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Water-Quality and Biologic Data for the Blue River Basin, Kansas City Metropolitan Area, Missouri and Kansas, October 2000 to October 2004

Data Series 127

U.S. Department of the Interior
U.S. Geological Survey

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By Donald H. Wilkison, Daniel J. Armstrong, Rebecca E. Brown, Barry C. Poulton, Jeffrey D. Cahill, and Steven D. Zaugg

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Conversion Factors and Datum

Multiply	By	To obtain
Length		
centimeter (cm)	0.3937	inch (in.)
millimeter (mm)	0.03937	inch (in.)
meter (m)	3.281	foot (ft)
kilometer (km)	0.6214	mile (mi)
Area		
square meter (m^2)	0.0002471	acre
hectare (ha)	2.471	acre
square kilometer (km^2)	247.1	acre
square centimeter (cm^2)	0.001076	square foot (ft^2)
square decimeter (dm^2)	0.1076	square foot (ft^2)
square meter (m^2)	10.76	square foot (ft^2)
square centimeter (cm^2)	0.1550	square inch (in^2)
hectare (ha)	0.003861	square mile (mi^2)
square kilometer (km^2)	0.3861	square mile (mi^2)
Volume		
liter (L)	33.82	ounce, fluid (fl. oz)
liter (L)	2.113	pint (pt)
liter (L)	1.057	quart (qt)
liter (L)	0.2642	gallon (gal)
Flow rate		
cubic meter per second (m^3/s)	35.31	cubic foot per second (ft^3/s)
Mass		
gram (g)	0.03527	ounce, avoirdupois (oz)
kilogram (kg)	2.205	pound avoirdupois (lb)

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:
°F = (1.8 x °C) + 32

Horizontal coordinate information is referenced to the “North American Datum of 1983 (NAD 83)”.

Specific conductance is given in microsiemens per centimeter at 25 degrees Celsius (μS/cm at 25 °C).

Concentrations of chemical constituents in water are given either in milligrams per liter (mg/L) or micrograms per liter (μg/L).

Water-Quality and Biologic Data for the Blue River Basin, Kansas City Metropolitan Area, Missouri and Kansas, October 2000 to October 2004

By Donald H. Wilkison, Daniel J. Armstrong, Rebecca E. Brown, Barry C. Poulton, Jeffrey D. Cahill, and Steven D. Zaugg

Abstract

This report presents water-quality and biologic data collected in the Blue River Basin, metropolitan Kansas City, Missouri and Kansas, from October 2000 to October 2004. Data were collected in cooperation with the city of Kansas City, Missouri, Water Services Department as part of an ongoing study designed to characterize long-term water-quality trends in the basin and to provide data to support a strategy for combined sewer overflow control. These data include values of physical properties, fecal indicator bacteria densities, suspended sediment, and concentrations of major ions, nutrients, trace elements, organic wastewater compounds, and pharmaceutical compounds in base-flow and stormflow stream samples and bottom sediments. Six surface-water sites in the basin were sampled 13 times during base-flow conditions and during a minimum of 7 storms. Benthic macroinvertebrate communities are described at 10 sites in the basin and 1 site outside the basin. Water-column and bottom-sediment data from impounded reaches of Brush Creek are provided. Continuous specific conductance, pH, water-quality temperature, turbidity, and dissolved oxygen data are provided for two streams—the Blue River and Brush Creek. Sampling, analytical, and quality assurance methods used in data collection during the study also are described in the report.

Introduction

Wastewater, both treated and untreated, is an important hydrologic component in the Blue River Basin. As development, population, and wastewater treatment capacity increase in the basin, anthropogenic alterations to stream hydrology and water quality can be expected. Consequently, the contribution of urban point-source and nonpoint-source contamination to constituent concentrations and loads in the basin may be increasing. Investigations are needed to characterize and understand the roles of point and nonpoint-source contamination with regard to water quality in the basin and how these roles may be changing with time. Data are needed to provide a scientific basis to better understand these issues, characterize long-term water-quality trends, and to support the development of basin management strategies that address factors affecting stream water quality.

Combined Sewer Overflows

Kansas City is 1 of 770 cities in the United States served by combined sewers. Combined sewers are designed to transport both sewage and stormwater. During dry weather, sewage from homes, businesses, and industry is transported to a wastewater treatment facility (WWTF) for treatment and then discharged to a receiving water body. During wet weather, runoff from streets, rooftops, parking lots, and lawns enter the combined system. Depending on the amount, or intensity, of the runoff or snowmelt, the combined volume of runoff and sewage can exceed the capacity of the pipe network or treatment plant. As a result, excess flow (a mixture of stormwater and sewage) is diverted from the sewer system to local receiving waters. This diversion and discharge is referred to as a combined sewer overflow (CSO).

Under Federal and state regulations, communities with combined sewers must develop a plan to control their overflow (U.S. Environmental Protection Agency, 1994). The regulations have specific requirements for developing a CSO long-term control plan. As part of this plan, water-quality data on streams receiving CSOs are needed to understand existing conditions and to characterize other pollutant sources in the basin that might prevent the attainment of water-quality objectives (U.S. Environmental Protection Agency, 1999). The data also are needed to develop water-quality models that can be used to predict improvement in water quality related to a range of control options.

Purpose and Scope

This report presents water-quality and biologic data collected in the Blue River Basin from October 2000 to October 2004 by the U.S. Geological Survey (USGS) as part of a cooperative study with the city of Kansas City, Missouri, Water Ser-

vices Department. Data were collected as part of an ongoing study designed to characterize long-term water-quality trends in the basin and provide data to support a strategy for CSO control. Two streams in the basin, the Blue River and Brush Creek, contain stream segments that are in areas served by combined sewers and are subject to CSOs during wet weather. Water-quality sampling sites are shown in figure 1 in relation to streams and tributaries in the basin, to the areal extent of CSOs in Kansas City, Missouri, and to the proximity of existing WWTFs in the study area. Data from one site outside the Blue River Basin (site 19, fig. 1) also are included in the report.

The sampling effort described in this report is an extension of a previous water-quality study conducted in the basin from July 1998 to October 2000 (Wilkison and others, 2002). Values of physical properties, fecal indicator bacteria [*Escherichia coli (E. coli)* and fecal coliform] densities, and concentrations of major ions, nutrients, trace elements, organic wastewater compounds, and pharmaceutical compounds, including selected over-the-counter and prescription drugs, in stream samples and bottom sediments are described in this report. Continuous water-quality data for specific conductance, pH, temperature, turbidity, and dissolved oxygen are included for one site on the Blue River and one site on Brush Creek in the Kansas City metropolitan area. Aquatic biota in the basin are measured using biological assessment protocols for aquatic macroinvertebrate communities (Rabeni and others, 1997; Kansas Department of Health and Environment, 2000). Sampling, analytical, and quality assurance methods used in data collection are described.

These streams and their adjacent park lands provide numerous recreational and developmental opportunities that potentially are negatively affected by water-quality issues. Development within the upper basin continues at a rapid pace, and, as it does, the potential for deleterious water-quality effects also increases. Some compounds examined likely produce adverse effects when released into the environment, either through direct harm to bacterial or aquatic health, or as agents of endocrine disruption (Wilkison and others, 2002).

Study Area Description

The Blue River Basin encompasses approximately one-half of the Kansas City metropolitan area, consisting of approximately 700 km^2 (square kilometers) in parts of Johnson and Wyandotte County, Kansas, and Cass and Jackson County, Missouri. The study area included part of the Blue River, Indian Creek, Tomahawk Creek, and Brush Creek. Reaches of the Blue River, Indian Creek, and Brush Creek that receive treated or untreated wastewater discharges were sampled (fig. 1). Natural streamflow in the basin is altered by inputs from three WWTFs, 75 CSO outfalls, and runoff from impervious surfaces.

Generally, more than one-half of the base flow in the Blue River downstream from the junction with Indian Creek originates as wastewater effluent (Wilkison and others, 2002). During drought periods, such as 2002 and 2003, the ratio of effluent to natural streamflow can exceed 95 percent (unpublished data on file at the U.S. Geological Survey, Lee's Summit, Missouri). Approximately 140 km^2 of the basin are underlain by a combined sewer system that sometimes allows untreated wastewater mixed with stormwater runoff to discharge into receiving waters. The approximate boundaries of the combined system are the Missouri River on the north, the Blue River on the east, 85th Street on the south, and the Missouri-Kansas state line on the west (fig. 1). Sections of the Kansas and Missouri Rivers that also receive effluent and CSO discharges were not part of this study.

Much of the basin is nearly completely developed and has been for a number of years. However, there has been a 25 percent increase in urbanized area in the upper part of the Blue River Basin during the last 20 years (U.S. Census Bureau, 2002), which has resulted in increasing quantities of runoff in the Blue River (Wilkison and others, 2002). The upper basin continues to be one of the most rapidly developing parts of metropolitan Kansas City, and extensive growth is projected to continue for the next 20 years (Mid-America Regional Council, 2003).

Flooding is a concern in the basin. Floods have resulted in extensive property damage and loss of life (Hauth and Carswell, 1978; Becker and others, 1983). During the last 30 years, 250 million dollars have been spent on basin flood-control projects (U.S. Army Corps of Engineers, 2004). The lower part of Brush Creek (downstream from the Missouri-Kansas state line) and the Blue River (downstream from the mouth of Brush Creek) have been channelized to decrease the area inundated by floods. Numerous stream segments have been straightened, and the banks lined with rip-rap or concrete to increase stormwater conveyance. In the process, much of the riparian corridor and native instream habitat has been altered or removed.

Water-quality issues also have been a concern in the basin. Principal water-quality concerns have centered around the effects of increasing urbanization in the basin, industrial and wastewater discharges, nonpoint-source pollution, and CSOs (Mid-America Regional Council, 1983; Blevins, 1986; Wilkison and others, 2002). Stream alterations, habitat loss, point- and nonpoint-source pollution, and urban development each cause concern about the ecological condition of receiving streams in the basin and how these conditions might be changing with time.

Previous Studies

In 1998, the USGS began analyzing stream samples within the Blue River Basin to better understand how wastewater might be affecting the water quality of receiving streams (Wilkison and others, 2002). This work focused primarily on the lower one-half of the Blue River and Brush Creek, although a few samples were collected in the upper reaches of the basin and along one of the principal tributaries, Indian Creek, to better characterize wastewater effluent loadings to the Blue River. Stream samples were analyzed for a number of constituents, including nutrients, suspended sediment, *E. coli*, organic waste-

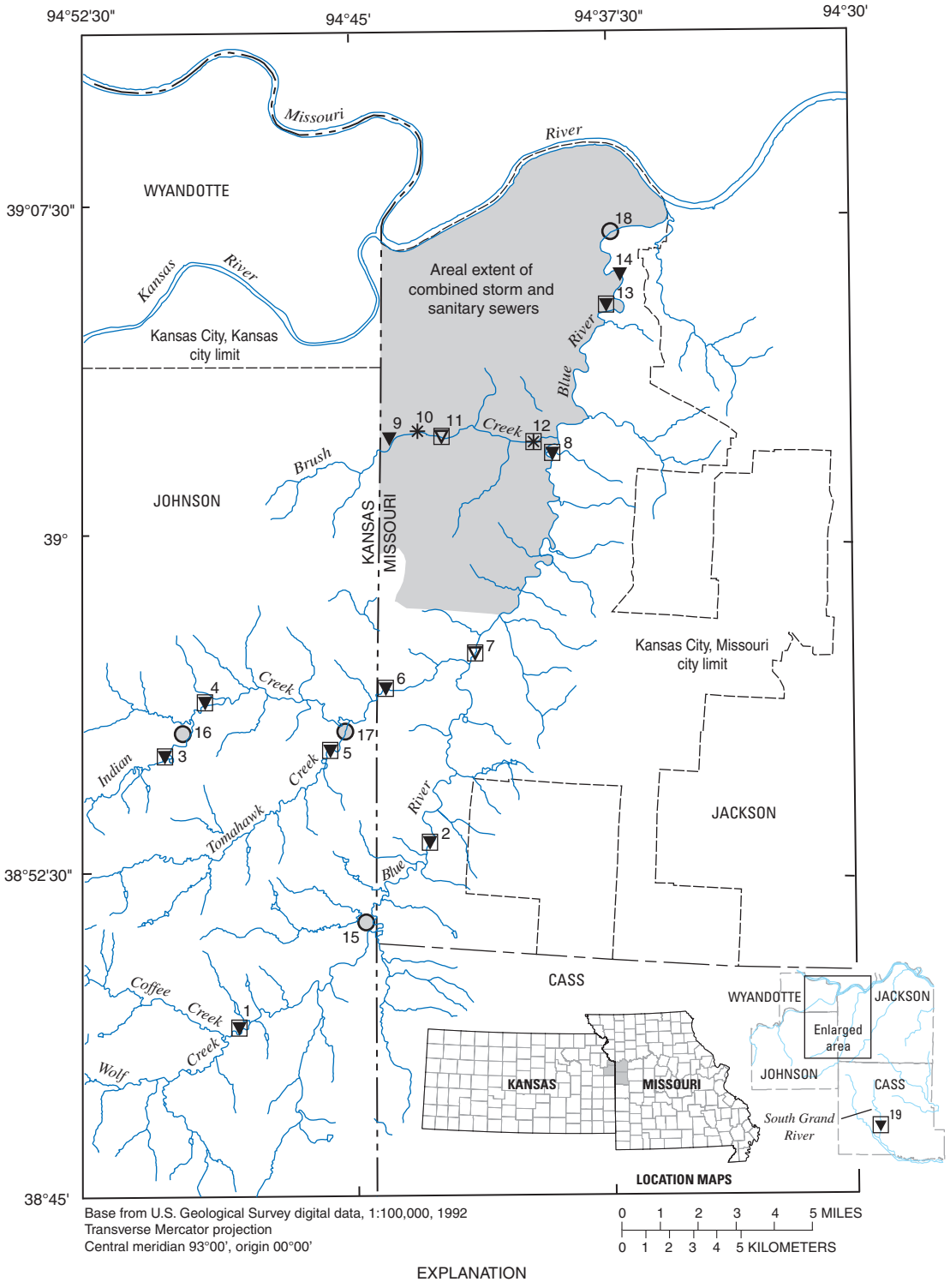

Figure 1. Location of study area, sampling sites, wastewater treatment facilities, and area of combined storm and sanitary sewers.

water compounds, and selected pharmaceutical compounds. DNA-fingerprinting of *E. coli* was used to estimate relative proportions of bacteria sources at selected sites within the study area. A number of compounds, known to be related to human wastewater, were determined to be widespread in stream samples collected during both base flow and stormwater runoff. These data indicated that water quality in the basin was affected by numerous contaminant sources. Sources included urban stormwater runoff and a variety of wastewater sources, including CSOs, leaks from aging or damaged sewer lines, sediments trapped behind recreational impoundments, continuous (or nearly continuous) discharges of treated WWTF effluent, occasional WWTF by-pass discharges, and a combination of these factors (Wilkison and others, 2002).

Systematic measurement of streamflow began in 1939 on the Blue River (site 7, fig. 1) and in 1963 on Indian Creek (approximately 1 mi upstream from site 6, fig. 1) and has continued through the present. Various other streamflow gages were established as part of individual study efforts over the years (Blevins, 1986; Becker, 1990; Wilkison and others, 2002); several of which are currently (2005) in use.

The publication of a national reconnaissance on the occurrence of organic wastewater and pharmaceutical compounds (Barnes and others, 2002; Kolpin and others, 2002) in surface waters of the United States has lead to other studies that either describe the occurrence of these compounds on a local scale or describe processes that affect the fate and distribution of these compounds in the environment.

Barnes and others (2005) described the occurrence and distribution of organic wastewater and pharmaceutical compounds in a reconnaissance study of ground water and drinking water facilities in the United States. The persistence of these compounds in a conventional drinking water treatment plant was examined by Stackleberg and others (2004). Lee and others (2004) described the presence and distribution of these compounds in wastewater, surface, ground, and drinking waters of Minnesota. Other studies (Barber and others, 2002; Barnes and others, 2004; Kolpin and others, 2004) have described the importance of flow conditions or land use on constituent contributions to surface water.

Several review papers also have been written that provide summaries of either the occurrence of organic wastewater and pharmaceutical compounds in the environment (Jorgensen and Halling-Sorensen, 2000; Heberer, 2002a; Focazio and others, 2004), their removal during drinking water or wastewater treatment (Heberer, 2002b), or issues and risks associated with their environmental occurrence (Daughton and Jones-Lepp, 2001; Focazio and others, 2004).

Although systematic studies have described macroinvertebrate communities in Missouri, few data are available on community structure in urban areas. Existing macroinvertebrate studies have been largely confined to wetlands (Heimann and Femmer, 1998), large river systems (Poulton, 2003), and the Ozarks (U.S. Geological Survey, written commun., 2005). The Missouri Department of Natural Resources (MDNR) assesses macroinvertebrate communities in the State, but has not examined them in the Kansas City metropolitan area.

Methods

Water-quality and biologic data were collected from October 2000 to October 2004 during both base-flow and stormwater conditions. Stream samples were collected from selected surface-water sites (fig. 1; table 1, at the back of this report) and analyzed for physical properties, fecal indicator bacteria (*E. coli* and fecal coliform), major ions, nutrients, trace elements, organic wastewater compounds, and selected pharmaceutical compounds. Water samples from wastewater influent streams at two WWTFs (sites 17, 18; fig. 1) were analyzed for selected pharmaceutical compounds to determine concentrations expected in untreated wastewater during base flow and from the effluent at one WWTF (site 18) to examine concentrations after treatment. Base flow for this study was defined as streamflow unaffected by runoff. Water-column and bottom-sediment samples were collected from selected reaches of Brush Creek. Macroinvertebrate samples were collected at 11 sites (fig. 1, table 1).

Physical properties were measured onsite at the time of sample collection and included discharge, specific conductance, pH, temperature, turbidity, and dissolved oxygen according to USGS procedures (Wilde and Radtke, 1998). Stream discharge measurements were either made concurrent with sample collection or taken from established stage-discharge relations in accordance with USGS methods (Rantz and others, 1982a; 1982b). Fecal indicator bacteria samples were collected and analyzed using the membrane filtration technique described in Myers and Wilde (2003). Selected bacteria samples were enumerated by defined substrate method (Covert and others, 1992; Yakub and others, 2002; Noble and others, 2003). Nutrients analyzed in this study included total ammonia plus organic nitrogen, dissolved ammonia as nitrogen, dissolved nitrite (NO_2) plus nitrate (NO_3) as nitrogen, dissolved nitrite as nitrogen, orthophosphate, and dissolved and total phosphorus. Major ions and trace elements were analyzed, including arsenic, copper, lead, mercury, and zinc. Organic wastewater compounds refer to a list of common household and industrial chemicals including, but not limited to, detergent surfactants and surfactant metabolites, antimicrobial agents, personal-care insecticides, plasticizers, musks and fragrance compounds (Zaugg and others, 2002). Pharmaceutical compounds analyzed included several analgesics (acetaminophen and ibuprofen), anti-epileptics (carbemazepine), stimulants (caffeine and cotinine, a metabolite of nicotine), narcotics (codeine), cholesterol-regulators (gemfibrozil), cardiac and anti-clotting related medications (dehydronifedipine, diltiazem, and warfarin), and antibiotics (sulfamethoxazole and trimethoprim) (Cahill and others, 2004).

Physical properties, including specific conductance, pH, water temperature, turbidity, and dissolved oxygen, were measured continuously (15-minute intervals) at two sites (sites 7

and 11, table 1, fig. 2) from early spring to late fall (generally the first of April to the beginning of December each year) using multi-parameter probes designed for continuous instream measurement. Data were not collected during winter months because of the potential for probe freezing and instrument damage. Monitors were installed to allow adequate contact with the sampled stream and to provide protection from flood events. Installation, operation, calibration, and cleaning of the monitors and records computation were done in accordance with established USGS guidelines (Wagner and others, 2000). The continuous water-quality data were made available on the world wide web (http://waterdata.usgs.gov/mo/nwis) and mean daily water-quality values published annually (Hauck and Nagel, 2002; 2003; 2004; 2005). Estimations and corrections to the record were based on partial day records, inspection of contiguous data, hydrograph comparison, and the best judgement of the hydrographer as outlined in standard USGS methods (Rantz and others, 1982a; Wagner and others, 2000).

Sampling Protocol

Base-Flow and Stormflow Sampling

Continuous stage (water-surface elevation) data were collected at USGS gaging stations (sites 1, 2, 6, 7, 9, 11, 13, and 14; fig. 1, table 1) from October 2000 to October 2004. Stage data were measured at 5- or 15-minute intervals using a recording gas-bubble system. Stage at site 2 was additionally measured using a non-contact, pulsed, radar sensor. Streamflow measurements were used to establish and maintain the relation between stage and discharge (Rantz and others, 1982b). Discharge data from these stations were made available on the world wide web (http://waterdata.usgs.gov/mo/nwis) and published annually (Hauck and Nagel, 2002; 2003; 2004; 2005). At sites without continuous stage-discharge relations (sites 3, 4, 5, and 19), flow measurements were made concurrent with sample collection to determine the discharge. Standard USGS methods (Rantz and others, 1982a) were used to measure discharge at all sites.

Depth- and width-integrated water samples were collected manually during base-flow conditions using standard USGS collection and processing methods appropriate for each stream section (Wilde and others, 1999a; 199b; Wilde, 2004). When necessitated by flow constrictions, grab samples were collected from the centroid of flow. Six principal surface-water locations (sites 2, 6, 7, 9, 11, and 13/14; fig. 1) were sampled during base flow. For safety reasons, data collection on the lower Blue River was moved approximately 0.5 mi upstream from site 14 to site 13 beginning in March 2003. For the principal sites, samples were collected at a minimum of 13 different base-flow conditions between June 2001 and August 2004. At selected upstream sites (sites 1, 3, 4, and 7), three to eight samples were collected between August 2001 and March 2003. Analytical results from stream samples collected from lotic stream sections during base-flow conditions are given in tables 2 to 5, at the back of this report.

Stormwater samples were collected from the same six principal surface-water sites (sites 2, 6, 7, 9, 11, and 13/14; fig. 1) with an effort to ensure that the sampling point was representative of a well-mixed stream sample, usually near the centroid of flow, or channel thalweg. Again, for safety reasons, beginning March 2003, data collection on the lower Blue River was moved from site 14 to site 13. Stormwater samples were collected using automatic samplers programmed to collect flow-weighted samples after stage thresholds were exceeded. The programs generally were based on the shape and duration of a hydrograph from a thunderstorm capable of producing 0.75 to 1.5 in. (inches) of precipitation. However, special consideration was given to ensure that the rising limb of the hydrograph and peak stormflow were captured during sampling. Although attempts were made to sample the same storms at all sites, the intensity of rainfall often varied considerably within the basin for any given storm. Thus, samples were sometimes collected at one site, while not at another. The number of stormwater samples collected ranged from 7 (sites 2 and 7) to 12 (sites 6 and 9). Sample lines were flushed twice prior to, and between, sample collections to minimize cross-contamination. Analytical results from stormwater samples are reported in tables 6 to 8, at the back of this report.

Samples were collected using stainless steel or fluorocarbon polymer equipment, with the exception of bacteria samples, which were collected in aseptic glass or polycarbonate containers. Sampling equipment was cleaned between sampling events using established USGS methods designed for the collection of organic compounds, such as wastewater and pharmaceutical compounds (Wilde and others, 1999b; Wilde, 2004). This method involves a series of cleaning and rinsing procedures that were, in brief, a triple-rinsing of the equipment in tap water followed by a 30-minute (or overnight) soaking in a non-phosphate, low-sudsing detergent, followed by copious rinsing (minimum of three rinses) with tap water. Equipment was then triple-rinsed with high-performance liquid chromatography (HPLC)-grade organic-free water, followed by one rinse of HPLC-grade methanol, and finally by a single rinse of HPLC-grade organic-free water. To ensure aseptic conditions, autosampler bottles were additionally rinsed with histological-grade 2-propanol. Once clean (and sterile, or both), the equipment was then capped and stored inside two sealed polypropylene bags until use onsite. Bags were not reused for equipment storage.

Water-Column and Bottom-Sediment Samples

Water-column and bottom-sediment samples were collected from selected reaches of Brush Creek (sites 10–12) to provide data to assess the effects that bottom sediments might have on the water quality of the overlying water column. These reaches are upstream from a series of low-water dams situated along the lower one-half of Brush Creek. The low-water dams

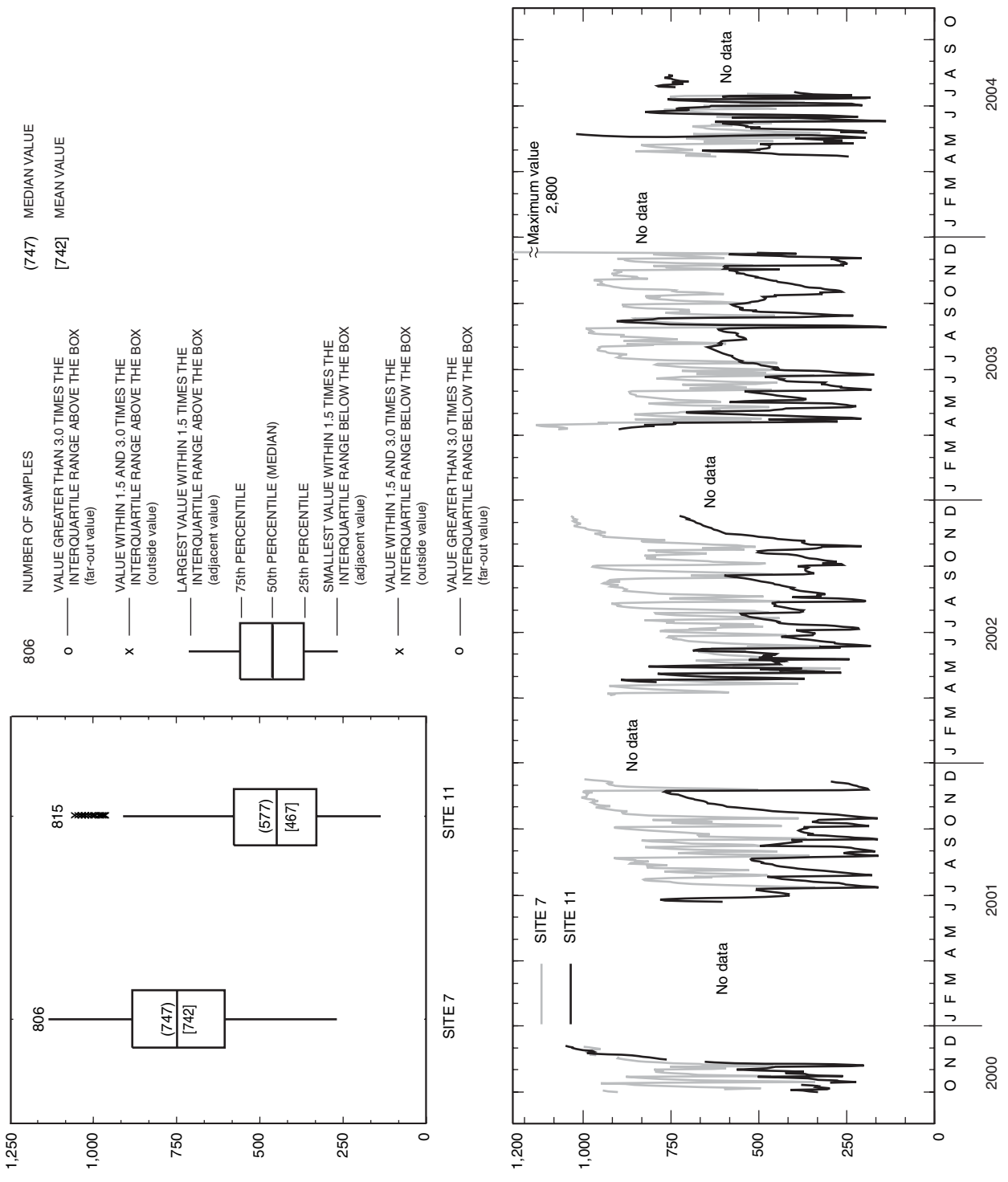

Figure 2. Boxplots and time-series plots of mean daily physical properties for the Blue River near Kansas City (site 7) and Brush Creek at Rockhill Road (site 11) from October 2000 through October 2004.

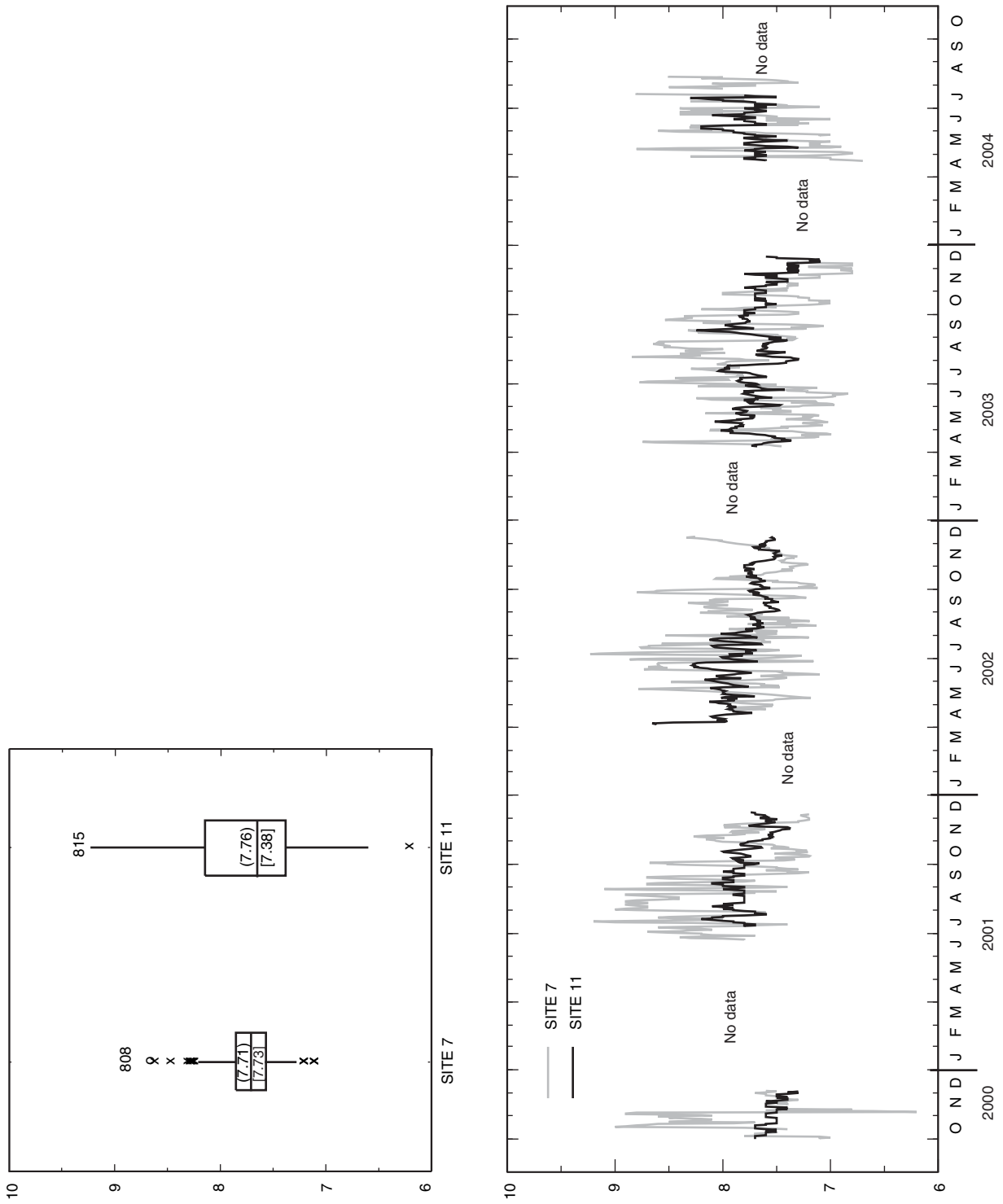

Figure 2. Boxplots and time-series plots of mean daily physical properties for the Blue River near Kansas City (site 7) and Brush Creek at Rockhill Road (site 11) from October 2000 through October 2004—Continued.

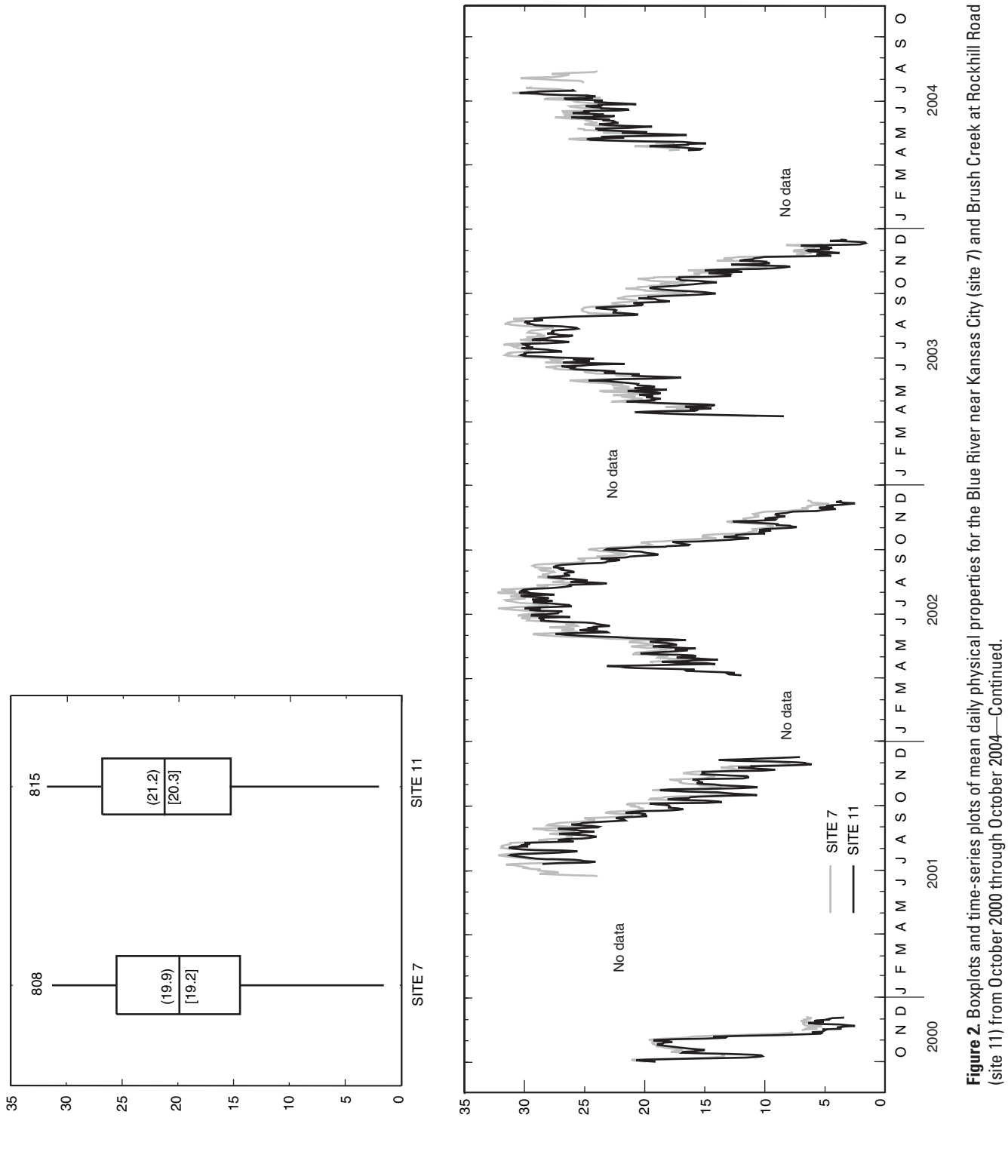

Figure 2. Boxplots and time-series plots of mean daily physical properties for the Blue River near Kansas City (site 7) and Brush Creek at Rockhill Road (site 11) from October 2000 through October 2004—Continued.

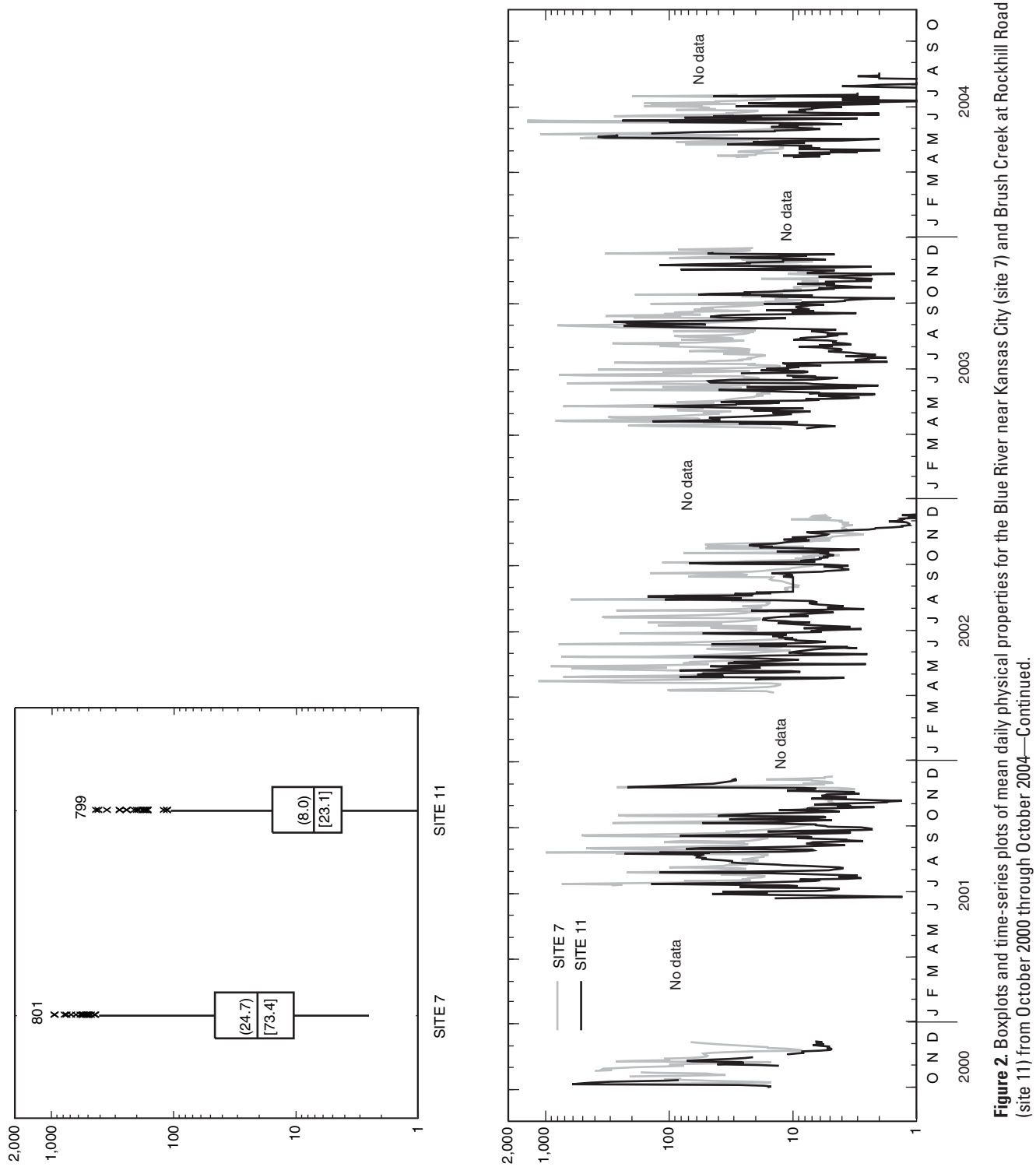

Figure 2. Boxplots and time-series plots of mean daily physical properties for the Blue River near Kansas City (site 7) and Brush Creek at Rockhill Road (site 11) from October 2000 through October 2004—Continued.

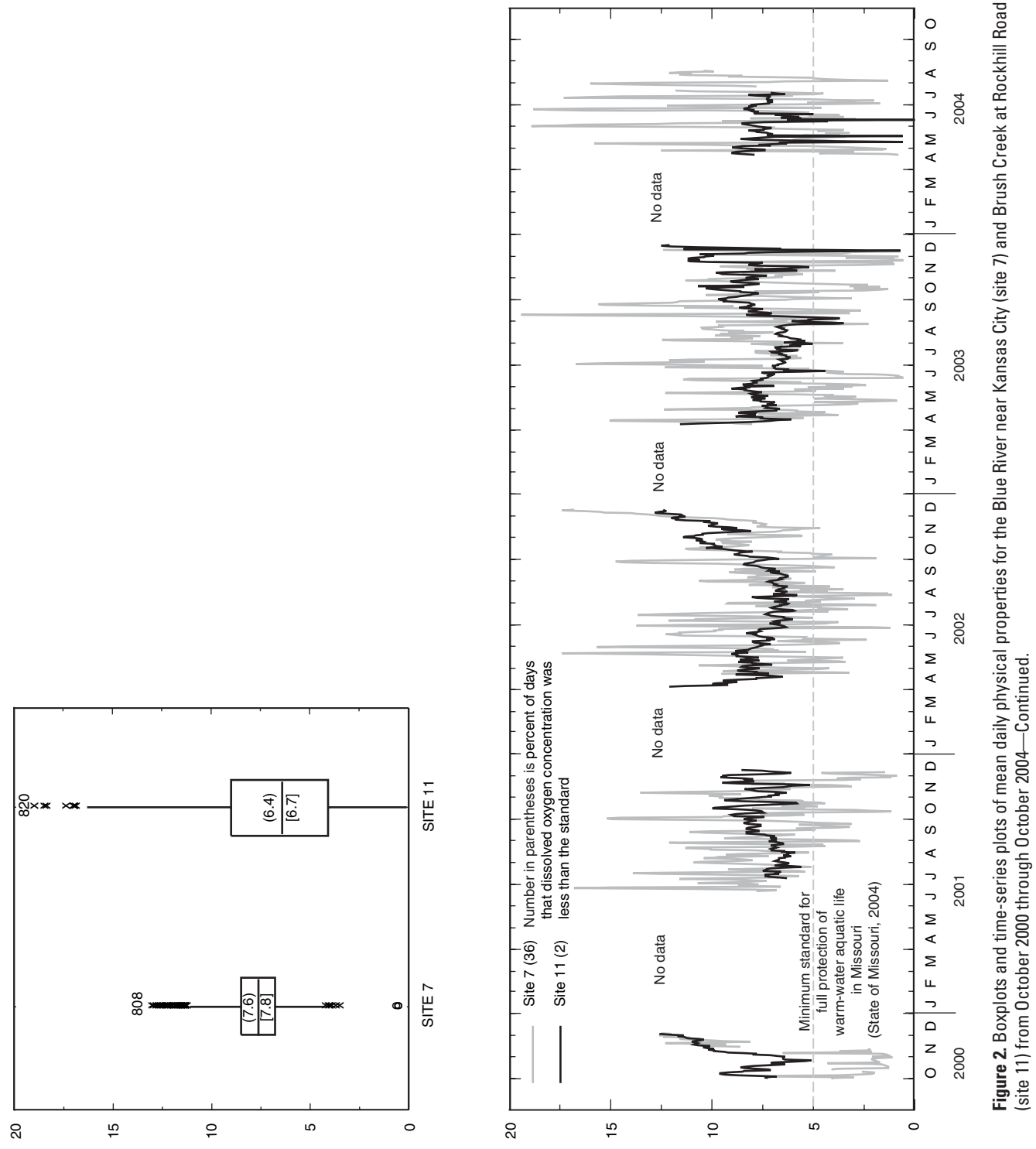

Figure 2. Boxplots and time-series plots of mean daily physical properties for the Blue River near Kansas City (site 7) and Brush Creek at Rockhill Road (site 11) from October 2000 through October 2004—Continued.

impound water and create lentic, or slow-moving, stream sections during base flow. Because the intent was to sample water that was in chemical equilibrium with bottom sediment, sampling events were scheduled to follow extended periods (2 weeks or greater) of little, or no, precipitation. Usually, these periods coincided with periods of thermal stratification. Therefore, to assess spatial and depth changes in water chemistry, vertical profiles of selected physical properties were determined concurrently with the collection of water samples. Specific conductance, pH, temperature, turbidity, dissolved oxygen, and oxidation-reduction potential were determined at 0.25-m (meter) depth intervals. Secchi disk depths were measured prior to collecting water samples so that the photic (depth of light penetration) and aphotic (depth of no light penetration) zones could be elaborated. The photic zone was defined for this study as 1.5 times the secchi depth, and the aphotic zone was defined as the zone between the base of the photic zone and 0.25 m above the bottom sediments. Water samples were depth integrated through the photic and aphotic zone. An additional water sample was collected from 0.25 m above the bottom sediments. Bottom sediments were collected using either a stainless steel 2-in. corer or a stainless steel Ponar sampler. Bottom-sediment samples were collected adjacent to the low-water dam at each site and from two or three depositional zones upstream from the dam. When the 2-in. corer was employed, 10 randomly selected bottom-sediment samples were collected within a 25-m radius around the water column sampling point. When the Ponar sampler was employed, three to four randomly selected samples were collected within a 25-m radius of the water sampling location. Sediment samples at each sampling point were then composited into a stainless steel pail before splitting into containers for laboratory analysis. Results from water-column and bottom-sediment samples are reported in tables 9 to 12, at the back of this report.

Laboratory Analysis

Biochemical oxygen demand and fecal indicator bacteria samples were analyzed by personnel at the USGS Kansas City Water Science Center. Laboratory analysis for all other compounds were performed at the USGS National Water Quality Laboratory (NWQL) in Arvada, Colorado. The USGS Columbia Environmental Research Center personnel enumerated macroinvertebrate samples collected in 2002 and NWQL personnel identified samples collected in 2003.

Nitrogen and phosphorus species were determined from unfiltered and filtered samples using methods discussed in Fishman and Friedman (1989) or Fishman (1993). Major ions, trace elements, and metals were determined from filtered samples using methods described by Faires (1993) or Fishman (1993). Organic wastewater compounds were determined from unfiltered samples by continuous liquid-liquid extraction and capillary-column gas chromatography/mass spectrometry (GC/MS) (Kolpin and others, 2002; S.D. Zaugg and others, U.S. Geological Survey, written commun., 2005). Selected samples were analyzed using a variant of this method that captures and concentrates the analytes of interest on solid phase extraction cartridges prior to elution and entry into the GC/MS (Zaugg and others, 2002). Pharmaceutical compounds were determined from filtered samples by solid-phase extraction and HPLC-electrospray ionization mass spectrometry (Cahill and others, 2004).

Quality Control and Assurance

Quality-control and assurance samples, designed to document the integrity of the water-quality data presented in this report, represented approximately 10 percent of all samples. The variability of sample collection and processing procedures was assessed through the use of replicate samples. The adequacy of cleaning protocols for field and sample-processing equipment was evaluated through the collection of field equipment blank samples. Laboratory method performance was continuously evaluated through the use of standard reference materials, logic checks, and internal data reviews.

Field Methods

Replicate samples were collected to determine the variability in sample collection and processing procedures and to examine the effect these variations can have on environmental concentrations. Quantile-quantile (Q-Q) plots (fig. 3) show the concentrations of constituents in environmental samples in relation to the concentrations determined from replicate samples. The smaller the difference between the two measured concentrations, the higher the confidence level that sampling variability does not unduly bias results. Concentration differences can, and do, exist in replicate samples. The coefficients of determination for environmental and replicate samples analyzed for nutrients and pharmaceutical compounds was 0.96 and 0.94; the relative percent difference for these compounds averaged 1 percent or less. These data indicate that sample collection and analysis procedures typically accounted for no more than 4 to 6 percent of any error in concentration. A higher degree of uncertainty resulted when compounds were determined from whole water samples because slight differences in suspended sediment or organic matter can substantially affect concentrations. Samples analyzed for organic wastewater compounds method had lower coefficients of determinations (average r^2 of 0.85) and higher relative percent differences (average of 5.7 percent) than did the samples for nutrient or pharmaceutical compounds. Where constituents were mediated by biological activity (such as biochemical oxygen demand), replicate precision also tended to decline.

Field equipment blank samples were collected by passing highly purified water through the same equipment used to collect and process water-quality samples, and then they were stored, shipped, and analyzed by the identical methods that were used for environmental samples. Measurable concentrations in blank water can result from trace amounts of constitu-

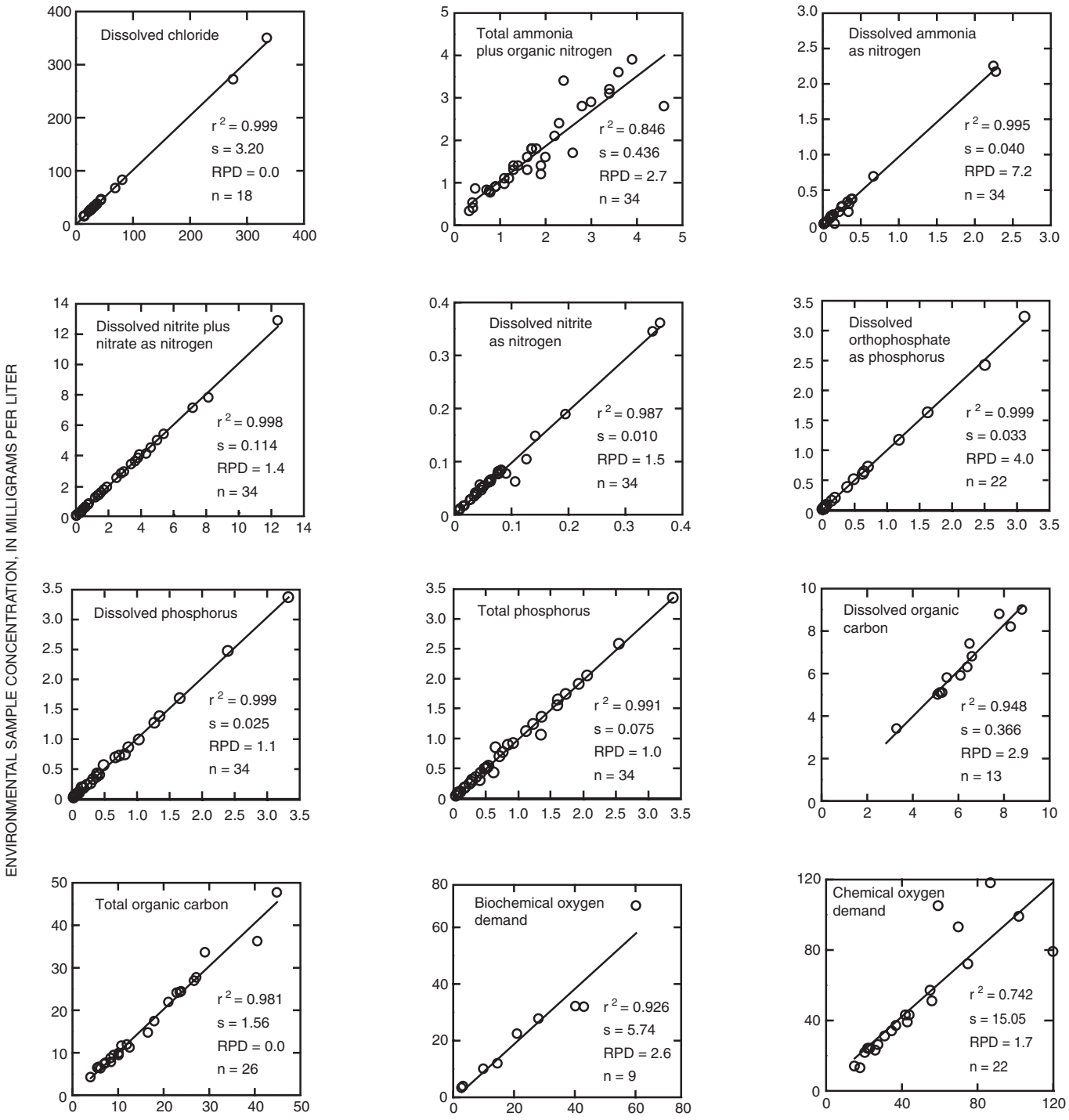

Figure 3. Quantile-quantile plots of replicate samples.

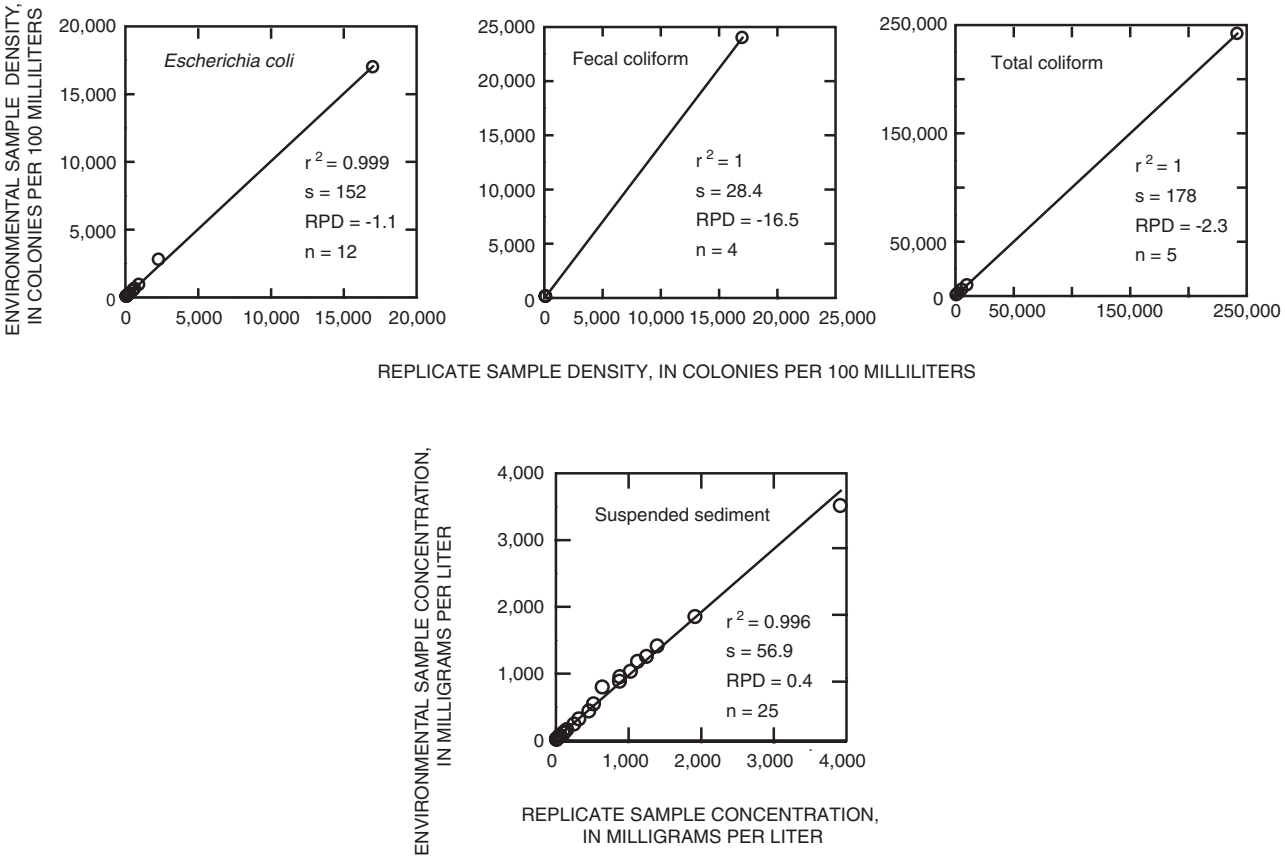

Figure 3. Quantile-quantile plots of replicate samples—Continued.

ents in the water, as well as residual material in sample processing or analytical equipment. Most compounds were not detected in field equipment blanks; if detected, the reported concentrations were near the detection limits for the compounds. Field equipment blank concentrations are reported in tables 3 to 12, adjacent to the results from environmental samples that were collected sequential to the blank samples. Among the blank samples collected for pharmaceutical compounds, there was one detection each of sulfamethoxazole and diphenhydramine. The concentration of sulfamethoxazole reported in the blank sample was estimated to be less than the method reporting limit for that compound, and diphenhydramine was not detected in any of the environmental samples in this study. For bacteria analyses, an equipment blank was processed before and after every environmental sample (approximately 100 samples; data not shown) to ensure the sterility of filtering equipment and to evaluate cross-contamination potential. No bacteria colonies were observed in any of the equipment blanks.

Laboratory Methods

Standard laboratory production methods have been used for many years at the USGS NWQL. As a result, quality assurance information for major ion, nutrient, and trace metal analyses are tracked annually by several techniques. These methodologies include determination of long-term method detection limits, internal and external audits, blind blank and blind spike programs using standard reference materials, method performance evaluations, and data review. Laboratory blank and reagent-spiked samples were processed with environmental samples to assess sample contamination potential and to provide method performance, bias, and variability information. Data review was performed by logic algorithms (for example cation/anion balances) and data that were outside acceptable limits were reviewed by chemists, verified, and re-analyzed, if necessary, prior to release. The NWQL quality-assurance data for standard production methods are documented in Childress and others (1999) or on the world wide web (URL http://bqs.usgs.gov). These data indicate that laboratory bias and variability were within acceptable limits—generally less than one standard deviation from the most probable value of the standard reference material during this study.

Methods for the analysis of organic wastewater and pharmaceutical compounds in water and sediment currently (2005) are considered research techniques rather than standard USGS production methods. For these methods, a laboratory reagant

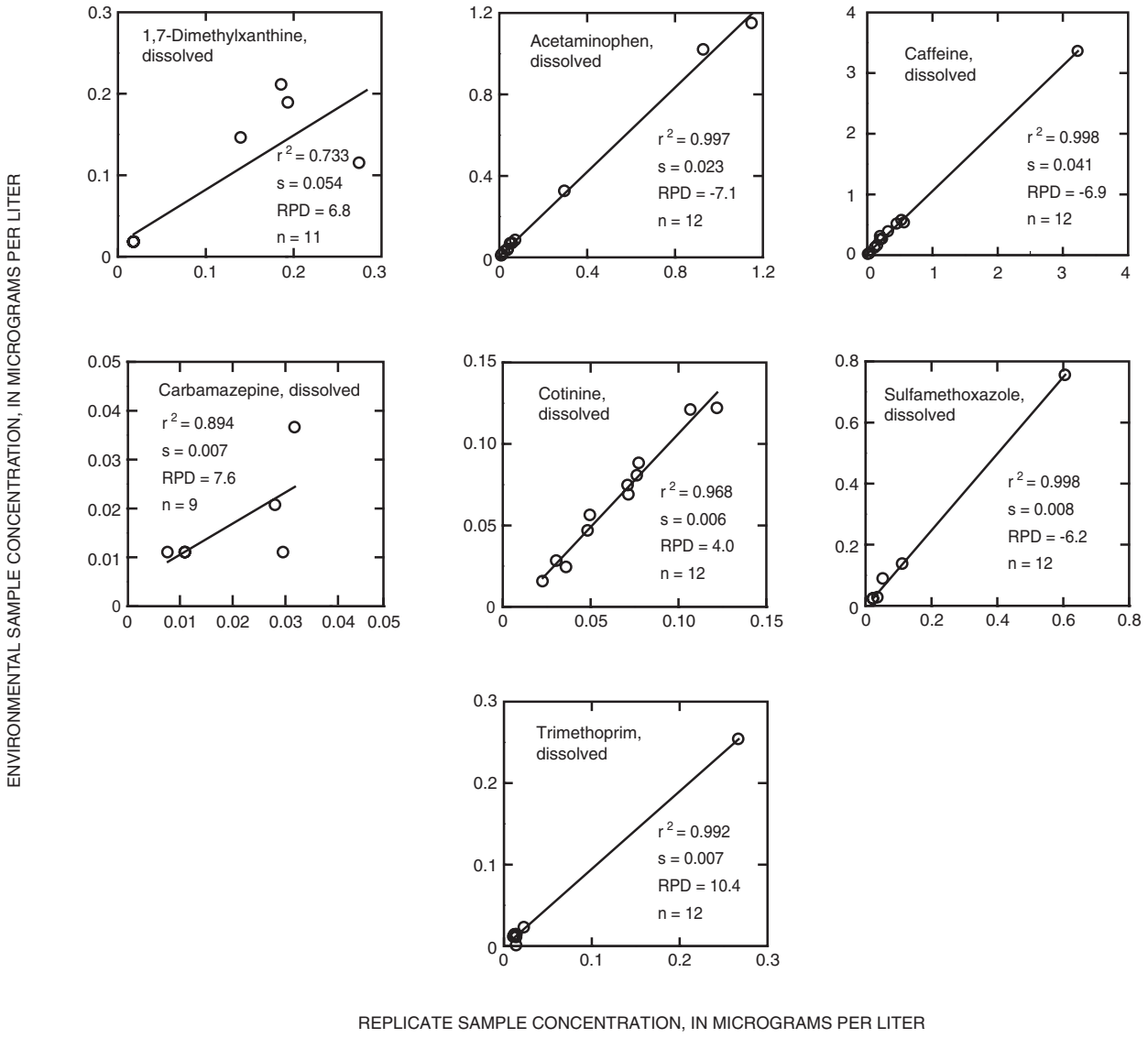

Figure 3. Quantile-quantile plots of replicate samples—Continued.

spike for every compound analyzed and a laboratory blank are included with each environmental sample set (no more than 18 samples) to evaluate method performance. Continuing calibration verification solutions are analyzed with each sample set to ensure that the instrument maintains calibration criteria. For the results to be quantitatively reported, verification concentrations must be within plus or minus 25 percent of the expected concentration. Low concentration standards [1 µg/L (microgram per liter) or less] are analyzed before and after environmental samples in each sequence to ensure that instrument sensitivity is maintained (S.D. Zaugg and others, written commun., 2005). For any given sample set, if an environmental sample had a concentration 10 times less than that determined in a laboratory blank associated with that sample set, then the environmental concentration was reported as less than the method detection limit. This was done to prevent any possible bias associated with laboratory contamination.

Summaries of the quality-assurance data for laboratory spikes and blanks analyzed with environmental samples in this study are given in tables 13 and 14, at the back of this report. The mean recovery for organic wastewater compounds laboratory spikes was 75 percent in water samples and 73 percent in sediment samples in this study. For pharmaceutical compounds, the mean recovery was 60 percent in water samples and 25 percent in sediment samples. These data indicate that, in some cases, environmental concentrations may be under-reported. However, as method development progresses, these recoveries are expected to improve.

Detailed information about the method performance of organic wastewater compounds is reported in Zaugg and others, 2002; S.D. Zaugg and others, written commun., 2005). Mean

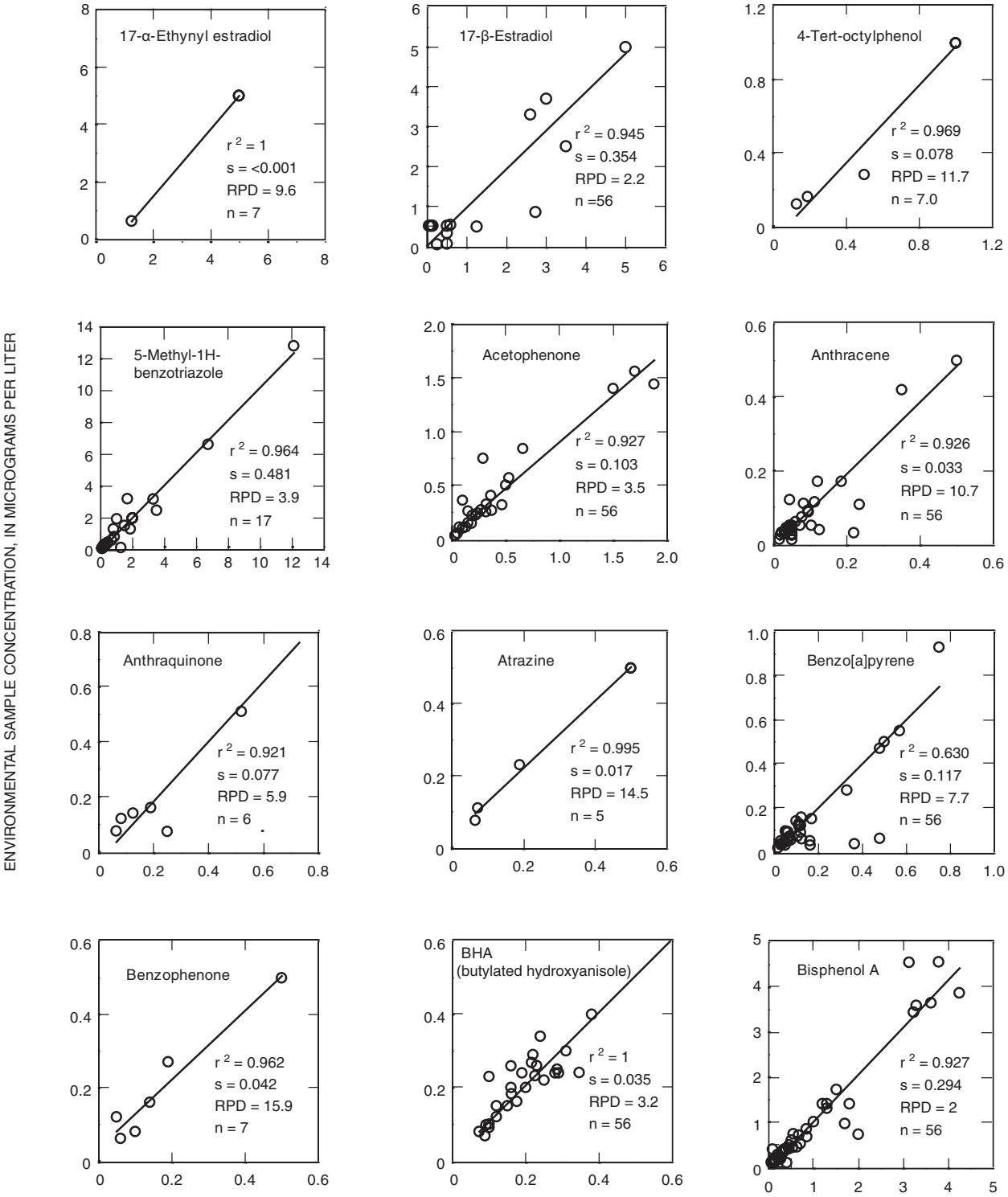

Figure 3. Quantile-quantile plots of replicate samples—Continued.

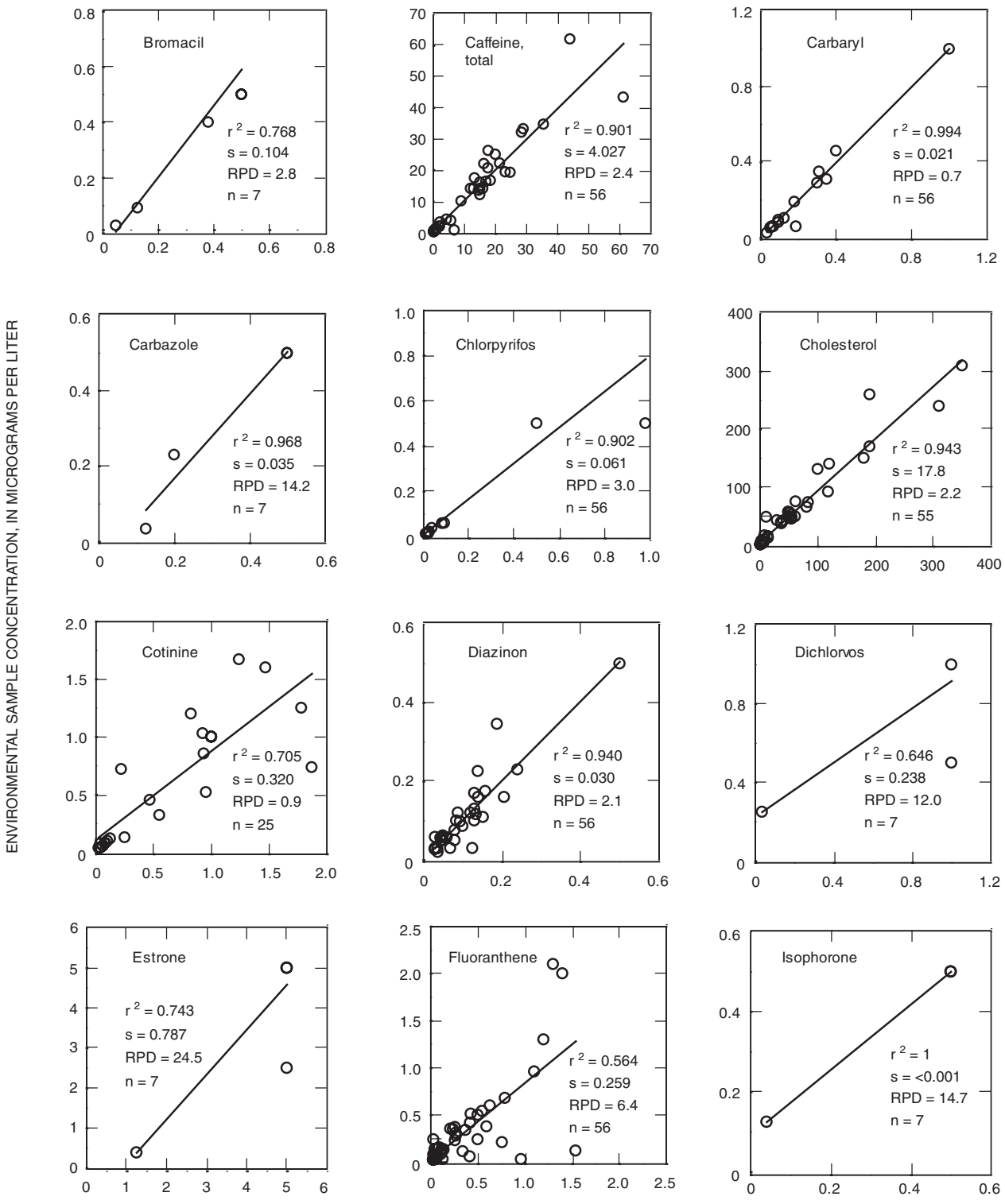

Figure 3. Quantile-quantile plots of replicate samples—Continued.

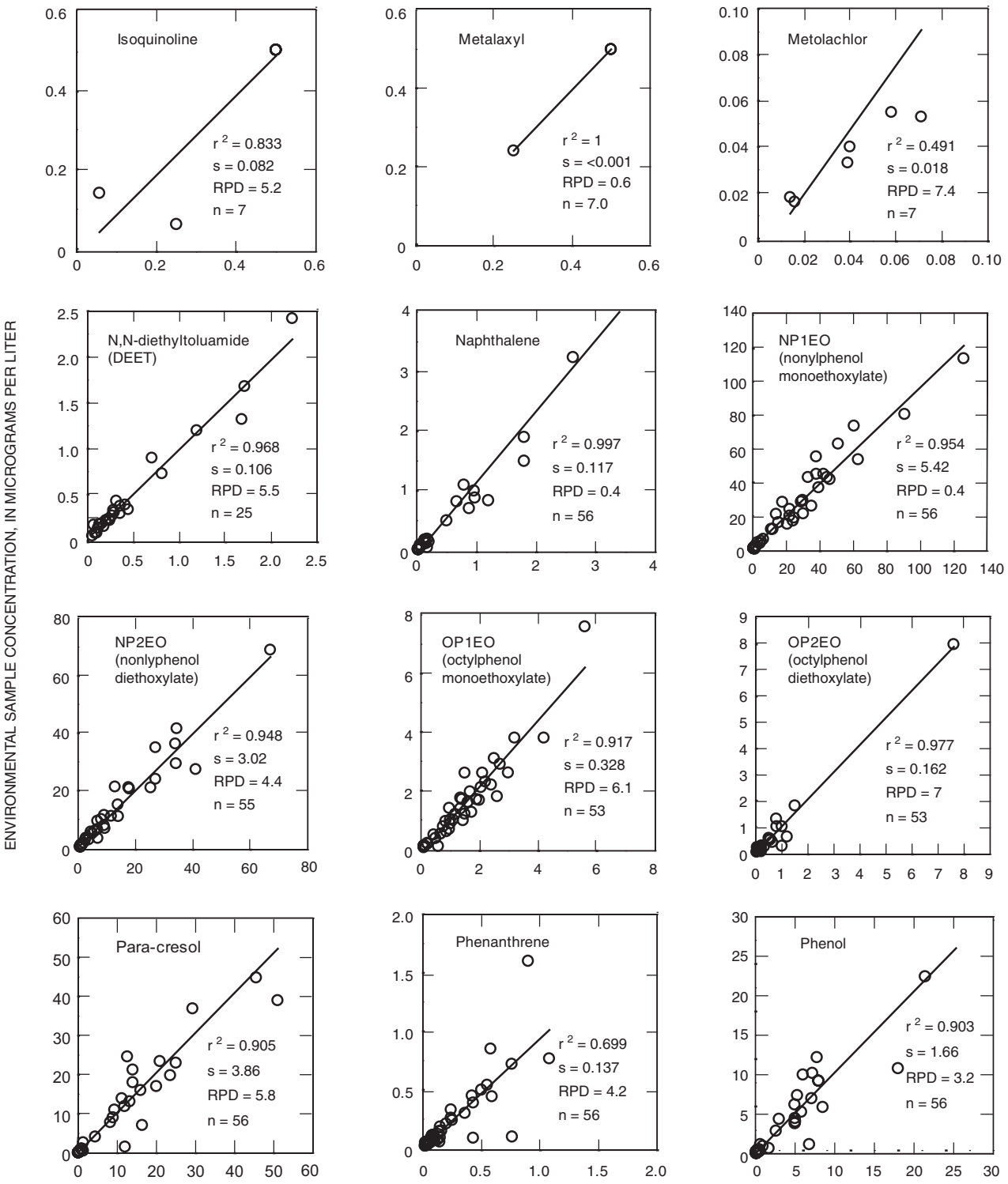

Figure 3. Quantile-quantile plots of replicate samples—Continued.

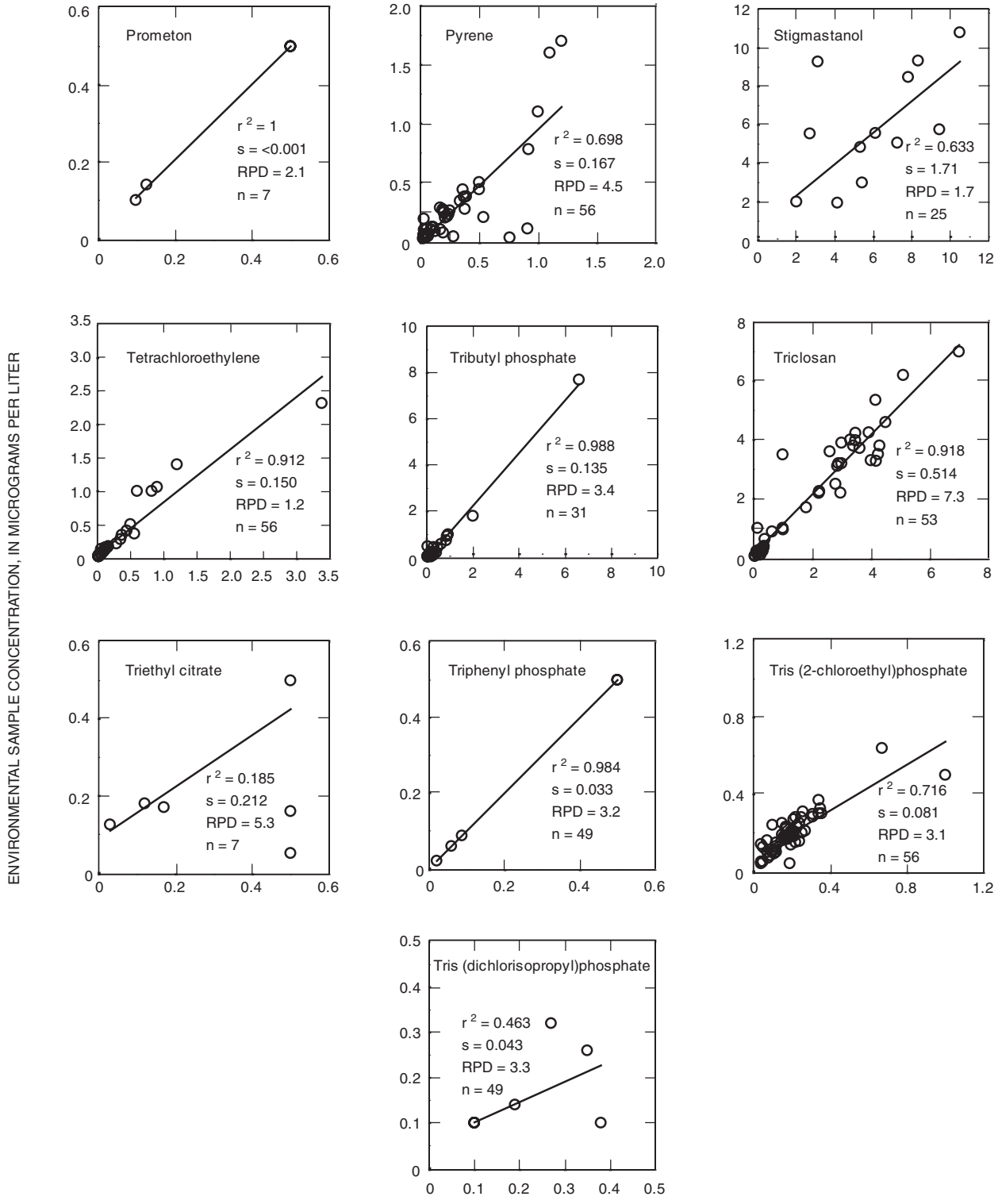

Figure 3. Quantile-quantile plots of replicate samples—Continued.

set laboratory spike recovery for all organic wastewater compounds was 77 percent—a value consistent with that reported in this study.

Cahill and others (2004) provide detailed information about the method performance for pharmaceutical compounds analyzed in this study. Data for some pharmaceutical compounds tested had low laboratory set spike recoveries and eventually were discontinued from the method during this study. Mean set spike recovery for the remaining pharmaceutical compounds was 60 percent (Cahill and others, 2004)—a value consistent with the method performance reported in this study.

Benthic Macroinvertebrate Sampling and Metrics

Aquatic communities were sampled according to established protocols for the assessment of benthic macroinvertebrates (Rabeni and others, 1997; Kansas Department of Health and Environmental, 2000). Eleven sites, 10 within the basin (sites 1–8, 12, and 13) and one outside the basin (site 19, fig. 1) were sampled. Site 19, the South Grand River near Freeman, was sampled because the South Grand River is a MDNR reference stream for the Blue/Lamine River Ecological Drainage Unit. Reference streams were chosen by the MDNR to represent the least impacted streams within an ecoregion. Metrics were determined from categorical enumeration of the samples in accordance with standardized procedures (table 15, at the back of this report).

During 2002, only coarse substrate in riffles was sampled. This was the most faunally rich habitat that was common to all sites, and it consisted of exposed riffles with cobble and pebble-sized bed material. Each stream site was sampled in March and September 2002. The sampling times chosen are MDNR recommended index periods designed to enhance comparisons with other reference conditions and coincide with the maturation of most benthic insects, thus simplifying laboratory identification (Cuffney and others, 1993), and were times of stable flow and temperature, which facilitated a stable biotic assemblage throughout the sampling period (Shackleford, 1988). Samples were collected during 4 to 5 days when no substantial rainfall was expected. Discharge, specific conductance, pH, water stream temperature, turbidity, and dissolved oxygen were monitored at the time of sample collection. Discharge was determined from existing stage-discharge relations or measured concurrently.

In 2002, benthic macroinvertebrate samples were collected using a bottom aquatic kicknet [500 µm (micrometer) mesh] held snugly against the bed material immediately downstream from the sample collector. The sample collector then vigorously disturbed approximately 0.5 m^2 (square meter) of the substrate in front of the kicknet to a depth of approximately 10 cm (centimeters) for 2 minutes. This action dislodged the invertebrates and allowed the current to carry them into the net. All material that collected in the kicknet was deposited into a white collection tray large enough to accommodate the materials. Large debris, such as twigs, leaves, and substrate, were inspected for attached organisms. Organisms present on the debris were washed off or removed with tweezers before the debris were removed from the sample. Additionally, the kicknet was inverted into the collection tray and backwashed and hand-picked to remove clinging organisms. Six separate coarse substrate locations were sampled at each site. All organisms collected at each site were composited and the samples were placed on a 500-µm mesh screen and repeatedly rinsed with native or deionized water or both to remove excess fine sediment and organic matter. Sieved samples were then placed in 1-L (liter) wide-mouth plastic jars, preserved with a mixture of 90 percent ethanol, and stored at 25 °C (degrees Celsius) until analysis. After 2 weeks of storage, the supernatant liquid was decanted in the laboratory and replaced with fresh preservative.

Samples were then gridded, sorted, and identified using quantitative processing methods with a target of 600 organisms as stated in the MDNR protocol (Rabeni and others, 1997; Moulton and others, 2000). Samples were identified to the lowest taxon possible, generally genus or species. These data then were used to determine benthic macroinvertebrate metrics (table 16, at the back of this report), including the MDNR core metrics for determination of aquatic life use support (ALUS). The four core MDNR metrics are total taxa richness, Ephemeroptera/Plecoptera/Trichoptera Taxa Richness (EPT), Missouri Biotic Index (MBI), and the Shannon-Weiner Diversity Index (Sarver, 2001). These four metrics are scored individually where 5 indicates full support, 3 indicates partial support, and 1 indicates non-support of aquatic life based on biological criteria for ecological drainage units in Missouri (Sarver, 2001). Stream Condition Index (SCI) is the sum of the four core metric scores and determines ALUS status. A SCI score of 16 to 20 indicates a fully biologically supporting stream, a score of 10 to 14 indicates a partially biologically supporting stream, and scores from 4 to 8 represent a non-biologically supporting stream (Rabeni and others, 1997). The SCI scores and ALUS status for stream sites sampled in 2002 are listed in table 17, at the back of this report.

In 2003 and 2004, macroinvertebrate samples were collected using protocols established for Kansas streams (Kansas Department of Health and Environment, 2000). Results from the 2004 samples were not received at the time this report was written. This method was used because of the inter-jurisdictional nature of the basin and to allow for future comparison of methods. The Kansas Department of Health and Environment (KDHE) method was similar to the MDNR method used in 2002 with the following exceptions. Samples were collected once per year during 1 week in late February or early March. All potential stream habitats and substrates present at each site were sampled. These included riffles, pools, leaf packs, woody debris, and vegetative margins along the banks under a variety of current velocities and with varying substrate sizes. Every habitat was not available at each site. Two field personnel simultaneously collected samples using a combination of kick-netting, sweeping, and hand-picking. The goal was to obtain the highest diversity possible with no more than 50 percent of any species collected from any single habitat. Sam-

pling lasted for no more than 1 hour or until 100 organisms were collected by each individual. Each of the two 100-organism samples was pooled into one 200-organism sample per site. Field personnel included both large and small organisms, and selection followed the morpho-species principle—any organism appearing different from those previously sorted was included in the sample.

Kansas determines ALUS with five core metrics, of which only four (table 15) are from macroinvertebrate data (Kansas Department of Health and Environment, 2000). Benthic macroinvertebrate metric values determined from the 2003 sampling are listed in table 18, at the back of this report. Kansas ALUS determinations are taken from the mean, rather than the sum, of the individual core metric values (table 19, at the back of this report). The ALUS scoring criteria are as follows: individual metric score of 3 or site score between 2.5 and 3.0 indicates full-support, individual metric score of 2 or site score of 2.5 to 3.0 indicates partial support, and individual metric score of 1 or site score of 1.0 to 2.49 indicates non-support.

Data for 10 metrics (table 15) were scaled proportionally by transforming metric values from 1 to 100; the highest score was assigned 100 and the remaining values calculated as a proportion of that score. Sites were then ranked from highest (1) to lowest (11) for each sampling period based on the sum of the scores (table 20, at the back of this report). Macroinvertebrate taxa included in stream sampling during this study are listed in table 21, at the back of this report.

Water-Quality Data

Analytical results from lotic and lentic stream reaches are reported in tables 2 through 12. A brief summary of the data follows.

Continuous Water Quality

Continuous specific conductance, pH, temperature, turbidity, and dissolved oxygen data were collected on the Blue River and Brush Creek from April 1st to November 30th of each year. In both streams, changes to water quality often occurred quickly (fig. 2).

Specific conductance values declined rapidly during storms when rainfall entered streams. It took several days, or weeks, for values to return to pre-storm levels. Specific conductance was higher on the Blue River [median value of 747 µS/cm (microsiemens per centimeter at 25 degrees Celsius)] than on Brush Creek (median value of 577 µS/cm). Mean daily pH values fluctuated over a larger range on Brush Creek than on the Blue River, although median values were similar (7.71 and 7.76). Water temperatures were slightly higher on Brush Creek (21.2 °C) when compared to the temperatures in the Blue River (19.9 °C). The higher temperatures occurred in July and August of each year. Dissolved oxygen concentrations in Brush Creek [median concentration of 6.4 mg/L (milligrams per liter)] were lower than the concentration on the Blue River (median concentration of 7.6 mg/L). Thirty-six percent of the time the mean daily dissolved oxygen concentration was less than 5 mg/L in samples from Brush Creek as compared to only 2 percent of the time in samples from the Blue River (fig. 2). Rapid fluctuations in dissolved oxygen concentrations occurred at both sites in response to diurnal temperature fluctuations, algal growth, and storm events (Wilkison and others, 2002). Turbidity levels were higher in the Blue River than they were in Brush Creek (fig. 2). The median turbidity value in the Blue River was 24.7 Nephelometric Turbidity Units (NTU) and 8.0 NTU in Brush Creek.

Nutrients

Dissolved nitrite (NO_2) plus nitrate (NO_3) accounted for more than 70 percent of total nitrogen in base-flow samples from Indian Creek and the Blue River and only 17 percent in Brush Creek samples. Total ammonia plus organic nitrogen was the principal nitrogen species in Brush Creek base-flow samples. During stormflow, the principal nitrogen species at all sites was organic nitrogen.

Median total nitrogen concentration in stream samples from Indian Creek during base flow was 11.6 mg/L compared to 5.36 mg/L in samples from the Blue River and 1.47 mg/L in samples from Brush Creek. Total nitrogen concentrations in stormwater samples from Indian Creek and the Blue River (median concentrations of 5.5 and 4.9 mg/L) were less than the median concentrations in the base-flow samples. However, median total nitrogen concentrations increased in stormwater samples collected from Brush Creek (2.4 mg/L) when compared to the concentration in base-flow samples.

Dissolved phosphorus accounted for more than 90 percent of the total phosphorus in base-flow samples from Indian Creek and the Blue River and slightly more than 60 percent from samples collected from Brush Creek. In stormwater samples, this percentage declined for each stream and ranged from 26 to 35 percent of the total phosphorus.

In base-flow samples collected from Indian Creek, the median total phosphorus concentration was 2.62 mg/L compared to 0.91 mg/L in Blue River samples and 0.14 mg/L in Brush Creek samples. Median total phosphorus concentrations declined in Indian Creek in stormwater samples (1.40 mg/L), but still remained greater than in samples from the Blue River (1.24 mg/L) or Brush Creek (0.37 mg/L).

Bacteria and Suspended Sediment

Median densities of E. coli in base-flow samples from the Blue River were 380 col/100 mL (colonies per 100 milliliters) and were 355 col/100 mL in base-flow samples from Brush Creek; these densities were greater than those counted in samples from Indian Creek (115 col/100 mL). The E. coli densities were much greater in stormwater samples at all sites, with the greatest median density in samples from Brush Creek (24,000 col/100 mL). Median E. coli densities in samples from Indian

Creek (16,000 col/100 mL) were nearly identical to those from the Blue River (17,000 col/100 mL).

Suspended sediment concentrations in base-flow samples generally were an order of magnitude lower than concentrations measured in stormwater samples. The median concentration of suspended sediment in base-flow samples collected from Brush Creek was 39 mg/L, 54 mg/L in samples from Indian Creek, and 61 mg/L in Blue River samples. For stormwater samples, the median suspended sediment concentration increased to 110 mg/L in Brush Creek, 387 mg/L in samples from Indian Creek, and 765 mg/L in Blue River samples.

Organic Wastewater Compounds

Organic wastewater compounds detected most frequently in both base-flow and stormflow samples included animal and plant sterols (coprostanol, cholesterol, and stigmastanol), fragrances [acetyl-hexamethyl-tetrahydro-napthalene (AHTN) and hexadydro-hexamethyl-cyclopenta-benzopyran (HHCB)], plasticizers (bisphenol A), insect repellants [N,N-diethyl-m-toluamide (DEET)], anti-microbials (triclosan), and non-anionic detergent surfactants and metabolites (4-nonyl phenol and nonyl phenol diethoxlyate). Base-flow samples from Indian Creek had more frequent detections of organic wastewater compounds (31 percent) compared to samples from the Blue River (26 percent) and Brush Creek (22 percent). Detection frequencies increased in stormwater samples from Brush Creek and declined in samples collected from the Blue River and Indian Creek.

Pharmaceutical Compounds

Over-the-counter drugs accounted for more than three-fourths of pharmaceutical compounds detected in stream samples. These included the stimulant caffeine and a metabolite, which accounted for one-half of the detections, and two pain-relievers, acetaminophen and ibuprofen, which represented 16 and 11 percent of the detections. Two antibiotics, sulfamethoxazole and trimethoprim, each accounted for 4 percent of detections.

Detections of pharmaceutical compounds increased by 10 percent in Brush Creek storm samples when compared to base-flow samples. There was a 15 to 34 percent decrease in detection frequency for stormwater samples collected from the Blue River and Indian Creek compared to base-flow samples.

Biologic Data

Overall, metric values were highest at sites in the upper reaches of the basin and values declined in downstream sites. Benthic macroinvertebrate metrics, enumerated in accordance with MNDR bioassessment protocols in 2002, indicated that 36 percent of the sites sampled met the criteria for full support of aquatic life, 45 percent were considered partially supportive, and the rest considered to be non-supportive during part of the year. In 2003, using the KDHE bioassessment protocols, no site met the full-support criteria for streams.

Summary

Water-quality and biologic data were collected as part of a program to establish long-term trends in water quality in the basin, provide a foundation for future studies, and to aid in the development of a long-term overflow control plan and other basin management efforts for the city of Kansas City, Missouri. This report provides water-quality and biologic data at selected sites in the Blue River Basin from October 2000 to October 2004 collected during base flow and stormflow. Data presented include measurements of physical properties, fecal indicator bacteria densities, and concentration of major ions, nutrients, trace elements, organic wastewater compounds, and selected pharmaceutical compounds in stream samples. Thirteen base-flow events and as many as seven storms were sampled as part of the study. Water-column profiles and bottom-sediment samples were collected at selected lentic reaches of Brush Creek. Continuous data for physical properties, including specific conductance, pH, temperature, turbidity, and dissolved oxygen, are provided for two sites. Descriptions of the data-collection and quality-assurance methods used during the study are documented. Benthic macroinvertebrate metrics were enumerated for 10 sites in the basin and 1 reference site using established protocols for Missouri and Kansas.

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TABLES

Table 1. Site number, station name, and station identification for sampling sites and types of data collected at each site.

[ID, identification; KS, Kansas; B, biologic; WQ, base-flow and/or stormflow water quality; MO, Missouri; Hwy., highway; C, continuous physical properties; BM, water column and bottom sediment; WWTF, wastewater treatment facility; --, not assigned

Site number (fig. 1)	Station name	Station ID	Latitude	Longitude	Type of data collected
1	Blue River near Stanley, KS	06893080	384845	0944031	B,WQ
2	Blue River at Blue Ridge Boulevard Extension, Kansas City, MO	06893150	385324	0943452	B,WQ
3	Indian Creek at 69 Hwy., Overland Park, KS	06893270	385513	0944216	B,WQ
4	Indian Creek at Farley, Overland Park, KS	06893280	385600	0944139	B,WQ
5	Tomahawk Creek at Tomahawk Creek Park, Overland Park, KS	385539094372100	385539	0943721	B,WQ
6	Indian Creek at 103rd Street, Kansas City, MO	06893400	385631	0943616	B,WQ
7	Blue River at Kansas City, MO	06893500	385726	0943331	B,C,WQ
8	Blue River at Blue Parkway, Kansas City, MO	06893552	390206	0943136	B,WQ
9	Brush Creek at Ward Parkway, Kansas City, MO	06893557	390159	0943619	WQ
10	Brush Creek at Kansas City, MO	06893560	390222	0943504	BM,WQ
11	Brush Creek at Rockhill Road, Kansas City, MO	06893562	390221	0943443	C,BM,WQ
12	Brush Creek at Elmwood Avenue, Kansas City, MO	06893564	390211	0943152	B,BM,WQ
13	Blue River at Stadium Drive, Kansas City, MO	06893578	390330	0943042	B,WQ
14	Blue River at 12th Street, Kansas City, MO	06893590	390548	0942926	WQ
15	Blue River Main WWTF, Johnson County, KS	--	385114	0943658	--
16	Indian Creek Middle Basin WWTF, Overland Park, KS	--	385514	0944208	--
17	Tomahawk Creek WWTF, Overland Park, KS	--	385548	0943726	WQ
18	Blue River WWTF, Kansas City, MO	390736094292700	390736	0942927	WQ
19	South Grand River near Freeman, MO	06921582	383520	0942630	B,WQ

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Discharge, instantaneous (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)	$NO_2 + NO_3$, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)
1	03/06/02	1420	5.5	540	8.1	5.4	3.9	15.5	--	--	--	--	--	--
	03/13/02	1315	7.0	560	8.2	10.4	9.6	15.3	0.55	<0.04	1.70	0.173	2.25	0.28
	09/10/02	1145	.01	460	7.8	24.8	6.1	4.5	--	--	--	--	--	--
	11/08/02	1100	.50	585	7.2	7.9	4.7	6.4	--	--	--	--	--	--
2	08/29/01	1130	7.5	620	8.0	25.7	39	7.2	.60	E.01	E3.44	E.029	4.04	E.37
	10/31/01	1000	6.8	740	8.2	13.1	19	12.1	.96	<.04	6.84	.053	7.80	1.13
	12/11/01	1045	4.7	825	8.6	4.3	5.2	16.0	.76	<.04	10.0	.031	10.8	1.46
	03/05/02	1125	5.8	810	8.3	3.4	16	14.5	--	--	--	--	--	--
	03/13/02	1530	5.8	675	8.5	11.5	17	15.7	.55	<.04	1.70	.173	2.25	.28
	06/18/02	1300	20	555	7.9	22.9	20	7.6	.66	.05	2.42	.035	3.08	.32
	08/07/02	1245	2.8	790	8.4	28.5	19	10.2	.64	<.04	5.22	.045	5.86	.80
	09/10/02	1046	2.8	920	7.9	23.7	7.7	6.0	--	--	--	--	--	--
	11/05/02	1045	11	770	7.6	7.8	10	10.9	.63	<.04	6.96	.026	7.59	1.09
	02/11/03	1000	3.6	1,140	8.3	2.3	14	15.2	3.1	1.93	12.3	.279	15.4	2.42
	03/07/03	1500	8.8	1,220	8.7	7.3	9.8	18.4	--	--	--	--	--	--
	07/07/03	1130	3.6	680	8.2	30.3	15	9.2	.71	.04	4.54	.035	5.25	.56
	08/18/03	1045	3.5	975	8.1	27.5	6.5	8.1	.92	<.04	9.46	.040	10.4	1.55
	11/25/03	1030	8.4	705	7.7	4.0	13	12.1	.67	<.04	4.59	.030	5.26	.72
	02/24/04	0900	72	700	7.9	6.0	20	11.3	--	--	--	--	--	--
	04/08/04	1000	44	605	8.0	14.2	10	11.6	.55	<.04	1.71	.045	2.62	.14
	09/03/04	0945	34	575	8.0	22.4	12	8.2	.52	<.04	1.98	.018	2.50	.11
3	08/22/01	0945	.72	735	7.7	25.5	31	6.0	.74	<.04	.19	.009	.93	E.01
	11/01/01	1300	1.4	865	7.8	15.3	4.0	7.0	.54	<.04	.13	E.005	.67	.06
	12/20/01	1015	.83	625	8.0	2.8	9.6	14.3	.29	<.04	.25	.015	.54	E.01
	03/07/02	1200	3.5	3,840	8.2	6.4	7.9	17.6	--	--	--	--	--	--
	03/21/02	1245	1.3	1,070	8.2	9.8	8.7	15.6	.43	<.04	.05	E.006	.48	<.02
	06/19/02	1030	2.2	745	8.2	24.7	2.6	13.4	.71	<.04	.70	.013	1.41	<.02
	09/10/02	1344	.36	805	8.5	27.9	1.4	11.0	--	--	--	--	--	--
	03/07/03	1315	4.0	4,820	7.9	6.0	22	14.9	--	--	--	--	--	--
	02/24/04	1100	E5	1,360	7.9	5.3	11	13.4	--	--	--	--	--	--

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Discharge, instantaneous (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)	$NO_2 + NO_3$, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)
4	08/22/01	1100	1.4	975	7.5	25.1	7.1	7.0	1.3	0.10	15.7	0.153	17.0	3.07
	11/01/01	1145	10	1,010	7.4	21.7	3.4	6.1	1.4	.20	18.3	.137	19.7	4.09
	12/20/01	1215	15	1,020	7.6	17.6	3.6	8.5	4.2	2.55	11.1	.307	15.3	3.59
	03/06/02	1550	15	1,870	7.9	15.3	5.0	13.0	--	--	--	--	--	--
	03/21/02	1445	15	1,110	7.9	15.6	5.6	11.3	1.8	.14	13.3	.295	15.1	3.49
	06/19/02	1130	14	895	7.5	22.7	3.7	8.1	1.5	.19	13.0	.185	14.5	2.98
	09/10/02	1448	11	1,090	7.5	26.6	1.7	7.0	--	--	--	--	--	--
5	03/05/02	1410	8.6	2,400	8.1	4.1	6.3	16.3	--	--	--	--	--	--
	03/22/02	1200	8.6	1,040	8.1	5.6	22	12.5	1.1	<.04	9.71	.194	10.8	2.04
	09/11/02	1100	.61	860	8.0	22.9	2.9	6.5	--	--	--	--	--	--
6	08/22/01	1315	18	960	7.7	27.0	11	6.8	1.8	.53	11.3	.230	13.1	2.32
	11/01/01	0930	20	935	7.5	16.7	14	7.2	3.6	2.25	8.15	.348	11.8	2.51
	11/01/01*	0931	--	--	--	--	--	--	3.6	2.25	7.82	.345	11.4	2.42
	12/20/01	1415	14	980	7.6	9.2	6.9	9.0	4.3	2.55	11.1	.307	15.4	3.59
	03/05/02	1500	29	2,440	8.2	7.8	17	13.1	--	--	--	--	--	--
	03/22/02	1415	32	1,110	8.6	8.7	9.9	15.4	1.1	<.04	9.71	.194	10.8	2.04
	06/19/02	1300	20	850	8.5	25.9	3.4	14.1	.93	<.04	5.53	.040	6.46	1.19
	08/06/02	1400	21	1,000	7.6	27.9	5.6	8.6	2.1	.80	7.45	.151	9.55	2.54
	09/11/02	1030	21	1,120	7.5	23.1	4.1	6.2	--	--	--	--	--	--
	11/07/02	1230	36	870	7.8	12.1	5.6	10.1	1.7	.55	6.20	.124	7.90	1.69
	02/12/03	0945	21	1,320	7.3	6.6	11	10.0	5.3	3.42	12.8	.517	18.1	3.87
	07/07/03	0945	20	940	7.8	27.5	5.8	8.6	1.6	.34	9.06	.232	10.7	2.49
	08/18/03	0930	18	995	7.4	27.6	11	6.3	2.0	.52	11.4	.261	13.4	2.95
	12/02/03	0930	23	985	6.9	8.7	4.7	7.2	3.9	2.08	10.7	.392	14.6	3.27
	04/13/04	0945	30	1,070	7.8	11.8	5.0	10.0	2.8	1.0	7.10	.728	9.87	1.78
	09/03/04	1400	36	905	8.4	25.9	<1	14.2	.96	.04	6.40	.078	7.36	1.03

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Discharge, instantaneous (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)	$NO_2 + NO_3$, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)
7	08/29/01	0945	60	680	7.9	25.9	39	6.6	0.92	<0.04	E5.52	E0.068	6.44	E0.71
	10/31/01	1145	29	985	7.7	14.2	5.2	8.7	1.4	.16	11.3	.493	12.7	2.66
	12/10/01	1300	30	1,000	7.8	6.9	5.2	10.2	3.1	1.47	8.66	.558	11.8	2.73
	03/05/02	1030	65	1,650	8.0	2.7	8.4	13.2	--	--	--	--	--	--
	03/14/02	0945	43	950	8.1	11.4	24	10.8	.99	.13	4.05	.130	5.04	.83
	06/18/02	1500	60	670	8.2	24.4	13	8.5	.71	<.04	3.91	.018	4.62	.49
	06/18/02*	1501	--	--	--	--	--	--	.83	<.04	4.06	.017	4.89	.51
	08/07/02	1030	25	965	7.7	26.9	20	6.1	1.3	.19	7.49	.207	8.79	2.00
	09/09/02	1428	25	895	7.7	27.6	19	7.6	--	--	--	--	--	--
	11/05/02	1245	47	860	7.7	9.4	9.6	10.0	1.3	.30	6.53	.130	7.83	1.71
	02/11/03	1145	24	1,290	7.8	4.3	7.8	12.5	3.0	1.08	11.7	.482	14.7	2.64
	03/06/03	1600	40	2,000	8.1	3.9	12	15.2	--	--	--	--	--	--
	07/08/03	1145	25	890	7.9	29.4	13	6.6	1.1	E.03	7.19	.081	8.29	1.63
	07/08/03*	1146	--	--	--	--	--	--	.97	E.03	7.14	.083	8.11	1.63
	08/19/03	0945	20	960	7.6	28.5	33	6.2	1.2	<.04	8.71	.098	9.91	2.10
	11/25/03	1245	38	600	7.6	4.9	30	11.5	1.2	.17	3.65	.096	4.85	.83
	02/24/04	1320	116	1,040	8.0	6.4	16	11.6	--	--	--	--	--	--
	04/07/04	1140	88	775	8.0	16.5	11	11.6	.86	<.04	2.61	.212	3.47	.38
	09/09/04	1100	87	600	7.9	20.8	12	7.8	.65	<.04	3.06	.027	3.71	.46
9	06/13/01	1015	1.4	930	7.6	25.9	3.4	9.3	.66	.08	1.48	.300	2.14	.07
	10/30/01	0945	.64	770	7.6	13.3	4.3	8.0	.46	E.03	E.03	E.007	.49	.04
	12/07/01	1000	.38	725	7.5	8.0	5.6	6.5	.40	<.04	E.03	<.008	.43	.04
	12/07/01*	1001	--	--	--	--	--	--	.53	<.04	E.03	<.008	.56	.05
	03/18/02	1245	.58	1,300	7.9	9.3	5.2	12.8	.41	<.04	.09	.010	.50	<.02
	06/20/02	1130	.74	650	8.0	27.9	3.8	10.9	.61	.04	.09	E.006	.70	.03
	08/01/02	1020	.77	535	7.9	30.4	5.3	6.6	.92	.04	.09	.010	1.01	.08
	11/06/02	1000	1.2	525	7.4	8.0	27	8.2	.51	.05	.75	.032	1.26	.04
	02/13/03	1000	.70	1,390	7.9	3.2	1.4	13.4	.33	.05	.76	.016	1.09	.04
	02/13/03*	1001	--	--	--	--	--	--	.33	.05	.75	.016	1.08	.02

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Discharge, instantaneous (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)	$NO_2 + NO_3$, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)
9	07/09/03	0930	0.21	660	7.7	30.1	12	7.1	0.56	E0.03	0.07	<0.008	0.63	0.03
	08/20/03	0945	.35	730	7.6	28.6	7.5	6.1	.72	.14	.07	E.006	.79	.06
	08/20/03*	0946	--	--	--	--	--	--	--	--	--	--	--	--
	11/20/03	0945	.24	470	6.9	10.1	13	3.0	.75	<.04	<.06	<.008	.81	.1
	04/13/04	1145	.56	1,055	7.8	14.3	1.8	14.4	.52	<.04	.41	.017	.93	<.02
	08/18/04	1000	.27	810	8.1	25.7	<1	10.4	.70	<.04	.11	<.008	.81	<.02
11	06/13/01	1230	1.3	855	8.0	26.3	19	2.6	1.7	<.04	2.26	.258	3.96	<.02
	10/30/01	1145	.01	530	7.9	13.9	5.0	8.1	.90	.10	.46	.040	1.36	.05
	12/07/01	1145	1.6	315	7.1	10.2	23	.9	.96	.11	.10	.017	1.06	.22
	03/18/02	1500	.60	1,220	7.5	10.0	7.0	6.0	1.2	.35	.28	.028	1.48	.08
	06/20/02	1315	.27	330	8.7	26.7	6.7	11.5	1.2	<.04	<.05	<.008	1.25	E.01
	08/01/02	1220	1.1	385	9.0	32.1	5.6	12.7	1.3	<.04	<.05	<.008	1.35	E.01
	11/06/02	1145	1.5	390	7.5	8.2	9.6	9.1	.65	.15	.79	.046	1.44	.04
	02/13/03	1230	.96	1,610	8.3	5.0	7.2	15.9	2.6	.93	.65	.041	3.25	<.02
	07/09/03	1130	.21	510	8.5	31.0	10	11.2	1.1	E.03	<.06	<.008	1.16	.02
	08/20/03	1145	.23	585	8.6	30.0	1.5	8.1	1.5	<.04	<.06	<.008	1.56	E.14
	11/20/03	1330	.44	590	7.4	11.5	11	3.2	1.2	<.04	.12	.030	1.32	.1
	04/13/04	1330	.64	650	8.6	13.1	6.4	11.7	.89	<.04	<.06	<.008	.93	<.02
	08/19/04	1030	.10	775	8.4	24.7	<1	7.7	.74	<.04	<.06	<.008	.80	<.02
13	03/06/03	0930	30	1,680	7.6	.6	14	13.7	--	--	--	--	--	--
	07/08/03	0930	26	810	7.7	28.4	41	5.6	.86	.06	4.33	.045	5.19	.84
	08/19/03	1215	19	905	7.7	29.6	39	7.6	.92	E.03	5.39	.048	6.31	1.32
	12/02/03	1230	42	805	7.4	4.8	16	11.4	1.4	.48	5.83	.190	7.23	1.28
	12/02/03*	1231	--	--	--	--	--	--	1.4	.49	5.76	.187	7.16	1.3
	02/24/04	1520	150	1,210	7.8	5.4	18	11.9	--	--	--	--	--	--
	04/08/04	1300	86	805	8.3	17.1	15	13.5	.74	<.04	2.07	.115	2.82	.23
	09/10/04	1030	83	690	7.6	21.7	33	7.8	.60	.03	2.21	.031	2.80	.28

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Discharge, instantaneous (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)	$NO_2 + NO_3$, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)
14	08/29/01	1400	44	675	8.0	28.5	54	7.7	0.07	E0.07	E3.33	E0.241	3.40	E0.28
	10/31/01	1345	29	935	8.1	13.3	33	12.6	.97	.07	7.03	.107	8.00	1.20
	12/11/01	1430	41	965	8.0	6.6	18	13.6	2.0	.91	7.93	.305	9.93	2.15
	03/04/02	1130	64	1,440	7.9	1.2	21	14.0	--	--	--	--	--	--
	03/14/02	1500	66	1,010	8.1	14.6	26	11.8	1.2	.29	3.49	.095	4.69	.57
	06/20/02	1400	48	705	8.3	29.4	13	12.8	.87	.09	2.97	.028	3.84	.27
	08/06/02	1120	31	850	7.7	29.2	31	6.1	.90	.11	5.00	.060	5.90	.71
	08/06/02*	1121	--	--	--	--	--	--	.90	.13	5.00	.060	5.90	.72
	09/09/02	1106	24	940	7.6	26.1	100	5.9	--	--	--	--	--	--
	11/07/02	1015	47	810	7.6	8.3	26	10.4	1.1	.28	4.87	.072	5.97	1.22
	02/12/03	1230	24	1,330	8.1	3.6	9.5	15.6	2.0	.75	10.8	.193	12.8	2.27

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, dissolved (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)
1	03/06/02	1420	--	--	--	--	--	--	--	--	--	--	--
	03/13/02	1315	0.30	0.30	[a]7	--	--	74	29	4.9	4.9	--	--
	09/10/02	1145	--	--	--	--	--	--	--	--	--	--	--
	11/08/02	1100	--	--	--	--	--	--	--	--	--	--	--
2	08/29/01	1130	.43	.47	[a]380	--	--	--	55	4.9	11.1	--	--
	10/31/01	1000	1.16	1.28	[a]300	--	--	--	51	7.4	8.3	--	--
	12/11/01	1045	1.64	1.64	[a]20	--	--	--	50	5.7	5.9	--	--
	03/05/02	1125	--	--	--	--	--	--	--	--	--	--	--
	03/13/02	1530	.30	.30	[a]100	--	--	74	52	4.9	4.9	--	--
	06/18/02	1300	.31	.36	[a]7,600	--	--	--	79	5.0	5.4	--	--
	08/07/02	1245	.81	.86	[a]<1	--	--	--	48	6.3	6.3	--	16
	09/10/02	1046	--	--	--	--	--	--	--	--	--	--	--
	11/05/02	1045	1.09	1.12	[a]80	90	--	--	7	5.7	6.4	--	14
	02/11/03	1000	2.33	2.46	5	90	1,600	144	57	6.2	8.1	--	30
	03/07/03	1500	--	--	--	--	--	--	--	--	--	--	--
	07/07/03	1130	.57	.61	45	130	8,700	--	49	5.6	6.0	--	24
	08/18/03	1045	1.64	1.68	43	122	3,300	196	44	6.9	6.7	<2	21
	11/25/03	1030	.80	.81	140	164	2,150	58	38	--	--	<2	26
	02/24/04	0900	--	--	--	--	--	--	--	--	--	--	--
	04/08/04	1000	.15	.20	34	37	7,940	44	35	4.0	4.4	--	<10
	09/03/04	0945	.13	.17	E250	E230	>4,840	33	55	4.6	5.2	--	13
3	08/22/01	0945	E.04	.06	--	--	--	--	57	7.7	9.3	--	--
	11/01/01	1300	E.05	.08	[a]65	--	--	--	53	6.2	7.9	--	--
	12/20/01	1015	E.06	E.04	[a]42	--	--	--	39	3.2	4.1	--	--
	03/07/02	1200	--	--	--	--	--	--	--	--	--	--	--
	03/21/02	1245	<.06	E.05	[a]45	--	--	173	76	4.0	4.5	--	--
	06/19/02	1030	<.06	E.03	[a]860	--	--	--	5	4.4	5.2	--	--
	09/10/02	1344	--	--	--	--	--	--	--	--	--	--	--
	03/07/03	1315	--	--	--	--	--	--	--	--	--	--	--
	02/24/04	1100	--	--	--	--	--	--	--	--	--	--	--

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, dissolved (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)
4	08/22/01	1100	3.54	3.44	--	--	--	--	62	8.3	8.0	--	--
	11/01/01	1145	4.32	4.32	[a]270	--	--	--	54	7.7	9.7	--	--
	12/20/01	1215	3.67	3.51	[a]95	--	--	--	60	7.8	9.0	--	--
	03/06/02	1550	--	--	--	--	--	--	--	--	--	--	--
	03/21/02	1445	3.70	3.56	[a]230	--	--	146	57	8.1	9.5	--	--
	06/19/02	1130	3.10	3.02	[a]1,100	--	--	--	3	7.2	8.5	--	--
	09/10/02	1448	--	--	--	--	--	--	--	--	--	--	--
5	03/05/02	1410	--	--	--	--	--	--	--	--	--	--	--
	03/22/02	1200	2.13	2.13	[a]10	--	--	163	75	7.0	8.2	--	--
	09/11/02	1100	--	--	--	--	--	--	--	--	--	--	--
6	08/22/01	1315	2.62	2.71	--	--	--	--	66	9.4	9.7	--	--
	11/01/01	0930	2.40	2.55	[a]1,200	--	--	--	64	8.8	10.8	--	--
	11/01/01*	0931	2.47	2.58	--	--	--	--	--	9.0	11.6	--	--
	12/20/01	1415	3.67	3.51	[a]58	--	--	--	3	8.8	11.4	--	--
	03/05/02	1500	--	--	--	--	--	--	--	--	--	--	--
	03/22/02	1415	2.13	2.12	[a]<1	--	--	163	56	7.0	8.2	--	--
	06/19/02	1300	1.31	1.28	[a]180	--	--	--	4	5.4	6.5	--	--
	08/06/02	1400	2.82	2.73	[a]4,600	--	--	--	48	8.0	10.0	--	23
	09/11/02	1030	--	--	--	--	--	--	--	--	--	--	--
	11/07/02	1230	1.72	1.77	[a]1,100	1,100	--	--	2	7.3	7.2	--	17
	02/12/03	0945	3.69	4.08	60	65	870	203	--	11.1	14.1	--	51
	07/07/03	0945	2.69	2.67	200	300	6,900	--	46	7.0	9.6	--	33
	08/18/03	0930	3.12	3.27	120	220	2,600	122	55	9.0	12.4	3.6	35
	12/02/03	0930	3.62	3.53	35	25	15,500	116	49	--	--	5.6	33
	04/13/04	0945	1.86	2.05	110	128	>2,420	146	59	7.9	9.8	--	35
	09/03/04	1400	1.12	1.13	E265	E240	>4,840	92	49	5.5	7.6	--	22

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, dissolved (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)
7	08/29/01	0945	0.78	0.86	[a]540	--	--	--	61	5.2	8.1	--	--
	10/31/01	1145	2.70	2.69	[a]40	--	--	--	60	8.2	11.2	--	--
	12/10/01	1300	2.89	3.18	[a]20	--	--	--	48	13.1	10.0	--	--
	03/05/02	1030	--	--	--	--	--	--	--	--	--	--	--
	03/14/02	0945	.85	.86	[a]21	--	--	131	65	6.2	6.7	--	--
	06/18/02	1500	.49	.54	[a]2,300	--	--	--	15	5.3	5.8	--	--
	06/18/02*	1501	.56	.54	[a]2,800	--	--	--	13	5.1	6.6	--	--
	08/07/02	1030	2.32	2.33	[a]<1	--	--	--	61	7.2	10.0	--	17
	09/09/02	1428	--	--	--	--	--	--	--	--	--	--	--
	11/05/02	1245	1.79	1.83	[a]270	530	--	--	14	7.1	7.0	--	24
	02/11/03	1145	2.95	3.27	16	125	1,300	196	65	--	12.2	--	42
	03/06/03	1600	--	--	--	--	--	--	--	--	--	--	--
	07/08/03	1145	1.66	1.73	79	139	10,000	--	67	6.4	8.5	--	26
	07/08/03*	1146	1.68	1.74	77	141	>10,000	--	59	6.3	7.8	--	28
	08/19/03	0945	2.28	2.43	100	200	>4,800	112	62	8.2	9.1	4.7	26
	11/25/03	1245	.94	.98	1,700	1,770	>9,680	54	40	--	--	3.6	37
	02/24/04	1320	--	--	--	--	--	--	--	--	--	--	--
	04/07/04	1140	.45	.53	69	69	5,650	82	53	5.2	8.0	--	14
	09/09/04	1100	.49	.51	365	440	>4,800	48	33	6.2	9.6	--	<10
9	06/13/01	1015	.08	.11	[a]570	--	--	--	49	3.7	4.8	--	--
	10/30/01	0945	E.04	.07	[a]80	--	--	--	52	6.5	9.2	--	--
	12/07/01	1000	.07	.10	[a]260	--	--	--	44	5.1	6.2	--	--
	12/07/01*	1001	.07	.10	--	--	--	--	41	5.0	6.3	--	--
	03/18/02	1245	<.06	E.05	[a]26	--	--	246	63	4.9	5.1	--	--
	06/20/02	1130	E.04	.07	[a]550	--	--	--	8	4.1	5.0	--	--
	08/01/02	1020	.12	.17	[a]400	--	--	--	23	7.9	9.0	--	21
	11/06/02	1000	.06	.10	[a]1,100	440	--	--	43	6.7	5.7	--	20
	02/13/03	1000	E.03	.04	1	<10	360	276	56	3.3	4.0	--	18
	02/13/03*	1001	E.02	E.04	--	--	--	272	54	3.4	4.2	--	13

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, dissolved (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)
9	07/09/03	0930	0.04	0.09	130	300	6,900	--	46	4.8	7.3	--	18
	08/20/03	0945	.10	.13	62	231	>9,700	75	50	7.3	11.4	5.5	29
	08/20/03*	0946	--	--	--	--	--	--	--	--	--	4.9	--
	11/20/03	0945	.13	.21	8,200	E>600	>48,400	41	29	--	--	6.8	30
	04/13/04	1145	<.04	.05	10	17	>2,420	176	62	4.2	3.8	--	<10
	08/18/04	1000	<.04	.04	90	133	2,022	107	42	5.6	6.5	--	16
11	06/13/01	1230	<.06	.12	[a]E120	--	--	--	58	4.1	9.6	--	--
	10/30/01	1145	.08	.14	[a]35	--	--	--	32	5.0	8.2	--	--
	12/07/01	1145	.27	.37	[a]830	--	--	--	34	6.9	8.7	--	--
	03/18/02	1500	.13	.17	[a]<1	--	--	277	59	6.7	9.1	--	--
	06/20/02	1315	.06	.19	[a]200	--	--	--	2	6.6	9.8	--	--
11	08/01/02	1220	E.05	.18	[a]180	--	--	--	24	9.5	13.9	--	29
	11/06/02	1145	.06	.09	[a]720	280	--	--	7	4.8	3.9	--	<10
	02/13/03	1230	E.03	.16	3	20	140	374	66	6.5	11.2	--	39
	07/09/03	1130	.04	.15	77	140	>10,000	--	26	7.2	10.9	--	41
	08/20/03	1145	.17	.37	140	290	9,700	65	24	10.6	15.3	240	47
11	11/20/03	1330	.16	.31	7,300	E>1,770	>48,400	--	40	--	--	12	34
	04/13/04	1330	<.04	.09	2	8	>2,420	101	38	5.8	7.8	--	21
	08/19/04	1030	E.03	.08	425	495	>9,680	109	31	6.8	8.7	--	18
13	03/06/03	0930	--	--	--	--	--	--	--	--	--	--	--
	07/08/03	0930	.82	.95	79	120	>10,000	--	77	5.6	7.9	--	30
	08/19/03	1215	1.44	1.53	49	207	>4,800	102	75	7.2	9.4	4.2	27
	12/02/03	1230	1.45	1.52	68	103	5,540	82	72	--	--	2.8	21
	12/02/03*	1231	1.46	1.52	81	152	5,910	83	--	--	--	3.3	20
	02/24/04	1520	--	--	--	--	--	--	--	--	--	--	--
	04/08/04	1300	.28	.37	16	30	14,100	89	57	5.1	6.7	--	17
	09/10/04	1030	.30	.35	505	590	>4,800	49	69	4.9	7.8	--	<10

Table 2. Physical properties, nutrients, bacteria, and selected chemical concentrations in base-flow samples collected between June 2001 and September 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; total concentrations from unfiltered samples; dissolved concentrations from filtered samples; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; <, less than; E, estimated; *, replicate sample; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, dissolved (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)
14	08/29/01	1400	0.39	0.51	--	--	--	--	72	5.5	7.7	--	--
	10/31/01	1345	1.17	1.36	[a]180	--	--	--	75	6.4	10.1	--	--
	12/11/01	1430	2.22	2.35	[a]460	--	--	--	62	7.5	8.9	--	--
	03/04/02	1130	--	--	--	--	--	--	--	--	--	--	--
	03/14/02	1500	.59	.67	[a]170	--	--	145	76	5.3	5.7	--	--
	06/20/02	1400	.30	.35	[a]310	--	--	--	27	6.4	6.1	--	--
	08/06/02	1120	.73	.76	270	--	--	--	69	6.1	7.0	--	15
	08/06/02*	1121	.72	.77	300	--	--	--	65	5.9	7.3	--	14
	09/09/02	1106	--	--	--	--	--	--	--	--	--	--	--
	11/07/02	1015	1.20	1.31	[a]1,500	2,300	--	--	54	5.8	6.1	--	11
	02/12/03	1230	2.50	2.46	200	300	960	219	59	8.5	10.1	--	35

[a]Membrane filtration on m-TEC agar.

Table 3. Dissolved major ions and trace elements in base-flow samples.

[mg/L, milligrams per liter; µg/L, micrograms per liter; --, no data; **, field equipment blank; E, estimated; <, less than; *, replicate sample; M, presence verified, but not quantified]

Site number (fig. 1)	Sample date	Sample time	Calcium, dissolved (mg/L)	Magnesium, dissolved (mg/L)	Potassium, dissolved (mg/L)	Sodium, dissolved (mg/L)	Acid neutralizing capacity, total, lab (mg/L)	Alkalinity, dissolved (mg/L)	Fluoride, dissolved (mg/L)	Silica, dissolved (mg/L)	Sulfate, dissolved (mg/L)	Aluminum, dissolved (µg/L)	Antimony, dissolved (µg/L)
2	03/13/02	1530	81.1	11.4	4.38	47.3	179	--	0.2	2.08	62.8	--	--
	02/11/03	1000	65.5	20.1	13.2	113	134	--	.46	6.27	154	--	--
	11/25/03	1030	78.5	13.2	7.17	47.4	--	167	.40	7.10	90.8	8	0.20
3	03/21/02	1245	97.4	16.6	2.80	94.3	206	--	.30	1.50	79.7	--	--
4	03/21/02	1445	66.1	17.2	15.1	125	142	--	.80	15.1	131	--	--
6	03/22/02	1415	80.5	17.8	10.9	118	159	--	.60	5.59	122	--	--
	02/12/03	0945	58.5	19.9	15.8	153	104	--	.57	9.16	154	--	--
	12/02/03	0930	56.2	14.9	15.3	103	--	106	.60	10.9	138	14	.45
7	03/14/02	0945	83.8	14.0	6.93	92.4	175	--	.30	4.08	85.5	--	--
	02/11/03	1145	56.2	17.4	13.2	138	110	--	.56	6.71	144	--	--
	02/11/03**	1500	.08	E.007	<.10	<.09	2	--	<.10	<.13	<.20	--	--
	11/25/03	1245	58.3	10.8	6.93	45.1	--	131	.30	6.16	75.9	10	.29
9	03/18/02	1245	85.1	14.2	3.80	164	154	--	.20	3.26	113	--	--
	02/13/03	1000	61.7	15.3	6.28	172	115	--	.44	4.41	141	--	--
	02/13/03*	1001	63.3	15.6	6.33	177	115	--	.45	4.52	141	--	--
	11/20/03	0945	54.0	6.3	5.86	27.6	--	129	.20	6.84	45.9	23	.42
11	03/18/02	1500	58.3	6.98	5.12	175	122	--	.20	4.97	48.8	--	--
	02/13/03	1230	67.1	13.7	7.35	222	137	--	.38	3.17	109	--	--
	11/20/03	1330	63.9	8.18	6.29	41.9	--	102	.30	3.94	69.4	10	.39
13	12/02/03	1230	68.8	12.7	9.57	68.1	--	140	.50	7.89	110	4	.36
	12/02/03*	1231	67.9	12.6	9.29	67.6	--	141	.50	7.84	110	3	.34
14	03/14/02	1500	86.8	13.4	6.18	99.8	180	--	.30	5.25	87.4	--	--
	02/12/03	1230	68.6	16.7	11.9	155	123	--	.51	5.41	149	--	--

Table 3. Dissolved major ions and trace elements in base-flow samples.—Continued

[mg/L, milligrams per liter; µg/L, micrograms per liter; --, no data; **, field equipment blank; E, estimated; <, less than; *, replicate sample; M, presence verified, but not quantified]

Site number (fig. 1)	Sample date	Sample time	Arsenic, dissolved (µg/L)	Barium, dissolved (µg/L)	Beryllium, dissolved (µg/L)	Boron, dissolved (µg/L)	Cadmium, dissolved (µg/L)	Chromium, dissolved (µg/L)	Cobalt, dissolved (µg/L)	Copper, dissolved (µg/L)	Iron, dissolved (µg/L)	Lead, dissolved (µg/L)
2	03/13/02	1530	M	112	<0.5	60	<8	<10	<13	<6	44	0.20
	02/11/03	1000	<2	48.6	<.5	310	<8	<10	<8	<6	25	.11
	11/25/03	1030	1	80.5	<.4	100	<3	5	<3	E3	19	.12
3	03/21/02	1245	M	191	<.5	40	<8	E6	<13	<6	60	.13
4	03/21/02	1445	2	71.3	<.5	270	<8	<10	<13	<6	36	2.89
6	03/22/02	1415	3	91.4	<.5	200	<8	<10	<13	<6	34	1.35
	02/12/03	0945	<2	217	<.5	310	<8	<10	<8	E5	40	.81
	12/02/03	0930	1	45.4	<.4	230	<3	5	<3	6	46	.46
7	03/14/02	0945	<2	117	<.5	120	<8	<10	<13	E3	34	.51
	02/11/03	1145	<2	114	<.5	270	<8	<10	<8	E3	35	.52
	02/11/03**	1500	<2	<.9	<.5	<10	<8	<10	<8	<6	<10	<.08
	11/25/03	1245	1	57.6	<.4	100	<3	4	<3	E4	28	.14
9	03/18/02	1245	E1	124	<.5	50	<8	<10	<13	<6	90	.27
	02/13/03	1000	M	80.6	<.5	90	<8	<10	<8	<6	12	E.07
	02/13/03*	1001	<2	81.9	<.5	90	<8	<10	<8	<6	12	E.07
	11/20/03	0945	3	72.5	<.4	40	<3	E4	<3	E4	131	.42
11	03/18/02	1500	E1	98.5	<.5	30	<8	<10	<13	<6	189	.56
	02/13/03	1230	<2	82.5	<.5	80	<8	<10	<8	<6	62	.21
	11/20/03	1330	2	75.2	<.4	50	<3	5	<3	E4	61	.23
13	12/02/03	1230	2	62.8	<.4	140	<3	5	<3	E4	43	.23
	12/02/03*	1231	2	62.9	<.4	140	<3	5	<3	E3	35	.22
14	03/14/02	1500	E1	199	<.5	110	<8	<10	<13	E3	47	.53
	02/12/03	1230	<2	346	<.5	240	<8	<10	<8	<6	57	.53

Table 3. Dissolved major ions and trace elements in base-flow samples.—Continued

[mg/L, milligrams per liter; µg/L, micrograms per liter; --, no data; **, field equipment blank; E, estimated; <, less than; *, replicate sample; M, presence verified, but not quantified]

Site number (fig. 1)	Sample date	Sample time	Lithium, dissolved (µg/L)	Manganese, dissolved (µg/L)	Mercury, dissolved (µg/L)	Molybdenum, dissolved (µg/L)	Nickel, dissolved (µg/L)	Selenium, dissolved (µg/L)	Silver, dissolved (µg/L)	Strontium, dissolved (µg/L)	Vanadium, dissolved (µg/L)	Zinc, dissolved (µg/L)
2	03/13/02	1530	5	60.1	<0.01	<50	<30	<2	<9	420	<8	<24
	02/11/03	1000	44	29.9	<.02	<30	<30	<3	<9	380	<8	53
	11/25/03	1030	13	18.1	<.02	8	M	.5	<3	382	<5	13
3	03/21/02	1245	8	219	<.01	<50	<30	<2	<9	611	<8	E13
4	03/21/02	1445	23	60.7	<.01	<50	<30	E2	<9	400	<8	51
6	03/22/02	1415	20	78.9	<.01	<50	<30	E2	<9	481	<8	36
	02/12/03	0945	31	111	<.02	<30	<30	<3	<9	382	<8	123
	12/02/03	0930	33	62.6	<.02	12	M	.9	<3	318	<5	38
7	03/14/02	0945	11	98.2	<.01	<50	<30	<2	<9	460	<8	E21
	02/11/03	1145	30	118	<.02	E16	<30	<3	<9	350	<8	58
	02/11/03**	1500	<4	<2	<.02	<30	<30	<3	<9	.7	<8	<24
	11/25/03	1245	14	44.4	<.02	9	M	.4	<3	291	<5	13
9	03/18/02	1245	13	239	E.01	<50	<30	<2	<9	567	<8	<24
	02/13/03	1000	28	101	<.02	<30	<30	E2	<9	374	<8	<24
	02/13/03*	1001	30	102	<.02	<30	<30	E2	<9	380	<8	<24
	11/20/03	0945	8	607	<.02	8	M	E.3	<3	245	<5	10
11	03/18/02	1500	10	568	E.01	<50	<30	<2	<9	443	<8	E18
	02/13/03	1230	31	319	<.02	<30	<30	<3	<9	374	<8	<24
	11/20/03	1330	11	250	<.02	8	M	E.2	<3	311	<5	9
13	12/02/03	1230	22	175	<.02	13	M	.7	<3	339	<5	17
	12/02/03*	1231	21	174	<.02	13	M	.9	<3	336	<5	16
14	03/14/02	1500	10	174	E.01	<50	<30	<2	<9	467	<8	27
	02/12/03	1230	26	116	<.02	<30	<30	<3	<9	387	<8	90

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,4-Dichlorobenzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methylnaphthalene 90-12-0	2,6-Dimethylnaphthalene 581-42-0	2-Methylnaphthalene 91-57-6	3,4-Dichlorophenylisocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1
1	03/13/02	1315	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	<2	<1
2	08/29/01	1130	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	10/31/01	1000	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	12/11/01	1045	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	03/13/02	1530	<.5	<5	<5	<.5	<.5	<.5	E.20	<2	<1
	06/18/02	1300	<.5	<5	<5	<.5	<.5	<.5	E.55	<2	<1
	08/07/02	1245	<.5	<5	<5	<.5	<.5	<.5	E.21	<2	<1
	11/05/02	1045	<.5	<5	<5	<.5	<.5	<.5	E.42	<2	<1
	11/05/02[a]	1045	<.5	--	--	<.5	<.5	<.5	--	<2	<1
	02/11/03	1000	<.5	<5	<5	<.5	<.5	<.5	E.16	<2	<1
	07/07/03	1130	<.5	<5	<5	<.5	<.5	<.5	E2.7	<2	<1
	04/08/04	1000	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
3	08/22/01	0945	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	11/01/01	1300	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	12/20/01	1015	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	03/21/02	1245	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
	06/19/02	1030	<.5	<5	<5	<.5	<.5	<.5	E.04	<2	<1
4	08/22/01	1100	<.5	<5	<5	<.5	<.5	<.5	--	<2	E.39
	08/22/01*	1101	<.5	<5	<5	<.5	<.5	<.5	--	E.99	E.40
	11/01/01	1145	E.11	<5	<5	<.5	<.5	<.5	--	E.56	E.06
	12/20/01	1215	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	03/21/02	1445	E.12	<5	<5	<.5	<.5	<.5	E.06	E.51	E.06
	06/19/02	1130	E.15	<5	<5	<.5	<.5	<.5	E.16	E1.6	E.10
5	03/22/02	1200	<.5	<5	<5	<.5	<.5	<.5	E.05	<2	<1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,4-Dichlorobenzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methylnaphthalene 90-12-0	2,6-Dimethylnaphthalene 581-42-0	2-Methylnaphthalene 91-57-6	3,4-Dichlorophenylisocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1
6	08/22/01	1315	<0.5	<5	<5	<0.5	<0.5	<0.5	--	4.1	<1
	08/22/01*	1316	<.5	<5	<5	<.5	<.5	<.5	--	3.1	<1
	11/01/01	0930	<.5	<5	<5	<.5	<.5	<.5	--	4.2	<1
	11/01/01*	0931	<.5	<5	<5	<.5	<.5	<.5	--	8.0	<1
	12/20/01	1415	<.5	<5	<5	<.5	<.5	<.5	--	5.5	<1
	03/22/02	1415	<.5	<5	<5	<.5	<.5	<.5	E0.07	E.41	<1
	06/19/02	1300	<.5	<5	<5	<.5	<.5	<.5	E.12	<2	<1
	08/06/02	1400	<.5	<5	E.11	<.5	<.5	<.5	E.36	2.5	E.02
	11/07/02	1230	<.5	<5	<5	<.5	<.5	<.5	E.21	E2.4	<1
	11/07/02[a]	1230	<.5	--	--	<.5	<.5	<.5	--	M	<1
	02/12/03	0945	E.04	<5	<5	<.5	<.5	<.5	E2.4	5.8	<1
	07/07/03	0945	<.5	<5	E.66	<.5	<.5	<.5	E1.9	4.5	<1
	04/13/04	0945	<.5	<5	<5	<.5	<.5	<.5	E.46	4.4	<1
7	08/29/01	0945	<.5	<5	<5	<.5	<.5	<.5	--	E.6	<1
	10/31/01	1145	<.5	<5	<5	<.5	<.5	<.5	--	E1.4	<1
	12/10/01	1300	<.5	<5	<5	<.5	<.5	<.5	--	3.5	<1
	03/14/02	0945	<.5	<5	<5	<.5	<.5	<.5	E.12	E.95	<1
	06/18/02	1500	<.5	<5	<5	<.5	<.5	<.5	E.30	<2	<1
	06/18/02*	1501	<.5	E.30	E.38	<.5	<.5	<.5	E.30	<2.0	<1.0
	08/07/02	1030	<.5	<5	<5	<.5	<.5	<.5	E.25	E1.1	<1
	11/05/02	1245	<.5	<5	<5	<.5	<.5	<.5	E.34	2.6	E.02
	11/05/02[a]	1245	<.5	--	--	<.5	<.5	<.5	--	E1	M
	02/11/03	1145	<.5	<5	<5	<.5	<.5	<.5	E.24	E2.1	<1
	07/08/03	1145	<.5	<5	<5	<.5	<.5	<.5	E1.1	1.0	<1
	07/08/03*	1146	<.5	<5	<5	<.5	<.5	<.5	E1.7	E.94	<1
	04/07/04	1140	<.5	<5	<5	<.5	<.5	<.5	<.5	E.98	<1
8	08/29/01	1315	<.5	<5	<5	<.5	<.5	<.5	--	E.48	<1
	03/14/02	1215	<.5	<5	<5	<.5	<.5	<.5	E.16	E1.6	<1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,4-Dichlorobenzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methylnaphthalene 90-12-0	2,6-Dimethylnaphthalene 581-42-0	2-Methylnaphthalene 91-57-6	3,4-Dichlorophenylisocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1
9	06/13/01	1015	<0.5	<5	<5	<0.5	<0.5	<0.5	--	0.22	<1
	10/30/01	0945	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	12/07/01	1000	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	12/07/01*	1001	<.5	<5	<5	E.05	<.5	E.06	--	<2	<1
	03/18/02	1245	<.5	<5	<5	<.5	<.5	<.5	<0.5	<2	<1
	06/20/02	1130	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
	08/01/02	1020	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
	11/06/02	1000	<.5	<5	<5	<.5	<.5	<.5	<.5	E.33	<1
	11/06/02[a]	1000	<.5	--	--	<.5	<.5	<.5	--	M	M
	02/13/03	1000	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
	02/13/03*	1001	<.5	E.62	E.48	<.5	<.5	<.5	E.08	E.80	<1
	07/09/03	0930	<.5	<5	<5	<.5	<.5	<.5	E.07	<2	<1
	04/13/04	1145	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
10	06/13/01	1000	<.5	<5	E.11	<.5	<.5	<.5	--	E.39	<1
11	06/13/01	1230	<.5	<5	<5	<.5	<.5	<.5	--	E.36	<1
	10/30/01	1145	<.5	<5	<5	<.5	<.5	<.5	--	E.54	<1
	12/07/01	1145	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
	03/18/02	1500	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
	06/20/02	1315	<.5	<5	<5	<.5	<.5	<.5	E.04	<2	<1
	08/01/02	1220	<.5	<5	<5	<.5	<.5	<.5	E.12	E.68	<1
	11/06/02	1145	<.5	<5	<5	<.5	<.5	<.5	<.5	E.74	<1
	11/06/02[a]	1145	<.5	--	--	<.5	<.5	<.5	--	M	M
	02/13/03	1230	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
	07/09/03	1130	.04	<5	<5	<.5	<.5	<.5	E.40	<2	<1
	04/13/04	1330	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,4-Dichlorobenzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methylnaphthalene 90-12-0	2,6-Dimethylnaphthalene 581-42-0	2-Methylnaphthalene 91-57-6	3,4-Dichlorophenylisocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1
12	06/13/01	1430	E0.12	<5	<5	<0.5	<0.5	<0.5	--	E0.39	<1
	06/13/01**	1431	<.5	<5	<5	<.5	<.5	<.5	--	<2	<1
13	07/08/03	0930	<.5	<5	<5	<.5	<.5	<.5	E1.2	<2	<1
	04/08/04	1300	<.5	<5	<5	<.5	<.5	<.5	<.5	<2	<1
14	08/29/01	1400	<.5	<5	<5	<.5	<.5	<.5	--	E.52	<1
	10/31/01	1345	<.5	<5	<5	<.5	<.5	<.5	--	E.97	<1
	12/11/01	1430	<.5	<5	<5	<.5	<.5	<.5	--	E1.7	<1
	03/14/02	1500	<.5	<5	<5	<.5	<.5	<.5	E.11	E.46	<1
	06/20/02	1400	<.5	<5	<5	<.5	<.5	<.5	E.28	<2	<1
	08/06/02	1120	<.5	<5	<5	<.5	<.5	<.5	E.38	<2	<1
	08/06/02*	1121	<.5	<5	<5	<.5	<.5	<.5	E.35	E.24	<1
	11/07/02	1015	<.5	<5	<5	<.5	<.5	<.5	E.08	E.54	<1
	11/07/02[a]	1015	<.5	--	--	<.5	<.5	<.5	--	M	<1
	02/12/03	1230	.03	E.44	E.40	E.02	<.5	.02	E.29	E5.2	<1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-phenol 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthra-quinone 84-65-1
1	03/13/02	1315	<1	<5	<1	<1	<2	<0.5	<0.5	<0.5	<0.5
2	08/29/01	1130	<1	<5	<1	<1	<2	<.5	.07	<.5	<.5
	10/31/01	1000	<1	<5	<1	<1	<2	<.5	.17	<.5	<.5
	12/11/01	1045	<1	<5	<1	<1	<2	<.5	.23	<.5	<.5
	03/13/02	1530	<1	<5	<1	<1	<2	<.5	.23	<.5	<.5
	06/18/02	1300	<1	<5	<1	<1	<2	<.5	.14	<.5	<.5
	08/07/02	1245	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	11/05/02	1045	<1	<5	<1	<1	<2	<.5	.36	<.5	<.5
	11/05/02[a]	1045	<1	<5	<1	<1	<2	<.5	E.20	<.5	M
	02/11/03	1000	<1	<5	<1	<1	<2	<.5	.69	<.5	<.5
	07/07/03	1130	<1	<5	<1	<1	E.37	E.15	E.08	<.5	E.06
	04/08/04	1000	<1	<5	<1	E.03	<2	E.09	E.14	<.5	<.5
3	08/22/01	0945	<1	<5	<1	<1	E.39	<.5	<.5	<.5	E.21
	11/01/01	1300	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	12/20/01	1015	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	03/21/02	1245	<1	<5	<1	<1	E.24	<.5	<.5	<.5	<.5
	06/19/02	1030	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
4	08/22/01	1100	<1	<5	<1	<1	E.79	<.5	.10	<.5	E.20
	08/22/01*	1101	<1	<5	<1	<1	E.96	<.5	.18	<.5	<.5
	11/01/01	1145	<1	.57	<1	<1	<2	<.5	1.6	<.5	E.10
	12/20/01	1215	<1	<5	<1	<1	<2	<.5	.42	E.13	<.5
	03/21/02	1445	<1	E.53	<1	<1	<2	<.5	.98	<.5	<.5
	06/19/02	1130	<1	.82	<1	<1	E.70	<.5	.97	<.5	<.5
5	03/22/02	1200	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-phenol 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthra-quinone 84-65-1
6	08/22/01	1315	<1	<5	<1	<1	0.36	<0.5	0.06	<0.5	E0.21
	08/22/01*	1316	<1	<5	<1	<1	E.22	<.5	.26	<.5	E.20
	11/01/01	0930	<1	1.4	<1	<1	<2	<.5	.51	<.5	<.5
	11/01/01*	0931	<1	2.2	<1	.28	<2	<.5	.82	<.5	E.07
	12/20/01	1415	<1	1.8	<1	.22	<2	<.5	.60	<.5	E.07
	03/22/02	1415	<1	<5	<1	<1	<2	<.5	E.36	<.5	<.5
	06/19/02	1300	<1	.52	<1	<1	<2	<.5	.20	<.5	<.5
	08/06/02	1400	<1	E1.7	<1	E.15	E.56	<.5	E.44	<.5	<.5
	11/07/02	1230	<1	1.1	<1	<1	E.25	<.5	.46	<.5	<.5
	11/07/02[a]	1230	<1	M	<1	<1	<2	E.1	E.10	<.5	M
	02/12/03	0945	<1	<.5	<1	<1	E1.2	E.18	.65	<.5	<.5
	07/07/03	0945	<1	E.90	<1	<1	E.49	E.14	E.47	<.5	E.08
	04/13/04	0945	<1	E1.2	<1	E.06	<2	E.16	.57	<.5	E.11
7	08/29/01	0945	<1	<5	<1	E.12	<2	<.5	E.16	<.5	<.5
	10/31/01	1145	<1	<5	<1	<1	<2	<.5	.26	<.5	<.5
	12/10/01	1300	<1	.64	<1	<1	<2	<.5	.36	<.5	<.5
	03/14/02	0945	<1	<5	<1	<1	<2	<.5	.22	<.5	E.06
	06/18/02	1500	<1	<5	<1	<1	<2	<.5	.08	<.5	<.5
	06/18/02*	1501	<1	<5	<1	<1	<2	<.5	.07	<.5	<.5
	08/07/02	1030	<1	.59	<1	<1	<2	<.5	.17	<.5	<.5
	11/05/02	1245	<1	.93	<1	<1	E.30	<.5	.58	<.5	E.11
	11/05/02[a]	1245	<1	<5	<1	<1	<2	M	E.10	<.5	E.10
	02/11/03	1145	<1	1.6	<1	<1	<2	E.26	.59	<.5	<.5
	07/08/03	1145	<1	<5	<1	<1	E.45	E.07	E.10	<.5	E.06
	07/08/03*	1146	<1	<5	<1	<1	E.48	E.11	E.11	<.5	E.08
	04/07/04	1140	<1	E.76	<1	E.03	<2	<.5	E.20	<.5	<.5
8	08/29/01	1315	<1	<5	<1	<1	E.25	<.5	.08	<.5	<.5
	03/14/02	1215	<1	<5	<1	<1	<2	<.5	.23	<.5	E.11

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-pheno 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthra-quinone 84-65-1
9	06/13/01	1015	<1	<5	<1	<1	E0.47	<0.5	E0.07	<0.5	<0.5
	10/30/01	0945	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	12/07/01	1000	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.06
	12/07/01*	1001	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.08
	03/18/02	1245	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	06/20/02	1130	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.05
	08/01/02	1020	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.08
	11/06/02	1000	<1	<5	<1	<1	E.40	<.5	<.5	<.5	E.26
	11/06/02[a]	1000	<1	<5	<1	<1	<2	E.10	<.5	<.5	E.20
	02/13/03	1000	<1	<5	<1	<1	<2	E.13	<.5	<.5	<.5
	02/13/03*	1001	<1	E1	E.05	<1	<2	E.11	E.06	<.5	E.14
	07/09/03	0930	E.05	<5	<1	<1	E.42	E.05	<.5	E.04	E.09
	04/13/04	1145	<1	<5	<1	<1	<2	<.5	<.5	E.02	<.5
10	06/13/01	1000	<1	<5	<1	<1	<2	<.5	E.05	<.5	<.5
11	06/13/01	1230	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	10/30/01	1145	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.05
	12/07/01	1145	<1	<5	<1	<1	<2	<.5	E.41	<.5	E.08
	03/18/02	1500	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.20
	06/20/02	1315	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	08/01/02	1220	<1	<5	<1	<1	<2	.54	<.5	<.5	E.12
	11/06/02	1145	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	11/06/02[a]	1145	<1	<5	<1	<1	<2	E.10	M	<.5	M
	02/13/03	1230	<1	<5	<1	<1	E1.0	E.27	E.06	<.5	E.18
	07/09/03	1130	<1	<5	<1	<1	E.50	E.05	<.5	<.5	E.09
	04/13/04	1330	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-phenol 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthra-quinone 84-65-1
12	06/13/01	1430	<1	<5	<1	<1	E0.44	<0.5	E0.12	<0.5	<0.5
	06/13/01**	1431	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
13	07/08/03	0930	<1	<5	<1	<1	E.41	E.08	E.04	E.02	E.08
	04/08/04	1300	<1	E.68	<1	E.04	<2	<.5	E.13	<.5	E.08
14	08/29/01	1400	<1	<5	<1	<1	<2	<.5	E.05	<.5	<.5
	10/31/01	1345	<1	.68	<1	<1	<2	<.5	E.26	<.5	<.5
	12/11/01	1430	<1	<5	<1	<1	<2	<.5	E.30	<.5	<.5
	03/14/02	1500	<1	<5	<1	<1	<2	<.5	E.07	<.5	<.5
	06/20/02	1400	<1	.52	<1	<1	<2	<.5	E.06	<.5	<.5
	08/06/02	1120	<1	E.80	<1	E.12	<2	<.5	E.05	<.5	<.5
	08/06/02*	1121	<1	E.82	<1	<1	<2	<.5	E.05	<.5	<.5
	11/07/02	1015	<1	<5	<1	<1	<2	<.5	E.21	<.5	<.5
	11/07/02[a]	1015	<1	<5	<1	<1	<2	<.5	E.10	<.5	M
	02/12/03	1230	E.08	E1.7	<1	<1	E1.1	E.20	.58	E.06	E.14

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Atrazine 1912-24-9	Benzo[a]pyrene 50-32-8	Benzophenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bisphenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5	Caffeine 58-08-02	Camphor 76-22-2
1	03/13/02	1315	0.04	<0.5	<0.5	<0.5	<1	<0.5	<5	<0.5	<0.5
2	08/29/01	1130	--	<.5	<.5	--	E.14	E.04	<5	<.5	<.5
	10/31/01	1000	--	<.5	.06	--	E.10	E.06	<5	<.5	<.5
	12/11/01	1045	--	<.5	.08	--	E.17	<.5	<5	<.5	<.5
	03/13/02	1530	.05	<.5	<.5	<.5	<1	<.5	<5	E.07	<.5
	06/18/02	1300	1.2	<.5	<.5	<.5	<1	<.5	<5	E.14	<.5
	08/07/02	1245	.06	<.5	.06	<.5	<1	<.5	<5	<.5	<.5
	11/05/02	1045	.02	<.5	.06	E3.6	<1	<.5	<5	<.5	<.5
	11/05/02[a]	1045	--	<.5	M	--	<1	<.5	<5	M	<.5
	02/11/03	1000	<.5	<.5	.26	E1.4	<1	<.5	<5	E.11	<.5
	07/07/03	1130	E.12	<.5	E.05	--	<1	<.5	<5	E.05	<.5
	04/08/04	1000	E.11	<.5	<.5	--	<1	<.5	<5	<.5	<.5
3	08/22/01	0945	--	<.5	<.5	--	<1	<.5	<5	<.5	<.5
	11/01/01	1300	--	<.5	<.5	--	<1	<.5	<5	E.05	<.5
	12/20/01	1015	--	<.5	<.5	--	E.09	<.5	<5	E.10	<.5
	03/21/02	1245	E.01	<.5	<.5	<.5	<1	<.5	<5	E.10	<.5
	06/19/02	1030	.09	<.5	<.5	E18	E.09	E.20	<5	E.14	<.5
4	08/22/01	1100	--	<.5	<.5	--	E.69	<.5	<5	<.5	<.5
	08/22/01*	1101	--	<.5	<.5	--	E.69	<.5	<5	<.5	<.5
	11/01/01	1145	--	<.5	.18	--	E.16	<.5	<5	E.04	<.5
	12/20/01	1215	--	<.5	.13	--	E.12	<.5	<5	<.5	<.5
	03/21/02	1445	E.07	<.5	E.08	<.5	<1	<.5	<5	<.5	<.5
	06/19/02	1130	.62	E.06	.20	<.5	E.16	<.5	<5	E.08	<.5
5	03/22/02	1200	<.5	<.5	<.5	<.5	<1	<.5	<5	E.21	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Atrazine 1912-24-9	Benzo[a]pyrene 50-32-8	Benzo-phenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bis-phenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5	Caffeine 58-08-02	Camphor 76-22-2
6	08/22/01	1315	--	<0.5	<0.5	--	E0.67	<0.5	<5	1.4	<0.5
	08/22/01*	1316	--	<.5	<.5	--	.67	<.5	<5	.65	<.5
	11/01/01	0930	--	<.5	.19	--	E.09	<.5	<5	2.2	<.5
	11/01/01*	0931	--	<.5	.27	--	E.14	<.5	<5	3.2	<.5
	12/20/01	1415	--	<.5	.23	--	E.17	<.5	<5	3.2	<.5
	03/22/02	1415	E0.07	<.5	E.08	<0.5	<1	<.5	<5	E.07	<.5
	06/19/02	1300	.27	<.5	.10	<.5	E.11	E.20	<5	E.06	<.5
	08/06/02	1400	E.13	<.5	E.15	<.5	<1	<.5	<5	2.1	<.5
	11/07/02	1230	.05	<.5	.10	<.5	<1	<.5	<5	E1.2	<.5
	11/07/02[a]	1230	--	<.5	E.10	--	M	<.5	<5	1.8	<.5
	02/12/03	0945	--	<.5	E.39	<.5	<1	<.5	<5	2.2	<.5
	07/07/03	0945	E.26	<.5	E.23	--	E.15	<.5	<5	1.6	<.5
	04/13/04	0945	E.09	<.5	E.16	--	<1	<.5	<5	2.8	E.04
7	08/29/01	0945	--	<.5	<.5	--	<1	E.06	<5	E.19	<.5
	10/31/01	1145	--	<.5	.07	--	<1	<.5	<5	E.46	<.5
	12/10/01	1300	--	<.5	.31	--	E.24	<.5	<5	2.7	<.5
	03/14/02	0945	.04	<.5	.06	<.5	E.09	E.05	<5	.83	<.5
	06/18/02	1500	<.5	<.5	<.5	<.5	<1	E.20	<5	<.5	<.5
	06/18/02*	1501	.77	E.05	<.5	<.5	E.09	E..21	<5	E.08	<.5
	08/07/02	1030	.20	<.5	.24	<.5	<1	<.5	<5	.80	<.5
	11/05/02	1245	.06	<.5	.21	E1.4	<1	<.5	<5	1.2	<.5
	11/05/02[a]	1245	--	<.5	E.10	--	<1	<.5	<5	1.3	<.5
	02/11/03	1145	.09	<.5	.19	<.5	<1	<.5	<5	1.5	<.5
	07/08/03	1145	E.19	<.5	E.10	--	<1	<.5	<5	E.44	<.5
	07/08/03*	1146	E.23	<.5	E.08	--	<1	E.09	<5	.50	<.5
	04/07/04	1140	E.10	<.5	<.5	--	<1	<.5	<5	.53	<.5
8	08/29/01	1315	--	<.5	<.5	--	E.16	E.04	<5	E.17	<.5
	03/14/02	1215	.04	E.07	.06	<.5	<1	<.5	<5	.71	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Atrazine 1912-24-9	Benzo[a]pyrene 50-32-8	Benzo-phenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bis-phenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5	Caffeine 58-08-02	Camphor 76-22-2
9	06/13/01	1015	--	<0.5	<0.5	--	<1	E0.04	<5	0.51	<0.5
	10/30/01	0945	--	<.5	<.5	--	<1	E.05	<5	<.5	<.5
	12/07/01	1000	--	E.06	<.5	--	1.9	<.5	<5	E.08	<.5
	12/07/01*	1001	--	E.08	<.5	--	1.6	<.5	<5	E.14	<.5
	03/18/02	1245	0.01	<.5	<.5	<0.5	<1	<.5	<5	E.11	<.5
	06/20/02	1130	.25	E.06	<.5	<.5	<1	<.5	<5	E.10	<.5
	08/01/02	1020	.07	<.5	<.5	<.5	E.11	E.36	<5	E.13	<.5
	11/06/02	1000	<.5	E.08	<.5	E5.4	E.09	<.5	<5	.81	<.5
	11/06/02[a]	1000	--	M	<.5	--	M	M	<5	.90	<.5
	02/13/03	1000	E.07	<.5	E.05	E12	<1	<.5	<5	E.22	<.5
	02/13/03*	1001	E.11	E.06	E.12	<.5	E.17	.89	<5	E.36	<.5
	07/09/03	0930	E.21	E.02	<.5	--	<1	<.5	<5	E.05	<.5
	04/13/04	1145	<.5	<.5	<.5	--	<1	<.5	<5	E.10	<.5
10	06/13/01	1000	--	<.5	<.5	--	<1	E.06	<5	1.8	<.5
11	06/13/01	1230	--	<.5	.05	--	<1	<.5	<5	1.9	<.5
	10/30/01	1145	--	<.5	<.5	--	<1	<.5	<5	E.44	<.5
	12/07/01	1145	--	<.5	.10	--	E.88	<.5	<5	E.14	<.5
	03/18/02	1500	.03	<.5	<.5	<.5	E.09	<.5	<5	.69	<.5
	06/20/02	1315	.12	<.5	<.5	<.5	E.10	E.21	<5	E.24	<.5
	08/01/02	1220	.09	<.5	<.5	<.5	E.20	E.33	<5	.72	<.5
	11/06/02	1145	<.5	<.5	<.5	<.5	<1	<.5	<5	E.29	<.5
	11/06/02[a]	1145	--	<.5	M	--	M	M	<5	.50	<.5
	02/13/03	1230	E.08	<.5	E.09	<.5	E.13	<.5	<5	.98	<.5
	07/09/03	1130	E.13	<.5	E.03	--	E.11	<.5	<5	.52	E.03
	04/13/04	1330	<.5	<.5	<.5	--	<1	<.5	<5	.59	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Atrazine 1912-24-9	Benzo[a]pyrene 50-32-8	Benzo-phenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bis-phenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5	Caffeine 58-08-02	Camphor 76-22-2
12	06/13/01	1430	--	<0.5	0.06	--	E0.09	<0.5	<5	5.0	<0.5
	06/13/01**	1431	<0.5	<.5	<.5	--	<1	<.5	<5	<.5	<.5
13	07/08/03	0930	E.23	E.02	E.05	--	E.10	<.5	<5	E.21	<.5
	04/08/04	1300	<.5	<.5	E.06	--	E.14	<.5	<5	.51	<.5
14	08/29/01	1400	--	<.5	<.5	--	E.16	E.05	<5	E.16	<.5
	10/31/01	1345	--	<.5	.07	--	E.16	E.21	<5	.51	<.5
	12/11/01	1430	--	<.5	.26	--	E.20	<.5	<5	1.5	<.5
	03/14/02	1500	.03	<.5	<.5	<0.5	<1	E.07	<5	.86	<.5
	06/20/02	1400	.66	<.5	.05	<.5	E.10	E.21		E.37	<.5
	08/06/02	1120	E.10	<.5	<.5	<.5	<1	E.06	<5	E.27	<.5
	08/06/02*	1121	E.09	<.5	<.5	<.5	<1	E.05	<5	E.28	<.5
	11/07/02	1015	.02	<.5	<.5	<.5	<1	<.5	<5	E.28	<.5
	11/07/02[a]	1015	--	<.5	E.10	--	M	M	<5	.80	<.5
	02/12/03	1230	E.13	E.07	E.37	<.5	E.24	<.5	<5	1.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5
1	03/13/02	1315	<1	<0.5	<0.5	<2	<1	<0.5	<1	1.3	<0.5
2	08/29/01	1130	<1	<.5	<.5	E.65	<1	.13	<1	--	<.5
	10/31/01	1000	<1	<.5	<.5	E1.1	<1	.10	<1	--	<.5
	12/11/01	1045	<1	<.5	<.5	E.59	<1	<.5	<1	--	<.5
	03/13/02	1530	<1	<.5	<.5	<2	<1	.01	<1	1.2	<.5
	06/18/02	1300	<1	<.5	<.5	<2	<1	.14	<1	<.5	<.5
	08/07/02	1245	<1	<.5	<.5	<2	.16	.06	<1	<.5	<.5
	11/05/02	1045	<1	<.5	<.5	<2	<1	.03	<1	<.5	<.5
	11/05/02[a]	1045	<1	<.5	<.5	<2	<1	M	<1	--	<.5
	02/11/03	1000	E.27	<.5	<.5	E1.9	.22	<.5	<1	<.5	<.5
	07/07/03	1130	<1	<.5	<.5	<2	<1	<.5	<1	<.5	<.5
	04/08/04	1000	<1	<.5	<.5	<2	<1	<.5	<1	<.5	<.5
3	08/22/01	0945	<1	E.14	<.5	2.6	<1	.60	<1	--	<.5
	11/01/01	1300	<1	<.5	<.5	1.4	<1	<.5	<1	--	<.5
	12/20/01	1015	<1	<.5	<.5	<2	<1	<.5	<1	--	<.5
	03/21/02	1245	<1	<.5	<.5	E.64	<1	E.02	<1	<.5	<.5
	06/19/02	1030	<1	<.5	<.5	<2	<1	.05	<1	<.5	<.5
4	08/22/01	1100	<1	<.5	<.5	E1.0	<1	.56	E.19	--	<.5
	08/22/01*	1101	<1	<.5	<.5	E1.8	<1	.58	E.20	--	<.5
	11/01/01	1145	<1	<.5	<.5	E1.6	<1	<.5	<1	--	<.5
	12/20/01	1215	<1	<.5	<.5	E.58	<1	<.5	<1	--	<.5
	03/21/02	1445	<1	<.5	<.5	E1.3	<1	<.5	<1	<.5	<.5
	06/19/02	1130	<1	<.5	<.5	3.8	.11	.07	<1	<.5	<.5
5	03/22/02	1200	<1	<.5	<.5	E.71	<1	<.5	<1	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5
6	08/22/01	1315	<1	<0.5	<0.5	6.5	0.12	0.55	<1	--	<0.5
	08/22/01*	1316	<1	<.5	<.5	4.8	<1	.53	<1	--	<.5
	11/01/01	0930	<1	<.5	<.5	7.8	<1	<.5	<1	--	<.5
	11/01/01*	0931	<1	<.5	<.5	16	.13	<.5	<1	--	<.5
	12/20/01	1415	<1	<.5	<.5	7.8	<1	<.5	<1	--	<.5
	03/22/02	1415	<1	<.5	<.5	E1.0	<1	E.01	<1	<0.5	<.5
	06/19/02	1300	<1	<.5	<.5	E.78	.11	.04	<1	<.5	<.5
	08/06/02	1400	<1	<.5	<.5	4.0	<1	E.03	<1	E.37	<.5
	11/07/02	1230	<1	<.5	<.5	E3.6	<1	<.5	<1	<.5	<.5
	11/07/02[a]	1230	<1	<.5	<.5	E1.0	M	<.5	<1	--	E.10
	02/12/03	0945	<1	<.5	<.5	10	E.37	<.5	<1	--	<.5
	07/07/03	0945	<1	<.5	<.5	8.4	E.15	E.07	<1	E.22	<.5
	04/13/04	0945	<1	<.5	<.5	10	<1	<.5	<1	<.5	<.5
7	08/29/01	0945	<1	<.5	<.5	E.91	<1	E.12	<1	--	<.5
	10/31/01	1145	<1	<.5	<.5	2.3	<1	.03	<1	--	<.5
	12/10/01	1300	<1	<.5	<.5	5.4	<1	<.5	<1	--	<.5
	03/14/02	0945	<1	<.5	<.5	2.7	<1	.01	<1	<.5	<.5
	06/18/02	1500	<1	<.5	<.5	<2	<1	.04	<1	<.5	<.5
	06/18/02*	1501	<1	<.5	<.5	E.62	.11	.05	<1	<.5	<.5
	08/07/02	1030	<1	--	<.5	E1.9	.21	.06	<1	<.5	<.5
	11/05/02	1245	<1	<.5	<.5	4.3	<1	.03	<1	.35	<.5
	11/05/02[a]	1245	<1	<.5	<.5	2.0	M	M	<1	--	M
	02/11/03	1145	<1	<.5	<.5	E5.1	E.81	<.5	<1	<.5	<.5
	07/08/03	1145	<1	<.5	<.5	E1.7	E.13	E.04	<1	<.5	<.5
	07/08/03*	1146	<1	<.5	<.5	E1.4	E.13	E.06	<1	<.5	<.5
	04/07/04	1140	<1	<.5	<.5	3.1	<1	<.5	<1	<.5	<.5
8	08/29/01	1315	<1	<.5	<.5	E1.2	<1	.18	<1	--	<.5
	03/14/02	1215	<1	<.5	<.5	4.2	<1	.01	<1	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5
9	06/13/01	1015	<1	<0.5	<0.5	E1.1	0.11	E0.07	<1	--	<0.5
	10/30/01	0945	<1	<.5	<.5	<2	<1	<.5	<1	--	<.5
	12/07/01	1000	<1	E.18	<.5	E.55	<1	<.5	<1	--	<.5
	12/07/01*	1001	<1	E.30	<.5	E1.4	<1	<.5	<1	--	<.5
	03/18/02	1245	<1	<.5	<.5	<2	<1	E.01	<1	<0.5	<.5
	06/20/02	1130	<1	<.5	<.5	E1.0	<1	E.04	<1	<.5	<.5
	08/01/02	1020	<1	<.5	<.5	E.77	.16	E.06	<1	<.5	<.5
	11/06/02	1000	<1	E.10	<.5	E.71	<1	<.5	<1	<.5	<.5
	11/06/02[a]	1000	<1	M	<.5	M	M	<.5	<1	--	<.5
	02/13/03	1000	<1	<.5	<.5	<2	E.22	<.5	<1	<.5	<.5
	02/13/03*	1001	E.31	E.11	<.5	E1.6	E.72	<.5	<1	<.5	<.5
	07/09/03	0930	<1	<.5	<.5	E1.1	<1	E.08	<1	<.5	<.5
	04/13/04	1145	<1	<.5	<.5	<2	<1	<.5	<1	<.5	<.5
10	06/13/01	1000	<1	<.5	<.5	E1.8	.08	E.05	<1	--	<.5
11	06/13/01	1230	<1	<.5	<.5	E2.0	.10	E.06	<1	--	<.5
	10/30/01	1145	<1	<.5	<.5	2.8	<1	<.5	<1	--	<.5
	12/07/01	1145	<1	<.5	<.5	<2	<1	<.5	<1	--	<.5
	03/18/02	1500	<1	E.06	<.5	<2	.10	E.04	<1	<.5	<.5
	06/20/02	1315	<1	<.5	<.5	E1.5	.14	E.07	<1	<.5	<.5
	08/01/02	1220	<1	E.11	<.5	E1.4	.18	E.16	<1	<.5	<.5
	11/06/02	1145	<1	<.5	<.5	E.95	<1	E.01	<1	<.5	<.5
	11/06/02[a]	1145	<1	M	<.5	M	M	M	<1	--	<.5
	02/13/03	1230	E.11	E.10	<.5	2.0	E.74	<.5	<1	E.26	<.5
	07/09/03	1130	<1	<.5	<.5	E1.6	E.13	E.07	<1	<.5	<.5
	04/13/04	1330	<1	<.5	<.5	<2	<1	<.5	<1	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5
12	06/13/01	1430	<1	<0.5	<0.5	E2.0	0.14	E0.06	<1	--	<0.5
	06/13/01**	1431	<1	<.5	<.5	<2	<1	<.5	<1	--	<.5
13	07/08/03	0930	<1	E.02	<.5	E.74	<1	E.05	<1	E0.11	<.5
	04/08/04	1300	<1	<.5	<.5	2.1	<1	<.5	<1	<.5	<.5
14	08/29/01	1400	<1	<.5	<.5	E1.1	<1	E.19	<1	--	<.5
	10/31/01	1345	<1	<.5	<.5	E1.8	<1	E.11	<1	--	<.5
	12/11/01	1430	<1	<.5	<.5	2.9	<1	<.5	<1	--	<.5
	03/14/02	1500	<1	<.5	<.5	<2	.08	E.01	<1	<.5	<.5
	06/20/02	1400	<1	<.5	<.5	E.66	.11	E.04	<1	<.5	<.5
	08/06/02	1120	<1	<.5	<.5	<2	<1	E.08	<1	<.5	<.5
	08/06/02*	1121	<1	<.5	<.5	<2	<1	E.08	<1	<.5	<.5
	11/07/02	1015	<1	<.5	<.5	E.84	<1	<.5	<1	<.5	<.5
	11/07/02[a]	1015	<1	<.5	<.5	E1.0	M	M	<1	--	<.5
	02/12/03	1230	E.22	E.12	<.5	E9.5	E.59	<.5	<1	E.29	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3
1	03/13/02	1315	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2	08/29/01	1130	<5	<5	E.06	<.5	<.5	<.5	<.5	<.5	<.5
	10/31/01	1000	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	12/11/01	1045	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	03/13/02	1530	<5	<5	E.06	<.5	<.5	<.5	<.5	<.5	E.09
	06/18/02	1300	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/07/02	1245	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	11/05/02	1045	E.01	E.06	<.5	E.06	E.02	<.5	<.5	<.5	<.5
	11/05/02[a]	1045	--	--	<.5	M	M	<.5	<.5	<.5	<.5
	02/11/03	1000	<5	<5	<.5	E.11	<.5	<.5	<.5	<.5	<.5
	07/07/03	1130	<5	<5	E.02	E.03	<.5	<.5	<.5	<.5	<.5
	04/08/04	1000	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
3	08/22/01	0945	<5	<5	<.5	E.07	<.5	<.5	<.5	<.5	<.5
	11/01/01	1300	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	12/20/01	1015	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	03/21/02	1245	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	06/19/02	1030	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
4	08/22/01	1100	<5	<5	<.5	E.07	E.02	<.5	<.5	<.5	<.5
	08/22/01*	1101	<5	<5	<.5	E.07	E.02	<.5	<.5	<.5	<.5
	11/01/01	1145	<5	<5	<.5	E.35	<.5	<.5	<.5	<.5	<.5
	12/20/01	1215	<5	<5	<.5	E.07	<.5	<.5	<.5	<.5	<.5
	03/21/02	1445	E.06	<5	<.5	E.18	<.5	<.5	<.5	<.5	<.5
	06/19/02	1130	<5	E.28	<.5	E.21	<.5	<.5	<.5	<.5	<.5
5	03/22/02	1200	<5	<5	E.10	<.5	<.5	<.5	<.5	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3
6	08/22/01	1315	<5	<5	<0.5	E0.06	<0.5	<0.5	<0.5	<0.5	<0.5
	08/22/01*	1316	<5	<5	E.09	E.10	<.5	<.5	<.5	<.5	<.5
	11/01/01	0930	<5	<5	<.5	E.12	<.5	<.5	<.5	<.5	<.5
	11/01/01*	0931	<5	E1.5	<.5	E.20	<.5	<.5	<.5	<.5	<.5
	12/20/01	1415	<5	E2.4	<.5	E.11	<.5	<.5	<.5	<.5	<.5
	03/22/02	1415	E.06	<5	E.07	<.5	<.5	<.5	<.5	<.5	<.5
	06/19/02	1300	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/06/02	1400	E.02	E.09	<.5	E.10	<.5	<.5	<.5	<.5	<.5
	11/07/02	1230	<5	<5	<.5	E.09	<.5	<.5	<.5	<.5	<.5
	11/07/02[a]	1230	--	--	<.5	M	<.5	<.5	<.5	<.5	<.5
	02/12/03	0945	<5	<5	E.05	.15	<.5	<.5	<.5	<.5	<.5
	07/07/03	0945	<5	E.13	E.03	E.09	<.5	<.5	<.5	<.5	<.5
	04/13/04	0945	<5	<5	E.04	E.09	<.5	<.5	<.5	<.5	<.5
7	08/29/01	0945	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	10/31/01	1145	<5	<5	<.5	E.05	<.5	<.5	<.5	<.5	<.5
	12/10/01	1300	<5	E2.3	<.5	E.04	<.5	<.5	<.5	<.5	<.5
	03/14/02	0945	<5	<5	E.12	<.5	<.5	<.5	<.5	<.5	E.11
	06/18/02	1500	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	06/18/02*	1501	E.082	E.26	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/07/02	1030	<5	<5	<.5	--	<.5	<.5	<.5	<.5	<.5
	11/05/02	1245	E.013	E.07	E.12	E.10	<.5	<.5	<.5	<.5	<.5
	11/05/02[a]	1245	--	--	<.5	M	E.10	<.5	<.5	<.5	<.5
	02/11/03	1145	<5	<5	E.04	E.12	<.5	<.5	<.5	<.5	<.5
	07/08/03	1145	<5	<5	E.04	E.04	<.5	<.5	E.04	<.5	<.5
	07/08/03*	1146	<5	<5	E.05	E.04	<.5	<.5	<.5	<.5	<.5
	04/07/04	1140	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
8	08/29/01	1315	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	03/14/02	1215	<5	<5	E.27	<.5	<.5	<.5	<.5	<.5	E.06

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3
9	06/13/01	1015	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	10/30/01	0945	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	12/07/01	1000	<5	<5	E.07	<.5	<.5	<.5	<.5	<.5	<.5
	12/07/01*	1001	<5	<5	E.16	<.5	<.5	<.5	<.5	<.5	<.5
	03/18/02	1245	<5	<5	E.08	<.5	<.5	<.5	<.5	<.5	<.5
	06/20/02	1130	<5	<5	E.05	<.5	<.5	<.5	<.5	<.5	<.5
	08/01/02	1020	<5	<5	E.07	<.5	<.5	<.5	<.5	<.5	<.5
	11/06/02	1000	<5	<5	E.37	<.5	E.03	<.5	<.5	<.5	<.5
	11/06/02[a]	1000	--	--	M	<.5	E.1	<.5	<.5	<.5	<.5
	02/13/03	1000	<5	<5	E.07	<.5	<.5	<.5	<.5	<.5	<.5
	02/13/03*	1001	<5	E.39	E.14	E.10	<.5	<.5	<.5	<.5	E.14
	07/09/03	0930	<5	<5	E.12	<.5	<.5	<.5	<.5	<.5	<.5
	04/13/04	1145	<5	<5	E.18	<.5	<.5	<.5	<.5	<.5	<.5
10	06/13/01	1000	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
11	06/13/01	1230	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	10/30/01	1145	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	12/07/01	1145	<5	<5	<.5	E.07	<.5	<.5	<.5	<.5	<.5
	03/18/02	1500	<5	<5	E.16	<.5	<.5	<.5	<.5	<.5	<.5
	06/20/02	1315	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/01/02	1220	<5	<5	.07	<.5	<.5	<.5	<.5	<.5	<.5
	11/06/02	1145	<5	<5	E.11	<.5	<.5	<.5	<.5	<.5	<.5
	11/06/02[a]	1145	--	--	M	<.5	<.5	<.5	<.5	<.5	<.5
	02/13/03	1230	<5	<5	E.14	E.04	<.5	<.5	<.5	<.5	E.24
	07/09/03	1130	<5	<5	E.03	<.5	<.5	<.5	<.5	<.5	<.5
	04/13/04	1330	<5	<5	E.06	<.5	<.5	<.5	E.04	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3
12	06/13/01	1430	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/13/01**	1431	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
13	07/08/03	0930	<5	<5	E.13	E.03	<.5	<.5	<.5	<.5	<.5
	04/08/04	1300	<5	<5	E.04	<.5	<.5	<.5	<.5	<.5	<.5
14	08/29/01	1400	<5	<5	E.07	<.5	<.5	<.5	<.5	<.5	<.5
	10/31/01	1345	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	12/11/01	1430	<5	<5	<.5	E.05	<.5	E.09	<.5	<.5	<.5
	03/14/02	1500	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	E.08
	06/20/02	1400	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/06/02	1120	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/06/02*	1121	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	11/07/02	1015	<5	<5	<.5	E.04	<.5	<.5	<.5	<.5	<.5
	11/07/02[a]	1015	--	--	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	02/12/03	1230	<5	E.37	E.10	E.18	<.5	<.5	<.5	<.5	E.14

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5
1	03/13/02	1315	<0.5	<0.5	<0.5	E0.01	<0.5	<0.5	<5	<5	<1
2	08/29/01	1130	<.5	<.5	<.5	E.01	<.5	<.5	--	<5	<1
	10/31/01	1000	<.5	<.5	<.5	<.5	<.5	<.5	--	<5	<1
	12/11/01	1045	<.5	<.5	<.5	E.02	<.5	<.5	--	<5	<1
	03/13/02	1530	<.5	<.5	<.5	E.01	<.5	<.5	<5	<5	<1
	06/18/02	1300	<.5	<.5	<.5	E.36	E.24	<.5	<5	<5	<1
	08/07/02	1245	<.5	<.5	<.5	E.01	E.06	<.5	<5	<5	<1
	11/05/02	1045	<.5	<.5	E.05	<.5	<.5	<.5	<5	<5	<1
	11/05/02[a]	1045	<.5	<.5	E.10	<.5	E.10	<.5	--	E1.0	<1
	02/11/03	1000	<.5	<.5	<.5	<.5	E.15	<.5	<5	<5	<1
	07/07/03	1130	<.5	E.08	<.5	E.04	E.23	<.5	<2	<5	<1
	04/08/04	1000	<.5	<.5	<.5	<.5	<.5	<.5	<2	<5	<1
3	08/22/01	0945	<.5	<.5	<.5	E.04	E.27	<.5	--	<5	<1
	11/01/01	1300	<.5	<.5	<.5	E.02	<.5	<.5	--	<5	<1
	12/20/01	1015	<.5	<.5	<.5	<.5	<.5	<.5	--	<5	<1
	03/21/02	1245	<.5	<.5	<.5	E.01	<.5	<.5	<5	<5	<1
	06/19/02	1030	<.5	<.5	<.5	E.03	E.09	<.5	<5	<5	<1
4	08/22/01	1100	<.5	<.5	E.10	E.27	E.30	<.5	--	E15	<1
	08/22/01*	1101	<.5	<.5	E.10	E.27	E.20	<.5	--	E15	<1
	11/01/01	1145	<.5	<.5	<.5	E.11	<.5	<.5	--	E5.1	<1
	12/20/01	1215	<.5	<.5	<.5	E.03	<.5	<.5	--	E2.6	<1
	03/21/02	1445	<.5	<.5	<.5	E.03	E.10	<.5	E.80	E3.9	<1
	06/19/02	1130	<.5	<.5	E.04	E.20	E.43	<.5	E.97	E3.6	<1
5	03/22/02	1200	<.5	<.5	<.5	<.5	<.5	<.5	<5	<5	<1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5
6	08/22/01	1315	<0.5	<0.5	E0.10	E0.20	E0.57	<0.5	--	E15	<1
	08/22/01*	1316	<.5	<.5	<.5	E.14	E.32	<.5	--	E16	<1
	11/01/01	0930	E.22	<.5	<.5	E.04	E.13	<.5	--	E6.8	<1
	11/01/01*	0931	<.5	<.5	<.5	E.03	E.18	<.5	--	E9.4	<1
	12/20/01	1415	E.28	<.5	<.5	E.04	E.10	<.5	--	E4.9	<1
	03/22/02	1415	<.5	<.5	<.5	E.02	E.08	<.5	E0.40	E1.4	<1
	06/19/02	1300	<.5	<.5	<.5	E.11	E.30	<.5	<5	<5	<1
	08/06/02	1400	E.30	<.5	<.5	E.06	.92	<.5	E2.0	E3.9	E.25
	11/07/02	1230	E.18	<.5	<.5	E.04	E.10	<.5	E1.6	E3.5	E.22
	11/07/02[a]	1230	E.20	<.5	<.5	M	E.10	<.5	--	E2.0	<1
	02/12/03	0945	E.32	<.5	<.5	E.10	E.15	<.5	E2.6	E8.2	E.62
	07/07/03	0945	<.5	<.5	<.5	E.06	1.7	<.5	E.93	E3.0	E.36
	04/13/04	0945	E.22	<.5	<.5	<.5	E.29	<.5	E1.2	E3.6	E.44
7	08/29/01	0945	<.5	<.5	<.5	E.04	E.19	<.5	--	E1.4	<1
	10/31/01	1145	<.5	<.5	<.5	E.02	E.10	<.5	--	E2.1	<1
	12/10/01	1300	<.5	<.5	<.5	E.05	E.16	<.5	--	E6.3	<1
	03/14/02	0945	<.5	<.5	<.5	E.01	<.5	<.5	<5	<5	<1
	06/18/02	1500	<.5	<.5	<.5	E.21	E.20	<.5	<5	<5	<1
	06/18/02*	1501	<.5	<.5	<.5	E.24	E.19	<.5	<5	E1.5	<1
	08/07/02	1030	<.5	<.5	<.5	E.04	.57	<.5	E1.0	E2.5	<1
	11/05/02	1245	<.5	<.5	E.03	E.06	E.15	<.5	E1.3	E3.0	.25
	11/05/02[a]	1245	E.20	<.5	E.10	M	E.10	<.5	--	E2.0	<1
	02/11/03	1145	E.22	<.5	<.5	E.10	E.18	<.5	E2.4	E7.3	.49
	07/08/03	1145	<.5	<.5	<.5	E.04	E.70	<.5	<2	<5	<1
	07/08/03*	1146	<.5	<.5	E.02	E.04	E.90	<.5	<2	<5	<1
	04/07/04	1140	<.5	<.5	<.5	<.5	E.10	<.5	E.65	E1.2	E.38
8	08/29/01	1315	<.5	<.5	<.5	E.03	<.5	<.5	--	<5	<1
	03/14/02	1215	<.5	<.5	<.5	E.01	E.12	<.5	<5	<5	<1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5
9	06/13/01	1015	<0.5	<0.5	<0.5	E0.04	E0.32	<0.5	--	E1.2	<1
	10/30/01	0945	<.5	<.5	<.5	<.5	E.07	<.5	--	<5	<1
	12/07/01	1000	<.5	<.5	<.5	<.5	E.06	E.45	--	<5	<1
	12/07/01*	1001	<.5	<.5	<.5	<.5	E.09	.84	--	<5	<1
	03/18/02	1245	<.5	<.5	<.5	<.5	<.5	<.5	<5	<5	<1
	06/20/02	1130	<.5	<.5	E.04	E.06	E.10	<.5	<5	<5	<1
	08/01/02	1020	<.5	<.5	<.5	E.02	E.27	<.5	<5	<5	<1
	11/06/02	1000	E.16	<.5	E.14	E.01	E.11	E.06	E.35	E.69	<1
	11/06/02[a]	1000	<.5	<.5	E.20	<.5	E.10	E.10	--	E1.0	<1
	02/13/03	1000	<.5	<.5	<.5	E.07	E.07	<.5	<5	<5	<1
	02/13/03*	1001	<.5	E.24	<.5	E.15	E.17	<.5	E.98	E2.8	E.87
	07/09/03	0930	<.5	<.5	<.5	E.03	E.22	<.5	<2	<5	<1
	04/13/04	1145	<.5	<.5	<.5	<.5	<.5	<.5	<2	<5	<1
10	06/13/01	1000	<.5	<.5	<.5	E.06	E.37	<.5	--	E2.6	<1
11	06/13/01	1230	<.5	<.5	<.5	E.05	E.37	<.5	--	E1.1	<1
	10/30/01	1145	<.5	<.5	<.5	<.5	E.07	<.5	--	<5	<1
	12/07/01	1145	E.19	<.5	<.5	<.5	<.5	<.5	--	<5	<1
	03/18/02	1500	<.5	<.5	<.5	<.5	<.5	<.5	<5	<5	<1
	06/20/02	1315	<.5	<.5	<.5	E.02	E.12	<.5	<5	<5	<1
	08/01/02	1220	<.5	<.5	<.5	E.04	E.36	<.5	<5	<5	<1
	11/06/02	1145	<.5	<.5	<.5	<.5	E.07	<.5	<5	<5	<1
	11/06/02[a]	1145	E.10	<.5	<.5	M	E.10	<.5	--	E2.0	<1
	02/13/03	1230	E.19	<.5	<.5	E.06	E.13	<.5	<5	<5	E.38
	07/09/03	1130	<.5	<.5	E.02	<.5	E.29	<.5	<2	<5	<1
	04/13/04	1330	<.5	<.5	<.5	<.5	<.5	<.5	<2	<5	E.34

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5
12	06/13/01	1430	<0.5	<0.5	<0.5	E0.04	E0.26	<0.5	--	E3.8	<1
	06/13/01**	1431	<.5	<.5	<.5	<.5	<.5	<.5	--	<5	<1
13	07/08/03	0930	<.5	<.5	<.5	E.03	E.36	<.5	<2	<5	<1
	04/08/04	1300	<.5	<.5	<.5	<.5	E.10	<.5	E.49	E.69	E.36
14	08/29/01	1400	<.5	<.5	<.5	E.02	E.15	E.21	--	<5	<1
	10/31/01	1345	<.5	<.5	<.5	E.03	E.11	1.2	--	<5	<1
	12/11/01	1430	<.5	<.5	<.5	E.03	E.10	E.07	--	E3.6	<1
	03/14/02	1500	E.29	<.5	<.5	E.01	E.09	<.5	<5	<5	<1
	06/20/02	1400	<.5	<.5	<.5	E.20	E.25	<.5	<5	E1.4	<1
	08/06/02	1120	<.5	E.05	<.5	E.03	E.26	<.5	E.38	E.67	<1
	08/06/02*	1121	<.5	E.05	<.5	E.04	E.24	<.5	E.48	E.61	E.12
	11/07/02	1015	<.5	<.5	<.5	E.02	<.5	<.5	E.33	E.65	<1
	11/07/02[a]	1015	E.10	<.5	<.5	M	E.10	<.5	--	<5	<1
	02/12/03	1230	E.21	<.5	<.5	E.17	E.20	E.06	E2.3	E6.2	E1.1

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8
1	03/13/02	1315	<1	<1	<2	<0.5	<0.5	<0.5	<0.5	<2	<2
2	08/29/01	1130	<1	<1	<2	<.5	<.5	.02	E.05	.55	<2
	10/31/01	1000	<1	<1	<2	<.5	E.32	<.5	<.5	1.6	<2
	12/11/01	1045	<1	<1	<2	<.5	<.5	<.5	<.5	E.77	<2
	03/13/02	1530	<1	E.33	<2	<.5	<.5	<.5	<.5	2.0	<2
	06/18/02	1300	<1	<1	.04	<.5	E.24	.01	<.5	<2	<2
	08/07/02	1245	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
	11/05/02	1045	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
	11/05/02[a]	1045	<1	<1	<2	<.5	E.40	<.5	<.5	<2	<2
	02/11/03	1000	<1	<1	<2	<.5	E.24	<.5	<.5	E1.9	<2
	07/07/03	1130	<1	<1	<2	E.01	<.5	E.05	E.01	<2	<2
	04/08/04	1000	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
3	08/22/01	0945	<1	<1	<2	<.5	<.5	7.8	<.5	E1.9	<2
	11/01/01	1300	<1	<1	<2	<.5	<.5	.03	<.5	2.0	<2
	12/20/01	1015	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
	03/21/02	1245	<1	<1	<2	<.5	E.21	E.02	<.5	E1.4	<2
	06/19/02	1030	<1	<1	<2	<.5	E.45	.04	<.5	<2	<2
4	08/22/01	1100	<1	<1	<2	<.5	<.5	1.4	<.5	<2	<2
	08/22/01*	1101	<1	<1	<2	<.5	<.5	1.4	<.5	E1.6	<2
	11/01/01	1145	<1	<1	<2	<.5	E.81	<.5	<.5	E1.1	<2
	12/20/01	1215	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
	03/21/02	1445	<1	<1	<2	<.5	E.21	<.5	<.5	E1.4	<2
	06/19/02	1130	<1	<1	E.07	<.5	E.33	.02	<.5	E1.5	<2
5	03/22/02	1200	<1	<1	<2	<.5	<.5	E.01	<.5	E1.2	<2

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8
6	08/22/01	1315	<1	<1	<2	<0.5	<0.5	1.1	<0.5	3.4	<2
	08/22/01*	1316	E1.8	<1	<2	<.5	<.5	.78	E.10	2.4	<2
	11/01/01	0930	E1.5	<1	<2	<.5	E.22	<.5	<.5	3.5	<2
	11/01/01*	0931	E1.8	<1	<2	<.5	<.5	<.5	<.5	6.7	<2
	12/20/01	1415	<1	<1	<2	<.5	<.5	<.5	<.5	3.4	<2
	03/22/02	1415	<1	<1	<2	<.5	<.5	<.5	<.5	E1.2	<2
	06/19/02	1300	<1	<1	<2	<.5	E.26	.02	<.5	<2	<2
	08/06/02	1400	<1	<1	E.02	<.5	E.23	E.03	<.5	E1.8	E.54
	11/07/02	1230	<1	<1	<2	<.5	<.5	<.5	<.5	E2.2	<2
	11/07/02[a]	1230	M	<1	<2	<.5	<.5	<.5	<.5	M	<2
	02/12/03	0945	E.22	E.14	<2	<.5	<.5	<.5	E.04	4.3	<2
	07/07/03	0945	E.12	<1	<2	E.02	<.5	<.5	E.02	3.4	<2
	04/13/04	0945	E.09	<1	<2	E.03	<.5	<.5	E.04	E3.9	<2
7	08/29/01	0945	<1	<1	E.03	<.5	E.24	E.02	<.5	E.58	<2
	10/31/01	1145	<1	<1	<2	<.5	<.5	<.5	<.5	E1.2	<2
	12/10/01	1300	<1	<1	<2	<.5	<.5	<.5	<.5	2.1	<2
	03/14/02	0945	<1	<1	<2	E.06	E.65	<.5	E.07	2.4	<2
	06/18/02	1500	<1	<1	<2	<.5	E.32	<.5	<.5	<2	<2
	06/18/02*	1501	<1	<1	E.03	<.5	E.42	E.02	<.5	E.74	<2
	08/07/02	1030	E.12	<1	<2	<.5	E1.0	E.03	<.5	E.98	<2
	11/05/02	1245	<1	<1	E.04	E.06	E1.1	<.5	E.08	E1.9	<2
	11/05/02[a]	1245	<1	M	M	<.5	.70	<.5	<.5	E1.0	<2
	02/11/03	1145	E.18	<1	<2	<.5	E.29	<.5	E.03	<2	<2
	07/08/03	1145	<1	<1	<2	E.02	<.5	<.5	E.03	E.81	<2
	07/08/03*	1146	<1	<1	<2	E.02	E.30	<.5	E.03	<2	<2
	04/07/04	1140	E.04	<1	<2	<.5	<.5	<.5	<.5	<2	<2
8	08/29/01	1315	<1	<1	<2	<.5	E.30	E.03	<.5	E.74	<2
	03/14/02	1215	<1	<1	<2	.11	E1.6	<.5	E.16	2.9	<2

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8
9	06/13/01	1015	<1	<1	<2	<0.5	<0.5	0.02	<0.5	E0.75	<2
	10/30/01	0945	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
	12/07/01	1000	<1	<1	<2	E.18	<.5	<.5	E.05	E1.3	<2
	12/07/01*	1001	<1	<1	.15	E.30	<.5	<.5	E.11	2.4	<2
	03/18/02	1245	<1	<1	<2	<.5	<.5	E.01	<.5	<2	<2
	06/20/02	1130	<1	<1	<2	<.5	<.5	.67	<.5	E.97	<2
	08/01/02	1020	E.11	<1	.04	<.5	<.5	.14	<.5	<2	<2
	11/06/02	1000	<1	<1	.04	E.24	<.5	E.02	E.22	E.70	<2
	11/06/02[a]	1000	M	M	M	<.5	E.20	<.5	M	E1.0	M
	02/13/03	1000	<1	<1	<2	<.5	<.5	<.5	3.0	<2	<2
	02/13/03*	1001	E.13	E.08	E.66	E.07	<.5	E.14	E.08	E2.0	<2
	07/09/03	0930	<1	<1	<2	<.5	E.20	E.10	E.08	E.96	<2
	04/13/04	1145	<1	<1	<2	<.5	E.18	<.5	E.02	<2	<2
10	06/13/01	1000	<1	<1	<2	<.5	<.5	<.5	<.5	E.89	<2
11	06/13/01	1230	<1	<1	<2	<.5	<.5	<.5	<.5	E1.7	<2
	10/30/01	1145	<1	<1	.03	<.5	<.5	.03	<.5	2.3	<2
	12/07/01	1145	<1	<1	<2	<.5	<.5	<.5	<.5	<2	<2
	03/18/02	1500	<1	<1	.17	<.5	E1.3	<.5	E.07	E1.7	<2
	06/20/02	1315	<1	<1	<2	<.5	<.5	1.1	<.5	E1.1	<2
	08/01/02	1220	<1	<1	.09	.05	E.38	.27	<.5	E.91	<2
	11/06/02	1145	<1	<1	.02	<.5	<.5	.02	E.06	E.72	<2
	11/06/02[a]	1145	M	<1	M	<.5	E.19	<.5	M	E1.0	E1.0
	02/13/03	1230	E.07	<1	E.62	E.12	<.5	E.07	E.07	E2.6	<2
	07/09/03	1130	<1	<1	<2	<.5	<.5	<.5	E.01	E1.8	<2
	04/13/04	1330	<1	<1	<2	E.03	E.10	<.5	E.02	<2	<2

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8
12	06/13/01	1430	E0.74	<1	0.28	<0.5	<0.5	<0.5	<0.5	E1.7	<2
	06/13/01**	1431	<1	<1	<2	<.5	<.41	<.5	<.5	<2	<2
13	07/08/03	0930	<1	<1	<2	E.11	<.5	E.06	E.08	<2	<2
	04/08/04	1300	E.05	<1	<2	E.04	<.5	<.5	E.09	<2	<2
14	08/29/01	1400	<1	<1	<2	<.5	E.31	.04	E.06	E.74	<2
	10/31/01	1345	<1	<1	<2	<.5	E.26	<.5	<.5	E1.4	<2
	12/11/01	1430	<1	<1	<2	<.5	E.31	<.5	<.5	E1.5	<2
	03/14/02	1500	<1	<1	.13	<.5	E.96	<.5	<.5	E.99	<2
	06/20/02	1400	<1	<1	<2	<.5	E.33	.06	<.5	<2	<2
	08/06/02	1120	<1	<1	E.02	<.5	<.5	E.06	<.5	<2	<2
	08/06/02*	1121	<1	<1	E.02	<.5	<.5	E.06	<.5	<2	<2
	11/07/02	1015	<1	<1	<2	<.5	<.5	<.5	<.5	E.59	<2
	11/07/02[a]	1015	<1	<1	M	<.5	<.5	<.5	<.5	<2	<2
	02/12/03	1230	E.21	<1	E.67	E.08	E.61	E.10	E.10	E5.8	<2

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Tetrachloroethylene 127-18-4	Tribromomethane 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl citrate 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichloroisopropyl)phosphate 13674-87-8
1	03/13/02	1315	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
2	08/29/01	1130	<.5	<.5	<.5	<1	.10	E.06	<.5	.07	E.14
	10/31/01	1000	<.5	<.5	.08	<1	<.5	<.5	<.5	.12	E.18
	12/11/01	1045	<.5	<.5	.07	<1	<.5	<.5	<.5	.12	E.20
	03/13/02	1530	<.5	<.5	<.5	<1	<.5	<.5	1.9	<.5	<.5
	06/18/02	1300	<.5	<.5	<.5	<1	<.5	<.5	E.24	.07	E.05
	08/07/02	1245	<.5	<.5	.14	<1	<.5	<.5	<.5	.14	E.14
	11/05/02	1045	<.5	<.5	<.5	<1	<.5	<.5	<.5	.07	E.10
	11/05/02[a]	1045	<.5	<.5	E.10	<1	M	<.5	E.20	E.10	E.10
	02/11/03	1000	<.5	<.5	.10	<1	.17	E.07	<.5	.33	E.40
	07/07/03	1130	<.5	<.5	E.04	<1	E.02	<.5	E.21	E.13	E.11
	04/08/04	1000	<.5	<.5	<.5	<1	<.5	<.5	<.5	<.5	<.5
3	08/22/01	0945	<.5	<.5	.65	E.13	<.5	E.27	1.1	.17	.52
	11/01/01	1300	<.5	<.5	<.5	<1	<.5	<.5	E.12	<.5	E.06
	12/20/01	1015	<.5	<.5	<.5	<1	<.5	<.5	<.5	<.5	<.5
	03/21/02	1245	<.5	<.5	<.5	<1	<.5	<.5	E.19	<.5	<.5
	06/19/02	1030	<.5	<.5	<.5	<1	<.5	<.5	E.33	.07	<.5
4	08/22/01	1100	<.5	<.5	.69	E.21	.63	<.5	<.5	.54	<.5
	08/22/01*	1101	<.5	<.5	.70	E.23	.63	<.5	<.5	.53	<.5
	11/01/01	1145	<.5	<.5	.18	E.12	.20	E.06	<.5	.30	E.41
	12/20/01	1215	<.5	<.5	.07	E.12	<.5	<.5	<.5	.07	E.16
	03/21/02	1445	E.09	<.5	E.08	<1	E.12	<.5	E.16	E.15	E.17
	06/19/02	1130	<.5	<.5	<.5	E.17	.19	E.07	E.29	.20	E.27
5	03/22/02	1200	<.5	<.5	<.5	<1	<.5	<.5	E.15	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Tetrachloroethylene 127-18-4	Tribromomethane 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl citrate 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichloroisopropyl)phosphate 13674-87-8
6	08/22/01	1315	<0.5	<0.5	0.68	E0.70	0.53	<0.5	1.5	0.35	0.55
	08/22/01*	1316	<.5	<.5	.67	E.53	.52	E.29	1.3	.25	.59
	11/01/01	0930	<.5	<.5	.06	E.64	.12	<.5	.72	.15	E.22
	11/01/01*	0931	<.5	<.5	.10	E.88	.18	<.5	1.2	.25	E.27
	12/20/01	1415	E.20	<.5	.08	E.90	.08	E.07	.70	.22	E.26
	03/22/02	1415	E.06	<.5	E.09	<1	E.06	<.5	E.30	E.15	E.15
	06/19/02	1300	<.5	<.5	<.5	E.09	<.5	<.5	E.22	.18	E.19
	08/06/02	1400	<.5	<.5	E.14	E.44	E.09	<.5	3.5	E.29	E.32
	11/07/02	1230	E.05	<.5	.06	E.33	.07	<.5	E2.2	.10	E.14
	11/07/02[a]	1230	<.5	<.5	E.10	M	E.10	M	3.2	E.10	E.10
	02/12/03	0945	<.5	<.5	E.19	E.58	E.30	E.11	5.8	E.33	E.44
	07/07/03	0945	<.5	<.5	E.26	E.50	E.11	E.03	1.0	E.34	E.25
	04/13/04	0945	<.5	<.5	E.10	E.61	E.16	E.03	E2.1	E.22	E.12
7	08/29/01	0945	<.5	<.5	<.5	E.14	<.5	<.5	E.23	E.08	E.10
	10/31/01	1145	<.5	<.5	.08	E.21	.06	<.5	E.29	.13	E.13
	12/10/01	1300	<.5	<.5	.20	E.38	.15	<.5	1.5	.19	E.23
	03/14/02	0945	<.5	<.5	<.5	E.19	.06	<.5	1.9	.06	E.08
	06/18/02	1500	<.5	<.5	<.5	<1	<.5	<.5	E.32	.09	E.10
	06/18/02*	1501	<.5	<.5	<.5	<1	<.5	<.5	E.24	.09	E.10
	08/07/02	1030	<.5	<.5	.20	E.36	.08	E.08	2.4	.26	E.26
	11/05/02	1245	<.5	<.5	.12	E.27	.10	<.5	3.5	.15	E.20
	11/05/02[a]	1245	<.5	<.5	E.10	M	E.10	M	3.1	E.10	E.10
	02/11/03	1145	<.5	<.5	E.16	E.45	.25	E.11	E3.3	.30	E.46
	07/08/03	1145	<.5	<.5	E.12	E.19	E.03	E.18	.64	E.21	E.16
	07/08/03*	1146	<.5	<.5	E.17	E.22	<.5	E.19	.82	E.27	E.20
	04/07/04	1140	<.5	<.5	E.07	E.18	<.5	<.5	E1.0	E.12	<.5
8	08/29/01	1315	<.5	<.5	<.5	E.10	.11	E.06	E.24	<.5	E.13
	03/14/02	1215	<.5	<.5	<.5	E.19	<.5	<.5	1.8	.06	E.09

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Tetrachloroethylene 127-18-4	Tribromomethane 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl citrate 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichloroisopropyl)phosphate 13674-87-8
9	06/13/01	1015	<0.5	<0.5	<0.5	<1	<0.5	<0.5	E0.27	<0.5	E0.06
	10/30/01	0945	<.5	<.5	<.5	<1	<.5	<.5	<.5	<.5	E.07
	12/07/01	1000	<.5	<.5	<.5	<1	<.5	<.5	E.11	.05	E.07
	12/07/01*	1001	<.5	<.5	.09	<1	<.5	E.07	E.22	.08	E.13
	03/18/02	1245	<.5	<.5	<.5	<1	<.5	<.5	<.5	<.5	<.5
	06/20/02	1130	<.5	<.5	<.5	<1	<.5	<.5	E.38	.06	<.5
	08/01/02	1020	<.5	<.5	.14	<1	<.5	E.07	E.41	.10	E.09
	11/06/02	1000	<.5	<.5	.10	<1	<.5	<.5	.74	<.5	<.5
	11/06/02[a]	1000	<.5	<.5	<.5	<1	<.5	M	E.90	E.10	M
	02/13/03	1000	<.5	<.5	E.09	<1	E.05	E.06	E4.3	E.10	<.5
	02/13/03*	1001	<.5	<.5	E.18	E.10	E.16	E.14	E4.2	E.24	E.30
	07/09/03	0930	<.5	<.5	<.5	<1	<.5	<.5	E.28	E.04	E.06
	04/13/04	1145	<.5	<.5	<.5	<1	<.5	<.5	<.5	<.5	<.5
10	06/13/01	1000	<.5	<.5	<.5	<1	<.5	<.5	E.38	.07	E.08
11	06/13/01	1230	<.5	<.5	<.5	<1	<.5	<.5	E.49	.07	E.07
	10/30/01	1145	<.5	<.5	.05	<1	<.5	<.5	E.22	.08	<.5
	12/07/01	1145	E.06	E.75	.10	<1	.06	<.5	E.30	.08	E.20
	03/18/02	1500	<.5	<.5	<.5	<1	<.5	<.5	.80	<.5	<.5
	06/20/02	1315	<.5	<.5	<.5	<1	<.5	<.5	.50	.07	E.06
	08/01/02	1220	<.5	<.5	.14	E.18	<.5	E.07	.83	.12	E.08
	11/06/02	1145	<.5	<.5	<.5	<1	<.5	<.5	E.49	<.5	<.5
	11/06/02[a]	1145	<.5	<.5	M	<1	<.5	<.5	E.90	M	M
	02/13/03	1230	<.5	<.5	E.11	E.06	E.11	E.07	E1.5	E.14	<.5
	07/09/03	1130	<.5	<.5	E.04	<1	<.5	<.5	.56	E.07	E.08
	04/13/04	1330	<.5	<.5	<.5	<1	<.5	<.5	E35	<.5	<.5

Table 4. Concentrations of selected organic wastewater compounds in base-flow samples collected between June 2001 and April 2004.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, replicate sample; M, presence verified, but not quantified; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Tetrachloro-ethylene 127-18-4	Tribromo-methane 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl citrate 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichloriso-propyl)phosphate 13674-87-8
12	06/13/01	1430	<0.5	<0.5	<0.5	E0.20	<0.5	<0.5	1.2	0.07	E0.08
	06/13/01**	1431	<.5	<.5	<.5	<1	<.5	<.5	<.5	<.5	<.5
13	07/08/03	0930	<.5	<.5	E.08	E.12	<.5	<.5	.50	E.19	E.13
	04/08/04	1300	<.5	<.5	E.07	E.11	<.5	<.5	E.74	<.5	<.5
14	08/29/01	1400	<.5	<.5	<.5	E.11	.10	E.06	E.30	.06	E.13
	10/31/01	1345	<.5	<.5	.16	E.21	.05	<.5	E.33	.17	E.20
	12/11/01	1430	<.5	<.5	.12	E.40	.10	E.05	.96	.16	E.20
	03/14/02	1500	<.5	<.5	<.5	E.09	<.5	<.5	1.8	.06	E.05
	06/20/02	1400	<.5	<.5	<.5	<1	<.5	<.5	E.44	.08	E.09
	08/06/02	1120	<.5	<.5	E.10	E.09	<.5	<.5	1.3	E.15	E.17
	08/06/02*	1121	<.5	<.5	E.09	E.10	<.5	<.5	1.2	E.14	E.15
	11/07/02	1015	<.5	<.5	<.5	<1	<.5	<.5	E.59	.05	E.07
	11/07/02[a]	1015	<.5	<.5	E.10	M	E.10	M	1.4	E.10	E.10
	02/12/03	1230	<.5	<.5	E.30	E.35	E.28	E.19	E5.2	E.40	E.53

[a]Filtered sample.

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Amoxicillin 61336-70-7	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazepine 298-46-4	Cephalexin 15686-71-2
1	03/13/02	1315	0.022	<0.009	--	MRL-ND	0.030	E0.004	--
2	10/11/00	1030	.031	<.009	--	--	E.013	--	--
	08/29/01	1130	<.018	<.009	--	MRL-ND	E.019	<.011	--
	10/31/01	1000	.573	.566	--	MRL-ND	1.25	.025	--
	12/11/01	1045	.041	<.009	--	MRL-ND	.034	E.046	--
	03/13/02	1530	.037	.055	--	MRL-ND	.052	E.014	--
	06/18/02	1300	<.018	<.009	--	MRL-ND	.014	E.011	--
	08/07/02	1245	<.018	<.009	--	MRL-ND	.024	E.119	--
	11/05/02	1045	.151	<.009	--	MRL-ND	.042	.039	--
	02/11/03	1000	<.018	<.009	--	MRL-ND	<.014	.052	--
	07/07/03	1130	<.018	<.009	MRL-ND	MRL-ND	.036	.037	MRL-ND
	04/08/04	1000	.044	<.009	MRL-ND	MRL-ND	<.014	<.011	MRL-ND
	09/03/04	0945	<.018	<.009	--	MRL-ND	<.014	.030	--
3	10/12/00	1045	<.018	E.006	--	--	E.013	--	MRL-ND
	08/22/01	0945	<.018	<.009	--	MRL-ND	.076	<.011	--
	11/01/01	1300	<.018	<.009	--	MRL-ND	.015	<.011	--
	12/20/01	1015	<.018	<.009	--	MRL-ND	.213	<.011	--
	03/21/02	1245	<.018	<.009	--	MRL-ND	.114	<.011	--
	06/19/02	1030	<.018	E.006	--	MRL-ND	.094	<.011	--
4	10/12/00	1315	<.018	<.009	MRL-ND	--	<.014	--	MRL-ND
	10/12/00*	1316	<.018	<.009	MRL-ND	--	<.014	--	MRL-ND
	08/22/01	1100	<.018	<.009	--	MRL-ND	<.014	.076	--
	11/01/01	1145	<.018	<.009	--	MRL-ND	<.014	.043	--
	12/20/01	1215	<.018	<.009	--	MRL-ND	<.014	E.062	--
	03/21/02	1445	<.018	<.009	--	MRL-ND	<.014	E.070	--
	06/19/02	1130	<.018	<.009	--	MRL-ND	E.027	E.049	--
5	03/22/02	1200	.205	.077	--	MRL-ND	.24	<.011	--
6	10/12/00	1500	1.67	1.22	MRL-ND	--	E3.04	--	MRL-ND
	08/22/01	1315	.578	.453	MRL-ND	MRL-ND	1.58	.165	MRL-ND
	11/01/01	0930	.706	.745	--	MRL-ND	1.82	.027	--
	12/20/01	1415	E2.65	.695	--	MRL-ND	E3.07	E.064	--

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Amoxicillin 61336-70-7	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazepine 298-46-4	Cephalexin 15686-71-2
6	03/22/02	1415	0.100	<0.009	--	MRL-ND	0.069	E0.045	--
	06/19/02	1300	<.018	E.005	--	MRL-ND	.024	E.055	--
	08/06/02	1400	.615	.566	--	MRL-ND	.938	E.046	--
	11/07/02	1230	1.12	.727	--	MRL-ND	1.41	E.039	--
	02/12/03	0945	2.03	.536	--	MRL-ND	1.84	.068	--
	07/07/03	0945	.640	.580	MRL-ND	MRL-ND	.840	.083	MRL-ND
	04/13/04	0945	1.90	1.00	MRL-ND	MRL-ND	1.70	.082	MRL-ND
	09/03/04	1400	.460	.310	--	MRL-ND	.580	.026	--
7	10/11/00	1030	.617	<.009	MRL-ND	--	1.14	--	MRL-ND
	08/29/01	0945	.062	.046	--	MRL-ND	.232	E.013	--
	10/31/01	1145	.245	.317	--	MRL-ND	.718	E.034	--
	12/10/01	1300	.669	.146	--	MRL-ND	.928	E.021	--
	03/14/02	0945	.676	.192	--	MRL-ND	.811	E.026	--
	06/18/02	1500	<.018	.014	--	MRL-ND	.040	E.028	--
	06/18/02*	1501	<.018	.013	--	MRL-ND	.028	E.021	--
	08/07/02	1030	.456	.483	--	MRL-ND	.612	E.075	--
	11/05/02	1245	.705	.960	--	MRL-ND	1.00	.050	--
	02/11/03	1145	1.52	.242	--	MRL-ND	1.25	.069	--
	07/08/03	1145	.005	.140	--	MRL-ND	.200	.074	--
	07/08/03*	1146	.005	.140	--	MRL-ND	.310	.073	--
	04/07/04	1140	.550	.170	--	MRL-ND	.480	.030	MRL-ND
	09/09/04	1100	.150	.077	--	--	.120	<.011	--
8	10/11/00	1430	.393	.131	MRL-ND	--	.564	--	--
	08/29/01	1315	.068	.040	--	MRL-ND	.207	<.011	--
	03/14/02	1215	.704	.626	--	MRL-ND	.744	E.019	--
9	10/03/00	1015	.045	.044	MRL-ND	--	.493	--	MRL-ND
	06/13/01	1015	.216	.034	--	MRL-ND	.467	E.002	--
	10/30/01	0945	<.018	E.002	--	MRL-ND	E.007	E.010	--
	12/07/01	1000	<.018	.022	--	MRL-ND	.120	.008	--
	12/07/01*	1001	<.018	.026	--	MRL-ND	.120	<.011	--
	03/18/02	1245	.060	.023	--	MRL-ND	.145	<.011	--
	06/20/02	1130	<.018	.014	--	MRL-ND	.053	<.011	--
	08/01/02	1020	<.018	.015	--	MRL-ND	.113	<.011	--
	11/06/02	1000	<.018	.137	--	MRL-ND	.662	<.011	--

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Amoxicillin 61336-70-7	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazepine 298-46-4	Cephalexin 15686-71-2
9	02/13/03	1000	<0.018	0.037	--	MRL-ND	0.158	<0.011	--
	02/13/03*	1001	<.018	.036	--	MRL-ND	.161	<.011	--
	07/09/03	0930	<.018	<.009	MRL-ND	MRL-ND	<.014	<.011	MRL-ND
	04/13/04	1145	.066	.065	--	MRL-ND	.069	<.011	--
	08/18/04	1000	<.018	<.009	--	MRL-ND	<.014	<.011	--
	08/18/04*	1001	<.018	.064	--	MRL-ND	<.014	<.011	--
10	10/03/00	1100	<.018	<.009	MRL-ND	--	<.014	--	MRL-ND
	06/13/01	1000	.992	.023	--	MRL-ND	1.86	<.011	--
11	10/03/00	1245	E.018	.021	MRL-ND	--	.145	--	MRL-ND
	06/13/01	1230	.934	.019	--	MRL-ND	E2.25	<.011	--
	10/30/01	1145	.055	E.022	--	MRL-ND	.103	E.002	--
	12/07/01	1145	.146	.412	--	MRL-ND	1.05	<.011	--
	03/18/02	1500	.195	.274	--	MRL-ND	1.16	<.011	--
	06/20/02	1315	<.018	.022	--	MRL-ND	.183	E.011	--
	08/01/02	1220	<.018	.109	--	MRL-ND	.579	<.011	--
	11/06/02	1145	<.018	.112	--	MRL-ND	.503	<.011	--
	02/13/03	1230	.374	.533	--	MRL-ND	1.12	<.011	--
	07/09/03	1130	.063	.031	MRL-ND	MRL-ND	.220	<.011	MRL-ND
	04/13/04	1330	<.018	.023	--	MRL-ND	.510	<.011	--
	08/19/04	1030	<.018	<.009	MRL-ND	MRL-ND	.150	<.011	MRL-ND
12	10/03/00	1230	E.471	<.009	MRL-ND	--	1.14	--	MRL-ND
	06/13/01	1430	1.59	E.002	MRL-ND	MRL-ND	E3.72	<.011	MRL-ND
	06/13/01**	1431	<.018	<.009	MRL-ND	MRL-ND	<.014	<.011	MRL-ND
13	07/08/03	0930	.110	.016	MRL-ND	MRL-ND	<.014	.047	MRL-ND
	04/08/04	1300	.340	.052	--	MRL-ND	.340	.021	--
	09/10/04	1030	.064	<.009	--	MRL-ND	.130	<.011	MRL-ND
14	10/11/00	1230	.273	.224	--	--	.501	--	--
	08/29/01	1400	.072	.025	--	MRL-ND	.180	<.011	--
	10/31/01	1345	E.014	E.011	--	MRL-ND	E.008	E.00	--
	12/11/01	1430	1.28	.595	--	MRL-ND	1.44	E.029	--

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Amoxicillin 61336-70-7	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazepine 298-46-4	Cephalexin 15686-71-2
14	03/14/02	1500	0.676	0.196	--	MRL-ND	0.790	E0.010	--
	06/20/02	1400	.131	.011	--	MRL-ND	.237	E.017	--
	08/06/02	1120	.186	.057	--	MRL-ND	.236	E.030	--
	08/06/02*	1121	.211	.069	--	MRL-ND	.268	E.036	--
	11/07/02	1015	.416	<.009	--	MRL-ND	.610	.035	--
	02/12/03	1230	.938	.316	--	MRL-ND	.934	.058	--
17	10/19/00	1300	3.42	14.0	--	--	13.0	--	--
18	10/19/00	1130	4.05	16.0	--	--	12.0	--	--
	10/19/00	1200	4.94	32.0	--	--	13.0	--	--
[a]18	10/19/00	1230	1.68	<.009	--	--	5.11	--	--
19	07/10/02	1155	<.018	<.009	MRL-ND	--	<.014	--	--

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Cimetidine 51481-61-9	Clarithromycin 81103-11-9	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Digoxigenin 1672-46-4	Digoxin 20830-75-5
1	03/13/02	1315	<0.007	MRL-ND	<0.024	E0.009	<0.01	<0.008	<0.26
2	10/11/00	1030	.012	--	<.024	<.023	<.01	<.008	<.26
	08/29/01	1130	<.007	MRL-ND	<.024	E.010	<.01	<.008	<.26
	10/31/01	1000	E.005	0.057	.062	.095	E.001	<.008	<.26
	12/11/01	1045	.009	E.002	<.024	.025	<.01	<.008	<.26
	03/13/02	1530	E.006	E.008	E.008	E.016	<.01	<.008	<.26
	06/18/02	1300	.002	MRL-ND	E.004	E.017	<.01	<.008	<.26
	08/07/02	1245	<.007	--	<.024	.047	<.01	--	--
	11/05/02	1045	.009	--	E.015	.027	<.01	--	--
	02/11/03	1000	.027	--	.074	<.023	<.01	--	--
	07/07/03	1130	<.007	MRL-ND	E.001	.031	<.01	<.008	<.26
	04/08/04	1000	<.007	MRL-ND	<.024	<.023	<.01	<.008	<.26
	09/03/04	0945	<.007	--	<.024	<.023	<.01	<.008	<.26
3	10/12/00	1045	<.007	--	<.024	E.005	<.01	<.008	<.26
	08/22/01	0945	<.007	MRL-ND	<.024	.174	<.01	<.008	<.26
	11/01/01	1300	<.007	MRL-ND	<.024	E.016	<.01	<.008	<.26
	12/20/01	1015	<.007	MRL-ND	<.024	.040	<.01	<.008	<.26
	03/21/02	1245	<.007	MRL-ND	<.024	E.022	<.01	<.008	<.26
	06/19/02	1030	<.007	MRL-ND	<.024	.025	<.01	<.008	<.26
4	10/12/00	1315	<.007	--	<.024	.036	<.01	<.008	<.26
	10/12/00*	1316	<.007	--	<.024	.024	<.01	<.008	<.26
	08/22/01	1100	.023	MRL-ND	E.182	.033	E.002	<.008	<.26
	11/01/01	1145	.085	.108	.239	E.013	<.01	<.008	<.26
	12/20/01	1215	.092	E.121	E.297	.039	<.01	<.008	<.26
	03/21/02	1445	.165	E.137	E.272	.064	<.01	<.008	<.26
	06/19/02	1130	.049	MRL-ND	.123	.029	E.003	<.008	<.26
5	03/22/02	1200	<.007	MRL-ND	<.024	.048	<.01	<.008	<.26
6	10/12/00	1500	<.007	--	<.024	.150	<.01	<.008	<.26
	08/22/01	1315	<.007	.018	<.024	.196	E.001	<.008	<.26
	11/01/01	0930	<.007	.064	.091	.134	E.003	<.008	<.26
	12/20/01	1415	.011	E.083	E.170	.247	<.01	<.008	<.26

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Cimetidine 51481-61-9	Clarithromycin 81103-11-9	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Digoxigenin 1672-46-4	Digoxin 20830-75-5
6	03/22/02	1415	0.037	E0.048	E0.081	0.042	<0.01	<0.008	<0.26
	06/19/02	1300	.009	MRL-ND	E.019	E.018	<.01	<.008	<.26
	08/06/02	1400	<.007	--	.024	.062	<.01	--	--
	11/07/02	1230	E.006	--	.047	.092	E.007	--	--
	02/12/03	0945	.024	--	.152	.200	<.01	--	--
	07/07/03	0945	<.007	MRL-ND	.029	.089	E.006	<.008	<.26
	04/13/04	0945	<.007	--	.080	.099	<.01	<.008	<.26
	09/03/04	1400	<.007	--	--	.058	<.01	--	--
7	10/11/00	1030	<.007	--	<.024	.096	<.01	<.008	<.26
	08/29/01	0945	<.007	MRL-ND	<.024	.047	<.01	<.008	<.26
	10/31/01	1145	E.005	MRL-ND	E.067	.098	<.01	<.008	<.26
	12/10/01	1300	<.007	E.011	E.044	.064	E.003	<.008	<.26
	03/14/02	0945	.009	E.025	E.037	.075	<.01	<.008	<.26
	06/18/02	1500	<.007	MRL-ND	<.024	.023	<.01	<.008	<.26
	06/18/02*	1501	<.007	MRL-ND	E.004	E.016	<.01	<.008	<.26
	08/07/02	1030	E.004	--	.029	.105	<.01	--	--
	11/05/02	1245	.017	--	.058	.066	E.006	--	--
	02/11/03	1145	.015	--	.126	.200	<.01	--	--
	07/08/03	1145	<.007	--	E.008	.093	E.048	--	--
	07/08/03*	1146	<.007	--	E.007	.089	E.048	--	--
	04/07/04	1140	<.007	--	<.024	.031	<.01	--	--
	09/09/04	1100	<.007	--	<.024	.030	<.01	--	--
8	10/11/00	1430	<.007	--	<.024	.076	<.01	<.008	<.26
	08/29/01	1315	<.007	MRL-ND	<.024	.042	<.01	<.008	<.26
	03/14/02	1215	E.006	E.011	E.024	.085	<.01	<.008	<.26
9	10/03/00	1015	<.007	--	<.024	<.023	<.01	<.008	<.26
	06/13/01	1015	<.007	MRL-ND	<.024	.112	<.01	<.008	<.26
	10/30/01	0945	E.002	MRL-ND	<.024	E.002	<.01	<.008	<.26
	12/07/01	1000	<.007	MRL-ND	<.024	.050	<.01	<.008	<.26
	12/07/01*	1001	<.007	MRL-ND	<.024	.056	<.01	<.008	<.26
	03/18/02	1245	<.007	MRL-ND	<.024	.054	<.01	<.008	<.26
	06/20/02	1130	<.007	MRL-ND	<.024	E.019	<.01	<.008	<.26
	08/01/02	1020	<.007	--	<.024	.072	<.01	--	--
	11/06/02	1000	<.007	--	<.024	.069	<.01	--	--

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Cimetidine 51481-61-9	Clarithromycin 81103-11-9	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Digoxigenin 1672-46-4	Digoxin 20830-75-5
9	02/13/03	1000	<0.007	--	<0.024	0.100	<0.01	--	--
	02/13/03*	1001	<.007	--	<.024	.100	<.01	--	--
	07/09/03	0930	<.007	MRL-ND	<.024	.023	<.01	<0.008	<0.26
	04/13/04	1145	<.007	MRL-ND	<.024	E.004	<.01	--	--
	08/18/04	1000	<.007	--	<.024	.018	<.01	--	--
	08/18/04*	1001	<.007	--	<.024	.019	<.01	--	--
10	10/03/00	1100	<.007	--	<.024	<.023	<.01	<.008	<.26
	06/13/01	1000	<.007	MRL-ND	<.024	.156	<.01	<.008	<.26
11	10/03/00	1245	<.007	--	<.024	<.023	<.01	<.008	<.26
	06/13/01	1230	<.007	MRL-ND	<.024	.154	<.01	<.008	<.26
	10/30/01	1145	E.004	MRL-ND	<.024	E.011	<.01	<.008	<.26
	12/07/01	1145	<.007	MRL-ND	<.024	.132	<.01	<.008	<.26
	03/18/02	1500	<.007	MRL-ND	<.024	.272	<.01	<.008	<.26
	06/20/02	1315	<.007	MRL-ND	<.024	.040	<.01	<.008	<.26
	08/01/02	1220	<.007	--	<.024	.082	<.01	--	--
	11/06/02	1145	<.007	--	<.024	.058	<.01	--	--
	02/13/03	1230	<.007	--	<.024	.200	<.01	--	--
	07/09/03	1130	<.007	MRL-ND	<.024	.110	<.01	<.008	<.26
	04/13/04	1330	<.007	MRL-ND	<.024	.030	<.01	--	--
	08/19/04	1030	<.007	--	<.024	.080	<.01	--	--
12	10/03/00	1230	<.007	--	<.024	.079	<.01	<.008	<.26
	06/13/01	1430	<.007	MRL-ND	E.008	.166	<.01	<.008	<.26
	06/13/01**	1431	<.007	MRL-ND	<.024	<.023	<.01	<.008	<.26
13	07/08/03	0930	<.007	MRL-ND	<.024	.064	E.004	<.008	<.26
	04/08/04	1300	<.007	MRL-ND	<.024	.029	<.01	--	--
	09/10/04	1030	<.007	--	<.024	.014	<.01	--	--
14	10/11/00	1230	E.004	--	<.024	.074	<.01	<.008	<.26
	08/29/01	1400	<.007	MRL-ND	<.024	.040	<.01	<.008	<.26
	10/31/01	1345	<.007	MRL-ND	<.024	E.001	<.01	<.008	<.26
	12/11/01	1430	<.007	E0.028	.076	.169	<.01	<.008	<.26

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Cimetidine 51481-61-9	Clarithromycin 81103-11-9	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Digoxigenin 1672-46-4	Digoxin 20830-75-5
14	03/14/02	1500	E0.006	MRL-ND	E0.020	0.097	<0.01	<0.008	<0.26
	06/20/02	1400	<.007	MRL-ND	E.003	.035	<.01	<.008	<.26
	08/06/02	1120	<.007	--	E.005	.078	<.01	--	--
	08/06/02*	1121	<.007	--	E.005	.088	<.01	--	--
	11/07/02	1015	E.006	--	.041	.061	<.01	--	--
	02/12/03	1230	.010	--	.072	.200	<.01	--	--
17	10/19/00	1300	.045	--	<.024	.787	<.01	<.008	<.26
18	10/19/00	1130	<.007	--	<.15	1.32	<.01	<.008	<.26
	10/19/00	1200	<.007	--	<.15	1.81	<.01	<.008	<.26
[a]18	10/19/00	1230	.394	--	<.15	1.09	<.01	<.008	<.26
19	07/10/02	1155	<.007	--	<.15	E.018	<.01	<.008	<.26

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Enalaprilat 76420-72-9	Erythromycin 114-07-8	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0
1	03/13/02	1315	<0.012	<0.015	--	MRL-ND	<0.018	<0.039	<0.015
2	10/11/00	1030	<.012	<.015	<0.15	--	<.018	<.039	<.015
	08/29/01	1130	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	10/31/01	1000	E.008	E.002	--	0.109	<.018	<.039	<.015
	12/11/01	1045	E.003	<.015	--	E.007	<.018	<.039	<.015
	03/13/02	1530	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	06/18/02	1300	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/07/02	1245	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	11/05/02	1045	.008	<.015	--	MRL-ND	<.018	<.039	<.015
	02/11/03	1000	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	07/07/03	1130	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	04/08/04	1000	<.012	<.015	<.15	--	<.018	<.039	<.015
	09/03/04	0945	<.012	<.015	<.15	--	<.018	<.039	<.015
3	10/12/00	1045	<.012	<.015	<.15	--	<.018	<.039	<.015
	08/22/01	0945	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	11/01/01	1300	<.012	.005	--	MRL-ND	<.018	<.039	<.015
	12/20/01	1015	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	03/21/02	1245	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	06/19/02	1030	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
4	10/12/00	1315	.018	.099	<.15	--	<.018	<.039	<.015
	10/12/00*	1316	.018	.105	<.15	--	<.018	<.039	<.015
	08/22/01	1100	.049	.101	--	.087	<.018	<.039	<.015
	11/01/01	1145	<.012	.098	--	.248	<.018	<.039	<.015
	12/20/01	1215	<.012	.092	--	MRL-ND	<.018	<.039	<.015
	03/21/02	1445	.041	.134	--	MRL-ND	<.018	<.039	<.015
	06/19/02	1130	.017	.049	--	E.218	<.018	<.039	<.015
5	03/22/02	1200	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
6	10/12/00	1500	E.002	.003	<.15	--	<.018	<.039	<.015
	08/22/01	1315	.014	.003	<.15	E.128	<.018	<.039	<.015
	11/01/01	0930	.009	<.015	--	.102	<.018	<.039	<.015
	12/20/01	1415	<.012	E.017	--	MRL-ND	<.018	<.039	<.015

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Enalaprilat 76420-72-9	Erythromycin 114-07-8	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0
6	03/22/02	1415	0.015	<0.015	--	MRL-ND	<0.018	<0.039	<0.015
	06/19/02	1300	E.004	<.015	--	E0.103	<.018	<.039	<.015
	08/06/02	1400	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	11/07/02	1230	<.012	E.010	--	MRL-ND	<.018	<.039	<.015
	02/12/03	0945	.016	E.014	--	MRL-ND	<.018	<.039	<.015
	07/07/03	0945	.011	.008	<0.15	MRL-ND	<.018	<.039	<.015
	04/13/04	0945	.017	.075	--	MRL-ND	<.018	<.039	<.015
	09/03/04	1400	<.012	--	<.15	--	<.018	<.039	<.015
7	10/11/00	1030	<.012	<.015	<.15	--	<.018	<.039	<.015
	08/29/01	0945	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	10/31/01	1145	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	12/10/01	1300	E.004	E.003	--	MRL-ND	<.018	<.039	<.015
	03/14/02	0945	E.007	<.015	--	MRL-ND	<.018	<.039	<.015
	06/18/02	1500	<.012	<.015	--	E.050	<.018	<.039	<.015
	06/18/02*	1501	<.012	<.015	--	E.032	<.018	<.039	<.015
	08/07/02	1030	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	11/05/02	1245	.021	<.015	--	MRL-ND	<.018	<.039	<.015
	02/11/03	1145	.013	<.015	--	MRL-ND	<.018	<.039	<.015
	07/08/03	1145	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	07/08/03*	1146	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	04/07/04	1140	E.004	.019	--	MRL-ND	<.018	<.039	<.015
	09/09/04	1100	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
8	10/11/00	1430	<.012	<.015	<.15	--	<.018	<.039	<.015
	08/29/01	1315	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	03/14/02	1215	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
9	10/03/00	1015	<.012	<.015	<.15	--	<.018	<.039	<.015
	06/13/01	1015	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	10/30/01	0945	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	12/07/01	1000	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	12/07/01*	1001	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	03/18/02	1245	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	06/20/02	1130	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/01/02	1020	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	11/06/02	1000	<.012	<.015	--	MRL-ND	<.018	<.039	<.015

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Enalaprilat 76420-72-9	Erythromycin 114-07-8	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0
9	02/13/03	1000	<0.012	<0.015	--	MRL-ND	<0.018	<0.039	<0.015
	02/13/03*	1001	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	07/09/03	0930	<.012	<.015	<0.15	MRL-ND	<.018	<.039	<.015
	04/13/04	1145	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/18/04	1000	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/18/04*	1001	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
10	10/03/00	1100	<.012	<.015	<.15	--	<.018	<.039	<.015
	06/13/01	1000	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
11	10/03/00	1245	<.012	<.015	<.15	--	<.018	<.039	<.015
	06/13/01	1230	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	10/30/01	1145	<.012	<.015	--	E0.008	<.018	<.039	<.015
	12/07/01	1145	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	03/18/02	1500	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	06/20/02	1315	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/01/02	1220	<.012	E.007	--	MRL-ND	<.018	<.039	<.015
	11/06/02	1145	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	02/13/03	1230	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	07/09/03	1130	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	04/13/04	1330	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/19/04	1030	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
12	10/03/00	1230	<.012	<.015	<.15	--	<.018	<.039	<.015
	06/13/01	1430	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	06/13/01**	1431	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
13	07/08/03	0930	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	04/08/04	1330	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	09/10/04	1030	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
14	10/11/00	1230	<.012	<.015	<.15	--	<.018	<.039	<.015
	08/29/01	1400	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	10/31/01	1345	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	12/11/01	1430	<.012	<.015	--	MRL-ND	<.018	<.039	<.015

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Enalaprilat 76420-72-9	Erythromycin 114-07-8	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0
14	03/14/02	1500	E0.004	<0.015	--	MRL-ND	<0.018	<0.039	<0.015
	06/20/02	1400	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/06/02	1120	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/06/02*	1121	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	11/07/02	1015	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	02/12/03	1230	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
17	10/19/00	1300	<.012	<.015	<0.15	--	<.018	<.039	<.015
18	10/19/00	1130	<.012	<.015	<.15	--	<.018	<.039	<.015
	10/19/00	1200	.041	E.021	<.15	--	<.018	<.039	<.015
[a]18	10/19/00	1230	.059	E.015	<.15	--	<.018	<.039	<.015
19	07/10/02	1155	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Ibuprofen 15687-27-1	Lisinopril 83915-83-7	Metformin 657-24-9	Miconazole 22916-47-8	Naproxen 22204-53-1	Paroxetine metabolite 61869-08-7	Ranitidine 66357-35-5
1	03/13/02	1315	<0.018	--	<0.003	<0.018	--	<0.26	<0.01
2	10/11/00	1030	<.018	--	<.003	--	--	<.26	<.01
	08/29/01	1130	<.018	--	<.003	<.018	--	<.26	<.01
	10/31/01	1000	.172	--	<.003	<.018	--	<.26	<.01
	12/11/01	1045	<.018	--	<.003	<.018	--	<.26	<.01
	03/13/02	1530	.037	--	<.003	<.018	--	<.26	<.01
	06/18/02	1300	<.018	--	<.003	<.018	MRL-ND	<.26	E.001
	08/07/02	1245	<.018	--	<.003	<.018	MRL-ND	--	<.01
	11/05/02	1045	<.018	--	<.003	<.018	--	--	.010
	02/11/03	1000	<.018	--	<.003	<.018	--	--	<.01
	07/07/03	1130	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	04/08/04	1000	<.018	--	<.003	<.018	MRL-ND	<.26	E.008
	09/03/04	0945	<.018	--	<.003	<.018	--	<.26	<.01
3	10/12/00	1045	<.018	MRL-ND	<.003	--	--	<.26	<.01
	08/22/01	0945	<.018	--	<.003	<.018	--	<.26	<.01
	11/01/01	1300	<.018	--	<.003	<.018	--	<.26	<.01
	12/20/01	1015	<.018	--	<.003	<.018	--	<.26	<.01
	03/21/02	1245	<.018	--	<.003	<.018	--	--	<.01
	06/19/02	1030	<.018	--	<.003	<.018	MRL-ND	<.26	<.01
4	10/12/00	1315	<.018	MRL-ND	<.003	--	--	<.26	<.01
	10/12/00*	1316	<.018	MRL-ND	<.003	--	--	<.26	<.01
	08/22/01	1100	<.018	--	<.003	<.018	--	<.26	<.01
	11/01/01	1145	.114	--	<.003	<.018	--	<.26	<.01
	12/20/01	1215	<.018	--	<.003	<.018	--	<.26	<.01
	03/21/02	1445	.286	--	<.003	<.018	--	--	<.01
	06/19/02	1130	<.018	--	.123	<.018	MRL-ND	<.26	.037
5	03/22/02	1200	<.018	--	<.003	<.018	--	--	<.01
6	10/12/00	1500	.244	MRL-ND	<.003	--	--	<.26	<.01
	08/22/01	1315	<.018	MRL-ND	<.003	<.018	--	<.26	<.01
	11/01/01	0930	.398	--	<.003	<.018	--	<.26	<.01
	12/20/01	1415	.351	--	<.003	<.018	--	<.26	<.01

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Ibuprofen 15687-27-1	Lisinopril 83915-83-7	Metformin 657-24-9	Miconazole 22916-47-8	Naproxen 22204-53-1	Paroxetine metabolite 61869-08-7	Ranitidine 66357-35-5
6	03/22/02	1415	<0.018	--	<0.003	<0.018	--	--	<0.01
	06/19/02	1300	<.018	--	.067	<.018	MRL-ND	<0.26	E.009
	08/06/02	1400	<.018	--	<.003	<.018	MRL-ND	--	<.01
	11/07/02	1230	<.018	--	<.003	<.018	--	--	<.01
	02/12/03	0945	<.018	--	<.003	<.018	--	--	<.01
	07/07/03	0945	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	04/13/04	0945	<.018	--	<.003	<.018	MRL-ND	<.26	<.01
	09/03/04	1400	<.018	--	<.003	<.018	--	--	<.01
7	10/11/00	1030	<.018	MRL-ND	<.003	--	--	<.26	<.01
	08/29/01	0945	<.018	--	<.003	<.018	--	<.26	<.01
	10/31/01	1145	.074	--	<.003	<.018	--	<.26	<.01
	12/10/01	1300	.120	--	<.003	<.018	--	<.26	<.01
	03/14/02	0945	.173	--	<.003	<.018	--	<.26	<.01
	06/18/02	1500	<.018	--	<.003	<.018	0.261	<.26	<.01
	06/18/02*	1501	<.018	--	<.003	<.018	.150	<.26	E.003
	08/07/02	1030	<.018	--	<.003	<.018	MRL-ND	--	<.01
	11/05/02	1245	<.018	--	<.003	<.018	--	--	<.01
	02/11/03	1145	<.018	--	<.003	<.018	MRL-ND	--	<.01
	07/08/03	1145	<.018	--	<.003	<.018	--	--	<.01
	07/08/03*	1146	<.018	--	<.003	<.018	--	--	<.01
	04/07/04	1140	<.018	--	<.003	<.018	--	<.26	<.01
	09/09/04	1100	<.018	--	<.003	<.018	--	<.26	<.01
8	10/11/00	1430	<.018	MRL-ND	<.003	--	--	<.26	<.01
	08/29/01	1315	<.018	--	<.003	<.018	--	<.26	<.01
	03/14/02	1215	.099	--	<.003	<.018	--	<.26	<.01
9	10/03/00	1015	<.018	MRL-ND	<.003	--	--	<.26	<.01
	06/13/01	1015	<.018	--	<.003	<.018	--	<.26	<.01
	10/30/01	0945	<.018	--	<.003	<.018	--	<.26	<.01
	12/07/01	1000	<.018	--	<.003	<.018	--	<.26	<.01
	12/07/01*	1001	<.018	--	<.003	<.018	--	<.26	<.01
	03/18/02	1245	<.018	--	<.003	<.018	--	<.26	<.01
	06/20/02	1130	<.018	--	<.003	<.018	MRL-ND	<.26	<.01
	08/01/02	1020	<.018	--	<.003	<.018	MRL-ND	--	<.01
	11/06/02	1000	<.018	--	<.003	<.018	--	--	<.01

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Ibuprofen 15687-27-1	Lisinopril 83915-83-7	Metformin 657-24-9	Miconazole 22916-47-8	Naproxen 22204-53-1	Paroxetine metabolite 61869-08-7	Ranitidine 66357-35-5
9	02/13/03	1000	<0.018	--	<0.003	<0.018	--	--	<0.01
	02/13/03*	1001	<.018	--	<.003	<.018	--	--	<.01
	07/09/03	0930	<.018	MRL-ND	<.003	<.018	MRL-ND	<0.26	<.01
	04/13/04	1145	<.018	--	<.003	<.018	--	--	<.01
	08/18/04	1000	<.018	--	<.003	<.018	--	--	<.01
	08/18/04*	1001	<.018	--	<.003	<.018	--	--	<.01
10	10/03/00	1100	<.018	MRL-ND	<.003	--	--	<.26	<.01
	06/13/01	1000	<.018	--	<.003	<.018	--	<.26	<.01
11	10/03/00	1245	<.018	MRL-ND	<.003	--	--	<.26	<.01
	06/13/01	1230	<.018	--	<.003	<.018	--	<.26	<.01
	10/30/01	1145	<.018	--	<.003	<.018	--	<.26	<.01
	12/07/01	1145	<.018	--	<.003	<.018	--	<.26	<.01
	03/18/02	1500	.139	--	<.003	<.018	--	<.26	<.01
	06/20/02	1315	<.018	--	<.003	<.018	MRL-ND	<.26	<.01
	08/01/02	1220	<.018	--	<.003	<.018	MRL-ND	--	<.01
	11/06/02	1145	<.018	--	<.003	<.018	--	--	<.01
	02/13/03	1230	<.018	--	<.003	<.018	--	--	<.01
	07/09/03	1130	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	04/13/04	1330	<.018	--	<.003	<.018	--	--	<.01
	08/19/04	1030	<.018	--	<.003	<.018	--	--	<.01
12	10/03/00	1230	<.018	MRL-ND	<.003	--	--	<.26	<.01
	06/13/01	1430	.299	MRL-ND	<.003	<.018	--	<.26	<.01
	06/13/01**	1431	<.018	MRL-ND	<.003	<.018	--	<.26	<.01
13	07/08/03	0930	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	04/08/04	1300	<.018	MRL-ND	.009	<.018	MRL-ND	<.26	<.01
	09/10/04	1030	<.018	--	<.003	<.018	--	--	<.01
14	10/11/00	1230	<.018	MRL-ND	<.003	--	--	<.26	<.01
	08/29/01	1400	<.018	--	<.003	<.018	--	<.26	<.01
	10/31/01	1345	<.018	--	<.003	<.018	--	<.26	<.01
	12/11/01	1430	.296	--	<.003	<.018	--	<.26	<.01

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Ibuprofen 15687-27-1	Lisinopril 83915-83-7	Metformin 657-24-9	Miconazole 22916-47-8	Naproxen 22204-53-1	Paroxetine metabolite 61869-08-7	Ranitidine 66357-35-5
14	03/14/02	1500	0.079	--	<0.003	<0.018	--	<0.26	<0.01
	06/20/02	1400	<.018	--	.015	<.018	0.105	<.26	E.002
	08/06/02	1120	<.018	--	<.003	<.018	MRL-ND	--	E.004
	08/06/02*	1121	<.018	--	<.003	<.018	MRL-ND	--	<.01
	11/07/02	1015	<.018	--	<.003	<.018	--	--	<.01
	02/12/03	1230	<.018	--	<.003	<.018	--	--	<.01
17	10/19/00	1300	.905	--	<.003	--	--	<.26	<.01
18	10/19/00	1130	1.52	--	<.003	--	--	<.26	<.01
	10/19/00	1200	<.018	--	<.003	--	--	<.26	<.01
[a]18	10/19/00	1230	.114	--	<.003	--	--	<.26	<.01
19	07/10/02	1155	<.018	--	<.003	<.018	MRL-ND	<.26	<.01

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Urobilin 1856-98-0	Warfarin 81-81-2
1	03/13/02	1315	<0.029	<0.023	<0.011	<0.014	--	<0.001
2	10/11/00	1030	<.029	.024	<.011	<.014	MRL-ND	<.001
	08/29/01	1130	<.029	<.023	<.011	<.014	--	<.001
	10/31/01	1000	<.029	.100	<.011	.033	--	<.001
	12/11/01	1045	<.029	E.021	<.011	E.001	--	<.001
	03/13/02	1530	<.029	<.023	E.007	.024	--	<.001
	06/18/02	1300	<.029	.025	<.011	<.014	--	<.001
	08/07/02	1245	<.029	.093	<.011	<.014	--	<.001
	11/05/02	1045	<.029	.073	<.011	.027	--	<.001
	02/11/03	1000	<.029	.133	<.011	.028	--	<.001
	07/07/03	1130	<.029	.071	<.011	E.003	MRL-ND	<.001
	04/08/04	1000	<.029	<.023	--	E.006	--	<.001
	09/03/04	0945	<.029	<.023	--	<.014	--	<.001
3	10/12/00	1045	<.029	<.023	<.011	<.014	MRL-ND	<.001
	08/22/01	0945	<.029	<.023	<.011	<.014	--	<.001
	11/01/01	1300	<.029	<.023	<.011	<.014	--	<.001
	12/20/01	1015	<.029	<.023	<.011	<.014	--	<.001
	03/21/02	1245	<.029	<.023	<.011	<.014	--	<.001
	06/19/02	1030	<.029	<.023	<.011	<.014	--	<.001
4	10/12/00	1315	<.029	.112	<.011	.023	MRL-ND	<.001
	10/12/00*	1316	<.029	.137	<.011	.023	MRL-ND	<.001
	08/22/01	1100	<.029	.083	<.011	.040	--	<.001
	11/01/01	1145	E.005	.123	<.011	E.013	--	<.001
	12/20/01	1215	E.019	.098	<.011	.050	--	<.001
	03/21/02	1445	.034	.152	.691	.252	--	<.001
	06/19/02	1130	.010	.088	<.011	.098	--	<.001
5	03/22/02	1200	<.029	<.023	<.011	<.014	--	<.001
6	10/12/00	1500	<.029	.040	<.011	E.012	MRL-ND	<.001
	08/22/01	1315	<.029	.096	<.011	.048	MRL-ND	<.001
	11/01/01	0930	<.029	.083	<.011	.036	--	<.001
	12/20/01	1415	E.013	.100	<.011	.058	--	<.001

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Urobilin 1856-98-0	Warfarin 81-81-2
6	03/22/02	1415	E0.015	0.084	<0.011	0.115	--	<0.001
	06/19/02	1300	<.029	.059	<.011	.043	--	<.001
	08/06/02	1400	<.029	.102	<.011	.026	--	<.001
	11/07/02	1230	E.010	.115	<.011	.051	--	<.001
	02/12/03	0945	E.018	<.023	<.011	.097	--	<.001
	07/07/03	0945	<.029	.130	<.011	.041	MRL-ND	<.001
	04/13/04	0945	<.029	.080	<.011	.036	--	<.001
	09/03/04	1100	<.029	.016	.050	.017	--	<.001
7	10/11/00	1030	<.029	.042	<.011	E.003	MRL-ND	<.001
	08/29/01	0945	<.029	.026	<.011	E.010	--	<.001
	10/31/01	1145	<.029	E.010	<.011	.026	--	<.001
	12/10/01	1300	E.007	.024	E.026	.029	--	<.001
	03/14/02	0945	E.007	.072	E.088	.058	--	<.001
	06/18/02	1500	<.029	.037	<.011	E.011	--	<.001
	06/18/02*	1501	<.029	.027	<.011	E.011	--	<.001
	08/07/02	1030	<.029	.167	<.011	.032	--	<.001
	11/05/02	1245	E.012	.117	<.011	.050	--	<.001
	02/11/03	1145	<.029	.228	<.011	.107	--	<.001
	07/08/03	1145	<.029	.098	<.011	E.016	--	<.001
	07/08/03*	1146	<.029	.110	<.011	.032	--	<.001
	04/07/04	1140	<.029	<.023	<.011	.026	--	<.001
	09/09/04	1000	<.029	<.023	<.011	<.014	--	<.001
8	10/11/00	1430	<.029	.035	<.011	E.002	MRL-ND	<.001
	08/29/01	1315	<.029	<.023	<.011	<.014	--	<.001
	03/14/02	1215	E.006	.053	E.030	.357	--	<.001
9	10/03/00	1015	<.029	<.023	<.011	<.014	MRL-ND	<.001
	06/13/01	1015	<.029	<.023	<.011	E.001	--	<.001
	10/30/01	0945	<.029	E.002	<.011	<.014	--	<.001
	12/07/01	1000	<.029	<.023	<.011	<.014	--	<.001
	12/07/01*	1001	<.029	<.023	<.011	<.014	--	<.001
	03/18/02	1245	<.029	<.023	<.011	<.014	--	<.001
	06/20/02	1130	<.029	<.023	<.011	<.014	--	<.001
	08/01/02	1020	<.029	<.023	<.011	<.014	--	<.001
	11/06/02	1000	<.029	<.023	<.011	<.014	--	<.001

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Urobilin 1856-98-0	Warfarin 81-81-2
9	02/13/03	1000	<0.003	<0.023	<0.011	<0.014	--	<0.001
	02/13/03*	1001	<.029	<.023	<.011	<.014	--	<.001
	07/09/03	0930	<.029	<.023	<.011	<.014	MRL-ND	<.001
	04/13//04	1145	<.029	<.023	<.011	<.014	--	<.001
	08/18/04	1000	<.029	<.023	<.011	<.014	--	<.001
	08/18/04*	1001	<.029	<.023	<.011	<.014	--	<.001
10	10/03/00	1100	<.029	<.023	<.011	<.014	MRL-ND	<.001
	06/13/01	1000	<.029	<.023	<.011	E.003	--	<.001
11	10/03/00	1245	<.029	<.023	<.011	<.014	MRL-ND	<.001
	06/13/01	1230	<.029	<.023	<.011	E.003	--	<.001
	10/30/01	1145	<.029	<.023	<.011	E.003	--	<.001
	12/07/01	1145	<.029	.039	<.011	<.014	--	<.001
	03/18/02	1500	<.029	.024	<.011	<.014	--	<.001
	06/20/02	1315	<.029	<.023	<.011	<.014	--	<.001
	08/01/02	1220	<.029	<.023	<.011	<.014	--	<.001
	11/06/02	1145	<.029	<.023	<.011	<.014	--	<.001
	02/13/03	1230	<.003	<.023	<.011	<.014	--	<.001
	07/09/03	1130	<.029	<.023	<.011	<.014	MRL-ND	<.001
	04/13/04	1330	<.029	<.023	<.011	<.014	--	<.001
	08/19/04	1030	<.029	<.023	<.011	<.014	--	<.001
12	10/03/00	1230	<.029	<.023	<.011	<.014	MRL-ND	<.001
	06/13/01	1430	<.029	.014	.048	.015	MRL-ND	<.001
	06/13/01**	1431	<.029	<.023	<.011	<.014	MRL-ND	<.001
13	07/08/03	0930	<.029	.074	<.011	E.002	MRL-ND	<.001
	04/08/04	1300	<.029	.074	<.011	.015	--	<.001
	09/10/04	1030	<.029	<.023	<.011	<.014	--	<.001
14	10/11/00	1230	<.029	E.016	<.011	<.014	MRL-ND	<.001
	08/29/01	1400	<.029	<.023	<.011	<.014	--	<.001
	10/31/01	1345	<.029	<.023	<.011	<.014	--	<.001
	12/11/01	1430	<.029	.051	E.045	.038	--	<.001

Table 5. Concentrations of selected pharmaceutical compounds in base-flow samples.—Continued

[Numbers below compound are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter in filtered samples; <, less than; --, no data; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; E, estimated; *, replicate sample; **, field equipment blank]

Site number (fig. 1)	Sample date	Sample time	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Urobilin 1856-98-0	Warfarin 81-81-2
14	03/14/02	1500	E0.005	0.055	E0.056	0.042	--	<0.001
	06/20/02	1400	<.029	E.021	<.011	E.009	--	<.001
	08/06/02	1120	<.029	.053	<.011	<.014	--	<.001
	08/06/02*	1121	<.029	.089	<.011	.011	--	<.001
	11/07/02	1015	E.004	.091	<.011	.028	--	<.001
	02/12/03	1230	E.003	.104	<.011	.060	--	<.001
17	10/19/00	1300	<.029	<.023	<.011	E.004	MRL-ND	<.001
18	10/19/00	1130	<.029	<.023	<.011	.029	MRL-ND	<.001
	10/19/00	1200	<.029	<.023	<.011	.020	0.671	<.001
[a]18	10/19/00	1230	<.029	.252	<.011	.036	MRL-ND	<.001
19	7/10/02	1155	<.029	E.007	<.011	<.014	--	<.001

[a]Treated effluent.

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Mean discharge (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)
2	05/09/03	2300	05/11/03	1800	482	495	--	--	--	--	1.0	0.08
	06/02/03	0510	06/03/03	0910	167	430	--	--	--	--	2.3	.10
	06/10/03	1900	06/11/03	1700	262	450	--	--	--	--	2.0	E.04
	06/29/03	1800	07/01/03	0300	150	E445	--	--	--	--	2.5	<.04
	08/30/03	1100	08/30/03	2330	141	440	--	--	--	--	2.2	.05
	08/31/03	0845	08/31/03	1345	3,776	270	--	--	--	--	3.7	.14
	05/25/04	0230	05/25/04	1015	1,780	305	--	--	--	--	4.0	E.02
6	10/27/02	0900	10/28/02	0150	319	630	--	--	--	--	1.4	<.04
	02/13/03	1030	02/14/03	1800	667	--	--	--	--	--	13	.47
	03/19/03	1505	03/19/03	1730	171	1,580	--	--	--	--	3.9	2.28
	03/19/03*	1506	03/19/03	1731	171	1,560	--	--	--	--	3.9	2.17
	04/16/03	1400	04/17/03	0600	169	--	--	--	--	--	--	--
	04/19/03	0950	04/20/03	0930	1,596	400	--	--	--	--	7.2	.23
	04/23/03	2120	04/24/03	1155	633	475	--	--	--	--	1.4	.20
	05/08/03	0915	05/09/03	1300	312	--	--	--	--	--	--	--
	05/09/03	2200	05/11/03	0600	1,468	320	--	--	--	--	4.6	.25
	05/09/03*	2201	05/11/03	0601	1,468	E305	--	--	--	--	2.8	.26
	06/02/03	0310	06/03/03	1200	1,925	325	--	--	--	--	1.3	.13
	08/28/03	1600	08/29/03	0700	12,811	415	--	--	--	--	2.8	E.04
	08/31/03	0725	08/31/03	1140	7,281	175	--	--	--	--	1.8	.05
	05/24/04	2310	05/25/04	1020	1,163	335	--	--	--	--	2.1	<.04
7	04/23/03	2200	04/24/03	1330	832	500	7.6	14.6	295	8.4	2.1	.12
	04/24/03	1345	04/25/03	1300	439	540	7.6	14.3	355	8.2	1.6	<.04
	05/08/03	1900	05/09/03	0900	351	605	7.8	18.6	300	7.4	--	--
	05/09/03	2200	05/11/03	2000	1,793	E350	7.8	19.2	1,090	6.2	3.2	.10
	06/02/03	0345	06/03/03	0900	2,463	345	7.4	17.3	315	7.8	2.0	.11
	09/11/03	1315	09/15/03	0500	930	435	8.0	23.9	530	7.2	.8	<.04
	05/25/04	0800	05/25/04	0900	3,306	285	7.5	20.4	1,200	7.4	3.9	.21

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Mean discharge (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)
9	10/23/02	1450	10/24/02	0250	77	355	--	--	--	--	1.1	0.14
	10/23/02*	1451	10/24/02	0251	77	340	--	--	--	--	1.1	.15
	10/27/02	0845	10/27/02	1740	137	210	--	--	--	--	1.2	<.04
	02/14/03	0000	02/14/03	1845	202	--	--	--	--	--	3.4	.14
	02/14/03*	0001	02/14/03	1846	202	--	--	--	--	--	3.1	.14
	03/20/03	0320	03/20/03	0520	94	715	--	--	--	--	--	--
	04/06/03	0830	04/06/03	1325	104	--	--	--	--	--	--	--
	04/19/03	0955	04/19/03	1830	519	200	--	--	--	--	1.7	<.04
	04/23/03	2100	04/24/03	0450	327	175	--	--	--	--	1.2	.20
	05/08/03	0910	05/09/03	0800	229	--	--	--	--	--	--	--
	05/10/03	0455	05/10/03	1730	272	170	--	--	--	--	1.2	.41
	06/02/03	0000	06/03/03	0000	407	145	--	--	--	--	--	--
	06/12/03	2025	06/13/03	1155	1,245	185	--	--	--	--	1.6	.39
	06/12/03*	2026	06/13/03	1156	1,245	185	--	--	--	--	1.6	.37
	06/09/04	1130	06/10/04	1400	88	280	--	--	--	--	1.5	.04
11	03/20/03	0415	03/20/03	0555	84	--	--	--	--	--	--	--
	04/06/03	0930	04/06/03	1520	46	--	--	--	--	--	--	--
	04/19/03	0955	04/19/03	1830	913	310	7.5	15.6	4.8	8.6	4.1	E.04
	04/23/03	2040	04/24/03	0520	348	430	7.6	15.4	103	8.5	1.8	.25
	05/08/03	1015	05/09/03	0800	200	335	7.3	18.3	61	3.1	--	--
	05/10/03	0500	05/10/03	1800	305	235	7.3	18.7	145	6.7	1.7	.67
	06/02/03	0015	06/03/03	0015	419	410	7.4	18.6	64	6.8	2.5	.33
	06/12/03	2030	06/13/03	1200	2,236	160	7.5	21.2	410	5.5	5.3	.18
	08/28/03	1930	08/29/03	0400	370	270	7.5	25.8	220	5.0	4.6	.12
	06/09/04	1000	06/10/04	1400	1,535	365	7.5	22.3	26	6.2	1.2	<.04

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Mean discharge (ft^3/s)	Specific conductance (µS/cm)	pH (standard units)	Water temperature (°C)	Turbidity (NTU)	Oxygen, dissolved (mg/L)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)
13	06/02/03	0600	06/03/03	1800	1,830	415	--	2.1	--	--	1.5	0.13
	06/11/03	0245	06/11/03	2300	499	635	--	3.6	--	--	1.3	.06
	06/29/03	1845	07/01/03	0345	481	E620	--	4.0	--	--	2.2	.16
	07/09/03	2100	07/11/03	1000	550	575	--	4.3	--	--	2.6	<.04
	09/11/03	1315	09/13/03	0000	520	1,160	--	2.5	--	--	2.1	.05
	09/13/03	1300	09/15/03	1200	1,974	410	--	.6	--	--	1.0	.08
	05/25/04	1115	05/25/04	1230	2,816	425	--	1.4	--	--	1.9	<.04
	05/25/04*	1116	05/25/04	1231	2,816	435	--	--	--	--	1.4	<.04
14	10/23/02	1930	10/25/02	0315	189	580	--	4.6	--	--	1.5	.18
	10/27/02	1000	10/28/02	1700	198	475	--	2.2	--	--	1.2	<.04

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	NO_2+NO_3, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)
2	05/09/03	2300	05/11/03	1800	0.99	0.052	1.99	0.10	0.11	0.23	17,000	--
	06/02/03	0510	06/03/03	0910	2.10	.083	4.40	.18	.20	.71	E23,000	22,300
	06/10/03	1900	06/11/03	1700	1.24	.029	3.24	.11	.12	.65	18,000	22,000
	06/29/03	1800	07/01/03	0300	2.45	.026	4.95	.20	.22	1.12	5,900	4,200
	08/30/03	1100	08/30/03	2330	3.48	.032	5.68	.52	.58	1.16	7,400	11,700
	08/31/03	0845	08/31/03	1345	1.36	.033	5.06	.13	.16	1.54	24,000	45,000
	05/25/04	0230	05/25/04	1015	.94	.027	4.94	.01	.12	1.21	15,700	15,300
6	10/27/02	0900	10/28/02	0150	4.49	.073	5.89	1.03	1.21	1.50	--	--
	02/13/03	1030	02/14/03	1800	4.92	.246	17.9	1.08	1.15	6.30	--	--
	03/19/03	1505	03/19/03	1730	3.83	.361	7.73	1.19	1.35	1.60	E740	--
	03/19/03*	1506	03/19/03	1731	3.83	.361	7.73	1.17	1.38	1.55	--	--
	04/16/03	1400	04/17/03	0600	--	--	--	--	--	--	--	--
	04/19/03	0950	04/20/03	0930	1.64	.072	8.84	.23	.26	2.73	16,000	--
	04/23/03	2120	04/24/03	1155	1.86	.051	3.26	.19	.21	.37	3,300	--
	05/08/03	0915	05/09/03	1300	--	--	--	--	--	--	--	--
	05/09/03	2200	05/11/03	0600	1.35	.083	5.95	.15	.18	1.35	30,000	--
	05/09/03*	2201	05/11/03	0601	1.36	.084	4.16	.15	.18	1.06	--	--
	06/02/03	0310	06/03/03	1200	1.94	.076	3.24	.32	.37	.58	16,000	22,000
	08/28/03	1600	08/29/03	0700	2.74	.063	5.54	.57	.64	1.45	170,000	267,000
	08/31/03	0725	08/31/03	1140	1.19	.019	2.99	.15	.19	.77	12,000	37,000
	05/24/04	2310	05/25/04	1020	1.43	.105	3.53	.15	.22	.69	41,100	64,000
7	04/23/03	2200	04/24/03	1330	2.05	.071	4.15	.22	.27	.80	5,500	--
	04/24/03	1345	04/25/03	1300	1.65	.048	3.25	.10	.22	.43	4,600	--
	05/08/03	1900	05/09/03	0900	--	--	--	--	--	--	--	--
	05/09/03	2200	05/11/03	2000	1.34	.061	4.54	.10	.12	1.03	22,000	--
	06/02/03	0345	06/03/03	0900	2.01	.081	4.01	.32	.35	.86	8,300	13,500
	09/11/03	1315	09/15/03	0500	2.26	.109	3.06	.33	.40	.51	--	--
	05/25/04	0800	05/25/04	0900	.24	.102	4.14	.03	.11	1.13	32,500	31,000

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	NO_2+NO_3, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)
9	10/23/02	1450	10/24/02	0250	0.81	0.028	1.91	0.06	0.08	0.17	--	--
	10/23/02*	1451	10/24/02	0251	.82	.028	1.92	.06	.08	.17	--	--
	10/27/02	0845	10/27/02	1740	.68	.032	1.88	.06	.08	.26	--	--
	02/14/03	0000	02/14/03	1845	.58	.035	3.98	.06	.11	.71	--	--
	02/14/03*	0001	02/14/03	1846	.58	.034	3.68	.07	.11	.70	--	--
	03/20/03	0320	03/20/03	0520	--	--	--	--	--	--	1,600	--
	04/06/03	0830	04/06/03	1325	--	--	--	--	--	--	--	--
	04/19/03	0955	04/19/03	1830	.53	.020	2.23	E.01	.06	.38	20,000	--
	04/23/03	2100	04/24/03	0450	.33	.015	1.53	.07	.10	.23	12,000	--
	05/08/03	0910	05/09/03	0800	--	--	--	--	--	--	--	--
	05/10/03	0455	05/10/03	1730	.58	.037	1.78	.05	.07	.15	11,000	--
	06/02/03	0000	06/03/03	0000	--	--	--	--	--	--	>24,000	41,000
	06/12/03	2025	06/13/03	1155	1.21	.038	2.81	.15	.18	.35	67,000	113,000
	06/12/03*	2026	06/13/03	1156	1.23	.038	2.83	.15	.18	.35	--	--
	06/09/04	1130	06/10/04	1400	.26	.063	1.80	<.02	.08	.43	46,000	59,000
11	03/20/03	0415	03/20/03	0555	--	--	--	--	--	--	--	--
	04/06/03	0930	04/06/03	1520	--	--	--	--	--	--	--	--
	04/19/03	0955	04/19/03	1830	.32	.031	4.42	<.02	E.02	.94	48,000	--
	04/23/03	2040	04/24/03	0520	1.23	.069	3.03	.09	.12	.31	11,000	--
	05/08/03	1015	05/09/03	0800	--	--	--	--	--	--	--	--
	05/10/03	0500	05/10/03	1800	.55	.067	2.25	.06	.08	.18	14,000	--
	06/02/03	0015	06/03/03	0015	.47	.032	2.97	.04	.06	.33	>24,000	48,000
	06/12/03	2030	06/13/03	1200	.43	.030	5.73	<.02	.06	1.34	59,000	113,000
	08/28/03	1930	08/29/03	0400	.48	.047	5.08	.02	.06	1.24	160,000	190,000
	06/09/04	1000	06/10/04	1400	.44	.037	1.64	.05	.11	.24	43,500	74,000

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	NO_2+NO_3, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)	Phosphorus, dissolved (mg/L)	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)
13	06/02/03	0600	06/03/03	1800	2.09	0.044	3.59	0.25	0.28	0.60	8,800	>15,000
	06/11/03	0245	06/11/03	2300	3.55	.073	4.85	.51	.50	.78	4,800	6,400
	06/29/03	1845	07/01/03	0345	4.02	.098	6.22	.65	.73	1.51	5,100	5,000
	07/09/03	2100	07/11/03	1000	4.29	.060	6.89	.76	.81	1.63	18,000	32,000
	09/11/03	1315	09/13/03	0000	2.47	.134	4.57	.26	.29	.89	22,000	>31,000
	09/13/03	1300	09/15/03	1200	.61	.118	1.61	<.18	.07	.24	--	--
	05/25/04	1115	05/25/04	1230	1.43	.048	3.30	.07	.11	.62	17,300	16,700
	05/25/04*	1116	05/25/04	1231	1.41	.051	2.81	.08	.10	.43	17,000	24,000
14	10/23/02	1930	10/25/02	0315	4.60	.076	6.10	1.0	1.01	1.25	--	--
	10/27/02	1000	10/28/02	1700	2.19	.054	3.39	.33	.40	.60	--	--

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)	Carbon organic, dissolved (mg/L)
2	05/09/03	2300	05/11/03	1800	257,000	47.9	152	8.9	--	23	6.5
	06/02/03	0510	06/03/03	0910	>242,000	47.8	915	14.3	3.6	41	7.0
	06/10/03	1900	06/11/03	1700	242,000	41.9	724	14.2	7.4	E40	5.6
	06/29/03	1800	07/01/03	0300	242,000	40.6	1,280	17.5	18	43	5.3
	08/30/03	1100	08/30/03	2330	242,000	41.4	663	14.5	9.2	43	6.5
	08/31/03	0845	08/31/03	1345	155,000	19.1	1,940	33.8	9.5	70	6.1
	05/25/04	0230	05/25/04	1015	>242,000	15.0	1,830	39.6	4.5	90	6.0
6	10/27/02	0900	10/28/02	0150	--	63.5	167	35.4	36	30	5.8
	02/13/03	1030	02/14/03	1800	--	--	1,940	74.9	--	E140	6.1
	03/19/03	1505	03/19/03	1730	K970	335	112	12.6	--	42	7.8
	03/19/03*	1506	03/19/03	1731	--	350	115	11.2	--	43	8.8
	04/16/03	1400	04/17/03	0600	--	--	205	--	--	--	--
	04/19/03	0950	04/20/03	0930	>48,400	65.2	2,298	63.2	--	130	5.2
	04/23/03	2120	04/24/03	1155	175,000	66.2	147	9.6	--	31	5.4
	05/08/03	0915	05/09/03	1300	--	--	206	--	E3.9	--	--
	05/09/03	2200	05/11/03	0600	830,000	35.8	1,917	44.9	E3.9	60	6.6
	05/09/03*	2201	05/11/03	0601	--	35.6	1,848	47.7	--	100	6.8
	06/02/03	0310	06/03/03	1200	>24,200	40.9	159	9.9	7.8	37	5.8
	08/28/03	1600	08/29/03	0700	>2,400,000	45.3	567	26.3	5.2	29	8.4
	08/31/03	0725	08/31/03	1140	>48,300	10.2	815	17.8	12	46	5.0
	05/24/04	2310	05/25/04	1020	>2,400,000	37.7	821	32.0	6.2	63	6.2
7	04/23/03	2200	04/24/03	1330	220,000	67.2	2,906	16.5	--	25	5.8
	04/24/03	1345	04/25/03	1300	283,000	68.7	355	49.5	--	E170	43.3
	05/08/03	1900	05/09/03	0900	--	--	260	--	--	--	--
	05/09/03	2200	05/11/03	2000	955,000	38.7	2,433	28.5	--	50	6.1
	06/02/03	0345	06/03/03	0900	>242,000	41.5	299	16.2	7.1	57	5.4
	09/11/03	1315	09/15/03	0500	--	43.7	1,900	8.1	--	27	6.6
	05/25/04	0800	05/25/04	0900	>2,400,000	14.9	1,625	32.0	5.4	81	6.9

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)	Carbon organic, dissolved (mg/L)
9	10/23/02	1450	10/24/02	0250	--	25.7	64	9.1	E60	26	6.5
	10/23/02*	1451	10/24/02	0251	--	25.6	59	9.4	E68	23	7.4
	10/27/02	0845	10/27/02	1740	--	14.6	109	5.5	25.0	36	5.9
	02/14/03	0000	02/14/03	1845	--	--	320	26.7	--	E70	8.3
	02/14/03*	0001	02/14/03	1846	--	--	54	26.9	--	E90	8.2
	03/20/03	0320	03/20/03	0520	5,120	165	102	12.8	--	54	8.8
	04/06/03	0830	04/06/03	1325	--	--	198	--	--	--	--
	04/19/03	0955	04/19/03	1830	>24,200	26.7	159	11.9	--	46	4.7
	04/23/03	2100	04/24/03	0450	>242,000	18.3	125	9.2	--	33	7.1
	05/08/03	0910	05/09/03	0800	--	--	171	--	<2	--	--
	05/10/03	0455	05/10/03	1730	710,000	14.1	195	9.6	<2	23	5.3
	06/02/03	0000	06/03/03	0000	>24,200	12.6	64	10.5	11	47	5.9
	06/12/03	2025	06/13/03	1155	1,300,000	14.7	1,130	10.2	15	35	5.2
	06/12/03*	2026	06/13/03	1156	--	15.3	318	9.4	12	34	5.1
	06/09/04	1130	06/10/04	1400	>242,000	31.1	257	14.7	14	55	9.2
11	03/20/03	0415	03/20/03	0555	--	--	63	--	--	--	--
	04/06/03	0930	04/06/03	1520	--	--	59	--	--	--	--
	04/19/03	0955	04/19/03	1830	>48,400	43.0	1,146	58.8	--	114	6.7
	04/23/03	2040	04/24/03	0520	>242,000	57.1	109	10.8	--	31	5.7
	05/08/03	1015	05/09/03	0800	--	--	118	--	E23	--	--
	05/10/03	0500	05/10/03	1800	2,400,000	20.5	--	8.7	E22	32	6.1
	06/02/03	0015	06/03/03	0015	>24,200	49.0	60	15.6	16	55	7.8
	06/12/03	2030	06/13/03	1200	1,410,000	<.2	2,540	22.2	18	89	4.5
	08/28/03	1930	08/29/03	0400	2,400,000	26.5	820	43.1	19	30	9.3
	06/09/04	1000	06/10/04	1400	>242,000	35.3	71	10.8	6.6	34	6.3

Table 6. Physical properties, nutrients, bacteria, and selected chemical concentrations in stormwater samples collected between October 2002 and June 2004.—Continued

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, Nephelometric Turbidity Units; mg/L, milligrams per liter; +, plus; N, nitrogen; $NO_2 + NO_3$, nitrite plus nitrate; col/100 mL, colonies per 100 milliliters; --, no data; E, estimated; <, less than; *, replicate sample; >, greater than; K, estimated based on non-ideal colony count]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Total coliform (col/100 mL)	Chloride, dissolved (mg/L)	Suspended sediment (mg/L)	Carbon organic, total (mg/L)	Biochemical oxygen demand (mg/L)	Chemical oxygen demand (mg/L)	Carbon organic, dissolved (mg/L)
13	06/02/03	0600	06/03/03	1800	>242,000	50.7	187	9.9	8.6	34	5.1
	06/11/03	0245	06/11/03	2300	148,000	71.5	184	13.0	20	E30	5.7
	06/29/03	1845	07/01/03	0345	170,000	70.1	614	23.7	10	56	8.0
	07/09/03	2100	07/11/03	1000	>240,000	70.7	886	20.2	12	44	7.2
	09/11/03	1315	09/13/03	0000	>242,000	61.8	436	--	--	--	--
	09/13/03	1300	09/15/03	1200	--	39.9	1,060	9.8	--	35	6.6
	05/25/04	1115	05/25/04	1230	>242,000	31.0	459	15.1	3.3	34	9.4
	05/25/04*	1116	05/25/04	1231	>242,000	30.8	437	10.7	3.9	20	4.9
14	10/23/02	1930	10/25/02	0315	--	57.8	140	10.6	E58	23	7.0
	10/27/02	1000	10/28/02	1700	--	41.4	64	7.8	34	22	66.9

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	1,4-Dichloro-benzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methyl-naphthalene 90-12-0	2,6-Dimethyl-naphthalene 581-42-0	2-Methyl-naphthalene 91-57-6	3,4-Dichlorophenyl-isocyanate 102-36-3	3-β-Coprostanol 360-68-9
2	06/29/03	1800	07/01/03	0300	<0.5	<5	<5	<0.5	<0.5	<0.5	--	<2
	08/30/03	1100	08/30/03	2330	<.5	<5	<5	<.5	<.5	<.5	--	<2
	08/31/03	0845	08/31/03	1345	<.5	<5	<5	<.5	<.5	<.5	--	<2
6	10/27/02	0900	10/28/02	0150	<.5	<5	<5	<.5	<.5	<.5	E1.2	E1.4
	02/13/03	1030	02/14/03	1800	<.5	<5	<5	<.5	<.5	<.5	E2.4	E5.6
	03/19/03	1505	03/19/03	1730	<.5	<5	<5	<.5	<.5	<.5	E.58	E.76
	03/19/03*	1506	03/19/03	1731	<.5	<5	<5	<.5	<.5	<.5	E.62	E.89
	08/28/03	1600	08/29/03	0700	<.5	<5	<5	<.5	<.5	<.5	--	<2
	08/31/03	0725	08/31/03	1140	<.5	<5	<5	<.5	<.5	<.5	--	E.70
9	10/23/02	1450	10/24/02	0250	<.5	<5	<5	<.5	<.5	<.5	E.03	<2
	10/23/02*	1451	10/24/02	0251	<.5	<5	<5	<.5	<.5	<.5	E.03	<2
	10/27/02	0845	10/27/02	1740	<.5	<5	<5	<.5	<.5	E.05	E.02	<2
	02/14/03	0000	02/14/03	1845	<.5	<5	<5	<.5	<.5	<.5	<.5	E.68
	03/20/03	0320	03/20/03	0520	<.5	<5	<5	<.5	<.5	<.5	E.30	<2
11	08/28/03	1930	08/29/03	0400	E.04	<5	<5	E.04	E.05	E.04	--	4.5
14	10/24/02	1930	10/25/02	0315	<.5	E.11	E.33	<.5	<.5	<.5	E1.6	E1.0
	10/25/02**	1200	--	--	<.5	<5	<5	<.5	<.5	<.5	<.5	<2
	10/27/02	1000	10/28/02	1700	<.5	<5	<5	<.5	<.5	<.5	E.82	E.98

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	3-Methyl-1H-indole (skatol) 83-34-1	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-phenol 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7
2	06/29/03	1800	07/01/03	0300	<1	<1	<5	<1	<1	<2	E0.16	E0.05
	08/30/03	1100	08/30/03	2330	<1	<1	<5	<1	E.20	<2	E.22	E.06
	08/31/03	0845	08/31/03	1345	<1	<1	<5	<1	E.10	<2	E.06	E.05
6	10/27/02	0900	10/28/02	0150	<1	<1	E.54	<1	E.12	<2	<.5	E.36
	02/13/03	1030	02/14/03	1800	<1	<1	E2.7	<1	<1	<2	E.29	E.46
	03/19/03	1505	03/19/03	1730	<1	<1	E.77	<1	E.19	E.42	<.5	E.23
	03/19/03*	1506	03/19/03	1731	<1	<1	E.77	<1	E.16	E.45	<.5	E.27
	08/28/03	1600	08/29/03	0700	<1	<1	E.70	<1	E.30	<2	E.27	E.15
	08/31/03	0725	08/31/03	1140	<1	<1	E.30	<1	<1	<2	E.10	E.03
9	10/23/02	1450	10/24/02	0250	<1	<1	<5	<1	E.13	<2	E.24	<.5
	10/23/02*	1451	10/24/02	0251	<1	<1	<5	<1	E.12	<2	E.24	<.5
	10/27/02	0845	10/27/02	1740	<1	<1	<5	<1	E.12	<2	<.5	<.5
	02/14/03	0000	02/14/03	1845	<1	<1	<5	<1	<1	<2	E.49	<.5
	03/20/03	0320	03/20/03	0520	<1	<1	<5	<1	E.26	E.80	E.27	<.5
11	08/28/03	1930	08/29/03	0400	E.04	<1	E1.6	<1	E.50	<2	E.24	E.09
14	10/24/02	1930	10/25/02	0315	<1	<1	<5	<1	E.14	<2	<.5	E.16
	10/25/02**	1200	--	--	<1	<1	<5	<1	<1	<2	<.5	<.5
	10/27/02	1000	10/28/02	1700	<1	<1	E.63	<1	E.17	<2	<.5	E.16

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Anthracene 120-12-7	Anthra-quinone 84-65-1	Atrazine 1912-24-9	Benzo[a]-pyrene 50-32-8	Benzo-phenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bis-phenol A 80-05-7	Bromacil 314-40-9
2	06/29/03	1800	07/01/03	0300	<0.5	E0.20	--	<0.5	E0.14	--	<1	0.87
	08/30/03	1100	08/30/03	2330	E.02	E.24	--	E.08	E.12	--	E.10	.52
	08/31/03	0845	08/31/03	1345	E.02	E.10	--	E.08	E.06	--	<1	<.5
6	10/27/02	0900	10/28/02	0150	E.06	E.35	E0.05	E.34	E.14	<0.5	<1	<.5
	02/13/03	1030	02/14/03	1800	E.17	1.1	<.5	1.2	E.20	<.5	E.23	<.5
	03/19/03	1505	03/19/03	1730	<.5	.73	E.07	E.17	E.14	E.44	E.14	E.38
	03/19/03*	1506	03/19/03	1731	<.5	.82	E.08	E.15	E.16	E1.8	E.15	E.40
	08/28/03	1600	08/29/03	0700	E.10	.77	--	.81	E.06	--	E.20	<.5
	08/31/03	0725	08/31/03	1140	E.02	E.16	--	E.21	E.03	--	E.04	<.5
9	10/23/02	1450	10/24/02	0250	E.10	.52	<.5	E.33	E.06	<.5	E.12	<.5
	10/23/02*	1451	10/24/02	0251	E.09	.51	<.5	E.28	E.06	E1.1	E.15	<.5
	10/27/02	0845	10/27/02	1740	E.24	E.48	<.5	E.65	E.05	<.5	E.10	<.5
	02/14/03	0000	02/14/03	1845	E.17	.82	<.5	.75	E.10	<.5	E.19	<.5
	03/20/03	0320	03/20/03	0520	E.08	.75	<.5	E.29	E.11	E17	E.24	<.5
11	08/28/03	1930	08/29/03	0400	E.29	.99	--	1.9	E.06	--	E.3	<.5
14	10/24/02	1930	10/25/02	0315	<.5	E.18	E.04	E.10	E.15	<.5	E.17	<.5
	10/25/02**	1200	--	--	<.5	<.5	<.5	<.5	<.5	E2.5	<1	<.5
	10/27/02	1000	10/28/02	1700	<.5	E.19	E.02	E.13	E.08	<.5	E.16	<.5

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	BHA 25013-16-5	Caffeine 58-08-2	Camphor 76-22-2	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6
2	06/29/03	1800	07/01/03	0300	<5	E0.08	<0.5	<1	E0.04	<0.5	<2	<1
	08/30/03	1100	08/30/03	2330	<5	E.13	<.5	<1	E.07	<.5	E.60	<1
	08/31/03	0845	08/31/03	1345	<5	E.04	<.5	E.2	E.02	<.5	E.70	<1
6	10/27/02	0900	10/28/02	0150	<5	.59	<.5	<1	E.17	<.5	2.4	<1
	02/13/03	1030	02/14/03	1800	<5	.68	<.5	<1	E.48	<.5	E14	<1
	03/19/03	1505	03/19/03	1730	<5	.64	<.5	<1	E.20	<.5	E1.8	<1
	03/19/03*	1506	03/19/03	1731	<5	.80	<.5	<1	E.23	<.5	E1.9	<1
	08/28/03	1600	08/29/03	0700	<5	E.48	<.5	<1	E.15	<.5	E1.2	<1
	08/31/03	0725	08/31/03	1140	<5	E.09	<.5	E.2	E.03	<.5	E.80	<1
9	10/23/02	1450	10/24/02	0250	<5	E.38	<.5	<1	<.5	<.5	<2	<1
	10/23/02*	1451	10/24/02	0251	<5	.50	<.5	<1	E.19	<.5	E.93	<1
	10/27/02	0845	10/27/02	1740	<5	E.39	<.5	<1	E.33	<.5	E1.2	<1
	02/14/03	0000	02/14/03	1845	<5	.75	<.5	<1	E.48	<.5	E3.8	E.40
	03/20/03	0320	03/20/03	0520	<5	.71	<.5	<1	E.21	<.5	E.98	<1
11	08/28/03	1930	08/29/03	0400	<5	.82	<.5	<1	E.32	<.5	9.2	E.20
14	10/24/02	1930	10/25/02	0315	<5	.70	<.5	<1	E.07	<.5	2.1	E.15
	10/25/02**	1200	--	--	<5	<.5	<.5	<1	<.5	<.5	<2	<1
	10/27/02	1000	10/28/02	1700	<5	.73	<.5	<1	E.08	<.5	2.2	<1

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5
2	06/29/03	1800	07/01/03	0300	<0.5	<1	--	<0.5	<5	<5	E0.15	<0.5
	08/30/03	1100	08/30/03	2330	<.5	<1	--	<.5	<5	<5	E.18	E.03
	08/31/03	0845	08/31/03	1345	E.1	<1	--	<.5	<5	<5	E.21	E.03
6	10/27/02	0900	10/28/02	0150	E.04	E.13	<0.5	<.5	<5	<5	.75	E.06
	02/13/03	1030	02/14/03	1800	<.5	<1	<.5	<.5	<5	<5	2.9	E.13
	03/19/03	1505	03/19/03	1730	<.5	<1	E.31	<.5	<5	<5	.63	E.05
	03/19/03*	1506	03/19/03	1731	<.5	<1	E.33	<.5	<5	<5	.60	E.07
	08/28/03	1600	08/29/03	0700	<.5	E.30	--	<.5	<5	<5	2.0	E.04
	08/31/03	0725	08/31/03	1140	E.07	E.20	--	<.5	<5	<5	.50	<.5
9	10/23/02	1450	10/24/02	0250	<.5	<1	<.5	<.5	<5	<5	.79	<.5
	10/23/02*	1451	10/24/02	0251	E.03	<1	E.34	<.5	<5	<5	.68	<.5
	10/27/02	0845	10/27/02	1740	<.5	<1	<.5	<.5	<5	<5	E1.7	<.5
	02/14/03	0000	02/14/03	1845	<.5	<1	<.5	<.5	<5	<5	2.2	<.5
	03/20/03	0320	03/20/03	0520	E.06	<1	E.48	<.5	<5	<5	.94	<.5
11	08/28/03	1930	08/29/03	0400	<.5	<1	--	<.5	<5	<5	4.9	E.06
14	10/24/02	1930	10/25/02	0315	E.03	<1	2.2	<.5	E.07	E.16	E.18	<.5
	10/25/02**	1200	--	--	<.5	<1	<.5	<.5	<5	<5	<.5	<.5
	10/27/02	1000	10/28/02	1700	E.03	<1	2.7	<.5	<5	<5	E.27	<.5

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8
2	06/29/03	1800	07/01/03	0300	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	E0.13	<0.5
	08/30/03	1100	08/30/03	2330	<.5	<.5	E.05	<.5	<.5	<.5	<.5	<.5
	08/31/03	0845	08/31/03	1345	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
6	10/27/02	0900	10/28/02	0150	<.5	<.5	<.5	<.5	<.5	E.09	<.5	<.5
	02/13/03	1030	02/14/03	1800	E.09	<.5	<.5	<.5	E.16	<.5	<.5	<.5
	03/19/03	1505	03/19/03	1730	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	03/19/03*	1506	03/19/03	1731	<.5	<.5	<.5	<.5	E.06	<.5	<.5	<.5
	08/28/03	1600	08/29/03	0700	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	08/31/03	0725	08/31/03	1140	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
9	10/23/02	1450	10/24/02	0250	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	10/23/02*	1451	10/24/02	0251	<.5	<.5	<.5	<.5	E.06	<.5	<.5	<.5
	10/27/02	0845	10/27/02	1740	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	02/14/03	0000	02/14/03	1845	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	03/20/03	0320	03/20/03	0520	<.5	<.5	<.5	<.5	E.14	<.5	<.5	<.5
11	08/28/03	1930	08/29/03	0400	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
14	10/24/02	1930	10/25/02	0315	<.5	<.5	<.5	<.5	E.08	E.11	<.5	<.5
	10/25/02**	1200	--	--	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	10/27/02	1000	10/28/02	1700	<.5	<.5	<.5	<.5	<.5	E.12	<.5	<.5

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5	OP2EO 2315-61-9	Para-cresol 106-44-5
2	06/29/03	1800	07/01/03	0300	<0.5	E0.23	<0.5	--	<5	<1	<1	<1
	08/30/03	1100	08/30/03	2330	<.5	E.22	<.5	--	<5	<1	<1	<1
	08/31/03	0845	08/31/03	1345	<.5	E.14	<.5	--	<5	<1	<1	<1
6	10/27/02	0900	10/28/02	0150	E.03	E.15	<.5	E0.52	E1.5	<1	<1	<1
	02/13/03	1030	02/14/03	1800	E.08	E.15	<.5	E2.0	E3.3	<1	E.13	<1
	03/19/03	1505	03/19/03	1730	E.06	E.20	<.5	E.85	E2.8	<1	<1	<1
	03/19/03*	1506	03/19/03	1731	E.06	E.22	E.05	E.97	E3.5	E.37	<1	<1
	08/28/03	1600	08/29/03	0700	E.03	E.27	<.5	--	<5	<1	<1	<1
	08/31/03	0725	08/31/03	1140	<.5	E.08	<.5	--	<5	<1	<1	<1
9	10/23/02	1450	10/24/02	0250	E.02	.81	<.5	<5	E1.4	<1	<1	<1
	10/23/02*	1451	10/24/02	0251	E.02	.73	<.5	<5	<5	<1	<1	<1
	10/27/02	0845	10/27/02	1740	<.5	E.60	E.12	<5	<5	<1	<1	<1
	02/14/03	0000	02/14/03	1845	<.5	.51	E.11	<5	<5	<1	<1	<1
	03/20/03	0320	03/20/03	0520	<.5	.54	<.5	<5	<5	<1	<1	<1
11	08/28/03	1930	08/29/03	0400	<.5	2.3	E.06	--	<5	<1	<1	E.2
14	10/24/02	1930	10/25/02	0315	E.03	1.2	<.5	E.55	E2.6	<1	E.15	<1
	10/25/02**	1200	--	--	<.5	<.5	<.5	<5	<5	<1	<1	<1
	10/27/02	1000	10/28/02	1700	E.03	1.2	<.5	<5	E1	<1	<1	<1

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8	Tetrachloro-ethylene 127-18-4
2	06/29/03	1800	07/01/03	0300	<2	E0.07	<0.5	E0.18	E0.09	<2	<2	<0.5
	08/30/03	1100	08/30/03	2330	E.60	E.06	E.26	E.06	E.13	E1.0	<2	<.5
	08/31/03	0845	08/31/03	1345	E.50	E.08	<.5	<.5	E.15	E1.1	<2	<.5
6	10/27/02	0900	10/28/02	0150	E.05	E.29	E.50	<.5	.50	E1.7	<2	<.5
	02/13/03	1030	02/14/03	1800	<2	1.6	<.5	<.5	1.9	E8.1	<2	<.5
	03/19/03	1505	03/19/03	1730	<2	E.25	<.5	<.5	E.39	2.5	<2	<.5
	03/19/03*	1506	03/19/03	1731	E.12	E.24	<.5	<.5	E.38	<2	<2	<.5
	08/28/03	1600	08/29/03	0700	E.50	.59	<.5	E.07	1.3	E.80	<2	<.5
	08/31/03	0725	08/31/03	1140	E.50	E.16	<.5	<.5	E.33	E1.0	<2	<.5
9	10/23/02	1450	10/24/02	0250	E.08	E.36	<.5	<.5	.50	<2	<2	<.5
	10/23/02*	1451	10/24/02	0251	E.08	E.30	<.5	<.5	E.44	E1.3	<2	<.5
	10/27/02	0845	10/27/02	1740	E.08	E1.0	E.49	<.5	E1.1	E1.4	<2	<.5
	02/14/03	0000	02/14/03	1845	<2	1.2	<.5	<.5	1.4	E6.9	<2	<.5
	03/20/03	0320	03/20/03	0520	E.26	E.40	<.5	<.5	.59	<2	<2	<.5
11	08/28/03	1930	08/29/03	0400	E.80	1.5	<.5	E.14	2.9	4.8	E.90	<.5
14	10/24/02	1930	10/25/02	0315	E.07	E.08	<.5	<.5	E.12	E1.9	E.88	<.5
	10/25/02**	1200	--	--	<2	<.5	<.5	<.5	<.5	<2	<2	<.5
	10/27/02	1000	10/28/02	1700	E.07	E.11	E.43	E.06	E.18	E1.6	<2	<.5

Table 7. Concentrations of selected organic wastewater compounds in stormwater samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; all chemical concentrations in units of micrograms per liter in unfiltered samples; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; --, no data; E, estimated; *, field replicate; **, field equipment blank]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Tribromo-methane (bromoform) 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl citrate (ethyl citrate) 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichlor-isopropyl)-phosphate 13674-87-8
2	06/29/03	1800	07/01/03	0300	<0.5	E0.16	<1	<0.5	E0.06	<0.5	E0.20	E0.09
	08/30/03	1100	08/30/03	2330	<.5	E.16	E.05	<.5	E.02	E.30	E.20	E.17
	08/31/03	0845	08/31/03	1345	<.5	<.5	<1	<.5	<.5	E.23	E.04	E.03
6	10/27/02	0900	10/28/02	0150	<.5	E.09	E.27	E.07	<.5	1.0	E.12	E.13
	02/13/03	1030	02/14/03	1800	<.5	<.5	E.51	E.15	<.5	E1.8	E.22	E.34
	03/19/03	1505	03/19/03	1730	<.5	E.08	E.20	E.17	<.5	1.6	E.20	E.15
	03/19/03*	1506	03/19/03	1731	<.5	E.09	E.23	E.17	<.5	E1.7	E.19	E.15
	08/28/03	1600	08/29/03	0700	<.5	E.06	E.08	E.03	E.03	.68	E.10	E.10
	08/31/03	0725	08/31/03	1140	<.5	<.5	<1	<.5	E.01	E.20	E.04	E.04
9	10/23/02	1450	10/24/02	0250	<.5	E.06	<1	<.5	E.09	E.84	E.11	E.06
	10/23/02*	1451	10/24/02	0251	<.5	E.08	<1	<.5	E.08	E.75	E.09	<.5
	10/27/02	0845	10/27/02	1740	<.5	E.06	<1	<.5	E.09	E.64	E.05	<.5
	02/14/03	0000	02/14/03	1845	<.5	E.17	<1	<.5	E.15	E2.7	<.5	<.5
	03/20/03	0320	03/20/03	0520	<.5	E.10	<1	<.5	E.06	1.0	E.10	E.07
11	08/28/03	1930	08/29/03	0400	<.5	<.5	E.30	<.5	E.02	.67	E.10	E.05
14	10/24/02	1930	10/25/02	0315	<.5	E.10	E.26	E.06	<.5	1.1	E.17	E.12
	10/25/02**	1200	--	--	<.5	<.5	<1	<.5	<.5	<.5	<.5	<.5
	10/27/02	1000	10/28/02	1700	<.5	E.09	E.20	<.5	<.5	1.2	E.31	E.09

Table 8. Concentrations of selected pharmaceutical compounds in stormwater samples.

[Numbers below compounds are Chemical Abstract Services (CAS) registry numbers; all concentrations in micrograms per liter in filtered samples; <, less than; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; --, no data; *, replicate sample; **, field equipment blank sample]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Amoxicillin 61336-70-7	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazapine 298-46-4	Cephalexin 15686-71-2
2	06/29/03	1800	07/01/03	0300	<0.018	E0.005	MRL-ND	MRL-ND	<0.014	E0.006	MRL-ND
	08/30/03	1100	08/30/03	2330	<.018	.008	--	MRL-ND	.074	<.011	--
	08/31/03	0845	08/31/03	1345	<.018	.024	--	MRL-ND	.030	.008	--
6	10/27/02	0900	10/28/02	0150	.300	.330	MRL-ND	MRL-ND	.540	.029	MRL-ND
	02/13/03	1030	02/14/03	1800	<.018	.034	MRL-ND	MRL-ND	.590	.037	MRL-ND
	03/19/03	1505	03/19/03	1730	.280	.050	MRL-ND	MRL-ND	.450	.030	MRL-ND
	03/19/03*	1506	03/19/03	1731	.120	.067	MRL-ND	MRL-ND	.520	<.011	MRL-ND
	08/28/03	1600	08/29/03	0700	<.018	.058	--	MRL-ND	.190	<.011	--
	08/31/03	0725	08/31/03	1140	<.018	.050	--	MRL-ND	.058	<.011	--
9	10/23/02	1450	10/24/02	0250	<.018	.073	MRL-ND	MRL-ND	.530	<.011	MRL-ND
	10/23/02*	1451	10/24/02	0251	<.018	.084	MRL-ND	MRL-ND	.580	<.011	MRL-ND
	10/27/02	0845	10/27/02	1740	<.018	.091	MRL-ND	MRL-ND	.440	<.011	MRL-ND
	02/14/03	0000	02/14/03	1845	<.018	.059	MRL-ND	MRL-ND	.620	<.011	MRL-ND
	03/20/03	0320	03/20/03	0520	<.018	.068	MRL-ND	MRL-ND	.490	<.011	MRL-ND
	06/12/03	2025	06/13/03	1155	.200	1.20	MRL-ND	MRL-ND	.320	<.011	MRL-ND
	06/12/03*	2026	06/13/03	1156	.190	1.20	MRL-ND	MRL-ND	.390	<.011	MRL-ND
	06/09/04	1130	06/10/04	1400	1.30	.130	MRL-ND	MRL-ND	.400	<.011	MRL-ND
11	06/12/03	2030	06/13/03	1200	<.018	.200	MRL-ND	MRL-ND	.140	<.011	MRL-ND
	08/28/03	1930	08/29/03	0400	.060	.110	--	MRL-ND	.270	<.011	--
	06/09/04	1000	06/10/04	1400	1.30	.640	MRL-ND	MRL-ND	.710	<.011	MRL-ND
14	10/05/00	1445	10/05/00	1900	E.170	.346	--	--	.713	--	--
	10/24/02	1930	10/25/02	0315	.450	.130	MRL-ND	MRL-ND	.680	.037	MRL-ND
	10/25/02**	1200	--	--	<.018	<.009	MRL-ND	MRL-ND	<.014	<.011	MRL-ND

Table 8. Concentrations of selected pharmaceutical compounds in stormwater samples.—Continued

[Numbers below compounds are Chemical Abstract Services (CAS) registry numbers; all concentrations in micrograms per liter in filtered samples; <, less than; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; --, no data; *, replicate sample; **, field equipment blank sample]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Cimetidine 51481-61-9	Clarithromycin 81103-11-9	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Digoxigenin 1672-46-4	Digoxin 20830-75-5
2	06/29/03	1800	07/01/03	0300	<0.007	MRL-ND	<0.024	0.023	<0.01	<0.008	<0.26
	08/30/03	1100	08/30/03	2330	<.007	--	<.024	.034	<.01	--	--
	08/31/03	0845	08/31/03	1345	<.007	--	<.024	.007	<.01	--	--
6	10/27/02	0900	10/28/02	0150	.013	MRL-ND	.047	.054	<.01	<.008	<.26
	02/13/03	1030	02/14/03	1800	.024	MRL-ND	.051	.097	<.01	<.008	<.26
	03/19/03	1505	03/19/03	1730	.024	MRL-ND	.037	.110	<.01	<.008	<.26
	03/19/03*	1506	03/19/03	1731	<.007	MRL-ND	.009	.120	<.01	<.008	<.26
	08/28/03	1600	08/29/03	0700	<.007	--	<.024	.073	<.01	--	--
	08/31/03	0725	08/31/03	1140	<.007	--	<.024	E.006	<.01	--	--
9	10/23/02	1450	10/24/02	0250	<.007	MRL-ND	<.024	.071	<.01	<.008	<.26
	10/23/02*	1451	10/24/02	0251	<.007	MRL-ND	<.024	.075	<.01	<.008	<.26
	10/27/02	0845	10/27/02	1740	<.007	MRL-ND	<.024	.040	<.01	<.008	<.26
	02/14/03	0000	02/14/03	1845	<.007	MRL-ND	<.024	.180	<.01	<.008	<.26
	03/20/03	0320	03/20/03	0520	<.007	MRL-ND	E.009	.130	<.01	<.008	<.26
	06/12/03	2025	06/13/03	1155	<.007	MRL-ND	<.024	.031	<.01	<.008	<.26
	06/12/03*	2026	06/13/03	1156	<.007	MRL-ND	<.024	.028	<.01	<.008	<.26
	06/09/04	1130	06/10/04	1400	<.007	MRL-ND	<.024	.048	<.01	<.008	<.26
11	06/12/03	2030	06/13/03	1200	<.007	MRL-ND	<.024	.034	<.01	<.008	<.26
	08/28/03	1930	08/29/03	0400	<.007	--	<.024	.100	<.01	--	--
	06/09/04	1000	06/10/04	1400	<.007	MRL-ND	<.024	.053	<.01	<.008	<.26
14	10/05/00	1445	10/05/00	1900	<.007	--	<.024	.015	<.01	<.008	<.26
	10/24/02	1930	10/25/02	0315	.011	MRL-ND	.031	.092	.01	<.008	<.26
	10/25/02**	1200	--	--	<.007	MRL-ND	<.024	<.023	<.01	<.008	<.26

Table 8. Concentrations of selected pharmaceutical compounds in stormwater samples.—Continued

[Numbers below compounds are Chemical Abstract Services (CAS) registry numbers; all concentrations in micrograms per liter in filtered samples; <, less than; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; --, no data; *, replicate sample; **, field equipment blank sample]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Enalaprilat 76420-72-9	Erythromycin 114-07-8	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0
2	06/29/03	1800	07/01/03	0300	<0.012	<0.015	<0.15	MRL-ND	<0.018	<0.039	<0.015
	08/30/03	1100	08/30/03	2330	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/31/03	0845	08/31/03	1345	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
6	10/27/02	0900	10/28/02	0150	.013	<.015	<.15	MRL-ND	<.018	<.039	<.015
	02/13/03	1030	02/14/03	1800	<.012	<.015	<.15	MRL-ND	E.017	<.039	<.015
	03/19/03	1505	03/19/03	1730	<.012	<.015	<.15	MRL-ND	.016	<.039	<.015
	03/19/03*	1506	03/19/03	1731	<.012	<.015	<.15	MRL-ND	.050	<.039	<.015
	08/28/03	1600	08/29/03	0700	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	08/31/03	0725	08/31/03	1140	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
9	10/23/02	1450	10/24/02	0250	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	10/23/02*	1451	10/24/02	0251	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	10/27/02	0845	10/27/02	1740	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	02/14/03	0000	02/14/03	1845	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	03/20/03	0320	03/20/03	0520	<.012	<.015	<.15	MRL-ND	.050	<.039	<.015
	06/12/03	2025	06/13/03	1155	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	06/12/03*	2026	06/13/03	1156	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	06/09/04	1130	06/10/04	1400	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
11	06/12/03	2030	06/13/03	1200	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	08/28/03	1930	08/29/03	0400	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
	06/09/04	1000	06/10/04	1400	<.012	<.015	--	MRL-ND	<.018	<.039	<.015
14	10/05/00	1445	10/05/00	1900	<.012	<.015	<.15	--	<.018	<.039	<.015
	10/24/02	1930	10/25/02	0315	<.012	<.015	<.15	MRL-ND	<.018	<.039	<.015
	10/25/02**	1200	--	--	<.012	E.004	<.15	MRL-ND	<.018	<.039	<.015

Table 8. Concentrations of selected pharmaceutical compounds in stormwater samples.—Continued

[Numbers below compounds are Chemical Abstract Services (CAS) registry numbers; all concentrations in micrograms per liter in filtered samples; <, less than; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; --, no data; *, replicate sample; **, field equipment blank sample]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Ibuprofen 15687-27-1	Lisinopril 83915-83-7	Metformin 657-24-9	Miconazole 22916-47-8	Naproxen 22204-53-1	Paroxetine metabolite 61869-08-7	Ranitidine 66357-35-5
2	06/29/03	1800	07/01/03	0300	<0.018	MRL-ND	<0.003	<0.018	MRL-ND	<0.26	<0.01
	08/30/03	1100	08/30/03	2330	<.018	--	<.003	<.018	--	--	<.01
	08/31/03	0845	08/31/03	1345	<.018	--	<.003	<.018	--	--	<.01
6	10/27/02	0900	10/28/02	0150	<.018	MRL-ND	.049	<.018	MRL-ND	<.26	.014
	02/13/03	1030	02/14/03	1800	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	03/19/03	1505	03/19/03	1730	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	03/19/03*	1506	03/19/03	1731	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	08/28/03	1600	08/29/03	0700	<.018	--	<.003	<.018	--	--	<.01
	08/31/03	0725	08/31/03	1140	<.018	--	<.003	<.018	--	--	<.01
9	10/23/02	1450	10/24/02	0250	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	10/23/02*	1451	10/24/02	0251	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	10/27/02	0845	10/27/02	1740	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	02/14/03	0000	02/14/03	1845	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	03/20/03	0320	03/20/03	0520	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	06/12/03	2025	06/13/03	1155	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	06/12/03*	2026	06/13/03	1156	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	06/09/04	1130	06/10/04	1400	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
11	06/12/03	2030	06/13/03	1200	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
	08/28/03	1930	08/29/03	0400	<.018	--	<.003	<.018	--	--	<.01
	06/09/04	1000	06/10/04	1400	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01
14	10/05/00	1445	10/05/00	1900	<.018	--	<.003	--	--	<.26	<.01
	10/24/02	1930	10/25/02	0315	<.018	MRL-ND	.062	<.018	MRL-ND	<.26	<.01
	10/25/02**	1200	--	--	<.018	MRL-ND	<.003	<.018	MRL-ND	<.26	<.01

Table 8. Concentrations of selected pharmaceutical compounds in stormwater samples.—Continued

[Numbers below compounds are Chemical Abstract Services (CAS) registry numbers; all concentrations in micrograms per liter in filtered samples; <, less than; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting limit not quantified; --, no data; *, replicate sample; **, field equipment blank sample]

Site number (fig. 1)	Sample start date	Sample start time	Sample end date	Sample end time	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Urobilin 1856-98-0	Warfarin 81-81-2
2	06/29/03	1800	07/01/03	0300	<0.029	<0.023	<0.011	<0.014	MRL-ND	<0.001
	08/30/03	1100	08/30/03	2330	<.029	<.023	<.011	<.014	--	<.001
	08/31/03	0845	08/31/03	1345	<.029	<.023	<.011	<.014	--	<.001
6	10/27/02	0900	10/28/02	0150	E.008	.093	<.011	.031	MRL-ND	<.001
	02/13/03	1030	02/14/03	1800	<.029	.039	<.011	.049	MRL-ND	<.001
	03/19/03	1505	03/19/03	1730	<.029	<.023	<.011	.012	MRL-ND	<.001
	03/19/03*	1506	03/19/03	1731	<.029	<.023	<.011	<.014	MRL-ND	<.001
	08/28/03	1600	08/29/03	0700	<.029	<.023	<.011	<.014	--	<.001
	08/31/03	0725	08/31/03	1140	<.029	<.023	<.011	<.014	--	<.001
9	10/23/02	1450	10/24/02	0250	<.029	<.023	<.011	<.014	MRL-ND	<.001
	10/23/02*	1451	10/24/02	0251	<.029	<.023	<.011	<.014	MRL-ND	<.001
	10/27/02	0845	10/27/02	1740	<.029	<.023	<.011	<.014	MRL-ND	<.001
	02/14/03	0000	02/14/03	1845	<.029	<.023	<.011	<.014	MRL-ND	<.001
	03/20/03	0320	03/20/03	0520	<.029	<.023	<.011	<.014	MRL-ND	<.001
	06/12/03	2025	06/13/03	1155	<.029	<.023	<.011	<.014	MRL-ND	<.001
	06/12/03*	2026	06/13/03	1156	<.029	<.023	<.011	E.001	MRL-ND	<.001
	06/09/04	1130	06/10/04	1400	<.029	<.023	<.011	<.014	MRL-ND	<.001
11	06/12/03	2030	06/13/03	1200	<.029	<.023	<.011	<.014	MRL-ND	<.001
	08/28/03	1930	08/29/03	0400	<.029	<.023	<.011	<.014	--	<.001
	06/09/04	1000	06/10/04	1400	<.029	<.023	<.011	<.014	MRL-ND	<.001
14	10/05/00	1445	10/05/00	1900	<.029	<.023	<.011	<.014	MRL-ND	<.001
	10/24/02	1930	10/25/02	0315	E.005	.074	<.011	E.022	MRL-ND	<.001
	10/25/02**	1200	--	--	<.029	E.004	<.011	<.014	MRL-ND	<.001

Table 9. Nutrients, bacteria, and selected chemical concentrations in water-column samples from selected reaches of Brush Creek.

[m, meters; +, plus; N, nitrogen; mg/L, milligrams per liter; $NO_2 + NO_3$, nitrite plus nitrate; µg/L, micrograms per liter; col/100 mL, colonies per 100 milliliters; E, estimated; *, replicate sample; <, less than; --, no data; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Mean depth (m)	Distance, from dam (m)	Ammonia + organic N, total (mg/L)	Ammonia, as N, dissolved (mg/L)	$NO_2 + NO_3$, as N, dissolved (mg/L)	Nitrite, as N, dissolved (mg/L)	Nitrogen, total (mg/L)	Ortho-phosphate, dissolved (mg/L)	Phosphorus, dissolved (mg/L)
10	09/25/02	0945	0.55	10	0.768	0.050	0.382	0.048	1.99	0.022	E0.054
	09/25/02*	0946	.55	10	.809	<.04	.373	.046	4.40	E.012	E.052
	09/25/02	1030	1.50	10	1.07	.131	.356	.047	3.24	.033	E.054
	09/25/02	1200	.48	250	.718	.119	.370	.047	4.95	.042	.060
	09/25/02	1230	1.00	250	.760	.121	.377	.047	5.68	.041	E.053
	09/25/02	1330	.55	750	.680	<.04	.339	.056	5.06	E.014	E.058
	09/25/02	1400	1.25	750	.764	.070	.383	.050	4.96	.034	E.057
12	09/06/02	0930	.75	5	1.71	<.04	<.05	E.004	5.89	<.02	E.030
	09/06/02	1030	1.75	5	1.64	.271	E.023	E.007	17.9	E.017	E.043
	09/06/02	1045	2.50	5	2.25	.516	<.05	E.006	7.73	.053	.085
	09/06/02	1215	.75	60	2.25	<.04	<.05	<.008	7.73	<.02	E.038
	09/06/02	1245	2.50	60	1.87	.424	<.05	E.005	8.84	E.014	E.056
	09/06/02	1315	4.00	60	2.75	1.61	<.05	<.008	3.26	.275	.357
	09/06/02	1500	.75	200	2.32	<.04	<.05	<.008	5.95	<.02	<.06
	09/06/02	1530	2.15	200	1.78	.217	<.05	<.008	4.16	<.02	E.057
	09/06/02	1600	3.00	200	1.94	.718	<.05	<.008	3.24	.065	.090
	05/28/03	0945	.75	5	1.71	.023	<.06	<.008	5.54	<.02	E.025
	05/28/03	1015	2.75	5	2.35	.677	<.06	<.008	4.16	.104	.150
	05/28/03	1045	.75	60	2.22	.182	<.06	<.008	3.24	.037	.058
	05/28/03	1115	2.50	60	2.70	.336	<.06	<.008	5.54	.056	.076
	08/27/03	1000	.50	5	1.78	<.04	<.06	<.008	2.99	.040	.073
	08/27/03	1015	2.25	5	1.96	.474	<.06	<.008	3.53	.151	.191
	08/27/03	1030	3.75	5	2.30	.789	<.06	<.008	4.15	.228	.274
	08/27/03	1200	.50	60	1.77	.044	<.06	<.008	3.25	.048	.079
	08/27/03	1215	2.63	60	2.30	1.03	<.06	<.008	4.54	.273	.321
	08/27/03	1230	4.50	60	4.34	2.69	<.06	<.008	4.01	.641	.707
	09/05/03	1000	.50	100	1.21	.218	<3.13	.136	3.04	<.18	.076
	09/05/03	1015	1.63	100	1.52	.293	<2.99	.171	4.11	<.18	.088
	09/05/03	1030	4.50	100	1.72	.786	<2.34	.142	1.91	E.129	.197

Table 9. Nutrients, bacteria, and selected chemical concentrations in water-column samples from selected reaches of Brush Creek.—Continued

[m, meters; +, plus; N, nitrogen; mg/L, milligrams per liter; $NO_2 + NO_3$, nitrite plus nitrate; µg/L, micrograms per liter; col/100 mL, colonies per 100 milliliters; E, estimated; *, replicate sample; <, less than; --, no data; >, greater than]

Site number (fig. 1)	Sample date	Sample time	Phosphorus, total (mg/L)	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chlorophyll a (µg/L)	Chlorophyll b (µg/L)	Carbon organic, dissolved (mg/L)	Carbon organic, total (mg/L)	Chemical oxygen demand (mg/L)
10	09/25/02	0945	0.107	--	--	--	E6.26	<0.1	5.54	7.32	22
	09/25/02*	0946	.111	--	--	--	--	--	5.82	7.62	24
	09/25/02	1030	.191	--	--	--	--	--	7.41	7.20	28
	09/25/02	1200	.108	--	--	--	5.47	<.1	5.45	6.91	22
	09/25/02	1230	.118	--	--	--	--	--	10.3	6.87	25
	09/25/02	1330	.112	--	--	--	9.63	1.49	5.85	6.64	24
	09/25/02	1400	.117	--	--	--	--	--	5.94	7.69	--
12	09/06/02	0930	.183	--	--	--	49.0	9.48	8.50	13.7	18
	09/06/02	1030	.189	--	--	--	--	--	7.61	11.9	24
	09/06/02	1045	.278	--	--	--	--	--	7.50	18.4	19
	09/06/02	1215	.268	--	--	--	86.0	16.9	7.66	15.0	22
	09/06/02	1245	.228	--	--	--	--	--	7.62	11.5	29
	09/06/02	1315	.420	--	--	--	--	--	7.36	11.0	32
	09/06/02	1500	.284	--	--	--	E76.9	E8.13	7.43	17.4	47
	09/06/02	1530	.208	--	--	--	--	--	7.18	11.4	31
	09/06/02	1600	.250	--	--	--	--	--	6.85	10.7	32
	05/28/03	0945	.188	10	--	>242,000	39.0	<.1	6.14	14.3	36
	05/28/03	1015	.340	80	--	242,000	--	--	6.04	12.3	41
	05/28/03	1045	.266	80	--	>242,000	54.3	<.1	6.52	13.7	42
	05/28/03	1115	.308	30	--	>242,000	--	--	5.87	16.1	58
	08/27/03	1000	.266	2	6	3,500	--	--	10.3	14.8	--
	08/27/03	1015	.319	45	50	>4,800	--	--	10.4	15.8	--
	08/27/03	1030	.389	110	170	>4,800	--	--	10.2	16.8	--
	08/27/03	1200	.238	10	<10	>4,800	--	--	10.2	18.3	--
	08/27/03	1215	.415	850	1,100	3,500	--	--	10.2	14.7	--
	08/27/03	1230	.861	2,050	1,900	>4,800	--	--	10.7	17.1	--
	09/05/03	1000	.182	2	6	3,500	--	--	--	--	--
	09/05/03	1015	.242	45	50	>4,800	--	--	--	--	--
	09/05/03	1030	.303	110	170	>4,800	--	--	--	--	--

Table 10. Nutrients, bacteria, and selected chemical concentrations in bottom-sediment samples from selected reaches of Brush Creek.

[m, meters; mg/kg, milligrams per kilogram; col/100 mL, colonies per 100 milliliters in pore water; --, no data; *, replicate sample]

Site number (fig. 1)	Sample date	Sample time	Mean depth (m)	Distance, from dam (m)	Percent sand	Percent silt	Percent clay	pH (standard units)	Ammonia, as nitrogen (mg/kg)	Nitrate, as nitrogen (mg/kg)	Total nitrogen (mg/kg)	Total phosphorus (mg/kg)	Organic matter (percent)	Percent of total nitrogen	Percent of total carbon
10	09/25/02	1030	1.75	10	36	46	18	7.9	121.5	0.9	3,552	824	12.0	0.370	7.63
	09/25/02	1230	1.25	250	26	56	18	8.1	9.4	.1	2,978	765	8.8	.312	6.36
	09/25/02	1400	1.50	750	44	44	12	8.1	106.6	.4	1,841	810	6.0	.162	4.04
	03/12/03	1045	1.75	10	34	50	16	8.3	232.4	.3	2,482	798	7.2	.243	5.28
	03/12/03	1245	1.25	250	48	38	14	8.0	111.0	.3	2,090	879	7.6	.233	5.75
12	09/06/02	1045	2.75	5	18	58	24	8.0	479.1	.7	3,684	1,056	9.2	.399	5.87
	09/06/02	1315	4.25	60	20	54	26	7.8	456.7	.6	3,680	1,146	10.0	.402	5.66
	09/06/02	1600	3.25	200	18	58	24	8.2	477.7	3.5	3,515	1,109	8.8	.357	5.24
	05/28/03	1200	4.38	5	22	52	26	8.2	402.0	.7	3,835	1,111	10.8	.424	6.68
	05/28/03	1230	4.12	60	20	54	26	8.1	290.9	.4	2,922	1,080	8.8	.314	5.65
	08/27/03	1315	4.12	30	20	54	26	8.2	452.7	.4	3,782	1,097	10.0	.399	6.03
	08/27/03	1330	4.12	100	22	56	24	8.1	296.1	.4	2,509	1,016	7.2	.263	4.91
	09/05/03	1200	5.00	30	12	60	28	8.1	338.4	.6	2,546	1,017	6.8	.267	4.27
	09/05/03*	1201	5.00	30	14	60	26	8.1	329.4	.6	2,579	1,009	6.8	.262	4.21

Site number (fig. 1)	Sample date	Sample time	*Escherichia coli* (col/100 mL)	Fecal coliform (col/100 mL)	Total coliform (col/100 mL)	Chloride (mg/kg)	Boron (mg/kg)	Cadmium (mg/kg)	Copper (mg/kg)	Iron (mg/kg)	Lead (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
10	09/25/02	1030	--	--	--	42.1	0.82	0.76	13.7	8,245	26.7	191	9.6	87
	09/25/02	1230	--	--	--	48.6	.79	.74	13.7	7,953	29.5	143	9.4	103
	09/25/02	1400	--	--	--	39.9	1.40	.69	13.8	8,468	24.0	174	11.9	74
	03/12/03	1045	--	--	--	103.0	1.63	.74	10.6	8,284	28.6	187	9.5	83
	03/12/03	1245	--	--	--	163.2	1.66	.71	10.1	7,787	26.8	177	8.8	80
12	09/06/02	1045	--	--	--	90.0	.86	.91	15.4	8,973	41.3	180	10.6	116
	09/06/02	1315	--	--	--	91.7	.79	.99	18.0	10,003	43.6	173	11.4	118
	09/06/02	1600	--	--	--	89.4	.97	.91	15.5	9,266	43.2	172	10.6	115
	05/28/03	1200	30	--	5,220	109.7	--	.94	16.8	8,912	45.3	171	10.5	125
	05/28/03	1230	35	--	6,360	135.1	1.48	1.01	17.1	9,439	41.7	188	11.5	112
	08/27/03	1315	30	33	390	61.1	1.54	1.01	17.3	9,169	45.4	163	10.5	128
	08/27/03	1330	30	33	475	82.3	1.40	.99	16.1	9,274	41.3	194	11.6	107
	09/05/03	1200	--	--	--	68.2	1.14	.91	14.2	9,552	41.4	190	11.2	105
	09/05/03*	1201	--	--	--	58.7	.82	.94	14.4	9,634	41.2	190	11.0	106

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	1,4-Dichloro-benzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methyl-naphthalene 90-12-0	2,6-Dimethyl-naphthalene 581-42-0	2-Methyl-naphthalene 91-57-6	3,4-Dichlorophenyl-isocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1
							Water-column samples (micrograms per liter in unfiltered samples)						
10	09/25/02	0945	0.55	10	<0.5	<5	<5	<0.5	<0.5	<0.5	E0.05	<2	<1
	09/25/02*	0946	.55	10	<.5	<5	<5	<.5	<.5	<.5	E.05	<2	<1
	09/25/02	1030	1.50	10	<.5	<5	<5	<.5	<.5	<.5	E.06	E.31	<1
	09/25/02	1200	.48	250	<.5	<5	<5	<.5	<.5	<.5	E.06	E.38	<1
	09/25/02	1230	1.00	250	<.5	<5	<5	<.5	<.5	<.5	E.06	<2	<1
	09/25/02	1330	.55	750	<.5	E.1	E.48	<.5	<.5	<.5	E.07	E1.2	<1
	09/25/02	1400	1.25	750	<.5	<5	<5	<.5	<.5	<.5	E.06	E1.1	<1
12	09/06/02	0930	.75	5	E.08	<5	<5	<.5	<.5	<.5	E.14	E.32	<1
	09/06/02	1030	1.75	5	E.07	<5	<5	<.5	<.5	<.5	E.12	E.38	<1
	09/06/02	1045	2.50	5	<.5	<5	<5	<.5	<.5	<.5	E.12	<2	<1
	09/06/02	1215	.75	60	<.5	<5	<5	<.5	<.5	<.5	E.09	E.27	<1
	09/06/02	1245	2.50	60	E.09	<5	<5	<.5	<.5	<.5	E.15	E.53	<1
	09/06/02	1315	4.00	60	<.5	<5	<5	<.5	<.5	<.5	E.15	E.61	<1
	09/06/02	1500	.75	200	<.5	<5	<5	<.5	<.5	<.5	E.13	E.44	<1
	09/06/02	1530	2.15	200	E.09	<5	<5	<.5	<.5	<.5	E.14	E.58	<1
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	E.10	<5	<5	<.5	<.5	<.5	.71	E.46	<1
	05/28/03	1015	2.75	5	E.14	<5	<5	<.5	<.5	<.5	.88	E1.1	<1
	05/28/03	1045	.75	60	E.10	<5	<5	<.5	<.5	<.5	.67	E.55	<1
	05/28/03	1115	2.50	60	E.09	<5	<5	<.5	<.5	<.5	.54	E.49	<1

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	1,4-Dichloro-benzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methyl-naphthalene 90-12-0	2,6-Dimethyl-naphthalene 581-42-0	2-Methyl-naphthalene 91-57-6	3,4-Dichlorophenyl-isocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1
						Bottom-sediment samples (micrograms per kilogram)							
10	09/25/02	1030	1.75	10	E50	<250	<250	460	440	400	<100	37,000	950
	09/25/02	1230	1.25	250	<50	<250	<250	340	260	370	<100	16,000	840
	09/25/02	1400	1.50	750	<50	<250	<250	290	250	340	<100	22,000	820
	03/12/03	1045	1.75	10	<50	<250	<250	<50	74	<50	<100	3,600	220
	03/12/03	1245	1.25	250	<50	<250	<250	120	140	180	<100	3,300	340
11	02/25/03	1430	1.50	25	<50	<250	<250	<50	<50	<50	<100	11,000	260
	02/25/03	1500	1.50	250	<50	<250	<250	E31	97	57	<100	6,400	150
12	09/06/02	1045	2.75	5	E500	<250	<250	1,000	850	950	<100	45,000	2,200
	09/06/02	1315	4.25	60	E330	<250	<250	810	790	780	<100	120,000	2,400
	09/06/02	1600	3.25	200	E240	<250	<250	280	320	375	<100	26,000	980
	05/28/03	1200	4.38	5	E34	<250	<250	E22	150	53	<100	32,000	300
	05/28/03	1230	4.12	60	E31	<250	<250	E40	140	80	<100	17,000	280

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-phenol 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthra-quinone 84-65-1
						Water-column samples (micrograms per liter in unfiltered samples)							
10	09/25/02	0945	0.55	10	<1	<5	<1	<1	<2	<0.5	<0.5	<0.5	E0.08
	09/25/02*	0946	.55	10	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.12
	09/25/02	1030	1.50	10	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.14
	09/25/02	1200	.48	250	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.06
	09/25/02	1230	1.00	250	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.10
	09/25/02	1330	.55	750	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.13
	09/25/02	1400	1.25	750	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.24
12	09/06/02	0930	.75	5	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.06
	09/06/02	1030	1.75	5	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.06
	09/06/02	1045	2.50	5	<1	<5	<1	<1	<2	<.5	E.05	<.5	E.06
	09/06/02	1215	.75	60	<1	<5	<1	<1	<2	<.5	<.5	<.5	<.5
	09/06/02	1245	2.50	60	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.07
	09/06/02	1315	4.00	60	<1	<5	<1	<1	<2	<.5	E.05	<.5	E.09
	09/06/02	1500	.75	200	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.05
	09/06/02	1530	2.15	200	<1	<5	<1	<1	<2	<.5	<.5	<.5	E.08
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	<1	E7.1	<1	<1	<2	<.5	<.5	<.5	E.12
	05/28/03	1015	2.75	5	<1	E6.1	<1	<1	<2	E.13	<.5	<.5	E.17
	05/28/03	1045	.75	60	<1	<4.6	<1	<1	E.59	E.08	<.5	<.5	E.11
	05/28/03	1115	2.50	60	<1	<2.5	<1	<1	<2	<.5	E.07	<.5	E.10

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	4-Cumyl-phenol 599-64-4	4-Nonyl-phenol 104-40-5	4-Octyl-phenol 1806-26-4	4-Tert-octyl-phenol 140-66-9	5-Methyl-1H-benzo-triazole 136-85-6	Aceto-phenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthra-quinone 84-65-1
						Bottom-sediment samples (micrograms per kilogram)							
10	09/25/02	1030	1.75	10	<50	E2,200	50	50	--	E110	530	1,800	3,200
	09/25/02	1230	1.25	250	120	E3,800	<50	<50	--	E290	140	2,500	5,300
	09/25/02	1400	1.50	750	<50	E3,700	<50	<50	--	E510	150	2,300	4,500
	03/12/03	1045	1.75	10	<50	E520	<50	<50	--	E25	E18	780	1,000
	03/12/03	1245	1.25	250	<50	E400	<50	<50	--	E1.57	E14	2,300	1,400
11	02/25/03	1430	1.50	25	<50	E1,200	<50	<50	--	<50	E35	580	810
	02/25/03	1500	1.50	250	<50	E1,200	<50	<50	--	<50	E26	940	1,300
12	09/06/02	1045	2.75	5	<50	E29,000	310	400	--	E1,600	490	2,600	3,900
	09/06/02	1315	4.25	60	<50	E54,000	620	730	--	E1,030	920	2,200	3,900
	09/06/02	1600	3.25	200	<50	E5,800	<50	<50	--	E325	320	1,400	1,570
	05/28/03	1200	4.38	5	<50	E7,200	<50	<50	--	E120	170	450	400
	05/28/03	1230	4.12	60	<50	E8,100	<50	<50	--	E92	180	500	280

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Atrazine 1912-24-9	Benzo[a]-pyrene 50-32-8	Benzo-phenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bis-phenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5	Caffeine 58-08-2	Camphor 76-22-2
							Water-column samples (micrograms per liter in unfiltered samples)						
10	09/25/02	0945	0.55	10	<0.5	<0.5	<0.5	<0.5	<1	E0.05	<5	E0.43	<0.5
	09/25/02*	0946	.55	10	<.5	<.5	<.5	<.5	<1	E.03	<5	E.47	<.5
	09/25/02	1030	1.50	10	<.5	E.06	<.5	<.5	E.10	E.06	<5	.64	<.5
	09/25/02	1200	.48	250	<.5	<.5	<.5	<.5	<1	<.5	<5	E.46	<.5
	09/25/02	1230	1.00	250	E.01	<.5	<.5	<.5	E.10	E.05	<5	E.61	<.5
	09/25/02	1330	.55	750	<.5	<.5	<.5	E18	E.12	E.09	<5	.55	<.5
	09/25/02	1400	1.25	750	<.5	E.11	<.5	E16	E.08	E.06	<5	.58	<.5
12	09/06/02	0930	.75	5	E.02	<.5	<.5	E5.8	E.08	E.10	<5	<.5	<.5
	09/06/02	1030	1.75	5	<.5	<.5	E.05	<.5	<1	E.06	<5	<.5	<.5
	09/06/02	1045	2.75	5	<.5	<.5	E.05	<.5	<1	E.07	<5	E.19	<.5
	09/06/02	1215	.75	60	<.5	<.5	<.5	<.5	<1	E.10	<5	<.5	<.5
	09/06/02	1245	2.50	60	E.02	<.5	<.5	<.5	E.1	E.06	<5	<.5	<.5
	09/06/02	1315	4.00	60	<.5	<.5	<.5	<.5	<1	E.07	<5	E.19	<.5
	09/06/02	1500	.75	200	E.02	<.5	<.5	<.5	E.09	E.06	<5	<.5	<.5
	09/06/02	1530	2.15	200	E.01	<.5	<.5	<.5	E.1	E.06	<5	<.5	<.5
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	.52	.50	E.11	.58	E.16	<.5	<5	1.2	<.5
	05/28/03	1015	2.50	5	.38	E.02	E.18	.41	E.25	<.5	<5	1.3	<.5
	05/28/03	1045	.75	60	.31	E.01	E.11	.18	E.17	<.5	<5	.94	<.5
	05/28/03	1115	2.50	60	.27	.50	E.09	.33	E.14	<.5	<5	.89	<.5

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Atrazine 1912-24-9	Benzo[a]-pyrene 50-32-8	Benzo-phenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bis-phenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5	Caffeine 58-08-2	Camphor 76-22-2
						Bottom-sediment samples (micrograms per kilogram)							
10	09/25/02	1030	1.75	10	<100	5,900	<50	14,000	240	<100	--	--	<50
	09/25/02	1230	1.25	250	<100	8,800	<50	8,400	440	<100	--	--	<50
	09/25/02	1400	1.50	750	<100	9,700	<50	10,000	210	<100	--	--	<50
	03/12/03	1045	1.75	10	<100	3,000	<50	1,600	<100	<100	--	--	<50
	03/12/03	1245	1.25	250	<100	7,000	460	2,500	<100	<100	--	--	<50
11	02/25/03	1430	1.50	25	<100	2,500	<50	3,000	E22	<100	--	--	<50
	02/25/03	1500	1.50	250	<100	4,000	<50	2,600	E44	<100	--	--	<50
12	09/06/02	1045	2.75	5	<100	6,300	<50	5,200	280	<100	--	--	<50
	09/06/02	1315	4.25	60	<100	9,800	<50	15,000	380	<100	--	--	<50
	09/06/02	1600	3.25	200	<100	2,300	<50	3,100	<100	<100	--	--	<50
	05/28/03	1200	4.38	5	<100	1,800	<50	5,400	E80	<100	--	--	<50
	05/28/03	1230	4.12	60	<100	1,800	<50	4,600	<100	<100	--	--	<50

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5
							Water-column samples (micrograms per liter in unfiltered samples)						
10	09/25/02	0945	0.55	10	<1	<0.5	<0.5	E1.7	<1	E0.05	E0.04	<0.5	<0.5
	09/25/02*	0946	.55	10	<1	<.5	<.5	E1.8	<1	E.06	<1	<.5	<.5
	09/25/02	1030	1.50	10	<1	<.5	<.5	E2.1	<1	E.07	<1	<.5	<.5
	09/25/02	1200	.48	250	<1	<.5	<.5	E1.3	<1	E.06	E.04	<.5	<.5
	09/25/02	1230	1.00	250	<1	<.5	<.5	E2.3	<1	E.06	E.04	<.5	<.5
	09/25/02	1330	.55	750	<1	<.5	<.5	E1.9	<1	E.04	<1	<.5	<.5
	09/25/02	1400	1.25	750	<1	<.5	<.5	E1.8	<1	E.05	<1	<.5	<.5
12	09/06/02	0930	.75	5	<1	<.5	<.5	3.0	<1	E.05	<1	<.5	<.5
	09/06/02	1030	1.75	5	<1	<.5	<.5	2.9	<1	E.04	<1	<.5	<.5
	09/06/02	1045	2.75	5	<1	<.5	<.5	E1.2	<1	E.04	<1	<.5	<.5
	09/06/02	1215	.75	60	<1	<.5	<.5	4.1	<1	E.03	<1	<.5	<.5
	09/06/02	1245	2.50	60	<1	<.5	<.5	3.2	<1	E.06	<1	<.5	<.5
	09/06/02	1315	4.00	60	<1	<.5	<.5	E1.7	<1	E.06	<1	<.5	<.5
	09/06/02	1500	.75	200	<1	<.5	<.5	3.7	<1	E.05	<1	<.5	<.5
	09/06/02	1530	2.15	200	<1	E.05	<.5	3.9	<1	E.06	<1	<.5	<.5
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	<1	E.03	<.5	2.8	E.35	<.5	<1	1.4	<.5
	05/28/03	1015	2.50	5	<1	<.5	<.5	4.6	E.55	<.5	<1	.55	<.5
	05/28/03	1045	.75	60	<1	E.03	<.5	4.0	E.37	<.5	<1	<.5	<.5
	05/28/03	1115	2.50	60	<1	E.02	<.5	3.1	E.33	<.5	<1	<.5	<.5

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	Diethyl-phthalate 84-66-2	D-limonene 5989-27-5
						Bottom-sediment samples (micrograms per kilogram)							
10	09/25/02	1030	1.75	10	--	2,400	<50	39,000	--	<50	--	<130	E50
	09/25/02	1230	1.25	250		3,800	<50	20,000	--	<50	--	240	<50
	09/25/02	1400	1.50	750	--	3,000	<50	19,000	--	<50	--	68	<50
	03/12/03	1045	1.75	10	--	590	<50	4,600	--	<50	--	<50	<50
	03/12/03	1245	1.25	250	--	1,400	<50	4,000	--	<50	--	<50	E43
11	02/25/03	1430	1.50	25	--	390	<50	8,600	--	<50	--	<50	<50
	02/25/03	1500	1.50	250	--	670	<50	5,200	--	<50	--	<50	700
12	09/06/02	1045	2.75	5	--	3,500	<50	22,000	--	<50	--	<50	E960
	09/06/02	1315	4.25	60	--	3,400	<50	63,000	--	<50	--	E19	E510
	09/06/02	1600	3.25	200	--	1,510	<50	15,000	--	<50	--	<50	E350
	05/28/03	1200	4.38	5	--	530	<50	31,000	--	<50	--	<50	<50
	05/28/03	1230	4.12	60	--	370	<50	12,000	--	<50	--	<50	<50

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3
							Water-column samples (micrograms per liter in unfiltered samples)						
10	09/25/02	0945	0.55	10	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	09/25/02*	0946	.55	10	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/25/02	1030	1.50	10	<5	<5	E.12	<.5	<.5	<.5	<.5	<.5	<.5
	09/25/02	1200	.48	250	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/25/02	1230	1.00	250	<5	<5	E.10	<.5	<.5	<.5	<.5	<.5	<.5
	09/25/02	1330	.55	750	E.06	E.32	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/25/02	1400	1.25	750	E.03	E.19	E.17	<.5	<.5	<.5	<.5	<.5	<.5
12	09/06/02	0930	.75	5	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1030	1.75	5	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1045	2.75	5	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1215	.75	60	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1245	2.50	60	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1315	4.00	60	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1500	.75	200	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1530	2.15	200	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	<5	<5	<.5	<.5	<.5	<.5	<.5	<.5	<.5
	05/28/03	1015	2.75	5	<5	<5	E.05	<.5	<.5	<.5	<.5	<.5	<.5
	05/28/03	1045	.75	60	<5	<5	E.04	<.5	<.5	<.5	<.5	<.5	<.5
	05/28/03	1115	2.50	60	<5	<5	E.02	<.5	<.5	<.5	<.5	<.5	<.5

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Equilenin 517-09-9	Estrone 53-16-7	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3
							Bottom-sediment samples (micrograms per kilogram)						
10	09/25/02	1030	1.75	10	<100	<250	21,000	91	1,300	<50	<50	<50	<50
	09/25/02	1230	1.25	250	<100	<250	28,000	50	1,100	<50	<50	<50	<50
	09/25/02	1400	1.50	750	<100	E38	24,000	E41	1,200	<50	<50	<50	<50
	03/12/03	1045	1.75	10	<100	<250	6,400	<50	81	<50	<50	<50	<50
	03/12/03	1245	1.25	250	<100	<250	8,500	<50	710	<50	<50	<50	<50
11	02/25/03	1430	1.50	25	<100	<250	5,700	<50	160	<50	<50	<50	<50
	02/25/03	1500	1.50	250	<100	<250	8,300	<50	800	<50	<50	<50	<50
12	09/06/02	1045	2.75	5	<100	<250	25,000	84	2,600	<50	<50	<50	<50
	09/06/02	1315	4.25	60	<100	<250	26,000	290	2,200	<50	<50	<50	<50
	09/06/02	1600	3.25	200	<100	<250	8,200	48	1,000	<50	<50	<50	<50
	05/28/03	1200	4.38	5	<100	<250	4,200	15	130	<50	<50	<50	<50
	05/28/03	1230	4.12	60	<100	<250	3,800	23	110	<50	<50	<50	<50

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5
							Water-column samples (micrograms per liter in unfiltered samples)						
10	09/25/02	0945	0.55	10	<0.5	<0.5	<0.5	E0.02	E0.28	<0.5	<5	<5	<1
	09/25/02*	0946	.55	10	<.5	<.5	<.5	E.02	E.33	<.5	<5	<5	<1
	09/25/02	1030	1.50	10	<.5	<.5	<.5	E.02	E.35	<.5	<5	<5	<1
	09/25/02	1200	.48	250	<.5	<.5	<.5	E.02	E.3	<.5	<5	<5	<1
	09/25/02	1230	1.00	250	<.5	<.5	<.5	E.02	E.28	<.5	<5	<5	<1
	09/25/02	1330	.55	750	<.5	<.5	<.5	E.02	E.27	<.5	E.90	E4.0	E.69
	09/25/02	1400	1.25	750	<.5	<.5	<.5	E.02	E.23	<.5	E.57	E2.5	E.53
12	09/06/02	0930	.75	5	<.5	<.5	<.5	E.02	E.45	<.5	<5	<5	<1
	09/06/02	1030	1.75	5	<.5	<.5	<.5	E.02	E.42	<.5	<5	<5	<1
	09/06/02	1045	2.50	5	<.5	<.5	<.5	E.02	E.46	<.5	<5	<5	<1
	09/06/02	1215	.75	60	<.5	<.5	<.5	<.5	E.38	<.5	<5	<5	<1
	09/06/02	1245	2.50	60	<.5	<.5	<.5	<.5	E.47	<.5	<5	<5	<1
	09/06/02	1315	4.00	60	<.5	<.5	<.5	<.5	E.49	<.5	<5	<5	<1
	09/06/02	1500	.75	200	<.5	<.5	<.5	<.5	E.42	<.5	<5	<5	<1
	09/06/02	1530	2.15	200	<.5	<.5	<.5	<.5	.52	<.5	<5	<5	<1
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	<.5	<.5	<.5	E.11	E.32	<.5	<5	<5	<1
	05/28/03	1015	2.75	5	E.13	<.5	<.5	E.16	E.29	<.5	<5	<5	<1
	05/28/03	1045	.75	60	E.11	<.5	<.5	E.10	E.16	<.5	<5	<5	<1
	05/28/03	1115	2.50	60	E.09	<.5	<.5	E.09	E.21	<.5	<5	<5	<1

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5
							Bottom-sediment samples (micrograms per kilogram)						
10	09/25/02	1030	1.75	10	<50	<100	<100	<50	<100	690	4,800	E2,300	<100
	09/25/02	1230	1.25	250	<50	<100	<100	<50	<100	600	3,200	E2,100	<100
	09/25/02	1400	1.50	750	<50	<100	<100	<50	<100	500	3,100	E1,700	<100
	03/12/03	1045	1.75	10	<50	<100	<100	<50	<100	390	E240	E250	<1
	03/12/03	1245	1.25	250	<50	<100	<100	<50	<100	220	E210	E260	<100
11	02/25/03	1430	1.50	25	<50	<100	<100	<50	<100	170	E490	E400	<1
	02/25/03	1500	1.50	250	<50	<100	<100	<50	<100	250	530	E480	<100
12	09/06/02	1045	2.75	5	<50	<100	<100	<50	<100	1,100	8,000	E3,600	<100
	09/06/02	1315	4.25	60	<50	<100	<100	<50	<100	570	7,800	E3,800	<100
	09/06/02	1600	3.25	200	<50	<100	<100	<50	<100	130	2,880	E1,530	<100
	05/28/03	1200	4.38	5	<50	<100	<100	<50	<100	250	970	E530	<100
	05/28/03	1230	4.12	60	<50	<100	<100	<50	<100	200	670	E410	<100

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8
							Water-column samples (micrograms per liter in unfiltered samples)						
10	09/25/02	0945	0.55	10	<1	<1	E0.03	<0.5	E0.21	E1.0	<0.5	E1.2	<2
	09/25/02*	0946	.55	10	<1	<1	E.03	<.5	<.5	E.10	<.5	E1.1	<2
	09/25/02	1030	1.50	10	<1	<1	E.03	<.5	E.23	E.12	E.08	E1.6	<2
	09/25/02	1200	.48	250	<1	<1	E.02	<.5	<.5	E.11	<.5	E1.1	<2
	09/25/02	1230	1.00	250	<1	<1	E.03	<.5	E.29	E.11	E.07	E1.4	<2
	09/25/02	1330	.55	750	E.19	<1	E.1	<.5	<.5	<.5	<.5	2.1	2.2
	09/25/02	1400	1.25	750	E.13	<1	E.07	<.5	<.5	<.5	E.13	E1.7	E1.4
12	09/06/02	0930	.75	5	<1	<1	<2	<.5	<.5	E.13	<.5	E.80	<2
	09/06/02	1030	1.75	5	<1	<1	E.02	<.5	E.27	E.10	<.5	E.84	<2
	09/06/02	1045	2.50	5	<1	<1	E.02	<.5	<.5	E.04	<.5	<2	<2
	09/06/02	1215	.75	60	<1	<1	<2	<.5	E.31	E.08	<.5	E.77	<2
	09/06/02	1245	2.50	60	<1	<1	E.02	<.5	E.26	E.14	<.5	E1.0	<2
	09/06/02	1315	4.00	60	<1	<1	E.03	<.5	E.21	<.5	<.5	E1.0	<2
	09/06/02	1500	.75	200	<1	<1	E.02	<.5	E.27	E.11	<.5	E.99	<2
	09/06/02	1530	2.15	200	<1	<1	E.02	<.5	E.33	E.13	<.5	E1.1	<2
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	<1	<1	<2	<.5	E.21	<.5	<.5	E1.5	<2
	05/28/03	1015	2.75	5	<1	<1	<2	<.5	E.15	E.18	E.03	2.3	<2
	05/28/03	1045	.75	60	<1	<1	E.84	<.5	<.5	E.12	E.023	E1.7	<2
	05/28/03	1115	2.50	60	<1	<1	<2	<.5	<.5	E.12	E.015	E1.6	<2

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5	Stigmastanol 19466-47-8
						Bottom-sediment samples (micrograms per kilogram)							
10	09/25/02	1030	1.75	10	<100	590	<200	9,600	<100	E50	14,000	51,000	10,000
	09/25/02	1230	1.25	250	<100	430	<200	13,000	<100	<50	18,000	44,000	6,200
	09/25/02	1400	1.50	750	<100	410	<200	10,000	<100	<50	16,000	22,000	4,200
	03/12/03	1045	1.75	10	<1	180	<200	3,900	210	<50	5,200	19,000	3,800
	03/12/03	1245	1.25	250	<100	220	<200	5,700	220	<50	8,500	27,000	4,400
11	02/25/03	1430	1.50	25	<1	E99	<200	2,800	E99	<50	4,500	14,000	2,900
	02/25/03	1500	1.50	250	<100	E94	<200	4,000	160	<50	6,900	9,000	2,000
12	09/06/02	1045	2.75	5	<100	1,700	<200	13,000	<100	E34	16,000	22,000	5,700
	09/06/02	1315	4.25	60	<100	1,580	<200	11,000	<100	<50	17,000	58,000	18,000
	09/06/02	1600	3.25	200	<100	1,000	<200	2,200	E82	<50	7,600	9,100	3,500
	05/28/03	1200	4.38	5	<100	380	<200	2,700	320	<50	3,100	16,000	4,800
	05/28/03	1230	4.12	60	<100	270	<200	2,500	220	<50	2,000	13,000	3,200

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Tetrachloro-ethylene 127-18-4	Tribromo-methane (bromoform) 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl-citrate (ethyl citrate) 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichlor-isopropyl)-phosphate 13674-87-8
						Water-column samples (micrograms per liter in unfiltered samples)							
10	09/25/02	0945	0.55	10	<0.5	<0.5	<0.5	<1	<0.5	<0.5	0.54	E0.05	<0.5
	09/25/02*	0946	.55	10	<.5	<.5	<.5	<1	<.5	<.5	.52	<.5	E.05
	09/25/02	1030	1.50	10	<.5	<.5	E.06	<1	<.5	<.5	.71	E.06	E.06
	09/25/02	1200	.48	250	<.5	<.5	<.5	<1	<.5	<.5	.61	E.06	<.5
	09/25/02	1230	1.00	250	<.5	<.5	<.5	<1	<.5	<.5	.74	E.07	E.07
	09/25/02	1330	.55	750	<.5	<.5	<.5	E.11	<.5	<.5	E.65	E.06	<.5
	09/25/02	1400	1.25	750	<.5	<.5	<.5	E.08	<.5	<.5	E.54	<.5	<.5
12	09/06/02	0930	.75	5	<.5	<.5	<.5	E.11	<.5	<.5	.74	E.07	<.5
	09/06/02	1030	1.75	5	<.5	<.5	<.5	E.09	<.5	<.5	.68	E.06	E.06
	09/06/02	1045	2.50	5	<.5	<.5	<.5	E.11	<.5	<.5	.65	E.07	<.5
	09/06/02	1215	.75	60	<.5	<.5	<.5	E.09	<.5	<.5	E.58	E.05	<.5
	09/06/02	1245	2.50	60	<.5	<.5	<.5	E.14	<.5	<.5	.76	E.08	<.5
	09/06/02	1315	4.00	60	<.5	<.5	<.5	E.13	<.5	<.5	.80	E.08	E.06
	09/06/02	1500	.75	200	<.5	<.5	<.5	E.15	<.5	<.5	.7	E.07	E.05
	09/06/02	1530	2.15	200	<.5	<.5	<.5	E.14	<.5	<.5	.76	E.07	E.05
	09/06/02	1600	3.00	200	--	--	--	--	--	--	--	--	--
	05/28/03	0945	.75	5	<.5	<.5	E.15	E.14	<.5	E.07	.77	E.12	E.09
	05/28/03	1015	2.75	5	<.5	<.5	E.23	E.22	<.5	E.1	.81	E.17	<.5
	05/28/03	1045	.75	60	<.5	<.5	<.5	E.17	<.5	E.07	.62	E.1	E.08
	05/28/03	1115	2.50	60	<.5	<.5	E.13	E.14	<.5	E.06	.63	E.1	E.07

Table 11. Concentrations of selected organic wastewater compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; <, less than; E, estimated; *, replicate sample; --, no data]

Station number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Tetrachloro-ethylene 127-18-4	Tribromo-methane (bromoform) 75-25-2	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl-citrate (ethyl citrate) 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichlor-isopropyl)-phosphate 13674-87-8
							Bottom-sediment samples (micrograms per kilogram)						
10	09/25/02	1030	1.75	10	<50	<50	<50	630	--	<100	<100	E100	690
	09/25/02	1230	1.25	250	<50	<50	<50	190	--	<100	<100	E79	600
	09/25/02	1400	1.50	750	<50	<50	<50	130	--	E47	<100	<100	500
	03/12/03	1045	1.75	10	<50	<50	<50	52	--	<100	E71	<100	220
	03/12/03	1245	1.25	250	<50	<50	<50	E40	--	<100	<100	<100	390
11	02/25/03	1430	1.50	25	<50	<50	<50	89	--	<100	E72	<100	170
	02/25/03	1500	1.50	250	<50	<50	<50	66	--	<100	<100	<100	250
12	09/06/02	1045	2.75	5	<50	<50	<50	880	--	<100	<100	E92	1,100
	09/06/02	1315	4.25	60	<50	<50	<50	1,500	--	<100	<100	<100	570
	09/06/02	1600	3.25	200	<50	<50	<50	370	--	<100	<100	<100	130
	05/28/03	1200	4.38	5	<50	<50	<50	220	--	<100	<100	<100	250
	05/28/03	1230	4.12	60	<50	<50	<50	200	--	<100	<100	<100	200

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazepine 298-46-4	Cimetidine 51481-61-9
					Water-column samples (micrograms per liter in filtered samples)					
10	09/25/02	0945	0.55	10	<0.018	0.039	--	0.570	<0.011	<0.007
	09/25/02*	0946	.55	10	<.018	.039	--	.540	<.011	<.007
	09/25/02	1030	1.50	10	<.018	.035	--	.500	<.011	<.007
	09/25/02	1200	.48	250	<.018	.031	--	.490	<.011	<.007
	09/25/02	1230	1.00	250	<.018	.033	--	.500	<.011	<.007
	09/25/02	1330	.55	750	<.018	.028	--	.510	<.011	<.007
	09/25/02	1400	1.25	750	<.018	.031	--	.530	<.011	<.007
12	09/06/02	0930	.75	5	<.018	<.009	--	<.014	E.004	<.007
	09/06/02	1030	1.75	5	<.018	<.009	--	<.014	E.004	<.007
	09/06/02	1045	2.50	5	<.018	<.009	--	.018	E.004	<.007
	09/06/02	1215	.75	60	<.018	<.009	--	<.014	E.004	<.007
	09/06/02	1245	2.50	60	<.018	<.009	--	.021	<.011	<.007
	09/06/02	1315	4.00	60	<.018	<.009	--	<.014	E.007	<.007
	09/06/02	1500	.75	200	<.018	<.009	--	.019	E.007	<.007
	09/06/02	1530	2.15	200	<.018	<.009	--	.019	E.006	<.007
	09/06/02	1600	3.00	200	<.018	<.009	--	.022	E.009	<.007
	05/28/03	0945	.75	5	.370	.045	--	.350	.012	<.007
	05/28/03	1015	2.75	5	.450	.320	--	.860	.009	<.007
	05/28/03	1045	.75	60	.390	.150	--	.530	.010	<.007
	05/28/03	1115	2.50	60	.400	.090	--	.450	.009	<.007
	08/27/03	1000	.50	5	.160	<.009	--	.034	.005	<.007
	08/27/03	1015	2.25	5	.210	<.009	--	.011	.006	<.007
	08/27/03	1030	3.75	5	.180	<.009	--	.031	E.003	<.007
	08/27/03	1200	.50	60	.230	<.009	--	.043	.006	<.007
	08/27/03	1215	2.63	60	.260	<.009	--	.090	.004	<.007
	08/27/03	1230	4.50	60	.290	<.009	--	.100	.006	<.007

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Azithromycin 83905-01-5	Caffeine 58-08-2	Carbamazepine 298-46-4	Cimetidine 51481-61-9
					Bottom-sediment samples (micrograms per kilogram)					
10	09/25/02	1030	1.75	10	--	--	--	--	--	--
	09/25/02	1230	1.25	250	--	--	--	--	--	--
	09/25/02	1400	1.50	750	--	--	--	--	--	--
11	02/25/03	1430	1.50	60	MRL-ND	MRL-ND	MRL-ND	18.8	40.6	4.77
	02/25/03	1530	1.50	200	MRL-ND	MRL-ND	MRL-ND	28.1	47.2	5.92
12	09/06/02	1045	2.75	5	--	--	--	--	--	--
	09/06/02	1315	4.25	60	--	--	--	--	--	--
	09/06/02	1600	3.25	200	--	--	--	--	--	--
	05/28/03	1200	4.38	5	MRL-ND	MRL-ND	MRL-ND	MRL-ND	8.62	MRL-ND
	05/28/03	1230	4.12	60	MRL-ND	MRL-ND	MRL-ND	MRL-ND	7.47	1.87
	08/27/03	1315	4.00	5	MRL-ND	MRL-ND	MRL-ND	MRL-ND	10.46	2.25
	08/27/03	1330	4.75	60	MRL-ND	MRL-ND	MRL-ND	35.59	13.49	MRL-ND

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Erythromycin 114-07-8
					Water-column samples (micrograms per liter in filtered samples)					
10	09/25/02	0945	0.55	10	<0.024	0.048	<0.01	<0.012	<0.015	--
	09/25/02*	0946	.55	10	<.024	.047	<.01	<.012	<.015	--
	09/25/02	1030	1.50	10	<.024	.043	<.01	<.012	<.015	--
	09/25/02	1200	.48	250	<.024	.040	<.01	<.012	<.015	--
	09/25/02	1230	1.00	250	<.024	.044	<.01	<.012	<.015	--
	09/25/02	1330	.55	750	<.024	.048	<.01	<.012	<.015	--
	09/25/02	1400	1.25	750	<.024	.047	<.01	<.012	<.015	--
12	09/06/02	0930	.75	5	<.024	.088	<.01	<.012	<.015	--
	09/06/02	1030	1.75	5	<.024	.091	<.01	<.012	<.015	--
	09/06/02	1045	2.50	5	<.024	.092	<.01	<.012	<.015	--
	09/06/02	1215	.75	60	<.024	.093	<.01	<.012	<.015	--
	09/06/02	1245	2.50	60	<.024	.093	<.01	<.012	<.015	--
	09/06/02	1315	4.00	60	<.024	.093	<.01	<.012	<.015	--
	09/06/02	1500	.75	200	<.024	.096	<.01	<.012	<.015	--
	09/06/02	1530	2.15	200	<.024	.100	<.01	<.012	<.015	--
	09/06/02	1600	3.00	200	<.024	.097	<.01	<.012	<.015	--
	05/28/03	0945	.75	5	<.024	.190	<.01	<.012	<.015	--
	05/28/03	1015	2.75	5	<.024	.170	<.01	<.012	<.015	--
	05/28/03	1045	.75	60	<.024	.140	<.01	<.012	<.015	--
	05/28/03	1115	2.50	60	<.024	.160	<.01	<.012	<.015	--
	08/27/03	1000	.50	5	<.024	.240	<.01	<.012	<.015	--
	08/27/03	1015	2.25	5	<.024	.250	<.01	<.012	<.015	--
	08/27/03	1030	3.75	5	<.024	.240	<.01	<.012	<.015	--
	08/27/03	1200	.50	60	<.024	.250	<.01	<.012	<.015	--
	08/27/03	1215	2.63	60	<.024	.250	<.01	<.012	<.015	--
	08/27/03	1230	4.50	60	<.024	.260	<.01	<.012	<.015	--

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Erythromycin 114-07-8
					Bottom-sediment samples (micrograms per kilogram)					
10	09/25/02	1030	1.75	10	--	--	--	--	--	--
	09/25/02	1230	1.25	250	--	--	--	--	--	--
	09/25/02	1400	1.50	750	--	--	--	--	--	--
11	02/25/03	1430	1.50	60	MRL-ND	2.99	MRL-ND	MRL-ND	5.42	MRL-ND
	02/25/03	1530	1.50	200	MRL-ND	5.52	MRL-ND	6.72	20.7	MRL-ND
12	09/06/02	1045	2.75	5	--	--	--	--	--	--
	09/06/02	1315	4.25	60	--	--	--	--	--	--
	09/06/02	1600	3.25	200	--	.096	<0.01	<.012	<.015	--
	05/28/03	1200	4.38	5	MRL-ND	2.66	MRL-ND	MRL-ND	2.86	MRL-ND
	05/28/03	1230	4.12	60	MRL-ND	7.47	MRL-ND	MRL-ND	2.13	MRL-ND
	08/27/03	1315	4.00	5	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
	08/27/03	1330	4.75	60	MRL-ND	2.20	MRL-ND	MRL-ND	MRL-ND	MRL-ND

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0	Ibuprofen 15687-27-1	Metformin 657-24-9	Miconazole 22916-47-8
					Water-column samples (micrograms per liter in filtered samples)					
10	09/25/02	0945	0.55	10	<0.018	<0.039	<0.015	<0.018	<0.003	<0.018
	09/25/02*	0946	.55	10	<.018	<.039	<.015	<.018	<.003	<.018
	09/25/02	1030	1.50	10	<.018	<.039	<.015	<.018	<.003	<.018
	09/25/02	1200	.48	250	<.018	<.039	<.015	<.018	<.003	<.018
	09/25/02	1230	1.00	250	<.018	<.039	<.015	<.018	<.003	<.018
	09/25/02	1330	.55	750	<.018	<.039	<.015	<.018	<.003	<.018
	09/25/02	1400	1.25	750	<.018	<.039	<.015	<.018	<.003	<.018
12	09/06/02	0930	.75	5	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1030	1.75	5	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1045	2.50	5	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1215	.75	60	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1245	2.50	60	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1315	4.00	60	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1500	.75	200	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1530	2.15	200	<.018	<.039	<.015	<.018	<.003	<.018
	09/06/02	1600	3.00	200	<.018	<.039	--	--	--	--
	05/28/03	0945	.75	5	<.018	<.039	<.015	<.018	<.003	<.018
	05/28/03	1015	2.75	5	<.018	<.039	<.015	<.018	<.003	<.018
	05/28/03	1045	.75	60	<.018	<.039	<.015	<.018	<.003	<.018
	05/28/03	1115	2.50	60	<.018	<.039	<.015	<.018	<.003	<.018
	08/27/03	1000	.50	5	<.018	<.039	<.015	<.018	<.003	<.018
	08/27/03	1015	2.25	5	<.018	<.039	<.015	<.018	<.003	<.018
	08/27/03	1030	3.75	5	<.018	<.039	<.015	<.018	<.003	<.018
	08/27/03	1200	.50	60	<.018	<.039	<.015	<.018	<.003	<.018
	08/27/03	1215	2.63	60	<.018	<.039	<.015	<.018	<.003	<.018
	08/27/03	1230	4.50	60	<.018	<.039	<.015	<.018	<.003	<.018

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0	Ibuprofen 15687-27-1	Metformin 657-24-9	Miconazole 22916-47-8
					Bottom-sediment samples (micrograms per kilogram)					
10	09/25/02	1030	1.75	10	--	--	--	--	--	--
	09/25/02	1230	1.25	250	--	--	--	--	--	--
	09/25/02	1400	1.50	750	--	--	--	--	--	--
11	02/25/03	1430	1.50	60	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
	02/25/03	1530	1.50	200	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
12	09/06/02	1045	2.75	5	--	--	--	--	--	--
	09/06/02	1315	4.25	60	--	--	--	--	--	--
	09/06/02	1600	3.25	200	<0.018	<0.039	--	--	--	--
	05/28/03	1200	4.38	5	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
	05/28/03	1230	4.12	60	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
	08/27/03	1315	4.00	5	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
	08/27/03	1330	4.75	60	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Ranitidine 66357-35-5	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Warfarin 81-81-2
					Water-column samples (micrograms per liter in filtered samples)					
10	09/25/02	0945	0.55	10	<0.01	<0.029	<0.023	<0.011	<0.014	<0.001
	09/25/02*	0946	.55	10	<.01	<.029	<.023	<.011	<.014	<.001
	09/25/02	1030	1.50	10	<.01	<.029	<.023	<.011	<.014	<.001
	09/25/02	1200	.48	250	<.01	<.029	<.023	<.011	<.014	<.001
	09/25/02	1230	1.00	250	<.01	<.029	<.023	<.011	<.014	<.001
	09/25/02	1330	.55	750	<.01	<.029	<.023	<.011	<.014	<.001
	09/25/02	1400	1.25	750	<.01	<.029	<.023	<.011	<.014	<.001
12	09/06/02	0930	.75	5	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1030	1.75	5	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1045	2.50	5	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1215	.75	60	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1245	2.50	60	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1315	4.00	60	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1500	.75	200	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1530	2.15	200	<.01	<.029	<.023	<.011	<.014	<.001
	09/06/02	1600	3.00	200	--	--	<.023	<.011	<.014	<.001
	05/28/03	0945	.75	5	<.01	<.029	<.023	<.011	<.014	<.001
	05/28/03	1015	2.75	5	<.01	<.029	<.023	<.011	<.014	<.001
	05/28/03	1045	.75	60	<.01	<.029	<.023	<.011	<.014	<.001
	05/28/03	1115	2.50	60	<.01	<.029	<.023	<.011	<.014	<.001
	08/27/03	1000	.50	5	<.01	<.029	<.023	<.011	<.014	<.001
	08/27/03	1015	2.25	5	<.01	<.029	<.023	<.011	<.014	<.001
	08/27/03	1030	3.75	5	<.01	<.029	<.023	<.011	<.014	<.001
	08/27/03	1200	.50	60	<.01	<.029	<.023	<.011	<.014	<.001
	08/27/03	1215	2.63	60	<.01	<.029	<.023	<.011	<.014	<.001
	08/27/03	1230	4.50	60	<.01	<.029	<.023	<.011	<.014	<.001

Table 12. Concentrations of selected pharmaceutical compounds in water-column and bottom-sediment samples from selected reaches of Brush Creek.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; m, meters; <, less than; --, no data; *, replicate sample; E, estimated; MRL-ND, no quantifiable presence determined, minimum reporting level not quantified]

Site number (fig. 1)	Sample date	Sample time	Depth (m)	Distance, from dam (m)	Ranitidine 66357-35-5	Salbutamol (Albuterol) 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Warfarin 81-81-2
					Bottom-sediment samples (micrograms per kilogram)					
10	09/25/02	1030	1.75	10	--	--	--	--	--	--
	09/25/02	1230	1.25	250	--	--	--	--	--	--
	09/25/02	1400	1.50	750	--	--	--	--	--	--
11	02/25/03	1430	1.50	60	MRL-ND	MRL-ND	MRL-ND	1.98	MRL-ND	MRL-ND
	02/25/03	1530	1.50	200	MRL-ND	MRL-ND	MRL-ND	3.47	MRL-ND	MRL-ND
12	09/06/02	1045	2.75	5	--	--	--	--	--	--
	09/06/02	1315	4.25	60	--	--	--	--	--	--
	09/06/02	1600	3.25	200	--	--	<0.023	<.011	<0.014	<0.001
	05/28/03	1200	4.38	5	MRL-ND	MRL-ND	MRL-ND	.84	MRL-ND	MRL-ND
	05/28/03	1230	4.12	60	MRL-ND	MRL-ND	MRL-ND	.58	MRL-ND	MRL-ND
	08/27/03	1315	4.00	5	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND
	08/27/03	1330	4.75	60	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND	MRL-ND

Table 13. Quality-control data summary for selected organic wastewater compounds in laboratory reagent spike and blank samples.

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; concentrations in micrograms per liter; spike recoveries in average percent for all samples; number, number of samples analyzed; number in parentheses represents number of blank samples with detections; numbers in brackets represent average concentration in detection; nd, not detected; --, no data]

Matrix	1,4-Dichlorobenzene 106-46-7	17-α-Ethynyl estradiol 57-63-6	17-β-Estradiol 50-28-2	1-Methylnaphthalene 90-12-0	2,6-Dimethylnaphthalene 581-42-0	2-Methylnaphthalene 91-57-6	3,4-Dichlorophenylisocyanate 102-36-3	3-β-Coprostanol 360-68-9	3-Methyl-1H-indole (skatol) 83-34-1	4-Cumylphenol 599-64-4	4-Nonylphenol 104-40-5	4-Octylphenol 1806-26-4
Water, spike recovery (average percent)	62.2	72.2	72.6	59.6	70.5	65.6	79.5	68.9	66.4	75.7	69.3	80.7
Number	42	13	42	13.0	33	13	39	42	12	13	16	40
Water, blank detection	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Water, blank concentration	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]
Sediment, spike recovery	64.8	73.5	75.5	80.2	84.8	79.2	80.0	78.7	85.2	79.8	81.1	91.4
Number	3	3	3	3	3	3	3	3	3	3	3	3

Matrix	5-Methyl-1H-benzotriazole 136-85-6	Acetophenone 98-86-2	AHTN 21145-77-7	Anthracene 120-12-7	Anthraquinone 84-65-1	Atrazine 1912-24-9	Benzo[a]pyrene 50-32-8	Benzophenone 119-61-9	Bis(2-ethylhexyl)-phthalate 117-81-7	Bisphenol A 80-05-7	Bromacil 314-40-9	BHA 25013-16-5
Water, spike recovery (average percent)	84.9	80.7	79.7	78.7	83.8	102.6	88.3	77.8	--	83.4	83.2	57.2
Number	16	42	16	39	16	3	42	13	--	40	7	40
Water, blank detection	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Water, blank concentration	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]
Sediment, spike recovery	--	51.4	80.4	82.9	83.9	68.4	93.2	95.5	--	39.6	60.0	--
Number	--	3	3	3	3	3	3	3	--	3	3	--

Table 13. Quality-control data summary for selected organic wastewater compounds in laboratory reagent spike and blank samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; concentrations in micrograms per liter; spike recoveries in average percent for all samples; number, number of samples analyzed; number in parentheses represents number of blank samples with detections; numbers in brackets represent average concentration in detection; nd, not detected; --, no data]

Matrix	Caffeine 58-08-2	Camphor 76-22-2	Carbaryl 63-25-2	Carbazole 86-74-8	Chlorpyrifos 2921-88-2	Cholesterol 57-88-5	Cotinine 486-56-6	Diazinon 333-41-5	Dichlorvos 62-73-7	D-limonene 5989-27-5	Equilenin 517-09-9	Estrone 53-16-7
Water, spike recovery (average percent)	84.2	70.5	82.7	90.4	84.0	70.6	73.0	77.6	74.0	45.6	95.8	73.9
Number	39	13	42	16	33	42	16	42	13	13	11	16
Water, blank detection	(0)	(0)	(0)	(0)	(0)	(3)	(1)	(0)	(0)	(1)	(2)	(1)
Water, blank concentration	[nd]	[nd]	[nd]	[nd]	[nd]	[0.623]	[0.077]	[nd]	[nd]	[0.77]	[0.175]	[0.49]
Sediment, spike recovery	--	75.1	--	83.1	66.6	66.2	--	71.6	--	65.3	98.8	84.1
Number	--	--	--	3	3	3	--	3	--	3	3	3

Matrix	Fluoranthene 206-44-0	Galaxolide (HHCB) 1222-05-5	Indole 120-72-9	Isoborneol 124-76-5	Isophorone 78-59-1	Isopropyl-benzene (cumene) 98-82-8	Isoquinoline 119-65-3	Menthol 89-78-1	Metalaxyl 57837-19-1	Methyl-salicylate 119-36-8	Metolachlor 51218-45-2	N,N-diethyl-toluamide (DEET) 134-62-3
Water, spike recovery (average percent)	87.4	81.4	60.4	71.3	73.5	51.2	67.6	70.6	80.0	71.1	83.3	76.3
Number	42	13	13	13	13	13	13	13	13	13	13	14
Water, blank detection	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
Water, blank concentration	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]	[0.148]	[nd]	[nd]	[nd]
Sediment, spike recovery	80.3	81.0	76.9	81.0	40.8	53.1	45.3	83.8	50.4	33.9	83.9	69.8
Number	3	3	3	3	3	3	3	3	3	3	3	3

Table 13. Quality-control data summary for selected organic wastewater compounds in laboratory reagent spike and blank samples.—Continued

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; AHTN, acetyl hexamethyl tetrahydro naphthalene; BHA, butylated hydroxyanisole; NP1EO, nonylphenol monoethoxylate; NP2EO, nonylphenol diethoxylate; OP1EO, octylphenol monoethoxylate; OP2EO, octylphenol diethoxylate; concentrations in micrograms per liter; spike recoveries in average percent for all samples; number, number of samples analyzed; number in parentheses represents number of blank samples with detections; numbers in brackets represent average concentration in detection; nd, not detected; --, no data]

Matrix	Naphthalene 91-20-3	NP1EO 27986-36-3	NP2EO 26027-38-2	OP1EO 2315-67-5	OP2EO 2315-61-9	Para-cresol 106-44-5	Penta-chloro-phenol 87-86-5	Phenanthrene 85-01-8	Phenol 108-95-2	Prometon 1610-18-0	Pyrene 129-00-0	Sitosterol 83-46-5
Water, spike recovery (average percent)	73.3	85.4	72.3	85.1	78.1	80.0	67.9	78.5	77.4	78.9	84.7	80.8
Number	42	29	42	39	39	42	13	42	42	13	42	12
Water, blank detection	(0)	(0)	(2)	(0)	(1)	(0)	(0)	(0)	(1)	(0)	(0)	(0)
Water, blank concentration	[nd]	[nd]	[1.55]	[nd]	[0.052]	[nd]	[nd]	[nd]	[0.92]	[nd]	[nd]	[nd]
Sediment, spike recovery	83.2	82.9	89.5	82.6	86.2	80.9	22.5	83.4	52.0	66.8	81.8	--
Number	3	3	3	3	3	3	3	3	3	3	3	--

Matrix	Stigmastanol 19466-47-8	Tetrachloro-ethylene 127-18-4	Tributyl phosphate 126-73-8	Triclosan 3380-34-5	Triethyl citrate (ethyl citrate) 77-93-0	Triphenyl phosphate 115-86-6	Tris (2-butoxyethyl)-phosphate 78-51-3	Tris (2-chloroethyl)-phosphate 115-96-8	Tris (dichlor-isopropyl)-phosphate 13674-87-8
Water, spike recovery (average percent)	81.4	36.9	86.5	85.9	78.1	85.8	81.3	85.6	83.9
Number	17	42	37	39	13	42	36	16	42
Water, blank detection	(0)	(0)	(1)	(0)	(0)	(0)	(0)	(0)	(0)
Water, blank concentration	[nd]	[nd]	[0.12]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]
Sediment, spike recovery	66.8	35.0	97.3	79.9	--	58.3	73.8	50.5	--
Number	3	3	3	3	--	3	3	3	--

Table 14. Quality-control data summary for selected pharmaceutical compounds in laboratory reagent spike and blank samples.

[Numbers below chemical names are Chemical Abstract Service (CAS) registry numbers; concentrations in micrograms per liter; spike recoveries in average percent for all samples; number, number of samples analyzed; number in parentheses represents number of blank samples with detections; numbers in brackets represent average concentration in detection; nd, not detected; <, less than; --, no data]

Matrix	1,7-Dimethylxanthine 611-59-6	Acetaminophen 103-90-2	Caffeine 58-08-2	Carbamazepine 298-46-4	Cimetidine 51481-61-9	Codeine 76-57-3	Cotinine 486-56-6	Dehydronifedipine 67035-22-7
Water, spike recovery (average percent)	122	84	94	79	27	93	82	91
Number	43	45	45	32	45	42	45	45
Water, blank detection	(0)	(3)	(3)	(0)	(0)	(0)	(0)	(1)
Water, blank concentration	[nd]	[0.004]	[0.004]	[nd]	[nd]	[nd]	[nd]	[0.008]
Sediment, spike recovery	43	43	58	44	<5	<5	53	9
Number	2	--	2	--	2	2	2	2

Matrix	Diltiazem 42399-41-7	Diphenhydramine 58-73-1	Fluoxetine 54910-89-3	Furosemide 54-31-9	Gemfibrozil 25812-30-0	Ibuprofen 15687-27-1	Metformin 657-24-9	Miconazole 22916-47-8
Water, spike recovery (average percent)	56	56	39	49	38	61	4	15
Number	45	38	5	32	45	45	40	7
Water, blank detection	(1)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
Water, blank concentration	[0.0003]	[0.0018]	[nd]	[nd]	[nd]	[nd]	[nd]	[nd]
Sediment, spike recovery	63	39	<5	--	32	32	52	<5
Number	2	--	2	--	2	2	2	2

Matrix	Ranitidine 66357-35-5	Salbutamol 18559-94-9	Sulfamethoxazole 723-46-6	Thiabendazole 148-79-8	Trimethoprim 738-70-5	Warfarin 81-81-2
Water, spike recovery (average percent)	38	77	62	72	75	78
Number	45	33	45	38	45	33
Water, blank detection	(1)	(0)	(1)	(0)	(1)	(0)
Water,blank concentration	[0.004]	[nd]	[0.002]	[nd]	[0.0009]	[nd]
Sediment, spike recovery	<5	9	9.4	29	27	49
Number	2	2	2	2	2	2

Table 15. List of benthic macroinvertebrate metrics used and metric status for stream sites sampled in 2002 and 2003.

[MDNR, Missouri Department of Natural Resources; KDHE, Kansas Department of Health and Environment; ALUS, Aquatic Life Use Support Status; --, not applicable; EPT, Ephemeroptera-Plecoptera-Trichoptera; MO-BI, Missouri Biotic Index; KBI, Kansas Biotic Index]

Metric name and citation (if available)	2002 Sampling (MDNR protocol)		2003 Sampling (KDHE protocol)	
	ALUS core metric	10-metric	ALUS core metric	10-metric
Total Taxa Richness (Barbour and others, 1999)	X	X	--	X
EPT Taxa Richness (Klemm and others, 1990)	X	X	X	X
Missouri Biotic Index (Rabeni and others, 1997)	X	X	--	--
Shannon-Wiener Diversity Index (Washington, 1984)	X	X	--	X
Macroinvertebrate Biotic Index (Davenport and Kelly, 1983)	--	--	X	X
Kansas Biotic Index (Kansas Department of Health and Environment, 2000)	--	--	X	X
Percent Scrapers (Barbour and others, 1999)	--	X	--	X
Percent Chironomidea (Hayslip, 1993)	--	X	--	--
Percent Ephemeroptera-Plecoptera-Trichoptera (Barbour and others, 1999)	--	--	X	X
Percent Oligichaeta (Lenat, 1983; Kerans and Karr, 1994)	--	--	--	X
Percent Tanytarsini Midges (DeShon, 1995)	--	X	--	X
Percent Ephemeroptera and Plecoptera	--	--	--	X
Percent MO-BI tolerant organisms equal to or greater than 6.5	--	X	--	--
Percent KBI intolerant taxa [tolerance value less than 3] (Huggins and Moffett, 1988; DeShon, 1995)	--	--	--	X
Ratio of EPT to Oligicheata	--	X	--	--
Percent Dominant Intolerant Taxa (Shackleford, 1988)	--	X	--	--
Percent Mussel Loss	--	--	X[a]	--

[a]Not analyzed.

Table 16. Benthic macroinvertebrate metric values for sites sampled in 2002.

[EPT, Ephemeroptera-Plecoptera-Trichoptera; MO-BI, Missouri Biotic Index; SWDI, Shannon-Wiener Diversity Index; ≥, greater than or equal to; M, March; <, less than; S, September]

Site number (fig. 1)	Sample period	Total Taxa Richness	EPT Taxa Richness	MO-BI	SWDI	Percent Scrapers	Percent Chironomidae	Percent Tanytarsini Midges	Percent MO-BI ≥ 6.5	Ratio EPT to Oligicheata	Percent Dominant Intolerant Taxa
1	M	37	8	6.2	2.74	2.2	42	6.8	65.4	19.3	8.7
2	M	23	6	6.6	1.99	1.6	51	7.8	78.7	43.4	8.2
3	M	14	2	6.5	1.59	.2	62	1.4	65.0	5.4	20.6
4	M	15	1	7.1	2.06	0	41	1.0	72.8	.02	11.9
5	M	22	3	6.6	1.48	.4	65	1.7	88.8	3.4	4.9
6	M	12	1	7.2	1.49	.4	70	0	77.8	.07	5.1
7	M	21	2	7.1	1.57	.3	59	.4	86.5	.16	7.0
8	M	15	2	6.6	1.35	.1	71	.4	85.9	.58	5.8
12	M	12	0	7.9	1.47	1.4	79	.2	97.8	<.01	1.4
13	M	16	1	6.8	.98	.1	87	.1	93.1	.02	3.6
19	M	26	7	6.2	1.51	1.7	13	.5	23.0	3.7	65.5

Site number (fig. 1)	Sample period	Total Taxa Richness	EPT Taxa Richness	MO-BI	SWDI	Percent Scrapers	Percent Chironomidae	Percent Tanytarsini Midges	Percent MO-BI ≥ 6.5	Ratio EPT to Oligicheata	Percent Dominant Intolerant Taxa
1	S	34	7	6.2	2.78	9.7	41	0.5	43.2	5.6	30.3
1	S	33	9	6.7	2.41	14.8	6	.6	45.3	.59	24.8
2	S	24	7	6.2	2.09	1.7	13	.6	36.5	27.2	24.4
3	S	25	7	6.7	2.28	4.3	19	5.2	60.0	28.2	13.0
4	S	20	5	7.0	2.12	.7	34	2.8	72.3	3.8	19.4
5	S	21	5	6.1	1.83	3.4	14	.3	39.0	37.5	33.0
6	S	20	5	6.7	2.03	.4	13	0	58.3	4.5	24.7
7	S	13	5	6.2	1.42	.3	11	0	30.9	44.1	50.7
8	S	22	7	6.4	1.86	1.1	22	3.0	50.6	23	33.1
12	S	12	1	8.6	.66	12.8	86	0	99.1	<.01	.12
13	S	17	5	6.4	1.72	1.2	18	.8	54.3	13.8	27.5
19	S	35	9	6.4	2.47	.7	31	5.8	49.0	30.3	21.2

Table 17. Stream Condition Index (SCI) scores and Aquatic Life Use Support Status (ALUS) values for sites sampled in 2002.

[EPT, Ephemeropetra-Plecoptera-Trichoptera; MO-BI, Missouri Biotic Index; SWDI, Shannon-Wiener Diversity Index; M, March; P, partially supporting; F, fully supporting; N, not supporting; S, September]

Site number (fig. 1)	Sample period	Missouri Department of Natural Resource (MDNR) core metric				SCI Score (MDNR core metric sum)	ALUS status
		Total Taxa Richness score	EPT Taxa Richness score	MO-BI score	SWDI score		
1	M	5	3	3	5	16	F
2	M	3	3	3	5	14	P
3	M	3	1	3	3	10	P
4	M	3	1	3	5	12	P
5	M	3	1	3	3	10	P
6	M	1	1	3	3	8	N
7	M	3	1	3	3	10	P
8	M	3	1	3	3	10	P
12	M	1	1	1	3	6	N
13	M	3	1	3	3	10	P
19	M	5	3	3	3	14	P

Site number (fig. 1)	Sample period	Missouri Department of Natural Resource (MDNR) core metric				SCI Score (MDNR core metric sum)	ALUS status
		Total Taxa Richness score	EPT Taxa Richness score	MO-BI score	SWDI score		
1	S	5	3	5	5	18	F
2	S	5	3	5	5	18	F
3	S	5	3	5	5	18	F
4	S	3	3	3	5	14	P
5	S	3	3	5	3	14	P
6	S	3	3	3	5	14	P
7	S	3	3	5	3	14	P
8	S	3	3	5	3	14	P
12	S	3	1	1	1	6	N
13	S	3	3	5	3	14	P
19	S	5	3	5	5	18	F

Table 18. Benthic macroinvertebrate metric values for sites sampled in 2003.

[EPT, Ephemeropetra-Plecoptera-Trichoptera; SWDI, Shannon-Wiener Diversity Index; MBI, Macroinvertebrate Biotic Index; KBI, Kansas Biotic Index]

Site number (fig. 1)	Total Taxa Richness	EPT Taxa Richness	SWDI	MBI	KBI	Percent Scrapers	Percent EPT	Percent Oligochaeta	Percent Tanytarsini Midges	Percent Ephemeroptera and Plecoptera	Percent KBI Intolerant Taxa
1	42	6	3.26	5.47	2.71	29.8	24.8	3.0	0	21.2	20.4
2	29	6	2.60	5.36	3.17	21.6	45.5	1.4	.9	28.8	8.4
3	25	5	2.55	6.18	2.70	27.3	17.6	1.4	.5	8.8	17.9
4	20	2	1.92	7.17	2.79	1.6	1.6	40.0	0	.3	12.8
5	29	5	2.70	5.72	3.29	7.4	19.9	2.2	.4	10.8	6.4
6	24	1	2.40	7.68	3.76	5.2	12.0	20.6	0	0	2.75
7	23	4	2.66	5.68	2.91	14.3	37.1	7.8	0	11.8	12.2
8	22	2	2.18	5.08	2.95	6.2	53.1	1.3	.4	13.8	6.6
12	20	0	2.05	7.88	4.55	9.6	0	31.7	0	0	.18
13	21	2	2.17	5.70	3.23	3.4	47.5	11.9	0	11.9	2.8
19	28	5	2.66	5.51	3.04	13.2	30.2	1.2	0	12.0	7.0

Table 19. Aquatic Life Use Support Status (ALUS) values for sites sampled in February 2003.

[EPT, Ephemeropetra-Plecoptera-Trichoptera; MBI, Macroinvertebrate Biotic Index; KBI, Kansas Biotic Index; F. February; --, indicates no data for percent mussel loss; N, not supporting; P, partially supporting]

Site number	Kansas Department of Health and Environment (KDHE) core metric					ALUS score (KDHE core-metric average)	ALUS status
	EPT Taxa Richness	EPT percent	MBI	KBI	Percent Mussel loss		
1	1	1	1	2	--	1.25	N
2	1	2	2	1	--	1.50	P
3	1	1	1	2	--	1.25	N
4	1	1	1	2	--	1.25	N
5	1	1	1	1	--	1.00	N
6	1	1	1	1	--	1.00	N
7	1	2	1	2	--	1.50	P
8	1	3	2	2	--	2.00	P
12	1	1	1	1	--	1.00	N
13	1	2	1	1	--	1.25	N
19	1	2	1	1	--	1.25	N

Table 20. Ranking of sites sampled in 2002 and 2003 for 10 proportionally scaled metrics.

[0, no shift between years; +, positive shift; -, negative shift]

Site number (fig. 1)	2002			2003	Shift in rank from March 2002 to February 2003
	March rank	September rank	Yearly average rank	February rank	
1	1	2	1	1	0
2	3	4	3	2	1
3	4	3	4	3	1
4	6	10	8	9	-3
5	5	5	5	6	-1
6	9	9	9	10	-1
7	7	7	6	5	2
8	8	6	7	7	1
12	10	11	11	11	-1
13	11	8	10	8	3
19	2	1	2	4	-2

Table 21. List of macroinvertebrate taxa included in the sampling of stream sites during this study.

[--, not identified; sp., species undetermined]

Phylum	Class	Order	Family	Subfamily	Genus	Taxa Reported As
Annelida	Hirudinea	--	--	--	--	Hirudinea
Annelida	Hirudinea	Arhynchobdellae	Erpobdellidae	--	--	Erpobdellidae
Annelida	Hirudinea	Rhynchobdellae	Glossiphoniidae	--	*Helobdella*	*Helobdella* sp.
Annelida	Hirudinea	Rhynchobdellae	Glossiphoniidae	--	*Helobdella*	*Helobdella stagnalis* (Linnaeus)
Annelida	Hirudinea	Rhynchobdellae	Glossiphoniidae	--	*Placobdella*	*Placobdella ornata* (Verrill)
Annelida	Hirudinea	Rhynchobdellae	Piscicolidae	--	--	Piscicolidae
Annelida	Oligochaeta	--	--	--	--	Megadrile
Annelida	Oligochaeta	Enchytraeida	Enchytraeidae	--	--	Enchytraeidae
Annelida	Oligochaeta	Lumbriculida	Lumbriculidae	--	--	Lumbriculidae
Annelida	Oligochaeta	Tubificida	Naididae	--	--	Naididae
Annelida	Oligochaeta	Tubificida	Naididae	--	*Dero*	*Dero* sp.
Annelida	Oligochaeta	Tubificida	Tubificidae	--	--	Tubificidae
Annelida	Oligochaeta	Tubificida	Tubificidae	--	*Branchiura*	*Branchiura sowerbyi* (Beddard)
Arthropoda	Arachnida	--	--	--	--	Acari
Arthropoda	Insecta	Coleoptera	--	--	--	Coleoptera
Arthropoda	Insecta	Coleoptera	Carabidae	--	--	Carabidae
Arthropoda	Insecta	Coleoptera	Dytiscidae	Colymbetinae	*Agabus*	*Agabus* sp.
Arthropoda	Insecta	Coleoptera	Dytiscidae	Colymbetinae	*Agabus*	*Agabus* sp.
Arthropoda	Insecta	Coleoptera	Dytiscidae	Hydroporinae	--	Hydroporini
Arthropoda	Insecta	Coleoptera	Dytiscidae	Hydroporinae	--	Hydroporini
Arthropoda	Insecta	Coleoptera	Dytiscidae	Hydroporinae	*Neoporus*	*Neoporus* sp.
Arthropoda	Insecta	Coleoptera	Dryopidae	--	*Helichus*	Helichus basalis (LeConte)
Arthropoda	Insecta	Coleoptera	Dryopidae	--	*Helichus*	Helichus lithophilus (Germar)
Arthropoda	Insecta	Coleoptera	Elmidae	--	*Dubiraphia*	*Dubiraphia* sp.
Arthropoda	Insecta	Coleoptera	Elmidae	--	*Stenelmis*	*Stenelmis* sp.
Arthropoda	Insecta	Coleoptera	Elmidae	--	*Stenelmis*	*Stenelmis* sp.
Arthropoda	Insecta	Coleoptera	Elmidae	--	*Stenelmis*	*Stenelmis sexlineata* (Sanderson)
Arthropoda	Insecta	Coleoptera	Gyrinidae	--	*Dineutus*	Dineutus assimilis (Kirby)
Arthropoda	Insecta	Coleoptera	Haliplidae	--	*Peltodytes*	*Peltodytes* sp.

Table 21. List of macroinvertebrate taxa included in the sampling of stream sites during this study.—Continued

[--, not identified; sp., species undetermined]

Phylum	Class	Order	Family	Subfamily	Genus	Taxa Reported As
Arthropoda	Insecta	Coleoptera	Hydrophilidae	--	*Cymbiodyta*	*Cymbiodyta* sp.
Arthropoda	Insecta	Coleoptera	Hydrophilidae	--	*Enochrus*	*Enochrus* sp.
Arthropoda	Insecta	Coleoptera	Scirtidae	--	--	Scirtidae
Arthropoda	Insecta	Collembola	--	--	--	Collembola
Arthropoda	Insecta	Diptera	--	--	--	Brachycera
Arthropoda	Insecta	Diptera	--	--	--	Nematocera
Arthropoda	Insecta	Diptera	Chironomidae	--	--	Chironomidae
Arthropoda	Insecta	Diptera	Chironomidae	--	--	Chironomidae
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	--	Chironominae
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	--	Chironomini
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	--	*Micropsectra/Tanytarsus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	--	*Phaenopsectra/Tribelos* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	--	Tanytarsini
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Axarus*	*Axarus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Chironomus*	*Chironomus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Cryptochironomus*	*Cryptochironomus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Dicrotendipes*	*Dicrotendipes* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Glyptotendipes*	*Glyptotendipes* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Micropsectra*	*Micropsectra* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Microtendipes*	*Microtendipes* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Parachironomus*	*Parachironomus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Paracladopelma*	*Paracladopelma* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Paratanytarsus*	*Paratanytarsus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Paratendipes*	*Paratendipes* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Phaenopsectra*	*Phaenopsectra* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Polypedilum*	*Polypedilum* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Pseudochironomus*	*Pseudochironomus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Rheotanytarsus*	*Rheotanytarsus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Stictochironomus*	*Stictochironomus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Tanytarsus*	*Tanytarsus* sp.

Table 21. List of macroinvertebrate taxa included in the sampling of stream sites during this study.—Continued

[--, not identified; sp., species undetermined]

Phylum	Class	Order	Family	Subfamily	Genus	Taxa Reported As
Arthropoda	Insecta	Diptera	Chironomidae	Chironominae	*Tribelos*	*Tribelos* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Diamesinae	*Diamesa*	*Diamesa* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	--	Orthocladiinae
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	--	Orthocladiinae
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	--	*Cricotopus/Orthocladius* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Corynoneura*	*Corynoneura* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Cricotopus*	*Cricotopus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Cricotopus*	*Cricotopus bicinctus* group
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Cricotopus*	*Cricotopus bicinctus* group
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Cricotopus*	*Cricotopus (Isocladius)* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Diplocladius*	*Diplocladius cultriger* (Kieffer)
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Diplocladius*	*Diplocladius cultriger* (Kieffer)
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Eukiefferiella*	*Eukiefferiella* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Hydrobaenus*	*Hydrobaenus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Nanocladius*	*Nanocladius* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Parakiefferiella*	*Parakiefferiella* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Parametriocnemus*	*Parametriocnemus* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Paraphaenocladius*	*Paraphaenocladius* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Paratrichocladius*	*Paratrichocladius* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Psectrocladius*	*Psectrocladius* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Thienemanniella*	*Thienemanniella* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Orthocladiinae	*Tvetenia*	*Tvetenia* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Tanypodinae	--	Pentaneurini
Arthropoda	Insecta	Diptera	Chironomidae	Tanypodinae	--	Tanypodinae
Arthropoda	Insecta	Diptera	Chironomidae	Tanypodinae	--	*Thinemannimyia* sp. (Coffman and Ferrington, 1996)
Arthropoda	Insecta	Diptera	Chironomidae	Tanypodinae	*Ablabesmyia*	*Ablabesmyia* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Tanypodinae	*Natarsia*	*Natarsia* sp.
Arthropoda	Insecta	Diptera	Chironomidae	Tanypodinae	*Procladius*	*Procladius* sp.
Arthropoda	Insecta	Diptera	Empididae	--	--	Empididae
Arthropoda	Insecta	Diptera	Empididae	Clinocerinae	*Clinocera*	*Clinocera* sp.

Table 21. List of macroinvertebrate taxa included in the sampling of stream sites during this study.—Continued

[--, not identified; sp., species undetermined]

Phylum	Class	Order	Family	Subfamily	Genus	Taxa Reported As
Arthropoda	Insecta	Diptera	Simuliidae	--	--	Simuliidae
Arthropoda	Insecta	Diptera	Simuliidae	--	--	Simuliidae
Arthropoda	Insecta	Diptera	Simuliidae	--	*Simulium*	*Simulium* sp.
Arthropoda	Insecta	Diptera	Simuliidae	--	*Simulium*	*Simulium* sp.
Arthropoda	Insecta	Diptera	Stratiomyidae	Stratiomyinae	*Stratiomys*	*Stratiomys* sp.
Arthropoda	Insecta	Diptera	Tabanidae	--	--	Tabanidae
Arthropoda	Insecta	Diptera	Tabanidae	--	*Tabanus*	*Tabanus* sp.
Arthropoda	Insecta	Diptera	Tipulidae	--	--	Tipulidae
Arthropoda	Insecta	Diptera	Tipulidae	Tipulinae	*Tipula*	*Tipula* sp.
Arthropoda	Insecta	Diptera	Tipulidae	Limoniinae	*Hexatoma*	*Hexatoma* sp.
Arthropoda	Insecta	Ephemeroptera	Baetidae	--	*Acerpenna*	*Acerpenna pygmaea* (Hagen)
Arthropoda	Insecta	Ephemeroptera	Baetidae	--	*Baetis*	*Baetis intercalaris* (McDunnough)
Arthropoda	Insecta	Ephemeroptera	Baetidae	--	*Fallceon*	*Fallceon quilleri* (Dodds)
Arthropoda	Insecta	Ephemeroptera	Caenidae	--	*Caenis*	*Caenis* sp.
Arthropoda	Insecta	Ephemeroptera	Heptageniidae	--	--	Heptageniidae
Arthropoda	Insecta	Ephemeroptera	Heptageniidae	--	*Stenacron*	*Stenacron* sp.
Arthropoda	Insecta	Ephemeroptera	Heptageniidae	--	*Stenacron*	*Stenacron interpunctatum* (Say)
Arthropoda	Insecta	Ephemeroptera	Heptageniidae	--	*Stenonema*	*Stenonema* sp.
Arthropoda	Insecta	Ephemeroptera	Heptageniidae	--	*Stenonema*	*Stenonema femoratum* (Say)
Arthropoda	Insecta	Ephemeroptera	Heptageniidae	--	*Stenonema*	*Stenonema terminatum* (Walsh)
Arthropoda	Insecta	Ephemeroptera	Leptophlebiidae	--	*Leptophlebia*	*Leptophlebia* sp.
Arthropoda	Insecta	Ephemeroptera	Leptohyphidae	--	*Tricorythodes*	*Tricorythodes* sp.
Arthropoda	Insecta	Hemiptera	Belostomatidae	Belostomatinae	*Belostoma*	*Belostoma flumineum* (Say)
Arthropoda	Insecta	Hemiptera	Corixidae	Corixinae	*Sigara*	*Sigara* sp.
Arthropoda	Insecta	Hemiptera	Corixidae	Corixinae	*Trichocorixa*	*Trichocorixa* sp.
Arthropoda	Insecta	Hemiptera	Notonectidae	--	*Notonecta*	*Notonecta* sp.
Arthropoda	Insecta	Lepidoptera	--	--	--	Lepidoptera
Arthropoda	Insecta	Megaloptera	Corydalidae	Corydalinae	*Corydalus*	*Corydalus cornutus* (Linnaeus)
Arthropoda	Insecta	Megaloptera	Sialidae	--	*Sialis*	*Sialis* sp.
Arthropoda	Insecta	Odonata	Aeshnidae	--	*Nasiaeschna*	*Nasiaeschna pentacantha* (Rambur)

Table 21. List of macroinvertebrate taxa included in the sampling of stream sites during this study.—Continued

[--, not identified; sp., species undetermined]

Phylum	Class	Order	Family	Subfamily	Genus	Taxa Reported As
Arthropoda	Insecta	Odonata	Calopterygidae	--	*Calopteryx*	*Calopteryx maculata* (Beauvois)
Arthropoda	Insecta	Odonata	Calopterygidae	--	*Hetaerina*	*Hetaerina americana* (Fabricius)
Arthropoda	Insecta	Odonata	Coenagrionidae	--	--	Coenagrionidae
Arthropoda	Insecta	Odonata	Coenagrionidae	--	*Argia*	*Argia* sp.
Arthropoda	Insecta	Odonata	Coenagrionidae	--	*Argia*	*Argia apicalis* (Say)
Arthropoda	Insecta	Odonata	Coenagrionidae	--	*Argia*	*Argia plana* (Calvert)
Arthropoda	Insecta	Odonata	Coenagrionidae	--	*Argia*	*Argia translata* (Hagen)
Arthropoda	Insecta	Odonata	Coenagrionidae	--	*Enallagma*	*Enallagma* sp.
Arthropoda	Insecta	Odonata	Coenagrionidae	--	*Ischnura*	*Ischnura* sp.
Arthropoda	Insecta	Odonata	Corduliidae	--	*Epitheca*	*Epitheca princeps* (Hagen)
Arthropoda	Insecta	Odonata	Libellulidae	--	--	Libellulidae
Arthropoda	Insecta	Odonata	Libellulidae	--	*Libellula*	*Libellula* sp.
Arthropoda	Insecta	Odonata	Libellulidae	--	*Plathemis*	*Plathemis lydia* (Drury)
Arthropoda	Insecta	Plecoptera	Capniidae	Capniinae	*Allocapnia*	*Allocapnia* sp.
Arthropoda	Insecta	Plecoptera	Capniidae	Capniinae	*Allocapnia*	*Allocapnia vivipara* (Claassen)
Arthropoda	Insecta	Plecoptera	Perlidae	--	--	Perlidae
Arthropoda	Insecta	Plecoptera	Perlodidae	--	--	Perlodidae
Arthropoda	Insecta	Plecoptera	Perlodidae	Isoperlinae	*Isoperla*	*Isoperla* sp.
Arthropoda	Insecta	Trichoptera	Helicopsychidae	--	*Helicopsyche*	*Helicopsyche borealis* (Hagen)
Arthropoda	Insecta	Trichoptera	Hydroptilidae	Hydroptilinae	*Hydroptila*	*Hydroptila* sp.
Arthropoda	Insecta	Trichoptera	Hydropsychidae	Hydropsychinae	*Cheumatopsyche*	*Cheumatopsyche* sp.
Arthropoda	Insecta	Trichoptera	Hydropsychidae	Hydropsychinae	*Hydropsyche*	*Hydropsyche* sp.
Arthropoda	Insecta	Trichoptera	Hydropsychidae	Hydropsychinae	*Hydropsyche*	*Hydropsyche betteni* (Ross)
Arthropoda	Insecta	Trichoptera	Limnephilidae	Limnephilinae	*Pycnopsyche*	*Pycnopsyche* sp.
Arthropoda	Insecta	Trichoptera	Polycentropodidae	Polycentropodinae	--	*Cernotina/Polycentropus* sp.
Arthropoda	Insecta	Trichoptera	Rhyacophilidae	--	*Rhyacophila*	*Rhyacophila lobifera* (Betten)
Arthropoda	Malacostraca	Amphipoda	Crangonyctidae	--	*Crangonyx*	*Crangonyx* sp.
Arthropoda	Malacostraca	Amphipoda	Hyalellidae	--	*Hyalella*	*Hyalella azteca* (Saussure)
Arthropoda	Malacostraca	Decapoda	Cambaridae	--	--	Cambaridae
Arthropoda	Malacostraca	Decapoda	Cambaridae	Cambarinae	*Orconectes*	*Orconectes* sp.
Arthropoda	Malacostraca	Isopoda	Asellidae	--	*Caecidotea*	*Caecidotea* sp.

Table 21. List of macroinvertebrate taxa included in the sampling of stream sites during this study.—Continued

[--, not identified; sp., species undetermined]

Phylum	Class	Order	Family	Subfamily	Genus	Taxa Reported As
Arthropoda	Malacostraca	Isopoda	Asellidae	--	*Lirceus*	*Lirceus* sp.
Bryozoa	--	--	--	--	--	Bryozoa
Cnidaria	Hydrozoa	Hydroida	Hydridae	--	*Hydra*	*Hydra* sp.
Mollusca	Bivalvia	--	--	--	--	Bivalvia
Mollusca	Bivalvia	Veneroida	Corbiculidae	--	*Corbicula*	*Corbicula* sp.
Mollusca	Bivalvia	Veneroida	Sphaeriidae	--	--	Sphaeriidae
Mollusca	Bivalvia	Veneroida	Sphaeriidae	Pisidiinae	*Pisidium*	*Pisidium* sp.
Mollusca	Bivalvia	Veneroida	Sphaeriidae	Sphaeriinae	*Musculium*	*Musculium* sp.
Mollusca	Bivalvia	Veneroida	Sphaeriidae	Sphaeriinae	*Sphaerium*	*Sphaerium* sp.
Mollusca	Gastropoda	--	--	--	--	Gastropoda
Mollusca	Gastropoda	Basommatophora	Ancylidae	--	--	Ancylidae
Mollusca	Gastropoda	Basommatophora	Ancylidae	--	*Ferrissia*	*Ferrissia* sp.
Mollusca	Gastropoda	Basommatophora	Lymnaeidae	Lymnaeinae	*Fossaria*	*Fossaria* sp.
Mollusca	Gastropoda	Basommatophora	Physidae	Physinae	*Physella*	*Physella* sp.
Mollusca	Gastropoda	Basommatophora	Planorbidae	--	--	Planorbidae
Mollusca	Gastropoda	Basommatophora	Planorbidae	--	*Gyraulus*	*Gyraulus* sp.
Mollusca	Gastropoda	Basommatophora	Planorbidae	--	*Micromenetus*	*Micromenetus dilatatus* (Gould)
Mollusca	Gastropoda	Basommatophora	Planorbidae	--	*Planorbella*	*Planorbella* sp.
Mollusca	Gastropoda	Mesogastropoda	Hydrobiidae	--	--	Hydrobiidae
Nematoda	--	--	--	--	--	Nematoda
Nematomorpha	Gordioida	--	--	--	--	Gordioida
Platyhelminthes	Turbellaria	--	--	--	--	Turbellaria

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