.4	0.03	0.22	0.72	0.29
10/30/92	10:45	1.9	1.7	1.7	0.03	0.20	0.83	0.29
10/30/92	10:50	2.0	1.8	1.8	0.03	0.20	0.84	0.29
10/30/92	10:55	1.9	1.7	1.7	0.03	0.22	0.81	0.28
10/30/92	11:00	1.8	1.6	1.6	0.03	0.22	0.76	0.28
10/30/92	11:05	1.7	1.5	1.5	0.03	0.22	0.80	0.28
10/30/92	11:10	2.0	1.8	1.8	0.03	0.22	0.89	0.28
10/30/92	11:15	1.5	1.3	1.3	0.03	0.19	0.68	0.28
10/30/92	11:20	1.8	1.6	1.6	0.03	0.19	0.78	0.26
10/30/92	11:25	1.6	1.4	1.4	0.02	0.19	0.70	0.26
10/30/92	11:30	1.5	1.3	1.3	0.03	0.19	0.65	0.27
10/30/92	11:35	1.9	1.7	1.7	0.03	0.20	0.81	0.27
10/30/92	11:40	1.8	1.6	1.6	0.02	0.19	0.72	0.27
10/30/92	11:45	1.7	1.5	1.5	0.03	0.21	0.70	0.28
10/30/92	11:55	1.9	1.7	1.7	0.02	0.20	0.68	0.27
10/30/92	12:00	1.8	1.6	1.6	0.03	0.22	0.71	0.27
10/30/92	12:05	1.8	1.6	1.6	0.02	0.21	0.66	0.27
10/30/92	12:10	1.7	1.5	1.5	0.03	0.21	0.69	0.28
10/30/92	12:15	1.8	1.6	1.6	0.03	0.22	0.72	0.28
10/30/92	12:20	1.8	1.6	1.6	0.03	0.19	0.63	0.28
10/30/92	12:25	1.9	1.7	1.7	0.03	0.22	0.71	0.27
10/30/92	12:30	1.9	1.7	1.7	0.02	0.19	0.65	0.27
10/30/92	12:35	1.8	1.6	1.6	0.03	0.23	0.67	0.27
10/30/92	12:40	1.9	1.7	1.7	0.02	0.21	0.70	0.27
10/30/92	12:45	1.7	1.5	1.5	0.03	0.19	0.66	0.28
10/30/92	12:50	2.0	1.8	1.8	0.04	0.21	0.67	0.28
10/30/92	13:00	1.7	1.5	1.5	0.02	0.20	0.62	0.26
10/30/92	13:05	1.8	1.6	1.6	0.02	0.19	0.64	0.27
10/30/92	13:10	2.0	1.8	1.8	0.02	0.21	0.68	0.27
10/30/92	13:15	2.0	1.8	1.8	0.03	0.20	0.66	0.27
10/30/92	13:50	2.1	1.9	1.9	0.02	0.15	0.63	0.24
10/30/92	13:55	1.4	1.2	1.2	0.02	0.15	0.49	0.24
10/30/92	14:00	1.9	1.8	1.8	0.02	0.14	0.58	0.24
10/30/92	14:05	1.7	1.6	1.6	0.01	0.13	0.60	0.24
10/30/92	14:10	1.9	1.7	1.7	0.03	0.15	0.57	0.24
10/30/92	14:15	1.6	1.4	1.4	0.02	0.16	0.53	0.24
10/30/92	14:20	2.0	1.8	1.8	0.01	0.16	0.59	0.23
10/30/92	14:25	1.7	1.6	1.6	0.02	0.13	0.54	0.23
10/30/92	14:30	1.9	1.7	1.7	0.01	0.16	0.53	0.23
10/30/92	14:35	1.9	1.8	1.8	0.02	0.14	0.55	0.23
10/30/92	14:40	2.0	1.9	1.9	0.02	0.14	0.56	0.23
10/30/92	14:45	1.8	1.7	1.7	0.02	0.14	0.55	0.23
10/30/92	14:50	2.1	1.9	1.9	0.02	0.15	0.56	0.23
10/30/92	14:55	1.9	1.8	1.8	0.02	0.14	0.54	0.23
10/30/92	15:00	1.8	1.7	1.7	0.01	0.14	0.52	0.23
10/30/92	15:05	1.6	1.5	1.5	0.02	0.13	0.52	0.23
10/30/92	15:10	2.1	1.9	1.9	0.02	0.15	0.56	0.23
10/30/92	15:15	1.9	1.8	1.8	0.01	0.14	0.52	0.23
10/30/92	15:20	1.9	1.8	1.8	0.01	0.13	0.53	0.23
10/30/92	15:25	1.9	1.8	1.8	0.02	0.14	0.54	0.22
10/30/92	15:30	1.7	1.6	1.6	0.01	0.13	0.53	0.22
11/12/92	07:00	0.8	0.7	0.6	0.06	0.13	0.27	0.13
11/12/92	07:05	0.8	0.7	0.6	0.07	0.09	0.27	0.14
11/12/92	07:10	0.9	0.8	0.7	0.08	0.12	0.35	0.24
11/12/92	07:15	0.2	0.8	0.7	0.12	0.08	0.31	0.14
11/12/92	07:20	0.9	0.8	0.7	0.06	0.14	0.43	0.26

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
11/12/92	07:25	1.3	1.1	1.0	0.08	0.23	0.68	0.55
11/12/92	07:30	1.5	1.2	1.1	0.07	0.26	0.80	0.65
11/12/92	07:40	1.5	1.1	1.0	0.12	0.39	0.92	0.77
11/12/92	07:45	1.6	1.2	1.0	0.17	0.39	0.98	0.83
11/12/92	07:50	1.7	1.4	1.3	0.13	0.30	0.93	0.55
11/12/92	07:55	2.0	1.7	1.6	0.14	0.32	1.10	0.54
11/12/92	08:00	2.0	1.9	1.9	0.04	0.12	1.30	0.25
11/12/92	08:05	2.8	2.4	2.3	0.07	0.38	4.70	0.45
11/12/92	08:10	3.3	2.9	2.9	0.04	0.40	5.70	0.41
11/12/92	08:15	1.7	1.5	1.5	0.03	0.21	2.00	0.26
11/12/92	08:20	2.5	2.2	2.1	0.05	0.34	1.60	0.28
11/12/92	08:25	2.6	2.1	2.0	0.05	0.54	1.30	0.38
11/12/92	08:30	2.6	2.2	2.1	0.05	0.43	1.40	0.36
11/12/92	08:35	2.4	2.2	2.2	0.04	0.18	1.30	0.27
11/12/92	08:40	2.3	2.1	2.0	0.05	0.24	1.20	0.24
11/12/92	08:45	2.7	2.2	2.3	0.05	0.42	1.40	0.40
11/12/92	08:50	2.5	2.0	2.0	0.04	0.42	1.20	0.41
11/12/92	08:55	2.5	2.1	2.1	0.03	0.37	1.30	0.42
11/12/92	09:05	2.7	2.3	2.3	0.04	0.38	1.50	0.42
11/12/92	09:10	2.6	2.2	2.2	0.03	0.35	1.40	0.41
11/12/92	09:15	3.1	2.8	2.8	0.03	0.34	1.70	0.42
11/12/92	09:20	3.2	2.8	2.8	0.03	0.35	1.60	0.41
11/12/92	09:25	3.1	2.8	2.8	0.02	0.34	1.90	0.40
11/12/92	09:30	3.6	3.3	3.3	0.02	0.34	2.20	0.38
11/12/92	09:35	3.6	3.2	3.2	0.03	0.37	1.90	0.36
11/12/92	09:40	3.4	3.0	3.0	0.03	0.38	1.80	0.35
11/12/92	09:45	3.3	2.9	2.9	0.03	0.37	1.70	0.34
11/12/92	09:50	3.9	3.5	3.5	0.03	0.39	1.90	0.32
11/12/92	09:55	5.1	4.7	4.7	0.04	0.43	2.30	0.30
11/12/92	10:00	4.3	3.9	3.9	0.03	0.41	2.70	0.30
11/12/92	10:05	4.6	4.2	4.2	0.03	0.43	2.70	0.29
11/12/92	10:10	4.0	3.5	3.5	0.03	0.48	2.80	0.27
11/12/92	10:15	4.1	3.5	3.4	0.07	0.60	2.70	0.26
11/12/92	10:20	4.1	3.6	3.6	0.04	0.47	1.90	0.26
11/12/92	10:25	5.1	4.6	4.6	0.03	0.49	2.70	0.25
11/20/92	17:25	1.0	0.9	0.9	0.01	0.12	0.40	0.11
11/20/92	17:30	1.0	0.9	0.9	0.04	0.07	0.30	0.18
11/20/92	17:40	0.7	0.6	0.6	0.04	0.08	0.29	0.14
11/20/92	17:45	1.0	0.9	0.9	0.02	0.07	0.32	0.17
11/20/92	17:50	1.1	1.0	1.0	0.03	0.10	0.34	0.14
11/20/92	17:55	0.9	0.8	0.7	0.06	0.07	0.35	0.21
11/20/92	18:00	1.8	1.5	1.5	0.05	0.31	0.65	0.28
11/20/92	19:55	3.2	2.4	2.4	0.04	0.75	1.40	0.39
11/20/92	20:00	3.3	2.6	2.5	0.05	0.74	1.40	0.38
11/20/92	20:05	3.2	2.5	2.4	0.06	0.72	1.50	0.37
11/20/92	20:10	3.2	2.5	2.4	0.06	0.66	1.50	0.35
11/20/92	20:15	3.6	2.9	2.8	0.08	0.67	1.80	0.36
11/20/92	20:20	3.1	3.0	2.9	0.09	0.07	1.50	0.36
11/20/92	20:25	3.7	3.0	2.9	0.07	0.70	1.60	0.35
11/20/92	20:30	3.5	2.8	2.7	0.10	0.70	1.40	0.35
11/20/92	20:35	3.6	2.9	2.8	0.07	0.73	1.60	0.37
11/20/92	20:40	3.9	3.2	3.1	0.11	0.71	1.50	0.37
11/20/92	20:45	3.8	3.0	2.9	0.10	0.78	1.40	0.38
11/20/92	20:50	2.9	2.1	2.0	0.09	0.77	1.10	0.37
11/20/92	20:55	3.6	2.9	2.8	0.08	0.66	1.40	0.31
11/20/92	21:00	3.6	2.9	2.8	0.11	0.70	1.70	0.39

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
11/20/92	21:05	3.0	2.3	2.2	0.10	0.70	1.20	0.39
11/20/92	21:10	3.0	2.3	2.2	0.08	0.67	1.10	0.39
11/20/92	21:15	3.5	2.8	2.7	0.09	0.68	1.30	0.37
11/20/92	21:20	4.0	3.3	3.2	0.07	0.69	1.50	0.37
11/20/92	21:25	3.5	2.9	2.8	0.11	0.63	1.30	0.39
11/20/92	21:30	3.6	3.0	2.9	0.10	0.63	1.40	0.38
11/20/92	21:35	3.3	2.7	2.6	0.07	0.62	1.40	0.35
11/20/92	21:40	3.2	2.6	2.5	0.08	0.64	1.20	0.36
11/20/92	21:45	3.3	2.7	2.6	0.08	0.61	1.30	0.35
11/20/92	21:50	3.8	3.2	3.1	0.06	0.59	1.60	0.35
11/22/92	03:35	1.9	1.7	1.6	0.06	0.21	0.73	0.15
11/22/92	03:40	1.8	1.7	1.7	0.02	0.05	0.77	0.18
11/22/92	03:45	1.5	1.4	1.4	0.01	0.12	0.76	0.21
11/22/92	03:50	2.1	2.0	2.0	0.05	0.12	1.10	0.28
11/22/92	03:55	3.5	3.3	3.3	0.03	0.23	2.40	0.27
11/22/92	04:00	3.6	3.2	3.2	0.05	0.38	1.90	0.28
11/22/92	04:20	4.1	3.8	3.8	0.04	0.29	3.70	0.05
11/22/92	04:25	5.9	5.6	5.6	0.04	0.31	5.60	0.02
11/22/92	04:30	4.0	3.6	3.6	0.02	0.42	4.00	0.05
11/22/92	04:35	4.2	3.7	3.7	0.02	0.46	5.40	0.04
11/22/92	04:40	4.9	4.5	4.5	0.01	0.42	3.30	0.04
11/22/92	04:45	3.5	3.2	3.2	0.04	0.33	3.20	0.04
11/22/92	04:50	4.7	4.4	4.4	0.03	0.32	3.30	0.03
11/22/92	04:55	4.3	3.9	3.9	0.01	0.39	1.90	0.06
11/22/92	05:00	4.0	3.7	3.7	0.03	0.30	3.00	0.03
11/22/92	05:05	3.9	3.4	3.4	0.02	0.47	2.00	0.07
11/22/92	05:10	3.0	2.7	2.7	0.03	0.32	1.40	0.06
11/22/92	05:15	3.6	3.1	3.1	0.01	0.47	1.70	0.08
11/22/92	05:20	2.1	1.8	1.8	0.03	0.33	1.00	0.05
11/22/92	05:25	3.4	2.9	2.9	0.02	0.49	1.70	0.07
11/22/92	05:30	6.5	6.0	6.0	0.02	0.47	4.80	0.08
11/22/92	20:00	3.3	2.6	2.5	0.05	0.74	1.40	0.38
11/22/92	20:05	3.2	2.5	2.4	0.06	0.72	1.50	0.37
11/22/92	20:10	3.2	2.5	2.4	0.06	0.66	1.50	0.35
11/22/92	20:15	3.6	2.9	2.8	0.08	0.67	1.80	0.36
11/22/92	20:20	3.7	3.0	2.9	0.09	0.70	1.50	0.36
11/22/92	20:25	3.7	3.0	2.9	0.07	0.70	1.60	0.35
11/22/92	20:30	3.5	2.8	2.7	0.10	0.70	1.40	0.35
11/22/92	20:35	3.6	2.9	2.8	0.07	0.73	1.60	0.37
11/22/92	20:40	3.9	3.2	3.1	0.11	0.71	1.50	0.37
11/22/92	20:45	3.8	3.0	2.9	0.10	0.78	1.40	0.38
11/22/92	20:50	2.9	2.1	2.0	0.09	0.77	1.10	0.37
11/22/92	20:55	3.6	2.9	2.8	0.08	0.66	1.40	0.31
11/22/92	21:00	3.6	2.9	2.8	0.11	0.70	1.70	0.39
11/22/92	21:05	3.0	2.3	2.2	0.10	0.70	1.20	0.39
11/22/92	21:10	3.0	2.3	2.2	0.08	0.67	1.10	0.39
11/22/92	21:15	3.5	2.8	2.7	0.09	0.68	1.30	0.37
11/22/92	21:20	4.0	3.3	3.2	0.07	0.69	1.50	0.37
11/22/92	21:25	3.5	2.9	2.8	0.11	0.63	1.30	0.39
11/22/92	21:30	3.6	3.0	2.9	0.10	0.63	1.40	0.38
11/22/92	21:35	3.3	2.7	2.6	0.07	0.62	1.40	0.35
11/22/92	21:40	3.2	2.6	2.5	0.08	0.64	1.20	0.36
11/22/92	21:45	3.3	2.7	2.6	0.08	0.61	1.30	0.35
11/22/92	21:50	3.8	3.2	3.1	0.06	0.59	1.60	0.35
12/09/92	13:55	1.5	0.8	0.8	0.04	0.74	0.32	0.07

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
12/09/92	14:00	1.3	0.6	0.5	0.05	0.69	0.26	0.14
12/09/92	14:05	1.6	0.9	0.8	0.09	0.65	0.46	0.24
12/09/92	14:10	2.1	1.4	1.4	0.04	0.69	0.74	0.20
12/09/92	14:20	2.3	1.7	1.6	0.08	0.63	1.10	0.21
12/09/92	14:25	3.1	2.7	2.7	0.05	0.44	1.70	0.10
12/09/92	14:30	3.0	2.4	2.3	0.05	0.62	1.50	0.09
12/09/92	14:35	2.8	2.3	2.2	0.06	0.51	1.30	0.07
12/09/92	14:40	2.9	2.5	2.5	0.04	0.37	1.40	0.06
12/09/92	14:45	2.8	2.5	2.5	0.04	0.32	1.50	0.06
12/09/92	14:50	3.4	3.1	3.1	0.03	0.31	1.90	0.05
12/09/92	14:55	2.8	2.5	2.5	0.04	0.29	1.50	0.05
12/09/92	15:00	2.9	2.6	2.6	0.03	0.29	1.60	0.05
12/09/92	15:05	2.8	2.5	2.5	0.03	0.29	1.50	0.05
12/09/92	15:10	2.8	2.5	2.5	0.03	0.29	1.50	0.07
12/09/92	15:15	3.2	2.9	2.9	0.04	0.27	1.70	0.05
12/09/92	15:20	2.6	2.3	2.3	0.04	0.28	1.40	0.05
12/09/92	15:25	2.7	2.4	2.4	0.03	0.27	1.60	0.05
12/09/92	15:30	2.6	2.3	2.3	0.03	0.26	1.40	0.05
12/09/92	15:35	2.7	2.4	2.4	0.03	0.28	1.40	0.05
12/09/92	15:40	2.5	2.2	2.2	0.03	0.28	1.40	0.06
12/09/92	15:45	2.8	2.5	2.5	0.03	0.29	1.60	0.06
12/09/92	15:50	2.4	2.1	2.1	0.03	0.28	1.30	0.06
12/09/92	16:05	2.9	2.6	2.5	0.05	0.30	1.50	0.07
12/09/92	16:10	2.9	2.6	2.6	0.04	0.31	1.50	0.07
12/09/92	16:15	2.4	2.1	2.1	0.04	0.26	1.20	0.07
12/09/92	16:20	2.2	1.9	1.9	0.03	0.27	1.20	0.08
12/09/92	16:25	2.2	1.9	1.9	0.03	0.30	1.10	0.07
12/09/92	16:30	2.2	1.9	1.9	0.04	0.31	1.20	0.08
12/09/92	16:35	2.7	2.2	2.2	0.04	0.49	1.30	0.08
12/09/92	16:40	2.2	1.9	1.9	0.04	0.31	1.10	0.08
12/09/92	16:45	2.3	2.0	2.0	0.04	0.31	1.20	0.10
12/09/92	16:50	2.3	2.0	2.0	0.04	0.31	1.00	0.11
12/09/92	16:55	2.3	2.0	2.0	0.04	0.29	1.10	0.10
12/09/92	17:00	2.2	1.9	1.9	0.04	0.34	1.20	0.11
12/09/92	17:05	1.9	1.6	1.6	0.04	0.31	1.10	0.10
12/09/92	17:10	2.2	1.9	1.9	0.04	0.33	1.10	0.11
12/09/92	17:15	1.8	1.5	1.5	0.04	0.32	0.95	0.11
12/09/92	17:20	2.1	1.8	1.8	0.04	0.33	1.00	0.10
12/09/92	17:25	1.9	1.6	1.5	0.05	0.33	0.93	0.11
12/09/92	17:30	2.0	1.7	1.7	0.04	0.34	1.00	0.10
12/09/92	17:35	1.9	1.6	1.5	0.05	0.32	0.92	0.11
12/09/92	17:40	1.8	1.5	1.4	0.05	0.34	0.88	0.09
12/09/92	17:45	1.9	1.6	1.6	0.04	0.33	0.92	0.09
12/09/92	17:50	2.7	2.2	2.1	0.12	0.49	1.10	0.12
12/09/92	17:55	2.6	2.3	2.2	0.05	0.31	1.30	0.09
12/09/92	18:00	2.6	2.2	2.2	0.04	0.37	1.20	0.10
12/09/92	18:10	2.6	1.6	1.5	0.09	1.00	0.81	0.11
12/09/92	18:15	2.3	1.6	1.5	0.07	0.67	0.79	0.11
12/09/92	18:20	2.5	1.9	1.8	0.05	0.56	0.76	0.11
12/09/92	18:25	2.3	1.7	1.6	0.05	0.56	0.77	0.11
12/09/92	18:30	2.1	1.6	1.6	0.04	0.49	0.74	0.12
12/09/92	18:35	2.4	1.6	1.5	0.07	0.84	0.76	0.11
12/09/92	18:40	2.0	1.5	1.4	0.05	0.49	0.76	0.12
12/09/92	18:45	2.0	1.5	1.4	0.05	0.47	0.73	0.13
12/09/92	18:50	2.5	1.6	1.5	0.10	0.86	0.78	0.11
12/09/92	18:55	2.5	1.6	1.5	0.10	0.89	0.73	0.11
12/09/92	19:00	2.5	1.6	1.5	0.09	0.91	0.74	0.11

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
12/09/92	19:05	2.5	1.5	1.4	0.09	1.00	0.76	0.11
12/09/92	19:10	2.0	1.2	1.1	0.07	0.80	0.64	0.11
12/09/92	19:15	2.5	1.5	1.4	0.08	1.00	0.67	0.11
12/09/92	19:20	1.6	1.2	1.1	0.05	0.36	0.65	0.11
12/09/92	19:25	1.8	1.4	1.3	0.05	0.35	0.64	0.11
12/09/92	19:30	1.7	1.3	1.3	0.04	0.36	0.65	0.11
12/09/92	19:35	1.8	1.4	1.4	0.04	0.37	0.61	0.11
12/09/92	19:40	1.8	1.4	1.3	0.05	0.36	0.59	0.11
12/09/92	19:45	1.6	1.2	1.1	0.05	0.36	0.52	0.11
12/09/92	19:50	1.9	1.5	1.4	0.05	0.38	0.67	0.11
12/09/92	19:55	1.9	1.5	1.5	0.04	0.36	0.63	0.12
12/09/92	20:00	1.7	1.3	1.2	0.05	0.35	0.61	0.11
12/09/92	20:05	1.7	1.3	1.3	0.04	0.36	0.61	0.11
12/09/92	20:10	2.3	2.0	2.0	0.05	0.29	1.00	0.09
12/09/92	20:15	2.1	1.8	1.7	0.06	0.32	1.00	0.09
12/09/92	20:20	2.0	1.7	1.6	0.05	0.30	0.87	0.09
12/09/92	20:25	2.0	1.7	1.6	0.05	0.30	0.98	0.09
12/09/92	20:30	2.0	1.7	1.7	0.04	0.30	1.00	0.09
12/09/92	20:35	1.8	1.5	1.5	0.04	0.34	0.73	0.09
12/09/92	20:40	1.7	1.4	1.4	0.04	0.34	0.74	0.09
12/09/92	20:45	1.9	1.6	1.6	0.04	0.34	0.78	0.10
12/09/92	20:50	1.7	1.4	1.3	0.05	0.31	0.72	0.09
12/09/92	20:55	2.0	1.6	1.6	0.04	0.36	0.82	0.10
12/09/92	21:00	2.0	1.6	1.6	0.04	0.35	0.80	0.09
12/09/92	21:05	1.9	1.6	1.6	0.04	0.33	0.76	0.09
12/09/92	21:10	2.0	1.6	1.5	0.05	0.35	0.78	0.09
12/09/92	21:15	1.9	1.6	1.5	0.05	0.31	0.91	0.09
12/09/92	21:20	1.7	1.4	1.3	0.05	0.30	0.70	0.09
12/09/92	21:25	1.7	1.4	1.4	0.04	0.32	0.81	0.09
12/09/92	21:30	2.3	2.0	2.0	0.05	0.30	1.10	0.09
12/09/92	21:35	1.7	1.4	1.3	0.05	0.34	0.82	0.09
12/09/92	21:40	1.6	1.2	1.1	0.05	0.35	0.58	0.09
12/09/92	21:45	1.6	1.3	1.2	0.05	0.32	0.70	0.09
12/09/92	21:50	1.8	1.5	1.5	0.04	0.32	0.73	0.09
12/09/92	21:55	2.0	1.7	1.7	0.04	0.32	0.87	0.09
12/09/92	22:00	1.7	1.3	1.2	0.05	0.35	0.66	0.10
12/09/92	22:05	1.8	1.4	1.3	0.05	0.37	0.74	0.09
12/09/92	22:25	2.4	1.7	1.6	0.06	0.70	1.10	0.66
02/21/93	05:30	--	2.4	--	--	--	1.40	--
02/21/93	05:35	--	2.3	--	--	--	1.00	--
02/21/93	05:40	--	3.2	--	--	--	1.40	--
02/21/93	05:45	--	2.1	--	--	--	0.98	--
02/21/93	05:50	--	2.6	--	--	--	1.20	--
02/21/93	05:55	--	1.8	--	--	--	0.84	--
02/21/93	06:00	--	1.6	--	--	--	0.70	--
02/21/93	06:05	--	1.7	--	--	--	0.87	--
02/21/93	06:10	--	1.2	--	--	--	0.38	--
02/21/93	06:15	--	1.6	--	--	--	0.72	--
02/21/93	06:20	--	1.5	--	--	--	0.74	--
02/21/93	06:25	--	1.6	--	--	--	0.76	--
02/21/93	06:30	--	1.8	--	--	--	0.85	--
02/21/93	06:35	--	1.5	--	--	--	0.67	--
02/21/93	06:40	--	1.7	--	--	--	0.84	--
02/21/93	06:45	--	1.9	--	--	--	0.96	--
02/21/93	06:50	--	1.4	--	--	--	0.67	--
02/21/93	06:55	--	2.4	--	--	--	1.30	--

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
02/21/93	07:00	--	1.8	--	--	--	0.96	--
02/21/93	07:05	--	1.6	--	--	--	0.84	--
02/21/93	07:10	--	1.7	--	--	--	0.92	--
02/21/93	07:15	--	1.8	--	--	--	1.10	--
02/21/93	07:20	--	2.6	--	--	--	1.40	--
02/21/93	07:25	--	1.6	--	--	--	0.80	--
02/21/93	07:40	--	1.6	--	--	--	0.79	--
02/21/93	07:45	--	1.6	--	--	--	0.77	--
02/21/93	07:50	--	1.6	--	--	--	0.87	--
02/21/93	07:55	--	1.2	--	--	--	0.63	--
02/21/93	08:00	--	1.3	--	--	--	0.74	--
02/21/93	08:05	--	1.5	--	--	--	0.80	--
02/21/93	08:10	--	1.4	--	--	--	0.69	--
02/21/93	08:15	--	1.3	--	--	--	0.64	--
02/21/93	08:20	--	1.4	--	--	--	0.68	--
02/21/93	08:25	--	1.4	--	--	--	0.68	--
02/21/93	08:30	--	1.2	--	--	--	0.65	--
02/21/93	08:35	--	1.6	--	--	--	0.80	--
02/21/93	08:40	--	1.2	--	--	--	0.66	--
02/21/93	08:45	--	1.8	--	--	--	0.91	--
02/21/93	08:50	--	1.3	--	--	--	0.62	--
02/21/93	08:55	--	1.2	--	--	--	0.61	--
02/21/93	09:00	--	1.2	--	--	--	0.61	--
02/21/93	09:05	--	1.2	--	--	--	0.65	--
02/21/93	09:10	--	1.2	--	--	--	0.60	--
02/21/93	09:15	--	1.3	--	--	--	0.57	--
02/21/93	09:20	--	1.2	--	--	--	0.53	--
02/21/93	09:25	--	1.2	--	--	--	0.59	--
02/21/93	09:30	--	1.3	--	--	--	0.57	--
02/21/93	09:35	--	1.1	--	--	--	0.54	--
02/21/93	09:40	--	1.2	--	--	--	0.66	--
02/21/93	09:45	--	1.5	--	--	--	0.67	--
02/21/93	09:55	--	1.4	--	--	--	0.63	--
02/21/93	10:00	--	1.4	--	--	--	0.62	--
02/21/93	10:05	--	1.4	--	--	--	0.63	--
02/21/93	10:10	--	1.3	--	--	--	0.57	--
02/21/93	10:15	--	1.4	--	--	--	0.61	--
02/21/93	10:20	--	1.4	--	--	--	0.58	--
02/21/93	10:25	--	1.4	--	--	--	0.58	--
02/21/93	10:30	--	1.3	--	--	--	0.56	--
02/21/93	10:35	--	1.5	--	--	--	0.63	--
02/21/93	10:40	--	1.4	--	--	--	0.63	--
02/21/93	10:45	--	1.3	--	--	--	0.54	--
02/21/93	10:50	--	1.5	--	--	--	0.65	--
02/21/93	10:55	--	1.3	--	--	--	0.55	--
02/21/93	11:00	--	1.3	--	--	--	0.55	--
02/21/93	11:05	--	1.5	--	--	--	0.60	--
02/21/93	11:10	--	1.3	--	--	--	0.54	--
02/21/93	11:15	--	1.4	--	--	--	0.55	--
05/28/93	16:15	--	3.0	--	--	--	0.95	--
05/28/93	16:20	--	1.8	--	--	--	0.96	--
05/28/93	16:25	--	2.6	--	--	--	0.77	--
05/28/93	16:30	--	3.1	--	--	--	0.67	--
05/28/93	16:35	--	3.1	--	--	--	0.66	--
05/28/93	16:40	--	3.8	--	--	--	1.20	--
05/28/93	16:45	--	2.8	--	--	--	1.00	--

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
05/28/93	16:50	--	2.6	--	--	--	1.40	--
05/28/93	16:55	--	3.5	--	--	--	1.50	--
05/28/93	17:00	--	2.5	--	--	--	1.70	--
05/28/93	17:05	--	1.5	--	--	--	1.00	--
05/28/93	17:10	--	5.4	--	--	--	1.60	--
05/28/93	17:15	--	2.0	--	--	--	0.80	--
05/28/93	17:20	--	2.1	--	--	--	0.82	--
05/28/93	17:25	--	2.3	--	--	--	1.20	--
05/28/93	17:30	--	3.2	--	--	--	1.10	--
05/28/93	17:35	--	2.2	--	--	--	0.63	--
05/28/93	17:40	--	3.3	--	--	--	0.97	--
05/28/93	17:45	--	2.3	--	--	--	0.64	--
05/28/93	17:50	--	1.6	--	--	--	0.98	--
05/28/93	17:55	--	2.2	--	--	--	0.84	--
05/28/93	18:00	--	3.1	--	--	--	0.89	--
05/28/93	18:05	--	1.7	--	--	--	0.45	--
05/28/93	18:10	--	2.0	--	--	--	0.63	--
05/28/93	18:15	--	2.4	--	--	--	0.59	--
05/28/93	18:20	--	2.5	--	--	--	0.63	--
05/28/93	18:25	--	3.2	--	--	--	0.77	--
05/28/93	18:30	--	2.8	--	--	--	0.73	--
05/28/93	18:35	--	2.5	--	--	--	0.60	--
05/28/93	18:40	--	2.8	--	--	--	0.72	--
05/28/93	18:45	--	2.7	--	--	--	0.70	--
05/28/93	18:50	--	2.7	--	--	--	0.67	--
05/28/93	18:55	--	2.8	--	--	--	0.65	--
05/28/93	19:00	--	2.8	--	--	--	0.64	--
05/28/93	19:05	--	3.0	--	--	--	0.67	--
05/28/93	19:10	--	2.7	--	--	--	0.70	--
05/28/93	19:15	--	2.2	--	--	--	0.50	--
05/28/93	19:20	--	1.6	--	--	--	0.30	--
05/28/93	19:25	--	2.5	--	--	--	0.60	--
05/28/93	19:30	--	2.5	--	--	--	0.68	--
05/28/93	20:10	--	2.1	--	--	--	0.46	--
05/28/93	20:30	--	1.9	--	--	--	0.35	--
05/28/93	21:00	--	1.6	--	--	--	0.28	--
08/02/93	01:05	--	1.9	--	--	--	0.67	--
08/02/93	01:10	--	2.0	--	--	--	1.00	--
08/02/93	01:15	--	2.0	--	--	--	1.10	--
08/02/93	01:20	--	1.9	--	--	--	1.10	--
08/02/93	01:25	--	1.9	--	--	--	1.10	--
08/02/93	01:30	--	2.0	--	--	--	1.50	--
08/02/93	01:35	--	3.4	--	--	--	1.40	--
08/02/93	01:40	--	2.3	--	--	--	1.40	--
08/02/93	01:45	--	1.2	--	--	--	1.20	--
08/02/93	01:50	--	2.1	--	--	--	1.20	--
08/02/93	01:55	--	2.3	--	--	--	1.40	--
08/02/93	02:00	--	2.3	--	--	--	1.20	--
08/02/93	02:05	--	1.2	--	--	--	1.40	--
08/02/93	02:10	--	1.6	--	--	--	1.30	--
08/02/93	02:15	--	1.5	--	--	--	1.10	--
08/02/93	02:20	--	1.8	--	--	--	1.30	--
08/02/93	02:25	--	1.6	--	--	--	1.20	--
08/02/93	02:30	--	2.1	--	--	--	1.20	--
08/02/93	02:35	--	1.7	--	--	--	1.30	--
08/02/93	02:40	--	1.5	--	--	--	1.30	--

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phosphorus total (mg/L as P)	Phosphorus ortho total (mg/L as P)
08/02/93	02:45	--	1.4	--	--	--	1.30	--
08/02/93	02:50	--	1.3	--	--	--	1.20	--
08/02/93	02:55	--	2.4	--	--	--	1.20	--
08/02/93	03:00	--	2.3	--	--	--	1.00	--
05/28/93	21:00	--	1.6	--	--	--	0.28	--
08/02/93	01:05	--	1.9	--	--	--	0.67	--
08/02/93	01:10	--	2.0	--	--	--	1.00	--
08/02/93	01:15	--	2.0	--	--	--	1.10	--
08/02/93	01:20	--	1.9	--	--	--	1.10	--
08/02/93	01:25	--	1.9	--	--	--	1.10	--
08/02/93	01:30	--	2.0	--	--	--	1.50	--
08/02/93	01:35	--	3.4	--	--	--	1.40	--
08/02/93	01:40	--	2.3	--	--	--	1.40	--
08/02/93	01:45	--	1.2	--	--	--	1.20	--
08/02/93	01:50	--	2.1	--	--	--	1.20	--
08/02/93	01:55	--	2.3	--	--	--	1.40	--
08/02/93	02:00	--	2.3	--	--	--	1.20	--
08/02/93	02:05	--	1.2	--	--	--	1.40	--
08/02/93	02:10	--	1.6	--	--	--	1.30	--
08/02/93	02:15	--	1.5	--	--	--	1.10	--
08/02/93	02:20	--	1.8	--	--	--	1.30	--
08/02/93	02:25	--	1.6	--	--	--	1.20	--
08/02/93	02:30	--	2.1	--	--	--	1.20	--
08/02/93	02:35	--	1.7	--	--	--	1.30	--
08/02/93	02:40	--	1.5	--	--	--	1.30	--
08/02/93	02:45	--	1.4	--	--	--	1.30	--
08/02/93	02:50	--	1.3	--	--	--	1.20	--
08/02/93	02:55	--	2.4	--	--	--	1.20	--
08/02/93	03:00	--	2.3	--	--	--	1.00	--
08/02/93	04:15	--	2.1	--	--	--	0.88	--
08/02/93	04:20	--	2.0	--	--	--	0.87	--
08/02/93	04:25	--	2.1	--	--	--	0.89	--
08/02/93	04:30	--	2.0	--	--	--	0.87	--
08/02/93	04:35	--	2.0	--	--	--	0.87	--
08/02/93	04:40	--	2.0	--	--	--	0.85	--
08/02/93	04:45	--	2.0	--	--	--	0.82	--
08/02/93	04:50	--	2.1	--	--	--	0.80	--
08/02/93	04:55	--	1.9	--	--	--	0.81	--
08/02/93	05:00	--	2.2	--	--	--	0.78	--
08/02/93	05:05	--	2.0	--	--	--	0.76	--
08/02/93	05:10	--	2.0	--	--	--	0.73	--
08/02/93	05:15	--	1.9	--	--	--	0.72	--
08/02/93	05:20	--	1.9	--	--	--	0.74	--
08/02/93	05:25	--	1.9	--	--	--	0.72	--
08/02/93	05:30	--	1.7	--	--	--	0.62	--
08/02/93	05:35	--	1.8	--	--	--	0.58	--
08/02/93	05:40	--	1.7	--	--	--	0.70	--
08/02/93	05:45	--	1.8	--	--	--	0.70	--
11/14/93	13:35	1.6	1.6	--	--	0.02	0.61	0.42
11/14/93	13:40	1.9	1.9	--	--	0.02	0.87	0.65
11/14/93	13:55	3.0	3.0	--	--	0.02	1.20	0.43
11/14/93	14:00	3.8	3.2	--	--	0.57	1.20	0.90
11/14/93	14:05	2.6	2.3	--	--	0.34	1.40	0.94
11/14/93	14:10	3.1	2.8	--	--	0.26	1.20	0.68
11/14/93	14:15	3.4	3.3	--	--	0.15	1.20	0.75
11/14/93	14:20	2.9	2.8	--	--	0.09	1.10	0.64

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
11/14/93	14:25	2.3	2.2	--	--	0.09	1.20	0.64
11/14/93	14:30	2.3	2.2	--	--	0.07	1.30	0.53
11/14/93	14:35	2.3	2.2	--	--	0.08	1.00	0.52
11/14/93	14:40	2.7	2.6	--	--	0.09	0.93	0.48
11/14/93	14:45	2.2	2.1	--	--	0.10	0.81	0.46
11/14/93	14:50	3.8	3.7	--	--	0.10	0.72	0.45
11/14/93	14:55	2.5	2.4	--	--	0.11	0.78	0.45
11/14/93	15:00	2.5	2.4	--	--	0.11	0.75	0.45
11/14/93	15:05	2.8	2.7	--	--	0.09	0.88	0.29
11/14/93	15:10	2.6	2.5	--	--	0.09	0.73	0.29
11/14/93	15:15	3.0	2.9	--	--	0.11	0.65	0.46
11/14/93	15:20	2.6	2.5	--	--	0.11	0.69	0.46
11/14/93	15:25	2.4	2.3	--	--	0.10	0.68	0.46
11/14/93	15:30	2.5	2.4	--	--	0.11	0.67	0.47
11/14/93	18:15	1.8	1.7	--	--	0.10	0.58	0.43
11/14/93	18:20	1.8	1.7	--	--	0.10	0.58	0.44
11/14/93	18:25	1.8	1.7	--	--	0.09	0.58	0.42
11/14/93	18:30	1.9	1.8	--	--	0.09	0.54	0.43
11/14/93	18:35	1.7	1.6	--	--	0.09	0.55	0.43
11/14/93	18:40	1.8	1.7	--	--	0.09	0.53	0.43
11/14/93	18:45	1.8	1.7	--	--	0.08	0.55	0.43
11/14/93	18:50	1.8	1.7	--	--	0.10	0.55	0.43
11/14/93	18:55	1.8	1.7	--	--	0.09	0.53	0.43
11/14/93	19:00	1.8	1.7	--	--	0.10	0.55	0.43
11/14/93	19:05	1.7	1.6	--	--	0.09	0.55	0.43
11/14/93	19:10	1.7	1.6	--	--	0.10	0.55	0.43
11/14/93	19:20	1.8	1.7	--	--	0.10	0.55	0.43
11/14/93	19:25	1.7	1.6	--	--	0.10	0.55	0.43
11/14/93	19:30	1.8	1.7	--	--	0.10	0.55	0.42
11/14/93	19:35	1.7	1.6	--	--	0.10	0.55	0.43
11/14/93	19:40	1.7	1.6	--	--	0.11	0.54	0.44
11/14/93	19:45	1.7	1.6	--	--	0.11	0.56	0.44
11/14/93	19:50	1.8	1.7	--	--	0.11	0.55	0.44
11/14/93	19:55	1.7	1.6	--	--	0.10	0.55	0.45
11/14/93	20:00	1.8	1.7	--	--	0.11	0.55	0.45
11/14/93	20:15	1.9	1.8	--	--	0.12	0.58	0.45
11/14/93	20:35	1.7	1.6	--	--	0.13	0.57	0.46
11/14/93	20:45	1.8	1.7	--	--	0.14	0.60	0.47
11/14/93	20:50	1.8	1.7	--	--	0.14	0.61	0.46
11/14/93	20:55	1.8	1.7	--	--	0.14	0.62	0.47
11/14/93	21:00	1.8	1.6	--	--	0.15	0.61	0.46
11/14/93	21:05	1.7	1.6	--	--	0.14	0.60	0.76
11/14/93	21:10	1.8	1.7	--	--	0.15	0.61	0.47
11/14/93	21:15	1.8	1.7	--	--	0.15	0.63	0.47
11/14/93	21:20	1.8	1.6	--	--	0.16	0.68	0.47
11/14/93	21:25	1.9	1.7	--	--	0.16	0.63	0.47
11/14/93	21:30	2.1	1.9	--	--	0.16	0.68	0.48
11/14/93	21:35	1.9	1.7	--	--	0.16	0.63	0.47
11/14/93	21:40	1.9	1.7	--	--	0.16	0.63	0.48
11/14/93	21:45	1.9	1.7	--	--	0.16	0.64	0.48
11/14/93	21:50	2.0	1.8	--	--	0.16	0.69	0.48
11/14/93	21:55	2.0	1.8	--	--	0.17	0.65	0.48
11/14/93	22:00	1.9	1.7	--	--	0.17	0.65	0.48
11/14/93	22:05	1.9	1.7	--	--	0.17	0.64	0.48
11/14/93	22:10	1.8	1.6	--	--	0.17	0.67	0.48
11/14/93	22:15	1.9	1.7	--	--	0.17	0.65	0.47
11/14/93	22:20	1.8	1.6	--	--	0.17	0.65	0.47

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
11/14/93	22:25	1.8	1.6	--	--	0.17	0.64	0.50
11/14/93	22:30	1.7	1.5	--	--	0.18	0.71	0.47
11/15/93	09:00	1.4	1.3	--	--	0.13	0.39	0.29
11/16/93	15:40	1.3	1.3	--	--	0.04	0.65	0.45
11/16/93	15:45	3.6	3.4	--	--	0.15	0.73	0.54
11/16/93	15:50	2.0	1.8	--	--	0.17	0.80	0.57
11/16/93	15:55	2.5	2.1	--	--	0.37	0.79	0.56
11/16/93	16:00	1.6	1.3	--	--	0.25	0.93	0.52
11/16/93	16:05	1.9	1.7	--	--	0.20	0.86	0.49
11/16/93	16:10	1.6	1.4	--	--	0.17	0.86	0.45
11/16/93	16:15	1.6	1.4	--	--	0.16	0.90	0.46
11/16/93	16:20	1.6	1.5	--	--	0.14	0.85	0.46
11/16/93	16:25	1.3	1.2	--	--	0.14	0.83	0.45
11/16/93	16:30	1.1	1.0	--	--	0.12	0.85	0.41
11/16/93	16:35	1.3	1.2	--	--	0.06	0.55	0.24
11/16/93	16:40	1.2	1.1	--	--	0.12	0.75	0.35
11/16/93	16:45	1.4	1.3	--	--	0.12	0.76	0.34
11/16/93	16:50	1.1	1.0	--	--	0.12	0.74	0.32
11/16/93	16:55	1.5	1.4	--	--	0.11	0.78	0.34
11/16/93	17:00	1.0	0.9	--	--	0.10	0.76	0.32
11/16/93	17:05	1.0	0.9	--	--	0.10	0.73	0.30
11/16/93	17:10	1.1	1.0	--	--	0.09	0.75	0.29
11/16/93	17:15	1.0	0.9	--	--	0.09	0.70	0.29
11/16/93	17:20	0.8	0.7	--	--	0.07	0.69	0.23
11/16/93	17:25	0.9	0.9	--	--	0.08	0.66	0.27
11/16/93	17:30	1.0	0.9	--	--	0.08	0.65	0.26
11/16/93	17:35	1.2	1.1	--	--	0.07	0.58	0.24
11/16/93	17:45	1.0	0.9	--	--	0.08	0.55	0.27
11/16/93	17:50	0.9	0.8	--	--	0.08	0.56	0.28
11/16/93	17:55	0.9	0.8	--	--	0.08	0.57	0.28
11/16/93	18:00	0.9	0.8	--	--	0.08	0.40	0.27
11/16/93	18:05	0.9	0.8	--	--	0.09	0.49	0.28
11/16/93	18:10	0.8	0.7	--	--	0.08	0.35	0.27
11/16/93	18:15	0.9	0.8	--	--	0.08	0.33	0.27
11/16/93	18:20	1.0	0.9	--	--	0.09	0.43	0.27
11/16/93	18:25	0.9	0.8	--	--	0.09	0.38	0.28
11/16/93	18:30	1.0	0.9	--	--	0.09	0.44	0.28
11/16/93	18:35	1.3	1.2	--	--	0.09	0.41	0.28
11/16/93	18:40	1.1	1.0	--	--	0.08	0.38	0.28
11/16/93	18:45	1.0	0.9	--	--	0.09	0.45	0.28
11/16/93	18:50	0.9	0.8	--	--	0.09	0.41	0.28
11/16/93	18:55	1.0	0.9	--	--	0.09	0.40	0.29
11/16/93	19:00	1.2	1.1	--	--	0.08	0.30	0.29
11/16/93	19:05	1.0	0.9	--	--	0.08	0.44	0.27
11/16/93	19:10	1.2	1.1	--	--	0.08	0.42	0.28
11/16/93	19:15	1.0	0.9	--	--	0.08	0.44	0.28
11/16/93	19:20	0.9	0.9	--	--	0.08	0.40	0.28
11/16/93	19:25	1.3	1.2	--	--	0.08	0.40	0.29
11/16/93	19:30	1.0	0.9	--	--	0.09	0.31	0.29
11/16/93	19:35	1.5	1.4	--	--	0.09	0.40	0.29
11/16/93	19:40	0.9	0.8	--	--	0.09	0.41	0.28
11/16/93	19:45	1.1	1.0	--	--	0.09	0.41	0.28
11/16/93	19:50	1.1	1.0	--	--	0.09	0.45	0.29
11/16/93	19:55	1.2	1.1	--	--	0.08	0.39	0.29
11/16/93	20:00	1.1	1.0	--	--	0.09	0.40	0.30

Table 4. Nitrogen and phosphorus data for water samples collected at the East Beaver Creek canal tributary at Williams farm near Belmont (station 07030242), 1990-1993--Continued

[mg/L, milligrams per liter; N, nitrogen; P, phosphorus; --, no data]

Date	Time	Nitrogen total (mg/L as N)	Nitrogen organic and ammonia total (mg/L as N)	Nitrogen organic total (mg/L as N)	Nitrogen ammonia total (mg/L as N)	Nitrogen nitrite and nitrate total (mg/L as N)	Phos-phorus total (mg/L as P)	Phos-phorus ortho total (mg/L as P)
11/16/93	20:05	1.1	1.0	--	--	0.09	0.43	0.30
11/16/93	20:10	1.2	1.1	--	--	0.09	0.40	0.31
11/16/93	20:15	1.1	1.0	--	--	0.09	0.47	0.30
11/16/93	20:20	1.1	1.0	--	--	0.09	0.50	0.30
11/16/93	20:25	1.0	0.9	--	--	0.09	0.42	0.31
11/16/93	20:30	1.2	1.1	--	--	0.09	0.39	0.31
11/16/93	20:35	1.1	1.0	--	--	0.09	0.41	0.31
11/16/93	20:40	1.3	1.2	--	--	0.09	0.40	0.32
11/16/93	20:45	1.2	1.1	--	--	0.09	0.34	0.33
11/16/93	20:50	1.1	1.0	--	--	0.10	0.38	0.33
11/16/93	20:55	1.2	1.1	--	--	0.10	0.42	0.32
11/16/93	21:00	1.4	1.3	--	--	0.11	0.44	0.34
11/16/93	21:05	1.2	1.1	--	--	0.11	0.46	0.34
11/16/93	21:10	1.5	1.4	--	--	0.11	0.44	0.34
11/16/93	21:15	1.2	1.1	--	--	0.11	0.43	0.35
11/16/93	21:20	1.1	1.0	--	--	0.12	0.46	0.36
11/16/93	21:25	1.2	1.1	--	--	0.12	0.46	0.35
11/16/93	21:30	1.2	1.1	--	--	0.12	0.47	0.37
11/16/93	21:35	1.3	1.2	--	--	0.11	0.50	0.37
11/16/93	21:40	1.4	1.3	--	--	0.11	0.53	0.39
11/16/93	21:45	1.1	1.0	--	--	0.11	0.54	0.37
11/16/93	21:50	1.1	1.0	--	--	0.10	0.47	0.38
11/16/93	21:55	1.2	1.1	--	--	0.10	0.52	0.38
11/16/93	22:00	1.2	1.1	--	--	0.10	0.50	0.36
11/16/93	22:05	1.1	1.0	--	--	0.09	0.45	0.38
11/16/93	22:10	1.1	1.0	--	--	0.09	0.52	0.37
11/16/93	22:15	1.4	1.3	--	--	0.09	0.50	0.35
11/16/93	22:20	1.2	1.1	--	--	0.09	0.48	0.34
11/16/93	22:25	1.1	1.0	--	--	0.08	0.50	0.34
11/16/93	22:30	1.1	1.0	--	--	0.08	0.57	0.33
11/16/93	22:35	1.1	1.0	--	--	0.07	0.48	0.34
11/16/93	22:40	1.4	1.3	--	--	0.07	0.45	0.33
11/16/93	22:45	1.0	1.0	--	--	0.02	0.30	0.18
11/16/93	22:50	1.5	1.4	--	--	0.07	0.35	0.34
11/16/93	22:55	1.4	1.3	--	--	0.07	0.45	0.33
11/16/93	23:00	1.8	1.7	--	--	0.07	0.41	0.33
11/16/93	23:05	1.2	1.1	--	--	0.07	0.44	0.35
11/16/93	23:10	1.2	1.1	--	--	0.07	0.44	0.33
11/16/93	23:15	0.8	0.8	--	--	0.02	0.30	0.21
11/16/93	23:20	1.1	1.0	--	--	0.07	0.42	0.28
11/16/93	23:25	1.6	1.5	--	--	0.07	0.40	0.29
11/16/93	23:30	1.1	1.0	--	--	0.07	0.45	0.33
11/16/93	23:35	1.6	1.5	--	--	0.07	0.39	0.32
11/16/93	23:40	1.6	1.5	--	--	0.07	0.40	0.33
11/17/93	08:50	0.9	0.8	--	--	0.10	0.33	0.29