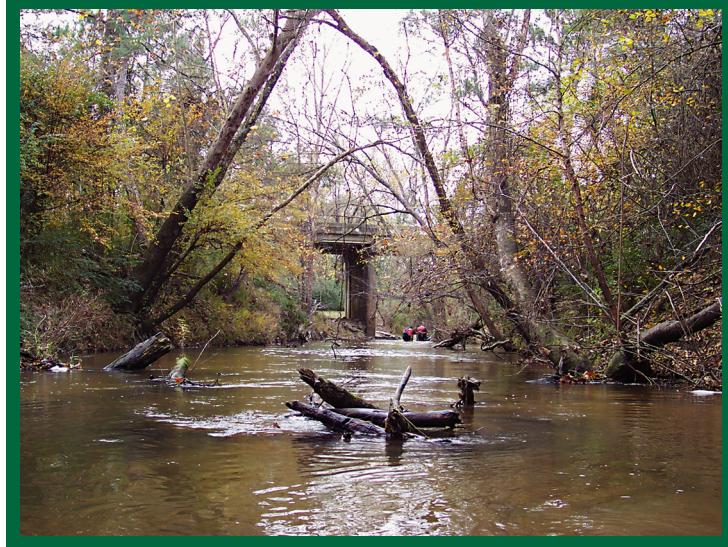


In cooperation with the Houston-Galveston Area Council and the
Texas Commission on Environmental Quality

Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04



Data Series 142

Cover. (Left) Early morning at Caney Creek at State Highway 105 near Cut And Shoot, Texas, December 2003.
(Right) U.S. Geological Survey staff fish shocking at Lake Creek near FM 149 at Richards, Texas, December 2003.

Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

By Jeffery W. East and Debra A. Sneck-Fahrer

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Data Series 142

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Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

By Jeffery W. East and Debra A. Sneck-Fahrer

Abstract

During 2002–04 the U.S. Geological Survey, in cooperation with the Houston-Galveston Area Council and the Texas Commission on Environmental Quality, conducted a systematic monitoring study on Lake Creek, Peach Creek, and Caney Creek near Houston, Texas, to assess the current water-quality and biological conditions in the three tributaries to Lake Houston. Streamflow and water-quality data (chloride and sulfate, nutrients, biochemical oxygen demand, phytoplankton, indicator bacteria, pesticides, and suspended sediment) were collected at 11 sites, and fish and benthic-macroinvertebrate data were collected at eight of the 11 sites. Graphical comparisons of concentration data for eight water-quality constituents by watershed indicate relatively large differences in concentration distribution among all three watersheds for nitrite plus nitrate nitrogen (medians: Lake, 0.20; Peach, 0.14; and Caney, 0.32 mg/L). Graphical comparisons of these data by season show consistency in distribution of constituent concentrations. The distributions of chlorophyll-*a* in summer and *E. coli* bacteria in winter each contain a few relatively large concentrations. Fifty-six species of fish from 15 major families were collected during the study. For all sites except one on Lake Creek, the majority of fish collected were sunfish; minnows dominated at the one Lake Creek site. Invertivores (mostly sunfish and minnows) made up more than 65 percent of the trophic structure, omnivores were the next largest percentage, and piscivores the smallest percentage. Ecoregion-specific index of biotic integrity (ECO-IBI) scores (averages of samples) for three of four upstream Lake Creek sites indicate intermediate aquatic life use, and the most downstream site, high aquatic life use. ECO-IBI scores for the Peach Creek and Caney Creek sites indicate high aquatic life use. The maximum number of aquatic-insect taxa (51) were collected at a site on Peach Creek near Cleveland, and the minimum number of aquatic-insect taxa (17) were

collected at site on Caney Creek near New Caney. The benthic-macroinvertebrate index of biotic integrity (B-IBI) scores (averages of samples) for the three upstream Lake Creek sites indicate intermediate aquatic life use, and the B-IBI score for the most downstream site indicates high aquatic life use. B-IBI scores for the Peach Creek sites, in downstream order, are exceptional and high; and scores for the Caney Creek sites, in downstream order, are high and intermediate.

Introduction

The Texas Commission on Environmental Quality (TCEQ) is responsible for assessing and maintaining the ecological health of streams throughout Texas. The various means to fulfill this mission include collecting environmental data. Water-quality data are collected through the TCEQ Clean Rivers Program (CRP); these data are interpreted to assess the quality of Texas water bodies. The TCEQ has CRP partners who are responsible for collecting and assessing the quality of water resources in their respective service areas. The Houston-Galveston Area Council (H-GAC) is the CRP partner for a 13-county region in southeastern Texas that includes the Houston metropolitan area. Every 2 years (biennium), CRP partners are required to perform at least one systematic monitoring study, whereby a variety of data are collected in water bodies that are not monitored routinely. Data from these studies allow a general assessment to determine whether future monitoring or additional studies are warranted.

Lake Creek, Peach Creek, and Caney Creek are tributaries to Lake Houston (fig. 1), located about 40 miles north of Houston, Tex. The watersheds of these three streams are similar, dominated by forests and pastures. Streambeds are predominantly sand and gravel with isolated pockets of silt and clay. No substantial water-quality concerns have been documented for

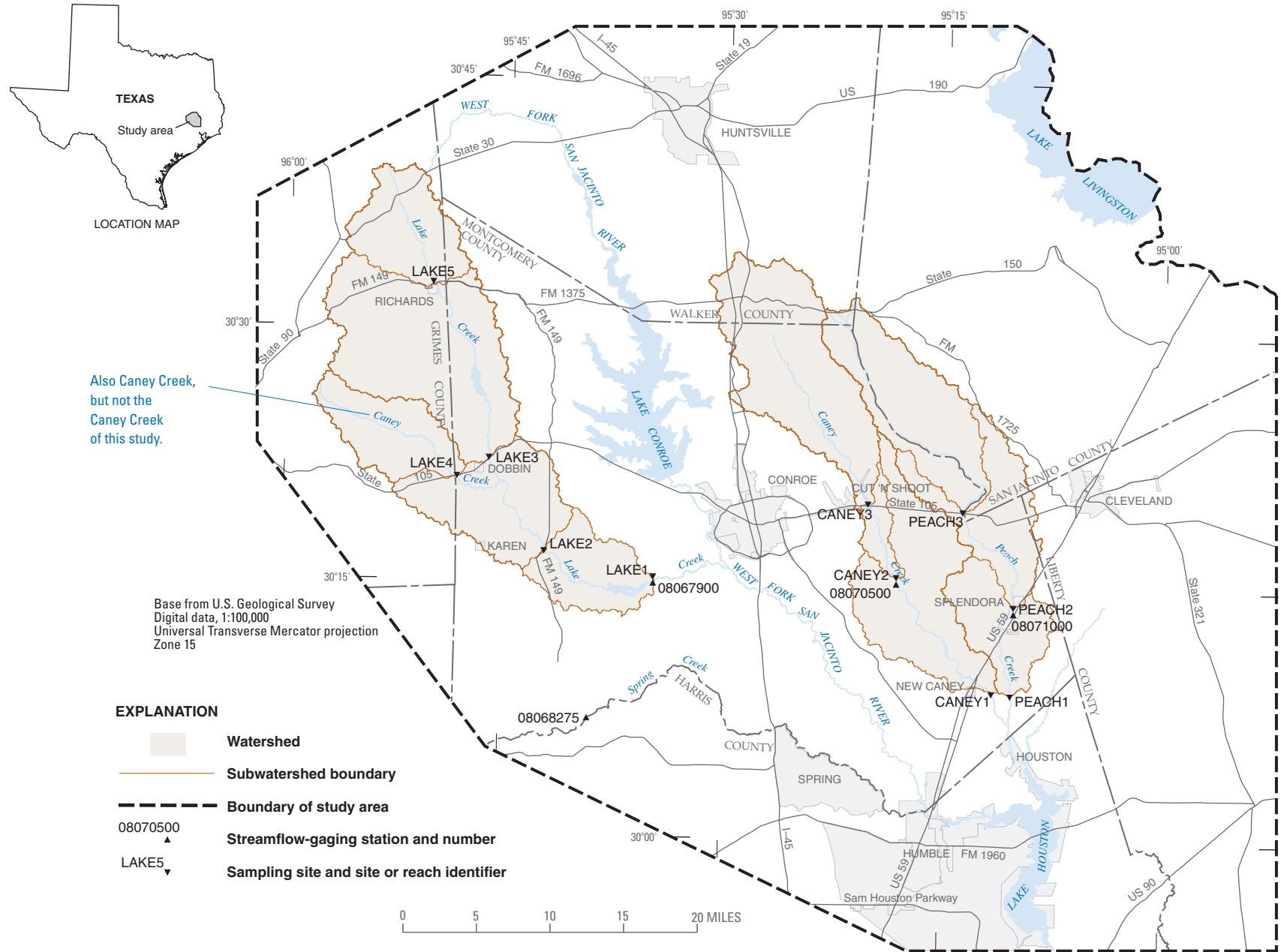


Figure 1. Location of study area and sampling sites for Lake, Peach, and Caney Creeks near Houston, Texas.

the three streams (Houston-Galveston Area Council, 2001). However, urban development is occurring in the watersheds, increasing the possibility of changes in water-quality and biological conditions.

To better understand the effects of recent urban development on the watersheds, the U.S. Geological Survey (USGS), in cooperation with H-GAC and TCEQ, conducted a baseline assessment of current conditions in the three streams. Hydrologic, water-quality, and biological data were collected during October 2002–September 2004 (water years¹ 2003 and 2004) and in October 2004 (biological data). As part of this study, these data were used to define spatial and temporal variations in water-quality constituents and biological indicators to provide a more complete understanding of the relation between water-quality conditions and biological metrics and to determine the applicability of State water-quality criteria for the three streams.

Purpose and Scope

The purpose of this report is to present hydrologic, water-quality, and biological data collected from Lake Creek, Peach Creek, and Caney Creek during October 2002–September 2004. Streamflow data were recorded continuously at one site on each of the three streams. Water-quality properties were recorded continuously at one site on Lake Creek during October 2002–September 2004. Water-quality samples were collected approximately bimonthly during December 2002–June 2004 at five Lake Creek sites, three Peach Creek sites, and three Caney Creek sites. Fish, benthic-macroinvertebrate, and stream-habitat data were collected at four reaches in the Lake Creek watershed, two reaches in the Peach Creek watershed, and two reaches in the Caney Creek watershed in October 2002; May, August, and December 2003; and October 2004.

Methods of assessment used during this study are described, and data are presented to compare water-quality changes at and among sites during the 2-year study period. This report evaluates biological data using standard indexes to assess the general health of the aquatic environment. These biological indexes are described, and results of the analyses are presented.

Description of Study Area

The Lake Creek, Peach Creek, and Caney Creek watersheds are in southeastern Texas about 40 miles north of Houston. The drainage areas for the most downstream sampling site on each stream range from 155 to 291 square miles. Lake Creek flows into West Fork San Jacinto River about 20 miles upstream from Lake Houston. Peach and Caney Creeks flow into East Fork San Jacinto River about 2 miles upstream from Lake Houston. The climate of the three watersheds is similar, with long, hot and humid summers, mild winters, and prevailing southeasterly winds (Liscum and East, 2000). Average annual

rainfall in the area for 1961–90 is about 46 inches (Alvarez, 2004, p. 106), with rainfall distributed unevenly throughout the year. Primary land use in the three watersheds (table 1) is similar, with pasture/hay and forest the major land-use categories. The distribution of these land uses is different among the three watersheds—in Lake Creek, the major land-use category is pasture/hay, whereas in Caney and Peach Creeks, the major land-use category is forest.

Acknowledgments

The authors thank Todd Running, Patrick Horton, Jean Wright, Om Chawla, Bruce Ridpath, and Karen Brettschneider of H-GAC and Laurie Curra of TCEQ for providing assistance throughout the study. Also, the authors gratefully acknowledge Montgomery County and the Texas Department of Transportation for permission to install and operate equipment during the study.

Methods of Monitoring, Sampling, and Analysis

Streamflow Data

Streamflow data were recorded continuously at one site on each of the three streams during October 2002–September 2004 (fig. 1, table 2). Gage height at each site was measured using pressure transducers and was recorded electronically at 15-minute intervals by a data-collection platform (DCP). Every 4 hours, the data were transmitted by a geostationary operational-environmental satellite to the USGS National Water Information System database. Streamflow was computed for the Peach Creek and Caney Creek stations using a pre-existing rating curve that relates gage height to instantaneous streamflow. These rating curves were developed using standard USGS procedures outlined by Rantz (1982). A discontinued station on Lake Creek was reactivated for the study. The stage-discharge rating curve was developed from discharge measurements made during the 2-year study.

In addition to continuous hydrologic data recorded at the three streamflow-gaging stations, instantaneous measurements of streamflow were made during each site visit at the eight other sites (table 2) using standard USGS procedures documented by Rantz (1982) and Simpson (2001). Depending on site conditions, velocities were measured using a Price pygmy velocity meter, Price type AA velocity meter, or acoustic Doppler current profiler (ADCP). When conditions allowed, wading measurements were made and top-setting wading rods were used to determine the depth of flow and to suspend the velocity meter in the water column (Rantz, 1982). When depths of flow or

¹Water year is the 12-month period October 1 through September 30, designated by the calendar year in which it ends.

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Table 1. Percentage of selected land-use categories in the Lake Creek, Peach Creek, and Caney Creek watersheds.

[Determined from 1992 multi-resolution land characteristics dataset (U.S. Environmental Protection Agency, 1993). ID, identifier]

Site ID (fig. 1)	Land-use classification (percent)										
	Open water	Residential ¹	Commercial/ industrial/ transportation	Bare rock/ sand/clay	Forest ²	Transi- tional	Quarries/ gravel pits	Pasture/ hay	Row crops	Urban/ recrea- tional grasses	Wet- lands ³
LAKE5	0.2	0.3	0.8	0.3	27.7	0	0	62.3	1.4	0	7.0
LAKE4	.4	.4	.3	.1	22.7	.7	0	67.6	1.3	.4	6.1
LAKE3	.2	.1	.7	.2	29.9	2.9	0	57.4	1.2	0	7.4
LAKE2	.4	.2	.6	.2	32.3	1.9	0	55.8	1.2	.1	7.3
LAKE1	.4	.3	.6	.2	37.2	1.6	0	50.7	1.1	.1	7.8
PEACH3	.1	0	.2	.5	83.2	5.4	.1	9.2	.5	0	.8
PEACH2	.2	.9	.6	.4	81.7	5.6	0	9.4	.5	.1	.6
PEACH1	.2	2.7	.9	.4	78.6	5.0	0	10.7	.4	.3	.8
CANEY3	.6	2.1	1.4	.2	54.7	2.0	.2	34.1	2.0	.2	2.5
CANEY2	.6	2.0	1.3	.2	56.5	1.8	.2	32.8	1.9	.2	2.5
CANEY1	.4	3.5	1.5	.2	64.1	2.7	.1	24.2	1.1	.4	1.8

¹ Includes both low- and high-intensity residential.

² Includes deciduous, evergreen, and mixed forest.

³ Includes woody and emergent herbaceous wetlands.

velocities were too great, measurements were made either by suspending instruments from nearby bridges or by deploying a tethered-boat mounted ADCP (Simpson, 2001).

Water-Quality Data

To characterize water-quality conditions in the three streams, selected water-quality properties were monitored continuously at one site on Lake Creek and selected water-quality properties and constituents were sampled routinely at all sites (fig. 1, table 2).

Continuous water-quality properties collected from Lake Creek (site LAKE1) were dissolved oxygen, pH, specific conductance, and water temperature. These data were electronically recorded at 15-minute intervals by a DCP. The multiprobe water-quality meter was installed near the center of flow and operated as documented in Wagner and others (2000).

Selected water-quality properties and constituents were determined discretely during site visits to each of the three streams. Water-quality properties measured instream were dissolved oxygen, pH, specific conductance, and water temperature. Water-quality constituents measured by laboratory analysis were

1. Chloride and sulfate

2. Nutrients (ammonia plus organic nitrogen, ammonia nitrogen, nitrite plus nitrate nitrogen, nitrite nitrogen, orthophosphate phosphorus, phosphorus)
3. 5-day biochemical oxygen demand (BOD)
4. Phytoplankton (biomass, pheophytin, chlorophyll-*a*)
5. Indicator bacteria (*E. coli*)
6. Pesticides
7. Suspended sediment

Water-quality samples were collected at the five Lake Creek sites, three Peach Creek sites, and three Caney Creek sites approximately bimonthly during December 2002–June 2004. Dissolved oxygen, pH, specific conductance, and water temperature measurements were made using a multiprobe water-quality instrument. Water samples were collected and processed as grab samples using TCEQ methods described in Texas Natural Resource Conservation Commission (1999b). Laboratory analyses for nutrients, phytoplankton, and pesticides were done at the USGS National Water Quality Laboratory in Denver, Colo. Analyses for BOD and indicator bacteria (*E. coli*) were done at the USGS Texas Water Science Center laboratory in Houston. Analyses for suspended-sediment concentration were done at the USGS Louisiana Water Science Center sediment laboratory in Baton Rouge, La.

Table 2. Data-collection sites in Lake Creek, Peach Creek, and Caney Creek watersheds, water years 2003–04.

[ID, identifier; FM, Farm-to-Market]

Site ID (fig. 1)	USGS station number	Station name	Location		Drainage area (square miles)	Data-collection activity
			Latitude	Longitude		
Lake Creek study area						
LAKE5	08067660	Lake Creek at FM 149, near Richards, Tex.	30°32'31"	95°49'58"	40.2	Bi-monthly water-quality sampling Biological sampling
LAKE3	08067690	Lake Creek at State Highway 105, near Dobbin, Tex.	30°22'17"	95°46'07"	157	Bi-monthly water-quality sampling Biological sampling
LAKE4	08067700	Caney Creek ¹ at State Highway 105, near Dobbin, Tex.	30°21'13"	95°48'35"	40.4	Bi-monthly water-quality sampling Biological sampling
LAKE2	08067800	Lake Creek at FM 149 near Karen, Tex.	30°16'48"	95°42'18"	256	Bi-monthly water-quality sampling
LAKE1	08067900	Lake Creek at Honea-Egypt Road, near Conroe, Tex.	30°15'12"	95°34'43"	291	Bi-monthly water-quality sampling Large-volume suspended-sediment sampling Biological sampling Continuous water-quality (properties) monitoring Continuous discharge
Peach Creek study area						
PEACH3	08070900	Peach Creek at State Highway 105, near Cleveland, Tex.	30°19'35"	95°13'34"	70.1	Bi-monthly water-quality sampling Biological sampling
PEACH2	08071000	Peach Creek at FM 2090, at Splendora, Tex.	30°13'57"	95°10'05"	117	Bi-monthly water-quality sampling Continuous discharge
PEACH1	08071100	Peach Creek at FM 1485, near New Caney, Tex.	30°08'48"	95°10'16"	155	Bi-monthly water-quality sampling Biological sampling
Caney Creek study area						
CANEY3	08070495	Caney Creek at State Highway 105, near Cut And Shoot, Tex.	30°19'59"	95°19'58"	94.9	Bi-monthly water-quality sampling Biological sampling
CANEY2	08070500	Caney Creek at FM 2090, near Splendora, Tex.	30°15'34"	95°18'08"	105	Bi-monthly water-quality sampling Continuous discharge
CANEY1	08070600	Caney Creek at FM 1485, near New Caney, Tex.	30°08'55"	95°11'31"	178	Bi-monthly water-quality sampling Biological sampling

¹ Caney Creek that flows from Grimes County into Lake Creek in Montgomery County.

To ensure the quality of these data, various quality-control (QC) samples were collected at the same time that environmental samples were collected. Equipment blanks and field blanks were used to verify the adequacy of cleaning procedures and to identify contamination that might be introduced at the sites. Split samples were used to determine the analytical precision (reproducibility) for various constituents. Concurrent samples were used to provide a measure of sampling precision (reproducibility) and to indicate spatial or temporal heterogeneities in the system being sampled. Results of concurrent samples also can reflect differences in sampling, processing, and laboratory analysis. In the Quality Assurance Project Plan, the stated QC objective for sampling and analytical precision was a relative percent difference (RPD) of 20 percent between environmental

and split/concurrent samples. The RPDs of all sample pairs were less than 20 percent. If equipment blanks or field blanks were greater than quality assurance limits (two times the minimum reporting level or 10 percent of the environmental value), a remark code of "V" (indicating contamination) precedes the values listed in the associated tables.

Biological Data

Appropriate stream reaches were selected before biological sampling. Potential reaches were identified using geographic information system maps of the three watersheds. Final reach selection occurred after onsite reconnaissance. A primary selection criterion was that a reach must contain a full meander

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Table 3. Annual mean streamflow at U.S. Geological Survey streamflow-gaging stations on Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04.

[ft³/s, cubic feet per second; --, not applicable]

Station name	Station number	Annual mean streamflow (ft ³ /s)		Annual mean streamflow (period of record)	
		2003	2004	Period of record	Annual mean discharge (ft ³ /s)
Lake Creek near Conroe	08067900	348	247	2003–04	298
Peach Creek at Splendora	08071000	114	193	1944–77, 1999–2004	77.5
Caney Creek near Splendora	08070500	130	154	1944–2004	83.9

(s-shaped curve) of the channel (Meador and others, 1993). To identify seasonal variations, biological surveys were done in October 2002; May, August, and December 2003; and October 2004. Biological sampling was done at eight reaches (table 2). However, because of high-flow conditions, biological data were not collected from any of the reaches in Peach Creek and Caney Creek in October 2002. Similarly, biological data were not collected from the PEACH3 reach in Peach Creek or the CANEY1 reach in Caney Creek in December 2003.

Fish surveys were done using backpack electrofishing in shallow reaches and barge electrofishing in deeper reaches. After collection, each fish was identified, weighed to the nearest gram, measured to the nearest millimeter, and released. After 30 fish of a single species were measured and weighed, any remaining fish of that species were counted and weighed as a group. Unidentified fish were fixed in 10-percent formalin solution and later transferred to 70-percent buffered ethanol solution for preservation. Dr. Dean Hendrickson, ichthyologist at the University of Texas Memorial Museum in Austin, identified unknown fish species.

Benthic-macroinvertebrate surveys were done using a qualitative multi-habitat (QMH) method described by Texas Natural Resource Conservation Commission (1999b). A QMH sample was collected by making an equal number of sweeps with a rectangular-framed net under aquatic invertebrate habitat, which included overhanging branches, woody debris, bank margins, and emerging macrophytes. Subsamples were composited with samples from the same reach and passed through a 210-micrometer sieve. Benthic macroinvertebrates were preserved in 70-percent buffered ethanol and shipped to a contract laboratory to be identified and enumerated (Cuffney and others, 1993).

Streamflow Data

The USGS operates two streamflow-gaging stations with long-term records in the study area—08071000 Peach

Creek near Splendora and 08070500 Caney Creek near Splendora. Annual mean streamflow (table 3) at the Peach Creek station during water years 2003–04 (154 cubic feet per second [ft³/s]) was about twice the long-term annual mean, and that at the Caney Creek station (142 ft³/s), about 1.7 times the long-term annual mean. Streamflow data also were collected at reactivated station 08067900 Lake Creek near Conroe during the 2-year study. Annual mean streamflow at that station during water years 2003–04 was 298 ft³/s.

Daily mean streamflow at each of the three stations during the study period (fig. 2) fluctuated over a wide range, from 3.0 to 15,700 ft³/s. Daily mean streamflow at the Lake Creek station (LAKE1) on the nine dates of water sampling ranged from 3.6 to 957 ft³/s; daily mean streamflow for the nine sampling dates at the Peach Creek station (PEACH2) ranged from 19 to 203 ft³/s; and at the Caney Creek station (CANEY2), the range of the nine sampling dates was 17 to 254 ft³/s.

Water-Quality Data

Water-quality data were analyzed to make comparisons between the streams. For these analyses, data were grouped by (1) continuous water-quality monitoring data—properties measured with a multiprobe instrument continuously deployed in Lake Creek (table 4, at end of report); and (2) routine water-quality sampling data—properties and constituents determined during bimonthly visits at each of the 11 sampling sites (table 5, at end of report).

Continuously Monitored Data

The continuous monitoring site on Lake Creek (LAKE1 [08067900]; fig. 1, table 1) was located in a stream reach with base-flow water depths of about 3 feet and constantly flowing water. The multiprobe water-quality meter was deployed at a depth of about 2 feet, although the exact depth of the meter

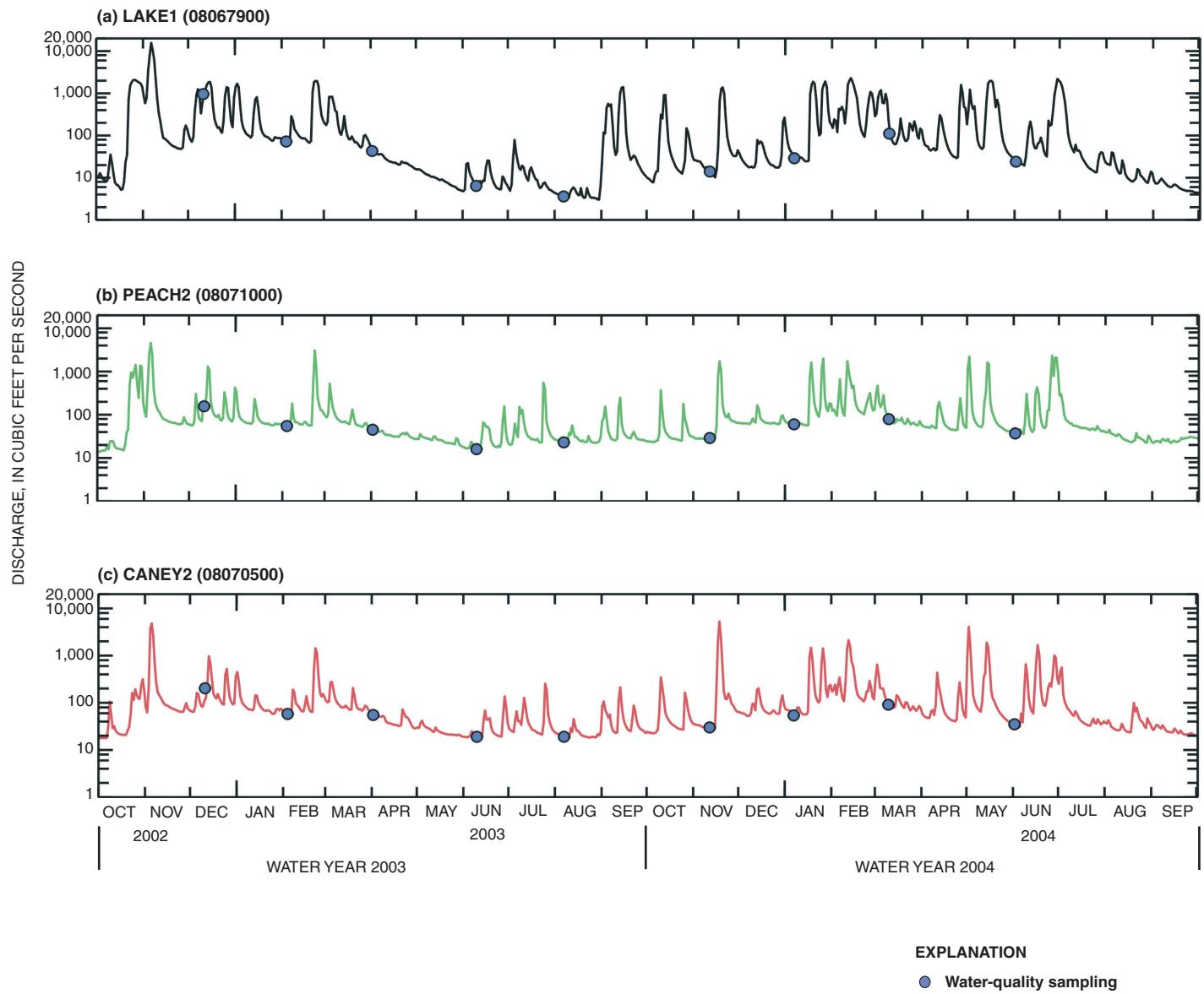


Figure 2. Hydrographs showing daily mean discharge for (a) Lake Creek, (b) Peach Creek, and (c) Caney Creek and dates of water-quality sampling, water years 2003–04.

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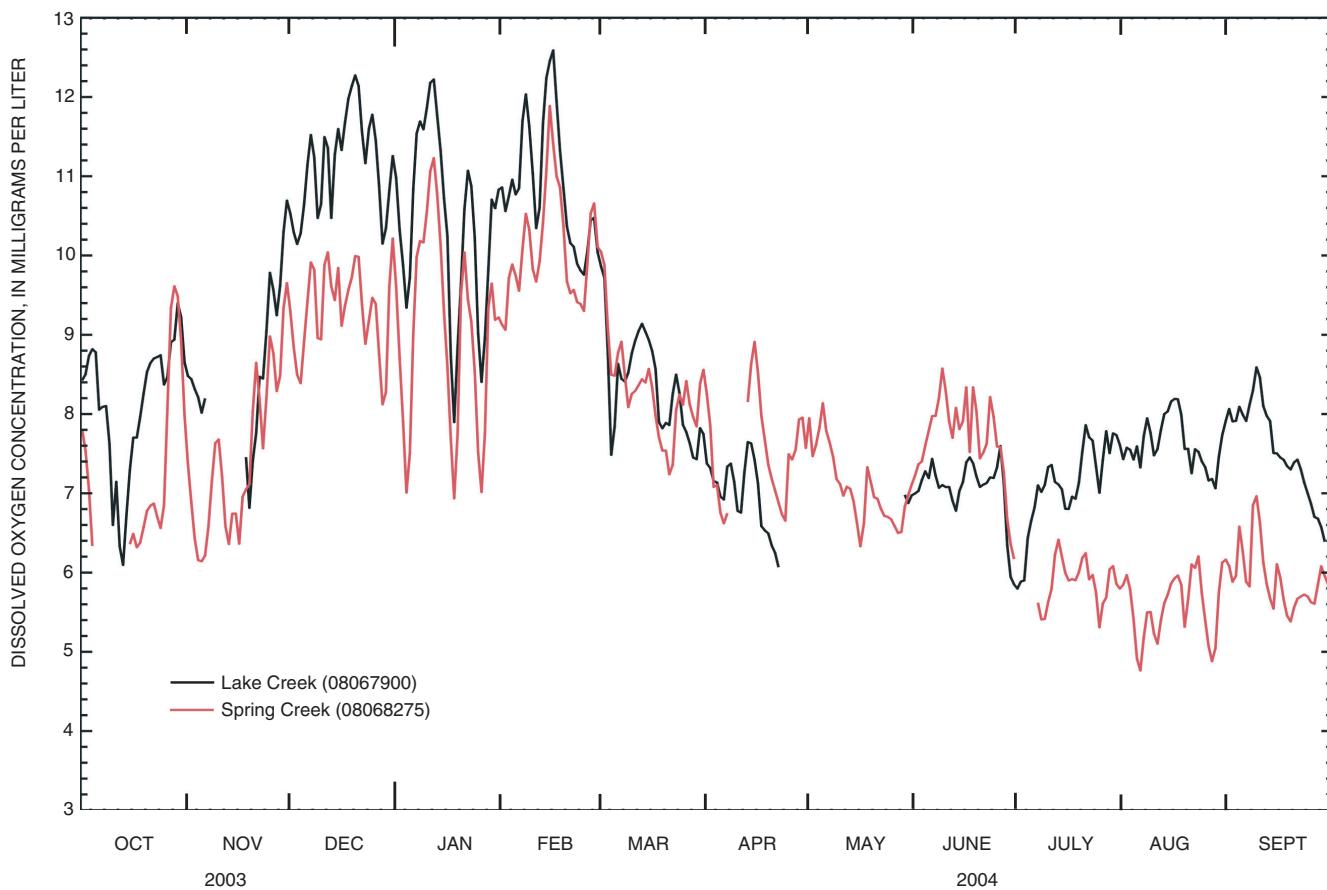


Figure 3. Daily mean dissolved oxygen concentration in Lake Creek (LAKE1 [08067900]) and Spring Creek (USGS station 08068275) about 12 miles southwest of site LAKE1 (fig. 1). The watersheds for these two streams are similar in size and land use; however, more domestic (59) and industrial (2) wastewater outfalls discharge to Spring Creek than to Lake Creek (22 domestic, no industrial).

was dependent on stream stage at any given time. The meter was installed in September 2002 and operated October 2002–September 2004.

Of the properties continuously monitored, dissolved oxygen is of particular interest because oxygen depletion can harm fish. Figure 3 shows dissolved oxygen concentrations in Lake Creek (LAKE1 [08067900]) and in Spring Creek (USGS station 08068275) about 12 miles southwest of site LAKE1 (fig. 1). The watersheds for these two streams are similar in size and land use; however, more domestic (59) and industrial (2) wastewater outfalls discharge to Spring Creek than to Lake Creek (22 domestic, no industrial).

A quantitative method of comparing time-series datasets was used to compare dissolved oxygen data collected from Lake Creek and Spring Creek. The reliability index (RI) (Leggett and Williams, 1981) is a measure of the comparability between two sets of time-series data. The RI was developed to assess the match between observed and simulated model results and is explained in detail in a report documenting the application of a

reservoir water-quality model to Lake Houston (Liscum and East, 2000). An RI of 1.0 indicates perfect agreement between the paired data. As the data diverge, the RI increases. If all comparisons are, on average, one-half order of magnitude apart, the RI would be 5.0 (Environmental Laboratory, 1986). An RI of 1.24 was computed for the 2-year study period, which indicates a close correlation between dissolved oxygen concentrations at the two sites. Dissolved oxygen concentrations are similar even though more than twice as many wastewater outfalls are in Spring Creek than in Lake Creek.

Routinely Monitored Data

Graphical comparisons were made to indicate differences in concentrations of selected water-quality constituents among the three streams. For these comparisons, data were grouped by watershed and by season. Water-quality constituents selected for these comparisons are ammonia plus organic nitrogen,

ammonia nitrogen, nitrite plus nitrate nitrogen, nitrite nitrogen, orthophosphate phosphorus, chlorophyll-*a*, and *E. coli* bacteria. TCEQ uses secondary screening levels of some of these constituents when assessing water-quality data to identify water bodies of concern. Secondary screening levels for the three streams sampled during this study are 0.17 milligram per liter (mg/L) ammonia nitrogen, 2.76 mg/L nitrite plus nitrate nitrogen, 0.80 mg/L orthophosphate phosphorus, and 11.6 micrograms per liter chlorophyll-*a* (Texas Natural Resource Conservation Commission, 1999a).

Concentration data for the eight constituents for all 11 sampling sites were compiled and grouped by watershed. Boxplots of these data (fig. 4) graphically summarize their distributions by watershed. The boxplots of the eight constituents show relatively large differences in concentration distribution among all three watersheds for nitrite plus nitrate nitrogen (medians: Lake, 0.20; Peach, 0.14; and Caney, 0.32 mg/L) and for one watershed relative to the others for ammonia plus organic nitrogen, phosphorus, and orthophosphate phosphorus; for those constituents, Lake concentrations were consistently higher than concentrations of Peach and Caney.

Concentration data for the eight constituents also were grouped on the basis of season of the year collected. The four seasons are defined as winter (December, January, and February), spring (March, April, and May), summer (June, July, and August), and fall (September, October, and November). The seasonal distributions of these data are shown by boxplots in figure 5. Most of the seasonal boxplots show consistency in distribution of concentrations among the seasons; nitrate nitrogen shows the most variability, with relatively high concentrations in summer and relatively low concentrations in fall. The distributions of chlorophyll-*a* in summer and *E. coli* bacteria in winter each contain a few relatively large values (outliers) compared with the ranges of values in distributions for the other three seasons.

Biological Data

To assess the status of instream biological resources, selected data were collected from each of the three streams. Data to define fish and benthic-macroinvertebrate community structure were compiled, as well as data to define stream-habitat conditions. Metrics that describe these data were computed and summarized. In addition, graphical comparisons of these data were made to identify differences on the basis of possible causative factors.

Fish Data

During 2002–04, 56 species of fish were collected at four sites (reaches) in the Lake Creek watershed, two sites in the Peach Creek watershed, and two sites in the Caney Creek watershed (table 2). Fish taxa and individual counts are listed in table 6 (at end of report). Because of high-flow conditions, data

for selected sites in Peach Creek and Caney Creek are not available for October 2002 and December 2003.

The maximum number of fish collected during sampling at one site was 578 at LAKE3, and the minimum number of fish collected during sampling at one site was 39 at PEACH3. The large number of fish collected at LAKE3 occurred during a sampling period when the stream was not flowing and fish were trapped in several isolated pools. As such, fish were not able to escape the electro-field and all fish in the pools were collected. For the entire study, the most species (37) were collected at PEACH1, and the least species (24) were collected at PEACH3. Seining was done to supplement electrofishing catches. However, water depths (greater than 2.5 feet) and channel obstructions hindered the ability to seine the entire channel, thus limiting the areas that could be sampled.

Fish from 15 major families were collected during the study (table 6). For all sites except LAKE1, the majority of fish collected during the study (47 to 67 percent) were sunfish. Among the sunfish, the most commonly collected species were longear sunfish (*Lepomis megalotis*), bluegill (*Lepomis macrochirus*), and warmouth (*Lepomis gulosus*). At LAKE1, the majority of fish collected (53 percent) were minnows. Among the minnows, the most commonly collected species at most sites were blacktail shiners (*Cyprinella venusta*) and bullhead minnows (*Pimephales vigilax*).

Several species that have been identified as being intolerant to pollution (Texas Natural Resource Conservation Commission, 1999a), thus indicators of minimally affected waters were collected at each site during the study. These species are identified as intolerant in table 6 and include tadpole madtoms (*Noturus gyrinus*), freckled madtoms (*Noturus nocturnus*), and dusky darters (*Peocilia sciera*). In all three streams, invertivores (mostly sunfish and minnows) made up more than 65 percent of the trophic structure. Omnivores accounted for the next-largest percentage and piscivores the smallest percentage.

The number of fish species collected can be influenced by the number of individuals collected, and the number of individuals can introduce bias into any interpretation of biological diversity indexes or other metrics (Moring, 2002). The relation between species and abundance (a way to characterize fish community structure) (fig. 6) showed a high linear correlation (Pearson's $r = .59$, $p = .002$). To minimize possible bias to fish species caused by differences in abundance, various indexes are used that standardize the number of species by relating it to the number of individuals. One such index is Menhinick's species richness (R) (Menhinick, 1964).

Menhinick's R is computed as the number of species collected divided by the square root of the total number of individuals collected; thus a larger value indicates a higher species diversity. In table 7 (at end of report), the average Menhinick's R is listed for each of the eight sampled sites. These data show that species diversity is greater for Peach Creek than for the two other streams. In particular, even though fewer individuals and species were collected at PEACH3, the largest average species richness was obtained for that site. For each stream, average species richness decreased in a downstream direction.

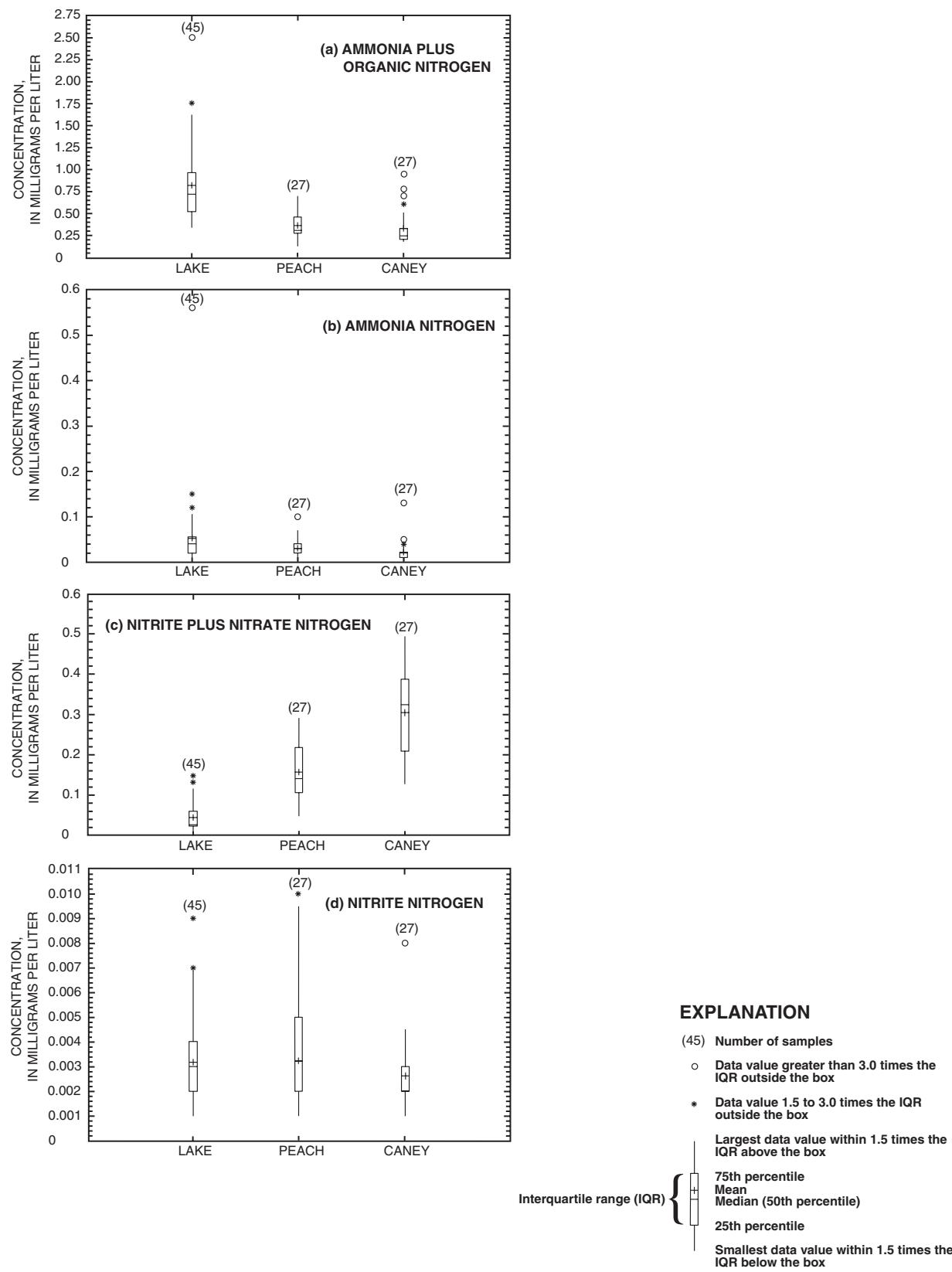
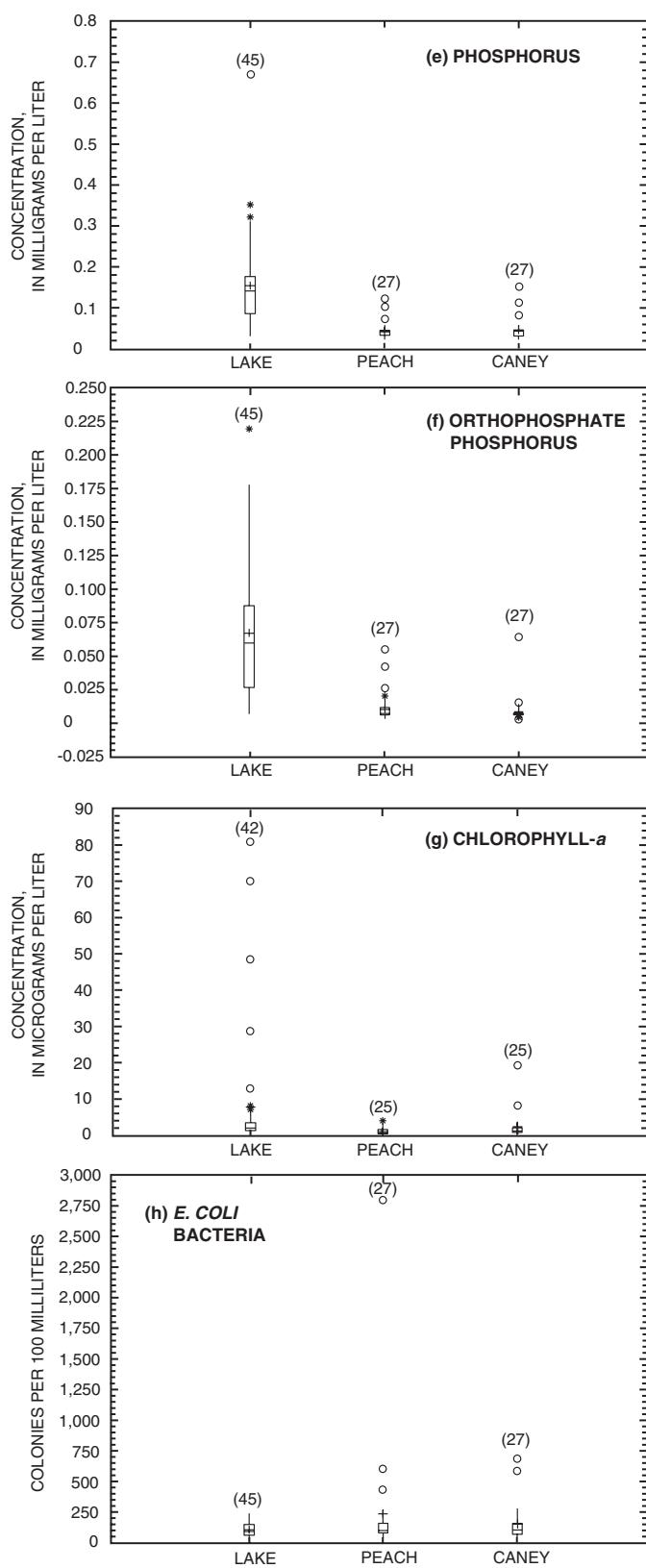


Figure 4. Boxplots of (a) ammonia plus organic nitrogen, (b) ammonia nitrogen, (c) nitrite plus nitrate nitrogen, (d) nitrite nitrogen from selected sites in Lake Creek, Peach Creek, and Caney Creek, grouped by watershed, December 2002–June 2004.

**EXPLANATION**

- (45) Number of samples
- Data value greater than 3.0 times the IQR outside the box
- * Data value 1.5 to 3.0 times the IQR outside the box
- Largest data value within 1.5 times the IQR above the box
- Interquartile range (IQR) {
- 75th percentile
- Mean
- Median (50th percentile)
- 25th percentile
- Smallest data value within 1.5 times the IQR below the box

Figure 4—Continued. Boxplots of (e) phosphorus, (f) orthophosphate phosphorus, (g) chlorophyll-a, and (h) *E. coli* bacteria from selected sites in Lake Creek, Peach Creek, and Caney Creek, grouped by watershed, December 2002–June 2004.

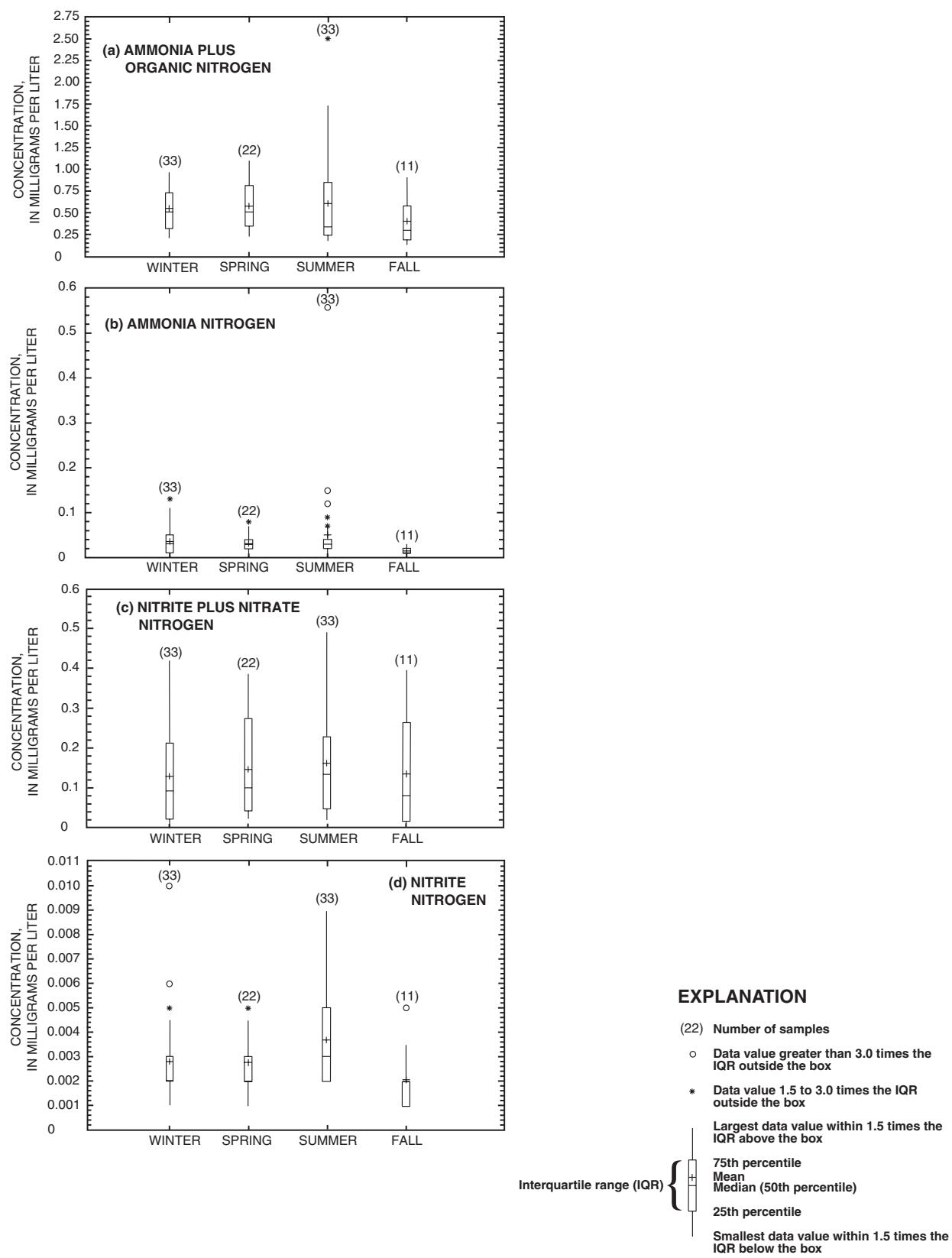
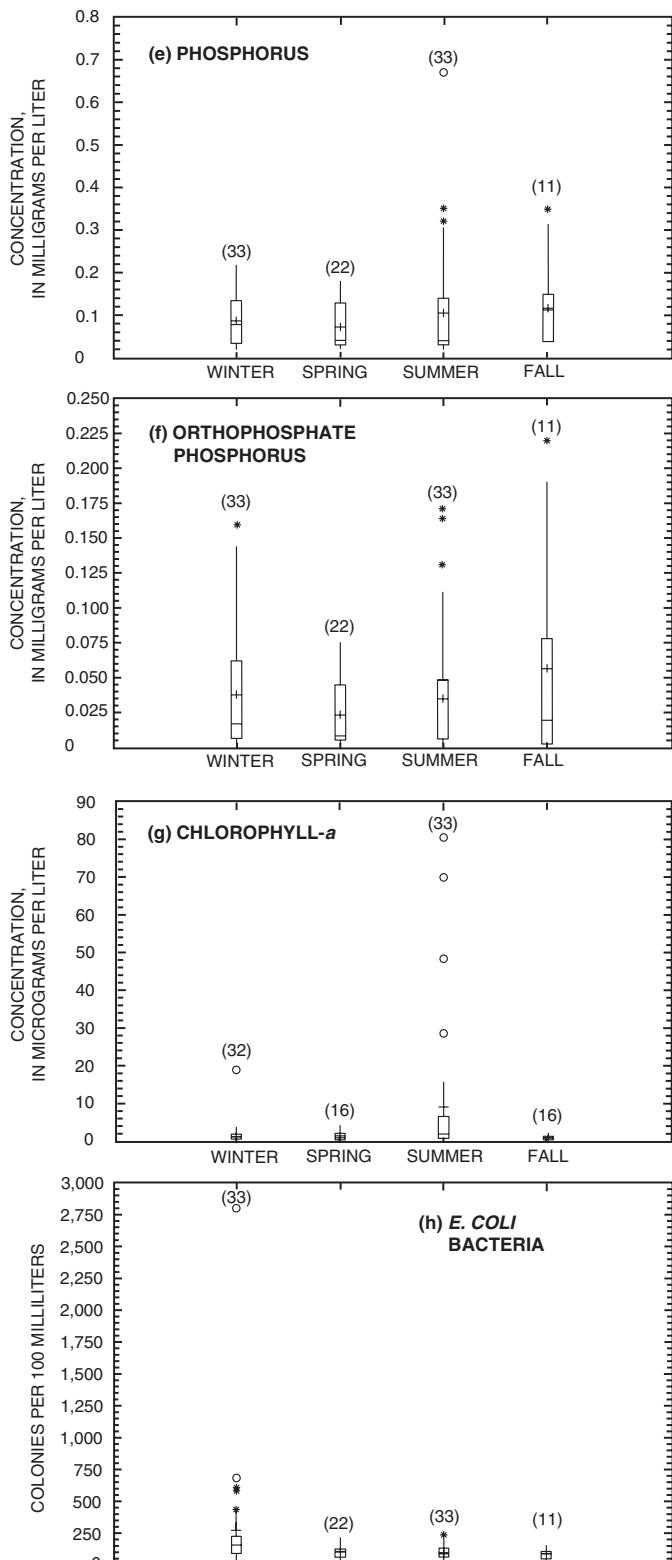


Figure 5. Boxplots of (a) ammonia plus organic nitrogen, (b) ammonia nitrogen, (c) nitrite plus nitrate nitrogen, (d) nitrite nitrogen from selected sites in Lake Creek, Peach Creek, and Caney Creek, grouped by season, December 2002–June 2004.



EXPLANATION

- (22) Number of samples
- Data value greater than 3.0 times the IQR outside the box
- * Data value 1.5 to 3.0 times the IQR outside the box
- Largest data value within 1.5 times the IQR above the box
- 75th percentile
- Mean
- Median (50th percentile)
- 25th percentile
- Smallest data value within 1.5 times the IQR below the box

Figure 5—Continued. Boxplots of (e) phosphorus, (f) orthophosphate phosphorus, (g) chlorophyll-a, and (h) *E. coli* bacteria from selected sites in Lake Creek, Peach Creek, and Caney Creek, grouped by season, December 2002–June 2004.

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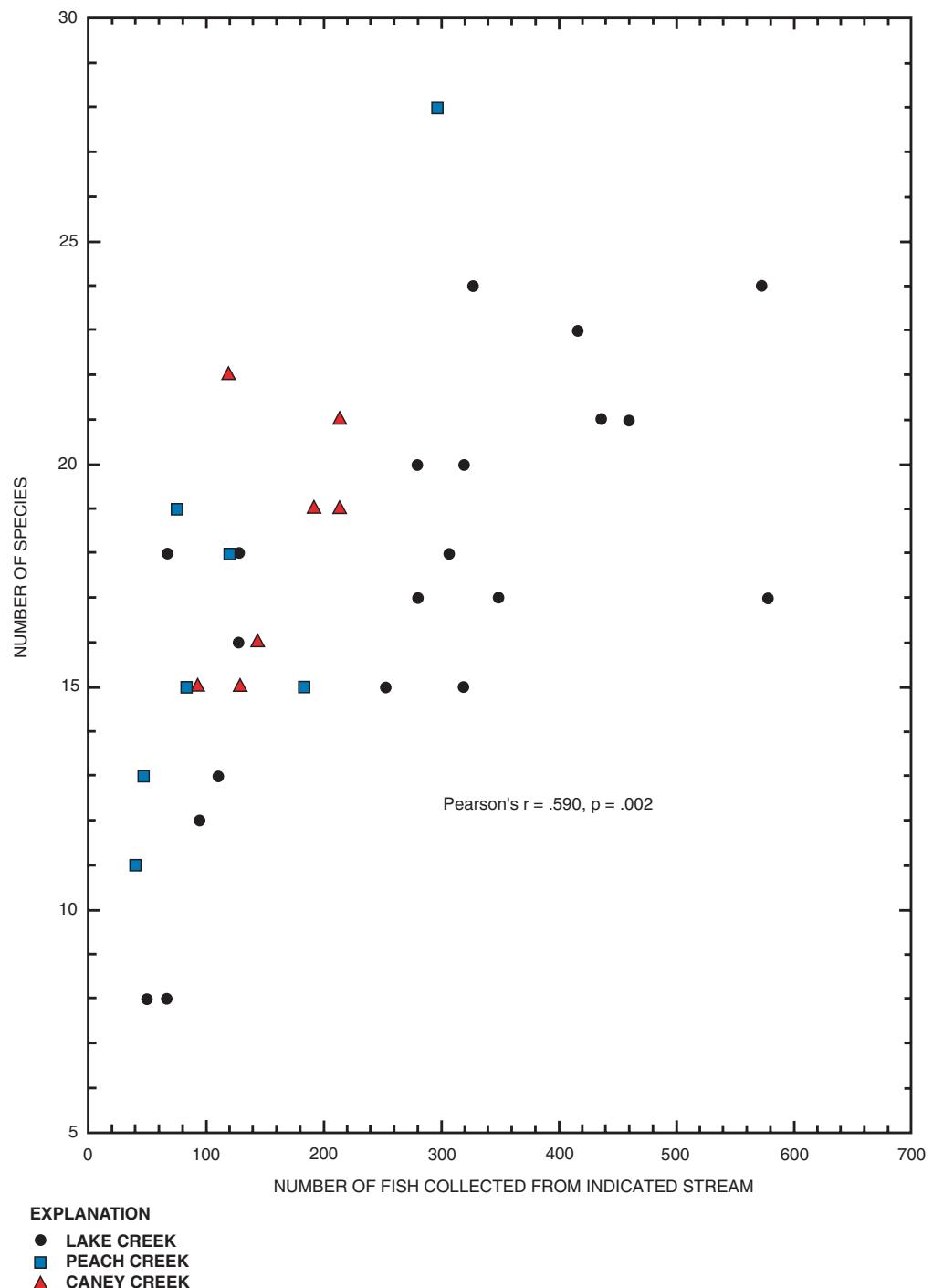


Figure 6. Number of fish species collected relative to number of individuals collected for selected sites in Lake Creek, Peach Creek, and Caney Creek, October 2002–October 2004.

Fish community structure from streams in different locations can vary because of “climatic and zoogeographic factors” (Linam and others, 2002). To compare fish community structure at various locations, a variety of numerical criteria are available. The index of biotic integrity (IBI) for Texas was developed on the basis of data collected from streams in the

midwestern United States. Linam and others (2002) modified the IBI to develop criteria that are specific to defined regions in Texas, as opposed to statewide criteria that do not represent all geographic regions well. As part of their study, Linam and others (2002) collected fish community data in 14 streams to represent the “south-central and southern humid, mixed land-use

region." Data collected from LAKE1 in 1988 were used to develop the ecoregion-specific index of biotic integrity (ECO-IBI), which was chosen to provide a frame of reference for the fish community structures of the three streams.

Twelve individual metrics (table 8, at end of report) are used to compute the ECO-IBI. A score is assigned for each of these metrics, and the sum of the 12 scores is the ECO-IBI. As part of their study, Linam and others (2002) also provide aquatic life-use criteria to provide narrative ratings for a given ECO-IBI score. Scores between 36 and 41 indicate intermediate aquatic life use, scores between 42 and 51 indicate high aquatic life use, and scores 52 and greater indicate exceptional aquatic life use. For general comparison between sites, averages of the ECO-IBIs were computed for each site by summing ECO-IBIs for each sampling period and dividing by the number of sampling periods. In general, the average ECO-IBI score tends to increase in downstream direction (table 7), which also corresponds to increases in flow. The score for the most downstream Lake Creek site indicates high aquatic life use, and scores for the Peach Creek and Caney Creek sites indicate high aquatic life use. The ECO-IBI scores for the three remaining sites on Lake Creek indicate intermediate aquatic life use. The three upstream sites on Lake Creek with intermediate scores correspond to sites that had low or no flow during each sampling period.

Benthic-Macroinvertebrate Data

Benthic-macroinvertebrate data provide better site-specific information about a site than fish community data (Cuffney and others, 1993). Moring (2001) states that fish mobility tends to make determinations of species composition and relative abundance more difficult. However, variability in benthic-macroinvertebrate communities can be influenced by differences in "chemical water quality, available habitat, and flow variability. Variations in sample-collection method or analysis precision also can cause variations in the data" (Lenz and Rheaume, 1995, p. 10).

The maximum number of aquatic-insect taxa (51) were collected at PEACH3, and the minimum number of aquatic-insect taxa (17) were collected at CANEY1. PEACH3 had the most instream cover and woody debris of all sites sampled. Once again, to minimize the possible bias caused by different sample sizes, Menhinick's R was computed for benthic-macroinvertebrate community data. Averages for each sample site are listed in table 7. Comparison of these data with Menhinick's R for fish (table 7) shows a similar relation among stream indexes for macroinvertebrates: Peach Creek diversity > Caney Creek diversity > Lake Creek diversity.

The Ephemeroptera Plecoptera Trichoptera (EPT) index is used as an indicator of the ecological health of a stream (Moring, 2002). The EPT index is the sum of the number of taxa within the insect orders of mayflies (Ephemeroptera), stoneflies (Plecoptera), and caddisflies (Trichoptera) expressed as a percentage of all identifiable taxa. The index is sensitive to changes

in water quality and often is less variable seasonally and perennially than other metrics (Moring, 2002). Larger EPT scores indicate healthier streams.

The three upstream sites in the Lake Creek watershed (LAKE3, LAKE4, and LAKE5) have the lowest EPT scores (table 7). Habitat at these three sites is similar to that at the most downstream site (LAKE1). However, the three upstream sites typically had low or no flow, which resulted in decreased dissolved oxygen concentrations. Caddisflies are filter feeders and require moderate stream velocity to survive. This explains why fewer Trichoptera were found at the upstream sites, resulting in lower EPT scores. The downstream sites of Lake Creek, Peach Creek, and Caney Creek each had the largest EPT score for their respective watershed (table 7).

As with fish communities, computation of an IBI using benthic-macroinvertebrate community data allows community structure at different sites to be compared. A benthic-macroinvertebrate index of biotic integrity (B-IBI) that uses 12 metrics (Texas Natural Resource Conservation Commission, 1999a) is listed in table 8. As noted for the ECO-IBI, a score is assigned for each of these metrics, and the sum of the 12 scores is the B-IBI. Scores between 22 and 28 indicate intermediate aquatic life use, scores between 29 and 35 indicate high aquatic life use, and scores 36 and greater indicate exceptional aquatic life use. Average B-IBI scores computed for each site during the study (table 7) can be compared to the ECO-IBI scores for the respective sites. The average B-IBI scores for the Lake Creek sites tend to increase in the downstream direction. Like the Lake Creek ECO-IBI scores, the B-IBI scores for the three upstream Lake Creek sites indicate intermediate aquatic life use, and the score for the most downstream site indicates high aquatic life use. B-IBI scores for the Peach Creek sites, in downstream order, are exceptional and high (compared with ECO-IBI scores high and high); and scores for the Caney Creek sites, in downstream order, are high and intermediate (compared with ECO-IBI scores high and high).

Summary

The Texas Commission on Environmental Quality (TCEQ) is responsible for assessing and maintaining the ecological health of streams throughout Texas. TCEQ Clean Rivers Program (CRP) partners are responsible for collecting and assessing the quality of water resources in their respective service areas. Each biennium, CRP partners are required to perform at least one systematic monitoring study, whereby a variety of data are collected in water bodies that are not routinely monitored. Data from these studies allow a general assessment to determine whether future monitoring or additional studies are warranted.

During 2002–04, the USGS conducted a systematic monitoring study on Lake Creek, Peach Creek, and Caney Creek near Houston in cooperation with the Houston-Galveston Area Council (CRP partner) and the TCEQ. Data were collected and

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used to assess water-quality and biological conditions in the three tributaries to Lake Houston. Streamflow data were collected continuously at one site in each of the three stream watersheds. Continuous water-quality properties were recorded at one site on Lake Creek. Discrete water samples were collected bimonthly during December 2002–June 2004 at five Lake Creek sites, three Peach Creek sites, and three Caney Creek sites. Water samples were analyzed for chloride and sulfate, nutrients, BOD, phytoplankton, indicator bacteria, pesticides, and suspended sediment. Fish, benthic-macroinvertebrate, and stream-habitat data were collected at four sites (reaches) in the Lake Creek watershed, two sites in Peach Creek, and two sites in Caney Creek a maximum of five times during the study.

The continuous monitoring site at Lake Creek (LAKE1, near Conroe) was in a reach with base-flow water depths of about 3 feet and constantly flowing water. An index that is a measure of the comparability between two sets of time-series data indicates that dissolved oxygen concentrations at site LAKE1 are closely correlated with those at a site on a nearby stream of similar size and watershed land use that has more than twice as many upstream wastewater outfalls as LAKE1.

Concentration data for eight constituents for all 11 sampling sites were compiled and grouped by watershed and by season. Graphical comparisons of these data by watershed indicate relatively large differences in concentration distribution among all three watersheds for nitrite plus nitrate nitrogen (medians: Lake, 0.20; Peach, 0.14; and Caney, 0.32 mg/L). The seasonal distributions of these data show consistency among the four seasons. The distributions of chlorophyll-*a* in summer and *E. coli* bacteria in winter each contain a few relatively large concentrations.

During 2002–04, 56 species of fish were collected at four sites in the Lake Creek watershed, two sites in the Peach Creek watershed, and two sites in the Caney Creek watershed. The maximum number of fish collected during sampling at one site was 578 at site LAKE3 near Dobbin, and the minimum number of fish collected during sampling at one site was 39 at site PEACH3 near Cleveland. For the entire study, the most species (37) were collected at site PEACH1 near New Caney, and the least species (24) were collected at site PEACH3. Fish from 15 major families were collected during the study. For all sites except LAKE1, the majority of fish collected during the study (47 to 67 percent) were sunfish. At LAKE1, the majority of fish collected (53 percent) were minnows. Invertivores (mostly sunfish and minnows) made up more than 65 percent of the trophic structure, omnivores the next-largest percentage, and piscivores the smallest percentage. Ecoregion-specific index of biotic integrity (ECO-IBI) scores (average of samples) were determined using fish community data collected during the study. Higher ECO-IBI scores equate to higher aquatic life use. Scores for the three upstream Lake Creek sites indicate intermediate aquatic life use, and for the most downstream site, high aquatic life use. Scores for Peach Creek and Caney Creek sites indicate high aquatic life use.

The maximum number of aquatic-insect taxa (51) were collected at site PEACH3, and the minimum number of aquatic-

insect taxa (17) were collected at site CANEY1 near New Caney. EPT index, an indicator of the ecological health of a stream, is largest for the most downstream sampling site in each of the three streams. The benthic-macroinvertebrate index of biotic integrity (B-IBI) scores (averages of samples) for the three upstream Lake Creek sites indicate intermediate aquatic life use, and the score for most downstream site indicates high aquatic life use. B-IBI scores for the Peach Creek sites, in downstream order, are exceptional and high; and scores for the Caney Creek sites, in downstream order, are high and intermediate.

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Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003 Discharge, cubic feet per second DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	895	99	1430	82	195	48	16	4.8	5.7	4.3	23
2	11	584	80	1690	77	177	43	16	5.2	4.9	4.2	119
3	13	778	71	1420	75	211	40	16	21	6.8	4.0	112
4	11	e3570	93	532	72	823	38	15	22	29	3.9	450
5	9.3	e7950	390	225	68	827	36	14	14	79	3.7	568
6	9.0	e15700	919	154	76	831	36	13	11	38	3.7	497
7	8.0	e10600	1260	128	288	589	36	12	9.4	25	3.6	547
8	8.6	e6250	906	110	224	393	36	12	7.9	17	3.5	175
9	18	e2260	334	103	143	363	33	12	6.8	15	3.5	53
10	35	e756	599	98	126	182	29	11	6.4	19	3.4	35
11	22	e342	957	90	111	121	27	10	5.9	18	4.6	42
12	12	e224	1230	100	98	104	26	11	8.4	12	5.4	331
13	7.8	e133	1620	329	91	145	24	10	7.1	9.9	5.9	1010
14	6.9	e88	1830	709	86	292	24	9.8	8.6	8.5	5.4	1360
15	6.6	84	1860	815	86	150	23	9.5	8.4	15	4.5	e1400
16	5.9	79	1390	484	85	102	23	8.8	17	18	3.9	586
17	5.2	73	488	220	78	84	23	8.9	26	14	3.9	112
18	5.3	67	251	141	70	81	21	9.1	25	11	5.7	54
19	7.9	61	186	114	68	96	20	8.5	14	9.1	3.7	36
20	23	58	153	100	73	82	21	8.1	10	8.8	3.3	27
21	34	55	158	95	1050	69	24	7.8	7.9	6.5	3.5	30
22	711	54	131	93	1860	70	23	7.4	6.6	5.7	5.7	34
23	1500	51	116	88	e1960	64	22	6.9	5.8	6.1	4.3	31
24	1820	49	215	81	1950	57	22	6.7	5.6	7.3	3.6	25
25	e2050	48	855	76	1490	52	22	6.4	5.3	7.7	3.3	21
26	e2100	48	1390	77	565	57	20	6.2	5.4	6.5	3.4	18
27	e2020	52	1350	92	300	97	19	6.0	11	5.9	3.3	15
28	1910	135	505	88	227	103	18	5.5	9.5	5.2	3.3	13
29	1790	173	212	87	---	89	17	5.2	7.6	5.1	3.1	12
30	1700	138	158	87	---	76	16	5.0	6.8	4.8	3.0	11
31	1450	---	787	86	---	62	---	4.9	---	4.5	6.2	---
TOTAL	17320.5	51355	20593	9942	11479	6644	810	298.7	310.4	429.0	126.8	7747
MEAN	559	1712	664	321	410	214	27.0	9.64	10.3	13.8	4.09	258
MAX	2100	15700	1860	1690	1960	831	48	16	26	79	6.2	1400
MIN	5.2	48	71	76	68	52	16	4.9	4.8	4.5	3.0	11
AC-FT	34360	101900	40850	19720	22770	13180	1610	592	616	851	252	15370

e Estimated

Table 4 19

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued													
Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius													
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
	OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	244	239	242	204	186	198	374	334	356	182	165	168	
2	239	234	236	216	204	210	334	300	317	167	148	158	
3	234	228	231	219	143	191	300	280	290	150	143	145	
4	228	222	225	145	126	137	280	219	254	183	150	166	
5	222	203	218	---	---	---	290	169	217	214	183	199	
6	214	207	210	---	---	---	298	225	243	248	214	231	
7	210	202	206	---	---	---	226	156	186	273	248	261	
8	206	189	200	---	---	---	160	151	154	297	273	284	
9	189	132	168	---	---	---	181	160	172	309	297	303	
10	159	126	134	---	---	---	234	180	199	326	303	315	
11	202	136	164	---	---	---	228	200	205	341	326	336	
12	219	202	214	---	---	---	205	129	178	340	301	330	
13	210	194	200	---	---	---	129	104	114	346	284	302	
14	194	190	192	---	---	---	125	120	123	375	291	320	
15	190	186	187	235	228	232	122	108	114	294	236	265	
16	189	185	186	239	229	236	136	107	117	236	226	229	
17	199	189	194	237	228	231	172	136	155	247	231	239	
18	204	199	202	246	237	241	206	172	190	269	247	258	
19	204	145	189	256	246	252	240	206	224	285	269	278	
20	167	133	152	260	255	257	273	240	256	300	285	292	
21	191	130	157	261	257	260	315	273	295	317	299	307	
22	191	62	114	263	256	260	336	315	328	333	315	325	
23	119	76	109	271	262	267	336	321	333	350	333	341	
24	120	110	116	275	271	273	332	296	308	368	348	359	
25	111	101	105	277	272	274	411	232	299	375	367	371	
26	110	105	107	280	276	277	232	157	185	377	361	373	
27	107	106	106	281	276	279	157	151	153	362	326	345	
28	118	106	112	429	273	309	190	157	172	338	324	330	
29	129	106	113	568	429	511	220	190	206	353	322	334	
30	156	129	146	526	373	411	244	220	232	382	353	367	
31	186	156	168	---	---	---	223	162	191	403	377	389	
MONTH	244	62	171	---	---	---	411	104	218	403	143	288	

20 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued													
Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius—Continued													
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
FEBRUARY				MARCH				APRIL				MAY	
1	422	403	414	289	252	272	433	420	424	358	354	355	
2	426	422	424	301	289	296	436	419	429	356	353	354	
3	426	422	423	302	226	280	419	408	411	354	351	353	
4	431	423	426	254	176	219	412	396	404	352	347	349	
5	434	429	431	285	224	248	397	384	391	351	345	347	
6	433	394	416	289	234	267	384	375	381	346	342	344	
7	415	266	346	234	219	223	375	368	372	351	335	338	
8	369	324	347	250	225	241	369	363	367	353	332	334	
9	399	338	374	244	203	214	370	360	364	333	329	331	
10	408	399	404	238	209	225	375	370	372	331	328	329	
11	420	408	416	268	238	254	389	375	383	334	329	331	
12	433	414	425	291	268	281	399	389	394	334	329	331	
13	449	414	434	297	180	271	400	394	398	332	323	326	
14	454	440	451	219	192	203	401	386	393	325	323	324	
15	440	424	430	251	218	234	386	374	378	325	323	323	
16	424	420	422	298	251	273	374	364	367	326	322	323	
17	436	421	429	328	298	315	364	357	359	325	320	323	
18	456	436	445	339	315	331	360	356	358	324	319	321	
19	458	445	456	322	311	315	360	357	358	319	315	317	
20	451	331	432	344	322	333	358	345	354	316	307	312	
21	331	108	177	363	318	342	345	330	335	316	308	313	
22	181	112	134	409	363	387	347	336	342	321	316	317	
23	187	143	170	441	409	430	348	340	345	320	307	311	
24	143	135	136	440	428	434	340	324	329	309	300	304	
25	153	135	141	428	404	417	337	327	332	302	293	298	
26	180	153	167	404	374	382	336	330	333	293	284	288	
27	208	180	193	403	325	380	355	336	345	284	279	281	
28	252	208	230	424	287	349	359	351	353	280	274	277	
29	---	---	---	444	424	436	363	357	359	277	270	273	
30	---	---	---	461	442	448	361	354	357	273	268	270	
31	---	---	---	462	428	449	---	---	---	270	265	267	
MONTH	458	108	346	462	176	314	436	324	370	358	265	318	
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
JUNE				JULY				AUGUST				SEPTEMBER	
1	267	263	264	180	172	176	217	211	214	240	121	216	
2	266	240	260	183	176	179	220	215	219	241	139	207	
3	240	103	181	190	179	184	225	219	222	230	197	213	
4	213	144	184	185	125	168	226	223	225	372	230	254	
5	294	170	242	142	127	137	229	226	227	245	239	242	
6	298	265	284	166	135	150	233	227	228	246	216	240	
7	265	225	245	170	146	164	233	228	229	216	202	206	
8	225	209	215	172	154	167	233	229	230	239	210	225	
9	214	204	209	178	168	173	232	229	230	258	239	249	
10	226	210	218	184	178	181	232	229	230	271	239	259	
11	241	226	234	204	184	196	232	221	227	264	239	256	
12	243	205	224	215	203	210	221	213	217	264	204	230	
13	221	213	218	214	194	206	215	211	213	285	233	250	
14	215	206	210	194	178	184	214	212	213	---	---	---	
15	210	201	204	181	165	174	216	213	214	---	---	---	
16	202	103	181	169	160	162	218	216	217	---	---	---	
17	190	122	164	167	160	162	225	216	220	---	---	---	
18	195	154	175	170	164	166	229	219	225	---	---	---	
19	216	195	208	175	169	172	237	225	231	---	---	---	
20	198	178	183	175	162	168	242	234	239	354	339	347	
21	187	179	182	175	169	171	245	240	242	357	331	348	
22	199	186	194	179	175	177	246	235	239	354	341	348	
23	211	199	205	181	177	179	241	233	237	363	342	354	
24	219	209	214	184	175	179	249	241	245	388	359	370	
25	225	219	222	181	176	179	249	245	247	413	388	403	
26	226	217	224	186	181	183	251	247	249	420	392	404	
27	217	172	191	190	184	186	252	249	251	440	420	432	
28	179	166	173	190	184	186	254	249	252	447	440	444	
29	186	179	182	194	189	192	252	249	250	453	445	449	
30	191	180	186	206	194	199	254	250	252	460	452	456	
31	---	---	---	211	204	208	254	239	249	---	---	---	
MONTH	298	103	209	215	125	178	254	211	232	---	---	---	

Table 4 21**Table 4.** Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued pH, water, unfiltered, field, standard units														
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH			
1	7.57	7.29	6.85	6.74	7.39	7.28	7.30	7.18	7.71	7.63	7.37	7.31		
2	7.57	7.23	6.86	6.85	7.29	7.19	7.25	7.18	7.70	7.64	7.39	7.36		
3	7.48	7.21	6.86	6.53	7.19	7.15	7.22	7.16	7.67	7.63	7.41	7.27		
4	7.45	7.10	6.61	6.52	7.17	7.02	7.21	7.15	7.70	7.64	7.56	7.26		
5	7.46	7.15	---	---	7.33	6.93	7.15	7.10	7.69	7.65	7.58	7.53		
6	7.34	7.07	---	---	7.35	7.14	7.17	7.12	7.67	7.60	7.57	7.49		
7	7.25	6.98	---	---	7.14	7.03	7.26	7.13	7.74	7.53	7.49	7.39		
8	7.26	6.98	---	---	7.06	6.98	7.31	7.25	7.81	7.74	7.48	7.38		
9	7.10	6.80	---	---	7.09	7.05	7.35	7.31	7.76	7.73	7.48	7.30		
10	6.97	6.79	---	---	7.37	7.05	7.40	7.33	7.73	7.69	7.31	7.25		
11	7.08	6.88	---	---	7.37	7.22	7.46	7.39	7.69	7.64	7.28	7.25		
12	7.25	7.08	---	---	7.23	6.93	7.45	7.38	7.67	7.61	7.29	7.26		
13	7.16	7.04	---	---	6.97	6.82	7.63	7.38	7.65	7.61	7.29	7.08		
14	7.15	7.01	---	---	7.01	6.96	7.73	7.58	7.68	7.63	7.12	7.05		
15	7.18	7.00	7.13	7.09	6.96	6.90	7.58	7.47	7.67	7.63	7.12	7.09		
16	7.20	6.98	7.15	7.11	6.94	6.86	7.47	7.40	7.73	7.66	7.21	7.12		
17	7.24	6.97	7.13	7.10	7.00	6.92	7.40	7.34	7.75	7.70	7.29	7.21		
18	7.30	7.00	7.14	7.11	6.96	6.91	7.34	7.32	7.76	7.69	7.32	7.28		
19	7.14	6.87	7.16	7.13	7.03	6.95	7.34	7.33	7.77	7.69	7.35	7.28		
20	6.96	6.84	7.18	7.15	7.09	7.02	7.35	7.32	7.69	7.44	7.40	7.34		
21	7.03	6.80	7.20	7.15	7.28	7.09	7.37	7.35	7.44	6.93	7.48	7.36		
22	7.04	6.38	7.20	7.15	7.29	7.27	7.46	7.37	7.25	7.00	7.59	7.47		
23	6.72	6.47	7.21	7.17	7.28	7.19	7.51	7.46	7.25	7.17	7.66	7.59		
24	6.68	6.60	7.23	7.19	7.35	7.14	7.53	7.50	7.21	7.15	7.61	7.55		
25	6.61	6.53	7.24	7.20	7.49	7.23	7.53	7.51	7.21	7.16	7.56	7.50		
26	6.60	6.56	7.25	7.22	7.23	7.08	7.52	7.51	7.25	7.18	7.51	7.45		
27	6.60	6.57	7.27	7.21	7.11	7.05	7.53	7.50	7.23	7.20	7.63	7.51		
28	6.62	6.57	7.57	7.25	7.18	7.11	7.50	7.46	7.31	7.23	7.69	7.46		
29	6.63	6.45	7.66	7.57	7.16	7.13	7.52	7.45	---	---	7.75	7.69		
30	6.76	6.63	7.59	7.39	7.19	7.14	7.61	7.52	---	---	7.76	7.71		
31	6.75	6.70	---	---	7.31	7.09	7.65	7.59	---	---	7.71	7.59		
MONTH	7.57	6.38	---	---	7.49	6.82	7.73	7.10	7.81	6.93	7.76	7.05		
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER			
1	7.59	7.56	7.72	7.54	7.46	7.20	7.32	7.05	7.21	6.87	6.87	6.49		
2	7.65	7.56	7.75	7.53	7.46	7.19	7.38	7.03	7.23	6.90	6.91	6.49		
3	7.64	7.59	7.70	7.52	7.31	6.89	7.24	7.04	7.22	6.90	6.85	6.68		
4	7.63	7.58	7.61	7.51	7.18	6.91	7.10	6.78	7.17	6.89	6.99	6.72		
5	7.64	7.57	7.72	7.48	7.33	6.94	6.89	6.77	7.16	6.89	6.95	6.90		
6	7.57	7.53	7.66	7.46	7.43	7.30	6.99	6.83	7.19	6.88	6.97	6.88		
7	7.61	7.52	7.69	7.43	7.44	7.23	7.01	6.90	7.16	6.89	6.89	6.82		
8	7.67	7.56	7.71	7.41	7.44	7.14	6.96	6.90	7.15	6.86	6.93	6.88		
9	7.70	7.60	7.72	7.40	7.49	7.13	7.00	6.93	7.05	6.87	6.97	6.91		
10	7.69	7.61	7.66	7.40	7.44	7.11	7.10	6.98	7.07	6.85	7.14	6.90		
11	7.71	7.58	7.49	7.37	7.50	7.15	7.15	7.02	7.00	6.86	6.97	6.90		
12	7.74	7.60	7.50	7.38	7.35	7.11	7.27	7.02	7.05	6.85	7.05	6.78		
13	7.77	7.61	7.60	7.40	7.35	7.07	7.25	7.04	7.16	6.89	7.04	6.84		
14	7.79	7.62	7.62	7.39	7.39	7.13	7.21	6.98	7.11	6.88	---	---		
15	7.74	7.60	7.62	7.38	7.23	7.09	7.08	6.94	7.10	6.83	---	---		
16	7.64	7.57	7.65	7.37	7.26	6.76	6.96	6.89	7.01	6.82	---	---		
17	7.69	7.54	7.60	7.32	7.07	6.77	7.08	6.90	7.07	6.79	---	---		
18	7.68	7.53	7.66	7.36	7.14	7.00	7.17	6.94	7.12	6.80	---	---		
19	7.62	7.54	7.66	7.36	7.31	7.11	7.18	6.93	7.09	6.79	---	---		
20	7.56	7.52	7.57	7.33	7.19	7.00	7.10	6.88	7.01	6.84	---	---		
21	7.60	7.48	7.63	7.33	7.24	7.00	7.08	6.86	7.11	6.84	6.99	6.93		
22	7.62	7.55	7.64	7.35	7.32	7.02	7.16	6.84	7.11	6.85	7.00	6.95		
23	7.65	7.57	7.62	7.34	7.38	7.06	7.03	6.84	7.07	6.83	7.00	6.95		
24	7.64	7.54	7.59	7.31	7.41	7.15	6.98	6.83	7.12	6.86	7.01	6.96		
25	7.68	7.52	7.54	7.29	7.50	7.19	7.18	6.89	7.10	6.84	7.06	6.98		
26	7.73	7.54	7.55	7.27	7.47	7.21	7.20	6.89	7.10	6.83	7.02	6.98		
27	7.78	7.55	7.53	7.25	7.35	7.18	7.25	6.89	7.08	6.83	7.08	7.00		
28	7.78	7.56	7.57	7.28	7.38	7.10	7.22	6.85	7.00	6.79	7.14	7.05		
29	7.79	7.56	7.55	7.29	7.49	7.15	7.17	6.86	7.01	6.75	7.19	7.10		
30	7.77	7.56	7.53	7.26	7.34	7.14	7.18	6.84	7.00	6.80	7.23	7.17		
31	---	---	7.51	7.23	---	---	7.21	6.85	6.96	6.84	---	---		
MONTH	7.79	7.48	7.75	7.23	7.50	6.76	7.38	6.77	7.23	6.75	---	---		

22 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued													
Temperature, water, degrees Celsius—Continued													
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
OCTOBER				NOVEMBER				DECEMBER				JANUARY	
1	26.10	23.50	24.75	19.80	18.50	19.15	11.70	10.90	11.33	14.00	12.90	13.30	
2	27.00	24.50	25.61	18.50	17.50	17.97	12.40	10.50	11.39	12.90	11.20	11.70	
3	27.50	24.60	26.07	17.50	16.50	17.00	13.90	12.40	13.06	11.20	9.80	10.35	
4	28.00	25.20	26.58	16.50	15.00	15.63	14.30	12.30	13.48	10.40	9.60	10.03	
5	28.20	25.90	26.96	---	---	---	12.30	10.70	11.40	11.20	10.10	10.65	
6	27.60	25.10	26.35	---	---	---	10.70	8.30	9.25	12.20	11.00	11.52	
7	27.20	25.00	26.07	---	---	---	9.10	7.80	8.44	12.20	11.10	11.57	
8	26.10	24.80	25.29	---	---	---	9.90	8.70	9.16	12.00	10.40	11.23	
9	24.90	23.70	24.09	---	---	---	10.20	9.90	10.13	13.30	11.30	12.30	
10	23.70	22.20	22.87	---	---	---	10.40	10.00	10.13	13.20	12.00	12.56	
11	23.00	21.70	22.18	---	---	---	10.20	9.50	9.91	12.30	11.10	11.59	
12	22.50	20.40	21.49	---	---	---	10.90	9.70	10.22	11.10	9.10	10.11	
13	21.60	20.50	21.11	---	---	---	11.30	10.70	10.96	9.20	8.50	8.86	
14	20.50	18.60	19.56	---	---	---	11.00	10.00	10.59	8.50	7.80	8.14	
15	19.60	16.90	18.21	16.10	15.50	15.86	11.60	10.10	10.80	8.60	7.90	8.23	
16	18.80	15.60	17.17	15.50	14.30	14.96	13.10	11.30	11.98	9.10	8.50	8.77	
17	19.10	15.40	17.22	14.30	13.10	13.79	14.90	13.10	14.03	8.90	8.20	8.55	
18	19.40	16.70	18.08	14.60	13.00	13.89	16.80	14.90	15.97	8.50	7.30	7.93	
19	19.50	19.10	19.26	15.20	14.30	14.67	17.00	16.10	16.68	8.80	7.00	7.97	
20	20.40	19.20	19.67	14.90	13.80	14.36	16.10	14.30	15.13	11.70	8.80	10.07	
21	19.70	19.20	19.36	14.80	13.60	14.15	14.30	13.30	13.75	14.20	11.70	13.06	
22	19.30	18.10	18.70	14.60	13.40	13.90	14.10	13.20	13.70	14.10	13.00	13.60	
23	19.30	18.70	19.01	13.70	12.20	13.02	15.40	14.10	14.69	13.00	10.70	11.77	
24	19.40	19.20	19.34	14.30	12.60	13.48	15.00	12.70	13.86	10.70	9.10	9.84	
25	19.70	19.40	19.56	15.20	13.80	14.35	12.70	9.30	11.52	9.60	9.00	9.39	
26	19.70	19.40	19.56	14.30	12.80	13.58	9.30	8.80	9.02	9.50	9.00	9.18	
27	19.50	19.40	19.46	12.80	12.10	12.38	9.50	8.50	9.01	9.90	9.00	9.45	
28	20.20	19.50	19.66	12.20	11.10	11.75	9.70	9.00	9.37	11.80	9.90	10.82	
29	20.60	20.10	20.33	11.10	10.30	10.77	11.70	9.70	10.56	13.50	11.80	12.71	
30	20.80	19.80	20.34	11.90	11.00	11.41	13.80	11.70	12.66	13.20	12.70	12.89	
31	20.60	19.80	20.02	---	---	---	14.40	13.70	14.08	13.70	12.50	12.99	
MONTH	28.20	15.40	21.42	---	---	---	17.00	7.80	11.81	14.20	7.00	10.68	
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
FEBRUARY				MARCH				APRIL				MAY	
1	13.50	11.70	12.71	11.20	10.30	10.70	17.90	15.30	16.64	25.00	23.20	23.98	
2	14.70	12.70	13.57	12.30	11.20	11.70	18.60	16.80	17.68	25.60	23.10	24.25	
3	16.00	14.70	15.19	12.30	11.90	12.18	19.30	17.70	18.49	25.40	24.00	24.66	
4	15.00	13.50	14.22	12.00	11.60	11.78	20.50	18.90	19.69	25.20	24.30	24.66	
5	13.80	12.60	13.09	12.40	12.00	12.21	22.20	20.00	21.00	27.00	24.50	25.49	
6	12.60	11.30	11.97	12.40	11.80	12.17	22.00	21.50	21.72	27.50	25.40	26.32	
7	11.30	9.50	10.44	12.80	11.10	11.88	22.90	21.30	21.97	28.70	25.80	26.98	
8	9.50	9.00	9.17	14.10	12.80	13.44	22.20	19.90	21.20	29.40	26.40	27.67	
9	9.50	8.80	9.06	15.40	14.10	14.89	19.90	17.30	18.55	29.30	26.30	27.66	
10	10.90	9.20	9.95	17.40	15.30	16.27	18.80	15.80	17.39	28.70	26.60	27.50	
11	11.70	9.60	10.68	18.30	16.50	17.27	18.90	16.40	17.70	27.60	25.90	26.92	
12	13.70	11.20	12.36	19.00	17.60	18.24	20.40	16.70	18.50	25.90	23.60	24.62	
13	14.50	13.40	13.88	19.80	18.00	18.79	21.90	18.20	19.90	25.90	22.60	24.07	
14	16.20	14.50	15.36	19.80	18.00	18.83	23.00	19.50	21.13	27.30	24.20	25.53	
15	17.20	16.20	16.54	20.30	18.80	19.60	23.10	20.80	21.89	27.50	25.10	26.20	
16	16.30	13.20	14.71	20.30	19.00	19.56	22.50	21.10	21.73	29.30	25.60	27.15	
17	13.30	11.50	12.55	20.50	18.60	19.58	24.60	21.60	22.89	29.60	26.10	27.58	
18	14.00	11.40	12.73	19.90	18.10	19.23	24.50	22.20	23.33	28.80	24.70	26.71	
19	15.20	13.60	14.36	19.10	17.00	18.15	23.40	22.50	22.86	29.10	24.90	26.86	
20	15.20	14.90	15.07	18.60	17.30	18.08	22.60	21.60	22.23	28.40	25.90	27.15	
21	15.00	14.50	14.80	18.80	16.50	17.72	23.80	20.90	22.10	27.90	25.10	26.42	
22	15.20	14.00	14.58	17.70	16.30	16.93	22.40	20.50	21.14	27.90	24.60	26.17	
23	15.80	14.00	14.79	18.10	15.50	16.82	21.30	20.10	20.60	28.10	23.90	26.04	
24	15.70	13.90	14.61	19.00	16.10	17.65	23.60	21.10	22.02	27.80	24.10	26.00	
25	13.90	11.20	12.29	19.10	17.80	18.51	25.20	22.10	23.31	28.20	24.70	26.44	
26	11.20	9.40	10.11	18.80	18.00	18.21	24.60	21.10	22.84	28.50	25.30	26.78	
27	9.70	9.10	9.41	19.50	17.40	18.39	25.00	21.30	23.08	28.00	25.30	26.64	
28	10.30	9.70	9.97	18.70	17.00	18.05	24.60	22.00	23.26	27.50	23.70	25.69	
29	---	---	---	17.00	15.70	16.36	24.40	21.90	23.18	27.50	23.00	25.28	
30	---	---	---	16.40	14.10	15.30	24.80	22.40	23.60	29.00	24.40	26.61	
31	---	---	---	16.00	13.70	15.10	---	---	---	30.00	25.60	27.76	
MONTH	17.20	8.80	12.79	20.50	10.30	16.24	25.20	15.30	21.05	30.00	22.60	26.19	

Table 4 23**Table 4.** Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued Temperature, water, degrees Celsius—Continued													
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
	JUNE			JULY			AUGUST			SEPTEMBER			
1	30.00	26.30	28.26	29.50	26.90	28.16	31.60	27.70	29.56	27.40	25.70	26.38	
2	29.80	27.00	28.31	30.00	26.60	28.29	31.40	28.20	29.79	26.20	25.70	25.93	
3	28.90	24.40	26.84	29.10	27.20	28.01	31.80	28.40	30.06	26.60	25.70	26.08	
4	27.90	25.70	26.85	27.50	25.60	26.56	31.90	28.60	30.23	27.00	26.10	26.53	
5	25.70	25.20	25.47	26.10	25.20	25.69	31.60	28.80	30.20	27.00	26.70	26.89	
6	27.50	24.80	25.98	27.60	25.40	26.42	32.30	28.80	30.48	27.10	26.60	26.85	
7	28.70	24.40	26.37	27.40	26.00	26.54	32.80	29.20	30.92	27.10	25.70	26.22	
8	28.50	24.70	26.52	27.00	25.10	26.08	32.40	29.10	30.76	26.20	25.40	25.78	
9	29.60	24.90	27.16	26.60	25.50	26.09	31.20	29.20	30.06	26.50	24.50	25.56	
10	29.00	26.80	27.90	27.30	25.30	26.22	31.20	28.20	29.63	26.70	25.20	25.82	
11	30.60	26.90	28.56	27.90	25.80	26.82	30.30	27.20	28.43	25.80	25.00	25.25	
12	29.40	26.70	28.12	30.00	25.80	27.64	27.90	25.50	26.72	25.10	22.90	23.66	
13	29.60	26.00	27.59	30.80	26.90	28.58	28.40	25.10	26.69	24.20	22.90	23.74	
14	29.50	25.60	27.42	31.60	27.40	29.23	28.50	25.80	27.16	---	---	---	
15	28.10	25.90	26.56	29.60	26.00	27.30	29.80	26.10	27.88	---	---	---	
16	26.60	24.40	25.46	26.90	25.70	26.23	30.60	27.10	28.84	---	---	---	
17	26.70	24.00	25.33	30.00	25.90	27.57	31.00	27.50	29.23	---	---	---	
18	28.20	25.10	26.57	30.80	27.20	28.67	31.80	27.70	29.64	---	---	---	
19	29.70	25.90	27.63	30.40	27.30	28.74	31.40	28.10	29.81	---	---	---	
20	29.60	26.80	28.13	31.10	27.30	29.01	31.60	28.30	29.94	25.40	24.50	25.01	
21	30.50	27.20	28.69	31.90	27.70	29.62	31.30	28.30	29.76	24.90	23.60	24.23	
22	31.80	27.60	29.52	31.80	28.20	29.92	29.40	27.10	28.17	25.10	23.30	24.03	
23	31.90	28.10	29.94	30.60	28.00	28.85	30.00	26.40	28.16	24.90	22.90	23.97	
24	30.80	28.40	29.72	28.50	27.40	27.98	30.80	27.10	28.93	25.30	23.60	24.42	
25	32.30	27.90	29.94	30.30	26.30	28.09	30.80	27.70	29.33	25.70	23.60	24.60	
26	30.80	28.50	29.69	30.20	27.00	28.61	31.00	27.90	29.44	24.90	23.90	24.35	
27	29.60	26.70	28.21	30.80	26.80	28.67	31.00	28.20	29.65	25.70	23.30	24.37	
28	30.60	26.40	28.29	30.80	27.10	28.97	30.80	28.40	29.55	25.30	23.30	24.24	
29	29.80	26.70	28.29	30.80	27.50	29.20	30.60	27.90	29.19	23.70	21.70	22.73	
30	29.10	27.00	28.14	30.80	27.60	29.24	29.80	28.10	28.85	22.60	20.30	21.42	
31	---	---	---	30.60	27.80	29.21	28.50	26.40	27.14	---	---	---	
MONTH	32.30	24.00	27.72	31.90	25.10	27.94	32.80	25.10	29.17	---	---	---	
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	24.75	19.15	11.33	13.30	12.71	10.70	16.64	23.98	28.26	28.16	29.56	26.38	
2	25.61	17.97	11.39	11.70	13.57	11.70	17.68	24.25	28.31	28.29	29.79	25.93	
3	26.07	17.00	13.06	10.35	15.19	12.18	18.49	24.66	26.84	28.01	30.06	26.08	
4	26.58	15.63	13.48	10.03	14.22	11.78	19.69	24.66	26.85	26.56	30.23	26.53	
5	26.96	---	11.40	10.65	13.09	12.21	21.00	25.49	25.47	25.69	30.20	26.89	
6	26.35	---	9.25	11.52	11.97	12.17	21.72	26.32	25.98	26.42	30.48	26.85	
7	26.07	---	8.44	11.57	10.44	11.88	21.97	26.98	26.37	26.54	30.92	26.22	
8	25.29	---	9.16	11.23	9.17	13.44	21.20	27.67	26.52	26.08	30.76	25.78	
9	24.09	---	10.13	12.30	9.06	14.89	18.55	27.66	27.16	26.09	30.06	25.56	
10	22.87	---	10.13	12.56	9.95	16.27	17.39	27.50	27.90	26.22	29.63	25.82	
11	22.18	---	9.91	11.59	10.68	17.27	17.70	26.92	28.56	26.82	28.43	25.25	
12	21.49	---	10.22	10.11	12.36	18.24	18.50	24.62	28.12	27.64	26.72	23.66	
13	21.11	---	10.96	8.86	13.88	18.79	19.90	24.07	27.59	28.58	26.69	23.74	
14	19.56	---	10.59	8.14	15.36	18.83	21.13	25.53	27.42	29.23	27.16	---	
15	18.21	15.86	10.80	8.23	16.54	19.60	21.89	26.20	26.56	27.30	27.88	---	
16	17.17	14.96	11.98	8.77	14.71	19.56	21.73	27.15	25.46	26.23	28.84	---	
17	17.22	13.79	14.03	8.55	12.55	19.58	22.89	27.58	25.33	27.57	29.23	---	
18	18.08	13.89	15.97	7.93	12.73	19.23	23.33	26.71	26.57	28.67	29.64	---	
19	19.26	14.67	16.68	7.97	14.36	18.15	22.86	26.86	27.63	28.74	29.81	---	
20	19.67	14.36	15.13	10.07	15.07	18.08	22.23	27.15	28.13	29.01	29.94	25.01	
21	19.36	14.15	13.75	13.06	14.80	17.72	22.10	26.42	28.69	29.62	29.76	24.23	
22	18.70	13.90	13.70	13.60	14.58	16.93	21.14	26.17	29.52	29.92	28.17	24.03	
23	19.01	13.02	14.69	11.77	14.79	16.82	20.60	26.04	29.94	28.85	28.16	23.97	
24	19.34	13.48	13.86	9.84	14.61	17.65	22.02	26.00	29.72	27.98	28.93	24.42	
25	19.56	14.35	11.52	9.39	12.29	18.51	23.31	26.44	29.94	28.09	29.33	24.60	
26	19.56	13.58	9.02	9.18	10.11	18.21	22.84	26.78	29.69	28.61	29.44	24.35	
27	19.46	12.38	9.01	9.45	9.41	18.39	23.08	26.64	28.21	28.67	29.65	24.37	
28	19.66	11.75	9.37	10.82	9.97	18.05	23.26	25.69	28.29	28.97	29.55	24.24	
29	20.33	10.77	10.56	12.71	---	16.36	23.18	25.28	28.29	29.20	29.19	22.73	
30	20.34	11.41	12.66	12.89	---	15.30	23.60	26.61	28.14	29.24	28.85	21.42	
31	20.02	---	14.08	12.99	---	15.10	---	27.76	---	29.21	27.14	---	
MEAN	21.42	---	11.81	10.68	12.79	16.24	21.05	26.19	27.72	27.94	29.17	---	
MAX	26.96	---	16.68	13.60	16.54	19.60	23.60	27.76	29.94	29.92	30.92	---	
MIN	17.17	---	8.44	7.93	9.06	10.70	16.64	23.98	25.33	25.69	26.69	---	

24 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued													
Dissolved oxygen, water, unfiltered, milligrams per liter													
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
OCTOBER				NOVEMBER				DECEMBER				JANUARY	
1	---	---	---	11.69	9.83	10.99	10.68	10.53	10.59	8.83	8.61	8.73	
2	7.96	6.50	7.46	12.10	11.69	11.91	10.71	10.29	10.55	9.42	8.83	9.14	
3	8.60	6.36	7.33	12.90	12.08	12.39	10.31	9.80	10.11	9.91	9.41	9.67	
4	9.46	6.99	8.17	12.80	12.19	12.39	9.83	9.55	9.73	10.69	9.90	10.42	
5	9.26	7.22	8.14	---	---	---	10.32	9.71	10.02	10.63	10.18	10.39	
6	9.16	7.08	8.02	---	---	---	10.97	10.31	10.74	10.68	9.96	10.35	
7	10.83	7.93	9.33	---	---	---	11.13	10.79	10.99	10.94	10.27	10.59	
8	10.94	8.56	9.56	---	---	---	10.88	10.72	10.79	10.91	10.34	10.58	
9	9.98	9.22	9.63	---	---	---	10.90	10.85	10.88	10.41	9.90	10.21	
10	10.04	9.68	9.85	---	---	---	11.15	10.89	11.05	10.37	9.92	10.15	
11	10.95	10.00	10.44	---	---	---	11.23	10.96	11.13	10.66	10.37	10.56	
12	11.87	10.48	11.01	---	---	---	11.06	10.42	10.87	11.28	10.62	11.02	
13	11.96	10.71	11.18	---	---	---	10.42	9.95	10.12	11.80	11.26	11.56	
14	12.57	11.09	11.71	---	---	---	10.35	9.96	10.20	12.14	11.79	12.02	
15	13.58	11.76	12.47	8.87	8.74	8.80	10.41	9.98	10.25	12.22	11.57	11.85	
16	14.28	12.26	13.07	9.14	8.85	9.04	9.98	9.66	9.74	11.65	11.41	11.52	
17	14.68	12.63	13.38	9.45	9.14	9.34	9.86	9.66	9.79	11.44	11.26	11.35	
18	14.78	12.42	13.40	9.62	9.31	9.44	9.66	9.23	9.43	11.74	11.43	11.63	
19	12.92	11.99	12.37	9.44	9.25	9.34	9.33	9.19	9.24	11.72	11.52	11.61	
20	12.29	11.91	12.12	9.47	9.28	9.37	9.88	9.33	9.65	11.60	10.77	11.31	
21	12.60	11.96	12.25	9.51	9.35	9.43	10.26	9.87	10.12	10.77	10.15	10.48	
22	13.36	11.52	12.39	9.59	9.37	9.50	10.23	10.07	10.17	10.18	10.06	10.12	
23	11.52	10.19	10.70	9.83	9.58	9.72	10.07	9.64	9.87	10.86	10.14	10.56	
24	10.65	10.06	10.33	9.82	9.60	9.74	10.21	9.49	9.72	11.44	10.86	11.25	
25	10.46	9.89	10.27	9.68	9.53	9.60	10.69	9.98	10.26	11.66	11.32	11.51	
26	10.27	10.10	10.15	9.80	9.53	9.66	10.76	10.66	10.72	11.75	11.51	11.62	
27	10.35	10.26	10.31	10.22	9.76	10.03	10.67	10.34	10.52	11.77	11.55	11.68	
28	10.28	9.88	10.13	10.74	10.13	10.38	10.69	10.39	10.57	11.55	10.98	11.33	
29	10.20	9.37	9.55	10.95	10.74	10.85	10.51	9.86	10.20	10.98	10.57	10.79	
30	9.37	9.03	9.23	10.76	10.53	10.66	9.86	9.08	9.60	10.81	10.54	10.64	
31	9.83	8.93	9.15	---	---	---	9.08	8.52	8.78	10.99	10.57	10.73	
MONTH	---	---	---	---	---	---	11.23	8.52	10.21	12.22	8.61	10.82	
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
FEBRUARY				MARCH				APRIL				MAY	
1	11.12	10.60	10.84	11.36	10.88	11.00	9.66	9.01	9.38	8.31	6.96	7.46	
2	10.75	10.10	10.52	11.25	10.67	10.78	9.45	8.61	9.04	8.55	6.89	7.50	
3	10.12	9.82	9.96	10.71	10.44	10.60	8.92	8.33	8.64	8.11	6.76	7.31	
4	10.46	9.82	10.14	10.71	10.41	10.49	8.58	8.03	8.32	7.70	6.64	7.03	
5	10.53	10.10	10.30	10.58	10.17	10.33	8.51	7.74	8.10	8.39	6.61	7.20	
6	10.71	10.15	10.52	10.40	9.94	10.27	7.74	7.52	7.62	8.04	6.32	6.93	
7	11.40	10.50	11.04	10.97	10.09	10.37	8.03	7.50	7.69	8.31	6.25	7.00	
8	11.60	11.40	11.53	10.28	10.07	10.16	8.51	7.53	7.98	8.34	6.15	6.95	
9	11.62	11.39	11.54	10.07	9.66	9.87	9.23	8.09	8.64	8.39	6.12	6.95	
10	11.51	11.21	11.41	9.68	9.35	9.49	9.64	8.64	9.05	8.13	6.06	6.87	
11	11.34	10.45	11.18	9.44	9.21	9.35	9.58	8.67	9.02	6.96	5.96	6.43	
12	10.99	10.44	10.85	9.29	8.94	9.16	9.58	8.55	8.92	7.49	6.30	6.83	
13	10.60	10.28	10.48	8.97	8.15	8.81	9.44	8.26	8.68	8.55	6.60	7.47	
14	10.29	9.83	10.14	8.15	7.99	8.07	9.22	7.96	8.39	8.36	6.43	7.27	
15	10.12	9.70	9.78	8.24	8.06	8.12	8.73	7.61	8.07	8.18	6.34	7.07	
16	10.53	9.68	10.08	8.31	8.08	8.18	8.26	7.50	7.79	8.38	6.19	7.03	
17	11.61	10.32	10.85	8.43	7.85	8.22	8.46	7.40	7.77	8.16	5.90	6.76	
18	11.30	10.70	11.03	8.23	7.85	8.07	8.31	7.22	7.65	8.50	6.11	6.99	
19	10.94	10.23	10.63	8.50	7.86	8.26	7.81	7.12	7.41	8.63	6.04	7.11	
20	10.23	9.84	10.12	8.68	7.66	8.34	7.42	7.20	7.30	7.96	6.00	6.87	
21	9.84	9.19	9.48	8.89	7.67	8.40	8.12	7.25	7.58	8.57	5.89	7.08	
22	9.23	9.06	9.16	9.21	8.44	8.88	8.00	7.37	7.63	8.61	6.25	7.22	
23	9.20	8.89	9.09	9.47	8.73	9.14	8.21	7.66	7.86	8.69	6.19	7.26	
24	9.33	8.86	9.08	9.52	8.73	9.07	8.23	7.39	7.72	8.56	6.22	7.23	
25	10.04	9.16	9.50	9.04	8.60	8.82	8.33	7.17	7.57	8.39	6.06	7.07	
26	11.14	10.04	10.72	8.70	8.45	8.60	8.64	7.20	7.70	8.37	5.94	7.01	
27	11.28	11.11	11.20	8.93	8.47	8.70	8.89	7.27	7.82	8.27	5.89	6.97	
28	11.19	10.95	11.10	8.89	8.46	8.64	8.82	7.16	7.76	8.79	6.19	7.27	
29	---	---	---	9.51	8.81	9.26	8.86	7.20	7.82	8.85	6.17	7.46	
30	---	---	---	10.02	9.45	9.76	8.65	7.12	7.70	8.54	6.14	7.20	
31	---	---	---	10.04	9.39	9.76	---	---	---	8.30	5.76	6.92	
MONTH	11.62	8.86	10.44	11.36	7.66	9.26	9.66	7.12	8.09	8.85	5.76	7.09	

Table 4 25

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued													
DAY	MAX	Dissolved oxygen, water, unfiltered, milligrams per liter—Continued			MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		MIN	MEAN	MAX									
		JUNE			JULY			AUGUST			SEPTEMBER		
1	8.09	5.58	6.70	8.07	5.45	6.53	8.86	5.60	7.15	---	---	---	---
2	7.88	5.31	6.51	8.35	5.24	6.61	8.84	5.64	7.09	---	---	---	---
3	6.66	5.56	5.99	7.16	5.15	6.05	8.73	5.48	7.05	---	---	---	---
4	6.39	5.61	6.06	6.95	5.61	6.16	8.34	5.39	6.87	---	---	---	---
5	6.73	5.92	6.34	6.26	5.57	5.99	8.17	5.33	6.72	---	---	---	---
6	7.45	6.05	6.60	6.59	6.00	6.29	8.32	5.17	6.72	---	---	---	---
7	8.08	5.98	6.73	6.53	5.86	6.17	8.03	5.30	6.62	---	---	---	---
8	8.56	5.85	6.90	6.56	5.94	6.19	8.14	4.99	6.56	---	---	---	---
9	9.06	5.68	7.11	6.57	5.88	6.21	7.46	5.05	6.31	---	---	---	---
10	8.45	5.76	6.97	7.10	6.10	6.54	7.97	5.10	6.44	---	---	---	---
11	8.46	5.57	6.83	7.42	5.60	6.48	7.09	5.10	6.26	---	---	---	---
12	6.76	5.74	6.20	7.96	5.60	6.75	8.38	5.95	6.96	---	---	---	---
13	7.87	5.49	6.39	8.20	6.09	6.78	8.96	6.55	7.57	---	---	---	---
14	8.22	5.94	6.76	8.16	5.83	6.68	8.81	6.44	7.49	---	---	---	---
15	7.45	5.59	6.38	6.54	5.51	6.05	8.91	6.15	7.45	---	---	---	---
16	7.74	6.13	6.72	6.69	5.99	6.27	8.05	6.07	7.07	---	---	---	---
17	6.79	5.03	6.35	7.90	6.31	6.84	8.25	5.72	6.95	---	---	---	---
18	7.25	6.31	6.68	8.15	6.13	6.82	8.42	5.78	6.92	---	---	---	---
19	7.70	6.09	6.62	8.15	5.76	6.64	8.49	5.07	6.81	---	---	---	---
20	7.42	5.80	6.42	8.13	5.75	6.63	7.53	5.04	6.28	6.69	6.52	6.62	
21	7.63	5.62	6.40	7.98	5.33	6.38	8.42	5.06	6.70	6.85	6.63	6.76	
22	7.84	5.25	6.29	8.43	4.86	6.38	8.24	5.74	6.86	6.97	6.77	6.89	
23	7.63	4.93	6.02	7.34	5.50	6.30	8.93	5.58	7.23	7.14	6.91	7.02	
24	7.30	4.70	5.88	7.69	5.89	6.66	8.78	5.85	7.29	7.15	6.94	7.03	
25	7.88	4.92	6.12	8.88	6.51	7.39	8.48	5.69	7.11	7.26	6.98	7.09	
26	7.37	4.78	5.94	8.75	6.16	7.24	8.43	5.47	7.03	7.26	6.96	7.08	
27	7.03	5.10	6.09	9.17	6.22	7.42	8.53	5.43	6.97	7.54	7.07	7.24	
28	7.50	5.71	6.42	9.13	5.96	7.36	7.92	5.27	6.67	7.82	7.05	7.38	
29	8.36	5.82	6.82	8.80	5.82	7.18	8.09	4.69	6.51	8.33	7.35	7.77	
30	7.54	5.61	6.51	8.77	5.69	7.09	---	---	---	8.84	7.74	8.17	
31	---	---	---	8.95	5.67	7.19	---	---	---	---	---	---	
MONTH	9.06	4.70	6.46	9.17	4.86	6.62	---	---	---	---	---	---	
DAILY MEAN VALUES													
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	---	10.99	10.59	8.73	10.84	11.00	9.38	7.46	6.70	6.53	7.15	---	
2	7.46	11.91	10.55	9.14	10.52	10.78	9.04	7.50	6.51	6.61	7.09	---	
3	7.33	12.39	10.11	9.67	9.96	10.60	8.64	7.31	5.99	6.05	7.05	---	
4	8.17	12.39	9.73	10.42	10.14	10.49	8.32	7.03	6.06	6.16	6.87	---	
5	8.14	---	10.02	10.39	10.30	10.33	8.10	7.20	6.34	5.99	6.72	---	
6	8.02	---	10.74	10.35	10.52	10.27	7.62	6.93	6.60	6.29	6.72	---	
7	9.33	---	10.99	10.59	11.04	10.37	7.69	7.00	6.73	6.17	6.62	---	
8	9.56	---	10.79	10.58	11.53	10.16	7.98	6.95	6.90	6.19	6.56	---	
9	9.63	---	10.88	10.21	11.54	9.87	8.64	6.95	7.11	6.21	6.31	---	
10	9.85	---	11.05	10.15	11.41	9.49	9.05	6.87	6.97	6.54	6.44	---	
11	10.44	---	11.13	10.56	11.18	9.35	9.02	6.43	6.83	6.48	6.26	---	
12	11.01	---	10.87	11.02	10.85	9.16	8.92	6.83	6.20	6.75	6.96	---	
13	11.18	---	10.12	11.56	10.48	8.81	8.68	7.47	6.39	6.78	7.57	---	
14	11.71	---	10.20	12.02	10.14	8.07	8.39	7.27	6.76	6.68	7.49	---	
15	12.47	8.80	10.25	11.85	9.78	8.12	8.07	7.07	6.38	6.05	7.45	---	
16	13.07	9.04	9.74	11.52	10.08	8.18	7.79	7.03	6.72	6.27	7.07	---	
17	13.38	9.34	9.79	11.35	10.85	8.22	7.77	6.76	6.35	6.84	6.95	---	
18	13.40	9.44	9.43	11.63	11.03	8.07	7.65	6.99	6.68	6.82	6.92	---	
19	12.37	9.34	9.24	11.61	10.63	8.26	7.41	7.11	6.62	6.64	6.81	---	
20	12.12	9.37	9.65	11.31	10.12	8.34	7.30	6.87	6.42	6.63	6.28	6.62	
21	12.25	9.43	10.12	10.48	9.48	8.40	7.58	7.08	6.40	6.38	6.70	6.76	
22	12.39	9.50	10.17	10.12	9.16	8.88	7.63	7.22	6.29	6.38	6.86	6.89	
23	10.70	9.72	9.87	10.56	9.09	9.14	7.86	7.26	6.02	6.30	7.23	7.02	
24	10.33	9.74	9.72	11.25	9.08	9.07	7.72	7.23	5.88	6.66	7.29	7.03	
25	10.27	9.60	10.26	11.51	9.50	8.82	7.57	7.07	6.12	7.39	7.11	7.09	
26	10.15	9.66	10.72	11.62	10.72	8.60	7.70	7.01	5.94	7.24	7.03	7.08	
27	10.31	10.03	10.52	11.68	11.20	8.70	7.82	6.97	6.09	7.42	6.97	7.24	
28	10.13	10.38	10.57	11.33	11.10	8.64	7.76	7.27	6.42	7.36	6.67	7.38	
29	9.55	10.85	10.20	10.79	---	9.26	7.82	7.46	6.82	7.18	6.51	7.77	
30	9.23	10.66	9.60	10.64	---	9.76	7.70	7.20	6.51	7.09	---	8.17	
31	9.15	---	8.78	10.73	---	9.76	---	6.92	---	7.19	---	---	
MEAN	---	---	10.21	10.82	10.44	9.26	8.09	7.09	6.46	6.62	---	---	
MAX	---	---	11.13	12.02	11.54	11.00	9.38	7.50	7.11	7.42	---	---	
MIN	---	---	8.78	8.73	9.08	8.07	7.30	6.43	5.88	5.99	---	---	

26 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004 Discharge, cubic feet per second DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	26	38	134	151	336	81	394	26	1840	21	8.6
2	9.5	26	31	70	241	783	61	1230	24	1480	21	7.4
3	8.8	25	26	51	219	1060	57	569	24	1010	20	7.3
4	8.0	25	24	43	120	1190	55	429	22	615	40	7.7
5	7.8	24	21	38	427	602	47	492	21	296	38	8.7
6	12	21	19	32	401	583	44	172	21	112	25	9.6
7	14	19	18	29	480	976	47	80	19	73	18	8.6
8	14	17	18	27	401	686	50	60	30	56	14	7.7
9	84	18	18	30	193	231	44	52	68	47	13	7.1
10	315	18	17	31	430	111	47	48	150	40	13	6.5
11	253	15	18	30	1590	82	136	53	215	61	26	6.2
12	911	14	23	28	2000	69	306	188	142	44	19	6.0
13	911	13	79	26	e2300	62	262	691	65	45	13	6.2
14	231	11	64	24	1930	64	162	1700	51	40	10	6.8
15	73	10	72	25	1510	81	105	1940	49	32	9.5	6.8
16	45	15	68	25	1060	106	74	e2000	64	27	8.8	6.6
17	33	50	53	953	772	253	57	1830	70	24	8.3	6.1
18	26	681	38	1600	366	144	46	1060	89	21	8.1	5.7
19	21	1280	30	1890	186	94	39	470	66	18	8.7	5.5
20	18	1390	25	1670	131	75	35	704	44	17	9.7	5.2
21	16	982	22	712	108	75	32	519	34	16	16	5.1
22	15	262	20	188	93	86	31	223	32	15	15	5.0
23	14	97	20	101	168	194	29	114	225	14	11	4.8
24	12	61	19	112	415	171	31	72	172	14	11	4.9
25	17	45	18	1210	747	131	432	57	180	13	9.6	4.8
26	26	38	17	1590	1080	217	1580	47	371	25	8.6	4.8
27	148	33	17	1910	984	167	1060	40	897	36	7.8	4.7
28	120	32	19	1440	629	101	481	36	1410	40	7.6	4.5
29	79	33	32	391	285	84	448	33	e2200	39	11	4.4
30	46	45	206	208	---	146	185	30	e2000	28	14	4.4
31	31	---	267	183	---	135	---	28	---	23	13	---
TOTAL	3529.0	5326	1357	14801	19417	9095	6064	15361	8781	6161	468.7	187.7
MEAN	114	178	43.8	477	670	293	202	496	293	199	15.1	6.26
MAX	911	1390	267	1910	2300	1190	1580	2000	2200	1840	40	9.6
MIN	7.8	10	17	24	93	62	29	28	19	13	7.6	4.4
AC-FT	7000	10560	2690	29360	38510	18040	12030	30470	17420	12220	930	372

e Estimated

Table 4 27

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

DAY	WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—Continued											
	Specific conductance, water, unfiltered, microsiemens per centimeter at 25 degrees Celsius											
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	474	459	466	527	504	516	656	574	624	684	664	677
2	465	435	446	504	483	490	651	611	626	664	633	650
3	455	444	448	487	476	481	612	604	607	633	610	620
4	459	454	455	489	486	488	605	587	596	610	603	607
5	459	445	457	489	451	471	590	583	586	607	591	597
6	445	413	424	501	480	490	606	518	590	629	607	618
7	432	420	426	515	501	508	558	329	384	653	629	642
8	444	412	423	518	515	517	590	311	372	660	653	657
9	469	167	381	520	516	518	573	310	450	670	658	663
10	249	166	220	541	519	524	335	286	311	684	670	678
11	558	221	403	568	541	557	591	318	345	670	657	660
12	585	213	317	570	553	563	595	476	572	678	655	666
13	240	213	224	553	540	545	476	285	360	703	678	691
14	287	240	263	544	539	542	519	409	484	725	702	713
15	319	287	303	543	532	538	712	519	631	726	706	716
16	347	319	333	532	432	500	811	712	773	736	661	726
17	371	347	358	433	235	331	929	811	882	661	189	301
18	386	371	380	565	187	338	928	873	911	265	243	249
19	402	380	390	335	323	328	873	790	825	296	255	276
20	415	402	409	327	289	309	790	772	779	289	273	280
21	419	413	415	301	282	289	772	743	760	336	286	314
22	423	417	420	341	301	321	743	696	717	383	336	359
23	429	422	425	371	341	357	696	657	670	416	379	399
24	429	424	426	426	371	396	661	386	600	432	286	408
25	430	291	400	456	426	442	430	344	365	314	182	242
26	394	347	369	472	455	464	347	335	341	302	245	263
27	664	307	486	478	470	475	380	334	343	252	228	234
28	477	410	435	497	478	488	605	378	552	254	227	236
29	613	477	560	524	497	511	591	557	578	305	254	282
30	619	577	603	586	524	553	868	550	691	342	303	320
31	577	527	548	---	---	---	710	665	677	428	342	382
MONTH	664	166	407	586	187	462	929	285	581	736	182	488

28 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

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Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

30 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—Continued												
Temperature, water, degrees Celsius												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER				DECEMBER				JANUARY
1	22.30	19.80	20.95	21.80	20.30	20.95	14.50	13.00	13.72	12.80	10.90	11.93
2	22.00	19.90	20.82	22.30	20.90	21.57	14.60	13.50	14.05	14.70	12.80	13.74
3	21.40	18.80	20.07	23.00	21.40	22.08	15.00	13.70	14.28	16.50	14.70	15.65
4	21.70	18.70	20.16	23.20	21.70	22.39	14.50	13.20	13.85	17.50	16.50	16.95
5	23.00	19.70	21.15	23.00	21.80	22.43	13.30	11.80	12.66	16.90	13.70	15.26
6	23.20	21.50	22.22	22.40	20.40	21.66	11.80	10.50	11.14	13.70	11.50	12.28
7	23.80	22.00	22.73	20.40	18.60	19.42	11.20	9.30	10.34	11.50	10.30	10.76
8	24.70	22.80	23.57	18.60	17.90	18.24	12.80	10.50	11.61	11.10	10.10	10.51
9	24.10	23.30	23.76	18.80	17.40	18.02	14.30	12.80	13.51	12.10	10.80	11.36
10	23.40	23.20	23.29	18.70	16.90	17.89	13.20	11.00	12.09	11.20	10.00	10.62
11	23.60	22.90	23.23	20.60	18.50	19.46	11.10	9.60	10.45	10.60	9.20	9.97
12	24.60	23.00	23.85	21.50	19.80	20.51	11.90	10.60	11.16	10.90	9.40	10.21
13	24.70	23.90	24.30	20.70	19.00	20.20	12.00	10.60	11.55	12.90	10.90	11.96
14	24.90	23.70	24.52	19.00	17.00	17.89	10.60	9.30	9.90	13.90	12.30	13.09
15	23.70	21.70	22.48	19.30	17.40	18.33	11.50	9.50	10.47	14.80	13.70	14.26
16	22.00	20.70	21.53	21.00	19.10	20.00	12.00	11.00	11.49	15.90	14.70	15.19
17	23.10	21.80	22.26	20.50	20.30	20.39	11.00	9.50	10.24	16.50	15.80	16.35
18	22.10	20.50	21.30	20.50	20.10	20.33	10.10	8.90	9.55	16.40	14.00	15.35
19	21.40	19.30	20.32	20.10	17.90	19.25	9.90	8.60	9.24	14.00	11.80	12.64
20	21.10	18.70	19.89	17.90	16.60	17.09	9.70	8.10	8.88	11.80	10.20	10.78
21	21.00	18.70	19.82	17.30	16.00	16.57	10.70	8.40	9.53	10.70	9.60	10.13
22	21.10	18.60	19.83	17.90	17.10	17.53	12.60	10.20	11.36	11.00	10.20	10.58
23	21.50	19.10	20.21	18.60	16.90	18.06	12.90	11.40	12.20	12.50	10.90	11.64
24	21.80	19.70	20.68	16.90	14.00	15.39	11.40	9.70	10.65	14.70	12.50	13.30
25	21.30	20.80	20.94	14.00	12.50	13.29	11.40	9.80	10.67	15.30	14.70	15.03
26	20.90	18.10	19.59	15.80	13.80	14.82	13.00	11.20	12.01	15.30	14.40	14.94
27	18.60	17.90	18.17	17.50	15.80	16.49	15.20	13.00	14.12	14.40	12.00	12.83
28	18.00	17.00	17.52	15.90	13.70	14.80	16.30	14.90	15.52	12.00	10.00	10.64
29	18.00	16.70	17.41	13.70	12.40	12.90	14.90	12.80	13.97	11.30	10.60	10.86
30	19.40	17.30	18.33	13.00	11.50	12.29	12.80	11.00	11.79	11.90	11.30	11.74
31	20.50	19.40	20.05	---	---	---	11.00	10.40	10.69	11.90	11.70	11.81
MONTH	24.90	16.70	21.13	23.20	11.50	18.34	16.30	8.10	11.70	17.50	9.20	12.66
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH				APRIL				MAY
1	12.80	11.70	12.18	15.00	13.80	14.50	21.20	18.70	19.95	22.70	19.80	21.32
2	13.20	12.40	12.78	16.00	14.80	15.34	21.10	18.90	20.12	19.80	18.80	19.19
3	12.60	11.50	11.84	18.50	15.90	17.14	21.50	19.90	20.70	20.00	18.60	19.33
4	11.60	11.10	11.37	19.80	18.50	19.19	21.90	19.90	20.91	21.00	19.40	19.99
5	12.00	10.90	11.47	19.80	19.20	19.47	21.90	20.30	21.03	21.60	20.80	21.26
6	12.10	11.40	11.84	19.30	18.30	18.67	20.90	19.10	19.82	23.00	21.40	22.11
7	11.40	10.30	10.72	19.00	17.10	18.16	20.60	18.30	19.28	22.80	21.30	22.16
8	10.60	9.60	9.94	18.80	17.00	18.04	20.80	18.80	19.93	22.80	21.90	22.38
9	11.70	10.00	10.87	19.00	17.80	18.38	22.20	19.40	20.74	23.80	22.00	22.81
10	12.20	11.70	12.01	18.50	16.50	17.50	21.90	20.70	21.14	24.00	22.10	22.96
11	12.10	11.40	11.85	18.40	16.30	17.41	20.70	18.00	18.88	23.50	22.30	22.96
12	11.40	10.01	10.69	17.60	16.40	17.06	18.00	16.00	16.87	23.50	22.10	22.65
13	10.01	8.30	9.05	17.20	16.30	16.83	16.40	15.20	15.79	23.40	20.90	22.51
14	8.30	7.20	7.76	17.40	17.00	17.16	17.10	15.20	16.13	20.90	20.40	20.70
15	7.90	6.70	7.29	18.50	17.20	17.72	18.40	15.80	17.10	22.40	20.70	21.19
16	9.80	7.10	8.35	20.00	17.70	18.78	20.20	17.10	18.60	23.30	22.10	22.49
17	11.30	8.80	9.91	20.40	19.30	19.84	21.40	19.20	20.24	24.00	23.00	23.40
18	12.00	10.90	11.52	21.70	20.10	20.93	22.20	20.00	21.06	24.50	23.80	24.12
19	13.60	11.70	12.62	22.20	21.00	21.55	23.10	20.90	21.87	25.10	24.30	24.68
20	14.90	13.20	13.97	22.90	20.80	21.83	22.20	21.20	21.79	26.40	25.00	25.58
21	15.40	13.90	14.64	22.70	21.40	22.02	22.70	21.20	21.88	26.50	25.70	26.04
22	15.80	14.00	14.93	21.40	19.70	20.55	24.00	21.60	22.65	26.50	25.30	25.88
23	15.90	15.20	15.52	20.00	19.20	19.51	24.60	22.80	23.59	26.70	24.90	25.73
24	15.60	15.20	15.41	19.50	18.90	19.17	23.70	22.70	23.20	27.00	24.90	25.86
25	15.50	13.90	14.83	19.80	18.60	19.21	22.80	20.80	21.85	27.10	25.30	26.11
26	13.90	12.10	13.03	20.60	19.60	20.03	21.70	20.70	21.10	27.30	25.30	26.18
27	13.30	11.10	12.23	21.20	20.00	20.62	22.10	21.10	21.62	27.70	25.30	26.32
28	13.50	11.70	12.59	21.90	20.80	21.38	22.10	21.10	21.50	27.20	25.70	26.35
29	14.00	13.50	13.80	21.70	20.40	21.17	21.80	21.20	21.57	27.70	25.60	26.56
30	---	---	---	20.90	19.00	20.11	22.90	21.80	22.33	27.00	26.30	26.66
31	---	---	---	20.70	19.10	19.92	---	---	---	28.90	26.20	27.35
MONTH	15.90	6.70	11.90	22.90	13.80	19.01	24.60	15.20	20.44	28.90	18.60	23.64

Table 4 31**Table 4.** Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—Continued													
Temperature, water, degrees Celsius—Continued													
DAY	MAX	MIN	MEAN										
JUNE						JULY						AUGUST	
1	29.40	26.40	27.85	26.50	25.70	26.07	30.10	28.00	28.98	27.40	24.60	25.99	
2	29.40	26.90	28.09	27.30	26.10	26.59	30.80	27.50	29.01	26.20	24.60	25.38	
3	28.80	26.10	27.42	28.30	27.00	27.47	31.30	28.10	29.51	25.90	24.70	25.26	
4	28.90	26.20	27.40	28.50	28.00	28.25	30.50	28.40	29.45	27.40	24.50	25.80	
5	27.30	25.80	26.39	29.30	28.30	28.72	31.50	28.80	30.01	28.30	25.20	26.66	
6	28.80	25.40	26.82	29.50	27.60	28.46	30.40	28.90	29.75	28.40	25.90	27.08	
7	27.60	26.20	26.99	29.40	27.20	28.32	29.50	27.00	28.21	27.20	25.70	26.44	
8	26.70	24.60	25.58	30.00	27.90	28.85	29.30	26.30	27.69	26.30	25.00	25.63	
9	26.20	24.60	25.32	29.20	27.70	28.43	28.90	26.50	27.60	27.00	23.50	25.15	
10	27.10	25.70	26.38	29.00	26.90	27.85	29.00	26.80	27.75	27.50	23.80	25.57	
11	27.10	26.30	26.66	27.80	26.60	27.11	29.20	26.60	27.77	27.00	24.90	26.01	
12	28.30	26.70	27.32	28.30	25.80	26.94	29.00	26.40	27.50	27.20	24.90	26.09	
13	28.20	26.50	27.25	29.10	26.30	27.61	27.50	24.70	26.06	27.40	25.00	26.22	
14	27.70	25.50	26.54	29.70	27.00	28.22	27.50	24.30	25.78	27.10	25.50	26.37	
15	26.70	25.20	25.93	30.30	27.60	28.82	27.30	23.70	25.47	28.80	25.50	26.98	
16	25.30	24.70	25.05	30.00	27.90	28.93	27.30	23.60	25.35	28.90	25.70	27.29	
17	26.10	24.40	25.20	30.20	27.70	28.86	27.50	23.60	25.46	29.10	25.90	27.50	
18	27.80	25.30	26.51	30.50	28.20	29.21	27.00	24.00	25.54	28.70	26.20	27.53	
19	29.10	26.60	27.76	29.90	27.50	28.67	26.70	25.10	25.97	28.50	26.10	27.35	
20	29.50	27.20	28.31	29.90	27.20	28.41	28.80	25.10	26.77	27.30	24.80	26.21	
21	29.60	27.20	28.32	29.00	26.80	27.79	28.00	26.40	27.04	27.10	24.80	25.98	
22	28.50	26.20	27.30	27.80	26.60	27.19	27.60	25.70	26.57	27.20	24.80	26.01	
23	26.20	24.50	25.07	29.60	25.90	27.42	28.30	26.00	26.92	26.50	24.40	25.60	
24	25.20	24.40	24.68	30.00	26.90	28.24	29.80	26.40	27.92	26.20	24.80	25.54	
25	24.70	24.10	24.38	29.00	27.10	28.04	30.50	27.20	28.65	26.50	24.80	25.58	
26	24.80	24.40	24.68	27.70	26.30	26.94	30.80	27.80	29.12	26.10	24.50	25.41	
27	25.00	24.30	24.68	28.40	25.70	26.93	30.50	27.90	29.13	25.50	23.90	24.82	
28	25.20	24.20	24.65	27.80	26.20	27.03	29.50	27.60	28.38	25.80	23.60	24.69	
29	25.70	25.00	25.24	28.70	26.60	27.57	27.70	25.80	26.87	24.90	23.00	23.98	
30	26.00	25.70	25.81	29.50	27.30	28.30	28.70	25.70	26.96	24.40	22.10	23.34	
31	---	---	---	30.40	27.50	28.82	28.60	25.80	27.00	---	---	---	
MONTH	29.60	24.10	26.32	30.50	25.70	27.94	31.50	23.60	27.55	29.10	22.10	25.92	
YEAR	31.50	6.70	20.57										
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	20.95	20.95	13.72	11.93	12.18	14.50	19.95	21.32	27.85	26.07	28.98	25.99	
2	20.82	21.57	14.05	13.74	12.78	15.34	20.12	19.19	28.09	26.59	29.01	25.38	
3	20.07	22.08	14.28	15.65	11.84	17.14	20.70	19.33	27.42	27.47	29.51	25.26	
4	20.16	22.39	13.85	16.95	11.37	19.19	20.91	19.99	27.40	28.25	29.45	25.80	
5	21.15	22.43	12.66	15.26	11.47	19.47	21.03	21.26	26.39	28.72	30.01	26.66	
6	22.22	21.66	11.14	12.28	11.84	18.67	19.82	22.11	26.82	28.46	29.75	27.08	
7	22.73	19.42	10.34	10.76	10.72	18.16	19.28	22.16	26.99	28.32	28.21	26.44	
8	23.57	18.24	11.61	10.51	9.94	18.04	19.93	22.38	25.58	28.85	27.69	25.63	
9	23.76	18.02	13.51	11.36	10.87	18.38	20.74	22.81	25.32	28.43	27.60	25.15	
10	23.29	17.89	12.09	10.62	12.01	17.50	21.14	22.96	26.38	27.85	27.75	25.57	
11	23.23	19.46	10.45	9.97	11.85	17.41	18.88	22.96	26.66	27.11	27.77	26.01	
12	23.85	20.51	11.16	10.21	10.69	17.06	16.87	22.65	27.32	26.94	27.50	26.09	
13	24.30	20.20	11.55	11.96	9.05	16.83	15.79	22.51	27.25	27.61	26.06	26.22	
14	24.52	17.89	9.90	13.09	7.76	17.16	16.13	20.70	26.54	28.22	25.78	26.37	
15	22.48	18.33	10.47	14.26	7.29	17.72	17.10	21.19	25.93	28.82	25.47	26.98	
16	21.53	20.00	11.49	15.19	8.35	18.78	18.60	22.49	25.05	28.93	25.35	27.29	
17	22.26	20.39	10.24	16.35	9.91	19.84	20.24	23.40	25.20	28.86	25.46	27.50	
18	21.30	20.33	9.55	15.35	11.52	20.93	21.06	24.12	26.51	29.21	25.54	27.53	
19	20.32	19.25	9.24	12.64	12.62	21.55	21.87	24.68	27.76	28.67	25.97	27.35	
20	19.89	17.09	8.88	10.78	13.97	21.83	21.79	25.58	28.31	28.41	26.77	26.21	
21	19.82	16.57	9.53	10.13	14.64	22.02	21.88	26.04	28.32	27.79	27.04	25.98	
22	19.83	17.53	11.36	10.58	14.93	20.55	22.65	25.88	27.30	27.19	26.57	26.01	
23	20.21	18.06	12.20	11.64	15.52	19.51	23.59	25.73	25.07	27.42	26.92	25.60	
24	20.68	15.39	10.65	13.30	15.41	19.17	23.20	25.86	24.68	28.24	27.92	25.54	
25	20.94	13.29	10.67	15.03	14.83	19.21	21.85	26.11	24.38	28.04	28.65	25.58	
26	19.59	14.82	12.01	14.94	13.03	20.03	21.10	26.18	24.68	26.94	29.12	25.41	
27	18.17	16.49	14.12	12.83	12.23	20.62	21.62	26.32	24.68	26.93	29.13	24.82	
28	17.52	14.80	15.52	10.64	12.59	21.38	21.50	26.35	24.65	27.03	28.38	24.69	
29	17.41	12.90	13.97	10.86	13.80	21.17	21.57	26.56	25.24	27.57	26.87	23.98	
30	18.33	12.29	11.79	11.74	---	20.11	22.33	26.66	25.81	28.30	26.96	23.34	
31	20.05	---	10.69	11.81	---	19.92	---	27.35	---	28.82	27.00	---	
MEAN	21.13	18.34	11.70	12.66	11.90	19.01	20.44	23.64	26.32	27.94	27.55	25.92	
MAX	24.52	22.43	15.52	16.95	15.52	22.02	23.59	27.35	28.32	29.21	30.01	27.53	
MIN	17.41	12.29	8.88	9.97	7.29	14.50	15.79	19.19	24.38	26.07	25.35	23.34	

32 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 4. Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—Continued													
Dissolved oxygen, water, unfiltered, milligrams per liter													
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
OCTOBER				NOVEMBER				DECEMBER				JANUARY	
1	9.19	8.02	8.43	8.76	8.02	8.48	10.68	10.30	10.53	11.33	10.55	10.98	
2	9.32	8.06	8.50	8.60	8.29	8.44	10.52	10.13	10.29	10.65	9.51	10.32	
3	9.71	8.24	8.73	8.61	8.04	8.31	10.34	10.04	10.14	10.15	9.45	9.88	
4	9.81	8.31	8.82	8.52	7.76	8.21	10.58	10.03	10.28	9.51	9.12	9.34	
5	9.82	8.22	8.78	8.37	7.75	8.02	10.99	10.34	10.64	10.17	9.20	9.72	
6	8.42	7.80	8.06	8.63	7.89	8.20	11.58	10.66	11.14	11.26	10.17	10.84	
7	8.81	7.73	8.09	---	---	---	11.97	11.12	11.52	11.82	11.20	11.54	
8	8.95	7.68	8.10	---	---	---	11.67	10.68	11.24	11.84	11.48	11.69	
9	7.98	6.97	7.63	---	---	---	10.78	10.00	10.47	11.94	11.39	11.59	
10	6.99	6.37	6.60	---	---	---	11.33	9.91	10.65	12.31	11.48	11.86	
11	7.40	6.72	7.15	---	---	---	12.12	11.02	11.50	12.67	11.82	12.18	
12	7.36	5.85	6.33	---	---	---	11.67	11.02	11.36	12.72	11.92	12.22	
13	6.45	5.85	6.09	---	---	---	11.02	10.10	10.47	12.31	11.31	11.77	
14	6.96	6.42	6.73	---	---	---	11.54	10.71	11.27	11.98	10.93	11.32	
15	7.52	6.96	7.30	---	---	---	11.81	11.35	11.60	11.17	10.34	10.72	
16	7.88	7.50	7.70	---	---	---	11.42	11.27	11.33	10.56	9.99	10.25	
17	7.78	7.65	7.70	---	---	---	11.99	11.32	11.68	10.04	8.12	8.73	
18	8.15	7.70	7.96	8.18	6.84	7.46	12.29	11.68	11.98	8.20	7.60	7.90	
19	8.47	8.02	8.26	7.06	6.65	6.81	12.51	11.90	12.14	9.32	7.97	8.84	
20	8.86	8.29	8.53	7.56	7.06	7.41	12.66	12.01	12.27	9.96	9.21	9.64	
21	9.02	8.43	8.64	8.28	7.39	7.76	12.44	11.77	12.14	11.13	9.72	10.58	
22	9.14	8.47	8.70	8.55	8.28	8.47	11.94	11.02	11.56	11.14	10.93	11.07	
23	9.24	8.47	8.72	8.53	8.28	8.45	11.73	10.82	11.16	11.07	10.57	10.88	
24	9.39	8.41	8.74	9.45	8.26	9.03	12.33	11.01	11.60	10.57	9.65	10.23	
25	8.69	8.02	8.37	9.97	9.45	9.78	12.47	11.45	11.78	9.91	8.62	9.02	
26	8.83	8.16	8.47	9.80	9.26	9.57	12.06	10.94	11.45	8.63	8.17	8.40	
27	9.26	8.49	8.91	9.38	9.09	9.24	11.51	10.24	10.87	9.30	8.38	8.97	
28	9.22	8.54	8.94	9.93	9.19	9.62	10.67	9.79	10.15	10.34	9.18	9.82	
29	9.55	9.21	9.40	10.54	9.91	10.30	10.96	9.89	10.34	10.88	10.30	10.71	
30	9.40	8.83	9.22	10.89	10.47	10.69	11.04	10.51	10.82	10.71	10.05	10.60	
31	8.89	8.45	8.65	---	---	---	11.42	10.99	11.26	10.91	10.68	10.83	
MONTH	9.82	5.85	8.14	---	---	---	12.66	9.79	11.15	12.72	7.60	10.40	
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
FEBRUARY				MARCH				APRIL				MAY	
1	10.94	10.55	10.86	10.04	9.70	9.86	7.52	6.91	7.38	---	---	---	
2	10.81	10.03	10.56	9.93	9.49	9.72	7.52	7.16	7.32	---	---	---	
3	10.90	10.43	10.75	9.51	7.84	8.76	7.33	6.75	7.15	---	---	---	
4	11.02	10.72	10.96	7.84	7.09	7.48	7.37	6.69	7.14	---	---	---	
5	11.10	10.45	10.77	8.35	7.33	7.84	7.35	6.64	6.96	---	---	---	
6	11.40	10.48	10.85	8.89	7.92	8.63	7.29	5.67	6.92	---	---	---	
7	11.83	11.37	11.69	8.67	8.03	8.45	7.73	6.84	7.33	---	---	---	
8	12.23	11.78	12.03	8.55	8.16	8.41	7.74	6.89	7.38	---	---	---	
9	12.06	11.23	11.63	8.64	8.21	8.52	7.61	6.61	7.15	---	---	---	
10	11.26	10.90	11.03	8.88	8.38	8.77	7.12	6.40	6.78	---	---	---	
11	10.94	10.08	10.34	9.03	8.72	8.92	7.11	6.44	6.75	---	---	---	
12	10.90	10.25	10.60	9.16	8.61	9.05	7.46	7.10	7.26	---	---	---	
13	12.02	10.64	11.67	9.27	8.90	9.14	7.74	7.45	7.65	---	---	---	
14	12.34	12.00	12.24	9.17	8.60	9.04	7.72	7.44	7.63	---	---	---	
15	12.64	12.33	12.45	9.05	8.30	8.93	7.53	7.14	7.42	---	---	---	
16	12.94	12.07	12.59	8.91	8.62	8.79	7.27	6.68	7.12	---	---	---	
17	12.19	11.36	11.94	8.70	8.11	8.57	6.72	6.44	6.59	---	---	---	
18	11.42	11.16	11.33	8.11	7.74	7.90	6.85	6.23	6.53	---	---	---	
19	11.17	10.52	10.86	7.96	7.62	7.82	6.87	6.20	6.49	---	---	---	
20	10.53	10.14	10.37	8.13	7.64	7.89	6.69	6.04	6.34	---	---	---	
21	10.26	9.87	10.16	8.18	7.65	7.86	6.65	5.97	6.25	---	---	---	
22	10.24	9.92	10.11	8.76	7.82	8.25	6.54	5.25	6.07	---	---	---	
23	9.97	9.85	9.90	8.76	8.26	8.50	---	---	---	---	---	---	
24	9.97	9.74	9.81	8.41	8.18	8.26	---	---	---	---	---	---	
25	9.84	9.68	9.76	8.28	7.58	7.86	---	---	---	---	---	---	
26	10.36	9.82	10.05	8.01	6.95	7.77	---	---	---	---	---	---	
27	10.64	10.23	10.44	7.94	7.36	7.63	---	---	---	---	---	---	
28	10.68	10.25	10.48	7.50	7.30	7.45	---	---	---	---	---	---	
29	10.25	9.88	10.04	7.52	7.30	7.43	---	---	---	7.34	6.75	6.98	
30	---	---	---	7.98	7.48	7.82	---	---	---	7.11	6.69	6.88	
31	---	---	---	7.93	7.25	7.75	---	---	---	7.43	6.71	6.97	
MONTH	12.94	9.68	10.91	10.04	6.95	8.36	---	---	---	---	---	---	

Table 4 33**Table 4.** Continuously monitored discharge, specific conductance, pH, water temperature, and dissolved oxygen for 08067900 Lake Creek near Conroe (LAKE1), water years 2003–04—Continued.

WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—Continued Dissolved oxygen, water, unfiltered, milligrams per liter—Continued												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.62	6.66	7.00	5.89	5.63	5.80	8.90	6.64	7.43	9.26	7.31	8.06
2	7.77	6.59	7.03	5.99	5.54	5.89	9.32	6.67	7.58	8.70	7.26	7.91
3	8.12	6.65	7.16	6.08	5.73	5.90	9.38	6.61	7.55	8.78	7.27	7.91
4	8.27	6.71	7.28	6.63	5.92	6.44	8.54	6.76	7.42	9.19	7.32	8.09
5	7.93	6.67	7.19	6.82	6.51	6.65	9.14	6.81	7.59	9.28	7.16	7.99
6	8.65	6.80	7.44	6.97	6.70	6.82	8.62	6.51	7.33	9.11	7.17	7.91
7	8.05	6.62	7.23	7.32	6.89	7.10	9.36	6.82	7.72	9.53	7.13	8.12
8	7.46	6.58	7.07	7.22	6.83	7.02	9.69	6.98	7.95	9.70	7.10	8.30
9	7.39	6.91	7.10	7.39	6.83	7.10	9.10	6.96	7.76	9.99	7.57	8.59
10	7.18	6.93	7.08	7.65	7.11	7.33	8.86	6.63	7.48	9.89	7.39	8.46
11	7.16	6.98	7.08	7.73	7.08	7.36	8.73	6.73	7.56	9.20	7.10	8.10
12	7.00	6.70	6.91	7.44	6.92	7.14	9.11	7.10	7.80	9.11	6.98	7.98
13	6.94	6.66	6.78	7.48	6.75	7.11	9.45	7.12	8.00	9.00	6.98	7.91
14	7.32	6.77	7.03	7.53	6.47	7.05	9.34	7.33	8.03	8.19	6.87	7.51
15	7.31	6.89	7.14	7.49	6.30	6.80	9.29	7.44	8.16	8.79	6.58	7.50
16	7.56	7.18	7.39	7.61	6.13	6.80	9.33	7.48	8.19	8.69	6.52	7.45
17	7.70	7.26	7.45	8.06	6.22	6.96	9.31	7.47	8.19	8.63	6.42	7.42
18	7.58	7.14	7.38	7.77	6.32	6.93	8.90	7.23	7.99	8.55	6.29	7.34
19	7.57	6.88	7.21	8.42	6.15	7.13	8.08	7.09	7.56	8.39	6.30	7.30
20	7.45	6.77	7.08	8.73	6.40	7.52	8.36	7.08	7.56	8.49	6.50	7.39
21	7.57	6.65	7.11	8.96	6.64	7.86	7.91	6.77	7.25	8.41	6.49	7.43
22	7.45	6.86	7.13	8.25	7.28	7.71	8.18	7.22	7.56	8.20	6.49	7.30
23	7.68	6.81	7.20	8.61	6.91	7.66	8.28	7.14	7.52	7.93	6.31	7.14
24	7.49	6.83	7.19	8.74	6.54	7.34	8.32	6.85	7.40	7.74	6.30	7.00
25	7.53	7.17	7.33	8.01	6.53	7.01	8.41	6.72	7.33	7.54	6.23	6.87
MONTH	8.65	5.62	7.06	9.18	5.54	7.10	9.69	6.41	7.63	---	---	---
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.43	8.48	10.53	10.98	10.86	9.86	7.38	---	7.00	5.80	7.43	8.06
2	8.50	8.44	10.29	10.32	10.56	9.72	7.32	---	7.03	5.89	7.58	7.91
3	8.73	8.31	10.14	9.88	10.75	8.76	7.15	---	7.16	5.90	7.55	7.91
4	8.82	8.21	10.28	9.34	10.96	7.48	7.14	---	7.28	6.44	7.42	8.09
5	8.78	8.02	10.64	9.72	10.77	7.84	6.96	---	7.19	6.65	7.59	7.99
6	8.06	8.20	11.14	10.84	10.85	8.63	6.92	---	7.44	6.82	7.33	7.91
7	8.09	---	11.52	11.54	11.69	8.45	7.33	---	7.23	7.10	7.72	8.12
8	8.10	---	11.24	11.69	12.03	8.41	7.38	---	7.07	7.02	7.95	8.30
9	7.63	---	10.47	11.59	11.63	8.52	7.15	---	7.10	7.10	7.76	8.59
10	6.60	---	10.65	11.86	11.03	8.77	6.78	---	7.08	7.33	7.48	8.46
11	7.15	---	11.50	12.18	10.34	8.92	6.75	---	7.08	7.36	7.56	8.10
12	6.33	---	11.36	12.22	10.60	9.05	7.26	---	6.91	7.14	7.80	7.98
13	6.09	---	10.47	11.77	11.67	9.14	7.65	---	6.78	7.11	8.00	7.91
14	6.73	---	11.27	11.32	12.24	9.04	7.63	---	7.03	7.05	8.03	7.51
15	7.30	---	11.60	10.72	12.45	8.93	7.42	---	7.14	6.80	8.16	7.50
16	7.70	---	11.33	10.25	12.59	8.79	7.12	---	7.39	6.80	8.19	7.45
17	7.70	---	11.68	8.73	11.94	8.57	6.59	---	7.45	6.96	8.19	7.42
18	7.96	7.46	11.98	7.90	11.33	7.90	6.53	---	7.38	6.93	7.99	7.34
19	8.26	6.81	12.14	8.84	10.86	7.82	6.49	---	7.21	7.13	7.56	7.30
20	8.53	7.41	12.27	9.64	10.37	7.89	6.34	---	7.08	7.52	7.56	7.39
21	8.64	7.76	12.14	10.58	10.16	7.86	6.25	---	7.11	7.86	7.25	7.43
22	8.70	8.47	11.56	11.07	10.11	8.25	6.07	---	7.13	7.71	7.56	7.30
23	8.72	8.45	11.16	10.88	9.90	8.50	---	---	7.20	7.66	7.52	7.14
24	8.74	9.03	11.60	10.23	9.81	8.26	---	---	7.19	7.34	7.40	7.00
25	8.37	9.78	11.78	9.02	9.76	7.86	---	---	7.33	7.01	7.33	6.87
26	8.47	9.57	11.45	8.40	10.05	7.77	---	---	7.60	7.42	7.16	6.70
27	8.91	9.24	10.87	8.97	10.44	7.63	---	---	7.13	7.78	7.18	6.68
28	8.94	9.62	10.15	9.82	10.48	7.45	---	---	6.35	7.51	7.06	6.57
29	9.40	10.30	10.34	10.71	10.04	7.43	---	6.98	5.94	7.76	7.46	6.39
30	9.22	10.69	10.82	10.60	---	7.82	---	6.88	5.85	7.73	7.73	---
31	8.65	---	11.26	10.83	---	7.75	---	6.97	---	7.61	7.91	---
MEAN	8.14	---	11.15	10.40	10.91	8.36	---	---	7.06	7.10	7.63	---
MAX	9.40	---	12.27	12.22	12.59	9.86	---	---	7.60	7.86	8.19	---
MIN	6.09	---	10.14	7.90	9.76	7.43	---	---	5.85	5.80	7.06	---

34 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04.

Lake Creek 08067660 Lake Creek near Richards, TX (LAKE5)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 11...	08067660	20021211	1348	34	768	10.1	88	7.3	222	17.9	9.4	21	
FEB 04...	08067660	20030204	1256	2.8	762	8.0	81	7.1	299	14.2	16.1	40	
APR 02...	08067660	20030402	1212	1.6	764	7.8	79	7.0	301	26.0	16.1	48	
JUN 10...	08067660	20030610	1305	.00	755	10.2	134	7.5	464	31.5	29.0	93	
AUG 07...	08067660	20030807	1200	.00	754	1.9	24	7.0	328	33.5	27.7	84	
Bicarbonate, wat flt incrm. incr. Chloride, titr., titr., mg/L (00453) Carbonate, wat flt incrm. (00452) Sulfate, mg/L (00940) Residue on evap. Chloride, mg/L (00945) Ammonia + org-N, mg/L (70300) Ammonia water, mg/L as N (00625) Nitrite + nitrate, mg/L (00610) Nitrite water, mg/L as N (00631) Nitrite water, mg/L as N (00613) Organic nitrogen, mg/L (00605) Orthophosphate, mg/L as P (00671) Phosphorus, mg/L (00665) BOD, mg/L (00310)													
DEC 11...	26	.0	24.2	5.9	150	.95	.03	E.013	.003	.91	.093	.17	1.7
FEB 04...	49	.0	47.8	14.2	189	.66	<.01	<.022	E.002	--	.044	.10	1.3
APR 02...	59	.0	45.1	12.0	194	.98	.05	.030	.005	.93	.068	.17	2.0
JUN 10...	113	.0	79.5	2.8	296	2.5	.15	<.022	E.002	2.4	.088	.67	8.2
AUG 07...	102	.0	42.4	5.7	222	1.6	.56	<.022	E.002n	1.0	.171	.20	4.0
Pheophytin a, phytoplankton, ug/L (62360) Chlorophyll a, phytoplankton, fluoro, ug/L (70953) E. coli, m-TEC 100 mL (31633) 2,6-Diethyl-aniline water filtrd 0.7u GF (82660) CIAT, water, filtrd, ug/L (04040) Aceto-chlor, water, filtrd, ug/L (49260) Alachlor, water, filtrd, ug/L (46342) alpha-HCH, water, filtrd, ug/L (34253) Atrazine, water, filtrd, ug/L (39632) Ben-flur-alin, water, filtrd, 0.7u GF ug/L (82673) Butylate, water, filtrd, 0.7u GF ug/L (04028) Carboxylic, water, filtrd, 0.7u GF ug/L (82680) Carbafuran, water, filtrd, 0.7u GF ug/L (82674)													
DEC 11...	2.3	1.5	140	<.006	<.006	<.006	<.004	<.005	E.006n	<.010	<.002	<.041	<.020
FEB 04...	--r	--r	68	--	--	--	--	--	--	--	--	--	--
APR 02...	3.2	2.6	160	<.006	E.005	<.006	<.004	<.005	.019	<.010	<.002	<.041	<.020
JUN 10...	53.3	80.8	200	--	--	--	--	--	--	--	--	--	--
AUG 07...	10.8	12.9	72	.111	E.043	.126	.111	.094	.108	.092	.106	E.137	E.130
Chlorpyrifos water, fltrd, ug/L (38933) Cyazine, water, fltrd, ug/L (04041) DCPA, water, fltrd, ug/L (82682) Desulfuryl Diazinon, water, fltrd, ug/L (62170) Diel-drin, water, fltrd, ug/L (39572) Disulfoton, water, fltrd, ug/L (39381) Ethalfluralin, water, fltrd, ug/L (82677) Ethoprop, water, fltrd, ug/L (82668) Desulfuryl fipronil, water, fltrd, ug/L (62169) Fipro-nil sulfone water, fltrd, ug/L (62168)													
DEC 11...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	.106	.099	.111	.124	.096	.092	.08	.104	.088	.117	E.190	.131	.115

Table 4 35

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

36 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

38 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Lake Creek—Continued 08067690 Lake Creek near Dobbin, TX (LAKE3)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 11...	08067690	20021211	1218	812	768	9.2	81	7.1	159	17.3	9.9	34	
FEB 04...	08067690	20030204	1126	17	767	8.2	77	7.5	641	14.0	12.4	107	
APR 02...	08067690	20030402	1028	8.8	764	7.8	80	7.3	612	24.0	16.7	111	
JUN 10...	08067690	20030610	1130	.00	756	7.2	93	8.0	809	30.5	27.3	158	
AUG 07...	08067690	20030807	1038	.00	756	2.4	31	7.9	745	32.5	27.7	91	
Date	Bicarbonate, wat flt incr. incrm. (00453)	Carbonate, wat flt incrm. (00452)	Chloride, titr., field, mg/L (00940)	Sulfate, water, field, mg/L (00945)	Residue on evap. at 180degC (70300)	Ammonia + org-N, water, mg/L (00625)	Ammonia water, mg/L as N (00610)	Nitrite + nitrate, water, mg/L as N (00631)	Nitrite water, mg/L as N (00613)	Organic nitrogen, water, mg/L as P (00605)	Orthophosphate, water, mg/L as P (00671)	Phosphorus, water, mg/L (00665)	BOD, water, mg/L (00310)
	water, mg/L (00453)	water, mg/L (00940)	water, mg/L (00945)	water, mg/L (70300)	water, mg/L (00625)	water, mg/L as N (00610)	water, mg/L as N (00631)	water, mg/L as N (00613)	water, mg/L as N (00605)	water, mg/L as P (00671)	water, mg/L (00665)	water, mg/L (00310)	
DEC 11...	41	.0	15.2	5.5	117	.97	.05	E.020	.003	.92	.160	.22	2.6
FEB 04...	130	.0	116	15.8	372	.48	<.01	<.022	<.002	--	.041	.08	1.2
APR 02...	135	.0	106	12.3	358	.72	.02	.035	.003	.69	.055	.12	1.8
JUN 10...	191	.0	151	2.8	508	.86	.02	<.022	<.002	.84	.072	.14	3.2
AUG 07...	110	.0	178	3.8	565	1.1	.04	<.022	<.002	1.1	.102	.14	4.1
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC, MF, col/100 mL (31633)	2,6-Diethyl-aniline water, 0.7u GF (82660)	CIAT, water, 0.7u GF (04040)	Aceto-chlor, water, 0.7u GF (49260)	Ala-chlor, water, 0.7u GF (46342)	alpha-HCH, water, 0.7u GF (34253)	Atrazine, water, 0.7u GF (39632)	Ben-flur-alain, water, 0.7u GF (82673)	Butyl-baryl, water, 0.7u GF (04028)	Car-baryl, water, 0.7u GF (82680)	Carbo-furan, water, 0.7u GF (82674)
	ug/L (62360)	ug/L (70953)	m-TEC, MF, col/100 mL (31633)	water, 0.7u GF (82660)	water, 0.7u GF (04040)	water, 0.7u GF (49260)	water, 0.7u GF (46342)	water, 0.7u GF (34253)	water, 0.7u GF (39632)	water, 0.7u GF (82673)	water, 0.7u GF (04028)	water, 0.7u GF (82680)	water, 0.7u GF (82674)
DEC 11...	2.8	1.6	200	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020
FEB 04...	1.6	2.7	100	--	--	--	--	--	--	--	--	--	--
APR 02...	2.7	3.9	92	<.006	E.004	<.006	<.004	<.005	.015	<.010	<.002	<.041	<.020
JUN 10...	2.8	3.3	88	--	--	--	--	--	--	--	--	--	--
AUG 07...	5.6	8.0	<41k	.124	E.058	.135	.120	.114	.118	.099	.112	E.150	E.145
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulfanyl nil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Ethoprop, water, fltrd, ug/L (82672)	Desulf-inyl amide, water, fltrd, ug/L (62169)	Fipronil, water, fltrd, ug/L (62167)	Fipronil sulfone, water, fltrd, ug/L (62168)
	water, fltrd, ug/L (38933)	water, fltrd, ug/L (04041)	water, fltrd, ug/L (82682)	water, fltrd, ug/L (62170)	water, fltrd, ug/L (39572)	water, fltrd, ug/L (39381)	water, fltrd, ug/L (82677)	water, fltrd, ug/L (82668)	water, fltrd, ug/L (82663)	water, fltrd, ug/L (82672)	water, fltrd, ug/L (62169)	water, fltrd, ug/L (62167)	water, fltrd, ug/L (62168)
DEC 11...	<.005	<.018	<.003	<.004	<.007	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	.115	.110	.121	.125	.114	.107	.08	.110	.094	.121	E.192	.127	.112

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Lake Creek—Continued
08067690 Lake Creek near Dobbin, TX (LAKE3)—Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

						Azin-	Methyl						
Date	Fipro-	Fonofos	Lindane	Linuron	Mala-	phos-	para-	Metola-	Metri-	Moli-	Naprop-	p,p'-	Para-
	nil, water, ug/L (62166)	water, water, ug/L (04095)	water, water, ug/L (39341)	water, fltrd, ug/L (82666)	thion, fltrd, ug/L (39532)	methyl, water, fltrd, ug/L (82686)	para- thion, water, fltrd, ug/L (82667)	chlor, water, fltrd, ug/L (39415)	buzin, water, fltrd, ug/L (82630)	water, fltrd, ug/L (82671)	water, fltrd, ug/L (82684)	amide, water, fltrd, ug/L (34653)	DDE, water, fltrd, ug/L (39542)
DEC 11...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	E.009n	<.006	<.002	<.007	<.003	<.010
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	E.220	.109	.099	.118	.158	E.167	.124	.134	.106	.129	.114	.058	.140

	Pendi-	cis-	Per-	Propy-	Pro-	Propar-	Tebu-	Terba-	Terbu-
Date	Peb-	meth-	methrin	Phorate	Promo-	panil,	thiuron	cil,	fos,
	ulate,	alin,	water,	water	ton,	water,	water	water,	water,
	water,	water,	water,	water	water,	water,	water	water,	water,
	fltrd								
0.7u GF (82669)	0.7u GF (82683)	0.7u GF (82687)	0.7u GF (82687)	0.7u GF (82664)	0.7u GF (04037)	0.7u GF (82676)	0.7u GF (82679)	0.7u GF (82685)	0.7u GF (82670)
ug/L									
DEC 11...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02
FEB 04...	--	--	--	--	--	--	--	--	--
APR 02...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02
JUN 10...	--	--	--	--	--	--	--	--	--
AUG 07...	.124	.131	.062	.114	.14	.125	.137	.14	.149
							E.18	E.115	.12

	Thio- bencarb water fltrd	Tri- allate, water, fltrd	Tri- flurin- alin, water, fltrd	Sus- pended sedimen- tconcen- tration mg/L	Stream- flow sever- ity, code (01351)
Date	0.7u GF ug/L (82681)	0.7u GF ug/L (82678)	0.7u GF ug/L (82661)	0.7u GF ug/L (80154)	
DEC 11...	<.005	<.002	<.009	49	5
FEB 04...	--	--	--	13	3
APR 02...	<.005	<.002	<.009	26	3
JUN 10...	--	--	--	42	1
AUG 07...	.128	.120	.102	90	1

Remark codes used in this table:

< -- Less than
E -- Estimated value

Value qualifier codes used in this table:

k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL

40 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

42 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Lake Creek—Continued 08067700 Caney Ck nr Dobbin, TX (LAKE4)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 11...	08067700	20021211	1255	87	768	9.8	84	7.5	294	21.2	9.0	76	
FEB 04...	08067700	20030204	1203	2.8	762	8.1	78	7.8	754	14.0	13.5	211	
APR 02...	08067700	20030402	1111	1.1	764	8.8	90	7.7	877	24.5	16.4	217	
JUN 10...	08067700	20030610	1212	.00	755	9.8	125	8.0	969	30.5	26.8	235	
AUG 07...	08067700	20030807	1106	.00	755	6.3	81	7.9	825	32.0	27.5	144	
Date	Bicarbonate, wat flt incrm.	Carbonate, wat flt incrm.	Chloride, titr., field, mg/L (00453)	Sulfate, titr., field, mg/L (00452)	Residue on evap. at 180degC (00940)	Ammonia + org-N, water, mg/L (00945)	Ammonia water, mg/L as N (70300)	Nitrite + nitrate, water, mg/L as N (00625)	Nitrite water, mg/L as N (00610)	Organic nitrogen, water, mg/L as N (00631)	Orthophosphate, water, mg/L as P (00605)	Phosphorus, water, mg/L as P (00671)	BOD, water, mg/L (00310)
	water, mg/L (00453)	water, mg/L (00452)	water, mg/L (00940)	water, mg/L (00945)	water, mg/L (70300)	water, mg/L as N (00625)	water, mg/L as N (00610)	water, mg/L as N (00631)	water, mg/L as N (00613)	water, mg/L as N (00605)	water, mg/L as P (00671)	water, mg/L as P (00665)	water, mg/L (00310)
DEC 11...	92	.0	29.6	6.5	186	.74	.03	E.013	.003	.71	.043	.09	2.2
FEB 04...	256	1	99.3	13.0	445	.41	<.01	<.022	<.002	--	.012	.06	1.2
APR 02...	263	.0	121	13.4	497	.44	.02	<.022	<.002	.42	.013	.04	1.9
JUN 10...	283	2	167	3.4	585	2.5	.04	E.019	.007	2.4	.007	.35	5.9
AUG 07...	174	.0	158	7.1	503	.68	<.01	<.022	<.002	--	<.007	<.04	7.3
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC	2,6-Diethyl-aniline	Aceto-chlor, water, fltrd, ug/L (04040)	Ala-chlor, water, fltrd, ug/L (49260)	alpha-HCH, water, fltrd, ug/L (46342)	Atrazine, water, fltrd, ug/L (34253)	Ben-flur-alain, water, fltrd, ug/L (39632)	Butyl-alain, water, fltrd, ug/L (82673)	Carbaryl, water, fltrd, ug/L (04028)	Carboxylic acid, water, fltrd, ug/L (82680)	Carboxylic acid, water, fltrd, ug/L (82674)
	ug/L (62360)	ug/L (70953)	ug/L (31633)	ug/L (82660)	ug/L (04040)	ug/L (49260)	ug/L (46342)	ug/L (34253)	ug/L (39632)	ug/L (82673)	ug/L (04028)	ug/L (82680)	ug/L (82674)
DEC 11...	2.4	3.2	150	<.006	<.006	<.006	<.004	<.005	E.006n	<.010	<.002	<.041	<.020
FEB 04...	E1.2	E2.0	150	--	--	--	--	--	--	--	--	--	--
APR 02...	--	--	84	<.006	E.004	<.006	<.004	<.005	.018	<.010	<.002	<.041	<.020
JUN 10...	17.1	48.5	230	--	--	--	--	--	--	--	--	--	--
AUG 07...	29.3d	70.1d	<45k	.116	E.049	.124	.106	.102	.111	.092	.103	E.132	E.132
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulfuryl nil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Ethoprop, water, fltrd, ug/L (82672)	Desulfuryl nil amide, water, fltrd, ug/L (62169)	Fipronil, water, fltrd, ug/L (62167)	Fipronil sulfone, water, fltrd, ug/L (62168)
	ug/L (38933)	ug/L (04041)	ug/L (82682)	ug/L (62170)	ug/L (39572)	ug/L (39381)	ug/L (82677)	ug/L (82668)	ug/L (82663)	ug/L (82672)	ug/L (62169)	ug/L (62167)	ug/L (62168)
DEC 11...	<.005	<.018	<.003	<.004	<.006	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	.106	.095	.110	.112	.110	.104	.07	.107	.089	.114	E.172	.105	.094

Table 5 43

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

44 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 45

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

46 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Lake Creek—Continued 08067800 Lake Creek near Karen, TX (LAKE2)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 11...	08067800	20021211	1123	988	768	10.2	86	6.8	107	19.3	8.5	50	
FEB 04...	08067800	20030204	1028	36	767	9.0	86	7.8	541	12.0	13.1	116	
APR 02...	08067800	20030402	0944	27	764	9.3	96	7.6	529	21.5	16.8	113	
JUN 10...	08067800	20030610	1040	1.0	756	7.3	93	7.1	279	30.0	26.8	53	
AUG 07...	08067800	20030807	0955	.00	757	4.3	56	7.4	372	30.5	28.7	74	
Date	Bicarbonate, wat flt incr. incrm. (00453)	Carbonate, wat flt incrm. (00452)	Chloride, titr., field, mg/L (00940)	Sulfate, water, field, mg/L (00945)	Residue on evap. at 180degC (70300)	Ammonia + org-N, water, mg/L (00625)	Ammonia water, mg/L as N (00610)	Nitrite + nitrate, water, mg/L as N (00631)	Nitrite water, mg/L as N (00613)	Organic nitrogen, water, mg/L as P (00605)	Orthophosphate, water, mg/L as P (00671)	Phosphorus, water, mg/L (00665)	BOD, water, mg/L (00310)
	mg/L (00453)	mg/L (00940)	mg/L (00945)	mg/L (70300)	mg/L (00625)	mg/L as N (00610)	mg/L as N (00631)	mg/L as N (00613)	mg/L as N (00605)	mg/L as P (00671)	mg/L (00665)	mg/L (00310)	
DEC 11...	60	.0	8.26	5.1	94	.88	.04	.040	.003	.84	.087	.14	2.2
FEB 04...	142	.0	81.9	12.1	312	.42	<.01	E.011	<.002	--	.020	.04	1.2
APR 02...	137	.0	80.9	10.4	315	.58	.02	<.022	E.002	.56	.021	.07	1.4
JUN 10...	65	.0	42.0	7.3	186	1.0	.05	.073	.009	.96	.039	.16	1.7
AUG 07...	90	.0	62.6	3.4	211	.40	<.01	<.022	<.002	--	.022	E.03n	1.5
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC, MF, col/100 mL (31633)	2,6-Diethyl-aniline water, 0.7u GF (82660)	CIAT, water, 0.7u GF (04040)	Aceto-chlor, water, 0.7u GF (49260)	Ala-chlor, water, 0.7u GF (46342)	alpha-HCH, water, 0.7u GF (34253)	Atrazine, water, 0.7u GF (39632)	Ben-flur-alain, water, 0.7u GF (82673)	Butylate, water, 0.7u GF (04028)	Carbaryl, water, 0.7u GF (82680)	Carbo-furan, water, 0.7u GF (82674)
	ug/L (62360)	ug/L (70953)	(31633)	(82660)	(04040)	(49260)	(46342)	(34253)	(39632)	(82673)	(04028)	(82680)	(82674)
DEC 11...	2.4	1.9	240	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020
FEB 04...	1.8	2.5	88	--	--	--	--	--	--	--	--	--	--
APR 02...	2.3	4.3	120	<.006	E.004	<.006	<.004	<.005	.016	<.010	<.002	<.041	<.020
JUN 10...	8.4	28.6	52	--	--	--	--	--	--	--	--	--	--
AUG 07...	2.1	2.4	<58k	.123	E.050	.130	.118	.112	.112	.095	.104	E.142	E.134
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulfanyl, fipronil, water, 0.7u GF (62170)	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, 0.7u GF (82663)	Ethoprop, water, 0.7u GF (82672)	Desulfanyl, fipronil, water, 0.7u GF (62169)	Fipro-nil, water, fltrd, ug/L (62167)	Fipro-nil sulfone, water, fltrd, ug/L (62168)
	ug/L (38933)	(04041)	(82682)	(62170)	(39572)	(39381)	(82677)	(82668)	(82663)	(82672)	(62169)	(62167)	(62168)
DEC 11...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 02...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 07...	.113	.106	.118	.127	.112	.121	.07	.133	.090	.119	E.191	.126	.106

Table 5 47

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

48 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

50 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 51

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

52 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 53

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

54 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Peach Creek 08070900 Peach Creek near Cleveland, TX (PEACH3)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat filt inc tit mg/L as CaCO3 (39086)	
DEC 12...	08070900	20021212	1426	139	755	10.7	97	5.8	64	13.5	10.7	4	
FEB 05...	08070900	20030205	1109	55	763	9.7	89	6.6	67	10.5	11.9	7	
APR 03...	08070900	20030403	1130	41	761	8.8	89	6.5	64	24.0	15.9	8	
JUN 11...	08070900	20030611	0956	18	756	7.7	92	6.4	64	29.0	24.0	8	
AUG 06...	08070900	20030806	1220	24	753	7.2	89	6.3	59	33.0	25.9	10	
Bicarbonate, wat filt incr. titr., field, mg/L (00453)													
Date	Carbonate, wat filt incr. titr., field, mg/L (00452)	Chloride, wat filt incr. titr., field, mg/L (00940)	Sulfate, water, mg/L (00945)	Residue on evap. at 180degC	Ammonia + org-N, water, wat filtrd (70300)	Ammonia water, unfiltrd mg/L as N (00625)	Nitrite + nitrate water, unfiltrd mg/L as N (00610)	Nitrite water, filtrd mg/L as N (00631)	Organic nitrogen, water, unfiltrd mg/L as P (00605)	Orthophosphate, water, filtrd mg/L as P (00671)	Phosphorus, water, unfiltrd mg/L (00665)	BOD, water, unfiltrd 5 day, 20 degC mg/L (00310)	
	(00453)	(00452)	(00940)	(00945)	(70300)	(00625)	(00610)	(00631)	(00605)	(00671)	(00665)		
DEC 12...	6	.0	8.73	4.9	70	.56	.04	.047	E.002	.52	<.007	.05	2.0
FEB 05...	9	.0	8.86	2.2	46	.27	<.01	.098	<.002	--	<.007	<.04	.6
APR 03...	9	.0	8.61	2.0	46	.27	.02	.108	<.002	.25	<.007	<.04	1.5
JUN 11...	10	.0	8.45	1.1	46	.25	.02	.140	E.002	.24	<.007	E.03	.8
AUG 06...	12	.0	8.90	1.2	56	.34	.02	.144	E.002	.32	<.007	<.04	1.1
Pheophytin a, phytoplankton, ug/L (62360)													
Date	Chlorophyll a, phytoplankton, ug/L (70953)	E. coli, m-TEC	2,6-Diethyl-aniline	Aceto-chlor, water, filtrd, ug/L (49260)	Ala-chlor, water, filtrd, ug/L (46342)	alpha-HCH, water, filtrd, ug/L (34253)	Atrazine, water, filtrd, ug/L (39632)	Ben-flur-alin, water, filtrd, ug/L (82673)	Butyl-ate, water, filtrd, ug/L (04028)	Carbaryl, water, filtrd, ug/L (0.7u GF (82680))	Carbo-furan, water, filtrd, ug/L (0.7u GF (82674))		
	(70953)	(31633)	(82660)	(04040)	(49260)	(46342)	(34253)	(39632)	(82673)	(04028)	(0.7u GF (82680))	(0.7u GF (82674))	
DEC 12...	.9	.3	230	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020
FEB 05...	E.7	E.5	48	--	--	--	--	--	--	--	--	--	--
APR 03...	.6	.2	140	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020
JUN 11...	.6	.3	130	--	--	--	--	--	--	--	--	--	--
AUG 06...	.9	.4	56	.108	E.051	.106	.101	.101	.097	.074	.093	E.115	E.126
Desulfuryl chlorpyrifos water, filtrd, ug/L (38933)													
Date	Cyazine, water, filtrd, ug/L (04041)	DCPA, water, filtrd, ug/L (82682)	Desulfuryl chlorpyrifos water, filtrd, ug/L (62170)	Diazinon, water, filtrd, ug/L (39572)	Dieldrin, water, filtrd, ug/L (39381)	Disulfoton, water, filtrd, ug/L (82677)	EPTC, water, filtrd, ug/L (82668)	Ethalflur-alin, water, filtrd, ug/L (82663)	Ethoprop, water, filtrd, ug/L (82672)	Desulfuryl chlorpyrifos water, filtrd, ug/L (62169)	Fipro-nil sulfide water, filtrd, ug/L (62167)	Fipro-nil sulfone water, filtrd, ug/L (62168)	
	(38933)	(04041)	(82682)	(62170)	(39572)	(39381)	(82677)	(82668)	(82663)	(82672)	(62169)	(62167)	(62168)
DEC 12...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.116	.098	.103	.101	.103	.106	.07	.095	.092	.096	E.125	.091	.074

Table 5 55

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Peach Creek—Continued
08070900 Peach Creek near Cleveland, TX (PEACH3)—Continued

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

Date	Fipro-nil, water, filtrd, ug/L (62166)	Fonofos water, filtrd, ug/L (04095)	Lindane water, filtrd, ug/L (39341)	Linuron water, filtrd, 0.7u GF ug/L (82666)	Mala-thion, water, filtrd, 0.7u GF ug/L (39532)	Azin-phos- methyl, water, filtrd, 0.7u GF ug/L (82686)	Methyl-para- thion, water, filtrd, 0.7u GF ug/L (82667)	Metola-chlor, water, filtrd, 0.7u GF ug/L (39415)	Metri-buzin, water, filtrd, 0.7u GF ug/L (82630)	Moli-nate, water, filtrd, 0.7u GF ug/L (82671)	Naprop-amide, water, filtrd, 0.7u GF ug/L (82684)	p,p'-DDE, water, filtrd, ug/L (34653)	Para-thion, water, filtrd, ug/L (39542)
DEC 12...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	E.137	.086	.091	.102	.118	E.142	.092	.102	.086	.106	.094	.067	.099
Date	Peb- ulate, water, filtrd, ug/L (82669)	Pendi- meth- alin, water, filtrd, ug/L (82683)	cis- Per- methrin water, filtrd, ug/L (82687)	Phorate water, filtrd, ug/L (82664)	Prome-ton, water, filtrd, 0.7u GF ug/L (04037)	Propy-zamide, water, filtrd, 0.7u GF ug/L (82676)	Propa-chlor, water, filtrd, 0.7u GF ug/L (04024)	Pro-paniol, water, filtrd, 0.7u GF ug/L (82679)	Propar-gite, water, filtrd, 0.7u GF ug/L (82685)	Sima-zine, water, filtrd, 0.7u GF ug/L (04035)	Tebu-thiuron, water, filtrd, 0.7u GF ug/L (82670)	Terba-cil, water, filtrd, 0.7u GF ug/L (82665)	Terbu-fos, water, filtrd, 0.7u GF ug/L (82675)
DEC 12...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.101	.092	.061	.099	.11	.092	.105	.105	.12	.126	E.16	E.101	.09
Date	Thio-bencarb water, filtrd, 0.7u GF ug/L (82681)	Tri-allate, water, filtrd, 0.7u GF ug/L (82678)	Tri-flur-alin, water, filtrd, 0.7u GF ug/L (82661)	Sus-pended sediment filtrd, 0.7u GF ug/L (80154)	Stream-concen- tration mg/L (01351)								
DEC 12...	<.005	<.002	<.009	64	5								
FEB 05...	--	--	--	9	3								
APR 03...	<.005	<.005	<.009	12	3								
JUN 11...	--	--	--	12	2								
AUG 06...	.104	.097	.078	8	3								

Remark codes used in this table:

< -- Less than
E -- Estimated value

56 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

58 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Peach Creek—Continued 08071000 Peach Ck at Splendora, TX (PEACH2)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 12...	08071000	20021212	1720	304	760	10.0	90	6.3	73	13.7	10.7	9	
FEB 05...	08071000	20030205	1210	56	763	9.6	89	6.5	91	12.0	12.2	8	
APR 03...	08071000	20030403	1227	49	761	8.7	88	6.4	84	24.0	15.8	9	
JUN 11...	08071000	20030611	1040	19	758	7.0	85	6.3	79	32.0	24.9	10	
AUG 06...	08071000	20030806	1014	19	761	6.5	82	6.4	72	32.0	26.4	9	
Date	Bicarbonate, wat flt incrm.	Carbonate, wat flt incrm.	Chloride, titr., field, mg/L (00453)	Sulfate, field, mg/L (00452)	Residue on evap. Chloride, water, 180degC (00940)	Ammonia + org-N, water, 180degC (00945)	Ammonia water, unfltrd (70300)	Nitrite + nitrate, water, unfltrd (00625)	Nitrite water, fltrd (00610)	Organic nitrogen, water, unfltrd (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	BOD, water, 5 day, 20 degC (00310)
	water, mg/L (00453)	water, mg/L (00452)	water, mg/L (00940)	water, mg/L (00945)	water, mg/L (70300)	water, mg/L (00625)	water, mg/L (00610)	water, mg/L (00631)	water, mg/L (00613)	water, mg/L (00605)	water, mg/L (00671)	water, mg/L (00665)	water, mg/L (00310)
DEC 12...	12	.0	8.56	3.0	74	.70	.05	.265	.006	.64	.042	.12	3.1
FEB 05...	10	.0	13.7	2.8	68	.31	.02	.114	E.002	.29	<.007	<.04	.6
APR 03...	11	.0	12.5	2.4	62	.35	.04	.125	E.002	.31	<.007	E.03	1.5
JUN 11...	13	.0	11.1	1.5	50	.30	.03	.110	E.002	.27	<.007	E.03	.9
AUG 06...	10	.0	11.3	1.4	67	.19	.01	.134	E.002	.18	<.007	<.04	.8
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC, MF, col/100 mL (31633)	2,6-Diethyl-aniline water, 0.7u GF (82660)	CIAT, water, 0.7u GF (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Ben-flur-alain, water, fltrd, ug/L (82673)	Butyl-baryl, water, fltrd, 0.7u GF (04028)	Carbaryl, water, fltrd, 0.7u GF (82680)	Carbo-furan, water, fltrd, 0.7u GF (82674)
	ug/L (62360)	ug/L (70953)	m-TEC, MF, col/100 mL (31633)	water, 0.7u GF (82660)	water, 0.7u GF (04040)	water, 0.7u GF (49260)	water, 0.7u GF (46342)	water, 0.7u GF (34253)	water, 0.7u GF (39632)	water, 0.7u GF (82673)	water, 0.7u GF (04028)	water, 0.7u GF (82680)	water, 0.7u GF (82674)
DEC 12...	3.5	2.1	430	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	E.006	<.020
FEB 05...	E.8	E1.4	96	--	--	--	--	--	--	--	--	--	--
APR 03...	--	--	150	<.006	<.006	<.006	<.004	<.005	.010	<.010	<.002	<.041	<.020
JUN 11...	1.2	1.5	84	--	--	--	--	--	--	--	--	--	--
AUG 06...	.6	.5	88	.105	E.063	.110	.100	.100	.101	.072	.092	E.129	E.130
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulfanyl nil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Ethoprop, water, fltrd, ug/L (82672)	Desulfanyl amide, water, fltrd, ug/L (62169)	Fipronil, water, fltrd, ug/L (62167)	Fipronil sulfone, water, fltrd, ug/L (62168)
	water, fltrd, ug/L (38933)	water, fltrd, ug/L (04041)	water, fltrd, ug/L (82682)	water, fltrd, ug/L (62170)	water, fltrd, ug/L (39572)	water, fltrd, ug/L (39381)	water, fltrd, ug/L (82677)	water, fltrd, ug/L (82668)	water, fltrd, ug/L (82663)	water, fltrd, ug/L (82672)	water, fltrd, ug/L (62169)	water, fltrd, ug/L (62167)	water, fltrd, ug/L (62168)
DEC 12...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.101	.087	.108	.110	.105	.089	.07	.098	.068	.099	E.159	.098	.082

Table 5 59

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

60 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 61

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Peach Creek-Continued
08071000 Peach Ck at Splendora, TX (PEACH2)-Continued
WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004-Continued

					Azin-	Methyl				Naprop-	p,p'-	Para-
Date	Fipro-	Fonofos	Lindane	Linuron	Malathion,	methyl,	Metola-	Metri-	nate,	amide,	DDE,	Parathion,
	nil, water, ug/L (62166)	water, ug/L (04095)	water, ug/L (39341)	water, ug/L (82666)	water, ug/L (39532)	water, ug/L (82686)	water, ug/L (82667)	chlor, water, ug/L (39415)	buzin, water, ug/L (82630)	water, ug/L (82671)	water, ug/L (82684)	water, ug/L (34653)
NOV 13...	<.016	<.003	<.004	<.035	<.027	<.050	<.015	<.013	<.006	<.003	<.007	<.003
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<.016	<.003	<.004	<.035	<.027	<.050	<.015	<.013	<.006	<.003	<.007	<.003
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--
Date	Pendi-	cis-	Per-	Phorate	Propo-	Pro-	Propar-	Tebu-	Terba-	Terbu-		
	Peb-	meth-	Per-	methrin	zamide,	panil,	gite,	thiuron	cil,	fos,		
	ulate, water, ug/L (82669)	water, ug/L (82683)	methrin	water, ug/L (82687)	water, ug/L (82664)	water, ug/L (04037)	water, ug/L (82676)	water, ug/L (82679)	water, ug/L (82685)	water, ug/L (82670)	water, ug/L (82665)	water, ug/L (82675)
NOV 13...	<.004	<.022	<.006	<.011	<.01	<.004	<.025	<.011	<.02	<.005	<.02	<.034
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<.004	<.022	<.006	<.011	.01	<.004	<.025	<.011	<.02	<.005	<.02	<.034
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--
Date	Thio-	Tri-	Tri-	flur-	Sus-	Stream-						
	bencarb	bencarb	allate,	alin,	suspended	flow						
	water	water	water,	water,	sediment	sever-						
	fltrd	fltrd	fltrd	fltrd	concen-	ity,						
	0.7u GF ug/L (82681)	0.7u GF ug/L (82678)	0.7u GF ug/L (82661)	0.7u GF ug/L (80154)	tration mg/L (01351)	code						
NOV 13...	<.010	<.002	<.009	9	3							
JAN 08...	--	--	--	6	3							
MAR 11...	<.010	<.002	<.009	12	3							
JUN 03...	--	--	--	11	3							

Remark codes used in this table:

< -- Less than
E -- Estimated value

Value qualifier codes used in this table:
n -- Below the LRL and above the LT-MDL

62 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Peach Creek—Continued 08071100 Peach Ck nr New Caney, TX (PEACH1)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 12...	08071100	20021212	1040	359	759	10.1	91	6.6	94	15.7	10.6	10	
FEB 05...	08071100	20030205	1321	62	764	10.5	98	6.8	107	11.0	12.2	12	
APR 03...	08071100	20030403	1350	53	761	9.1	96	6.6	105	25.5	17.6	12	
JUN 11...	08071100	20030611	1140	19	758	7.0	88	6.7	117	31.0	26.6	16	
AUG 06...	08071100	20030806	0930	22	762	7.2	89	6.4	105	30.0	26.5	16	
Date	Bicarbonate, wat flt incrm.	Carbonate, wat flt incrm.	Chloride, titr., field, mg/L (00453)	Sulfate, field, mg/L (00452)	Residue on evap. Chloride, water, 180degC at (00940)	Ammonia + org-N, water, 180degC at (70300)	Ammonia water, unfltrd mg/L as N (00625)	Nitrite + nitrate water, unfltrd mg/L as N (00610)	Nitrite water, fltrd mg/L as N (00631)	Organic nitrogen, water, unfltrd mg/L as P (00605)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	BOD, 5 day, 20 degC (00310)
	mg/L (00453)	mg/L (00452)	(00940)	(00945)	(70300)	(00625)	(00610)	(00631)	(00613)	(00605)	(00671)	(00665)	(00310)
DEC 12...	12	.0	13.6	3.7	78	.46	.04	.172	.003	.42	E.006	.04	2.0
FEB 05...	15	.0	17.0	3.7	74	.31	.04	.217	.005	.27	E.03	.8	
APR 03...	15	.0	16.4	3.4	71	.35	.03	.267	.005	.32	E.04	1.2	
JUN 11...	20	.0	18.0	2.8	66	.31	.03	.229	.004	.28	.026	.07	1.1
AUG 06...	19	.0	17.5	2.5	80	.29	.02	.249	.007	.27	E.03	.7	
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC	2,6-Diethyl-aniline	Aceto-chlor, water, fltrd, ug/L (04040)	Ala-chlor, water, fltrd, ug/L (49260)	alpha-HCH, water, fltrd, ug/L (46342)	Atrazine, water, fltrd, ug/L (34253)	Ben-flur-alin, water, fltrd, ug/L (39632)	Butyl-alate, water, fltrd, ug/L (82673)	Carbaryl, water, fltrd, ug/L (04028)	Carbo-furan, water, fltrd, ug/L (82680)	Carbo-furan, water, fltrd, ug/L (82674)
	(62360)	(70953)	(31633)	(82660)	(04040)	(49260)	(46342)	(34253)	(39632)	(82673)	(04028)	(82680)	(82674)
DEC 12...	E1.3	E.4	120	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020
FEB 05...	E.8	E1.4	80	--	--	--	--	--	--	--	--	--	--
APR 03...	--	--	96	<.006	<.006	<.006	<.004	<.005	.020	<.010	<.002	<.041	<.020
JUN 11...	2.7	2.2	96	--	--	--	--	--	--	--	--	--	--
AUG 06...	.7	.3	92	.105	E.058	.115	.102	.100	.103	.080	.096	E.133	E.136
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulfanyl, fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Ethoprop, water, fltrd, ug/L (82672)	Desulfanyl, fipronil, water, fltrd, ug/L (62169)	Fipro-nil, sulfide, water, fltrd, ug/L (62167)	Fipro-nil, sulfone, water, fltrd, ug/L (62168)
	(38933)	(04041)	(82682)	(62170)	(39572)	(39381)	(82677)	(82668)	(82663)	(82672)	(62169)	(62167)	(62168)
DEC 12...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.103	.090	.110	.113	.106	.099	.07	.096	.074	.101	E.152	.100	.080

Table 5 63

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

64 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 65

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

66 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek 08070495 Caney Creek near Cut And Shoot, TX (CANEY3)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Alka-linity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 12...	08070495	20021212	1535	278	760	10.6	96	6.9	75	12.5	10.9	16	
FEB 05...	08070495	20030205	1019	39	762	9.6	91	7.0	150	11.0	12.8	30	
APR 03...	08070495	20030403	1021	37	761	8.7	90	6.8	143	23.0	17.1	30	
JUN 11...	08070495	20030611	0925	12	756	7.9	94	6.5	118	29.0	23.9	21	
AUG 06...	08070495	20030806	1140	20	758	7.4	91	6.6	101	31.0	25.4	16	
Date	Bicar-bonate, wat flt incr. incrm. (00453)	Carbon-ate, wat flt incrm. (00452)	Chloride, titr., field, mg/L (00940)	Sulfate, titr., field, mg/L (00945)	Residue on evap. at 180degC (70300)	Ammonia + org-N, water, mg/L (00625)	Ammonia water, mg/L as N (00610)	Nitrite + nitrate, water, mg/L as N (00631)	Nitrite water, mg/L as N (00613)	Organic nitrogen, water, mg/L as P (00605)	Ortho-phosphate, water, mg/L as P (00671)	Phos-phorus, water, mg/L (00665)	BOD, water, mg/L (00310)
	water, mg/L (00940)	water, mg/L (00945)	water, mg/L (00945)	water, mg/L (00945)	water, mg/L (00945)	water, mg/L as N (00625)	water, mg/L as N (00610)	water, mg/L as N (00631)	water, mg/L as N (00613)	water, mg/L as P (00605)	water, mg/L as P (00671)	water, mg/L (00665)	water, mg/L (00310)
DEC 12...	20	.0	6.94	3.2	72	.78	.05	.148	.004	.73	.064	.15	3.7
FEB 05...	36	.0	17.1	3.9	90	.21	<.01	.331	<.002	--	<.007	E.03	.7
APR 03...	37	.0	16.7	3.4	83	.23	.01	.388	E.002	.22	<.007	E.03	2.8
JUN 11...	26	.0	14.0	2.7	70	.19	<.01	.423	E.002	--	<.007	E.03	.2
AUG 06...	20	.0	13.1	2.5	75	.26	.03	.487	.003	.23	<.007	<.04	.8
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC (31633)	2,6-Diethyl-aniline (82660)	CIAT, water, 0.7u GF (04040)	Aceto-chlor, water, 0.7u GF (49260)	Ala-chlor, water, 0.7u GF (46342)	alpha-HCH, water, 0.7u GF (34253)	Atra-zine, water, 0.7u GF (39632)	Ben-flur-alin, water, 0.7u GF (82673)	Butyl-atate, water, 0.7u GF (04028)	Car-baryl, water, 0.7u GF (82680)	Carbo-furan, water, 0.7u GF (82674)
	water, col/100 mL (70953)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)
DEC 12...	2.2	.8	680	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	E.014	<.020
FEB 05...	E1.2	E1.0	56	--	--	--	--	--	--	--	--	--	--
APR 03...	1.3	1.0	120	<.006	<.006	<.006	<.004	<.005	.012	<.010	<.002	<.041	<.020
JUN 11...	1.7	1.6	58	--	--	--	--	--	--	--	--	--	--
AUG 06...	.7	.5	120	.119	E.056	.122	.107	.112	.112	.085	.104	E.134	E.140
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulf-inyl, water, 0.7u GF (62170)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Etho-prop, water, fltrd, ug/L (82672)	Desulf-inyl, water, fltrd, ug/L (62169)	Fipro-nil, water, fltrd, ug/L (62167)	Fipro-nil sulfone, water, fltrd, ug/L (62168)
	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)	water, ug/L (0.7u GF)
DEC 12...	<.005	<.018	<.003	<.004	.022	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.116	.099	.116	.123	.113	.111	.08	.104	.079	.109	E.155	.111	.091

Table 5 67

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek--Continued
08070495 Caney Creek near Cut And Shoot, TX (CANEY3)--Continued

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

Date	Fipro-	Fonofos	Lindane	Linuron	Mala-	Azin-	Methyl	Moli-	Naprop-	p,p'-	Para-
	nil, water, fltrd, ug/L (62166)	water, fltrd, ug/L (04095)	water, fltrd, ug/L (39341)	water, fltrd, ug/L (82666)	thion, water, fltrd, ug/L (39532)	methyl, water, fltrd, ug/L (82686)	para- thion, water, fltrd, ug/L (82667)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	amate, water, fltrd, ug/L (82671)	DDE, water, fltrd, ug/L (34653)
DEC 12...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	E.171	.100	.099	.125	.133	E.156	.125	.123	.101	.110	.103
DEC 12...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.110	.102	.068	.109	.12	.106	.111	.125	.14	.145	E.16
DEC 12...	<.005	<.002	<.009	116	5						
FEB 05...	--	--	--	6	3						
APR 03...	<.005	<.002	<.009	9	3						
JUN 11...	--	--	--	13	2						
AUG 06...	.119	.108	.079	12	3						

Remark codes used in this table:

< -- Less than
E -- Estimated value

68 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 69

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

70 Streamflow, Water-Quality, and Biological Data for Three Tributaries to Lake Houston Near Houston, Texas, 2002–04

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek—Continued 08070500 Caney Ck nr Splendora, TX (CANEY2)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 12...	08070500	20021212	1652	382	760	10.1	92	6.6	98	13.3	11.3	20	
FEB 05...	08070500	20030205	0928	53	763	9.8	92	7.2	150	11.0	12.6	32	
APR 03...	08070500	20030403	0932	44	761	8.8	91	7.0	150	23.0	16.6	34	
JUN 11...	08070500	20030611	0840	17	757	7.4	90	6.7	122	29.5	25.1	22	
AUG 06...	08070500	20030806	1054	24	760	7.5	94	6.7	107	32.0	26.6	20	
Bicarbonate, wat flt incrm. incr. titr., field, mg/L (00453)													
Carbonate, wat flt incrm. incr. titr., field, mg/L (00452)													
Chloride, Sulfate at 180degC (00940)													
Residue on evap. + org-N, water, 180degC (70300)													
Ammonia water, unfltrd wat flt incrm. titr., field, mg/L (00945)													
Ammonia water, unfltrd wat flt incrm. titr., field, mg/L (00945)													
Nitrite + nitrate water, unfltrd wat flt incrm. titr., field, mg/L (00625)													
Organic nitrogen water, unfltrd wat flt incrm. titr., field, mg/L (00610)													
Orthophosphate, Phosphorus, water, unfltrd wat flt incrm. titr., field, mg/L (00671)													
BOD, water, unfltrd wat flt incrm. titr., field, mg/L (00310)													
DEC 12...	24	.0	9.12	3.8	84	.95	.13	.134	.003	.82	E.006	.11	2.5
FEB 05...	38	.0	17.3	4.1	90	.23	<.01	.298	<.002	--	<.007	E.02	.7
APR 03...	41	.0	15.5	3.8	89	.25	.01	.365	.003	.24	<.007	E.04	2.8
JUN 11...	27	.0	14.6	2.7	66	.25	.02	.274	E.002	.23	<.007	E.03	.8
AUG 06...	25	.0	13.7	2.7	79	.20	<.01	.374	.008	--	<.007	<.04	1.0
Pheophytin a, phytoplankton, fluoro, ug/L (62360)													
Chlorophyll a, phytoplankton, fluoro, ug/L (70953)													
2,6-Diethyl-aniline CIAT, water, fltrd ug/L (31633)													
Acetochlor, water, fltrd ug/L (04040)													
Alpha-HCH, water, fltrd ug/L (49260)													
Atrazine, water, fltrd ug/L (46342)													
Benzylalain, water, fltrd ug/L (34253)													
Butylbenzylalain, water, fltrd ug/L (39632)													
Carboxylic acid, water, fltrd ug/L (82673)													
Carboxylic acid, water, fltrd ug/L (04028)													
Carboxylic acid, water, fltrd ug/L (82680)													
DEC 12...	6.6	19.0	580	<.006	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020
FEB 05...	E1.3	E1.5	88	--	--	--	--	--	--	--	--	--	--
APR 03...	--	--	210	<.006	<.006	<.006	<.004	<.005	.012	<.010	<.002	<.041	<.020
JUN 11...	1.8	1.9	68	--	--	--	--	--	--	--	--	--	--
AUG 06...	.8	.8	140	.113	E.054	.122	.113	.107	.118	.090	.101	E.135	E.151
Desulfuryl Diazinon Diel-drin, water, fltrd ug/L (39572)													
EPTC, water, fltrd ug/L (39381)													
Ethalfluron, water, fltrd ug/L (82677)													
Ethoprop, water, fltrd ug/L (82668)													
Desulfuryl Diazinon Diel-drin, water, fltrd ug/L (82663)													
Fipronil, water, fltrd ug/L (62169)													
DEC 12...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.111	.090	.115	.112	.117	.116	.08	.109	.082	.112	E.155	.102	.086

Table 5 71

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek—Continued
08070500 Caney Ck nr Splendora, TX (CANEY2)—Continued

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

Date	Fipro-nil, water, filtrd, ug/L (62166)	Fonofos water, filtrd, ug/L (04095)	Lindane water, filtrd, ug/L (39341)	Linuron water, filtrd, 0.7u GF ug/L (82666)	Mala-thion, water, filtrd, 0.7u GF ug/L (39532)	Azin-phos- methyl, water, filtrd, 0.7u GF ug/L (82686)	Methyl-para- thion, water, filtrd, 0.7u GF ug/L (82667)	Metola-chlor, water, filtrd, 0.7u GF ug/L (39415)	Metri-buzin, water, filtrd, 0.7u GF ug/L (82630)	Moli-nate, water, filtrd, 0.7u GF ug/L (82671)	Naprop-amide, water, filtrd, 0.7u GF ug/L (82684)	p,p'-DDE, water, filtrd, ug/L (34653)	Para-thion, water, filtrd, ug/L (39542)
DEC 12...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	E.170	.101	.088	.148	.138	E.163	.143	.122	.093	.123	.113	.071	.145
<hr/>													
Date	Peb- ulate, water, filtrd, ug/L (82669)	Pendi- meth- alin, water, filtrd, ug/L (82683)	cis- Per- methrin water, filtrd, ug/L (82687)	Phorate water, filtrd, ug/L (82664)	Prome- ton, water, filtrd, 0.7u GF ug/L (04037)	Propy- zamide, water, filtrd, 0.7u GF ug/L (82676)	Propa- chlor, water, filtrd, 0.7u GF ug/L (04024)	Pro- panil, water, filtrd, 0.7u GF ug/L (82679)	Propar- gite, water, filtrd, 0.7u GF ug/L (82685)	Teba- thiuron, water, filtrd, 0.7u GF ug/L (04035)	Terba- cill, water, filtrd, 0.7u GF ug/L (82670)	Terbu- fos, water, filtrd, 0.7u GF ug/L (82665)	Terbu- fos, water, filtrd, 0.7u GF ug/L (82675)
DEC 12...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.106	.132	.067	.112	.12	.111	.128	.117	.14	.158	E.17	E.103	.11
<hr/>													
Date	Thio- bencarb water, filtrd, 0.7u GF ug/L (82681)	Tri- allate, water, filtrd, 0.7u GF ug/L (82678)	Tri- flur-alin, water, filtrd, 0.7u GF ug/L (82661)	Sus- pended sediment filtrd, 0.7u GF ug/L (80154)	Stream- concen- tration mg/L (01351)								
DEC 12...	<.005	<.002	<.009	284	5								
FEB 05...	--	--	--	7	3								
APR 03...	<.005	<.002	<.009	10	3								
JUN 11...	--	--	--	13	2								
AUG 06...	.119	.114	.093	13	3								

Remark codes used in this table:

< -- Less than
E -- Estimated value

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek—Continued
08070500 Caney Ck nr Splendora, TX (CANEY2)—Continued

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

Date	Fipro-nil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water, fltrd, 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, 0.7u GF ug/L (39532)	Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (82686)	Methyl-para-thion, water, fltrd, 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, 0.7u GF ug/L (39415)	Metri-buzin, water, fltrd, 0.7u GF ug/L (82630)	Moli-nate, water, fltrd, 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd, 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)
NOV 13...	<.016	<.003	<.004	<.035	<.027	<.050	<.015	<.013	<.006	<.003	<.007	<.003	<.010
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<.016	<.003	<.004	<.035	<.027	<.050	<.015	<.013	<.006	<.003	<.007	<.003	<.010
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	Peb-ulate, water, fltrd, ug/L (82669)	Pendi-meth-alin, water, fltrd, ug/L (82683)	cis-Per-methrin water, fltrd, ug/L (82687)	Phorate water, fltrd, 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, 0.7u GF ug/L (04037)	Propy-zamide, water, fltrd, 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, 0.7u GF ug/L (04024)	Pro-panal, water, fltrd, 0.7u GF ug/L (82679)	Propar-gite, water, fltrd, 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, 0.7u GF ug/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF ug/L (82670)	Terba-cil, water, fltrd, 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd, 0.7u GF ug/L (82675)
NOV 13...	<.004	<.022	<.006	<.011	<.01	<.004	<.025	<.011	<.02	<.005	<.02	<.034	<.02
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<.004	<.022	<.006	<.011	<.01	<.004	<.025	<.011	<.02	<.005	<.02	<.034	<.02
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	Thio-bencarb, water, fltrd, 0.7u GF ug/L (82681)	Tri-allate, water, fltrd, 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd, 0.7u GF ug/L (82661)	Sus-pended sediment, concen-tration mg/L (80154)	Stream-flow sever-ity, code (01351)								
NOV 13...	<.010	<.002	<.009	7	3								
JAN 08...	--	--	--	4	3								
MAR 11...	<.010	<.002	<.009	13	3								
JUN 03...	--	--	--	10	3								

Remark codes used in this table:

< -- Less than
E -- Estimated value

Value qualifier codes used in this table:

n -- Below the LRL and above the LT-MDL

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek—Continued 08070600 Caney Ck nr New Caney, TX (CANEY1)													
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003													
Date	Station number	Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Disolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conductance, wat unf 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	
DEC 12...	08070600	20021212	0950	148	768	10.2	91	7.2	148	17.0	10.7	35	
FEB 05...	08070600	20030205	1252	51	764	10.9	101	7.3	160	11.0	12.0	30	
APR 03...	08070600	20030403	1315	52	761	9.4	102	7.2	161	24.0	18.9	38	
JUN 11...	08070600	20030611	1115	20	759	7.3	92	7.0	131	31.0	27.1	27	
AUG 06...	08070600	20030806	0850	29	762	7.2	90	6.8	105	28.0	27.2	26	
Date	Bicarbonate, wat flt incr. incrm. (00453)	Carbonate, wat flt incrm. (00452)	Chloride, titr., field, mg/L (00940)	Sulfate, water, field, mg/L (00945)	Residue on evap. at 180degC (70300)	Ammonia + org-N, water, mg/L as N (00625)	Ammonia water, mg/L as N (00610)	Nitrite + nitrate, water, mg/L as N (00631)	Nitrite water, mg/L as N (00613)	Organic nitrogen, water, mg/L as P (00605)	Orthophosphate, water, mg/L as P (00671)	Phosphorus, water, mg/L (00665)	BOD, water, mg/L (00310)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
DEC 12...	43	.0	12.2	5.5	111	.70	.04	.184	.004	.66	.015	.08	2.0
FEB 05...	37	.0	18.3	5.7	102	.24	<.01	.267	E.002	--	<.007	E.03	.7
APR 03...	46	.0	16.9	5.7	97	.30	.01	.328	.003	.29	<.007	E.04	3.0
JUN 11...	33	.0	15.1	4.5	74	.23	.02	.126	.003	.21	<.007	E.03	1.0
AUG 06...	32	.0	14.6	4.1	76	.18	<.01	.229	.003	--	<.007	<.04	.7
Date	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	E. coli, m-TEC, MF, col/100 mL (31633)	2,6-Diethyl-aniline water, 0.7u GF (82660)	CIAT, water, 0.7u GF (04040)	Aceto-chlor, water, 0.7u GF (49260)	Ala-chlor, water, 0.7u GF (46342)	alpha-HCH, water, 0.7u GF (34253)	Atrazine, water, 0.7u GF (39632)	Ben-flur-alain, water, 0.7u GF (82673)	Butyl-baryl, water, 0.7u GF (04028)	Car-baryl, water, 0.7u GF (82680)	Carbo-furan, water, 0.7u GF (82674)
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
DEC 12...	1.8	1.2	210	<.006	<.006	<.006	<.004	<.005	.008	<.010	<.002	<.041	<.020
FEB 05...	E1.3	E1.7	120	--	--	--	--	--	--	--	--	--	--
APR 03...	--	--	120	<.006	<.006	<.006	<.004	<.005	.014	<.010	<.002	<.041	<.020
JUN 11...	3.4	1.9	60	--	--	--	--	--	--	--	--	--	--
AUG 06...	1.9	.8	130	.116	E.048	.130	.116	.110	.121	.099	.101	E.138	E.151
Date	Chlorpyrifos water, fltrd, ug/L (38933)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulfuryl nil, water, 0.7u GF (62170)	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Ethoprop, water, fltrd, ug/L (82672)	Desulfuryl nil amide, water, fltrd, ug/L (62169)	Fipronil, water, fltrd, ug/L (62167)	Fipronil sulfone, water, fltrd, ug/L (62168)
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
DEC 12...	<.005	<.018	<.003	<.004	.014	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.005	<.018	<.003	<.004	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.115	.100	.119	.122	.121	.120	.08	.160	.092	.128	E.163	.116	.098

Table 5 75

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek—Continued
08070600 Caney Ck nr New Caney, TX (CANEY1)—Continued

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

Date	Fipro-nil, water, filtrd, ug/L (62166)	Fonofos water, filtrd, ug/L (04095)	Lindane water, filtrd, ug/L (39341)	Linuron water, filtrd, 0.7u GF ug/L (82666)	Mala-thion, water, filtrd, 0.7u GF ug/L (39532)	Azin-phos- methyl, water, filtrd, 0.7u GF ug/L (82686)	Methyl-para- thion, water, filtrd, 0.7u GF ug/L (82667)	Metola-chlor, water, filtrd, 0.7u GF ug/L (39415)	Metri-buzin, water, filtrd, 0.7u GF ug/L (82630)	Moli-nate, water, filtrd, 0.7u GF ug/L (82671)	Naprop-amide, water, filtrd, 0.7u GF ug/L (82684)	p,p'-DDE, water, filtrd, ug/L (34653)	Para-thion, water, filtrd, ug/L (39542)
DEC 12...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.007	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	E.192	.111	.104	.152	.147	E.158	.120	.128	.122	.130	.112	.069	.127
<hr/>													
Date	Peb- ulate, water, filtrd, ug/L (82669)	Pendi- meth- alin, water, filtrd, ug/L (82683)	cis- Per- methrin water, filtrd, ug/L (82687)	Phorate water, filtrd, ug/L (82664)	Prome- ton, water, filtrd, 0.7u GF ug/L (04037)	Propy- zamide, water, filtrd, 0.7u GF ug/L (82676)	Propa- chlor, water, filtrd, 0.7u GF ug/L (04024)	Pro- panil, water, filtrd, 0.7u GF ug/L (82679)	Propar- gite, water, filtrd, 0.7u GF ug/L (82685)	Tebu- thiuron, water, filtrd, 0.7u GF ug/L (04035)	Terba- cill, water, filtrd, 0.7u GF ug/L (82670)	Terbu- fos, water, filtrd, 0.7u GF ug/L (82665)	Terbu- fos, water, filtrd, 0.7u GF ug/L (82675)
DEC 12...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 03...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUN 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	.106	.127	.066	.119	.13	.116	.126	.127	.14	.150	E.19	E.098	.11
<hr/>													
Date	Thio- bencarb water, filtrd, 0.7u GF ug/L (82681)	Tri- allate, water, filtrd, 0.7u GF ug/L (82678)	Tri- flur- alin, water, filtrd, 0.7u GF ug/L (82661)	Sus- pended sediment filtrd, 0.7u GF ug/L (80154)	Stream- concen- tration mg/L (01351)								
DEC 12...	<.005	<.002	<.009	52	5								
FEB 05...	--	--	--	7	3								
APR 03...	<.005	<.002	<.009	12	3								
JUN 11...	--	--	--	12	2								
AUG 06...	.124	.119	.111	13	3								

Remark codes used in this table:

< -- Less than
E -- Estimated value

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Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Table 5 77

Table 5. Routinely sampled water-quality data for selected sites in Lake Creek, Peach Creek, and Caney Creek, Texas, water years 2003–04—Continued.

Caney Creek—Continued
08070600 Caney Ck nr New Caney, TX (CANEY1)—Continued

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

	Fipro-	Fonofos	Lindane	Linuron	Mala-	Azin-	Methyl	Moli-	Naprop-	p,p'-	Para-	
Date	nil, water, ug/L (62166)	water, water, ug/L (04095)	water, water, ug/L (39341)	water, fltrd (82666)	thion, water, ug/L (39532)	methyl, water, ug/L (82686)	thion, water, ug/L (82667)	chlor, water, ug/L (39415)	buzin, water, ug/L (82630)	water, ug/L (82671)	DDE, water, ug/L (82684)	thion, water, ug/L (34653)
NOV 13...	<.016	<.003	<.004	<.035	<.027	<.050	<.015	<.013	<.006	<.003	<.007	<.003
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<.016	<.003	<.004	<.035	<.027	<.050	<.015	<.013	<.006	<.003	<.007	<.003
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--
	Peb-	Pendi-	cis-									
Date	ulate, water, ug/L (82669)	meth- alin, water, ug/L (82683)	Per- methrin water, ug/L (82687)	Phorate water, ug/L (82664)	Prome- ton water, ug/L (04037)	Propy- amide, water, ug/L (82676)	Propa- chlor, water, ug/L (04024)	Pro- panil, water, ug/L (82679)	Propar- gite, water, ug/L (82685)	Tebu- thiuron water, ug/L (04035)	Terba- cil, water, ug/L (82670)	Terbu- fos, water, ug/L (82665)
NOV 13...	<.004	<.022	<.006	<.011	<.01	<.004	<.025	<.011	<.02	<.005	<.02	<.034
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	<.004	<.022	<.006	<.011	<.01	<.004	<.025	<.011	<.02	<.005	<.02	<.034
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--
Date	Thio- bencarb water, ug/L (82681)	Tri- allate, water, ug/L (82678)	Tri- flur- alin, water, ug/L (82661)	Sus- pended sediment concen- tration mg/L (80154)	Stream- flow concen- tration code (01351)							
NOV 13...	<.010	<.002	<.009	7	3							
JAN 08...	--	--	--	8	3							
MAR 11...	<.010	<.002	<.009	20	3							
JUN 03...	--	--	--	15	3							

Remark codes used in this table:

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

Value qualifier codes used in this table:

- k -- Counts outside acceptable range
- n -- Below the LRL and above the LT-MDL
- t -- Below the long-term MDL

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Table 6. Fish taxa and individual counts of fish collected in Lake Creek, Peach Creek, and Caney Creek, October 2002–October 2004.

[T, tolerant (to pollution) species; -- not found; I, intolerant (to pollution) species; NT, nonnative species; NP, survey not performed]

Scientific name Family Genus	Common name and status ¹	LAKE1					LAKE3					LAKE4					LAKE5					
		OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	
Lepisosteidae	(Gars)																					
<i>Lepistius oculatus</i>	Spotted gar T	--	--	1	1	--	1	--	--	--	--	3	1	4	--	4	--	--	--	--	--	--
<i>Lepisosteus osseus</i>	Longnose gar T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--
Clupeidae	(Herrings)																					
<i>Dorosoma cepedianum</i>	Gizzard shad T	2	--	--	--	--	1	--	2	--	--	1	56	18	21	--	12	--	--	--	--	--
Poeciliidae	(Livebearers)																					
<i>Gambusia affinis</i>	Western mosquito fish T	--	3	1	--	1	16	--	214	15	3	34	--	137	2	--	64	3	112	3	--	--
Catastomidae	(Suckers)																					
<i>Ictiobus bubalus</i>	Smallmouth buffalo	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
<i>Minytrema melanops</i>	Spotted sucker	--	1	--	--	--	--	--	1	--	--	--	2	2	--	12	--	--	--	--	--	1
<i>Carpoides carpio</i>	River carpsucker T	--	14	6	--	1	--	--	--	--	--	--	--	3	--	--	--	--	--	--	--	--
<i>Moxostoma poecilurum</i>	Blacktail redhorse	15	21	33	18	9	4	--	--	--	2	--	--	--	--	--	--	--	20	--	--	--
<i>Moxostoma congestum</i>	Gray redhorse	--	--	--	1	--	--	--	--	--	--	1	11	--	--	--	1	--	--	--	--	--
Ichthyidae	(Catfishes)																					
<i>Ameiurus melas</i>	Black bullhead T	--	--	--	--	--	--	--	2	--	--	4	2	14	1	--	30	25	5	4	8	--
<i>Noturus gyrinus</i>	Tadpole madtom I	2	1	1	--	2	1	--	4	--	1	--	--	--	--	--	--	--	--	--	--	--
<i>Noturus nocturnus</i>	Freckled madtom I	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ictalurus punctatus</i>	Channel catfish T	3	12	--	--	1	--	3	--	--	--	4	2	9	--	4	--	--	--	--	--	--
<i>Pylodictis olivaris</i>	Flathead catfish	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ameiurus natalis</i>	Yellow bullhead	--	--	--	1	--	--	--	--	--	2	--	2	--	--	2	2	1	1	2	1	--
Centrarchidae	(Sunfishes)																					
<i>Poxomis annularia</i>	White crappie	--	--	--	--	--	3	2	5	--	2	19	10	22	--	9	2	--	2	2	--	--
<i>Lepomis sp.</i>	Sunfish	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--	--
<i>Lepomis cyanellus</i>	Green sunfish T	2	12	4	1	5	35	16	23	17	28	5	35	4	1	4	1	4	7	1	4	--
<i>Lepomis microlophus</i>	Redear sunfish	--	--	--	--	--	--	1	2	--	2	5	2	15	--	11	--	--	--	1	--	--
<i>Lepomis megalotis</i>	Longear sunfish	128	153	48	42	52	90	35	69	8	13	15	43	21	13	55	30	9	13	10	12	--
<i>Lepomis punctatus</i>	Spotted sunfish	3	6	3	8	8	2	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Lepomis humilis</i>	Orangespotted sunfish	--	1	71	1	--	--	1	27	--	--	--	2	--	--	--	--	14	--	--	--	--
<i>Lepomis marginatus</i>	Dollar sunfish	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	2	--	--	--
<i>Lepomis macrochirus</i>	Bluegill T	9	22	15	10	8	68	29	128	9	23	78	75	63	10	134	24	18	21	8	35	--
<i>Lepomis gulosus</i>	Warmouth T	3	5	1	1	3	51	18	30	8	10	46	46	37	9	48	27	--	8	7	10	--
<i>Micropterus salmoides</i>	Largemouth bass	--	--	--	--	3	--	--	--	4	--	--	--	--	1	5	--	--	--	--	3	--
<i>Micropterus punctulatus</i>	Spotted bass	14	14	27	6	--	1	2	1	--	--	1	1	1	--	--	3	--	12	--	--	--
Aphredoderidae	(Pirate perches)																					
<i>Aphredoderus sayanus</i>	Pirate perch	2	1	1	--	2	39	2	29	3	24	3	4	1	--	12	51	14	31	5	19	--
Sciaenidae	(Drums)																					
<i>Aplodinotus grunniens</i>	Freshwater drum T	4	2	1	--	--	--	1	--	--	--	5	2	--	--	5	--	--	--	--	--	--
Percidae	(Perches)																					
<i>Etheostoma sp.</i>	Darter	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--
<i>Etheostoma gracile</i>	Slough darter	--	--	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--
<i>Etheostoma chlorosomum</i>	Bluntnose darter	--	--	--	--	--	--	--	--	--	2	--	--	--	--	--	--	--	3	--	--	--
<i>Peocilia sciera</i>	Dusky darter I	2	4	7	5	14	--	--	--	--	1	--	--	--	--	--	--	--	--	1	--	--
<i>Ammocrypta vivax</i>	Scaly sand darter	3	4	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Ammocrypta clara</i>	Western sand darter	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Percina macrolepida</i>	Bigscale logperch I	--	--	--	--	--	6	--	--	--	1	--	--	--	--	1	--	--	--	--	--	--

Table 6 79

Table 6. Fish taxa and individual counts of fish collected in Lake Creek, Peach Creek, and Caney Creek, October 2002–October 2004—Continued.

Scientific name Family Genus	Common name and status ¹	LAKE1					LAKE3					LAKE4					LAKE5				
		OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004
Cyprinodontidae	(Killifishes)																				
<i>Fundulus notatus</i>	Blackstripe topminnow	9	29	12	11	1	19	9	26	4	1	14	8	18	10	--	2	1	15	12	10
<i>Fundulus olivaceus</i>	Blackspotted topminnow I	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Atherinidae	(Silversides)																				
<i>Labidesthes sicculus</i>	Brook silverside I	--	--	1	--	--	1	--	--	--	--	8	--	20	--	--	--	--	--	--	--
<i>Menidia beryllina</i>	Inland silverside	--	--	--	10	--	--	--	--	--	--	--	--	--	2	--	--	--	--	1	--
Cyprinidae	(Carp and minnows)																				
<i>Notropis</i> sp.	Shiner	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cyprinella venusta</i>	Blacktail shiner	73	154	105	95	85	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
<i>Notropis volucellus</i>	Mimic shiner I	25	24	14	81	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Notropis sabinae</i>	Sabine shiner	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Lythrurus umbratilis</i>	Texas shiner	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Notemigonus crysoleucas</i>	Golden shiner T	--	--	--	--	--	--	--	--	--	--	3	--	8	--	--	10	1	27	2	4
<i>Cyprinella lutrensis</i>	Redfin shiner	18	1	--	3	--	9	--	--	--	--	--	--	--	--	--	--	--	--	2	--
<i>Cyprinella lutrensis</i>	Red shiner T	7	4	--	2	--	--	--	4	2	--	--	--	--	--	--	--	--	--	--	--
<i>Lythrurus fameus</i>	Ribbon shiner	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cyprinus carpio</i>	Common carp NT	--	--	--	--	--	--	--	--	--	--	3	--	5	--	--	--	--	--	--	--
<i>Pimephales vigilax</i>	Bullhead minnow	108	83	99	21	106	--	--	--	--	8	--	12	2	--	--	--	--	--	1	--
<i>Opsopoeodus emiliae</i>	Pugnose minnow	--	--	--	--	--	2	4	--	--	--	10	--	3	--	--	--	3	--	1	--
Esocidae	(Pikes)																				
<i>Esox americanus vermiculatus</i>	Grass pickerel	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	2	1	1	--	2
Elassomatidae	(Pygmy sunfishes)																				
<i>Elassoma zonatum</i>	Banded pygmy sunfish	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	3	--	1	--	1
Petromyzontidae	(Lampreys)																				
<i>Ichthyomyzon castaneus</i>	Chestnut lamprey I	--	--	--	--	--	--	--	--	3	--	--	--	--	--	--	--	--	--	--	--
<i>Ichthyomyzon gagei</i>	Southern brook lamprey I	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Number of fish	436	573	459	319	306	348	127	578	66	127	326	279	416	49	318	252	94	280	66	110
	Number of fish species	21	24	21	20	18	17	16	17	8	18	24	20	23	8	15	15	12	17	18	13

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Table 6. Fish taxa and individual counts of fish collected in Lake Creek, Peach Creek, and Caney Creek, October 2002–October 2004—Continued.

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Table 6. Fish taxa and individual counts of fish collected in Lake Creek, Peach Creek, and Caney Creek, October 2002–October 2004—Continued.

Scientific name Family Genus	Common name and status ¹	PEACH1					PEACH3					CANEY1					CANEY3				
		OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004	OCT 2002	MAY 2003	AUG 2003	DEC 2003	OCT 2004
Cyprinodontidae	(Killifishes)																				
<i>Fundulus notatus</i>	Blackstripe topminnow	--	6	51	17	1	--	3	17	--	6	--	6	22	--	9	--	5	12	12	1
<i>Fundulus olivaceus</i>	Blackspotted topminnow I	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--
Atherinidae	(Silversides)																				
<i>Labidesthes sicculus</i>	Brook silverside I	--	--	3	--	--	--	--	1	--	--	--	--	1	--	--	--	--	1	--	--
<i>Menidia beryllina</i>	Inland silverside	--	--	--	1	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--
Cyprinidae	(Carp and minnows)																				
<i>Notropis sp.</i>	Shiner	--	--	--	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--
<i>Cyprinella venusta</i>	Blacktail shiner	--	2	49	--	8	--	4	2	--	1	--	25	21	--	4	--	23	5	6	9
<i>Notropis volucellus</i>	Mimic shiner I	--	3	10	1	--	--	2	--	--	--	--	4	--	--	--	--	2	--	11	--
<i>Notropis sabinae</i>	Sabine shiner	--	--	1	--	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--
<i>Lythrurus umbratilis</i>	Texas shiner	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Notemigonus crysoleucas</i>	Golden shiner T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cyprinella lutrensis</i>	Redfin shiner	--	1	10	--	--	--	2	--	--	--	--	--	--	--	--	--	1	--	12	--
<i>Cyprinella lutrensis</i>	Red shiner T	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Lythrurus fumeus</i>	Ribbon shiner	--	--	--	--	--	--	--	--	--	--	--	2	--	--	--	--	2	10	11	--
<i>Cyprinus carpio</i>	Common carp NT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--
<i>Pimephales vigilax</i>	Bullhead minnow	--	--	1	--	1	--	--	--	--	--	--	3	3	--	5	--	--	5	4	24
<i>Opsopoeodus emiliae</i>	Pugnose minnow	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	--
Esocidae	(Pikes)																				
<i>Esox americanus vermiculatus</i>	Grass pickerel	--	1	1	--	--	--	3	1	--	2	--	4	--	--	--	--	1	--	--	--
Elassomatidae	(Pygmy sunfishes)																				
<i>Elassoma zonatum</i>	Banded pygmy sunfish	--	--	--	--	--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--
Petromyzontidae	(Lampreys)																				
<i>Ichthyomyzon castaneus</i>	Chestnut lamprey I	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--
<i>Ichthyomyzon gagei</i>	Southern brook lamprey I	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Number of fish	NP	119	297	83	183	NP	46	74	NP	39	NP	213	213	NP	191	NP	128	143	118	92
	Number of fish species	NP	18	28	15	15	NP	13	19	NP	11	NP	21	19	NP	19	NP	15	16	22	15

¹ Status from Texas Natural Resource Conservation Commission, 1999a.

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Table 7. Selected indexes that characterize fish and benthic-macroinvertebrate community structure in Lake Creek, Peach Creek, and Caney Creek, Texas, October 2002–October 2004.

[ID, identifier; R, richness; ECO-IBI, ecoregion-specific index of biotic integrity; B-IBI, benthic-macroinvertebrate index of biotic integrity; EPT, Ephemerop-tera Plecoptera Trichoptera]

Reach ID	Fish community		Benthic-macroinvertebrate community		
	Mehninick's R	ECO-IBI	Mehninick's R	B-IBI	EPT index
LAKE1	1.03	51	0.67	31	48.5
LAKE3	1.12	41	.63	28	14.1
LAKE4	1.13	41	.84	25	16.7
LAKE5	1.33	40	.79	24	11.3
PEACH1	1.51	51	.81	34	29.0
PEACH3	1.96	43	1.52	36	25.9
CANEY1	1.37	46	1.13	27	58.9
CANEY3	1.56	46	.57	34	45.0

Table 8. Metrics used to compute selected index of biotic integrity scores.

[IBI, index of biotic integrity; ECO-IBI, ecoregion-specific index of biotic integrity; B-IBI, benthic-macroinvertebrate index of biotic integrity]

Statewide IBI for fish communities ¹	ECO-IBI for fish communities ²	B-IBI ¹
Total number of species	Total number of species	Taxa richness
Number of darter species	Number of native cyprinid species	EPT taxa abundance
Number of sunfish species	Number of benthic invertivore species	Hilsenhoff biotic index
Number of sucker species	Number of sunfish species	Percentage of Chironomidae
Number of intolerant species	Number of intolerant species	Percentage of the dominant taxon
Percentage of individuals as tolerant species	Percentage of individuals as tolerant species	Percentage of the dominant functional feeding group
Percentage of individuals as omnivores	Percentage of individuals as omnivores	Percentage of predators
Percentage of individuals as invertivores	Percentage of individuals as invertivores	Ratio of intolerant to tolerant taxa
Percentage of individuals as piscivores	Percentage of individuals as piscivores	Percentage of total trichoptera as Hydropsychidae
Number of individuals in sample	Number of individuals in sample	Number of non-insect taxa
Percentage of individuals as hybrids	Percentage of individuals as non-native species	Percentage of collector-gatherers
Percentage of individuals with disease or anomaly	Percentage of individuals with disease or anomaly	Percentage of the total number as Elmidae

¹ Texas Natural Resource Conservation Commission, 1999a.

² Linam and others, 2002.

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