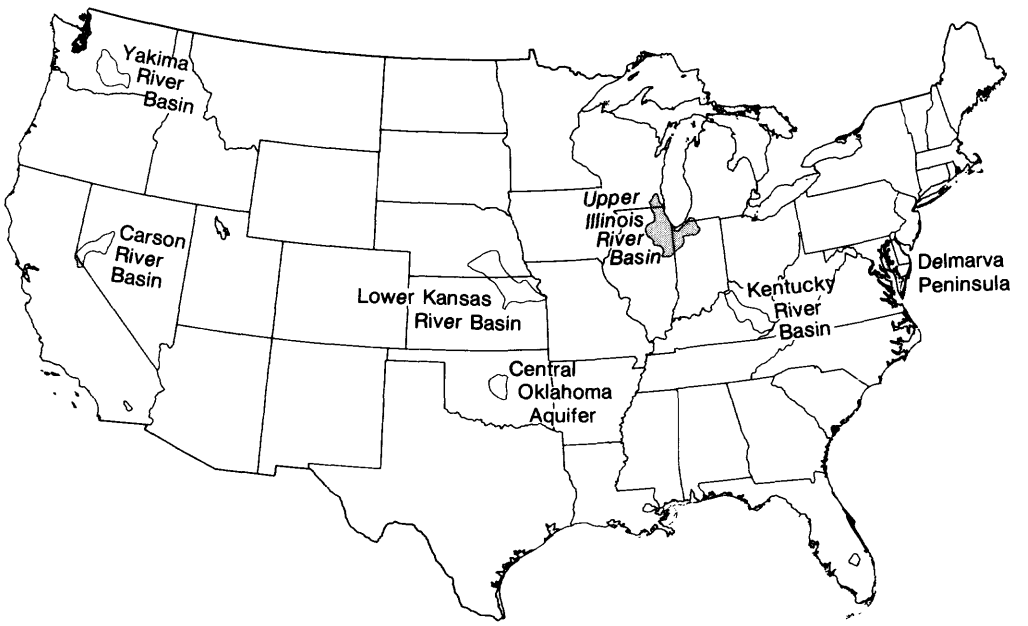
SURFACE-WATER-QUALITY ASSESSMENT OF THE UPPER ILLINOIS RIVER BASIN IN ILLINOIS, INDIANA, AND WISCONSIN: GEOCHEMICAL DATA FOR FINE-FRACTION STREAMBED SEDIMENT FROM HIGH- AND LOW-ORDER STREAMS, 1987

by John A. Colman and Richard F. Sanzolone



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CONVERSION FACTORS

Multiply	By	To obtain
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
square mile (mi^2)	2.590	square kilometer (km^2)

Additional Conversions

In this report certain units of measurement, by convention, use the metric system and include the following:

Multiply	By	To obtain
micrometer (μm)	0.00003937	inch (in.)
millimeter (mm)	0.03937	inch (in.)
kilogram (kg)	2.205	pound, avoirdupois (lb)
gram (g)	0.03527	ounce, avoirdupois (oz)

SURFACE-WATER-QUALITY ASSESSMENT OF THE UPPER ILLINOIS RIVER BASIN IN ILLINOIS, INDIANA, AND WISCONSIN: GEOCHEMICAL DATA FOR FINE-FRACTION STREAMBED SEDIMENT FROM HIGH- AND LOW-ORDER STREAMS, 1987

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ABSTRACT

Geochemical data are presented from a synoptic survey of 46 elements in fine-fraction streambed sediments of the upper Illinois River basin during the fall of 1987. The survey was a component study of the Illinois pilot project of the U.S. Geological Survey's National Water-Quality Assessment program. Most of the sampling sites were randomly chosen--135 on main stems of rivers and 238 on first- and second-order streams. In addition, 196 samples were collected for quality-assurance and special-study purposes. The report includes element-concentration data and summary-statistics tables of percentiles, nested analysis of variance, and correlation coefficients. All concentration data are included in tabular form and can be selected by map reference number, latitude and longitude, or remark code indicating purpose for collecting sample.

INTRODUCTION

The upper Illinois River basin is one of four basins that were selected to test and refine concepts for the surface-water component of the National Water-Quality Assessment (NAWQA) program of the U.S. Geological Survey (USGS). The NAWQA program, which was established by the Congress in 1986, has the following long-term goals: (1) to provide a nationally consistent description of current water-quality conditions for a large part of the Nation's water resources; (2) to define long-term trends in water quality; and (3) to identify, describe, and explain the major factors that affect observed water-quality conditions and trends (Cohen and others, 1988; Hirsch and others, 1988).

One specific assessment objective--to define the occurrence and distribution of trace elements within study basins--was met in part by synoptic geochemical surveys of streambed sediments. The chemical composition of streambed sediment is important for a water-quality assessment, because the sediment affects the biotic quality of a stream. Streambed sediments supply nutrients to plants, can be toxic to benthic invertebrates, and can transmit contaminants through the food chain. Streambed sediment also serves as an integrator of water-column conditions and is important in chemical budgets for source-fate investigations of river systems.

In addition to geochemical assessment of streambed sediment, the surveys in the initial four basins were intended to evaluate the effectiveness of the survey

techniques used. Survey-design components, such as sampling-site characteristics, sediment-size fraction, and methods of sample handling, have not been standardized for geochemical investigations. To evaluate the survey techniques used, a nested analysis of variance (ANOVA) and a sieving study were included in the investigation.

Purpose and Scope

This report presents geochemical data for streambeds in the upper Illinois River basin. These data can be selected from the report tables by latitude and longitude, by map reference number, or by remark code indicating purpose for collecting sample. The scope of the report includes a presentation of the investigative design, methodology, summary statistics, and raw-data results of the geochemical survey of streambed sediment in the basin.

Description of the Study Area

The following basin description was abstracted primarily from the project report of Mades (1987). The section describing soils is from Fehrenbacher and others (1967).

The upper Illinois River basin, shown in figure 1 (all figures at end of report), drains 10,949 mi^2 (square miles) in northeastern Illinois, northwestern Indiana, southeastern Wisconsin, and southwestern Michigan. The five subbasins outlined in figure 1 correspond with the USGS hydrologic unit codes as indicated in the figure. These five subbasins are the units that are shown in the more detailed sample-location maps in figures 2-6.

The basin has three major river systems: the Kankakee, Des Plaines, and Fox. The Kankakee River is joined by the Des Plaines River near Morris, Illinois, to form the Illinois River. The Illinois River flows westward and is joined by the Fox River at the southwestern boundary of the basin near Ottawa, Illinois. Two canals in the Chicago metropolitan area--the Chicago Sanitary and Ship Canal and the Calumet Sag Channel--provide a navigable link between the basin and Lake Michigan (fig. 1).

Bedrock throughout the basin is consolidated sedimentary deposits. The bedrock is overlain by unconsolidated glacial deposits throughout most of the basin. The thickness of the glacial deposits in the Kankakee River and Iroquois River basins increases from zero at the bedrock outcrop of Silurian dolomite near Kankakee to about 400 to 500 ft (feet) along the southern and eastern boundaries of the basin. Glacial deposits also are thick in the northern parts of the Fox River and Des Plaines River basins, whereas Ordovician and Pennsylvanian-age rocks outcrop in the river valleys of the lower Fox River and the Illinois River.

Soils in the basin are derived mainly from glacial outwash, till, alluvium, and loess; bedrock weathered in place does not contribute significantly to soils in the basin (Fehrenbacher and others, 1967). Much of the source material in the basin is associated with tills of Wisconsinan age that were deposited by a

glacial lobe that was channeled through Lake Michigan. Composition of the material brought by this lobe reflects its passage over mixed terranes of limestone, shale, sandstone and some igneous rocks. The tills generally are described as calcareous. Loess deposits, generally less than 3 ft thick, are not as thick in the upper Illinois River basin as found farther south in Illinois. However, loess is a significant soil component even in soils developed mainly from glacial drift or outwash. Organic soils in the basin are derived from lacustrine sediments and are not common. They are present in scattered areas in the Wisconsin and Indiana portions of the basin, and in the upper Des Plaines River and Iroquois River basins in Illinois (Gross and Berg, 1981).

Land use in the upper Illinois River basin includes areas typical of large metropolitan and agricultural areas in the Midwest. Agriculture accounts for about 75 percent of the land use, corn and soybeans being the principal crops. The remaining 25 percent consists of areas of urban (13 percent), forest (7 percent), and industrial (5 percent) land use.

Acknowledgments

The authors wish to acknowledge the help of the Metropolitan Water Reclamation District of Greater Chicago, who assisted with a boat and personnel for sample collection at deep-water sites on the Illinois River and on the Chicago-area canals.

METHODS

Survey Design

Sample-collection sites were selected according to a random design to eliminate bias caused by sampling "polluted" or easy-access areas. Sample sites were classified by stream order--high-order streams (main stems) and low-order streams (first and second order). (Stream order refers to the number of tributaries of a stream that have intersected upstream.) All sampling sites were at least 300 ft upstream from bridges to minimize possible contamination from road traffic. High-order streams were systematically sampled at 135 sites at intervals of 5 or 10 mi (miles) to assess streambed geochemistry of river reaches. Low-order streams were randomly sampled at 238 sites to assess background conditions (streams not affected by point sources).

The high-order stream sampling intervals were measured by river mile. The 10-mi sampling interval was used for rural river reaches along the Iroquois River, the Kankakee River, and the Wisconsin portion of the Fox River. Analysis of existing data in the upper Illinois River basin indicated that trace element variability was less in rural areas than in urban areas. Iman and Conover (1983, p. 11) recommend low sampling frequency for low variability data. A 5-mi interval was used for urban river reaches.

Low-order stream sites were selected randomly from a grid (with grid-element sides of 6.2 mi) placed over the basin map. No more than one site was

selected per grid element and not more than one site was selected per stream. Samples from these sites were to typify, as much as possible, the geochemistry of the small upstream watersheds. As such, sites below ponds or near obvious sources of pollution were avoided.

In addition to the above random sampling, 196 samples were collected for subdesigns. The subdesigns, which were used to evaluate alternative assessment techniques, included one-way, nested ANOVA, a comparison of wet- and dry-sieving techniques, a comparison of sites above and below dams, a comparison of sites before and after flooding, and comparison of samples collected from sites below a major point-source discharge.

Locations of all sampling sites with associated map reference numbers are shown in figures 2 through 6. Sites on high-order streams are indicated with triangles, sites on low-order streams with squares.

The nested ANOVA subdesign was included as a quality-control measure for the sampling and analytical methods. The nested ANOVA is a method for computing the size of sources of variation present in sample data (Ray, 1982). Sampling sites used in the nested ANOVA's were randomly selected from the groups of high- or low-order sites. On high-order streams, the analysis included three levels: (1) variation in concentration associated with sample splits made on sieved, dried material in the laboratory just prior to analysis (34 samples); (2) variation associated with resampling at a site (17 samples); and (3) site-to-site variation (17 samples). On low-order streams, the analysis included four levels with 30 samples at each level: (1) variation associated with split sample, (2) variation associated with resampling a site adjacent but upstream of the original site, (3) variation between subbasins within a grid element, and (4) variation between sites in different grid elements. The analysis was computed on ranked data sets to overcome difficulties of below-detection-limit and non-normal data (Conover and Iman, 1981). Elements that were below detection limits at 50 percent or more of the ANOVA sites were dropped from the analysis.

The comparison of sample sieving techniques involved 22 high-order stream sites. At these sites, two streambed samples were generated to compare sieving by dry, relative to wet, methods. The two samples were obtained either by resampling the site or by splitting material obtained from one sampling.

The comparison above and below dams involved six high-order stream sites where a randomly selected site was near a dam. In these cases, a second streambed sample was collected on the other side of the dam so that effects of dams could be observed.

The comparison of results from samples collected before and after flooding was made for nine high-order stream sites on Salt Creek (map numbers 95, 98, 108, 116, 125, 130, 131, 134, 137; fig. 3). The sites were sampled fortuitously 1 week prior to a 100-year flood and resampled 1 and 2 months after the flooding.

Observations below a point-source discharge were made at two sites (map numbers 103 and 106, fig. 3) on the North Shore Channel. These sites were sampled in addition to the randomly selected sample sites.

Field Methods

Samples were collected during late summer and fall of 1987. Sampling methods at high- and low-order streams were similar, except for sieving technique: wet sieving was used for high-order streams, dry sieving was used for low-order streams.

Samples were collected from the streambeds of high-order streams using stainless-steel Ekman and Ponar dredges at deep sites, and hand-held or pole mounted plastic scoops at shallow sites. Oxic surface sediments (top inch) were collected from the top of grab samples brought up by the dredges or from the streambed by use of the scoops. Three to five subsamples from a cross-channel transect were composited in a plastic tub and wet sieved with native water using a crimped (no solder) stainless-steel sieve with 63-μm (micrometer) mesh. The less than 63-μm fraction represents the silt and clay sized (fine-fraction) sediment. The sieved sediment and water slurry was poured into plastic settling jars and allowed to stand overnight. After settling, water was siphoned off and the settled fines were placed in a kraft-paper bag. The bags retain the fines but keep the sample aerobic by allowing air drying of the sample as water drips out of and evaporates from the bag. After sampling each site, the sampling equipment was sponged clean with native stream water.

Samples from low-order streams were collected from the active stream channel using a stainless-steel scoop. The active channel is defined as the channel that was under water during sampling, or, in the case of dry channels, as the channel most recently under water, as evidenced by damp soil or lack of vegetation. The oxidized portion of the streambed material (top inch) was selected. Five to seven subsamples were composited at each site. The subsamples were sieved through a 2-mm (millimeter) mesh stainless-steel screen into a stainless-steel pan, then transferred to 6- x 10-inch Hubco[1] sample bags. Sieving was omitted when samples were predominantly less than 2 mm. The samples were air dried in the bags before submittal to the USGS laboratory in Denver, Colorado. The dry weight of the bagged samples ranged from 0.5 to 1.5 kg (kilograms).

Laboratory Preparation

The dried high-order stream samples, which had been wet sieved to smaller than 63 μm, were processed through a jaw crusher to break up the large aggregates of material that formed during drying. About 25 percent of the material was separated out and archived. The remainder of the sample was processed using a ceramic-plate pulverizer to disaggregate and homogenize the sample before chemical analysis.

The dried low-order stream samples also were processed through a jaw crusher. The samples were then placed in a ceramic "juicer" (a commercial mechanical soil grinder) for further disaggregation with minimal particle

[1]Use of trade names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

disintegration. About 25 percent of the sample was separated out and archived. The remainder of the sample was dry sieved through a 63-μm mesh stainless-steel sieve, and the fine-fraction material was submitted for analysis.

Chemical Analysis

The samples were analyzed for 46 elements, including 3 forms of carbon. Table 1 lists the analytical and sample decomposition methods, and the minimum reporting level for each element (all tables at end of report). Detection of most of the elements studied was by inductively coupled plasma atomic-emission spectrometry (ICP-AES). Other methods were used when element determination could not be made by ICP-AES or when additional sensitivity was required. The sample-decomposition methods used prior to analysis by ICP-AES and atomic absorption were total digestions, as were the combustion techniques used for total carbon, sulfur, and the digestion for inorganic carbon. The decompositions used for boron and uranium were partial techniques. The protocols for sample handling procedures, sample preparation, analytical methods, use of instrumentation, and laboratory procedures are published in Arbogast (1990). Quality assurance of sample analysis was done by use of standard reference materials and split samples, which were included in each batch of 40 samples to be analyzed, and by the split samples that were included in the nested ANOVA (Sanzolone and Ryder, 1989).

SUMMARY STATISTICS AND GEOCHEMICAL DATA

Summary statistics of the elemental analysis results were computed only for data from the randomly selected sites. Percentile data including median, quartile, and tenth and ninetieth percentiles are presented in table 2 for high-order streams and table 3 for low-order streams. A percentile value is a value greater than a given percent of the observations.

Percent variance at each level of the nested ANOVA is presented by stream order in table 4. Variation introduced by the analytical method and sample splitting as a percentage of total variance is shown in the columns under "Sample split." Variation introduced by the stream-sampling procedure is shown in the "Within site" columns. The "Within grid" columns contain variance found within grid elements (but in separate subbasins) of the low-order stream sampling. The "Between site" columns contain variance found among sites. For the low-order streams, between site would represent variation beyond that found at sites within a grid element. For the high-order streams, variance at the within-grid level was not separated out.

Spearman's rho correlation coefficients on ranked data are presented in table 5 for high-order streams and in table 6 for low-order streams. Coefficients that are computed on ranked data are not overly influenced by outliers and reflect the degree of both linear and nonlinear correlations. Coefficients that were not significant at the alpha = 0.10 level were not included in the table. The order of elements in tables 5 and 6 was determined from factor and varimax rotation analysis of the results (Cattell, 1978). The factor analysis was used only as a means of grouping blocks of intercorrelated elements.

Concentrations for all elements by sample site are shown in table 7 for high-order streams and table 8 for low-order streams. The map reference numbers in tables 7 and 8 refer to figures 2 through 6, where sampling sites are shown according to hydrologic-unit subbasin. Map numbers are consecutive within a subbasin. The orientations of the subbasins can be found by reference to figure 1. Each sample in tables 7 and 8 is listed with a "Design remark" which refers to the intended use of the sample in the survey design. The order of samples in the table was arranged by subbasin (fig. 1) and sorted by latitude, highest to lowest. This order also is consecutive by map number.

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FIGURES 1-6; TABLES 1-8

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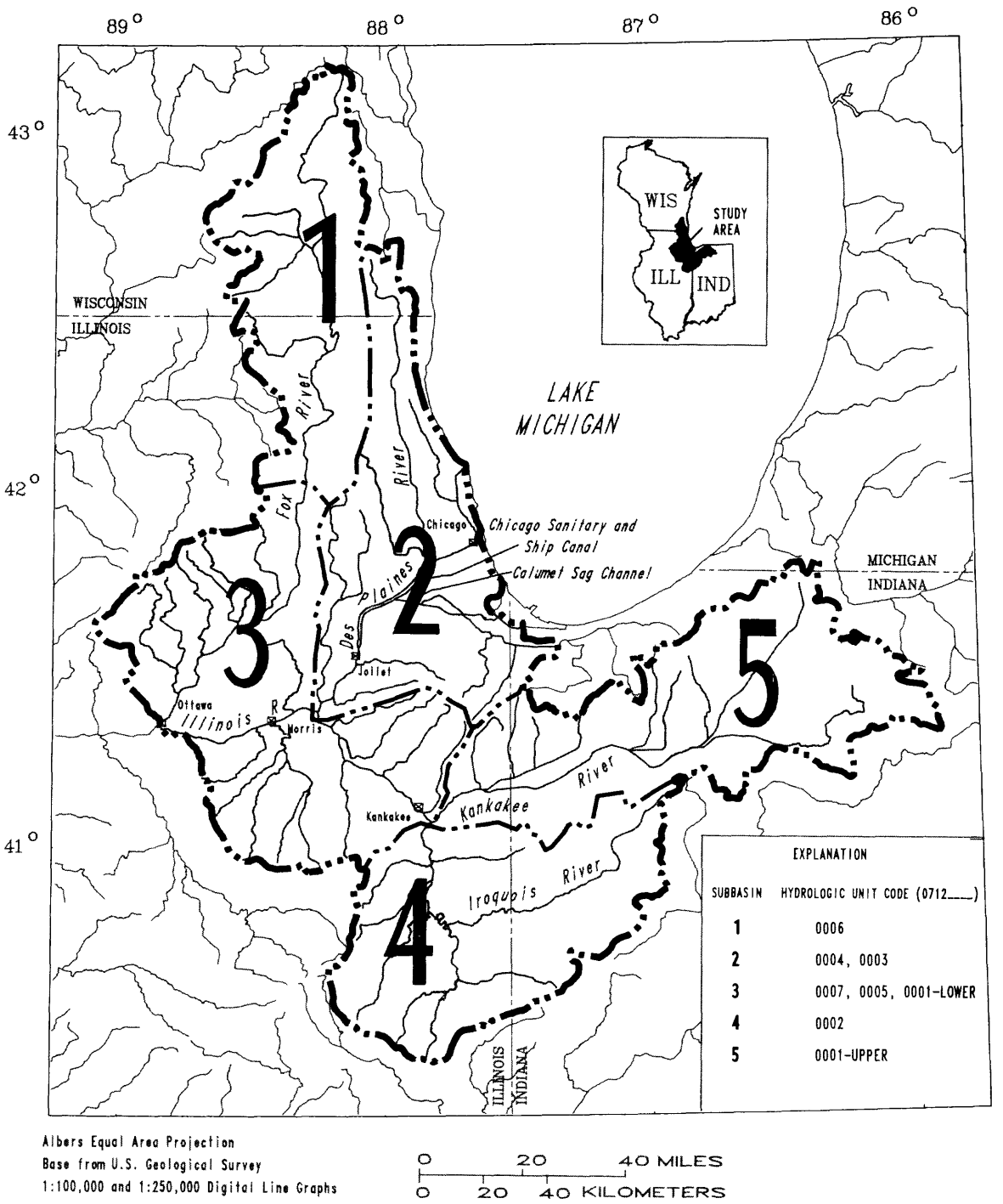
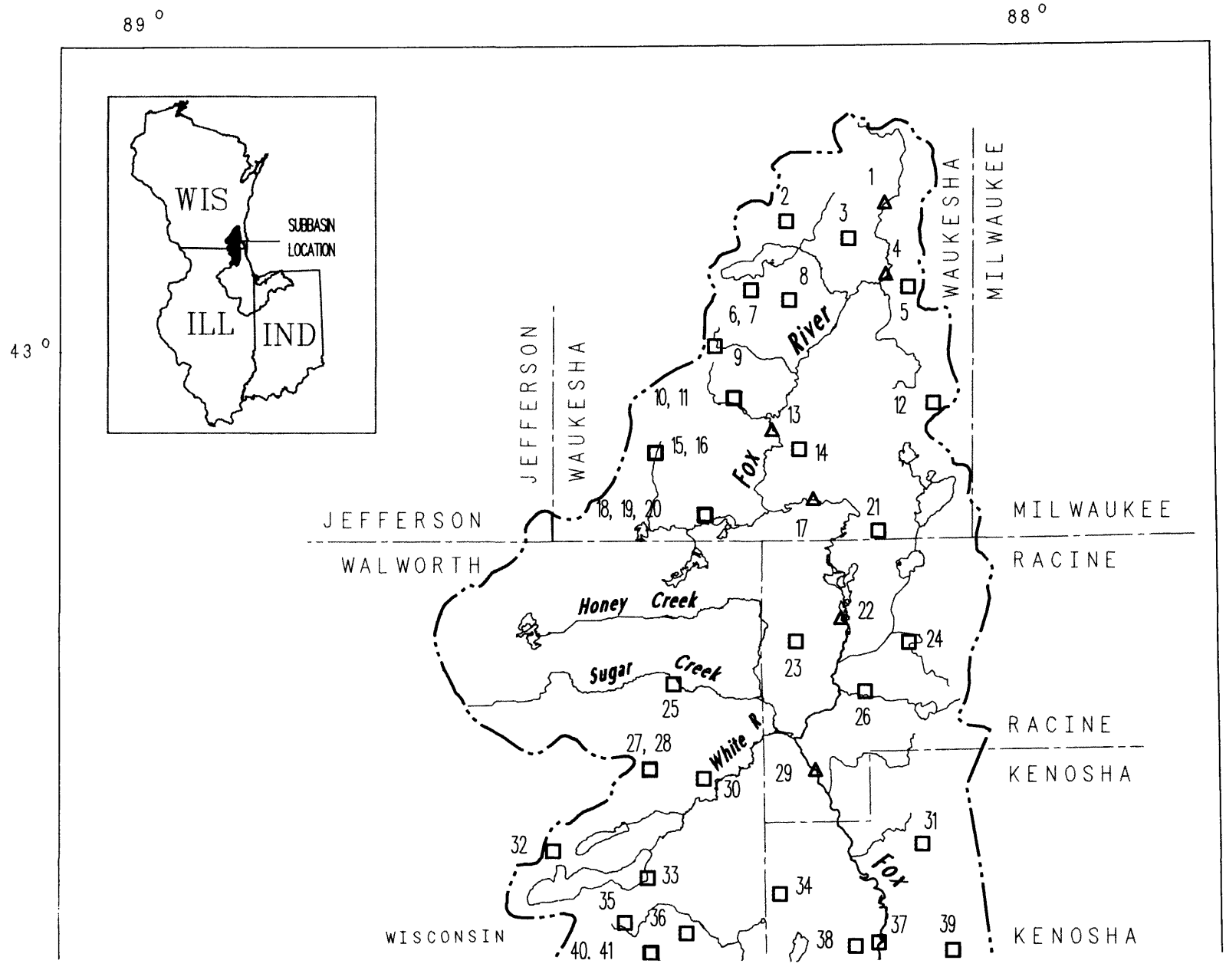


Figure 1.--Subbasins of the upper Illinois River basin.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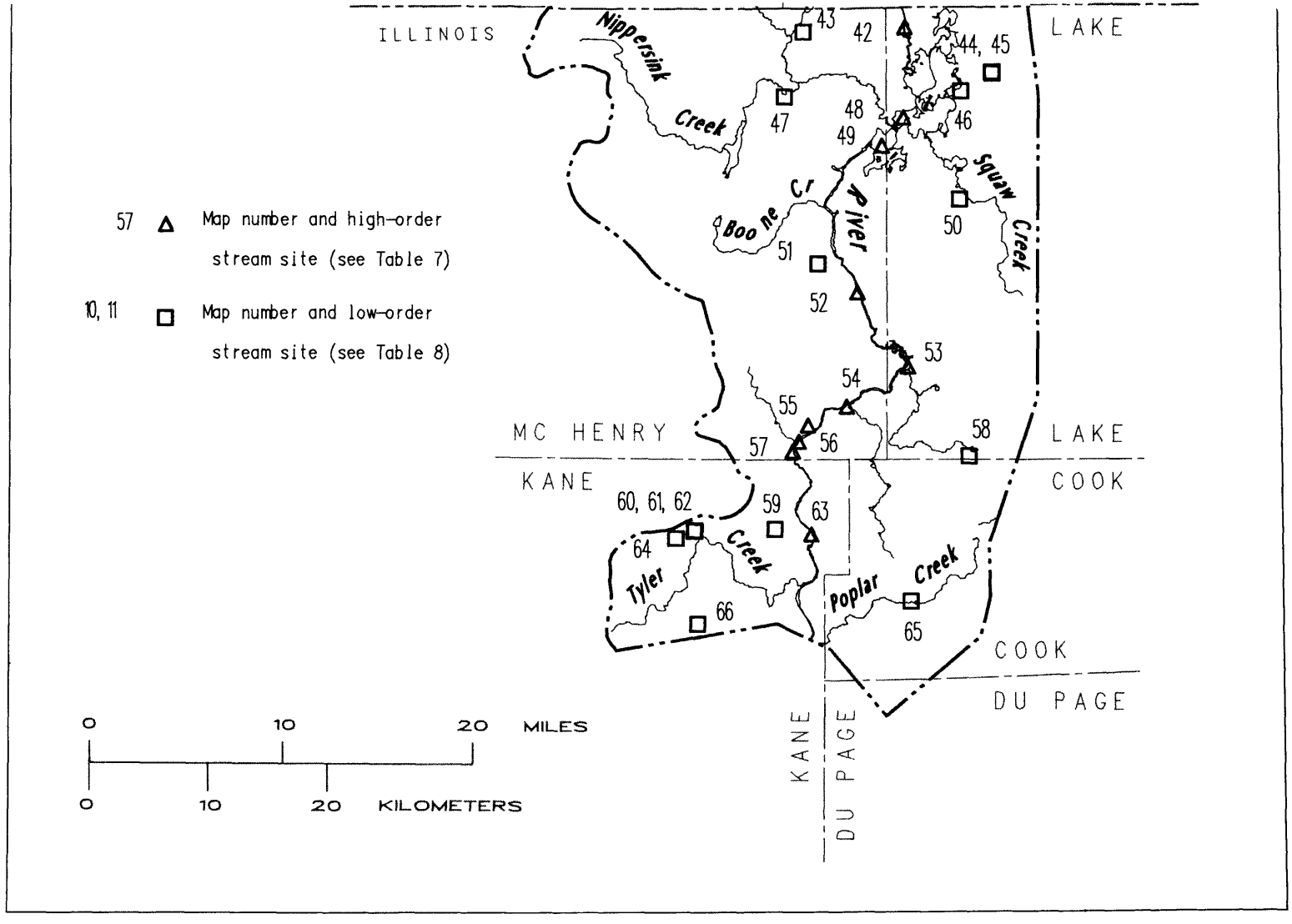

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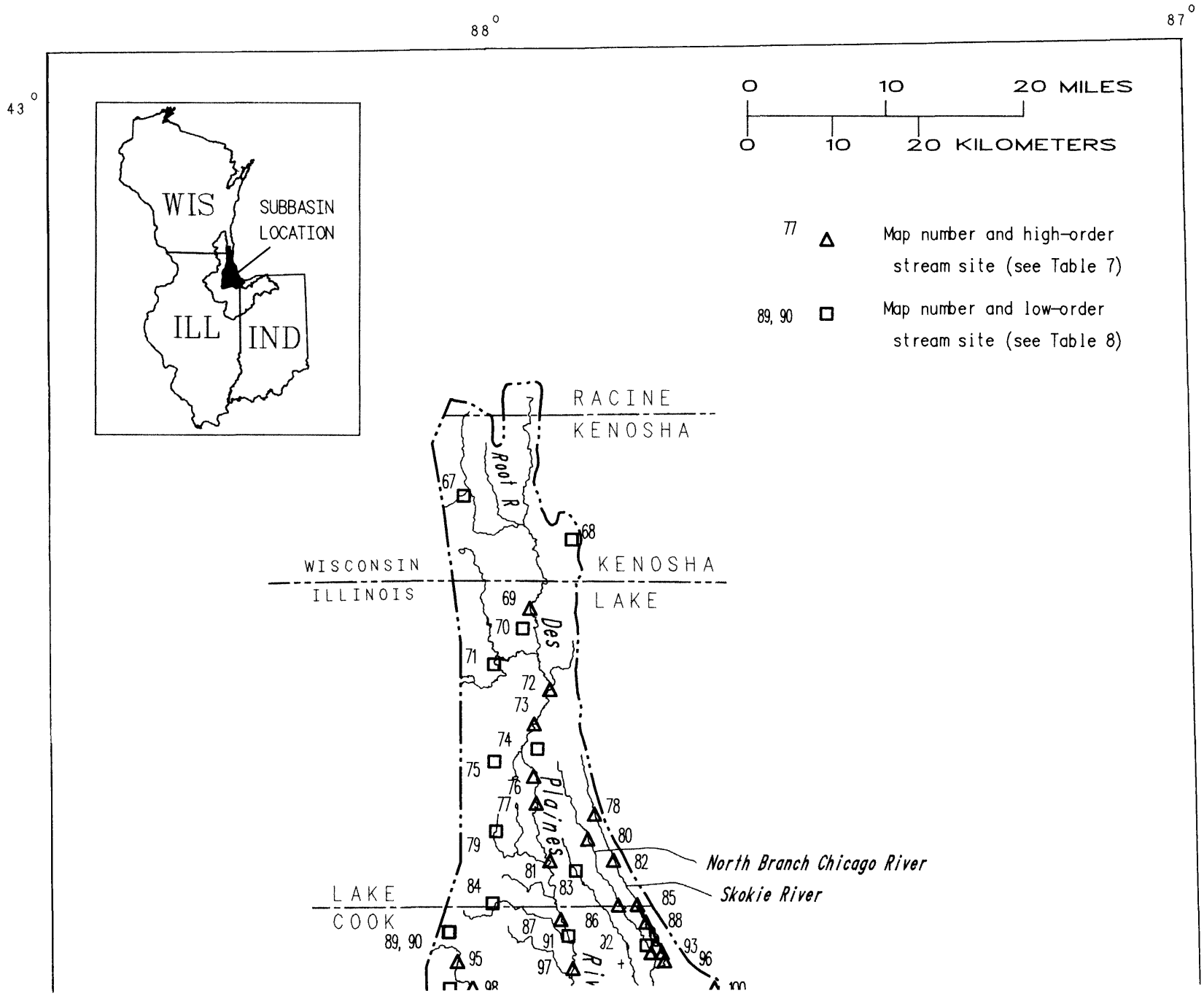
Figure 2.--Sample-site locations in the uppper Fox River subbasin (subbasin 1), hydrologic unit 07120006.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77 Map number and high-order stream site (see Table 7)
89, 90 Map number and low-order stream site (see Table 8)
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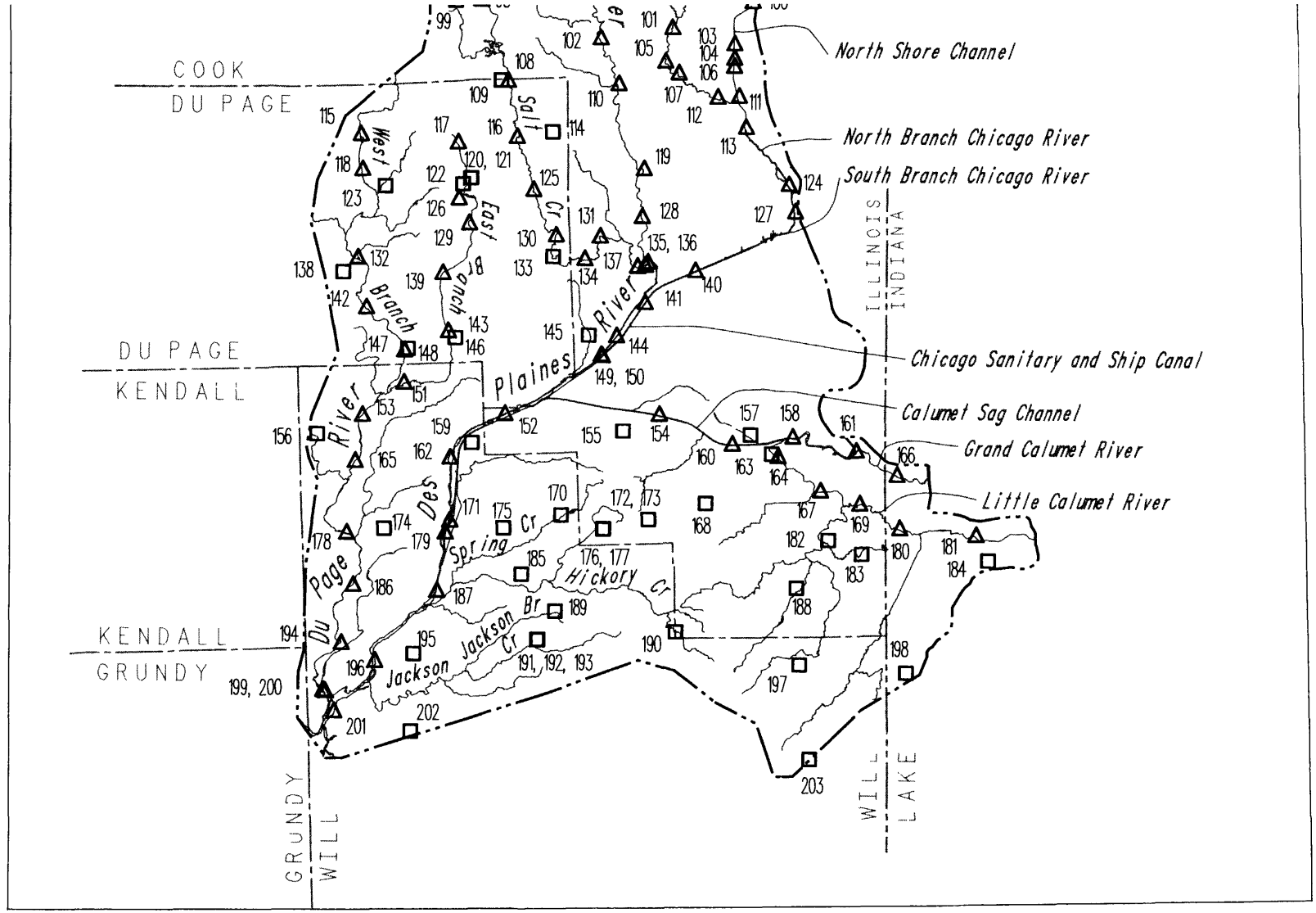
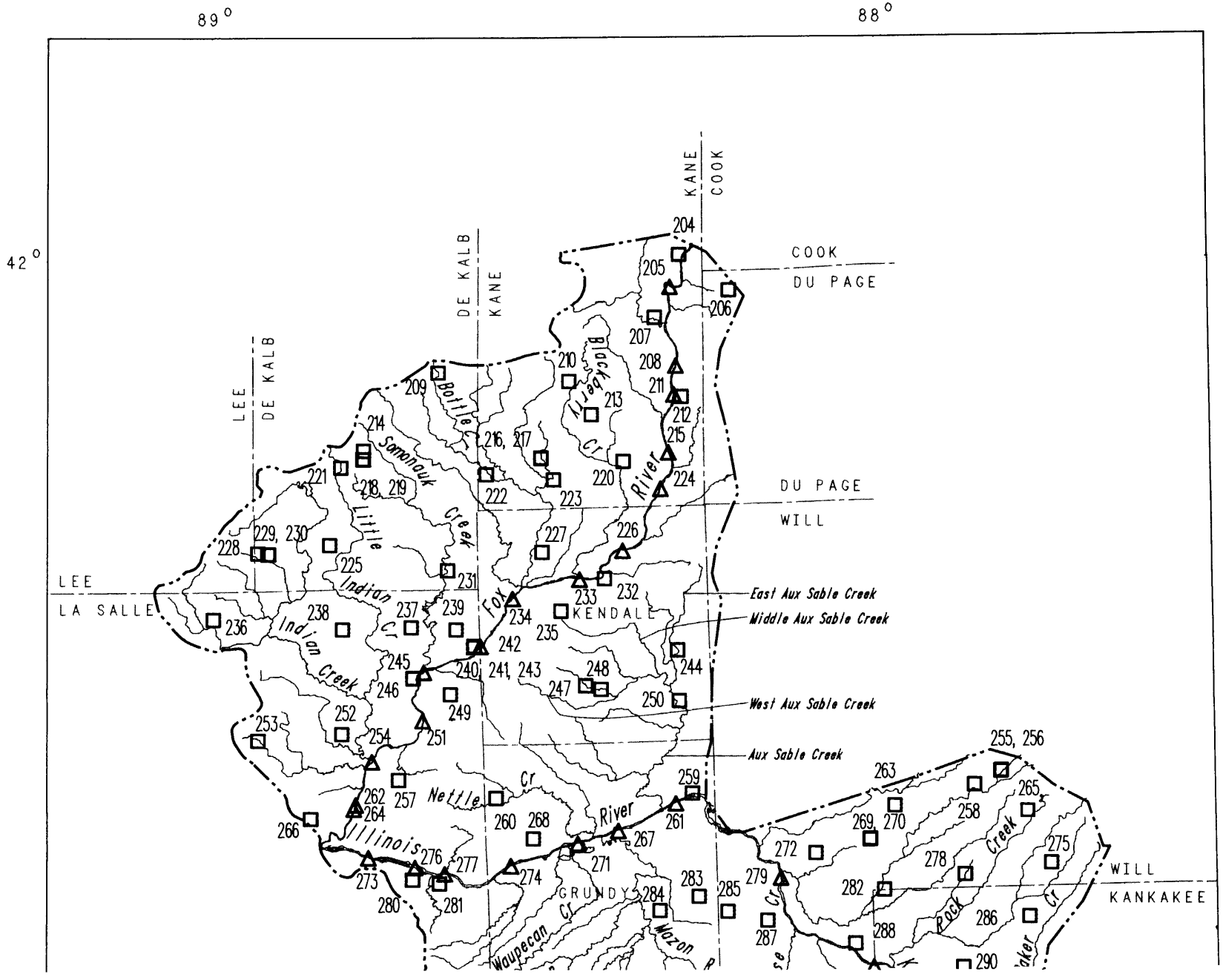


Albers Equal Area Projection
Base from U.S. Geological Survey
1:100,000 and 1:250,000 Digital Line Graphs

Figure 3.--Sample-site locations in the Des Plaines River subbasin and the Illinois Waterway Canal system (subbasin 2), hydrologic units 07120003 and 07120004.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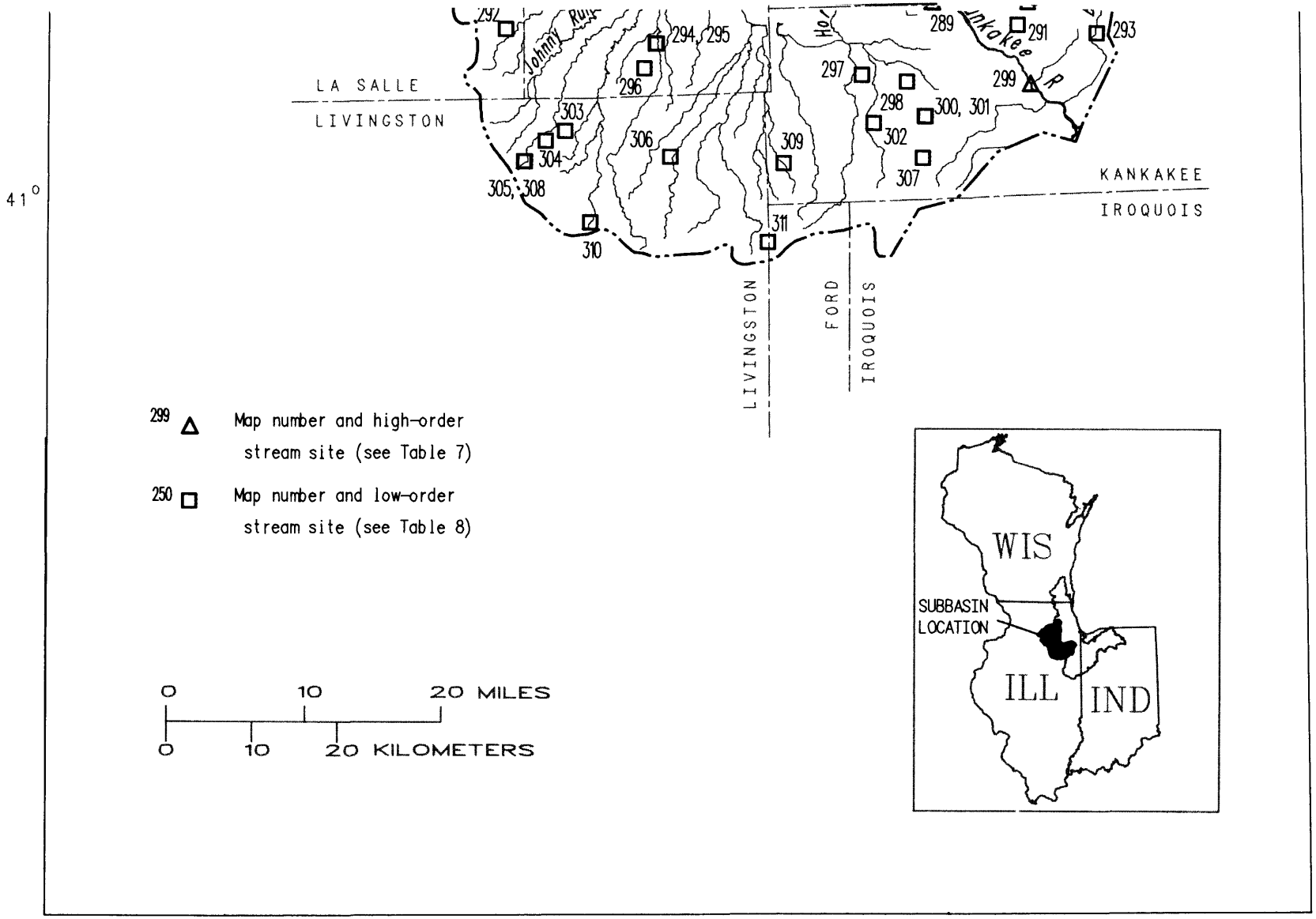

Albers Equal Area Projection
Base from U.S. Geological Survey
1:100,000 and 1:250,000 Digital Line Graphs

Figure 4.--Sample-site locations in the lower Fox, Illinois, and lower Kankakee River basin (subbasin 3), hydrologic units 07120005, 07120007, and lower portion 07120001.

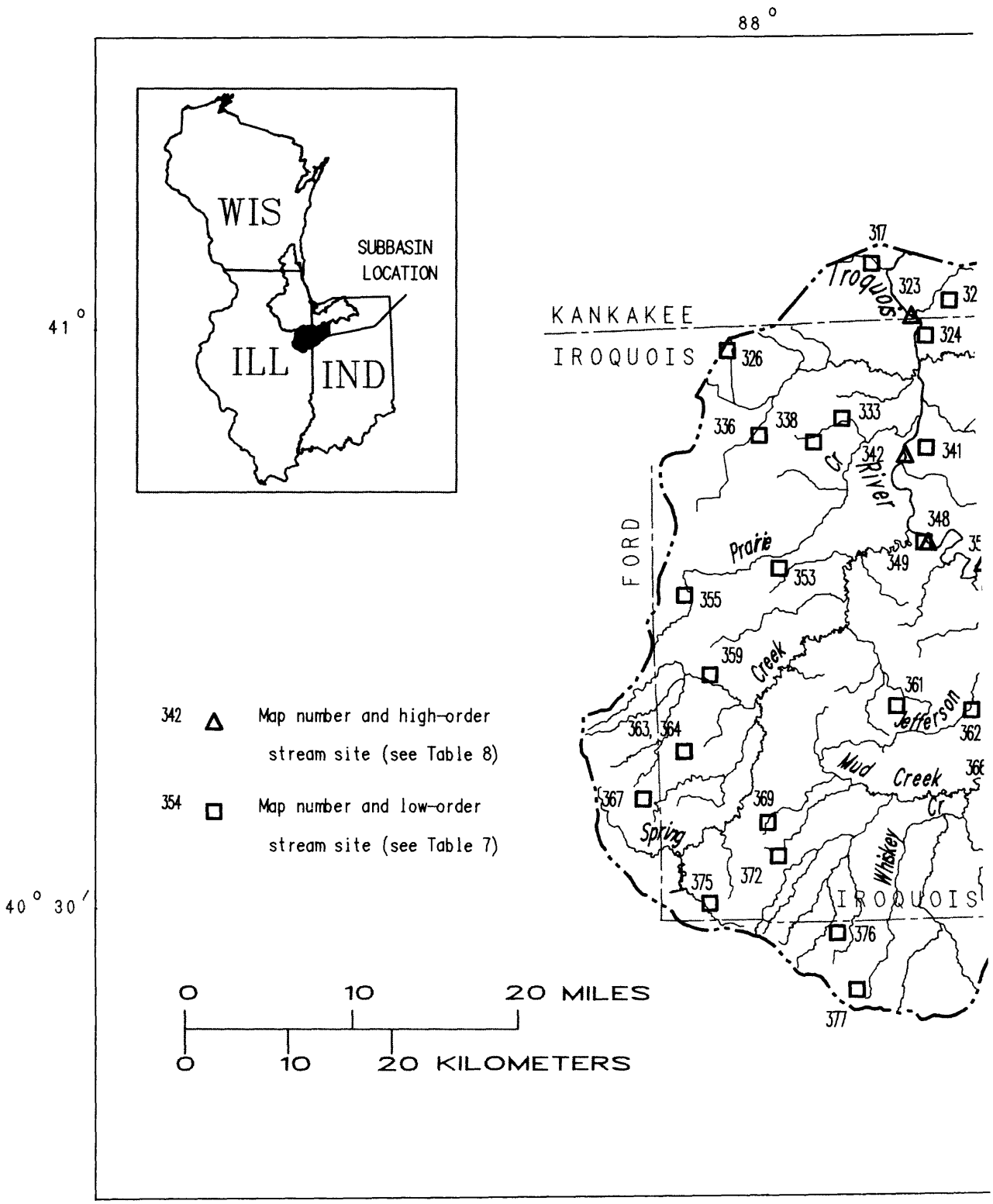

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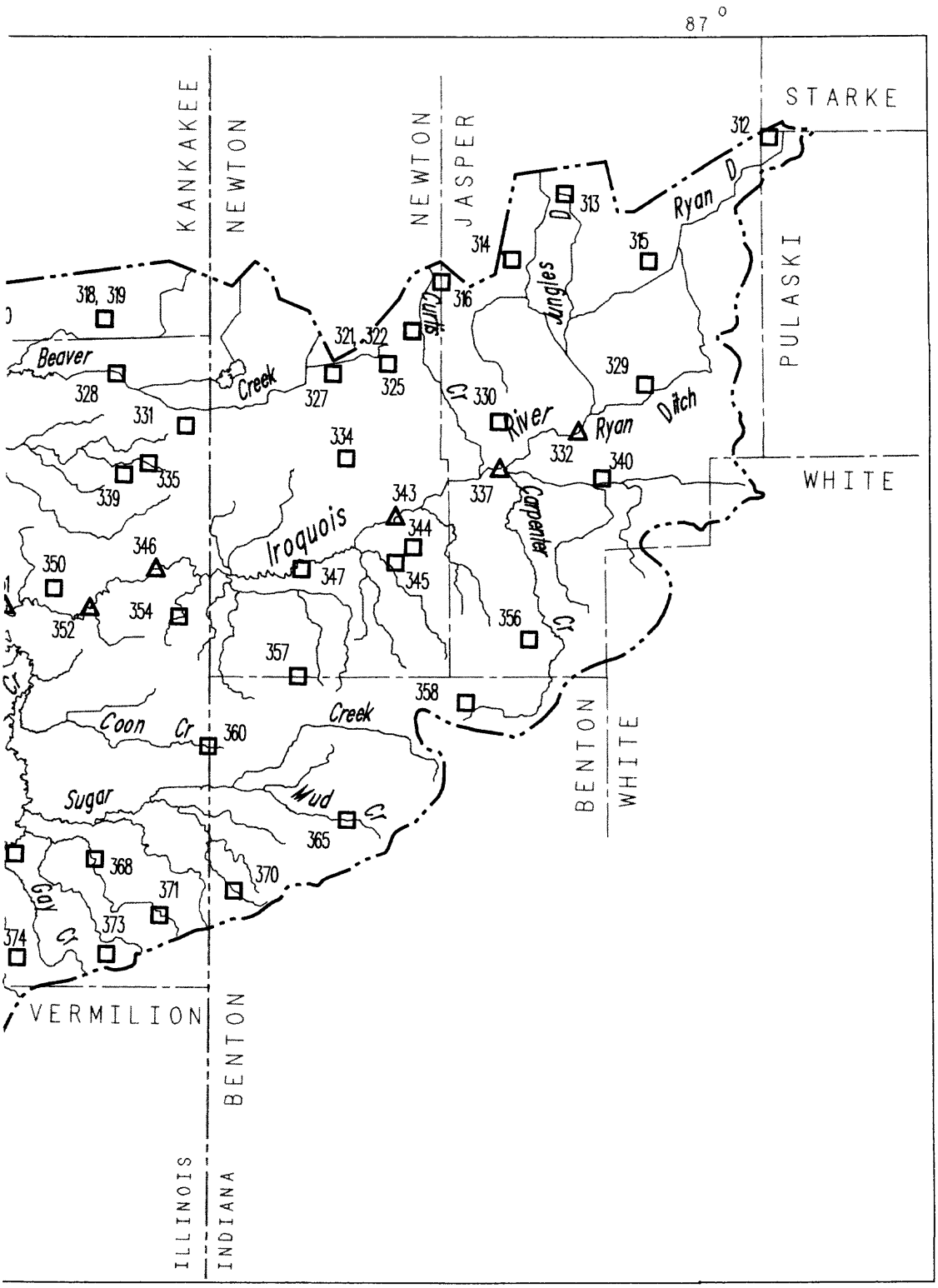
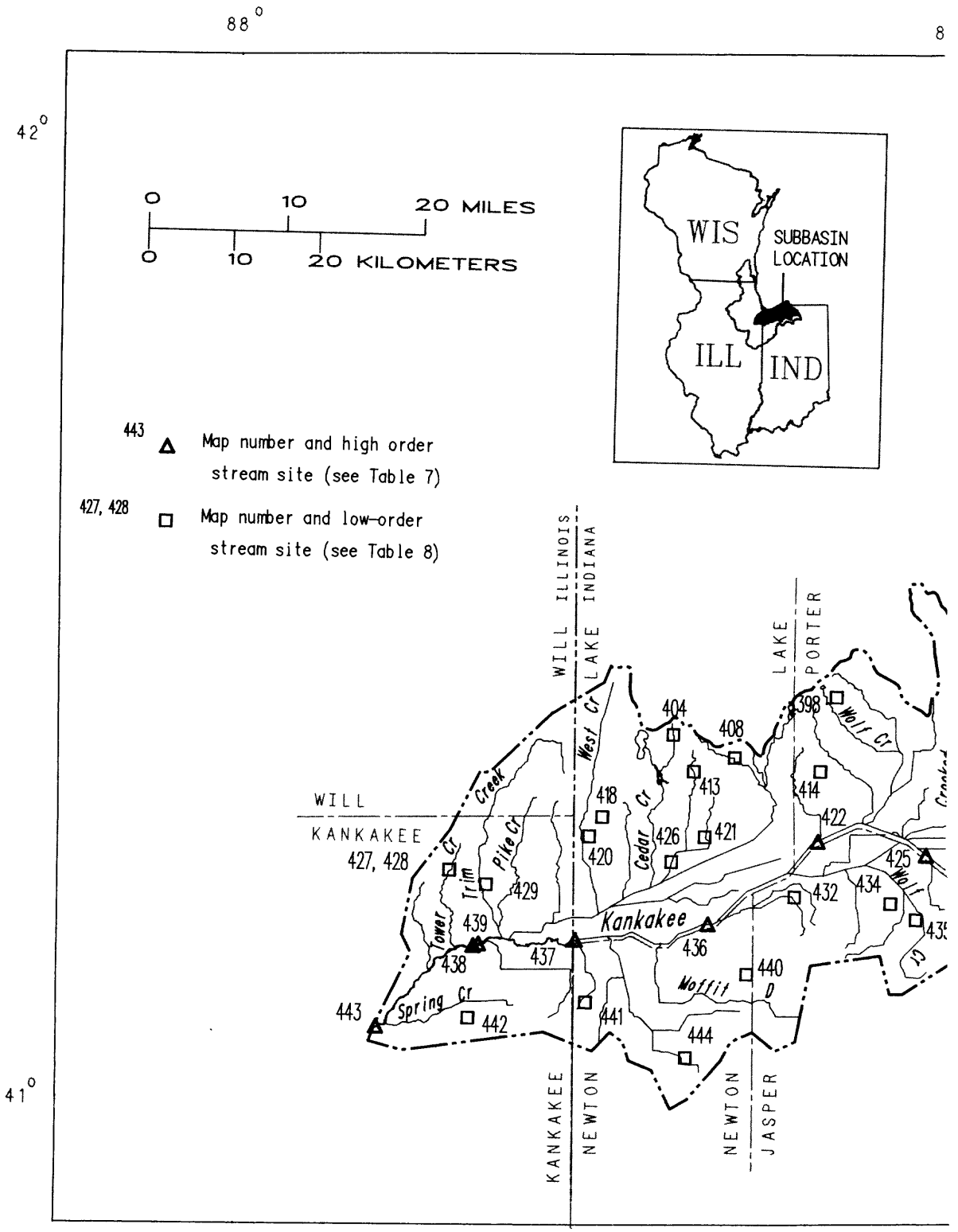
Figure 5.--Sample-site locations in the Iroquois River



basin (subbasin 4), hydrologic unit 07120002.



Alber Equal Area Projection
Base from U.S. Geological Survey
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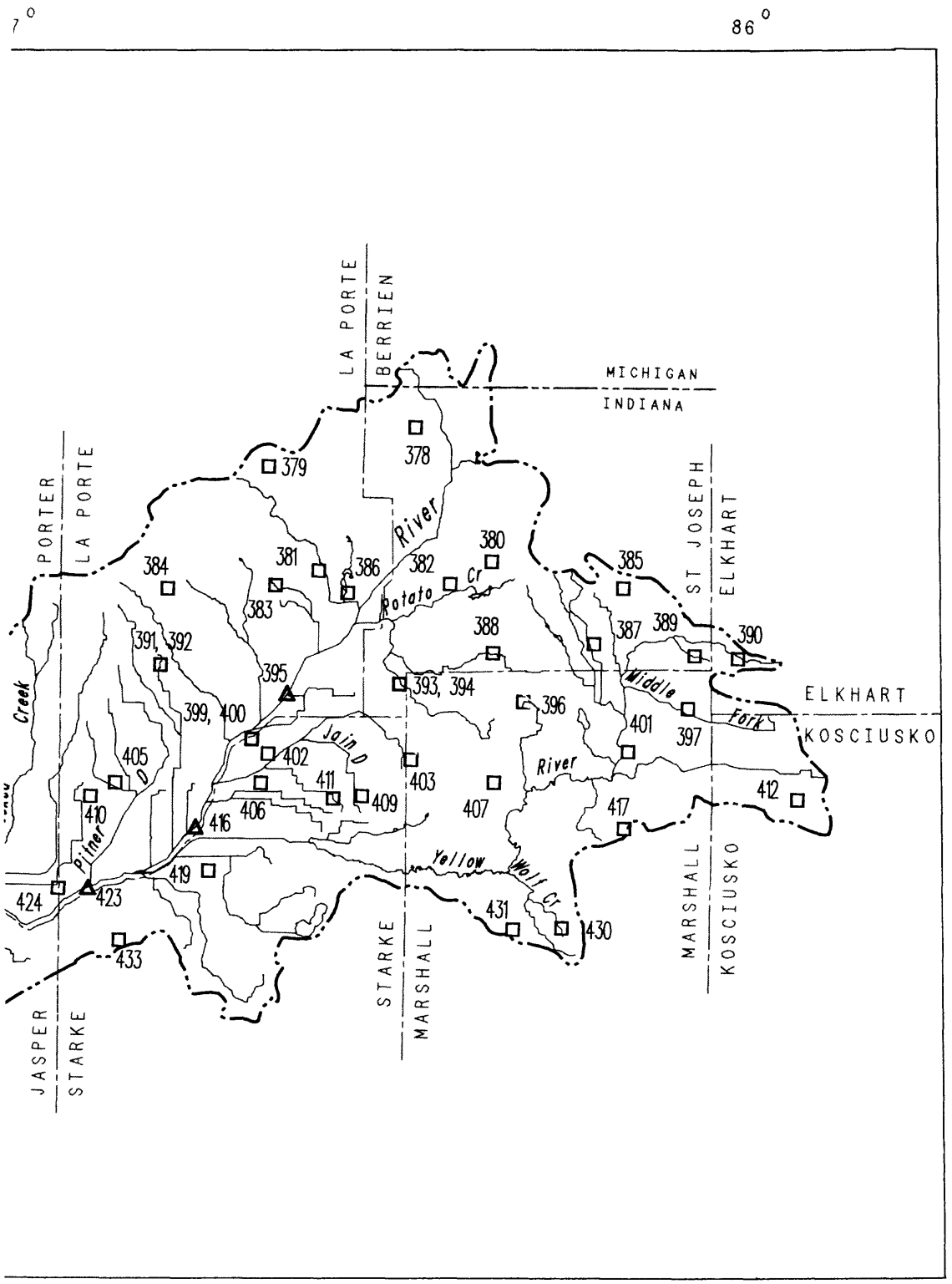
Figure 6.--Sample-site locations in the upper Kankakee River



basin (subbasin 5) upper portion of hydrologic unit 07120001.

Table 1.--Chemical analytical methods and minimum reporting levels for the streambed sediment survey of the upper Illinois River basin

[pct, percent on a dry-weight basis; μg/g, micrograms per gram]

Element	Units	Minimum reporting level	Analytical method[1]	Decomposition method[2]
Aluminum	pct	0.1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Antimony	μg/g	.1	Hydride-AAS	(HNO_3, $HClO_4$, HF)
Arsenic	μg/g	.1	Hydride-AAS	(HNO_3, $HClO_4$, HF)
Barium	μg/g	1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Beryllium	μg/g	1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Bismuth	μg/g	10	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Boron	μg/g	.4	ICP-AES	(Hot-water dissolution)
Cadmium	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Calcium	pct	.05	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Carbon, inorganic	pct	.01	Titration	($HClO_4$)
Carbon, organic	pct	.01	By difference	
Carbon, total	pct	.01	Infrared	(Combustion)
Cerium	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Chromium	μg/g	1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Cobalt	μg/g	1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Copper	μg/g	1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Europium	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Gallium	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Gold	μg/g	8	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Holmium	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Iron	pct	.05	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Lanthanum	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Lead	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Lithium	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Magnesium	pct	.005	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Manganese	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Mercury	μg/g	.02	Cold vapor-AAS	(HNO_3, $Na_2Cr_2O_7$)
Molybdenum	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Neodymium	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Nickel	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Niobium	μg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Phosphorus	pct	.005	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Potassium	pct	.05	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Scandium	μg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Selenium	μg/g	.1	Hydride-AAS	(HNO_3, $HClO_4$, HF)

Table 1.--Chemical analytical methods and minimum reporting levels for the streambed sediment survey of the upper Illinois River basin--Continued

Element	Units	Minimum reporting level	Analytical method[1]	Decomposition method[2]
Silver	µg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Sodium	pct	.005	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Strontium	µg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Sulfur	pct	.01	Infrared	(Combustion)
Tantalum	µg/g	40	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Thorium	µg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Tin	µg/g	10	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Titanium	pct	.005	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Uranium	µg/g	.05	Fluorimetry	(Partial HNO_3)
Vanadium	µg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Ytterbium	µg/g	1	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Yttrium	µg/g	2	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)
Zinc	µg/g	4	ICP-AES	(HCl, HNO_3, $HClO_4$, HF)

[1] ICP-AES means inductively coupled plasma atomic emission spectroscopy. Hydride AAS means atomic absorption spectroscopy after element-hydride generation.

Cold vapor AAS means atomic absorption spectroscopy after mercury vapor generation.

Infrared means detection by infrared spectrometry after combustion.

Fluorimetry means determination by ultra-violet fluorimetry.

Titration means coulometric titration of hydroxyethylcarbamic acid formed after carbon dioxide evolution from the acid digestion.

[2] (HCl, HNO_3, $HClO_4$, HF) means total digestion using hydrochloric, nitric, perchloric and hydrofluoric acids.

(HNO_3, $HClO_4$, HF) means total digestion using nitric, perchloric, and hydrofluoric acids.

Hot water dissolution was the partial digestion technique used for boron. (HNO_3, $Na_2Cr_2O_7$) means digestion using nitric acid and sodium dichromate. Combustion was the decomposition technique for sulfur and total carbon. (partial HNO_3) means partial digestion using nitric acid.

Table 2.--Percentile distribution of element concentrations in 135 samples of fine-fraction streambed sediment collected from high-order streams of the upper Illinois River basin

[<, less than the reporting level shown; pct, percent on a dry weight basis; µg/g, micrograms per gram]

Element	Units	Percentiles				
		10	25	50 (median)	75	90
Aluminum	pct	3.7	4.6	5.3	5.9	6.3
Antimony	µg/g	.5	.7	.9	1.4	2.4
Arsenic	µg/g	6.5	7.8	9.3	12	17
Barium	µg/g	370	410	440	460	540
Beryllium	µg/g	<1	<1	2	2	2
Bismuth	µg/g	<10	<10	<10	<10	<10
Boron	µg/g	.84	1.4	2.0	2.4	3.2
Cadmium	µg/g	<2.0	<2.0	<2.0	3.5	15
Calcium	pct	3.3	4.1	5.2	6.8	11
Carbon, inorganic	pct	1.18	1.64	2.16	2.99	3.94
Carbon, organic	pct	2.31	2.92	3.57	4.56	5.62
Carbon, total	pct	4.10	4.87	5.82	7.62	8.71
Cerium	µg/g	37	45	52	59	62
Chromium	µg/g	54	65	77	120	250
Cobalt	µg/g	10	12	14	16	18
Copper	µg/g	25	35	52	100	180
Europium	µg/g	<2	<2	<2	<2	<2
Gallium	µg/g	9	11	13	14	16
Gold	µg/g	<8	<8	<8	<8	<8
Holmium	µg/g	<4	<4	<4	<4	<4
Iron	pct	2.4	2.8	3.3	3.7	4.6
Lanthanum	µg/g	21	25	28	32	35
Lead	µg/g	31	42	75	190	320
Lithium	µg/g	24	29	36	44	48
Magnesium	pct	1.6	2.0	2.4	2.8	3.2
Manganese	µg/g	450	590	740	940	1,500
Mercury	µg/g	.10	.21	.44	.84	2.01
Molybdenum	µg/g	<2	<2	<2	3	5
Neodymium	µg/g	17	22	25	29	30
Nickel	µg/g	24	28	33	43	75

Table 2.--Percentile distribution of element concentrations in 135 samples of fine-fraction streambed sediment collected from high-order streams of the upper Illinois River basin--Continued

Element	Units	Percentiles				
		10	25	50 (median)	75	90
Niobium	µg/g	<4	<4	5	6	7
Phosphorus	pct	.09	.12	.16	.24	.36
Potassium	pct	1.4	1.7	2.1	2.3	2.6
Scandium	µg/g	6	7	9	10	11
Selenium	µg/g	.7	.9	1.1	1.4	1.8
Silver	µg/g	<2	<2	<2	4	7
Sodium	pct	.37	.42	.47	.54	.59
Strontium	µg/g	100	120	130	160	290
Sulfur	pct	.12	.18	.24	.36	.58
Tantalum	µg/g	<40	<40	<40	<40	<40
Thorium	µg/g	5.4	7.0	8.0	9.0	11
Tin	µg/g	<10	<10	<10	<10	40
Titanium	pct	.19	.21	.24	.26	.29
Uranium	µg/g	.7	1.1	1.5	2.2	2.9
Vanadium	µg/g	50	59	72	84	92
Ytterbium	µg/g	<1	2	2	2	2
Yttrium	µg/g	12	14	16	18	20
Zinc	µg/g	100	140	200	410	770

Table 3.--Percentile distribution of element concentrations in 238 samples of fine-fraction streambed sediment collected from low-order streams of the upper Illinois River basin

[<, less than the reporting level shown; pct, percent on a dry weight basis; μg/g, micrograms per gram]

Element	Units	Percentiles				
		10	25	50 (median)	75	90
Aluminum	pct	3.8	4.4	5.2	5.7	6.2
Antimony	μg/g	.4	.5	.7	.9	1.1
Arsenic	μg/g	5.4	7.0	9.3	13	21
Barium	μg/g	380	420	470	520	560
Beryllium	μg/g	<1	<1	2	2	2
Bismuth	μg/g	<10	<10	<10	<10	<10
Boron	μg/g	.8	.9	1.2	1.6	2.4
Cadmium	μg/g	<2	<2	<2	<2	<2
Calcium	pct	.91	1.5	2.7	4.7	7.3
Carbon, inorganic	pct	.07	.28	.88	1.94	3.05
Carbon, organic	pct	1.80	2.17	2.76	3.85	6.20
Carbon, total	pct	2.58	3.07	3.96	5.62	8.66
Cerium	μg/g	43	50	58	63	68
Chromium	μg/g	41	47	56	64	74
Cobalt	μg/g	9	11	13	17	20
Copper	μg/g	17	20	23	28	35
Europium	μg/g	<2	<2	<2	<2	<2
Gallium	μg/g	9	10	12	13	15
Gold	μg/g	<8	<8	<8	<8	<8
Holmium	μg/g	<4	<4	<4	<4	<4
Iron	pct	2.2	2.5	2.9	3.3	4.1
Lanthanum	μg/g	23	27	30	32	34
Lead	μg/g	19	23	27	34	53
Lithium	μg/g	18	24	30	37	44
Magnesium	pct	.66	.89	1.3	2.0	2.7
Manganese	μg/g	370	520	680	920	1,400
Mercury	μg/g	.02	.02	.04	.06	.12
Molybdenum	μg/g	<2	<2	<2	<2	3
Neodymium	μg/g	21	24	27	30	32
Nickel	μg/g	17	21	26	30	35

Table 3.--Percentile distribution of element concentrations in 238 samples of fine-fraction streambed sediment collected from low-order streams of the upper Illinois River basin--Continued

Element	Units	Percentiles				
		10	25	50 (median)	75	90
Niobium	µg/g	<4	<4	5	7	8
Phosphorus	pct	.06	.07	.08	.11	.14
Potassium	pct	1.2	1.6	1.9	2.2	2.4
Scandium	µg/g	6	7	8	10	11
Selenium	µg/g	.4	.5	.7	1.0	1.3
Silver	µg/g	<2	<2	<2	<2	<2
Sodium	pct	.46	.53	.60	.69	.79
Strontium	µg/g	88	96	110	120	140
Sulfur	pct	.03	.04	.07	.17	.38
Tantalum	µg/g	<40	<40	<40	<40	<40
Thorium	µg/g	6	7	9	9	10
Tin	µg/g	<10	<10	<10	<10	<10
Titanium	pct	.20	.23	.26	.28	.31
Uranium	µg/g	.8	1.1	1.5	2.1	2.8
Vanadium	µg/g	53	64	74	82	91
Ytterbium	µg/g	2	2	2	2	2
Yttrium	µg/g	14	16	17	19	20
Zinc	µg/g	67	79	100	130	240

Table 4.--Percent variance results from one-way, nested analysis of variance of ranked data sets

[-, variance data were not available at this level]

Element	Sample split		Within site		Within grid		Between site	
	Low-order streams	High-order streams	Low-order streams	High-order streams	Low-order streams	High-order streams	Low-order streams	High-order streams
Aluminum	1.2	3.5	3.3	5.8	17.0	-	78.4	90.7
Antimony	37.9	17.8	30.9	10.1	10.5	-	20.7	70.8
Arsenic	28.4	19.6	10.5	13.6	13.2	-	47.9	69.4
Barium	4.3	32.8	14.0	.0	41.8	-	40.2	67.2
Beryllium	6.4	12.5	3.2	.9	19.7	-	70.7	84.7
Boron	68.3	22.4	4.8	5.5	18.5	-	8.4	72.1
Calcium	.2	.6	9.8	1.9	33.4	-	56.7	97.5
Carbon, inorganic	5.1	.4	8.7	3.4	37.4	-	48.8	96.2
Carbon, organic	5.0	1.4	36.0	10.0	15.5	-	43.0	88.6
Carbon, total	5.4	.4	10.7	7.5	33.3	-	50.4	92.2
Cerium	14.6	4.7	19.8	9.6	30.6	-	34.8	85.7
Chromium	6.9	11.4	10.4	6.2	10.9	-	71.7	82.4
Cobalt	4.2	5.4	12.0	3.7	70.9	-	12.7	90.8
Copper	8.3	5.7	14.0	4.7	39.4	-	38.3	90.8
Gallium	4.4	13.8	1.5	5.7	20.4	-	73.8	80.5
Iron	1.7	.9	11.8	8.0	42.2	-	44.0	91.1
Lanthanum	27.1	20.8	12.8	5.4	26.7	-	33.1	73.6
Lead	4.5	2.6	17.6	4.1	34.2	-	44.0	93.3
Lithium	.8	2.0	9.0	6.8	6.3	-	84.0	89.9
Magnesium	.8	1.9	8.8	4.1	44.3	-	46.1	94.1
Manganese	.8	1.7	23.8	6.5	73.0	-	2.8	91.8
Mercury	41.5	9.9	13.3	5.9	.0	-	45.3	87.5
Neodymium	26.8	13.4	11.8	2.9	26.0	-	35.5	83.7
Nickel	1.2	5.0	6.7	7.1	34.6	-	57.3	90.8
Niobium	48.6	51.0	11.1	.2	6.8	-	33.4	49.0
Phosphorus	2.0	2.4	23.9	2.5	15.1	-	59.0	95.1
Potassium	2.7	7.0	.3	5.7	10.9	-	86.0	87.3
Scandium	3.1	5.0	7.5	8.6	18.2	-	71.3	86.4
Selenium	25.4	45.9	30.6	7.2	42.8	-	.8	46.8
Sodium	1.2	5.3	32.1	1.1	24.3	-	42.7	94.7
Strontium	1.6	.8	14.9	2.8	32.9	-	50.5	96.5
Sulfur	8.7	13.0	10.8	11.1	37.1	-	43.4	74.0
Thorium	26.2	20.4	16.0	7.1	3.9	-	53.7	72.5
Titanium	18.7	12.3	35.9	12.3	35.2	-	10.9	70.7
Uranium	7.7	20.2	31.9	.2	.0	-	60.4	79.8
Vanadium	2.3	2.6	13.3	8.8	36.3	-	48.2	88.6
Ytterbium	50.1	21.9	14.3	.0	.0	-	34.1	78.1
Yttrium	12.4	2.6	25.4	8.7	24.8	-	36.9	88.7
Zinc	2.0	1.9	19.6	5.4	55.1	-	23.3	92.7

Table 5.--Correlation coefficients on ranked concentration data from high-order streams, grouped by factor matrix

[Coefficients have been multiplied by a factor of 100;
--, correlation not significant at the $\alpha = 0.10$ level]

	Aluminum	Vana-dium	Cerium	Scan-dium	Lithium	Yttrium	Gal-lium	Neo-dymium	Tita-nium	Lantha-num	Potas-sium
Aluminum	100	95	87	95	93	80	88	78	84	80	88
Vanadium	95	100	87	93	93	80	87	78	85	80	87
Cerium	87	87	100	84	80	93	79	93	85	94	76
Scandium	95	93	84	100	94	81	88	76	81	75	88
Lithium	93	93	80	94	100	72	87	72	78	71	91
Yttrium	80	80	93	81	72	100	69	88	83	87	67
Gallium	88	87	79	88	87	69	100	74	71	71	81
Neodymium	78	78	93	76	72	88	74	100	78	92	68
Titanium	84	85	85	81	78	83	71	78	100	78	75
Lanthanum	80	80	94	75	71	87	71	92	78	100	70
Potassium	88	87	76	88	91	67	81	68	75	70	100
Calcium	-73	-74	-71	-74	-66	-72	-72	-63	-70	-62	-62
Cobalt	68	74	67	72	73	69	74	60	62	57	68
Thorium	65	63	77	63	59	74	68	84	63	75	52
Beryllium	76	79	66	75	80	61	68	53	66	56	70
Inorganic carbon	-64	-66	-63	-62	-56	-63	-65	-56	-64	-55	-49
Total carbon	-58	-55	-64	-58	-46	-65	-50	-65	-60	-63	-53
Uranium	66	68	59	61	69	52	60	50	53	52	68
Ytterbium	54	52	59	54	51	58	52	57	50	56	53
Strontium	-49	-47	-46	-49	-50	-39	-58	-44	-37	-42	-51
Niobium	45	48	49	49	41	59	39	43	51	42	36
Barium	36	39	42	33	36	38	40	36	40	41	27
Copper	19	20	--	19	35	--	17	--	--	--	27
Lead	--	--	--	--	21	--	--	--	--	--	17
Zinc	20	23	--	20	34	--	24	--	--	--	27
Cadmium	--	--	--	--	--	--	--	-17	--	--	--
Silver	--	14	--	15	27	--	--	--	--	--	21
Chromium	47	48	34	48	59	29	47	29	36	28	53
Mercury	17	22	--	18	30	--	15	--	--	--	27
Phosphorus	--	--	--	--	17	--	--	--	--	--	--
Antimony	--	18	--	14	26	--	20	--	--	--	20
Nickel	51	56	40	52	64	35	51	34	40	34	55
Tin	--	--	--	--	14	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	14	--	--	--	--
Sodium	--	--	--	--	-16	18	--	13	--	--	--
Sulfur	--	--	-29	--	--	-31	--	-30	-23	-29	--
Organic carbon	-23	-19	-33	-26	-17	-35	--	-39	-31	-37	-32
Molybdenum	24	33	22	22	34	--	28	--	20	--	25
Manganese	-23	-17	--	-17	-28	--	--	--	--	--	-26
Arsenic	-25	-32	-18	-25	28	-15	36	-15	--	--	-15
Iron	51	61	49	55	55	49	65	41	43	40	40
Magnesium	-16	-20	-22	--	--	-22	-23	-21	-18	-20	--
Boron	15	21	26	15	19	26	--	23	18	21	16

Table 5.--Correlation coefficients on ranked concentration data from high-order streams, grouped by factor matrix--Continued

	Calcium	Cobalt	Thorium	Beryl-lium	Inorganic carbon	Total carbon	Uranium	Ytterbium	Stron-tium	Niobium
Aluminum	-73	68	65	76	-64	-58	66	54	-49	42
Vanadium	-74	74	63	79	-66	-55	68	52	-47	44
Cerium	-71	67	77	66	-63	-64	59	59	-46	45
Scandium	-74	72	63	75	-62	-58	61	54	-49	45
Lithium	-66	73	59	80	-56	-46	69	51	-50	41
Yttrium	-72	69	74	61	-63	-65	52	58	-39	55
Gallium	-72	74	68	68	-65	-50	60	52	-58	35
Neodymium	-63	60	84	53	-56	-65	50	57	-41	38
Titanium	-70	62	63	66	-64	-60	53	50	-37	48
Lanthanum	-62	57	75	56	-55	-63	52	56	-42	38
Potassium	-62	68	52	70	-49	-53	68	53	-51	33
Calcium	100	-60	-57	-53	92	76	-42	-46	57	-42
Cobalt	-60	100	51	68	-52	-38	59	44	-51	45
Thorium	-57	51	100	36	-55	-58	34	47	-48	36
Beryllium	-53	68	36	100	-44	-23	71	32	-30	35
Inorganic carbon	92	-52	-55	-44	100	68	-39	-39	54	-39
Total carbon	76	-38	-58	-23	68	100	-19	-41	51	-29
Uranium	-42	59	34	71	-39	-19	100	45	-33	30
Ytterbium	-46	44	47	32	-39	-41	45	100	-35	28
Strontium	57	-51	-48	-30	54	51	-33	-35	100	-18
Niobium	-42	45	36	35	-39	-29	30	28	-18	100
Barium	-25	33	29	37	-25	--	35	39	-20	21
Copper	--	25	--	45	--	43	55	19	--	--
Lead	24	15	-15	36	27	54	41	--	--	--
Zinc	--	32	--	44	--	41	55	24	--	--
Cadmium	29	--	-25	22	30	59	31	--	21	--
Silver	--	21	--	38	--	45	46	--	--	--
Chromium	-16	46	16	65	--	19	68	13	--	--
Mercury	--	27	--	41	--	41	46	10	--	--
Phosphorus	--	22	--	30	--	45	36	13	18	--
Antimony	--	25	--	39	--	36	43	--	--	--
Nickel	-21	58	22	69	-17	14	70	30	-19	--
Tin	18	--	-20	25	18	50	32	--	--	--
Selenium	--	--	--	27	--	47	25	--	14	--
Sodium	-33	--	--	-30	-30	-58	-18	26	--	--
Sulfur	26	--	-30	17	24	56	31	-16	15	-8
Organic carbon	30	--	-31	--	25	77	--	-25	33	--
Molybdenum	-24	39	--	48	-26	--	54	--	--	--
Manganese	--	--	--	-30	--	--	-41	--	--	--
Arsenic	--	--	--	--	-21	--	--	--	-22	--
Iron	-61	74	40	58	-63	-28	49	30	-45	33
Magnesium	50	--	-33	--	65	38	--	--	19	-30
Boron	--	16	20	30	--	--	29	--	24	27

Table 5.--Correlation coefficients on ranked concentration data from high-order streams, grouped by factor matrix--Continued

	Barium	Copper	Lead	Zinc	Cadmium	Silver	Chromium	Mercury	Phosphorus	Antimony	Nickel
Aluminum	36	19	--	20	--	--	47	14	--	--	51
Vanadium	39	20	--	23	--	14	48	18	--	18	56
Cerium	42	--	--	--	--	--	34	--	--	--	40
Scandium	33	19	--	20	--	15	48	15	--	14	52
Lithium	36	32	21	34	--	27	59	27	17	26	64
Yttrium	38	--	--	--	--	--	29	--	--	--	35
Gallium	40	17	--	24	--	--	47	12	--	20	51
Neodymium	36	--	--	--	-17	--	29	--	--	--	34
Titanium	40	--	--	--	--	--	36	--	--	--	40
Lanthanum	41	--	--	--	--	--	28	--	--	--	34
Potassium	27	27	17	27	--	21	53	27	--	20	55
Calcium	-25	--	24	--	29	--	-16	--	--	--	-21
Cobalt	33	25	15	32	--	21	46	27	22	25	58
Thorium	29	--	-15	--	-25	--	16	--	--	--	22
Beryllium	37	45	36	44	22	38	65	41	30	39	69
Inorganic carbon	-25	--	27	--	30	--	--	--	--	--	-17
Total carbon	--	43	54	41	59	45	19	41	45	36	14
Uranium	35	55	41	55	31	46	68	46	36	43	70
Ytterbium	39	19	--	24	--	--	35	--	--	--	30
Strontium	-20	--	--	--	21	--	--	--	18	--	-19
Niobium	21	--	--	--	--	--	--	--	--	--	17
Barium	100	30	27	31	37	29	39	26	29	33	40
Copper	30	100	90	92	75	80	86	85	77	77	78
Lead	27	90	100	90	77	72	79	82	72	77	71
Zinc	31	92	90	100	71	76	85	82	80	79	76
Cadmium	37	75	77	71	100	84	69	65	69	67	69
Silver	29	80	72	76	84	100	77	70	67	72	75
Chromium	39	86	79	85	69	77	100	75	68	73	91
Mercury	26	85	82	82	65	70	75	100	68	66	71
Phosphorus	29	77	72	80	69	67	68	68	100	64	65
Antimony	33	77	77	79	67	72	73	66	64	100	70
Nickel	40	78	71	76	69	75	91	71	65	70	100
Tin	25	68	67	65	78	81	63	64	63	63	65
Selenium	33	56	64	60	53	47	50	48	58	51	46
Sodium	--	-51	-57	-44	-58	-52	-47	-48	-38	-48	-55
Sulfur	--	56	53	55	49	54	38	47	39	45	39
Organic carbon	15	41	48	46	53	45	27	34	48	38	26
Molybdenum	21	47	36	49	25	41	48	48	41	48	53
Manganese	--	-53	-46	-44	-38	-46	-49	-45	-25	-28	-43
Arsenic	--	--	--	--	--	--	--	--	--	14	--
Iron	32	20	--	34	--	19	36	15	30	35	44
Magnesium	--	45	48	36	44	39	34	46	35	33	26
Boron	--	41	36	35	15	21	29	37	46	20	28

Table 5.--Correlation coefficients on ranked concentration data from high-order streams, grouped by factor matrix--Continued

	Tin	Selenium	Sodium	Sulfur	Organic carbon	Molyb-denum	Manga-nese	Arsenic	Iron	Magne-sium	Boron
Aluminum	--	--	--	--	-23	24	-23	-15	51	-16	15
Vanadium	--	--	--	--	-19	33	-17	--	61	-20	21
Cerium	--	--	--	-29	-33	--	--	-20	49	-22	26
Scandium	--	--	--	--	-26	22	-17	-17	55	--	15
Lithium	14	--	-16	--	-17	34	-28	--	55	--	19
Yttrium	--	--	18	-31	-35	--	--	-20	49	-22	26
Gallium	--	14	--	--	--	28	--	--	65	-23	--
Neodymium	--	--	13	-30	-39	--	--	--	41	-21	23
Titanium	--	--	--	-23	-31	20	--	-23	43	-18	18
Lanthanum	--	--	--	-29	-37	--	--	-23	40	-20	21
Potassium	--	--	--	--	-32	25	-26	-19	40	--	16
Calcium	18	--	-33	26	30	-24	--	--	-61	50	--
Cobalt	--	--	--	--	--	39	--	--	74	--	16
Thorium	-20	--	--	-30	-31	--	--	--	40	-33	20
Beryllium	25	27	-30	17	--	48	-30	--	58	--	30
Inorganic carbon	18	--	-30	24	25	-26	--	-21	-63	65	--
Total carbon	50	47	-58	56	77	--	--	--	-28	38	--
Uranium	32	25	-18	31	--	54	-41	--	49	--	29
Ytterbium	--	--	26	-16	-25	--	--	--	30	--	--
Strontium	--	14	--	15	33	--	--	-22	-45	19	24
Niobium	--	--	--	-8	--	--	--	--	33	-30	27
Barium	25	33	--	--	15	21	--	--	32	--	--
Copper	68	56	-51	56	41	47	-53	--	20	45	41
Lead	67	64	-57	53	48	36	-46	--	--	48	36
Zinc	65	60	-44	55	46	49	-44	--	34	36	35
Cadmium	78	53	-58	49	53	25	-38	--	--	44	15
Silver	81	47	-52	54	45	41	-46	--	19	39	21
Chromium	63	50	-47	38	27	48	-49	--	36	34	29
Mercury	64	48	-48	47	34	48	-45	--	15	46	37
Phosphorus	63	58	-38	39	48	41	-25	--	30	35	46
Antimony	63	51	-48	45	38	48	-28	--	35	33	20
Nickel	65	46	-55	39	26	53	-43	--	44	26	28
Tin	100	45	-48	52	45	34	-39	--	13	37	18
Selenium	45	100	-46	43	67	32	-23	--	22	--	29
Sodium	-48	-46	100	-45	-54	-15	19	--	--	-16	-14
Sulfur	52	43	-45	100	53	45	-46	21	--	26	18
Organic carbon	45	67	-54	53	100	26	--	28	--	--	20
Molybdenum	34	32	-15	45	26	100	-35	26	52	--	28
Manganese	-39	-23	19	-46	--	-35	100	15	--	-20	-23
Arsenic	--	--	--	21	28	26	15	100	41	-26	--
Iron	13	22	--	--	--	52	--	41	100	-35	--
Magnesium	37	--	-16	26	--	--	-20	-26	-35	100	--
Boron	18	29	-14	18	20	28	-23	--	--	--	100

Table 6.--Correlation coefficients on ranked concentration data from low-order streams, grouped by factor matrix

[Coefficients have been multiplied by a factor of 100; --, correlation not significant at the $\alpha = 0.10$ level]

	Chro-mium	Aluminum	Vana-dium	Scan-dium	Gal-lium	Neodymium	Lithium	Lanthanum	Cerium	Thorium
Chromium	100	90	90	89	86	75	85	74	73	77
Aluminum	90	100	86	92	91	74	88	73	73	77
Vanadium	90	86	100	89	86	73	81	72	72	74
Scandium	89	92	89	100	90	67	91	64	68	71
Gallium	86	91	86	90	100	68	88	68	67	73
Neodymium	75	74	73	67	68	100	58	95	95	83
Lithium	85	88	81	91	88	58	100	53	58	63
Lanthanum	74	73	72	64	68	95	53	100	93	83
Cerium	73	73	72	68	67	95	58	93	100	80
Thorium	77	77	74	71	73	83	63	83	80	100
Potassium	79	83	70	83	80	60	86	56	62	63
Yttrium	64	62	74	63	59	82	47	79	76	67
Beryllium	74	76	73	74	72	58	76	56	57	55
Nickel	69	61	69	68	69	52	73	49	55	50
Titanium	55	57	51	46	47	64	30	69	62	65
Ytterbium	38	33	44	38	31	51	26	47	49	37
Uranium	46	42	45	43	40	32	47	28	29	35
Organic carbon	-20	-27	-22	-24	-23	-30	-19	-31	-35	-27
Selenium	--	--	--	--	--	-15	--	-13	-18	-12
Total carbon	-47	-61	-45	-47	-48	-63	-37	-62	-65	-61
Sulfur	-30	-39	-28	-28	-29	-42	-18	-45	-43	-37
Phosphorus	-17	-24	-14	-24	-18	-21	-20	-21	-24	-22
Mercury	--	-13	--	--	--	-14	--	-20	-16	-13
Zinc	20	--	19	13	18	11	19	--	--	12
Boron	--	--	--	--	--	--	--	--	--	--
Inorganic carbon	-36	-46	-32	-31	-34	-46	-26	-44	-43	-42
Magnesium	-13	-26	-12	--	-13	-26	--	-26	-23	-22
Calcium	-44	-55	-40	-40	-43	-55	-35	-52	-53	-51
Niobium	37	49	42	44	40	32	39	28	34	35
Barium	36	47	41	30	40	45	20	48	46	47
Antimony	--	--	--	--	--	--	--	--	--	--
Iron	37	23	47	35	38	30	37	25	29	28
Cobalt	39	28	42	36	41	35	41	31	40	29
Arsenic	-11	-19	--	-11	--	-11	--	-16	-11	-12
Lead	25	12	22	15	16	12	20	--	19	11
Copper	41	27	43	37	36	18	39	18	19	24
Manganese	-12	-23	--	-15	--	--	-11	--	--	-11
Molybdenum	--	--	11	--	--	--	--	--	--	--
Sodium	-30	-25	-31	-36	-35	--	-49	--	--	--
Strontium	-25	-27	-24	-29	-30	-17	-36	-13	-21	-22

Table 6.--Correlation coefficients on ranked concentration data from low-order streams, grouped by factor matrix--Continued

	Potassium	Yttrium	Beryllium	Nickel	Tita-nium	Ytter-bium	Uranium	Organic carbon	Sele-nium	Total carbon
Chromium	79	64	74	69	55	38	46	-20	--	-47
Aluminum	83	62	76	61	57	33	42	-27	--	-61
Vanadium	70	74	73	69	51	44	45	-22	--	-45
Scandium	83	63	74	68	46	38	43	-24	--	-47
Gallium	80	59	72	69	47	31	40	-23	--	-48
Neodymium	60	82	58	52	64	51	32	-30	-15	-63
Lithium	86	47	76	73	30	26	47	-19	--	-37
Lanthanum	56	79	56	49	69	47	28	-31	-13	-62
Cerium	62	76	57	55	62	49	29	-35	-18	-65
Thorium	63	67	55	50	65	37	35	-27	-12	-61
Potassium	100	41	70	65	37	24	34	-39	-21	-52
Yttrium	41	100	52	47	54	57	27	-20	--	-46
Beryllium	70	52	100	65	29	24	45	--	--	-34
Nickel	65	47	65	100	14	32	43	-12	14	-18
Titanium	37	54	29	14	100	40	11	-24	-21	-55
Ytterbium	24	57	24	32	40	100	15	--	--	-22
Uranium	34	27	45	43	11	15	100	17	18	-11
Organic carbon	-39	-20	--	-12	-24	--	17	100	64	54
Selenium	-21	--	--	14	-21	--	18	61	100	49
Total carbon	-52	-46	-34	-18	-55	-22	--	64	49	100
Sulfur	-37	-28	-17	--	-44	--	--	54	50	68
Phosphorus	-40	--	-14	--	-13	--	--	69	51	48
Mercury	-14	--	--	21	-24	--	--	42	43	44
Zinc	--	17	23	37	--	13	23	41	38	24
Boron	--	--	--	14	--	15	16	33	26	27
Inorganic carbon	-21	-37	-35	-12	-41	-27	-35	-20	--	52
Magnesium	--	-21	-21	--	-25	-11	-26	-29	--	38
Calcium	-33	-43	-40	-20	-47	-28	-37	--	--	62
Niobium	29	38	34	25	31	27	37	17	--	-23
Barium	24	46	26	--	48	21	--	-18	-16	-62
Antimony	--	13	--	29	-11	--	28	--	--	--
Iron	22	39	35	63	--	22	30	15	31	12
Cobalt	38	35	39	81	--	27	20	-12	--	--
Arsenic	-19	--	--	26	-31	--	15	23	17	27
Lead	17	14	24	37	--	--	20	19	16	12
Copper	31	28	36	56	--	--	38	13	23	12
Manganese	--	--	--	18	-18	--	-20	--	--	19
Molybdenum	--	--	--	31	-22	--	24	--	--	--
Sodium	-36	--	-39	-46	29	16	-28	-15	-27	-22
Strontium	-36	--	-34	-30	--	--	-22	--	--	16

Table 6.--Correlation coefficients on ranked concentration data from low-order streams, grouped by factor matrix--Continued

	Sulfur	Phosphorus	Mercury	Zinc	Boron	Inorganic carbon	Magnesium	Calcium	Niobium	Barium
Chromium	-30	-17	--	20	--	-36	-13	-44	37	36
Aluminum	-39	-24	-13	--	--	-46	-26	-55	49	47
Vanadium	-28	-14	--	19	--	-32	-12	-40	42	41
Scandium	-28	-24	--	13	--	-31	--	-40	44	30
Gallium	-29	-18	--	18	--	-34	-13	-43	40	40
Neodymium	-42	-21	-14	11	--	-46	-26	-55	32	45
Lithium	-18	-20	--	19	--	-26	--	-35	39	20
Lanthanum	-45	-21	-20	--	--	-44	-26	-52	28	48
Cerium	-43	-24	-16	--	--	-43	-23	-53	34	46
Thorium	-37	-22	-13	12	--	-42	-22	-51	35	47
Potassium	-37	-40	-14	--	--	-21	--	-33	29	24
Yttrium	-28	--	--	17	--	-37	-21	-43	38	46
Beryllium	-17	-14	--	23	--	-35	-21	-40	34	26
Nickel	--	--	21	37	14	-12	--	-20	25	--
Titanium	-44	-13	-24	--	--	-41	-25	-47	31	48
Ytterbium	--	--	--	13	15	-27	-11	-28	27	21
Uranium	--	--	--	23	16	-35	-26	-37	37	--
Organic carbon	69	42	41	33	-20	-29	-6	--	-18	7
Selenium	50	51	43	38	26	--	--	--	--	-16
Total carbon	68	48	44	24	27	52	38	62	-23	-62
Sulfur	100	48	48	34	36	35	16	42	-11	-41
Phosphorus	48	100	46	47	31	-11	-23	--	16	5
Mercury	48	46	100	50	30	--	--	--	--	--
Zinc	34	47	50	100	33	-13	-15	-13	18	--
Boron	36	31	30	33	100	--	--	--	12	--
Inorganic carbon	35	-11	--	-13	--	100	86	95	-53	-53
Magnesium	16	-23	--	-15	--	86	100	82	-43	-45
Calcium	42	--	--	-13	--	95	82	100	-53	-57
Niobium	-11	16	--	18	12	-53	-43	-53	100	43
Barium	-41	--	--	--	--	-53	-45	-57	43	100
Antimony	12	14	28	35	22	--	--	--	--	--
Iron	24	29	43	48	18	--	--	--	16	--
Cobalt	--	--	24	34	17	--	14	--	--	--
Arsenic	31	27	30	29	18	--	--	--	--	-12
Lead	--	21	42	56	21	-14	--	-18	14	--
Copper	--	13	45	53	18	--	--	--	18	--
Manganese	11	17	18	15	--	33	30	30	-21	--
Molybdenum	13	--	21	15	--	11	15	--	--	--
Sodium	--	--	-20	-24	--	--	--	--	-12	30
Strontium	23	15	--	-13	--	38	25	45	-19	--

Table 6.--Correlation coefficients on ranked concentration data from low-order streams, grouped by factor matrix--Continued

	Antimony	Iron	Cobalt	Arsenic	Lead	Copper	Manganese	Molybdenum	Sodium	Strontium
Chromium	--	37	39	-11	25	41	-12	--	-30	-25
Aluminum	--	23	28	-19	12	27	-23	--	-25	-27
Vanadium	--	47	42	--	22	43	--	11	-31	-24
Scandium	--	35	36	-11	15	37	-15	--	-36	-29
Gallium	--	38	41	--	16	36	--	--	-35	-30
Neodymium	--	30	35	-11	12	18	--	--	--	-17
Lithium	--	37	41	--	20	39	-11	--	-49	-36
Lanthanum	--	25	31	-16	--	18	--	--	--	-13
Cerium	--	29	40	-11	19	19	--	--	--	-21
Thorium	--	28	29	-12	11	24	-11	--	--	-22
Potassium	--	22	38	-19	17	31	--	--	-36	-36
Yttrium	13	39	35	--	14	28	--	--	--	--
Beryllium	--	35	39	--	24	36	-14	6	-39	-34
Nickel	29	63	81	26	37	56	18	31	-46	-30
Titanium	-11	--	--	-31	--	--	-18	-22	29	--
Ytterbium	--	22	27	--	--	--	--	--	16	--
Uranium	28	30	20	15	20	38	-20	24	-28	-22
Organic carbon	--		-12	23	19	13	--	--	-15	--
Selenium	--	31	--	17	16	23	--	--	-27	--
Total carbon	--	12	--	27	12	12	19	--	-22	16
Sulfur	12	24	--	31	--	--	11	13	--	23
Phosphorus	14	29	--	27	21	13	17	--	--	15
Mercury	28	43	24	30	42	45	18	21	-20	--
Zinc	35	48	34	29	56	53	15	15	-24	-13
Boron	22	18	17	18	21	18	--	--	--	--
Inorganic carbon	--	--	--	--	-14	--	33	11	--	38
Magnesium	--	--	14	--	--	--	30	15	--	25
Calcium	--	--	--	--	-18	--	30	--	--	45
Niobium	--	16	--	--	14	18	-21	--	-12	-19
Barium	--	--	--	-12	--	--	--	--	30	--
Antimony	100	40	38	46	35	38	28	36	--	--
Iron	40	100	64	51	37	50	40	41	-39	-17
Cobalt	38	64	100	33	35	43	48	30	-25	-14
Arsenic	46	51	33	100	24	24	23	47	-18	--
Lead	35	37	35	24	100	65	31	21	-26	-31
Copper	38	50	43	24	65	100	17	36	-39	-23
Manganese	28	40	48	23	31	17	100	15	--	--
Molybdenum	36	41	30	47	21	36	15	100	-19	-18
Sodium	--	-39	-25	-18	-26	-39	--	-19	100	57
Strontium	--	-17	-14	--	-31	-23	--	-18	57	100

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin

[--, data not available; <, less than reporting level given; >, greater than reporting level given; B, insufficient sample for analysis; H, chemical interference; footnotes are at end of table]

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (weight percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
1	43°07'14"	88°09'52"	DSS	10-15-87	0945	5.0	1.7	0.85	1.7
1	43°07'14"	88°09'52"	17-1	10-15-87	0945	4.8	1.6	.82	1.6
1	43°07'14"	88°09'52"	R 17-1	10-15-87	0945	4.7	1.7	.81	1.7
1	43°07'14"	88°09'52"	17-2	10-15-87	1015	4.8	1.7	.82	1.5
1	43°07'14"	88°09'52"	17-2	10-15-87	1015	4.9	1.7	.83	1.6
4	43°03'43"	88°09'50"	R	10-15-87	0900	4.8	2.3	.94	1.7
13	42°56'03"	88°17'35"	DSS	10-15-87	0745	8.4	3.3	.75	1.5
13	42°56'03"	88°17'35"	R	10-15-87	0745	5.9	2.3	.61	1.5
17	42°52'38"	88°14'53"	R	10-14-87	1545	8.7	2.9	.56	1.4
22	42°46'45"	88°13'05"	DSS	10-14-87	1430	11	1.9	.58	1.3
22	42°46'45"	88°13'05"	R	10-14-87	1430	10	1.4	.48	1.4
29	42°39'17"	88°14'53"	R	10-14-87	1230	11	2.9	.44	1.5
37	42°30'44"	88°10'43"	DSS	10-14-87	1130	12	4.9	.57	1.3
42	42°28'49"	88°10'38"	16-1	10-27-87	1530	9.6	3.2	.47	1.6
42	42°28'49"	88°10'38"	R 16-1	10-27-87	1530	9.5	3.0	.48	1.6
42	42°28'49"	88°10'38"	16-2	10-27-87	1540	7.6	3.0	.48	1.7
42	42°28'49"	88°10'38"	16-2	10-27-87	1540	7.9	3.0	.48	1.7
48	42°24'44"	88°10'45"	R	09-02-87	0845	16	2.3	.33	1.2
49	42°23'28"	88°12'05"	R	09-02-87	1000	15	2.5	.42	1.2
52	42°16'49"	88°13'38"	R	10-14-87	1000	17	2.1	.31	1.1
52	42°16'49"	88°13'38"	DSS	10-14-87	1000	16	3.3	.47	1.1
53	42°13'26"	88°10'33"	R 15-1	10-28-87	1600	15	2.4	.37	1.2
53	42°13'26"	88°10'33"	15-2	10-28-87	1545	16	2.2	.30	1.1
53	42°13'26"	88°10'33"	15-2	10-14-87	0800	17	2.2	.32	1.1
53	42°13'26"	88°10'33"	15-1	10-28-87	1545	16	2.4	.38	1.2
54	42°11'38"	88°14'20"	R	10-13-87	1515	3.9	1.7	.55	1.5
55	42°10'47"	88°16'45"	R	10-13-87	1315	12	2.5	.45	1.4
56	42°10'03"	88°17'19"	U 14-2	10-28-87	0830	14	2.2	.36	1.3
56	42°10'03"	88°17'19"	U 14-2	10-28-87	0830	14	2.1	.37	1.3
56	42°10'03"	88°17'19"	U 14-1	10-28-87	0815	14	2.1	.35	1.2
56	42°10'03"	88°17'19"	U 14-1	10-28-87	0815	14	2.1	.36	1.2
57	42°09'36"	88°17'40"	R D 13-1	10-28-87	1245	12	2.3	.37	1.2
57	42°09'36"	88°17'40"	D 13-2	10-28-87	1230	11	2.4	.38	1.2
57	42°09'36"	88°17'40"	D 13-2	10-28-87	1230	12	2.4	.38	1.2
57	42°09'36"	88°17'40"	D 13-1	10-28-87	1245	13	2.4	.38	1.2
63	42°05'51"	88°16'33"	R	10-13-87	1400	12	2.7	.37	1.3
69	42°27'56"	87°56'34"	R	10-07-87	0945	4.4	2.3	.63	2.1
72	42°22'49"	87°54'56"	R	10-07-87	0900	4.1	2.3	.66	2.2
73	42°20'39"	87°56'18"	R	10-07-87	0815	4.7	2.8	.55	2.3
76	42°17'21"	87°56'24"	R	10-06-87	1645	3.6	2.2	.57	2.3
77	42°15'40"	87°56'13"	R	10-06-87	1600	6.8	3.6	.49	2.3
78	42°14'55"	87°51'14"	R	10-21-87	1445	5.9	3.0	.54	2.2
80	42°13'22"	87°51'51"	R	10-20-87	1630	3.3	2.2	.45	2.7
81	42°12'02"	87°55'05"	R	10-06-87	1430	5.4	3.0	.60	2.2
82	42°12'01"	87°49'38"	R	10-21-87	1145	4.4	2.5	.49	2.4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (weight percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
85	42°09'13"	87°47'39"	R	10-21-87	1000	6.0	3.1	0.52	1.9
86	42°09'12"	87°49'16"	R	10-20-87	1435	3.4	2.4	.46	2.8
87	42°08'21"	87°54'14"	R	10-06-87	1345	5.4	2.9	.63	2.0
88	42°08'06"	87°46'58"	R	09-03-87	1400	7.4	3.7	.56	2.1
93	42°06'11"	87°45'36"	R	09-03-87	1600	4.4	2.1	.37	2.7
94	42°06'10"	87°46'32"	12-1	10-20-87	1210	2.0	1.6	.48	2.6
94	42°06'10"	87°46'32"	R 12-1	10-20-87	1210	2.1	1.7	.51	2.7
94	42°06'10"	87°46'32"	12-2	10-20-87	1255	2.0	1.6	.50	2.7
94	42°06'10"	87°46'32"	12-2	10-20-87	1255	2.1	1.7	.50	2.7
95	42°05'46"	88°02'59"	S1	08-07-87	1000	3.8	2.2	.50	2.5
95	42°05'46"	88°02'59"	S2	09-14-87	1430	13	2.4	.36	1.8
95	42°05'46"	88°02'59"	R S3	10-13-87	1430	4.1	2.6	.52	2.4
96	42°05'40"	87°45'25"	R	10-21-87	0845	3.7	2.7	.52	2.7
97	42°05'16"	87°53'14"	R	10-06-87	1215	5.1	2.9	.56	2.2
98	42°04'08"	88°01'43"	R S3	10-13-87	1615	2.8	2.0	.51	2.8
98	42°04'08"	88°01'43"	S2	09-14-87	1610	3.1	2.2	.47	2.8
98	42°04'08"	88°01'43"	S1	08-07-87	0830	3.0	1.9	.49	2.6
100	42°03'54"	87°41'11"	11-1	10-21-87	1338	10	5.0	.48	1.5
100	42°03'54"	87°41'11"	11-2	10-21-87	1338	11	5.2	.50	1.9
100	42°03'54"	87°41'11"	R 11-1	10-21-87	1338	10	4.9	.47	1.9
100	42°03'54"	87°41'11"	11-2	10-21-87	1338	11	5.1	.48	1.9
101	42°02'28"	87°47'16"	R	10-20-87	1045	4.3	2.6	.45	2.6
102	42°01'56"	87°52'42"	DSR	10-06-87	1045	8.8	4.3	.66	1.7
102	42°01'56"	87°52'42"	10-1	10-06-87	1045	5.3	3.1	.54	2.2
102	42°01'56"	87°52'42"	R 10-1	10-06-87	1045	5.2	2.9	.55	2.1
102	42°01'56"	87°52'42"	10-2	10-06-87	1045	5.4	2.9	.54	2.1
102	42°01'56"	87°52'42"	10-2	10-06-87	1045	5.4	2.9	.54	2.1
103	42°01'32"	87°42'36"	DSS	10-21-87	1236	7.8	4.2	.13	1.3
103	42°01'32"	87°42'36"	PTS	10-21-87	1236	7.8	4.3	.45	2.2
104	42°00'43"	87°42'37"	R	10-21-87	1158	7.3	3.7	.45	2.1
105	42°00'35"	87°47'49"	R	10-20-87	0830	4.9	2.9	.44	2.8
106	42°00'16"	87°42'38"	PTS	10-21-87	1147	7.2	3.8	.44	2.1
107	41°59'54"	87°46'48"	R	10-19-87	1732	4.3	2.9	.42	2.7
108	41°59'34"	87°59'44"	R S3	10-14-87	0900	2.3	1.6	.55	2.5
108	41°59'34"	87°59'44"	S1	08-06-87	1600	2.6	1.7	.52	2.5
108	41°59'34"	87°59'44"	S2	09-15-87	1000	2.3	1.7	.53	2.5
110	41°59'21"	87°51'21"	R	10-06-87	1000	5.8	3.2	.54	2.2
111	41°58'35"	87°42'17"	R	10-21-87	1100	7.3	3.8	.46	2.0
112	41°58'32"	87°43'53"	R	10-19-87	1605	4.1	2.6	.47	2.8
113	41°56'51"	87°41'47"	DSS	10-21-87	1045	8.3	4.1	.55	1.5
113	41°56'51"	87°41'47"	R	10-21-87	1045	6.6	3.7	.48	2.0
115	41°56'37"	88°10'51"	R	10-06-87	0925	3.6	2.1	.49	2.0
116	41°56'26"	87°59'05"	S1	08-06-87	1315	2.1	1.5	.56	2.4
116	41°56'26"	87°59'05"	R S3	10-14-87	1000	2.2	1.5	.58	2.3
116	41°56'26"	87°59'05"	S2	09-15-87	1200	2.9	1.8	.57	2.2
117	41°56'09"	88°03'32"	R	10-05-87	1845	2.2	1.4	.52	2.2
118	41°54'39"	88°10'44"	R	10-06-87	1110	2.5	1.4	.57	1.9
119	41°54'35"	87°49'29"	DSR	10-06-87	0850	5.7	3.2	.49	2.3
119	41°54'35"	87°49'29"	R	10-06-87	0845	4.5	2.8	.46	2.3
124	41°53'36"	87°38'34"	R	10-21-87	1003	5.4	3.1	.41	2.3

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (weight percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
125	41°53'27"	87°57'51"	S1	08-06-87	1200	3.5	2.1	0.49	2.3
125	41°53'27"	87°57'51"	S2	09-15-87	1430	2.9	2.0	.46	2.5
125	41°53'27"	87°57'51"	R S3	10-14-87	1045	3.6	2.2	.49	2.1
126	41°52'59"	88°03'29"	R	09-03-87	1000	6.3	2.2	.44	1.8
127	41°52'04"	87°38'05"	R	10-23-87	0945	5.7	3.3	.41	2.4
128	41°51'53"	87°49'39"	R	10-05-87	1715	4.8	2.5	.42	2.2
129	41°51'35"	88°02'44"	R	08-05-87	1700	3.2	1.9	.45	2.2
130	41°50'53"	87°56'11"	S1	08-06-87	1045	2.7	1.9	.46	2.6
130	41°50'53"	87°56'11"	S2	09-15-87	1600	3.2	2.0	.52	2.3
130	41°50'53"	87°56'11"	R S3	10-14-87	1145	3.3	2.0	.52	2.4
131	41°50'48"	87°52'51"	S1	08-06-87	0930	3.2	2.1	.46	2.4
131	41°50'48"	87°52'51"	S3 9-2	10-14-87	1445	3.8	2.2	.47	1.9
131	41°50'48"	87°52'51"	R S3 9-1	10-14-87	1530	3.9	2.2	.47	2.3
131	41°50'48"	87°52'51"	S2	09-16-87	1500	4.3	1.6	.49	2.2
131	41°50'48"	87°52'51"	S3 9-1	10-14-87	1530	3.7	2.2	.47	2.4
131	41°50'48"	87°52'51"	S1	08-06-87	0900	3.3	2.0	.49	2.5
131	41°50'48"	87°52'51"	S1	08-06-87	0930	3.2	2.0	.48	2.4
131	41°50'48"	87°52'51"	S3 9-2	10-14-87	1445	3.6	2.1	.47	2.5
131	41°50'48"	87°52'51"	S1	08-06-87	0900	3.5	2.0	.46	2.4
132	41°49'42"	88°11'08"	DSR	10-06-87	1210	8.5	4.2	.58	1.5
132	41°49'42"	88°11'08"	R	10-06-87	1230	4.7	2.5	.53	1.9
134	41°49'33"	87°54'02"	R S3	10-14-87	1330	3.3	1.9	.53	2.5
134	41°49'33"	87°54'02"	S2	09-16-87	1215	3.3	1.8	.53	2.5
134	41°49'33"	87°54'02"	S1	08-05-87	1600	4.0	2.4	.52	2.5
135	41°49'20"	87°49'15"	R D	10-30-87	1315	4.8	2.8	.47	2.3
135	41°49'20"	87°49'15"	DSS	10-30-87	1315	7.8	4.1	.54	1.9
136	41°49'10"	87°49'27"	DSS	10-30-87	1440	5.7	2.6	.44	2.3
136	41°49'10"	87°49'27"	U	10-30-87	1440	5.2	2.5	.42	2.4
137	41°49'06"	87°50'02"	R S3	10-14-87	1630	15	2.3	.37	1.7
137	41°49'06"	87°50'02"	S1	08-05-87	1430	8.8	3.7	.45	1.8
137	41°49'06"	87°50'02"	S2	09-16-87	1700	3.7	2.3	.49	2.5
139	41°48'49"	88°04'44"	R	08-08-87	1440	3.4	1.7	.57	2.1
140	41°48'49"	87°45'42"	R	10-19-87	0945	5.3	2.8	.35	1.5
141	41°47'04"	87°49'30"	R	10-19-87	1015	6.1	3.3	.45	2.3
142	41°46'54"	88°10'30"	R	10-06-87	1445	4.5	2.1	.52	1.9
143	41°45'33"	88°04'21"	R	08-08-87	1250	3.3	2.1	.57	2.3
144	41°45'13"	87°51'41"	R	10-05-87	1600	5.4	2.9	.45	2.4
148	41°44'28"	88°07'38"	R	10-06-87	1650	5.6	2.8	.47	1.8
149	41°44'10"	87°52'51"	DSR	10-06-87	1515	9.0	4.3	.50	1.7
149	41°44'10"	87°52'51"	R	10-05-87	1500	6.2	3.3	.49	2.1
150	41°44'06"	87°52'46"	R	10-19-87	1050	12	5.9	.41	1.1
151	41°42'40"	88°07'41"	DSR	10-08-87	1045	5.9	2.6	.71	1.6
151	41°42'40"	88°07'41"	R 8-1	10-08-87	1100	4.0	1.9	.66	1.7
151	41°42'40"	88°07'41"	8-2	10-08-87	1135	3.9	1.9	.64	1.9
151	41°42'40"	88°07'41"	8-2	10-08-87	1135	3.9	1.9	.64	1.9
151	41°42'40"	88°07'41"	8-1	10-08-87	1100	3.7	1.8	.65	1.8
152	41°40'54"	88°00'08"	R	10-05-87	1315	5.2	2.8	.42	2.3
153	41°40'52"	88°10'50"	R	10-07-87	1700	5.5	2.4	.51	2.0
154	41°40'47"	87°48'29"	R	10-20-87	1130	5.2	2.8	.41	2.4
154	41°40'47"	87°48'29"	DSS	10-20-87	1130	5.5	2.9	.40	2.4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (weight percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
158	41°39'26"	87°38'29"	R	10-20-87	1400	5.9	2.9	0.45	2.3
160	41°39'05"	87°43'03"	R	10-20-87	1300	5.7	2.8	.42	2.1
161	41°38'38"	87°33'39"	R	10-20-87	1500	5.3	2.4	.44	2.2
162	41°38'28"	88°04'17"	R	10-05-87	1215	4.9	2.7	.44	2.3
164	41°38'21"	87°39'37"	R	08-05-87	1430	6.8	3.6	.53	2.4
165	41°38'17"	88°11'25"	R	10-07-87	1515	5.5	2.2	.51	1.9
166	41°37'15"	87°30'36"	R	08-06-87	1730	6.1	1.4	.24	.6
167	41°36'25"	87°36'24"	R	08-06-87	1000	3.7	2.3	.46	2.7
169	41°35'40"	87°33'26"	R	08-06-87	1230	3.8	2.5	.44	2.4
171	41°34'56"	88°04'19"	R	10-05-87	1100	5.3	2.9	.37	2.2
178	41°34'16"	88°12'04"	DSR	10-07-87	1345	12	3.0	.54	1.5
178	41°34'16"	88°12'04"	R	10-07-87	1400	9.1	2.0	.46	1.7
179	41°34'16"	88°04'40"	R	10-19-87	1430	5.5	3.2	.37	2.4
180	41°34'16"	87°30'27"	R	08-06-87	1500	4.8	2.5	.54	2.3
181	41°33'50"	87°24'46"	R	08-07-87	1030	4.9	1.6	.36	2.2
186	41°31'20"	88°11'35"	R	10-07-87	1150	7.5	2.4	.54	1.9
187	41°31'00"	88°05'18"	R	10-05-87	0600	6.0	3.2	.41	2.1
194	41°28'06"	88°12'30"	DSR	10-07-87	1015	19	3.3	.35	1.1
194	41°28'06"	88°12'30"	R	10-07-87	1030	6.1	2.6	.44	2.2
196	41°27'05"	88°09'58"	R	10-05-87	0900	9.8	1.7	.35	1.6
199	41°25'27"	88°13'53"	DSS	10-30-87	0845	8.5	2.0	.51	1.9
199	41°25'27"	88°13'53"	U	10-30-87	0845	5.5	1.7	.48	1.9
200	41°25'24"	88°13'44"	R D	10-30-87	1050	6.0	2.1	.56	2.0
200	41°25'24"	88°13'44"	DSS	10-30-87	1050	11	2.7	.54	1.5
201	41°24'16"	88°13'03"	DSS	10-05-87	1130	7.4	3.1	.40	1.8
201	41°24'16"	88°13'03"	R 5-1	10-05-87	1130	5.4	2.6	.40	2.1
201	41°24'16"	88°13'03"	5-2	10-05-87	1130	4.7	2.3	.41	2.2
201	41°24'16"	88°13'03"	5-1	10-05-87	1130	5.2	2.6	.40	2.0
201	41°24'16"	88°13'03"	5-2	10-05-87	1130	4.8	2.2	.41	2.1
205	41°58'14"	88°18'41"	DSS	10-13-87	1200	12	3.8	.56	1.3
205	41°58'14"	88°18'41"	R	10-13-87	1200	11	2.6	.40	1.4
208	41°52'55"	88°18'13"	R	10-13-87	1100	10	2.9	.51	1.5
211	41°50'59"	88°18'25"	R	10-13-87	1030	10	2.6	.48	1.4
215	41°47'07"	88°18'56"	R	10-13-87	0945	11	2.6	.47	1.5
224	41°44'40"	88°19'39"	R	10-13-87	0745	9.6	2.4	.39	1.5
226	41°40'31"	88°23'06"	R	10-12-87	1630	11	2.4	.40	1.5
233	41°38'36"	88°27'00"	R	10-12-87	1530	9.5	2.4	.42	1.6
234	41°37'19"	88°33'04"	R	10-12-87	1415	8.6	3.2	.50	1.5
242	41°34'07"	88°35'58"	R	10-12-87	1330	9.1	2.5	.48	1.6
245	41°32'24"	88°41'02"	7-1	10-12-87	1200	7.2	2.3	.54	1.6
245	41°32'24"	88°41'02"	7-2	10-12-87	1230	7.9	2.4	.55	1.6
245	41°32'24"	88°41'02"	7-2	10-12-87	1230	7.7	2.4	.53	1.6
245	41°32'24"	88°41'02"	R 7-1	10-12-87	1200	7.2	2.3	.55	1.6
251	41°29'08"	88°41'10"	R	10-12-87	1030	8.3	2.4	.52	1.6
254	41°26'24"	88°45'45"	6-1	10-29-87	0950	6.2	2.1	.53	1.8
254	41°26'24"	88°45'45"	6-2	10-29-87	1000	6.7	2.2	.49	1.7
254	41°26'24"	88°45'45"	R 6-1	10-12-87	0930	5.9	2.0	.51	1.7
254	41°26'24"	88°45'45"	6-2	10-29-87	0950	6.5	2.1	.51	1.7
261	41°23'32"	88°18'30"	R	10-06-87	0947	5.1	2.5	.41	2.2
262	41°23'29"	88°47'14"	U 4-2	10-28-87	0230	7.2	2.0	.49	1.7

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (weight percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
262	41°23'29"	88°47'14"	U 4-1	10-28-87	0230	6.1	2.0	0.54	1.8
262	41°23'29"	88°47'14"	U 4-1	10-29-87	0230	5.8	2.0	.53	1.9
262	41°23'29"	88°47'14"	U 4-2	10-29-87	0230	7.0	1.8	.50	1.7
264	41°23'12"	88°47'26"	D 3-1	10-29-87	1230	8.1	2.1	.54	1.5
264	41°23'12"	88°47'26"	D 3-2	10-29-87	1230	6.6	1.9	.55	1.7
264	41°23'12"	88°47'26"	D 3-2	10-29-87	1230	6.5	1.9	.55	1.7
264	41°23'12"	88°47'26"	R D 3-1	10-29-87	1230	7.8	2.1	.54	1.5
267	41°21'42"	88°23'40"	R	10-06-87	1015	5.3	2.4	.41	2.2
271	41°20'51"	88°27'19"	R	10-06-87	1100	4.1	2.2	.43	2.2
273	41°19'56"	88°46'06"	R D	10-06-87	1500	4.0	2.1	.43	2.4
274	41°19'22"	88°33'21"	R	10-06-87	1230	4.5	2.2	.41	2.2
276	41°19'17"	88°41'55"	DSR	10-06-87	1430	5.1	2.5	.43	2.3
276	41°19'17"	88°41'55"	U	10-06-87	1430	4.2	2.1	.39	2.4
277	41°18'51"	88°39'14"	R	10-06-87	1400	4.4	2.3	.40	2.3
279	41°18'30"	88°09'07"	R	08-07-87	1530	4.9	1.7	.36	2.2
289	41°12'29"	88°00'46"	R	08-07-87	1400	4.9	1.6	.37	2.2
299	41°07'16"	87°52'35"	R	08-07-87	1300	3.5	1.6	.38	2.3
323	41°00'29"	87°49'23"	R	08-04-87	1000	2.9	1.8	.50	2.6
332	40°56'02"	87°07'42"	R	08-04-87	1300	6.9	2.4	.61	1.7
337	40°54'16"	87°12'44"	R	08-04-87	1345	4.6	2.0	.60	1.8
342	40°53'18"	87°49'55"	R	08-04-87	1230	3.2	1.9	.46	2.6
343	40°51'57"	87°19'29"	R	08-04-87	1321	4.5	2.0	.59	1.8
346	40°49'25"	87°34'55"	1-1	08-05-87	1000	4.1	2.0	.55	2.0
346	40°49'25"	87°34'55"	1-2	08-05-87	1100	4.2	2.0	.59	1.8
346	40°49'25"	87°34'55"	1-2	08-05-87	1100	4.2	2.0	.59	1.9
346	40°49'25"	87°34'55"	R 1-1	08-05-87	1000	4.0	2.0	.56	2.0
348	40°48'44"	87°48'25"	R	08-04-87	1515	2.9	1.7	.47	2.4
351	40°47'36"	87°44'38"	R	08-05-87	0915	5.1	2.3	.53	2.6
352	40°47'31"	87°39'11"	R	08-05-87	1100	3.9	2.0	.59	2.1
395	41°26'58"	86°37'26"	R	08-05-87	1200	6.3	1.5	.05	.5
416	41°19'03"	86°44'45"	R	08-05-87	1500	3.3	1.1	.54	1.5
422	41°16'03"	87°11'06"	R	08-06-87	1100	4.9	1.8	.63	1.7
423	41°15'24"	86°53'23"	R	08-05-87	1700	3.4	1.1	.69	1.5
425	41°15'13"	87°01'59"	R	08-05-87	1600	5.0	1.9	.60	1.7
436	41°10'57"	87°20'22"	R	08-04-87	1500	3.8	1.3	.55	1.5
437	41°09'58"	87°31'31"	R	08-06-87	1400	4.3	1.4	.52	1.6
438	41°09'42"	87°39'40"	U 2-1	08-07-87	0900	3.5	1.3	.48	1.7
438	41°09'42"	87°39'40"	U 2-1	08-07-87	0900	3.3	1.3	.47	1.8
438	41°09'42"	87°39'40"	2-2	08-07-87	1000	3.5	1.3	.47	1.8
438	41°09'42"	87°39'40"	2-2	10-07-87	1000	3.4	1.3	.48	1.8
439	41°09'36"	87°40'07"	R D	08-07-87	0900	4.5	1.7	.55	1.7
443	41°04'30"	87°48'15"	R	08-07-87	1000	5.5	1.4	.47	1.7

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
1	DSS	0.160	0.08	4.6	--	--	460	<1	<10	1.1
1	17-1	.130	.08	4.8	0.4	3.0	480	1	<10	1.7
1	R 17-1	.180	.08	5.0	.6	3.2	470	1	<10	1.8
1	17-2	.140	.09	4.8	.4	4.4	480	1	<10	1.4
1	17-2	.150	.09	4.8	.4	4.0	490	1	<10	1.6
4	R	.205	.09	4.5	.5	4.6	460	1	<10	.8
13	DSS	.110	.10	3.7	--	--	380	<1	<10	2.1
13	R	.180	.15	4.5	.9	12	430	1	<10	2.1
17	R	.220	.11	4.9	.5	8.4	370	1	<10	1.4
22	DSS	.500	.10	3.4	--	--	350	<1	<10	1.3
22	R	.360	.11	3.8	.3	5.9	360	<1	<10	1.7
29	R	.290	.16	4.0	.7	7.1	360	1	<10	1.8
37	DSS	.140	.07	3.1	--	--	300	<1	<10	.6
42	16-1	.240	.11	4.0	.6	7.3	340	1	<10	2.3
42	R 16-1	.200	.12	4.2	.3	13	350	<1	<10	2.3
42	16-2	.110	.11	4.7	.2	4.6	370	1	<10	1.4
42	16-2	.080	.11	4.7	.4	5.8	370	1	<10	1.9
48	R	.370	.10	3.3	.4	4.9	320	<1	<10	1.3
49	R	.320	.10	3.1	.6	4.7	320	<1	<10	1.1
52	R	.275	.12	3.2	.4	7.1	340	<1	<10	1.0
52	DSS	.260	.07	2.7	--	--	300	<1	<10	B
53	R 15-1	.260	.11	3.1	1.1	8.8	330	<1	<10	2.1
53	15-2	.290	.12	3.1	1.1	7.7	330	<1	<10	2.2
53	15-2	.280	.13	3.2	.9	7.8	340	<1	<10	2.8
53	15-1	.290	.12	3.1	1.2	11	340	<1	<10	1.9
54	R	.080	.09	5.3	.7	16	430	1	<10	.9
55	R	.240	.14	3.6	.9	7.7	850	<1	<10	1.5
56	U 14-2	.300	.11	3.4	.6	7.3	340	<1	<10	1.8
56	U 14-2	.300	.12	3.5	.5	6.8	350	<1	<10	1.9
56	U 14-1	.310	.11	3.6	.6	6.4	340	<1	<10	2.9
56	U 14-1	.290	.11	3.6	.5	6.2	350	<1	<10	2.1
57	R D 13-1	.320	.18	4.6	1.0	8.3	460	<1	<10	B
57	D 13-2	.280	.19	3.3	1.2	7.8	470	<1	<10	B
57	D 13-2	.270	.19	3.4	1.0	7.3	460	<1	<10	B
57	D 13-1	.280	.19	3.4	1.0	7.6	480	<1	<10	B
63	R	.510	.19	3.5	1.0	10	400	1	<10	3.4
69	R	.230	.10	4.9	.6	7.2	400	1	<10	1.4
72	R	.080	.09	5.2	.4	6.6	410	1	<10	1.4
73	R	.200	.18	5.2	.8	11	400	1	<10	1.6
76	R	.180	.15	5.8	.6	9.6	420	2	<10	1.4
77	R	.190	.12	5.6	.7	7.9	1,500	2	<10	1.0
78	R	.200	.12	5.0	1.0	9.0	370	1	<10	1.6
80	R	.100	.12	6.4	.6	8.7	420	2	<10	2.4
81	R	.200	.15	4.8	.6	8.5	400	1	<10	2.0
82	R	.185	.13	5.7	.7	10	430	2	<10	1.8
85	R	.190	.24	4.8	.9	7.7	370	2	<10	1.8
86	R	.545	.09	6.7	.7	8.4	470	2	<10	1.3
87	R	.220	.17	4.7	.5	8.0	380	1	<10	1.9
88	R	.270	.16	4.4	.8	5.6	370	1	<10	2.3
93	R	.180	.18	6.9	.6	6.3	420	2	<10	2.3

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
94	12-1	0.180	0.08	6.4	0.6	9.4	450	2	<10	2.5
94	R 12-1	.140	.09	6.4	.8	9.8	470	2	<10	1.4
94	12-2	.110	.09	6.3	.8	12	460	2	<10	1.5
94	12-2	.140	.08	6.5	.6	11	470	2	<10	2.4
95	S1	.340	.10	6.2	1.2	11	470	2	<10	2.3
95	S2	.650	.18	4.6	3.0	11	390	1	<10	2.1
95	R S3	.180	.08	5.8	.9	8.8	430	2	<10	1.4
96	R	.120	.08	5.9	.5	5.3	400	2	<10	1.6
97	R	.215	.18	5.2	.7	7.8	390	1	<10	1.7
98	R S3	.140	.07	6.5	1.2	12	440	2	<10	.9
98	S2	.100	.06	6.8	1.3	14	450	2	<10	1.1
98	S1	.200	.09	6.0	1.6	12	430	2	<10	1.3
100	11-1	.390	.06	3.8	.8	8.2	270	1	<10	1.1
100	11-2	.340	.05	3.8	.8	7.9	280	1	<10	1.4
100	R 11-1	.380	.05	3.9	.5	7.5	510	1	<10	1.7
100	11-2	.340	.05	3.8	.7	7.3	280	1	<10	1.7
101	R	.220	.17	6.3	.8	8.7	420	2	<10	3.2
102	DSR	.300	.11	3.6	--	--	340	<1	<10	B
102	10-1	.210	.14	4.8	1.7	8.8	390	1	<10	2.9
102	R 10-1	.200	.15	4.9	1.8	10	390	1	<10	3.2
102	10-2	.230	.16	4.9	2.2	12	420	1	<10	2.9
102	10-2	.250	.16	4.9	2.2	11	390	1	<10	2.8
103	DSS	.360	.11	3.0	--	--	200	1	<10	.9
103	PTS	.400	.11	4.7	.7	9.0	360	1	<10	.8
104	R	.500	.41	4.6	1.4	8.1	430	1	<10	B
105	R	.520	.12	6.2	1.3	11	410	2	<10	2.3
106	PTS	.545	.38	4.7	1.5	6.7	440	1	<10	2.2
107	R	.240	.17	6.4	1.2	12	420	2	<10	2.2
108	R S3	.195	.24	6.4	.8	7.4	470	2	<10	2.2
108	S1	.175	.25	6.3	.8	7.5	460	2	<10	1.8
108	S2	.150	.17	6.4	.8	8.9	460	2	<10	2.0
110	R	.255	.17	5.1	2.4	7.8	410	2	<10	1.9
111	R	.500	.32	4.8	1.5	7.5	430	1	<10	2.2
112	R	.160	.24	6.2	1.9	13	410	2	<10	2.8
113	DSS	.850	.25	3.4	--	--	280	1	<10	B
113	R	.560	.33	4.6	2.3	9.1	490	1	<10	B
115	R	2.40	.29	5.3	1.3	97	110	2	<10	2.8
116	S1	.120	.26	6.5	.7	8.8	480	2	<10	2.4
116	R S3	.140	.22	6.1	.7	9.3	450	2	<10	2.0
116	S2	.170	.24	5.8	.6	8.6	450	2	<10	2.7
117	R	.200	.12	6.1	1.1	12	510	2	<10	2.9
118	R	.150	.26	5.6	.7	11	600	2	<10	2.1
119	DSR	.260	.19	5.3	--	--	440	2	<10	2.3
119	R	.180	.18	5.6	3.2	11	420	2	<10	2.5
124	R	.435	.41	5.6	1.8	8.9	590	2	<10	2.1
125	S1	.420	.22	5.9	.8	10	460	2	<10	2.8
125	S2	.350	.17	5.9	1.4	11	450	2	<10	1.9
125	R S3	.300	.24	5.8	1.0	9.9	420	2	<10	3.0
126	R	.560	.10	6.0	1.2	11	380	2	<10	1.8
127	R	.420	.36	5.7	1.9	8.6	570	2	<10	1.8

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
128	R	0.400	0.16	5.8	2.2	15	440	2	<10	3.1
129	R	1.10	.22	6.1	1.2	15	270	2	<10	4.2
130	S1	.230	.33	6.5	1.0	10	490	2	<10	2.5
130	S2	.240	.26	6.0	.8	9.0	460	2	<10	2.0
130	R S3	.320	.25	5.9	1.0	8.1	450	2	<10	3.9
131	S1	.160	.26	6.1	1.3	11	450	2	<10	3.4
131	S3 9-2	.550	.20	6.0	1.3	12	420	2	<10	3.5
131	R S3 9-1	.600	.21	5.9	1.1	12	440	2	<10	3.7
131	S2	>10	.09	5.4	.6	9.9	400	2	<10	3.4
131	S3 9-1	.480	.20	5.9	.7	13	440	2	<10	5.5
131	S1	.210	.27	5.9	.6	11	470	2	<10	4.1
131	S1	.210	.28	5.9	1.1	11	460	2	<10	3.6
131	S3 9-2	.590	.20	6.0	1.3	13	450	2	<10	4.2
131	S1	.190	.27	5.9	.9	8.9	460	2	<10	4.3
132	DSR	.260	.22	3.7	--	--	420	<1	<10	B
132	R	.220	.31	5.1	1.3	8.7	550	2	<10	4.5
134	R S3	.595	.22	6.0	.9	11	460	2	<10	2.5
134	S2	.805	.16	6.3	.9	11	400	2	<10	2.2
134	S1	.350	.21	6.2	.8	10	480	2	<10	3.4
135	R D	.355	.26	5.6	1.4	8.0	440	2	<10	4.4
135	DSS	.350	.17	4.0	--	--	340	1	<10	B
136	DSS	.500	.27	5.6	--	--	450	2	<10	3.2
136	U	.400	.20	6.2	2.1	15	460	2	<10	3.3
137	R S3	.580	.26	4.1	1.5	11	390	1	<10	2.5
137	S1	.500	.15	3.8	1.8	10	340	1	<10	1.7
137	S2	.240	.08	5.9	1.2	12	460	2	<10	2.1
139	R	1.08	.14	5.8	.6	11	430	2	<10	3.9
140	R	.530	.27	3.7	5.6	11	430	2	<10	2.4
141	R	.550	.45	5.4	3.6	13	600	2	<10	2.9
142	R	.210	.17	5.4	1.0	10	500	2	<10	3.5
143	R	.177	.16	5.9	1.0	10	480	2	<10	2.6
144	R	.305	.26	5.6	1.5	13	440	2	<10	2.4
148	R	.140	.19	5.6	.9	12	440	1	<10	2.1
149	DSR	.460	.49	3.6	--	--	380	1	<10	1.7
149	R	.360	.36	4.9	1.1	8.7	420	1	<10	2.2
150	R	.450	.25	2.9	5.7	5.9	400	2	<10	B
151	DSR	.320	.18	3.9	--	--	390	<1	<10	1.4
151	R 8-1	.250	.24	5.0	.7	7.3	440	1	<10	2.8
151	8-2	.240	.22	5.0	.5	6.8	440	1	<10	2.5
151	8-2	.250	.23	5.0	.4	6.5	440	1	<10	2.5
151	8-1	.260	.24	4.9	.7	10	450	1	<10	3.1
152	R	.220	.34	5.6	1.3	11	470	2	<10	3.5
153	R	.175	.24	5.4	.8	12	460	2	<10	3.8
154	R	.500	.44	5.9	3.9	15	570	2	<10	2.0
154	DSS	.500	.44	5.5	--	--	540	2	<10	1.9
158	R	.660	.42	5.2	5.0	15	470	2	<10	2.1
160	R	.580	.49	5.9	4.4	33	610	2	<10	2.1
161	R	.760	.47	5.3	81	12	660	2	<10	2.0
162	R	.323	.26	5.7	1.2	7.7	440	2	<10	2.9
164	R	.990	.09	5.0	2.2	12	310	1	<10	1.1

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
165	R	0.160	0.19	5.3	1.0	9.9	440	1	<10	2.7
166	R	4.08	1.4	3.0	35	41	57	2	20	3.3
167	R	.270	.22	6.3	2.1	11	460	2	<10	1.9
169	R	.580	.14	6.6	1.7	9.5	460	2	<10	1.8
171	R	.300	.30	5.5	1.4	13	450	2	<10	B
178	DSR	.150	.14	3.4	--	--	360	<1	<10	B
178	R	.150	.21	4.4	.7	8.6	410	1	<10	2.9
179	R	.500	.48	5.8	5.1	16	580	2	<10	2.0
180	R	.230	.18	5.6	.9	7.8	420	2	<10	2.9
181	R	.980	.17	6.0	1.9	12	440	2	<10	1.9
186	R	.150	.20	4.9	.6	8.5	440	1	<10	4.4
187	R	.520	.55	5.1	6.6	16	580	2	<10	2.0
194	DSR	.100	.14	2.5	--	--	290	<1	<10	1.7
194	R	.340	.31	5.4	2.2	17	490	2	<10	2.5
196	R	.820	.15	3.8	.5	6.0	320	1	<10	3.0
199	DSS	.180	.16	4.7	--	--	410	1	<10	2.7
199	U	.160	.16	5.4	.7	8.0	440	2	<10	3.2
200	R D	.200	.20	5.2	.7	6.7	450	1	<10	2.6
200	DSS	.160	.23	3.7	--	--	370	<1	<10	2.0
201	DSS	.520	.87	4.4	--	--	580	2	<10	2.2
201	R 5-1	.460	.61	5.4	3.6	15	620	2	<10	3.3
201	5-2	.650	.80	5.5	5.3	25	410	3	<10	3.5
201	5-1	.480	.62	5.2	6.2	16	620	2	<10	4.2
201	5-2	.650	.81	5.8	5.6	23	740	3	<10	3.6
205	DSS	.200	.08	3.0	--	--	430	<1	<10	B
205	R	.190	.18	3.8	.7	6.7	490	1	<10	1.7
208	R	.245	.14	3.7	.9	5.1	440	<1	<10	2.0
211	R	.190	.15	3.8	1.4	9.1	470	1	<10	1.7
215	R	.220	.15	3.7	.8	7.4	430	1	<10	1.7
224	R	.200	.17	3.8	1.4	6.8	420	1	<10	1.6
226	R	.295	.18	4.0	1.1	6.2	430	1	<10	2.4
233	R	.180	.20	4.0	1.2	7.4	430	1	<10	2.2
234	R	.040	.12	4.0	.7	6.9	410	1	<10	2.7
242	R	.170	.14	4.1	1.3	6.5	440	1	<10	1.7
245	7-1	.120	.11	4.8	.7	10	450	1	<10	3.2
245	7-2	.100	.13	4.4	.8	8.0	460	1	<10	3.5
245	7-2	.110	.13	4.5	.7	8.7	440	<1	<10	3.7
245	R 7-1	.090	.12	4.7	.9	8.6	450	1	<10	B
251	R	.150	.14	4.4	.8	6.0	440	1	<10	1.4
254	6-1	.140	.11	5.2	.7	11	480	1	<10	1.9
254	6-2	.100	.12	4.7	1.1	8.8	450	1	<10	2.0
254	R 6-1	.100	.12	5.1	.6	14	460	1	<10	2.1
254	6-2	.130	.12	4.8	.9	9.9	460	1	<10	1.9
261	R	.290	.39	5.7	2.0	8.7	520	2	<10	2.1
262	U 4-2	.150	.14	5.0	.9	8.2	450	1	<10	1.9
262	U 4-1	.120	.12	5.1	.8	9.5	470	1	<10	1.9
262	U 4-1	.100	.12	5.0	.9	8.3	470	1	<10	2.4
262	U 4-2	.150	.14	4.6	.9	8.7	460	1	<10	2.1
264	D 3-1	.190	.14	4.1	.6	6.7	420	1	<10	2.5
264	D 3-2	.140	.14	4.8	.6	7.6	430	1	<10	2.5

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
264	D 3-2	0.140	0.14	4.8	0.8	9.9	430	1	<10	3.0
264	R D 3-1	.140	.14	4.1	.6	4.8	410	1	<10	3.8
267	R	.290	.34	5.7	2.1	11	510	2	<10	2.5
271	R	.180	.29	5.8	1.6	9.8	480	2	<10	B
273	R D	.260	.33	6.3	1.8	8.1	520	2	<10	2.1
274	R	.250	.30	5.7	2.1	9.7	490	2	<10	1.8
276	DSR	.260	.34	5.6	--	--	470	2	<10	1.6
276	U	.260	.33	6.4	1.8	9.5	530	2	<10	2.6
277	R	.305	.37	6.2	2.2	9.9	530	2	<10	2.0
279	R	.200	.11	6.2	.8	10	450	2	<10	.9
289	R	.200	.11	6.2	1.0	13	460	2	<10	1.0
299	R	.100	.13	6.5	.7	13	520	2	<10	2.4
323	R	.054	.09	6.7	.9	7.8	480	2	<10	1.1
332	R	.245	.09	4.7	.5	7.4	390	1	<10	.7
337	R	.180	.10	5.4	.5	9.3	440	2	<10	1.4
342	R	.090	.08	6.3	.7	8.3	450	2	<10	.9
343	R	.200	.11	5.3	.4	9.5	430	1	<10	1.0
346	1-1	.140	.09	5.5	.5	8.9	430	2	<10	1.9
346	1-2	.090	.10	5.5	.6	8.2	430	2	<10	1.4
346	1-2	.100	.09	5.5	.7	8.7	440	2	<10	1.5
346	R 1-1	.250	.09	5.5	.4	8.4	430	1	<10	1.6
348	R	.080	.09	6.7	.5	9.3	440	2	<10	1.4
351	R	.215	.08	6.6	.7	7.6	450	2	<10	.8
352	R	.080	.09	5.3	.7	8.2	440	1	<10	.9
395	R	.310	.13	2.5	1.0	49	390	<1	<10	1.6
416	R	.180	.16	4.4	1.2	46	650	1	<10	B
422	R	.275	.13	4.5	.9	28	440	1	<10	.7
423	R	.140	.09	3.4	.9	22	420	<1	<10	.8
425	R	.285	.14	4.7	1.0	32	440	1	<10	.9
436	R	.160	.12	4.2	.7	32	460	1	<10	1.7
437	R	.280	.15	4.8	.8	41	440	1	<10	1.3
438	U 2-1	.260	.15	5.4	.9	25	450	2	<10	1.3
438	U 2-1	.230	.14	5.4	.6	29	450	1	<10	1.6
438	2-2	.240	.14	5.2	.6	32	440	1	<10	2.3
438	2-2	.040	.14	5.2	.7	32	440	1	<10	2.1
439	R D	.200	.14	4.7	1.1	27	440	1	<10	.9
443	R	.260	.14	4.9	.8	24	430	1	<10	1.3

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
1	DSS	<2	48	42	9	18	<2	10	<8	<4
1	17-1	<2	53	50	9	23	<2	12	<8	<4
1	R 17-1	<2	52	58	9	24	<2	11	<8	<4
1	17-2	<2	47	55	10	20	<2	12	<8	<4
1	17-2	<2	50	56	10	20	<2	11	<8	<4
4	R	<2	48	46	9	17	<2	10	<8	<4
13	DSS	<2	43	56	10	23	<2	9	<8	<4
13	R	<2	45	87	14	40	<2	12	<8	<4
17	R	<2	38	68	10	39	<2	11	<8	<4
22	DSS	<2	34	44	11	23	<2	8	<8	<4
22	R	<2	34	51	10	26	<2	9	<8	<4
29	R	<2	37	60	11	26	<2	10	<8	<4
37	DSS	<2	37	39	9	11	<2	8	<8	<4
42	16-1	<2	40	57	10	24	<2	11	<8	<4
42	R 16-1	<2	37	60	11	24	<2	9	<8	<4
42	16-2	<2	44	59	11	33	<2	12	<8	<4
42	16-2	<2	42	65	10	22	<2	12	<8	<4
48	R	<2	31	50	9	27	<2	8	<8	<4
49	R	<2	29	51	8	41	<2	9	<8	<4
52	R	<2	31	56	9	23	<2	8	<8	<4
52	DSS	<2	37	42	8	16	<2	7	<8	<4
53	R 15-1	<2	29	48	8	24	<2	8	<8	<4
53	15-2	<2	31	54	8	28	<2	9	<8	<4
53	15-2	<2	29	59	9	32	<2	9	<8	<4
53	15-1	<2	29	55	9	23	<2	7	<8	<4
54	R	<2	52	61	12	14	<2	12	<8	<4
55	R	3	35	65	10	63	<2	9	<8	<4
56	U 14-2	<2	34	59	8	31	<2	10	<8	<4
56	U 14-2	<2	32	63	9	35	<2	9	<8	<4
56	U 14-1	<2	35	59	8	30	<2	9	<8	<4
56	U 14-1	<2	35	58	8	29	<2	9	<8	<4
57	R D 13-1	4	35	71	9	55	<2	10	<8	<4
57	D 13-2	4	34	62	9	52	<2	8	<8	<4
57	D 13-2	4	37	67	9	55	<2	9	<8	<4
57	D 13-1	3	35	62	10	52	<2	8	<8	<4
63	R	3	38	63	12	51	<2	9	<8	<4
69	R	<2	48	54	12	23	<2	12	<8	<4
72	R	<2	52	61	14	22	<2	13	<8	<4
73	R	<2	53	68	15	38	<2	13	<8	<4
76	R	<2	54	72	16	28	<2	14	<8	<4
77	R	<2	54	74	16	32	<2	14	<8	<4
78	R	<2	50	100	12	68	<2	12	<8	<4
80	R	<2	61	82	19	41	<2	17	<8	<4
81	R	<2	48	63	13	33	<2	13	<8	<4
82	R	<2	58	86	19	50	<2	14	<8	<4
85	R	<2	48	95	14	64	<2	12	<8	<4
86	R	<2	59	78	17	55	<2	16	<8	<4
87	R	<2	51	64	11	47	<2	11	<8	<4
88	R	<2	45	73	11	65	<2	10	<8	<4
93	R	<2	60	100	16	58	<2	18	<8	<4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
94	12-1	<2	64	77	21	34	<2	15	<8	<4
94	R 12-1	<2	64	86	22	37	<2	17	<8	<4
94	12-2	<2	64	76	21	32	<2	15	<8	<4
94	12-2	<2	67	81	22	34	<2	17	<8	<4
95	S1	2	59	81	19	60	<2	15	<8	<4
95	S2	3	41	120	12	130	<2	11	<8	<4
95	R S3	3	58	86	17	62	<2	15	<8	<4
96	R	<2	61	67	19	36	<2	14	<8	<4
97	R	<2	50	77	14	49	<2	13	<8	<4
98	R S3	<2	62	89	17	38	<2	17	<8	<4
98	S2	<2	64	94	19	39	<2	18	<8	<4
98	S1	4	61	96	18	48	<2	14	<8	<4
100	11-1	<2	39	58	11	55	<2	11	<8	<4
100	11-2	<2	37	54	11	55	<2	10	<8	<4
100	R 11-1	<2	39	50	12	56	<2	9	<8	<4
100	11-2	<2	39	50	10	51	<2	8	<8	<4
101	R	<2	58	94	17	70	<2	16	<8	<4
102	DSR	<2	44	53	11	50	<2	9	<8	<4
102	10-1	<2	51	74	15	52	<2	13	<8	<4
102	R 10-1	2	49	73	14	56	<2	13	<8	<4
102	10-2	2	49	75	13	57	<2	12	<8	<4
102	10-2	2	47	72	14	55	<2	12	<8	<4
103	DSS	3	43	78	13	120	<2	8	<8	<4
103	PTS	2	47	82	13	140	<2	11	<8	<4
104	R	28	43	290	12	320	<2	11	<8	<4
105	R	<2	54	120	21	97	<2	15	<8	<4
106	PTS	30	44	310	12	310	<2	11	<8	<4
107	R	3	59	150	20	120	<2	17	<8	<4
108	R S3	<2	63	110	16	54	<2	15	<8	<4
108	S1	2	60	110	16	48	<2	15	<8	<4
108	S2	<2	64	90	16	42	<2	16	<8	<4
110	R	<2	51	78	15	74	<2	12	<8	<4
111	R	25	47	280	13	280	<2	12	<8	<4
112	R	<2	61	82	23	33	<2	17	<8	<4
113	DSS	30	52	260	17	330	<2	8	16	<4
113	R	31	46	300	13	280	<2	11	<8	<4
115	R	<2	50	68	15	46	<2	14	<8	<4
116	S1	<2	66	92	18	53	<2	17	<8	<4
116	R S3	<2	61	93	17	65	<2	15	<8	<4
116	S2	<2	59	85	15	54	<2	13	<8	<4
117	R	<2	61	92	12	76	<2	15	<8	<4
118	R	<2	60	71	20	36	<2	14	<8	<4
119	DSR	3	56	120	19	130	<2	14	<8	<4
119	R	4	54	130	16	130	<2	14	<8	<4
124	R	41	55	390	15	380	<2	14	<8	<4
125	S1	3	57	100	15	110	<2	14	<8	<4
125	S2	2	58	110	16	89	<2	16	<8	<4
125	R S3	4	56	130	15	130	<2	14	<8	<4
126	R	2	49	76	11	100	<2	13	<8	<4
127	R	36	56	340	15	350	<2	14	<8	<4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
128	R	9	50	170	16	160	<2	11	<8	<4
129	R	2	54	97	14	120	<2	15	<8	<4
130	S1	<2	61	120	19	90	<2	16	<8	<4
130	S2	3	59	120	17	100	<2	15	<8	<4
130	R S3	3	57	120	15	110	<2	14	<8	<4
131	S1	<2	58	110	20	80	<2	16	<8	<4
131	S3 9-2	<2	57	99	18	72	<2	15	<8	<4
131	R S3 9-1	2	56	98	18	72	<2	15	<8	<4
131	S2	<2	55	61	15	43	<2	12	<8	<4
131	S3 9-1	<2	61	84	18	69	<2	17	<8	<4
131	S1	3	58	100	20	100	<2	16	<8	<4
131	S1	3	60	110	20	81	<2	15	<8	<4
131	S3 9-2	<2	56	89	17	67	<2	15	<8	<4
131	S1	<2	57	110	18	92	<2	15	<8	<4
132	DSR	<2	86	47	12	41	<2	9	<8	<4
132	R	<2	100	80	16	75	<2	13	<8	<4
134	R S3	<2	57	89	17	59	<2	14	<8	<4
134	S2	<2	60	83	18	52	<2	16	<8	<4
134	S1	3	60	110	16	120	<2	15	<8	<4
135	R D	5	53	130	18	120	<2	13	<8	<4
135	DSS	3	46	91	13	87	<2	9	<8	<4
136	DSS	11	52	240	19	140	<2	15	<8	<4
136	U	12	54	210	16	140	<2	15	<8	<4
137	R S3	4	37	150	13	120	<2	10	<8	<4
137	S1	2	37	77	12	82	<2	9	<8	<4
137	S2	<2	59	82	18	56	<2	14	<8	<4
139	R	<2	58	70	17	39	<2	13	<8	<4
140	R	22	40	280	13	290	<2	9	<8	<4
141	R	40	52	590	18	400	<2	13	<8	<4
142	R	<2	90	75	14	70	<2	14	<8	<4
143	R	<2	59	92	15	65	<2	14	<8	<4
144	R	5	53	150	16	120	<2	14	<8	<4
148	R	<2	73	74	15	66	<2	13	<8	<4
149	DSR	4	41	130	14	93	<2	9	<8	<4
149	R	8	43	160	15	150	<2	13	<8	<4
150	R	15	32	180	18	200	<2	7	<8	<4
151	DSR	<2	50	42	12	24	<2	9	<8	<4
151	R 8-1	<2	52	69	14	41	<2	12	<8	<4
151	8-2	<2	55	58	13	44	<2	11	<8	<4
151	8-2	<2	55	59	13	46	<2	11	<8	<4
151	8-1	<2	53	60	13	37	<2	11	<8	<4
152	R	3	54	160	18	110	<2	15	<8	<4
153	R	<2	62	72	18	54	<2	13	<8	<4
154	R	10	53	200	13	130	<2	15	<8	<4
154	DSS	8	52	180	14	120	<2	14	<8	<4
158	R	12	49	200	15	140	<2	13	<8	<4
160	R	12	47	220	13	160	<2	14	<8	<4
161	R	8	47	180	16	220	<2	14	<8	<4
162	R	5	54	150	15	120	<2	14	<8	<4
164	R	<2	47	74	14	51	<2	12	<8	<4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
165	R	<2	62	69	14	51	<2	13	<8	<4
166	R	13	39	640	11	800	<2	8	<8	<4
167	R	<2	59	120	14	79	<2	16	<8	<4
169	R	4	61	220	13	97	<2	16	<8	<4
171	R	7	50	180	17	120	<2	14	<8	<4
178	DSR	<2	50	36	11	30	<2	8	<8	<4
178	R	<2	53	55	12	44	<2	11	<8	<4
179	R	34	56	460	15	320	<2	15	<8	<4
180	R	<2	56	87	12	61	<2	13	<8	<4
181	R	<2	55	120	15	80	<2	15	<8	<4
186	R	<2	59	65	14	46	<2	12	<8	<4
187	R	46	51	620	16	390	<2	14	<8	<4
194	DSR	<2	40	29	10	22	<2	7	<8	<4
194	R	5	53	130	13	96	<2	13	<8	<4
196	R	5	35	82	11	65	<2	13	<8	<4
199	DSS	<2	57	54	12	38	<2	11	<8	<4
199	U	<2	57	66	12	48	<2	14	<8	<4
200	R D	<2	58	67	12	54	<2	13	<8	<4
200	DSS	<2	50	44	10	35	<2	9	<8	<4
201	DSS	23	59	380	19	260	<2	11	<8	<4
201	R 5-1	31	62	440	17	320	<2	14	<8	<4
201	5-2	58	61	660	17	430	<2	16	<8	<4
201	5-1	33	60	460	16	320	<2	13	<8	<4
201	5-2	55	62	690	17	460	<2	16	<8	<4
205	DSS	3	51	65	10	36	<2	8	<8	<4
205	R	4	40	86	10	54	<2	10	<8	<4
208	R	3	42	63	9	37	<2	9	<8	<4
211	R	3	43	66	10	52	<2	10	<8	<4
215	R	3	38	70	10	47	<2	10	<8	<4
224	R	3	40	67	9	57	<2	10	<8	<4
226	R	3	40	78	10	56	<2	10	<8	<4
233	R	3	41	71	10	52	<2	11	<8	<4
234	R	<2	46	60	11	31	<2	11	<8	<4
242	R	3	41	74	11	50	<2	10	<8	<4
245	7-1	<2	52	67	11	38	<2	12	<8	<4
245	7-2	<2	47	70	12	38	<2	11	<8	<4
245	7-2	<2	21	59	9	35	<2	<4	<8	<4
245	R 7-1	<2	49	71	12	39	<2	11	<8	<4
251	R	<2	44	67	10	37	<2	10	<8	<4
254	6-1	<2	59	62	15	33	<2	14	<8	<4
254	6-2	<2	53	63	13	37	<2	13	<8	<4
254	R 6-1	<2	59	58	14	32	<2	11	<8	<4
254	6-2	<2	52	62	13	34	<2	11	<8	<4
261	R	17	57	260	17	180	<2	14	<8	<4
262	U 4-2	<2	47	71	11	39	<2	12	<8	<4
262	U 4-1	<2	52	70	12	31	<2	13	<8	<4
262	U 4-1	<2	52	62	11	29	<2	13	<8	<4
262	U 4-2	<2	48	64	10	35	<2	12	<8	<4
264	D 3-1	<2	45	53	9	30	<2	10	<8	<4
264	D 3-2	<2	52	59	12	36	<2	11	<8	<4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
264	D 3-2	<2	52	58	12	39	<2	11	<8	<4
264	R D 3-1	<2	44	50	10	28	<2	8	<8	<4
267	R	15	55	250	15	170	<2	14	<8	<4
271	R	11	60	200	17	130	<2	15	<8	<4
273	R D	14	64	240	17	150	<2	16	<8	<4
274	R	12	56	220	15	140	<2	14	<8	<4
276	DSR	11	58	210	16	130	<2	14	<8	<4
276	U	13	62	280	18	170	<2	17	<8	<4
277	R	16	63	290	17	180	<2	16	<8	<4
279	R	<2	59	73	16	33	<2	16	<8	<4
289	R	<2	59	75	16	41	<2	16	<8	<4
299	R	<2	62	75	18	32	<2	17	<8	<4
323	R	<2	66	77	16	21	<2	17	<8	<4
332	R	<2	46	46	12	19	<2	11	<8	<4
337	R	<2	54	57	14	29	<2	13	<8	<4
342	R	<2	61	79	14	26	<2	17	<8	<4
343	R	<2	49	52	13	27	<2	11	<8	<4
346	1-1	<2	54	59	12	24	<2	13	<8	<4
346	1-2	<2	54	65	14	22	<2	14	<8	<4
346	1-2	<2	57	66	14	23	<2	14	<8	<4
346	R 1-1	<2	55	57	13	21	<2	12	<8	<4
348	R	<2	59	77	14	24	<2	15	<8	<4
351	R	2	63	77	15	26	<2	16	<8	<4
352	R	<2	56	60	14	22	<2	14	<8	<4
395	R	<2	36	37	14	27	<2	14	<8	<4
416	R	<2	43	80	17	37	<2	16	<8	<4
422	R	<2	46	54	14	28	<2	12	<8	<4
423	R	<2	31	37	9	23	<2	9	<8	<4
425	R	<2	47	66	15	29	<2	14	<8	<4
436	R	<2	41	50	15	31	<2	11	<8	<4
437	R	<2	48	62	15	41	<2	14	<8	<4
438	U 2-1	<2	51	71	17	38	<2	15	<8	<4
438	U 2-1	<2	53	61	16	37	<2	15	<8	<4
438	2-2	<2	51	59	16	39	<2	14	<8	<4
438	2-2	<2	49	58	15	38	<2	13	<8	<4
439	R D	<2	48	62	16	34	<2	13	<8	<4
443	R	<2	49	58	18	33	<2	13	<8	<4

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
1	DSS	2.0	29	24	18	520	0.12	<2	23	16
1	17-1	2.1	27	26	21	590	.08	<2	24	18
1	R 17-1	2.1	32	23	21	580	.20	<2	27	18
1	17-2	2.2	25	23	23	610	.08	<2	23	18
1	17-2	2.2	27	22	23	610	.08	<2	23	19
4	R	2.0	27	21	20	530	.08	<2	22	17
13	DSS	2.3	27	46	16	1,200	.20	<2	22	20
13	R	3.0	24	74	26	1,400	.34	<2	21	26
17	R	2.5	21	45	24	890	.20	<2	19	21
22	DSS	2.2	22	42	17	590	.38	<2	17	21
22	R	2.1	20	40	23	570	.16	<2	15	19
29	R	2.4	23	44	26	1,200	.12	<2	18	25
37	DSS	2.0	25	18	15	1,000	.16	<2	21	14
42	16-1	2.4	26	28	27	830	.38	<2	24	23
42	R 16-1	2.4	22	31	27	840	.28	<2	17	27
42	16-2	2.9	25	28	32	910	.20	<2	20	24
42	16-2	2.9	23	27	33	940	.18	<2	21	25
48	R	1.9	19	31	24	810	.10	<2	17	22
49	R	1.8	17	31	20	780	.08	<2	14	25
52	R	2.0	18	38	22	930	.54	<2	17	28
52	DSS	2.1	24	30	13	770	.28	<2	22	20
53	R 15-1	1.9	18	45	19	800	.42	<2	14	24
53	15-2	2.0	21	37	22	860	.44	<2	21	27
53	15-2	2.1	17	40	23	900	.56	<2	14	27
53	15-1	2.0	18	39	20	840	.48	<2	15	25
54	R	4.9	27	22	33	650	.08	<2	27	25
55	R	2.3	20	190	24	700	.68	<2	18	27
56	U 14-2	2.1	23	35	21	740	.44	<2	22	26
56	U 14-2	2.2	19	36	24	770	.18	<2	16	27
56	U 14-1	2.2	20	40	25	750	.48	<2	16	26
56	U 14-1	2.2	20	40	25	760	.44	<2	17	26
57	R D 13-1	2.4	19	170	22	780	.68	<2	17	31
57	D 13-2	2.4	18	130	22	690	.64	<2	16	32
57	D 13-2	2.4	20	160	23	690	.70	<2	15	33
57	D 13-1	2.4	20	180	23	800	.62	<2	17	32
63	R	3.1	22	220	24	910	.40	<2	19	33
69	R	2.8	25	21	32	700	.06	<2	24	23
72	R	3.1	27	35	33	1,000	.04	<2	24	24
73	R	3.3	31	34	36	1,100	.52	<2	27	30
76	R	4.0	32	33	39	1,300	.08	<2	28	30
77	R	3.2	28	26	46	830	.12	<2	27	31
78	R	2.7	28	150	33	620	1.00	<2	24	28
80	R	3.5	31	58	48	710	.48	2	27	36
81	R	3.0	24	31	32	1,400	.18	<2	24	26
82	R	3.5	28	100	42	1,400	1.60	3	28	34
85	R	2.9	26	130	34	640	2.18	<2	25	28
86	R	3.5	31	97	51	530	.68	2	29	37
87	R	2.7	27	45	29	720	.16	<2	24	25
88	R	2.2	24	120	30	570	.58	<2	23	23
93	R	3.3	31	93	56	510	.36	<2	28	41

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
94	12-1	3.4	32	42	44	770	0.38	3	30	38
94	R 12-1	3.6	33	42	47	820	.42	<2	31	41
94	12-2	3.6	32	35	45	830	.36	2	33	39
94	12-2	3.7	33	43	47	850	.40	3	32	41
95	S1	3.6	30	120	44	600	.28	6	29	38
95	S2	2.6	27	240	31	420	1.20	2	26	43
95	R S3	3.3	29	110	44	500	.74	4	28	37
96	R	3.2	33	38	42	660	.58	<2	28	38
97	R	3.2	28	55	35	880	.16	<2	24	29
98	R S3	3.6	37	34	47	660	.44	5	31	38
98	S2	3.8	37	33	49	810	.34	4	33	42
98	S1	3.7	30	52	45	700	.12	4	30	40
100	11-1	2.3	22	66	30	620	.72	<2	21	23
100	11-2	2.2	20	53	28	650	1.24	<2	19	22
100	R 11-1	2.2	23	71	29	600	1.76	<2	18	22
100	11-2	2.1	21	61	29	630	1.14	<2	19	22
101	R	3.4	29	160	49	770	1.52	3	28	38
102	DSR	2.3	25	88	18	940	.48	<2	21	19
102	10-1	3.0	31	74	35	920	.34	<2	28	30
102	R 10-1	3.1	25	71	35	940	.20	<2	25	31
102	10-2	3.0	25	81	35	910	.40	2	24	31
102	10-2	3.0	24	80	35	900	.26	<2	24	29
103	DSS	2.5	24	180	31	460	1.42	<2	20	31
103	PTS	2.5	26	170	36	470	1.54	<2	20	32
104	R	2.4	22	220	35	470	5.90	4	19	100
105	R	3.3	28	130	53	690	1.24	4	26	50
106	PTS	2.5	24	240	35	470	2.40	4	20	100
107	R	3.5	35	190	48	750	1.28	3	29	56
108	R S3	3.7	35	69	46	520	.64	4	30	46
108	S1	3.8	34	79	46	470	.12	3	29	45
108	S2	3.8	35	53	47	470	.18	3	30	41
110	R	3.1	29	130	36	970	.52	3	24	30
111	R	2.6	23	190	38	470	2.60	3	21	100
112	R	5.2	33	75	45	1,100	1.10	3	29	38
113	DSS	3.1	29	1,300	19	530	17.3	5	26	150
113	R	2.5	28	420	31	430	3.20	3	24	110
115	R	5.6	27	33	39	610	.32	51	25	37
116	S1	4.2	32	56	49	520	.20	6	32	43
116	R S3	4.1	31	49	47	430	.80	7	29	38
116	S2	3.5	30	67	44	470	.50	7	27	38
117	R	3.5	32	45	47	350	.46	9	29	31
118	R	4.6	33	36	38	1,400	.20	5	29	38
119	DSR	3.7	32	300	38	810	1.12	2	26	46
119	R	3.5	28	210	44	640	.56	2	26	46
124	R	3.0	27	430	44	390	2.30	4	25	130
125	S1	3.6	29	150	41	490	.54	5	28	44
125	S2	3.6	34	140	44	390	.74	4	30	43
125	R S3	3.5	29	130	43	410	1.10	4	27	45
126	R	2.9	27	460	32	400	.32	<2	23	31
127	R	3.1	27	400	46	410	3.10	3	26	110

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
128	R	3.4	29	330	44	530	0.56	2	23	48
129	R	4.0	27	210	47	310	1.08	9	26	36
130	S1	3.9	36	120	44	700	.38	5	30	45
130	S2	3.7	29	130	44	510	.78	4	29	42
130	R S3	3.4	28	160	44	400	.86	4	26	41
131	S1	3.8	34	110	43	1,000	.46	3	29	41
131	S3 9-2	3.8	30	110	47	860	1.16	4	28	44
131	R S3 9-1	3.8	29	110	45	880	1.50	4	27	44
131	S2	3.6	29	42	38	730	.25	4	25	28
131	S3 9-1	3.6	33	130	45	840	1.72	4	30	42
131	S1	3.7	32	120	44	910	1.14	4	27	41
131	S1	4.1	30	110	44	1,100	.42	4	28	43
131	S3 9-2	3.8	28	110	46	840	.96	4	28	43
131	S1	3.7	29	120	44	930	.34	4	27	42
132	DSR	2.6	71	47	20	1,300	.70	3	56	22
132	R	3.4	71	57	35	1,700	.74	3	63	33
134	R S3	4.1	32	83	43	720	.96	4	27	34
134	S2	4.2	33	76	45	720	.52	5	30	35
134	S1	3.6	30	130	45	550	.38	5	29	41
135	R D	3.3	27	160	43	1,000	.78	2	26	46
135	DSS	2.5	27	150	25	960	1.12	2	21	34
136	DSS	3.6	32	330	42	610	1.22	13	25	66
136	U	3.4	29	330	47	540	.86	3	28	64
137	R S3	2.5	22	260	31	450	1.90	3	19	55
137	S1	2.5	19	120	27	630	.48	4	19	45
137	S2	3.4	30	110	44	650	.74	5	27	41
139	R	3.9	30	41	45	370	.34	8	29	35
140	R	2.8	20	400	30	340	2.46	4	17	83
141	R	3.4	27	490	44	420	5.20	6	25	120
142	R	3.5	81	55	37	770	.48	3	73	29
143	R	3.7	33	80	40	540	.52	4	27	35
144	R	3.4	30	220	43	750	.52	3	25	45
148	R	3.5	43	75	33	970	.36	3	39	31
149	DSR	3.2	25	210	22	750	.58	2	21	40
149	R	3.1	25	320	35	640	.98	<2	32	45
150	R	5.1	20	220	30	560	1.96	6	15	91
151	DSR	2.5	30	36	20	490	.84	2	24	19
151	R 8-1	3.3	28	46	33	480	.38	2	26	29
151	8-2	3.0	31	51	31	410	.78	3	26	26
151	8-2	3.1	31	51	32	410	.42	3	27	28
151	8-1	3.3	27	43	32	470	.34	2	26	28
152	R	3.7	28	300	43	1,000	.58	2	25	52
153	R	3.9	33	59	36	1,200	.58	3	32	35
154	R	4.1	29	370	48	500	1.40	4	26	44
154	DSS	4.1	30	350	43	500	1.40	4	25	43
158	R	4.1	27	320	41	620	2.10	6	22	46
160	R	3.9	25	450	40	540	2.05	5	21	46
161	R	3.9	25	320	43	620	2.90	5	22	55
162	R	3.5	31	180	43	630	.44	2	24	45
164	R	3.1	26	99	37	610	.28	5	23	36

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
165	R	3.2	42	49	33	800	0.40	<2	34	29
166	R	5.8	19	1,700	17	760	6.19	15	15	120
167	R	3.5	35	140	53	510	.44	2	29	43
169	R	3.3	35	210	51	390	.80	3	27	61
171	R	3.6	27	210	43	1,100	.96	2	25	65
178	DSR	2.1	30	45	19	870	.44	<2	26	17
178	R	3.0	29	43	30	990	.46	<2	27	27
179	R	3.6	33	410	45	440	2.82	4	27	100
180	R	3.2	28	120	45	490	.60	2	27	31
181	R	4.1	28	280	51	640	.40	4	25	37
186	R	3.1	32	50	32	980	.66	2	29	30
187	R	4.1	26	440	41	540	1.94	5	24	120
194	DSR	1.8	28	37	15	920	.50	<2	26	15
194	R	3.5	29	240	41	650	.80	3	26	38
196	R	2.3	21	61	27	460	.40	2	23	33
199	DSS	2.7	36	46	29	550	.40	<2	28	25
199	U	3.0	33	46	37	520	.20	<2	29	29
200	R D	3.0	34	53	33	650	.44	<2	29	28
200	DSS	2.2	32	44	21	850	.50	<2	30	19
201	DSS	5.5	39	360	32	660	2.22	4	32	110
201	R 5-1	4.0	36	420	40	500	1.78	4	32	99
201	5-2	4.2	40	460	42	460	2.74	5	33	110
201	5-1	4.1	34	350	40	510	2.00	4	32	98
201	5-2	4.2	35	550	44	460	2.40	5	31	110
205	DSS	2.7	31	220	14	710	1.52	<2	26	25
205	R	2.7	23	170	26	840	.54	<2	19	33
208	R	2.2	25	140	21	730	.24	<2	20	26
211	R	2.6	23	190	23	750	.30	<2	20	29
215	R	2.4	21	140	24	700	.48	<2	17	28
224	R	2.3	25	110	25	680	.42	<2	23	31
226	R	2.6	24	130	26	900	.40	<2	20	33
233	R	2.4	22	110	25	880	.32	<2	19	32
234	R	2.5	25	56	24	990	.20	<2	23	27
242	R	2.6	23	81	26	750	.30	<2	20	29
245	7-1	2.9	27	71	26	780	.18	<2	25	30
245	7-2	2.8	26	65	25	820	.24	<2	23	28
245	7-2	2.7	22	49	23	800	.26	<2	9	26
245	R 7-1	2.9	27	72	27	790	.24	<2	23	30
251	R	2.6	26	75	25	760	.26	<2	21	26
254	6-1	3.1	31	46	30	990	.20	<2	29	31
254	6-2	2.8	32	49	29	860	.34	<2	29	29
254	R 6-1	3.0	32	45	29	950	.22	<2	28	29
254	6-2	2.8	26	47	30	880	.28	<2	25	28
261	R	3.8	32	220	42	670	1.10	3	26	75
262	U 4-2	2.5	30	56	28	700	.40	<2	27	27
262	U 4-1	2.7	28	42	33	720	.28	<2	25	27
262	U 4-1	2.7	27	43	33	710	.24	<2	25	26
262	U 4-2	2.6	25	54	29	720	.32	<2	23	27
264	D 3-1	2.1	23	61	23	540	.34	<2	22	23
264	D 3-2	2.7	29	66	29	600	.24	<2	24	27

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
264	D 3-2	2.7	29	68	29	590	0.24	<2	24	27
264	R D 3-1	2.1	25	54	22	540	.30	<2	19	22
267	R	3.5	30	190	44	620	.88	4	27	63
271	R	3.7	31	150	44	790	1.02	2	29	66
273	R D	3.8	36	220	47	790	.96	<2	31	76
274	R	3.6	29	140	43	690	.90	<2	28	62
276	DSR	3.7	34	170	39	770	1.54	2	29	66
276	U	3.8	33	200	50	740	.84	3	31	74
277	R	3.8	35	210	46	740	1.00	2	29	75
279	R	3.5	35	52	45	1,500	.16	<2	30	33
289	R	3.6	35	42	44	1,500	.24	<2	29	33
299	R	4.1	34	86	52	1,600	.24	<2	30	38
323	R	3.5	36	33	49	910	.04	<2	31	33
332	R	2.7	26	20	31	850	.06	<2	22	24
337	R	3.1	28	33	35	860	.10	<2	27	27
342	R	3.3	37	26	49	700	.10	<2	31	34
343	R	3.0	28	26	36	800	.14	<2	24	27
346	1-1	2.9	29	27	37	860	.04	<2	28	27
346	1-2	3.0	28	23	38	870	.04	<2	26	28
346	1-2	3.0	29	25	39	880	.06	<2	27	28
346	R 1-1	2.9	30	26	37	850	.06	<2	27	27
348	R	3.2	31	26	46	610	.04	<2	29	32
351	R	3.4	35	30	53	700	.06	<2	30	35
352	R	2.9	34	28	36	950	.22	<2	29	27
395	R	5.6	19	32	25	6,200	.16	3	17	24
416	R	6.6	22	44	30	6,400	.24	3	21	31
422	R	4.9	25	42	28	2,600	.28	3	21	24
423	R	3.1	18	26	17	1,500	.22	<2	16	16
425	R	5.6	26	43	31	2,300	.14	2	24	25
436	R	4.6	23	40	25	3,000	.20	2	18	24
437	R	5.5	24	45	32	2,400	.18	3	22	29
438	U 2-1	5.3	26	37	39	2,300	.16	3	25	31
438	U 2-1	5.0	29	41	37	2,200	.16	3	24	30
438	2-2	5.1	28	46	36	2,300	.20	3	24	29
438	2-2	5.0	28	42	37	2,300	.14	2	23	29
439	R D	4.9	25	43	32	2,500	.18	2	23	27
443	R	4.7	25	38	35	2,400	.20	3	23	31

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
1	DSS	<4	6	0.9	<2	140	<40	7	<10	0.25
1	17-1	<4	7	1.0	<2	140	<40	8	<10	.26
1	R 17-1	<4	7	.6	<2	130	<40	8	<10	.25
1	17-2	5	7	1.4	<2	130	<40	7	<10	.25
1	17-2	6	7	1.4	<2	140	<40	7	<10	.28
4	R	<4	6	1.1	<2	230	<40	6	<10	.24
13	DSS	<4	6	.6	<2	480	<40	5	<10	.30
13	R	<4	7	1.3	<2	580	<40	7	<10	.23
17	R	<4	7	1.2	<2	520	<40	6	<10	.22
22	DSS	<4	5	.8	<2	1,100	<40	5	<10	.25
22	R	6	6	1.5	<2	1,100	<40	5	<10	.21
29	R	<4	7	1.4	<2	740	<40	5	<10	.22
37	DSS	<4	5	.2	<2	250	<40	5	<10	.23
42	16-1	<4	7	.7	<2	440	<40	7	<10	.21
42	R 16-1	5	7	1.0	<2	450	<40	7	<10	.21
42	16-2	7	8	.8	<2	350	<40	7	<10	.23
42	16-2	<4	8	.8	<2	360	<40	7	<10	.23
48	R	<4	6	.6	<2	620	<40	5	<10	.16
49	R	<4	5	1.0	<2	430	<40	5	<10	.16
52	R	<4	6	.8	<2	510	<40	6	<10	.16
52	DSS	<4	5	.5	<2	360	<40	6	<10	.27
53	R 15-1	<4	5	1.1	<2	430	<40	5	<10	.15
53	15-2	<4	6	.9	<2	500	<40	6	<10	.15
53	15-2	<4	6	1.4	<2	510	<40	6	<10	.16
53	15-1	<4	5	1.4	<2	430	<40	6	<10	.17
54	R	5	10	.5	<2	180	<40	8	<10	.25
55	R	4	6	1.4	2	440	<40	6	<10	.20
56	U 14-2	<4	6	.7	<2	420	<40	5	<10	.19
56	U 14-2	4	6	1.2	<2	430	<40	5	<10	.18
56	U 14-1	<4	6	1.1	<2	420	<40	5	<10	.19
56	U 14-1	<4	6	.9	<2	430	<40	6	<10	.18
57	R D 13-1	<4	6	1.6	2	350	<40	5	20	.17
57	D 13-2	<4	6	1.7	2	330	<40	4	20	.17
57	D 13-2	<4	6	1.8	2	330	<40	6	20	.18
57	D 13-1	<4	6	1.9	2	360	<40	5	20	.20
63	R	<4	6	2.0	<2	310	<40	6	20	.19
69	R	5	9	.9	<2	140	<40	7	<10	.22
72	R	<4	9	.6	<2	120	<40	8	<10	.29
73	R	<4	9	.9	<2	130	<40	10	<10	.24
76	R	6	10	.9	<2	130	<40	8	<10	.27
77	R	5	10	.7	<2	130	<40	9	<10	.26
78	R	<4	8	.4	2	130	<40	6	<10	.22
80	R	5	11	1.2	<2	130	<40	9	<10	.29
81	R	<4	9	.8	<2	140	<40	7	<10	.21
82	R	5	10	.8	<2	120	<40	8	<10	.26
85	R	5	9	1.1	2	130	<40	7	<10	.22
86	R	8	12	1.2	<2	100	<40	9	<10	.32
87	R	<4	8	.7	<2	140	<40	8	<10	.24
88	R	<4	7	.8	<2	130	<40	8	<10	.20
93	R	6	12	1.2	<2	140	<40	10	<10	.28

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
94	12-1	5	12	0.9	<2	100	<40	9	<10	0.28
94	R 12-1	8	12	1.3	<2	100	<40	10	<10	.30
94	12-2	6	12	1.0	<2	100	<40	9	<10	.27
94	12-2	5	12	1.2	<2	100	<40	10	<10	.29
95	S1	7	11	1.0	<2	120	<40	9	<10	.29
95	S2	<4	7	1.3	5	250	<40	6	30	.17
95	R S3	6	11	1.1	<2	100	<40	10	<10	.26
96	R	10	11	.6	<2	100	<40	9	<10	.29
97	R	4	9	.9	<2	140	<40	7	<10	.23
98	R S3	5	11	.8	<2	99	<40	10	<10	.27
98	S2	<4	12	.6	<2	97	<40	11	<10	.26
98	S1	7	11	1.2	<2	100	<40	9	<10	.26
100	11-1	<4	7	.8	<2	110	<40	6	<10	.20
100	11-2	<4	7	.9	<2	110	<40	5	<10	.17
100	R 11-1	6	7	.7	<2	110	<40	6	<10	.19
100	11-2	<4	7	.6	<2	110	<40	5	<10	.18
101	R	5	11	1.2	<2	120	<40	10	<10	.28
102	DSR	<4	6	.4	<2	140	<40	6	<10	.18
102	10-1	<4	9	.7	<2	130	<40	9	<10	.23
102	R 10-1	4	9	1.1	<2	130	<40	7	<10	.22
102	10-2	4	9	.9	<2	140	<40	6	<10	.21
102	10-2	<4	9	.7	<2	130	<40	7	<10	.20
103	DSS	<4	6	1.0	5	69	<40	<4	<10	.05
103	PTS	5	8	1.3	6	100	<40	6	10	.23
104	R	<4	7	B	12	130	<40	6	50	.23
105	R	6	11	1.1	4	110	<40	8	<10	.24
106	PTS	<4	7	1.7	26	130	<40	6	40	.22
107	R	<4	11	1.8	3	120	<40	10	10	.28
108	R S3	6	11	1.2	<2	130	<40	8	<10	.29
108	S1	7	11	1.1	<2	140	<40	9	<10	.27
108	S2	5	11	1.1	<2	130	<40	8	<10	.28
110	R	5	9	.9	3	140	<40	6	<10	.25
111	R	4	8	2.0	20	130	<40	6	40	.21
112	R	7	11	1.0	<2	120	<40	9	<10	.29
113	DSS	<4	6	1.2	34	140	<40	5	110	.24
113	R	<4	7	2.0	21	130	<40	8	60	.21
115	R	4	9	1.1	<2	130	<40	8	<10	.23
116	S1	7	11	.6	<2	160	<40	10	<10	.28
116	R S3	7	11	1.0	<2	140	<40	9	<10	.26
116	S2	5	10	1.1	<2	140	<40	9	<10	.28
117	R	5	11	1.0	3	250	<40	11	<10	.28
118	R	6	9	1.0	<2	150	<40	8	<10	.26
119	DSR	<4	9	.8	5	140	<40	7	50	.23
119	R	5	11	.6	5	130	<40	7	30	.25
124	R	<4	9	1.7	23	140	<40	7	60	.28
125	S1	6	10	1.1	3	140	<40	9	10	.28
125	S2	5	11	1.2	3	120	<40	10	10	.27
125	R S3	6	10	1.3	3	130	<40	8	20	.25
126	R	<4	8	1.6	<2	130	<40	8	<10	.22
127	R	5	10	1.5	22	130	<40	7	50	.27

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
128	R	9	10	1.3	4	170	<40	8	50	0.28
129	R	5	11	1.7	3	150	<40	9	20	.26
130	S1	6	11	1.3	2	180	<40	10	<10	.27
130	S2	6	11	1.1	2	150	<40	9	10	.25
130	R S3	6	10	1.1	3	170	<40	9	10	.28
131	S1	5	10	1.0	2	180	<40	11	<10	.25
131	S3 9-2	7	11	.9	<2	160	<40	10	<10	.24
131	R S3 9-1	7	11	1.4	<2	160	<40	9	<10	.26
131	S2	8	9	.8	<2	160	<40	7	<10	.26
131	S3 9-1	12	11	.7	<2	160	<40	10	10	.29
131	S1	8	10	1.4	3	190	<40	10	10	.26
131	S1	6	11	1.3	2	190	<40	9	10	.26
131	S3 9-2	5	11	1.2	<2	160	<40	9	<10	.24
131	S1	5	10	1.4	3	190	<40	11	<10	.26
132	DSR	<4	6	.7	<2	150	<40	35	<10	.21
132	R	5	8	1.3	<2	150	<40	41	<10	.27
134	R S3	5	10	1.5	<2	160	<40	8	<10	.25
134	S2	7	10	1.5	<2	160	<40	9	<10	.27
134	S1	4	10	1.4	4	160	<40	9	10	.25
135	R D	5	10	.8	4	150	<40	8	20	.26
135	DSS	<4	6	.7	3	130	<40	7	40	.18
136	DSS	<4	10	1.0	6	160	<40	8	30	.26
136	U	5	11	1.2	5	160	<40	9	20	.25
137	R S3	<4	7	1.5	6	290	<40	4	20	.16
137	S1	<4	7	.9	3	160	<40	5	20	.14
137	S2	4	10	1.0	<2	110	<40	9	<10	.28
139	R	7	10	.8	<2	160	<40	9	<10	.26
140	R	<4	7	2.1	10	110	<40	5	40	.19
141	R	5	9	1.6	20	150	<40	6	70	.25
142	R	6	9	1.3	<2	130	<40	50	<10	.27
143	R	6	10	1.5	<2	130	<40	8	<10	.26
144	R	5	9	1.4	4	150	<40	6	10	.24
148	R	5	9	1.0	<2	110	<40	20	<10	.27
149	DSR	<4	6	.6	4	160	<40	5	20	.17
149	R	<4	8	1.1	6	150	<40	16	20	.23
150	R	<4	6	.8	6	140	<40	4	20	.19
151	DSR	<4	6	.5	<2	140	<40	8	<10	.22
151	R 8-1	6	8	1.1	<2	140	<40	9	<10	.24
151	8-2	8	8	1.2	<2	130	<40	8	<10	.26
151	8-2	16	8	1.1	<2	130	<40	10	<10	.27
151	8-1	5	8	.9	<2	140	<40	8	<10	.23
152	R	5	10	1.2	4	170	<40	8	20	.25
153	R	6	9	1.0	<2	140	<40	11	<10	.25
154	R	5	10	3.0	5	130	<40	7	20	.26
154	DSS	<4	9	1.9	5	130	<40	8	20	.24
158	R	4	9	4.3	6	140	<40	6	20	.23
160	R	<4	9	1.7	6	140	<40	7	20	.23
161	R	7	9	4.3	7	130	<40	8	110	.34
162	R	5	10	1.6	4	150	<40	7	10	.23
164	R	<4	8	.8	<2	110	<40	7	<10	.20

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
165	R	<4	9	0.8	<2	130	<40	15	<10	0.23
166	R	<4	4	9.5	29	210	<40	4	260	.23
167	R	4	11	.9	<2	120	<40	11	<10	.26
169	R	5	11	1.4	4	110	<40	9	40	.25
171	R	4	10	1.6	4	150	<40	8	20	.23
178	DSR	<4	5	.6	<2	160	<40	7	<10	.17
178	R	9	8	1.0	<2	150	<40	10	20	.20
179	R	<4	10	2.4	14	140	<40	8	50	.23
180	R	<4	9	1.2	<2	130	<40	8	10	.25
181	R	5	11	1.8	<2	120	<40	8	10	.23
186	R	5	8	.9	<2	140	<40	10	<10	.24
187	R	4	10	2.3	15	160	<40	7	50	.24
194	DSR	<4	4	.5	<2	180	<40	5	<10	.14
194	R	4	9	1.8	3	130	<40	9	10	.23
196	R	6	6	.6	3	170	<40	11	<10	.15
199	DSS	<4	7	.8	<2	150	<40	9	<10	.21
199	U	5	9	1.2	<2	130	<40	12	<10	.26
200	R D	5	8	1.4	<2	140	<40	10	<10	.25
200	DSS	<4	6	.5	<2	160	<40	8	<10	.19
201	DSS	5	8	1.4	9	170	<40	8	40	.23
201	R 5-1	7	9	2.0	12	160	<40	9	30	.26
201	5-2	10	11	2.8	15	180	<40	12	50	.27
201	5-1	8	10	2.2	13	160	<40	8	40	.25
201	5-2	10	11	2.4	15	180	<40	10	40	.29
205	DSS	<4	5	.6	<2	250	<40	7	20	.24
205	R	<4	7	1.5	2	310	<40	7	10	.24
208	R	<4	6	.9	<2	270	<40	5	<10	.22
211	R	<4	6	1.0	<2	250	<40	7	<10	.19
215	R	<4	7	1.3	<2	260	<40	6	<10	.19
224	R	<4	7	1.0	5	260	<40	6	<10	.19
226	R	5	7	1.3	<2	260	<40	5	<10	.21
233	R	5	7	1.3	<2	240	<40	6	<10	.19
234	R	<4	7	1.2	<2	150	<40	7	<10	.19
242	R	5	7	1.2	<2	210	<40	7	<10	.21
245	7-1	<4	8	.8	<2	180	<40	8	<10	.20
245	7-2	5	8	1.2	<2	180	<40	7	<10	.23
245	7-2	<4	5	.9	<2	180	<40	<4	<10	.23
245	R 7-1	<4	8	1.0	<2	180	<40	8	<10	.25
251	R	<4	7	1.1	<2	210	<40	5	<10	.22
254	6-1	<4	9	.7	<2	150	<40	9	<10	.24
254	6-2	<4	8	.7	<2	160	<40	9	<10	.23
254	R 6-1	7	9	1.1	<2	140	<40	9	<10	.26
254	6-2	5	8	.8	<2	160	<40	6	<10	.23
261	R	6	10	1.8	7	130	<40	7	20	.24
262	U 4-2	4	8	.8	<2	200	<40	8	<10	.23
262	U 4-1	6	8	1.0	<2	170	<40	8	<10	.24
262	U 4-1	5	9	.9	<2	170	<40	7	<10	.24
262	U 4-2	5	8	.9	<2	200	<40	7	<10	.22
264	D 3-1	<4	6	.8	<2	210	<40	7	<10	.20
264	D 3-2	7	8	1.3	<2	190	<40	8	<10	.25

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
264	D 3-2	7	8	1.1	<2	180	<40	7	<10	0.25
264	R D 3-1	6	6	.7	<2	200	<40	6	<10	.21
267	R	6	10	1.6	6	130	<40	9	20	.25
271	R	5	10	1.3	4	120	<40	10	10	.27
273	R D	<4	11	2.3	6	130	<40	10	<10	.28
274	R	7	11	1.0	5	120	<40	9	20	.24
276	DSR	<4	9	1.2	5	130	<40	8	10	.23
276	U	6	11	1.4	6	130	<40	11	10	.29
277	R	7	11	2.4	7	130	<40	8	20	.29
279	R	<4	11	1.1	<2	97	<40	10	<10	.26
289	R	4	10	1.1	<2	97	<40	11	<10	.25
299	R	9	12	1.1	<2	94	<40	13	<10	.32
323	R	6	11	.8	<2	110	<40	9	<10	.29
332	R	<4	8	.8	<2	150	<40	6	<10	.22
337	R	<4	9	1.1	<2	140	<40	7	<10	.23
342	R	<4	11	.6	<2	100	<40	11	<10	.29
343	R	6	9	.9	<2	130	<40	7	<10	.25
346	1-1	<4	9	.8	<2	120	<40	8	<10	.25
346	1-2	7	10	1.1	<2	120	<40	9	<10	.26
346	1-2	5	10	1.1	<2	120	<40	8	<10	.25
346	R 1-1	9	9	.9	<2	110	<40	9	<10	.28
348	R	6	11	.8	<2	100	<40	10	<10	.30
351	R	7	11	.6	<2	130	<40	9	<10	.32
352	R	<4	9	.9	<2	120	<40	10	<10	.25
395	R	<4	5	1.4	<2	68	<40	8	<10	.05
416	R	7	8	1.3	<2	100	<40	8	<10	.20
422	R	4	7	1.0	<2	120	<40	6	<10	.22
423	R	<4	5	.4	<2	120	<40	5	<10	.15
425	R	<4	8	1.0	<2	120	<40	8	<10	.21
436	R	5	7	1.1	<2	110	<40	7	<10	.20
437	R	5	8	1.2	<2	110	<40	8	<10	.21
438	U 2-1	5	10	1.5	<2	97	<40	11	<10	.23
438	U 2-1	8	9	1.2	<2	95	<40	10	<10	.27
438	2-2	7	9	1.0	<2	96	<40	9	<10	.25
438	2-2	7	9	1.4	<2	96	<40	9	<10	.25
439	R D	5	8	1.3	<2	100	<40	9	<10	.22
443	R	5	8	.9	<2	100	<40	8	<10	.22

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
1	DSS	0.65	53	2	15	100	4.68	2.94	1.74
1	17-1	.60	56	2	16	120	4.36	2.74	1.62
1	R 17-1	1.1	58	2	16	110	4.33	2.69	1.64
1	17-2	1.0	58	2	15	110	4.41	2.79	1.62
1	17-2	.55	58	2	16	110	4.37	2.76	1.61
4	R	.70	52	2	15	86	4.99	3.05	1.94
13	DSS	.40	48	1	13	110	6.22	2.57	3.65
13	R	.90	55	2	14	200	6.83	4.59	2.24
17	R	.65	50	2	13	150	8.13	4.75	3.38
22	DSS	.50	46	1	11	110	9.31	5.63	3.68
22	R	.35	45	1	11	110	8.57	5.38	3.19
29	R	.85	55	1	12	110	9.03	4.81	4.22
37	DSS	.40	43	1	11	40	7.09	1.70	5.39
42	16-1	.80	51	2	12	97	7.84	4.13	3.71
42	R 16-1	.50	52	1	12	93	7.96	4.23	3.73
42	16-2	.90	60	2	14	90	6.29	3.13	3.16
42	16-2	.90	61	2	14	98	6.24	3.03	3.21
48	R	.60	43	1	10	77	9.99	4.51	5.48
49	R	.60	37	1	10	68	9.24	4.13	5.11
52	R	.70	48	1	10	100	10.0	4.57	5.43
52	DSS	.40	49	1	11	68	8.56	2.61	5.95
53	R 15-1	.90	40	1	9	95	9.53	4.49	5.04
53	15-2	.60	45	1	9	100	9.76	4.76	5.00
53	15-2	.70	44	1	10	100	9.96	4.78	5.18
53	15-1	.65	42	1	9	93	9.40	4.42	4.98
54	R	.55	73	2	18	73	3.50	2.13	1.37
55	R	.55	48	1	11	170	8.38	4.33	4.05
56	U 14-2	.80	47	1	10	120	9.35	4.87	4.48
56	U 14-2	.75	46	1	11	110	9.33	4.63	4.70
56	U 14-1	.50	48	1	11	120	9.32	4.68	4.64
56	U 14-1	.50	48	1	11	120	9.30	4.70	4.60
57	R D 13-1	.70	48	1	11	180	10.1	5.94	4.16
57	D 13-2	.70	49	1	11	190	10.1	6.08	4.02
57	D 13-2	.80	51	1	11	200	10.1	6.08	4.02
57	D 13-1	.50	52	1	11	190	10.1	5.92	4.18
63	R	1.3	60	1	11	170	10.1	5.87	4.23
69	R	1.0	60	2	16	87	4.87	2.92	1.95
72	R	1.1	68	2	17	96	3.42	1.64	1.78
73	R	.90	70	2	16	150	4.87	2.79	2.08
76	R	1.7	81	2	19	130	3.91	2.41	1.50
77	R	2.1	75	2	17	97	4.61	1.47	3.14
78	R	1.7	66	2	16	310	5.84	3.08	2.76
80	R	2.2	91	2	19	160	4.85	3.45	1.40
81	R	1.3	59	2	15	120	4.87	2.31	2.56
82	R	1.5	84	2	19	270	5.47	3.54	1.93
85	R	1.7	61	2	16	410	6.05	3.38	2.67
86	R	2.9	96	2	20	270	4.38	2.89	1.49
87	R	1.5	55	2	16	160	4.90	2.42	2.48
88	R	1.4	53	2	14	440	5.82	2.33	3.49
93	R	2.1	98	2	18	270	5.04	3.45	1.59

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
94	12-1	3.3	88	2	20	150	2.92	2.11	0.81
94	R 12-1	3.6	93	3	22	150	2.97	2.15	.82
94	12-2	3.2	90	3	21	140	2.76	1.93	.83
94	12-2	3.6	97	2	21	160	2.76	1.93	.83
95	S1	3.7	84	2	18	200	4.48	2.88	1.60
95	S2	2.1	59	2	12	430	7.32	2.91	4.41
95	R S3	3.0	82	2	18	160	4.21	2.33	1.88
96	R	1.3	84	2	20	87	3.28	1.34	1.94
97	R	1.5	69	2	16	180	5.38	2.97	2.41
98	R S3	2.8	94	2	19	100	3.04	1.88	1.16
98	S2	2.1	99	2	18	110	3.05	1.71	1.34
98	S1	3.1	86	2	18	170	4.13	2.86	1.27
100	11-1	1.3	49	2	13	130	6.51	1.32	5.19
100	11-2	1.7	47	2	13	130	6.52	1.30	5.22
100	R 11-1	1.1	50	2	13	130	6.50	1.04	5.46
100	11-2	1.3	49	2	12	130	6.44	1.22	5.22
101	R	2.5	90	2	17	290	5.60	3.75	1.85
102	DSR	.75	43	2	13	140	5.92	1.58	4.34
102	10-1	1.3	66	2	16	200	5.31	2.85	2.46
102	R 10-1	1.3	63	2	16	190	5.20	2.72	2.48
102	10-2	1.1	62	2	16	200	5.45	2.83	2.62
102	10-2	1.1	61	2	15	200	5.54	2.92	2.62
103	DSS	1.4	49	<1	10	360	7.33	3.46	3.87
103	PTS	1.5	62	2	14	310	6.79	2.84	3.95
104	R	2.3	58	2	12	740	10.2	0	0
105	R	2.5	86	2	16	380	5.30	2.93	2.37
106	PTS	2.5	61	2	12	780	8.97	5.49	3.48
107	R	2.1	90	2	18	340	5.54	3.55	1.99
108	R S3	2.9	93	2	19	200	4.60	3.77	.83
108	S1	3.1	91	2	19	220	4.62	3.62	1.00
108	S2	3.6	96	3	20	160	4.03	3.19	.84
110	R	1.5	70	2	16	260	5.50	2.72	2.78
111	R	2.1	62	2	13	680	8.18	4.82	3.36
112	R	1.8	95	2	18	210	4.45	2.59	1.86
113	DSS	1.3	53	1	14	1,100	8.02	4.02	4.00
113	R	1.9	58	2	13	1,100	8.65	5.58	3.07
115	R	1.7	77	2	16	150	5.11	3.60	1.51
116	S1	2.4	100	3	21	190	3.30	2.64	.66
116	R S3	2.7	88	2	19	170	3.09	2.35	.74
116	S2	2.9	83	2	18	190	3.51	2.40	1.11
117	R	3.3	90	2	20	160	4.46	3.71	.75
118	R	1.5	82	2	18	150	4.82	4.07	.75
119	DSR	1.0	73	2	16	460	5.83	3.14	2.69
119	R	1.7	76	2	17	400	5.41	3.23	2.18
124	R	2.1	80	2	16	1,300	8.64	6.18	2.46
125	S1	2.7	78	2	17	340	5.00	3.52	1.48
125	S2	2.7	89	2	18	370	4.69	3.53	1.16
125	R S3	2.1	81	2	18	320	5.49	3.97	1.52
126	R	2.3	71	2	15	380	7.69	5.23	2.46
127	R	2.9	82	2	16	1,100	8.21	5.61	2.60

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
128	R	1.6	84	2	18	670	5.92	3.85	2.07
129	R	.50	87	2	17	510	6.63	5.37	1.26
130	S1	2.5	95	2	18	330	4.61	3.59	1.02
130	S2	3.3	83	2	18	330	4.30	3.03	1.27
130	R S3	3.1	84	2	17	350	4.97	3.60	1.37
131	S1	2.3	86	2	18	300	4.85	3.51	1.34
131	S3 9-2	3.4	85	2	18	260	4.98	3.42	1.56
131	R S3 9-1	2.6	84	2	18	260	4.95	3.36	1.59
131	S2	2.7	78	2	17	110	5.58	4.08	1.50
131	S3 9-1	2.4	87	2	19	250	4.94	3.34	1.60
131	S1	1.7	86	2	19	280	5.05	3.63	1.42
131	S1	2.5	85	2	18	300	4.83	3.51	1.32
131	S3 9-2	2.3	83	2	18	260	4.85	3.30	1.55
131	S1	1.8	85	2	17	300	5.01	3.59	1.42
132	DSR	1.0	51	2	20	130	6.60	2.50	4.10
132	R	1.4	72	2	26	210	5.99	4.01	1.98
134	R S3	2.5	88	2	17	220	4.48	3.16	1.32
134	S2	3.5	92	2	18	240	4.48	3.30	1.18
134	S1	2.6	82	2	18	350	5.24	3.59	1.65
135	R D	1.7	80	2	18	390	6.40	4.21	2.19
135	DSS	1.2	49	2	13	240	6.67	2.79	3.88
136	DSS	1.8	84	2	16	570	6.66	4.28	2.38
136	U	2.8	81	2	17	570	6.01	3.84	2.17
137	R S3	2.5	59	1	11	430	7.85	2.60	5.25
137	S1	2.5	49	2	12	240	6.45	2.06	4.39
137	S2	3.4	85	2	18	180	4.26	2.60	1.66
139	R	3.2	86	2	20	190	5.12	3.91	1.21
140	R	1.7	51	2	12	940	9.08	5.92	3.16
141	R	2.7	81	2	17	1,300	8.67	5.86	2.81
142	R	1.8	79	2	25	200	5.19	3.49	1.70
143	R	3.1	86	2	18	260	4.27	2.79	1.48
144	R	1.9	78	2	16	410	6.06	3.57	2.49
148	R	1.3	69	2	21	200	5.45	2.96	2.49
149	DSR	1.0	46	2	13	350	6.80	2.41	4.39
149	R	1.3	65	2	15	450	6.30	3.30	3.00
150	R	1.3	44	1	14	580	8.66	2.32	6.34
151	DSR	.80	45	2	15	140	4.63	2.04	2.59
151	R 8-1	1.3	63	2	18	220	4.60	3.09	1.51
151	8-2	1.1	64	2	18	230	4.75	3.19	1.56
151	8-2	1.5	64	2	18	230	4.68	3.13	1.55
151	8-1	1.6	61	2	17	210	4.65	3.16	1.49
152	R	2.3	75	2	17	480	6.40	4.12	2.28
153	R	2.0	84	2	21	210	5.66	3.44	2.22
154	R	2.3	94	2	15	1,200	7.55	5.19	2.36
154	DSS	1.8	86	2	14	1,100	7.66	5.13	2.53
158	R	2.2	82	2	13	1,000	8.70	6.04	2.66
160	R	3.1	77	2	14	1,400	8.56	6.04	2.52
161	R	2.1	74	2	14	730	9.81	7.74	2.07
162	R	2.0	80	2	16	440	6.63	4.44	2.19
164	R	2.4	65	2	13	270	5.09	1.72	3.37

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
165	R	1.7	70	2	18	190	5.42	3.30	2.12
166	R	3.7	61	1	10	3,200	21.9	20.20	1.66
167	R	1.7	90	2	17	300	4.30	2.77	1.53
169	R	2.2	86	2	17	490	5.44	3.71	1.73
171	R	1.5	74	2	16	570	7.28	4.89	2.39
178	DSR	.85	42	2	14	110	6.53	1.80	4.73
178	R	1.1	58	2	16	160	6.52	3.26	3.26
179	R	2.3	81	2	16	1,600	8.47	6.03	2.44
180	R	.80	75	2	16	350	5.00	2.94	2.06
181	R	1.5	81	2	16	630	7.76	6.19	1.57
186	R	1.4	71	2	18	170	5.84	2.86	2.98
187	R	2.1	70	2	16	1,900	8.53	5.63	2.90
194	DSR	.90	33	1	14	100	8.63	1.84	6.79
194	R	2.3	77	2	16	780	6.68	4.16	2.52
196	R	1.5	47	2	12	220	11.3	8.07	3.23
199	DSS	.85	61	2	17	150	6.14	3.18	2.96
199	U	1.3	74	2	18	170	5.13	3.24	1.89
200	R D	1.5	70	2	17	190	5.46	3.17	2.29
200	DSS	.60	45	2	15	140	6.68	2.65	4.03
201	DSS	8.5	66	3	31	1,200	8.00	4.84	3.16
201	R 5-1	7.1	73	3	32	1,500	7.90	5.64	2.26
201	5-2	12	94	4	38	2,400	7.83	6.05	1.78
201	5-1	5.9	74	3	32	1,400	7.96	5.71	2.25
201	5-2	15	94	4	38	2,400	7.79	6.01	1.78
205	DSS	.60	56	2	13	130	7.17	2.02	5.15
205	R	.70	56	2	13	200	8.73	4.74	3.99
208	R	.70	50	2	12	140	7.51	3.46	4.05
211	R	1.1	50	2	12	240	7.58	3.83	3.75
215	R	.70	49	2	12	210	7.70	3.84	3.86
224	R	.80	53	1	12	190	8.28	4.83	3.45
226	R	.80	57	2	12	200	8.41	4.56	3.85
233	R	.90	53	2	13	180	7.66	4.12	3.54
234	R	.65	56	2	15	120	6.80	3.22	3.58
242	R	.80	56	2	14	170	6.71	3.70	3.01
245	7-1	1.1	65	2	16	140	5.32	2.63	2.69
245	7-2	.80	62	2	15	130	5.66	2.77	2.89
245	7-2	.60	62	1	13	130	5.70	2.81	2.89
245	R 7-1	.85	70	2	16	140	5.30	2.55	2.75
251	R	.80	60	2	14	150	6.57	3.36	3.21
254	6-1	1.1	73	2	18	130	4.78	2.53	2.25
254	6-2	1.2	69	2	16	130	5.40	2.91	2.49
254	R 6-1	1.1	75	2	19	110	4.75	2.45	2.30
254	6-2	.65	66	2	16	130	5.46	2.97	2.49
261	R	3.6	79	2	20	780	6.72	4.56	2.16
262	U 4-2	.90	65	2	14	150	6.05	3.55	2.50
262	U 4-1	1.0	67	2	16	120	4.99	2.78	2.21
262	U 4-1	1.1	66	2	16	120	4.99	2.74	2.25
262	U 4-2	.70	61	2	14	140	6.20	3.70	2.50
264	D 3-1	1.0	50	2	13	120	6.33	3.42	2.91
264	D 3-2	.90	67	2	16	140	5.41	2.96	2.45

Table 7.--Element concentrations in fine-fraction streambed sediment from high-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
264	D 3-2	0.80	66	2	17	140	5.35	2.91	2.44
264	R D 3-1	.70	52	2	14	110	6.32	3.40	2.92
267	R	2.1	79	2	20	710	6.40	4.26	2.14
271	R	2.2	81	2	20	570	5.32	3.64	1.68
273	R D	2.5	94	3	21	660	6.14	4.50	1.64
274	R	2.1	77	2	20	560	6.14	4.27	1.87
276	DSR	2.1	77	2	19	590	6.32	4.16	2.16
276	U	1.9	92	3	21	710	6.08	4.49	1.59
277	R	2.9	89	2	22	750	6.42	4.59	1.83
279	R	1.5	87	2	17	140	4.78	3.10	1.68
289	R	1.6	85	2	17	140	4.79	3.15	1.64
299	R	1.1	95	2	19	150	4.65	3.47	1.18
323	R	1.9	96	2	18	130	3.51	2.41	1.10
332	R	1.3	63	2	14	95	5.85	3.01	2.84
337	R	1.4	71	2	17	140	5.04	3.29	1.75
342	R	1.2	92	2	18	100	3.45	2.28	1.17
343	R	1.4	72	2	17	110	5.50	3.73	1.77
346	1-1	1.1	72	2	17	100	4.16	2.51	1.65
346	1-2	1.7	73	2	18	100	4.14	2.51	1.63
346	1-2	1.5	74	2	18	100	4.10	2.47	1.63
346	R 1-1	1.3	76	2	18	96	4.15	2.47	1.68
348	R	2.2	85	2	18	110	3.40	2.28	1.12
351	R	2.3	100	2	18	110	4.06	2.04	2.02
352	R	1.1	75	2	17	100	4.07	2.54	1.53
395	R	1.1	45	1	9	160	7.52	5.42	2.10
416	R	.85	62	2	14	250	6.58	5.60	.98
422	R	1.3	64	2	14	170	5.58	3.70	1.88
423	R	.75	38	1	10	120	4.72	3.66	1.06
425	R	1.4	71	2	14	200	5.75	3.89	1.86
436	R	.90	57	2	13	170	5.34	3.96	1.38
437	R	1.2	66	2	15	210	6.36	4.92	1.44
438	U 2-1	1.4	75	2	16	180	5.74	5.44	.30
438	U 2-1	.85	77	2	17	170	5.47	4.37	1.10
438	2-2	1.3	74	2	17	180	6.13	4.97	1.16
438	2-2	.90	74	2	17	170	6.04	4.88	1.16
439	R D	1.3	64	2	15	180	5.46	3.83	1.63
443	R	1.4	72	2	16	180	6.40	4.63	1.77

[1] R means randomly selected site 11-1 are nested ANOVA site and resampling number, respectively. (Splits from the same sample would have the same sampling site and resampling numbers.)
U means upstream from dam.
D means downstream from dam.
S1 means sampling 1 week before 100-year flood.
S2 means resampling 1 month after 100-year flood.
S3 means resampling 2 months after 100-year flood.
PTS means point-source sampling.
DSS means dry sieved split.
DSR means dry sieved resampled.

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin

[--, data not available; <, less than reporting level given; >, greater than reporting level given; B, insufficient sample for analysis; H, chemical interference; footnotes are at end of table]

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
2	43°06'19"	88°16'31"	R	09-12-87	--	5.3	2.5	0.86	1.6
3	43°05'28"	88°12'21"	R	09-13-87	--	4.3	1.3	.35	2.2
5	43°03'02"	88°08'20"	R	09-13-87	--	6.8	3.6	.65	1.7
6	43°02'56"	88°18'56"	1-2-1	09-12-87	--	14	5.9	.37	1.9
7	43°02'55"	88°18'54"	1-2-2	09-12-87	--	2.9	1.2	.82	1.7
7	43°02'55"	88°18'54"	1-2-2	09-12-87	--	2.9	1.2	.82	1.6
8	43°02'27"	88°16'21"	R 1-1-1	09-12-87	--	1.9	.96	.73	1.8
9	43°00'10"	88°21'24"	R	09-10-87	--	2.8	1.7	.70	1.8
10	42°57'37"	88°20'09"	3-2-2	09-10-87	--	10	4.0	.56	1.1
10	42°57'37"	88°20'09"	3-2-2	09-10-87	--	10	3.9	.54	1.0
11	42°57'36"	88°20'06"	3-2-1	09-10-87	--	11	4.7	.57	1.1
12	42°57'19"	88°06'42"	R	09-12-87	--	2.0	1.2	.71	1.8
14	42°55'05"	88°15'47"	R 3-1-1	09-15-87	--	5.3	1.3	.30	0.67
15	42°54'57"	88°25'26"	2-2-2	09-15-87	--	3.7	.91	.22	.50
15	42°54'57"	88°25'26"	2-2-2	09-15-87	--	3.7	.92	.22	.50
16	42°54'55"	88°25'28"	2-2-1	09-10-87	--	4.2	1.1	.22	.49
18	42°51'53"	88°22'11"	4-2-2	09-10-87	--	7.7	3.1	.61	1.4
18	42°51'53"	88°22'11"	4-2-2	09-10-87	--	7.7	3.0	.64	1.4
19	42°51'50"	88°22'09"	4-2-1	09-10-87	--	8.1	2.8	.57	1.3
20	42°51'50"	88°22'07"	R 4-1-1	09-10-87	--	9.2	3.5	.61	1.3
21	42°51'02"	88°10'30"	R	09-11-87	--	16	8.0	.48	.76
23	42°45'36"	88°16'06"	R	09-11-87	--	.76	.52	.71	1.8
24	42°45'31"	88°08'30"	R	09-11-87	--	2.8	1.6	.69	1.9
25	42°43'30"	88°24'20"	R	09-11-87	--	3.9	1.3	.79	1.5
26	42°43'06"	88°11'30"	R	09-07-87	--	7.3	3.9	.75	1.8
27	42°39'21"	88°25'59"	5-2-2	09-07-87	--	2.6	1.2	.79	1.6
27	42°39'21"	88°25'59"	5-2-2	09-07-87	--	2.8	1.3	.88	1.7
28	42°39'18"	88°25'59"	5-2-1	09-07-87	--	2.5	1.0	.76	1.6
30	42°38'51"	88°22'21"	R 5-1-1	09-07-87	--	4.4	1.7	.81	1.5
31	42°35'35"	88°07'45"	R	09-09-87	--	5.9	2.7	.51	.98
32	42°35'19"	88°32'31"	R	09-10-87	--	16	5.3	.49	1.0
33	42°35'58"	88°26'10"	R	09-08-87	--	2.8	.92	.30	.78
34	42°33'09"	88°17'18"	R	09-09-87	--	7.0	3.3	.70	1.4
35	42°31'46"	88°27'43"	R	09-08-87	--	3.7	2.3	.72	1.7
36	42°31'14"	88°23'34"	R 6-1-1	09-09-87	--	4.4	1.8	.90	1.5
38	42°30'34"	88°12'16"	R	09-09-87	--	8.8	4.5	.60	1.5
39	42°30'19"	88°05'45"	R	09-09-87	--	4.3	2.5	.60	2.3
40	42°30'17"	88°25'57"	6-2-1	09-08-87	--	6.0	3.0	.73	1.6
41	42°30'16"	88°26'01"	6-2-2	09-08-87	--	5.3	2.6	.71	1.6
41	42°30'16"	88°26'01"	6-2-2	09-08-87	--	5.3	2.6	.70	1.6
43	42°28'37"	88°16'55"	R	09-08-87	--	1.9	.76	.73	1.8
44	42°26'46"	88°05'18"	7-2-1	09-11-87	--	2.9	2.0	.56	2.6
45	42°26'44"	88°05'18"	7-2-2	09-11-87	--	1.6	1.3	.57	2.4
45	42°26'44"	88°05'18"	7-2-2	09-11-87	--	1.6	1.4	.59	2.5
46	42°25'55"	88°07'13"	R	09-11-87	--	3.2	2.0	.58	2.2

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
47	42°25'41"	88°18'05"	R	09-08-87	--	8.3	2.8	0.81	1.4
50	42°21'01"	88°07'20"	R	09-11-87	--	1.8	1.3	.60	2.4
51	42°18'06"	88°16'03"	R	09-11-87	--	5.3	2.5	.66	1.5
58	42°09'22"	88°06'51"	R	09-14-87	--	4.3	2.6	.50	2.6
59	42°06'05"	88°18'46"	R	09-11-87	--	3.1	1.9	.66	1.6
60	42°06'02"	88°23'41"	9-2-2	09-11-87	--	5.4	2.8	.84	1.7
61	42°06'02"	88°23'40"	9-2-2	09-11-87	--	5.3	2.7	.83	1.6
62	42°06'00"	88°23'40"	9-2-1	09-11-87	--	6.1	2.9	.73	1.6
64	42°05'40"	88°24'49"	R 9-1-1	09-11-87	--	7.1	2.4	.59	1.7
65	42°02'48"	88°10'27"	R	09-11-87	--	2.7	1.7	.50	2.2
66	42°01'47"	88°23'30"	R	09-11-87	--	5.2	2.8	.64	1.9
67	42°35'03"	88°02'06"	R	09-09-87	--	7.8	4.2	.55	1.7
68	42°32'14"	87°52'56"	R	09-11-87	--	1.0	1.0	.52	2.6
70	42°26'40"	87°57'10"	R	09-11-87	--	7.1	4.0	.47	2.5
71	42°24'25"	87°59'39"	R 7-1-1	09-15-87	--	1.1	.87	.65	2.2
74	42°19'04"	87°56'03"	R	09-12-87	--	2.2	1.7	.55	2.6
75	42°18'19"	87°59'43"	R	09-12-87	--	6.2	3.5	.45	2.5
79	42°13'55"	87°59'37"	R	09-12-87	--	5.6	3.1	.70	1.9
83	42°11'23"	87°52'54"	R	09-12-87	--	4.9	2.6	.59	2.1
84	42°09'24"	87°59'58"	R 8-1-1	09-12-87	--	1.2	.92	.54	2.1
89	42°07'37"	88°03'40"	8-2-1	09-14-87	--	1.9	1.3	.52	2.6
90	42°07'36"	88°03'43"	8-2-2	09-14-87	--	1.5	1.2	.51	2.6
90	42°07'36"	88°03'43"	8-2-2	09-14-87	--	1.5	1.2	.49	2.6
91	42°07'18"	87°53'36"	R	09-12-87	--	4.4	2.6	.59	2.2
92	42°06'38"	87°46'55"	R	09-12-87	--	3.3	2.3	.54	2.7
99	42°04'03"	88°03'39"	R	09-12-87	--	2.7	2.0	.47	2.8
109	41°59'32"	88°00'17"	R	09-14-87	--	2.4	1.7	.51	2.3
114	41°56'38"	87°56'23"	R	09-14-87	--	2.2	1.4	.57	2.3
120	41°54'04"	88°02'34"	10-2-2	09-14-87	--	1.3	1.1	.44	2.4
120	41°54'04"	88°02'34"	10-2-2	09-14-87	--	1.2	1.0	.44	2.3
121	41°54'03"	88°02'36"	10-2-1	09-14-87	--	1.0	.83	.53	2.2
122	41°53'44"	88°03'12"	R 10-1-1	09-14-87	--	1.8	1.2	.54	2.2
123	41°53'38"	88°09'01"	R	09-11-87	--	1.2	.91	.56	2.1
133	41°49'38"	87°56'26"	R	09-14-87	--	3.8	2.4	.58	2.3
138	41°48'49"	88°12'15"	R	09-11-87	--	4.7	2.6	.63	1.6
145	41°45'12"	87°53'48"	R	09-14-87	--	.91	.99	.59	2.5
146	41°45'07"	88°03'51"	R	09-15-87	--	2.0	1.4	.60	2.2
147	41°44'31"	88°07'24"	R	09-14-87	--	2.1	1.5	.57	2.2
155	41°39'49"	87°51'15"	R	09-06-87	--	2.6	1.8	.48	2.7
156	41°39'44"	88°14'17"	R	09-05-87	--	2.5	1.3	.61	2.0
157	41°39'32"	87°41'42"	R	09-06-87	--	8.5	3.2	.39	1.8
159	41°39'13"	88°02'40"	R	09-14-87	--	9.3	5.3	.38	1.9
163	41°38'27"	87°40'07"	R	09-06-87	--	1.2	1.1	.51	2.5
168	41°35'43"	87°45'06"	R 14-1-1	09-06-87	--	1.3	1.2	.48	2.6
170	41°35'08"	87°55'57"	R 15-1-1	09-10-87	--	.87	.87	.51	2.4
172	41°34'52"	87°49'23"	14-2-2	09-10-87	--	2.7	1.9	.48	2.6
172	41°34'52"	87°49'23"	14-2-2	09-10-87	--	2.7	1.9	.49	2.8
173	41°34'51"	87°49'22"	14-2-1	09-06-87	--	2.2	1.6	.49	2.5
174	41°34'26"	88°09'13"	R	09-05-87	--	2.7	1.7	.56	2.1
175	41°34'26"	88°00'18"	R	09-05-87	--	1.1	.91	.60	2.3

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
176	41°34'21"	87°52'48"	15-2-2	09-05-87	--	0.67	0.82	0.51	2.6
176	41°34'21"	87°52'48"	15-2-2	09-05-87	--	.67	.79	.51	2.4
177	41°34'20"	87°52'50"	15-2-1	09-10-87	--	.63	.76	.52	2.4
182	41°33'36"	87°35'51"	R	09-06-87	--	.69	.53	.67	2.0
183	41°32'47"	87°33'21"	R	09-06-87	--	1.1	.99	.33	2.5
184	41°32'20"	87°23'54"	R	09-06-87	--	4.5	2.4	.73	1.7
185	41°31'49"	87°58'59"	R 17-1-1	09-10-87	--	1.8	1.0	.65	2.1
188	41°30'55"	87°38'18"	R	09-06-87	--	3.4	2.0	.58	2.2
189	41°29'45"	87°56'27"	R	09-10-87	--	1.2	.89	.59	2.2
190	41°28'32"	87°47'26"	R	09-09-87	--	.99	.93	.58	2.4
191	41°28'11"	87°57'48"	17-2-2	09-09-87	--	2.2	.90	.65	2.1
192	41°28'10"	87°57'51"	17-2-1	09-10-87	--	3.6	.91	.57	2.0
193	41°28'10"	87°57'48"	17-2-2	09-10-87	--	2.1	.90	.65	2.1
195	41°27'25"	88°07'05"	R	09-05-87	--	2.2	1.1	.66	2.0
197	41°26'38"	87°38'08"	R	09-09-87	--	1.7	1.3	.50	2.3
198	41°26'07"	87°30'06"	R	09-09-87	--	.85	.90	.54	2.4
202	41°23'04"	88°07'20"	R	09-09-87	--	2.6	1.6	.60	2.1
203	41°21'20"	87°37'27"	R	09-04-87	--	2.1	1.3	.58	2.3
204	42°00'24"	88°17'50"	R	09-11-87	--	9.5	3.5	.47	1.6
206	41°57'59"	88°13'21"	R	09-11-87	--	2.1	1.3	.67	1.9
207	41°56'10"	88°20'04"	R	09-10-87	--	6.4	3.5	.62	1.9
209	41°52'29"	88°39'37"	R	09-10-87	--	1.8	1.1	.78	1.8
210	41°51'54"	88°27'52"	R	09-10-87	--	8.9	4.7	.61	1.8
212	41°50'50"	88°17'43"	R	09-11-87	--	3.4	2.0	.74	1.8
213	41°49'40"	88°25'49"	R	09-10-87	--	7.0	2.4	.58	1.6
214	41°47'17"	88°46'26"	R 12-1-1	09-09-87	--	1.7	.92	.77	1.7
216	41°46'47"	88°30'26"	11-2-2	09-09-87	--	3.3	1.6	.78	1.6
216	41°46'47"	88°30'26"	11-2-2	09-09-87	--	3.4	1.7	.84	1.7
217	41°46'45"	88°30'26"	11-2-1	09-09-87	--	2.5	1.3	.80	1.5
218	41°46'43"	88°46'29"	12-2-2	09-09-87	--	5.4	2.9	.73	1.6
218	41°46'43"	88°46'29"	12-2-2	09-09-87	--	5.3	2.9	.75	1.6
219	41°46'42"	88°46'26"	12-2-1	09-09-87	--	4.7	2.3	.74	1.6
220	41°46'31"	88°22'59"	R	09-10-87	--	4.9	1.6	.76	1.3
221	41°46'09"	88°48'30"	R	09-09-87	--	2.7	1.3	.96	1.7
222	41°45'39"	88°35'21"	R	09-09-87	--	1.5	.83	.71	1.7
223	41°45'18"	88°29'19"	R 11-1-1	09-09-87	--	1.9	.81	.87	1.5
225	41°40'56"	88°49'33"	R 13-1-1	09-09-87	--	1.1	.66	.80	1.7
227	41°40'26"	88°30'24"	R	09-09-87	--	4.1	2.5	.60	2.1
228	41°40'23"	88°55'59"	R	09-09-87	--	2.9	1.6	.79	1.8
229	41°40'20"	88°55'06"	13-2-1	09-09-87	--	1.6	.96	.73	1.7
230	41°40'20"	88°55'03"	13-2-2	09-09-87	--	.94	.75	.61	1.6
230	41°40'20"	88°55'03"	13-2-2	09-09-87	--	.94	.76	.60	1.7
231	41°39'14"	88°38'51"	R	09-09-87	--	2.4	1.1	.76	1.7
232	41°38'38"	88°24'45"	R	09-09-87	--	8.3	3.0	.61	1.6
235	41°36'28"	88°28'42"	R	09-09-87	--	1.4	.96	.67	2.0
236	41°35'56"	89°00'00"	R	09-09-87	--	.86	.50	.82	1.5
237	41°35'23"	88°42'08"	R	09-06-87	--	1.6	.87	.73	1.6
238	41°35'16"	88°48'24"	R	09-06-87	--	1.1	.55	.90	1.6
239	41°35'15"	88°38'05"	R	09-06-87	--	1.1	.59	.83	1.7
240	41°34'08"	88°36'31"	16-2-2	09-06-87	--	2.7	1.2	.78	1.7

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
241	41°34'07"	88°36'31"	16-2-2	09-06-87	--	2.7	1.2	0.82	1.8
243	41°34'05"	88°36'30"	16-2-1	09-05-87	--	3.2	1.5	.87	1.7
244	41°33'50"	88°18'13"	R	09-05-87	--	2.5	1.5	.70	2.1
246	41°32'00"	88°42'01"	R	09-06-87	--	7.8	4.1	.76	1.7
247	41°31'28"	88°26'31"	R	09-05-87	--	7.3	2.7	.49	2.0
248	41°31'13"	88°25'07"	R	09-05-87	--	1.4	.73	.74	1.7
249	41°30'55"	88°38'38"	R 16-1-1	09-06-87	--	3.4	1.6	.64	1.8
250	41°30'26"	88°18'06"	R	09-05-87	--	3.3	2.0	.62	1.9
252	41°28'15"	88°48'29"	R	09-06-87	--	1.0	.59	.82	1.6
253	41°27'49"	88°56'02"	R	09-06-87	--	1.3	.77	.87	1.6
255	41°25'37"	87°49'12"	21-2-2	09-06-87	--	.80	.69	.59	2.3
255	41°25'37"	87°49'12"	21-2-2	09-06-87	--	.79	.69	.59	2.3
256	41°25'35"	87°49'14"	21-2-1	09-09-87	--	.59	.66	.55	2.2
257	41°25'09"	88°43'21"	R	09-06-87	--	2.9	1.8	.65	2.1
258	41°24'41"	87°51'36"	R	09-09-87	--	2.1	1.2	.55	1.9
259	41°24'13"	88°16'59"	R	09-05-87	--	5.7	2.4	.64	2.4
260	41°23'56"	88°34'38"	R	09-06-87	--	2.5	1.6	.72	1.7
263	41°23'19"	87°58'45"	R	09-09-87	--	2.3	.92	.61	2.1
265	41°22'53"	87°46'51"	R 21-1-1	09-09-87	--	1.6	1.1	.59	2.1
266	41°22'32"	87°51'20"	R	09-06-87	--	1.6	1.0	.62	2.2
268	41°21'12"	88°31'19"	R	09-06-87	--	4.0	2.0	.60	2.1
269	41°21'05"	88°00'58"	22-2-2	09-06-87	--	2.5	1.1	.68	1.9
269	41°21'05"	88°00'58"	22-2-2	09-06-87	--	2.5	1.1	.70	2.0
270	41°21'03"	88°01'01"	22-2-1	09-09-87	--	1.9	1.0	.65	2.0
272	41°20'09"	88°05'54"	R	09-09-87	--	3.9	2.2	.56	2.3
275	41°19'21"	87°44'47"	R	09-04-87	--	1.8	1.1	.65	2.0
278	41°18'39"	87°52'33"	R	09-04-87	--	2.6	1.7	.57	2.5
280	41°18'27"	88°42'08"	R	09-06-87	--	4.7	2.7	.60	2.4
281	41°18'12"	88°39'43"	R	09-06-87	--	4.6	2.8	.50	2.3
282	41°17'40"	87°59'47"	R 22-1-1	09-04-87	--	.85	.65	.65	1.9
283	41°17'16"	88°16'27"	R	09-06-87	--	4.7	2.2	.50	1.8
284	41°16'20"	88°19'59"	R	09-06-87	--	5.1	2.0	.53	1.9
285	41°16'15"	88°13'53"	R	09-05-87	--	2.3	1.4	.57	2.3
286	41°15'46"	87°46'50"	R	09-04-87	--	1.0	.72	.66	1.9
287	41°15'39"	88°10'18"	R	09-05-87	--	1.5	.52	1.20	1.3
288	41°14'03"	88°02'24"	R	09-06-87	--	3.0	1.5	.51	1.6
290	41°12'23"	87°52'48"	R	09-03-87	--	.91	.68	.68	1.9
291	41°10'58"	87°53'41"	R	09-03-87	--	2.4	1.3	.67	1.8
292	41°10'50"	88°36'40"	R	09-05-87	--	4.5	1.5	.70	2.2
293	41°10'23"	87°47'01"	R	09-03-87	--	.92	.67	.66	1.7
294	41°09'55"	88°23'57"	25-2-1	09-05-87	--	3.5	1.1	.59	2.3
295	41°09'54"	88°24'00"	25-2-2	09-05-87	--	3.4	1.1	.58	2.2
295	41°09'54"	88°24'00"	25-2-2	09-05-87	--	3.4	1.0	.58	2.2
296	41°08'21"	88°25'00"	R 25-1-1	09-05-87	--	5.3	1.9	.55	2.1
297	41°07'52"	88°06'42"	R	09-05-87	--	5.6	3.4	.45	2.3
298	41°07'26"	88°02'56"	R	09-05-87	--	.91	.58	.82	1.6
300	41°05'16"	88°01'26"	28-2-1	09-05-87	--	1.2	.80	.54	2.2
301	41°05'15"	88°01'24"	28-2-2	09-05-87	--	1.0	.84	.49	2.3
301	41°05'15"	88°01'24"	28-2-2	09-05-87	--	1.1	.85	.50	2.3
302	41°04'50"	88°05'44"	R	09-05-87	--	2.9	1.7	.50	2.1

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
303	41°04'24"	88°31'39"	R	09-05-87	--	1.3	0.83	0.58	2.1
304	41°03'48"	88°33'18"	R 29-1-1	09-05-87	--	2.4	.79	.69	1.9
305	41°03'29"	88°35'04"	29-2-1	09-06-87	--	1.5	1.1	.57	2.3
306	41°02'45"	88°22'49"	R	09-05-87	--	6.2	1.5	.45	2.2
307	41°02'37"	88°01'37"	R 28-1-1	09-05-87	--	.62	.58	.54	2.1
308	41°02'29"	88°35'07"	29-2-2	09-05-87	--	1.3	1.1	.62	2.5
308	41°02'29"	88°35'07"	29-2-2	09-05-87	--	1.3	1.0	.61	2.2
309	41°02'19"	88°13'22"	R	09-05-87	--	3.2	1.9	.44	2.5
310	40°58'38"	88°29'34"	R	09-05-87	--	1.6	1.4	.49	3.1
311	40°57'21"	88°14'45"	R	09-05-87	--	.91	.85	.02	.74
312	41°10'07"	86°55'14"	R	08-30-87	--	1.7	.63	.58	.87
313	41°07'25"	87°08'31"	R	08-31-87	--	12	1.2	.56	.80
314	41°04'16"	87°11'57"	R	08-31-87	--	12	1.1	.32	.67
315	41°04'10"	87°03'05"	R	08-31-87	--	1.1	.40	.86	1.3
316	41°03'11"	87°16'31"	R 26-1-1	09-02-87	--	2.5	.85	.92	1.2
317	41°03'09"	87°52'06"	R	09-03-87	--	3.6	1.4	.66	1.8
318	41°01'24"	87°38'18"	27-2-2	09-03-87	--	5.1	1.6	.94	1.5
318	41°01'24"	87°38'18"	27-2-2	09-03-87	--	5.2	1.7	.95	1.5
319	41°01'22"	87°38'18"	27-2-1	09-03-87	--	3.4	1.4	1.10	1.5
320	41°01'13"	87°46'44"	R	09-03-87	--	.90	1.0	.46	2.5
321	41°00'50"	87°18'24"	26-2-2	09-03-87	--	1.4	.40	.49	.89
321	41°00'50"	87°18'24"	26-2-2	09-03-87	--	1.4	.38	.46	.85
322	41°00'48"	87°18'24"	26-2-1	09-02-87	--	1.6	.53	.82	1.2
324	40°59'25"	87°48'25"	R	09-01-87	--	1.1	.80	.53	2.3
325	40°59'14"	87°19'59"	R	09-01-87	--	2.2	.86	.62	1.4
326	40°58'45"	88°02'10"	R	09-01-87	--	.91	.89	.54	2.4
327	40°58'45"	87°23'32"	R	09-01-87	--	6.1	1.6	.71	1.4
328	40°58'44"	87°37'31"	R	09-03-87	--	1.8	1.0	.55	2.1
329	40°58'13"	87°03'21"	R	09-01-87	--	3.9	1.3	.43	1.8
330	40°56'27"	87°12'48"	R	09-01-87	--	4.3	1.9	.64	1.7
331	40°56'15"	87°33'03"	R	09-03-87	--	4.5	2.1	.83	1.6
333	40°55'12"	87°54'17"	R	09-01-87	--	1.9	1.1	.58	2.7
334	40°54'42"	87°22'41"	R	09-01-87	--	3.8	1.8	.52	2.5
335	40°54'27"	87°35'24"	R	09-03-87	--	1.8	1.1	.60	2.3
336	40°54'21"	88°00'01"	R	09-01-87	--	4.4	1.3	.54	2.1
338	40°53'58"	87°56'16"	R	09-01-87	--	1.1	.96	.51	2.3
339	40°53'54"	87°37'00"	R	09-03-87	--	2.8	1.2	.42	2.4
340	40°53'45"	87°06'09"	R	09-01-87	--	6.8	2.6	.94	1.4
341	40°53'38"	87°48'29"	R	09-01-87	--	7.8	2.5	.48	2.1
344	40°50'25"	87°18'21"	R	09-01-87	--	7.1	1.7	.66	1.6
345	40°49'40"	87°19'29"	R	09-01-87	--	7.4	1.6	.58	1.7
347	40°49'20"	87°25'33"	R	09-01-87	--	1.8	.91	.72	1.8
349	40°48'42"	87°48'42"	R	09-01-87	--	.94	.65	.61	1.9
350	40°48'23"	87°41'29"	R	09-03-87	--	2.9	.92	.66	2.0
353	40°47'25"	87°58'44"	R	09-01-87	--	.77	.78	.58	2.2
354	40°47'02"	87°33'25"	R	09-03-87	--	5.4	1.8	.79	1.7
355	40°46'06"	88°05'18"	R	09-01-87	--	6.9	1.9	.53	2.0
356	40°45'56"	87°10'52"	R	09-03-87	--	1.2	.89	.54	2.3
357	40°44'11"	87°25'46"	R	09-03-87	--	3.8	1.3	.64	1.9
358	40°42'56"	87°14'58"	R	09-03-87	--	1.3	.65	.62	1.8

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
359	40°41'59"	88°03'37"	R	09-01-87	--	0.93	0.66	0.70	2.0
360	40°40'49"	87°31'33"	R	09-03-87	--	2.9	1.3	.61	2.2
361	40°40'16"	87°50'44"	R	09-02-87	--	1.1	1.2	.50	2.6
362	40°40'00"	87°45'33"	R	09-02-87	--	3.2	1.6	.55	2.3
363	40°38'00"	88°05'25"	30-2-1	09-02-87	--	.70	.82	.61	2.4
364	40°37'59"	88°05'27"	30-2-2	09-02-87	--	.67	.82	.55	2.4
364	40°37'59"	88°05'27"	30-2-2	09-02-87	--	.69	.82	.55	2.5
365	40°37'17"	87°22'37"	R	09-03-87	--	7.6	2.0	.63	1.6
366	40°35'35"	87°43'56"	R	09-03-87	--	1.3	.74	.58	2.1
367	40°35'33"	88°08'17"	R 30-1-1	09-02-87	--	3.6	1.3	.45	2.4
368	40°35'21"	87°38'48"	R	09-03-87	--	3.9	2.0	.56	2.2
369	40°34'17"	87°59'42"	R	09-02-87	--	1.1	1.1	.50	2.4
370	40°33'49"	87°29'52"	R	09-03-87	--	4.2	1.8	.50	2.3
371	40°32'39"	87°34'39"	R	09-03-87	--	.90	.82	.58	2.4
372	40°32'33"	87°59'00"	R	09-02-87	--	1.8	1.5	.53	2.7
373	40°30'47"	87°38'03"	R	09-03-87	--	.90	.75	.57	2.1
374	40°30'37"	87°43'46"	R	09-03-87	--	5.6	1.6	.41	2.1
375	40°30'09"	88°03'46"	R	09-02-87	--	1.8	1.2	.52	2.4
376	40°28'33"	87°54'59"	R	09-02-87	--	1.1	1.1	.39	2.7
377	40°25'35"	87°53'41"	R	09-02-87	--	1.6	1.1	.50	2.0
378	41°42'45"	86°27'10"	R	08-29-87	--	.76	.49	.53	1.7
379	41°40'27"	86°38'56"	R	08-29-87	--	.64	.52	.59	2.0
380	41°34'47"	86°21'01"	R	08-29-87	--	4.8	2.2	.79	2.0
381	41°34'16"	86°34'55"	R	08-29-87	--	12	.72	.26	.68
382	41°33'27"	86°24'22"	R	08-29-87	--	18	.85	.17	.43
383	41°33'24"	86°38'24"	R	08-29-87	--	3.4	.72	.56	1.3
384	41°33'11"	86°47'02"	R 18-1-1	08-30-87	--	.67	.46	.63	1.9
385	41°33'10"	86°10'29"	R	08-29-87	--	1.7	.68	.86	1.8
386	41°32'56"	86°32'36"	R	08-29-87	--	15	1.2	.37	1.1
387	41°29'51"	86°12'49"	R	08-29-87	--	6.1	1.5	.59	1.6
388	41°29'19"	86°20'56"	R	08-29-87	--	.96	.75	.68	2.3
389	41°29'07"	86°04'43"	R	08-29-87	--	9.1	2.1	.66	1.5
390	41°28'56"	86°01'15"	R	08-29-87	--	1.5	.89	.79	2.1
391	41°28'38"	86°47'37"	18-2-2	08-29-87	--	5.4	.53	.53	1.7
391	41°28'38"	86°47'37"	18-2-2	08-29-87	--	5.5	.53	.54	1.7
392	41°28'36"	86°47'37"	18-2-1	08-30-87	--	4.2	.58	.53	1.9
393	41°27'31"	86°28'25"	19-2-1	08-31-87	--	3.9	1.6	1.00	1.4
394	41°27'29"	86°28'26"	19-2-2	08-31-87	--	6.5	1.9	.76	1.4
394	41°27'29"	86°28'26"	19-2-2	08-31-87	--	6.4	1.9	.76	1.4
396	41°26'25"	86°18'30"	R	08-29-87	--	1.8	1.1	.47	1.8
397	41°26'00"	86°05'17"	R	08-29-87	--	4.3	1.9	.86	1.9
398	41°25'06"	87°09'30"	R	08-30-87	--	.80	.87	.58	2.3
399	41°24'17"	86°40'17"	20-2-2	08-30-87	--	4.0	1.7	.69	1.4
399	41°24'17"	86°40'17"	20-2-2	08-30-87	--	4.0	1.6	.66	1.4
400	41°24'15"	86°40'16"	20-2-1	08-30-87	--	3.6	1.7	.59	1.4
401	41°23'28"	86°10'06"	R	08-29-87	--	2.3	.93	.72	2.1
402	41°23'23"	86°38'58"	R 20-1-1	08-30-87	--	3.3	.71	.46	1.0
403	41°23'01"	86°27'31"	R 19-1-1	08-30-87	--	6.4	1.8	.69	1.4
404	41°22'45"	87°23'16"	R	09-09-87	--	1.0	1.0	.47	2.3
405	41°21'40"	86°51'12"	R	08-30-87	--	1.9	.93	.53	1.2

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Latitude	Longitude	Design remark[1]	Date	Time	Calcium (percent)	Magnesium (weight percent)	Sodium (weight percent)	Potassium (weight percent)
406	41°21'39"	86°39'33"	R	08-30-87	--	4.5	1.2	0.76	1.1
407	41°21'38"	86°20'53"	R	08-29-87	--	3.5	1.9	.58	2.0
408	41°21'18"	87°18'06"	R	09-12-87	--	2.8	1.6	.64	2.0
409	41°20'52"	86°31'26"	R	08-30-87	--	1.7	.50	.52	.89
410	41°20'49"	86°53'13"	R	08-30-87	--	1.8	.84	.50	1.2
411	41°20'43"	86°33'45"	R	08-30-87	--	1.2	.35	.35	.71
412	41°20'32"	85°56'32"	R 23-1-1	08-29-87	--	7.9	2.4	.67	1.3
413	41°20'27"	87°21'32"	R	08-31-87	--	.91	.75	.56	2.1
414	41°20'26"	87°10'53"	R	08-30-87	--	1.9	1.1	.45	2.1
415	41°19'46"	86°00'50"	23-2-2	08-30-87	--	9.6	2.9	.85	1.1
415	41°19'46"	86°00'50"	23-2-1	08-30-87	--	8.6	2.7	.98	1.2
415	41°19'46"	86°00'50"	23-2-2	08-30-87	--	9.8	2.8	.83	1.1
417	41°18'53"	86°10'27"	R	08-29-87	--	7.2	2.2	.75	1.4
418	41°17'34"	87°29'17"	R	09-04-87	--	.54	.52	.58	2.0
419	41°16'24"	86°43'43"	R	08-30-87	--	3.9	1.3	.59	1.1
420	41°16'22"	87°30'21"	R	09-04-87	--	.63	.52	.55	1.9
421	41°16'19"	87°20'37"	R	08-31-87	--	3.6	1.9	.62	1.9
424	41°15'20"	86°55'46"	R	08-30-87	--	1.0	.49	.67	1.2
426	41°14'47"	87°23'27"	R	08-31-87	--	3.7	1.8	.53	1.5
427	41°14'15"	87°42'06"	24-2-2	08-31-87	--	1.8	1.1	.54	2.3
427	41°14'15"	87°42'06"	24-2-2	08-31-87	--	1.9	1.2	.55	2.4
428	41°14'14"	87°42'08"	24-2-1	09-04-87	--	2.0	1.2	.59	2.4
429	41°13'22"	87°39'01"	R 24-1-1	09-04-87	--	.54	.52	.62	1.9
430	41°12'57"	86°15'31"	R	08-30-87	--	6.1	1.7	.64	1.4
431	41°12'52"	86°19'23"	R	08-30-87	--	3.8	1.6	.77	1.4
432	41°12'37"	87°13'04"	R	08-31-87	--	5.4	1.4	.85	1.2
433	41°12'16"	86°50'52"	R	08-30-87	--	5.3	2.3	1.20	1.3
434	41°12'13"	87°05'02"	R	08-31-87	--	8.9	3.7	.77	1.1
435	41°11'13"	87°02'52"	R	08-31-87	--	3.2	.92	.46	.9
440	41°07'48"	87°17'07"	R	09-02-87	--	2.1	.83	.72	1.1
441	41°06'03"	87°30'39"	R	09-03-87	--	2.8	1.4	1.00	1.6
442	41°05'03"	87°40'32"	R 27-1-1	09-03-87	--	2.5	1.1	.64	1.2
444	41°02'34"	87°22'16"	R	09-02-87	--	3.0	1.3	.51	1.0

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
2	R	0.060	0.08	4.4	0.4	2.6	430	<1	<10	1.4
3	R	.510	.13	6.1	.5	5.5	440	2	<10	2.0
5	R	.070	.09	4.2	.7	5.7	390	1	<10	1.2
6	1-2-1	.036	.04	4.2	.4	3.8	280	1	<10	.3
7	1-2-2	--	.06	4.2	.4	3.2	500	<1	<10	1.3
7	1-2-2	--	.06	4.2	.4	3.1	490	<1	<10	1.1
8	R 1-1-1	.030	.07	5.5	.3	7.5	530	1	<10	.8
9	R	.040	.07	4.8	.6	7.5	480	1	<10	1.3
10	3-2-2	--	.11	2.8	.3	6.5	300	<1	<10	1.7
10	3-2-2	--	.11	2.8	.6	11	290	<1	<10	B
11	3-2-1	.120	.10	2.7	.2	7.2	290	<1	<10	1.4
12	R	.100	.09	5.5	.8	7.8	560	2	<10	1.2
14	R 3-1-1	1.80	.12	2.1	.3	3.9	250	<1	<10	H
15	2-2-2	--	.17	1.8	.4	3.3	180	<1	<10	H
15	2-2-2	--	.17	1.8	.4	4.0	180	<1	<10	1.4
16	2-2-1	.420	.16	1.8	.5	3.5	170	<1	<10	H
18	4-2-2	--	.10	3.7	.3	3.2	350	<1	<10	1.6
18	4-2-2	--	.09	3.7	.3	4.5	360	<1	<10	1.5
19	4-2-1	.080	.10	3.4	.4	4.1	340	<1	<10	1.0
20	R 4-1-1	.110	.10	3.4	.4	4.0	340	<1	<10	2.2
21	R	.040	.04	2.0	.5	2.5	150	<1	<10	1.8
23	R	.040	.06	4.7	.8	7.7	550	1	<10	1.5
24	R	.070	.10	4.9	.9	11	460	1	<10	1.3
25	R	.040	.06	4.3	.6	3.9	470	1	<10	1.4
26	R	.140	.09	4.3	.7	8.7	410	1	<10	1.4
27	5-2-2	--	.11	4.9	.4	7.6	550	1	<10	1.2
27	5-2-2	--	.11	5.4	.6	7.6	600	1	<10	1.6
28	5-2-1	.080	.12	4.7	.3	8.7	530	1	<10	.8
30	R 5-1-1	<.010	.12	4.5	.6	9.7	530	1	<10	.6
31	R	.110	.35	3.0	.8	9.7	460	<1	<10	B
32	R	.120	.05	2.4	.5	5.6	260	<1	<10	1.3
33	R	.380	.22	2.5	.7	36	400	<1	<10	B
34	R	.086	.06	3.6	.5	3.1	410	<1	<10	.7
35	R	.030	.06	5.4	.6	7.0	470	1	<10	.8
36	R 6-1-1	.080	.12	3.7	2.4	20	900	<1	<10	1.6
38	R	.040	.05	3.4	.4	7.2	380	<1	<10	.9
39	R	.030	.07	5.3	.9	19	420	1	<10	.9
40	6-2-1	.140	.12	4.5	.5	5.4	460	1	<10	1.1
41	6-2-2	--	.14	4.9	.5	4.3	480	1	<10	1.3
41	6-2-2	--	.15	4.9	.4	3.9	480	1	<10	1.2
43	R	.060	.12	5.0	.3	6.3	550	1	<10	.9
44	7-2-1	.120	.08	6.4	.8	8.2	490	2	<10	1.0
45	7-2-2	--	.08	6.3	.6	5.5	450	2	<10	1.4
45	7-2-2	--	.08	6.6	.3	6.1	480	2	<10	1.2
46	R	.080	.10	5.4	.5	7.6	460	2	<10	1.6
47	R	.120	.08	3.5	.6	10	390	<1	<10	1.9
50	R	.180	.13	6.0	.4	7.4	560	2	<10	3.0
51	R	.275	.09	3.8	.8	15	420	<1	<10	1.7
58	R	.090	.06	6.2	.8	15	550	2	<10	.7
59	R	.030	.06	5.0	.7	16	500	1	<10	.8

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
60	9-2-2	--	0.09	4.8	0.7	4.9	570	1	<10	1.2
61	9-2-2	--	.10	4.7	.6	5.3	550	1	<10	1.2
62	9-2-1	0.310	.13	4.6	.4	14	540	1	<10	1.8
64	R 9-1-1	.420	.08	4.9	.4	5.1	510	1	<10	.9
65	R	.060	.08	5.7	.3	8.6	450	2	<10	1.1
66	R	.050	.07	4.8	.4	7.8	480	1	<10	.8
67	R	.040	.07	4.2	.6	6.7	340	1	<10	1.5
68	R	.110	.11	6.0	.3	6.2	480	2	<10	1.9
70	R	.140	.07	5.4	.5	1.1	380	2	<10	.6
71	R 7-1-1	.063	.08	5.4	.6	7.6	490	2	<10	1.1
74	R	.026	.09	6.1	.6	6.7	460	2	<10	.9
75	R	.120	.06	5.5	.3	8.9	370	2	<10	.9
79	R	.260	.06	4.3	.6	14	390	1	<10	1.0
83	R	.200	.07	5.4	.5	7.6	420	2	<10	1.0
84	R 8-1-1	.040	.07	5.5	.6	13	470	2	<10	1.5
89	8-2-1	.080	.09	6.1	.9	20	460	2	<10	1.7
90	8-2-2	--	.09	6.0	1.1	13	450	2	<10	1.7
90	8-2-2	--	.09	6.1	.8	13	450	2	<10	2.0
91	R	.180	.10	5.3	.9	16	420	2	<10	1.5
92	R	.140	.09	5.7	1.0	12	450	2	<10	1.3
99	R	.072	.05	6.6	1.0	13	430	2	<10	.8
109	R	.170	.12	6.1	1.0	13	430	2	<10	2.0
114	R	.140	.08	5.7	.7	11	530	2	<10	1.8
120	10-2-2	--	.15	6.2	1.0	14	480	2	<10	1.5
120	10-2-2	--	.14	6.0	1.2	20	490	2	<10	2.5
121	10-2-1	.100	.09	5.6	1.2	14	500	2	<10	2.6
122	R 10-1-1	.050	.09	5.8	.7	12	500	2	<10	1.5
123	R	.030	.10	5.7	1.0	9.8	500	2	<10	1.4
133	R	.080	.07	5.1	1.2	21	430	2	<10	1.2
138	R	.100	.12	4.7	1.2	10	480	1	<10	1.3
145	R	.030	.08	6.5	1.5	22	540	2	<10	2.8
146	R	<.010	.08	5.4	.6	11	490	2	<10	1.1
147	R	.040	.08	5.4	1.0	16	620	2	<10	.9
155	R	.020	.06	6.2	.5	14	440	2	<10	1.0
156	R	.070	.08	5.5	.5	6.3	500	2	<10	1.4
157	R	.500	.15	4.2	1.6	15	540	2	<10	2.8
159	R	.020	.06	4.0	1.2	23	320	1	<10	.9
163	R	.180	.10	5.9	2.4	12	720	2	<10	14
168	R 14-1-1	.022	.06	6.7	1.0	11	480	2	<10	1.0
170	R 15-1-1	.100	.12	6.1	.7	12	540	2	<10	1.9
172	14-2-2	--	.06	6.7	.9	15	460	2	<10	1.5
172	14-2-2	--	.06	6.9	.6	11	480	2	<10	1.0
173	14-2-1	.130	.06	6.7	1.1	10	480	2	<10	1.2
174	R	.040	.07	5.6	1.2	28	600	2	<10	1.2
175	R	.030	.07	6.2	.8	10	510	2	<10	1.1
176	15-2-2	--	.08	6.4	.6	7.5	500	2	<10	1.9
176	15-2-2	--	.07	6.3	.5	8.4	490	2	<10	1.3
177	15-2-1	.095	.07	6.2	.8	7.6	500	2	<10	2.5
182	R	.090	.10	5.0	1.0	8.0	430	2	<10	3.3
183	R	.200	.19	6.9	.9	6.5	430	2	<10	3.4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
184	R	0.184	0.12	4.2	2.6	10	420	1	<10	2.6
185	R 17-1-1	.500	.08	5.3	.8	12	470	2	<10	1.4
188	R	.200	.08	5.2	1.1	17	440	2	<10	2.2
189	R	.060	.07	5.6	.6	8.9	490	2	<10	1.6
190	R	.029	.06	5.9	.9	9.1	480	2	<10	1.0
191	17-2-2	--	.08	6.1	.9	11	510	2	<10	1.4
192	17-2-1	.160	.10	5.6	.8	7.9	470	2	<10	1.6
193	17-2-2	--	.08	5.9	.7	7.9	510	2	<10	1.3
195	R	.040	.08	5.7	1.2	20	580	2	<10	1.2
197	R	.080	.07	5.6	.7	8.1	430	2	<10	1.5
198	R	.060	.08	6.5	.9	7.9	500	2	<10	1.4
202	R	.040	.09	5.3	.7	24	530	2	<10	1.2
203	R	.072	.06	5.6	1.1	5.8	470	2	<10	2.4
204	R	.057	.08	4.4	1.0	11	430	1	<10	.8
206	R	.040	.09	5.1	.8	10	490	1	<10	1.1
207	R	.030	.07	4.2	.5	9.1	410	1	<10	3.0
209	R	.050	.07	5.1	.8	9.3	600	1	<10	.8
210	R	.020	.06	4.1	.5	7.2	420	1	<10	1.0
212	R	.044	.09	4.9	.8	9.4	520	1	<10	.9
213	R	.100	.10	4.8	.6	11	470	1	<10	1.1
214	R 12-1-1	.060	.09	4.9	.6	8.7	720	1	<10	.7
216	11-2-2	--	.11	5.0	.5	9.0	710	1	<10	1.1
216	11-2-2	--	.11	5.2	.4	1.3	750	1	<10	.6
217	11-2-1	.070	.12	4.9	.8	15	570	1	<10	1.0
218	12-2-2	--	.06	3.9	.7	5.0	460	<1	<10	.7
218	12-2-2	--	.05	3.9	.7	5.8	480	<1	<10	.6
219	12-2-1	.034	.06	4.1	.7	5.0	490	<1	<10	.7
220	R	.200	.25	4.3	.5	13	530	1	<10	1.3
221	R	.080	.07	5.0	.6	6.2	560	1	<10	.5
222	R	.060	.10	4.9	.9	6.3	530	1	<10	1.0
223	R 11-1-1	.070	.14	4.4	.7	14	560	1	<10	2.1
225	R 13-1-1	.030	.11	5.6	.9	9.8	610	2	<10	.9
227	R	.030	.07	5.2	1.4	20	480	2	<10	.9
228	R	.050	.07	5.0	.4	8.1	520	1	<10	.8
229	13-2-1	.020	.08	5.1	.7	6.1	550	1	<10	1.0
230	13-2-2	--	.11	5.8	.7	7.9	590	1	<10	1.6
230	13-2-2	--	.10	5.7	.5	7.3	580	2	<10	1.2
231	R	.060	.08	4.9	1.3	5.6	560	1	<10	1.0
232	R	.080	.07	4.0	.5	5.0	390	1	<10	.9
235	R	.030	.06	5.4	.7	9.3	520	2	<10	1.0
236	R	.020	.07	4.9	.4	5.6	530	1	<10	.8
237	R	.030	.09	4.7	.4	5.4	530	1	<10	.8
238	R	.027	.09	5.1	.7	3.9	540	1	<10	.8
239	R	.023	.10	4.9	.6	4.6	580	1	<10	.8
240	16-2-2	--	.09	4.4	.6	4.2	510	1	<10	1.9
241	16-2-2	--	.09	4.3	.6	6.7	530	1	<10	1.2
243	16-2-1	.060	.07	3.9	.5	3.6	480	<1	<10	.9
244	R	.030	.07	5.8	.4	8.0	560	2	<10	1.0
246	R	.040	.04	3.1	.3	3.4	390	<1	<10	.8
247	R	.058	.08	4.7	.7	10	490	1	<10	.7

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
248	R	0.040	0.05	4.7	0.8	5.4	490	1	<10	0.9
249	R 16-1-1	.120	.13	5.4	.4	1.2	500	2	<10	1.9
250	R	.050	.11	5.0	.8	12	570	1	<10	1.4
252	R	.020	.08	4.9	.5	6.2	570	1	<10	1.0
253	R	.025	.08	5.3	.7	5.6	590	1	<10	.8
255	21-2-2	--	.06	5.9	.9	12	500	2	<10	2.7
255	21-2-2	--	.06	5.9	.8	11	490	2	<10	1.0
256	21-2-1	.030	.06	5.7	.6	10	480	2	<10	1.1
257	R	.060	.06	5.3	.8	11	520	2	<10	.8
258	R	.180	.25	4.6	.6	4.9	430	1	<10	4.4
259	R	.060	.07	5.2	.4	7.7	440	1	<10	1.0
260	R	.050	.07	5.4	1.0	18	530	1	<10	1.0
263	R	.050	.07	5.7	.4	9.9	480	2	<10	1.7
265	R 21-1-1	.070	.06	5.6	1.0	10	470	2	<10	1.2
266	R	.030	.06	5.8	.7	7.3	620	2	<10	1.1
268	R	.060	.07	4.9	.9	12	450	1	<10	2.0
269	22-2-2	--	.07	5.3	.6	12	540	1	<10	1.9
269	22-2-2	--	.07	5.3	.6	1.2	550	1	<10	1.7
270	22-2-1	.100	.06	5.5	.5	14	540	2	<10	H
272	R	.060	.09	5.0	1.0	16	480	1	<10	1.9
275	R	.030	.07	5.2	.7	13	460	2	<10	1.2
278	R	.050	.07	5.9	1.2	15	450	2	<10	1.1
280	R	.080	.05	5.5	.7	15	400	2	<10	1.1
281	R	.040	.05	4.9	.6	13	380	1	<10	.8
282	R 22-1-1	.040	.10	5.8	.7	9.1	550	2	<10	1.2
283	R	.380	.09	5.8	1.2	19	540	2	<10	5.6
284	R	.180	.11	5.3	.5	7.3	390	2	<10	2.5
285	R	.360	.16	8.3	.6	15	470	2	<10	3.6
286	R	.030	.08	5.6	.5	8.1	570	2	<10	1.1
287	R	.045	.12	5.8	.6	9.1	480	1	<10	1.4
288	R	.100	.12	4.9	.7	12	510	1	<10	1.2
290	R	.030	.08	5.5	.5	6.5	550	2	<10	.8
291	R	.060	.07	5.2	.7	8.5	590	1	<10	1.2
292	R	.050	.06	5.4	.8	8.7	510	2	<10	.7
293	R	.050	.14	5.9	.5	1.2	560	2	<10	.8
294	25-2-1	.160	.12	5.7	.5	9.6	470	2	<10	4.1
295	25-2-2	--	.10	5.3	.6	5.9	460	2	<10	2.4
295	25-2-2	--	.10	5.2	.4	6.2	450	2	<10	2.0
296	R 25-1-1	.030	.07	5.5	.7	9.6	530	2	<10	1.1
297	R	.040	.06	5.0	.9	12	370	2	<10	.9
298	R	.030	.07	5.4	.6	10	550	1	<10	.9
300	28-2-1	.030	.07	5.7	.8	12	470	2	<10	1.0
301	28-2-2	--	.10	5.5	.6	8.5	440	2	<10	1.2
301	28-2-2	--	.10	5.7	.8	13	450	2	<10	1.3
302	R	.070	.07	5.2	.8	9.2	390	2	<10	1.7
303	R	.030	.07	6.3	.5	8.2	530	2	<10	.9
304	R 29-1-1	.100	.06	5.5	.6	7.6	620	2	<10	1.3
305	29-2-1	.021	.08	6.1	.5	8.4	500	2	<10	1.1
306	R	.060	.06	5.7	.5	11	440	2	<10	1.1
307	R 28-1-1	.080	.10	5.5	.3	5.9	470	2	<10	<.4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
308	29-2-2	--	0.06	6.4	0.8	8.9	520	2	<10	1.2
308	29-2-2	--	.06	6.0	.8	14	480	2	<10	.9
309	R	0.080	.06	5.7	1.0	14	420	2	<10	2.3
310	R	.040	.06	6.7	.8	11	490	2	<10	.8
311	R	.030	.06	3.2	.6	13	160	1	<10	1.2
312	R	.280	.38	3.9	.5	27	450	2	<10	2.9
313	R	1.30	.15	3.1	.8	21	460	1	<10	1.9
314	R	1.50	.14	2.7	.6	23	240	<1	<10	2.0
315	R	.240	.18	4.4	.9	7.9	660	1	30	2.8
316	R 26-1-1	.280	.14	4.7	1.0	50	540	7	<10	1.5
317	R	.353	.10	5.3	.8	11	430	2	<10	1.1
318	27-2-2	--	.10	4.2	.6	14	410	<1	<10	1.2
318	27-2-2	--	.10	4.2	.5	16	390	1	<10	2.3
319	27-2-1	.242	.09	4.5	.7	9.6	420	1	<10	2.4
320	R	.020	.06	7.5	.5	9.6	770	2	<10	1.1
321	26-2-2	--	.17	4.0	.7	7.4	330	1	<10	4.9
321	26-2-2	--	.16	3.8	.5	9.0	310	1	<10	B
322	26-2-1	.240	.10	4.0	.6	11	400	1	<10	3.1
324	R	.040	.07	5.6	.7	14	460	2	<10	1.0
325	R	.160	.14	4.9	.7	7.0	440	1	<10	1.4
326	R	.040	.06	6.2	.7	11	490	2	<10	1.1
327	R	.143	.13	4.4	.7	10	410	1	<10	2.3
328	R	.080	.11	6.4	.5	8.2	470	2	<10	1.1
329	R	.100	.13	5.8	.6	10	450	2	<10	.6
330	R	.300	.13	4.9	.7	13	480	1	<10	2.4
331	R	.094	.10	4.2	.7	8.1	420	1	<10	1.4
333	R	.130	.06	7.2	.5	7.7	500	2	<10	1.2
334	R	.080	.07	6.8	.4	5.7	490	2	<10	1.2
335	R	.050	.06	6.4	.3	7.6	510	2	<10	.9
336	R	.080	.08	5.7	.6	9.6	460	2	<10	1.0
338	R	.040	.10	6.5	.4	7.3	510	2	<10	1.1
339	R	.080	.09	7.0	.3	6.6	480	2	<10	1.0
340	R	.160	.08	4.2	.4	6.6	380	1	<10	1.6
341	R	.100	.07	5.3	.4	6.2	360	2	<10	.8
344	R	.070	.08	4.9	.6	4.3	400	1	<10	.8
345	R	.130	.09	4.6	.7	7.3	390	1	<10	1.6
347	R	.040	.07	4.7	.3	6.4	440	1	<10	1.2
349	R	.040	.10	6.2	.7	13	530	2	<10	.9
350	R	.120	.09	5.6	.3	8.5	490	2	<10	1.4
353	R	.030	.08	6.0	.9	6.5	450	2	<10	1.7
354	R	.040	.12	4.4	.5	5.4	470	1	<10	1.8
355	R	.160	.07	5.2	.4	9.3	420	2	<10	3.3
356	R	.070	.07	5.7	.8	12	560	2	<10	1.2
357	R	.070	.07	5.0	.8	6.7	470	1	<10	1.1
358	R	.060	.06	5.7	.7	8.7	550	2	<10	.6
359	R	.022	.09	5.6	.5	5.1	520	2	<10	1.0
360	R	.060	.06	6.1	.7	15	530	2	<10	1.2
361	R	.020	.06	7.0	.6	9.4	510	2	<10	1.0
362	R	.074	.09	6.3	.6	7.0	470	2	<10	1.0
363	30-2-1	.020	.05	6.5	.5	7.0	510	2	<10	1.5

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
364	30-2-2	--	0.06	6.5	0.4	7.2	500	2	<10	1.2
364	30-2-2	--	.06	6.6	1.1	11	500	2	<10	1.2
365	R	0.440	.06	4.3	.5	9.9	410	1	<10	.7
366	R	.100	.09	5.6	.6	6.6	480	2	<10	1.1
367	R 30-1-1	.080	.06	6.0	.6	7.8	430	2	<10	1.2
368	R	.040	.06	5.0	.8	8.7	410	1	<10	1.5
369	R	.050	.08	6.4	.9	9.5	460	2	<10	2.3
370	R	.050	.06	5.4	.9	16	420	2	<10	.7
371	R	.040	.06	5.6	.5	7.1	460	2	<10	.8
372	R	.028	.04	6.9	.6	7.7	490	2	<10	1.2
373	R	.020	.07	6.0	.4	6.3	500	2	<10	.8
374	R	.110	.07	5.5	.4	10	410	2	<10	1.9
375	R	.013	.06	6.2	.6	7.2	480	2	<10	.6
376	R	.050	.08	7.1	.4	8.8	480	2	<10	1.0
377	R	.040	.06	6.5	.6	9.3	430	2	<10	2.7
378	R	.040	.12	5.3	.8	9.0	550	1	<10	1.1
379	R	.040	.14	5.1	.7	13	540	2	<10	1.1
380	R	.082	.09	5.2	.6	9.3	430	1	<10	.6
381	R	.400	.16	2.0	1.2	48	320	<1	<10	.8
382	R	.594	.10	1.5	.6	7.0	340	<1	<10	1.0
383	R	.810	.11	3.8	.7	8.2	420	1	<10	1.3
384	R 18-1-1	.070	.08	4.4	.4	8.1	500	1	<10	1.1
385	R	.170	.06	4.3	.4	3.7	410	1	<10	1.1
386	R	1.02	.06	3.3	.5	1.4	250	<1	<10	1.1
387	R	.200	.13	4.7	.3	7.5	420	1	<10	.6
388	R	.027	.09	5.7	.6	6.1	490	2	<10	.8
389	R	.180	.08	4.2	.6	5.2	380	1	<10	1.2
390	R	.120	.13	6.2	.4	6.9	540	2	<10	1.5
391	18-2-2	--	.06	4.2	.6	6.8	390	1	<10	1.1
391	18-2-2	--	.07	4.2	.6	5.5	400	1	<10	1.4
392	18-2-1	.400	.06	4.5	.9	5.6	410	1	<10	2.4
393	19-2-1	.280	.08	3.8	.9	29	440	<1	<10	B
394	19-2-2	--	.10	3.4	.6	35	400	<1	<10	1.3
394	19-2-2	--	.10	3.3	.7	38	390	<1	<10	1.4
396	R	.490	.16	4.8	1.0	9.9	400	1	<10	3.8
397	R	.120	.13	4.5	.5	4.3	480	1	<10	1.8
398	R	.050	.06	6.0	.7	4.5	530	2	<10	1.7
399	20-2-2	--	.10	4.1	.9	40	460	1	<10	1.2
399	20-2-2	--	.10	4.1	.8	38	420	1	<10	.9
400	20-2-1	.420	.11	4.2	.4	50	500	1	<10	1.0
401	R	.120	.06	6.2	.9	15	510	2	<10	.5
402	R 20-1-1	1.12	.13	3.6	1.0	40	480	1	<10	2.7
403	R 19-1-1	.410	.09	3.4	.8	25	390	<1	<10	1.5
404	R	.160	.47	6.7	.5	9.1	530	2	<10	2.8
405	R	.280	.16	4.2	1.8	140	470	1	<10	1.2
406	R	1.11	.11	3.9	1.1	96	510	1	<10	2.1
407	R	.180	.19	4.9	.3	4.6	420	1	<10	1.3
408	R	.180	.07	4.6	.6	11	400	1	<10	1.7
409	R	.230	.29	3.9	1.4	32	410	2	<10	1.5
410	R	.300	.27	4.2	.9	47	480	1	<10	2.0

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Sulfur (weight percent)	Phosphorus (weight percent)	Aluminum (weight percent)	Antimony (micrograms per gram)	Arsenic (micrograms per gram)	Barium (micrograms per gram)	Beryllium (micrograms per gram)	Bismuth (micrograms per gram)	Boron (micrograms per gram)
411	R	0.400	0.20	3.8	1.1	21	280	2	<10	2.4
412	R 23-1-1	.360	.10	4.0	.4	18	410	1	<10	.7
413	R	.070	.08	5.5	.3	6.6	450	2	<10	1.1
414	R	.050	.09	5.7	.4	6.7	460	2	<10	1.0
415	23-2-2	--	.14	3.3	.7	14	340	<1	<10	B
415	23-2-1	--	.09	3.6	.3	8.4	340	<1	<10	B
415	23-2-2	--	.14	3.3	.7	12	330	<1	<10	B
417	R	.280	.13	4.3	.6	9.5	400	1	<10	1.2
418	R	.030	.06	5.1	.8	7.1	460	1	<10	1.2
419	R	.430	.11	3.7	1.2	11	350	<1	<10	1.6
420	R	.050	.08	5.2	.7	9.0	470	1	<10	1.5
421	R	.920	.06	4.9	.8	31	420	1	<10	1.0
424	R	.220	.13	5.5	.8	23	440	1	<10	2.4
426	R	.450	.12	4.8	.8	21	420	1	<10	1.4
427	24-2-2	--	.07	6.0	.4	7.5	490	2	<10	.9
427	24-2-2	--	.07	6.1	.4	7.4	500	2	<10	1.1
428	24-2-1	.080	.08	6.3	.7	9.9	480	2	<10	.7
429	R 24-1-1	.030	.09	5.4	.8	9.6	550	2	<10	1.9
430	R	.200	.15	4.5	1.0	10	470	1	<10	.7
431	R	.140	.12	4.0	.7	6.3	410	<1	<10	1.2
432	R	1.55	.29	3.8	1.4	24	470	<1	<10	3.3
433	R	.300	.06	4.9	1.0	26	370	1	<10	1.2
434	R	.300	.06	3.3	.6	8.6	360	<1	<10	1.7
435	R	.280	.23	3.8	1.3	120	390	2	<10	1.0
440	R	.220	.17	4.3	.9	22	400	1	<10	1.1
441	R	.380	.09	4.0	1.1	39	420	<1	<10	3.2
442	R 27-1-1	.260	.22	3.7	1.0	58	370	1	<10	B
444	R	.100	.08	4.1	.6	10	410	1	<10	1.4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
2	R	<2	47	44	9	22	<2	10	<8	<4
3	R	<2	54	69	15	28	<2	15	<8	<4
5	R	<2	49	52	12	39	<2	10	<8	<4
6	1-2-1	<2	36	53	12	21	<2	10	<8	<4
7	1-2-2	<2	46	49	9	17	<2	9	<8	<4
7	1-2-2	<2	44	43	9	16	<2	9	<8	<4
8	R 1-1-1	<2	63	57	12	23	<2	13	<8	<4
9	R	<2	54	49	11	21	<2	11	<8	<4
10	3-2-2	<2	33	29	9	15	<2	6	<8	<4
10	3-2-2	<2	30	30	8	15	<2	7	<8	<4
11	3-2-1	<2	34	31	8	12	<2	6	<8	<4
12	R	<2	57	58	15	47	<2	13	<8	<4
14	R 3-1-1	<2	22	37	9	20	<2	4	<8	<4
15	2-2-2	<2	19	22	5	19	<2	<4	<8	<4
15	2-2-2	<2	21	24	5	19	<2	5	<8	<4
16	2-2-1	<2	17	22	5	17	<2	5	<8	<4
18	4-2-2	<2	39	43	10	21	<2	9	<8	<4
18	4-2-2	<2	43	40	10	19	<2	8	<8	<4
19	4-2-1	<2	37	36	9	17	<2	9	<8	<4
20	R 4-1-1	<2	41	37	10	14	<2	8	<8	<4
21	R	<2	22	29	9	25	<2	4	<8	<4
23	R	<2	56	47	11	18	<2	11	<8	<4
24	R	<2	50	56	12	28	<2	13	<8	<4
25	R	<2	49	42	10	11	<2	9	<8	<4
26	R	<2	48	46	17	25	<2	10	<8	<4
27	5-2-2	<2	55	56	12	19	<2	11	<8	<4
27	5-2-2	<2	62	53	13	17	<2	12	<8	<4
28	5-2-1	<2	53	46	12	18	<2	11	<8	<4
30	R 5-1-1	<2	51	54	14	17	<2	11	<8	<4
31	R	<2	29	41	10	28	<2	9	<8	<4
32	R	<2	25	27	8	18	<2	6	<8	<4
33	R	<2	26	28	8	16	<2	8	<8	<4
34	R	<2	39	39	9	17	<2	8	<8	<4
35	R	<2	58	61	9	20	<2	13	<8	<4
36	R 6-1-1	<2	58	40	22	12	<2	14	<8	<4
38	R	<2	36	32	10	21	<2	7	<8	<4
39	R	<2	58	59	17	27	<2	14	<8	<4
40	6-2-1	<2	45	43	10	21	<2	10	<8	<4
41	6-2-2	<2	51	51	9	24	<2	11	<8	<4
41	6-2-2	<2	51	49	10	24	<2	11	<8	<4
43	R	<2	53	48	11	24	<2	11	<8	<4
44	7-2-1	<2	65	81	15	34	<2	15	<8	<4
45	7-2-2	<2	55	69	12	25	<2	14	<8	<4
45	7-2-2	<2	62	73	13	27	<2	15	<8	<4
46	R	<2	59	61	15	23	<2	12	<8	<4
47	R	<2	46	34	12	15	<2	8	<8	<4
50	R	<2	60	67	14	25	<2	15	<8	<4
51	R	<2	44	47	10	23	<2	7	<8	<4
58	R	<2	61	68	20	29	<2	15	<8	<4
59	R	<2	62	56	12	38	<2	12	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
60	9-2-2	<2	52	46	10	16	<2	11	<8	<4
61	9-2-2	<2	51	52	10	20	<2	10	<8	<4
62	9-2-1	<2	52	50	11	22	<2	11	<8	<4
64	R 9-1-1	<2	48	48	9	20	<2	11	<8	<4
65	R	<2	60	61	15	24	<2	13	<8	<4
66	R	<2	52	48	13	20	<2	11	<8	<4
67	R	<2	46	46	12	27	<2	10	<8	<4
68	R	<2	65	69	18	35	<2	14	<8	<4
70	R	<2	54	64	19	30	<2	13	<8	<4
71	R 7-1-1	<2	63	67	15	26	<2	13	<8	<4
74	R	<2	58	75	14	28	<2	15	<8	<4
75	R	<2	53	63	15	27	<2	13	<8	<4
79	R	<2	54	51	11	22	<2	10	<8	<4
83	R	<2	56	60	16	30	<2	13	<8	<4
84	R 8-1-1	<2	62	61	15	27	<2	13	<8	<4
89	8-2-1	10	64	89	19	35	<2	15	<8	<4
90	8-2-2	10	63	82	18	41	<2	15	<8	<4
90	8-2-2	9	64	88	17	34	<2	15	<8	<4
91	R	<2	51	63	13	34	<2	13	<8	<4
92	R	<2	60	65	19	34	<2	14	<8	<4
99	R	<2	64	69	22	39	<2	16	<8	<4
109	R	<2	60	71	15	52	<2	15	<8	<4
114	R	<2	61	64	19	31	<2	13	<8	<4
120	10-2-2	<2	59	82	15	44	<2	15	<8	<4
120	10-2-2	<2	54	69	14	41	<2	14	<8	<4
121	10-2-1	<2	59	60	15	25	<2	13	<8	<4
122	R 10-1-1	<2	62	64	15	34	<2	15	<8	<4
123	R	<2	69	64	14	30	<2	13	<8	<4
133	R	<2	54	54	17	37	<2	12	<8	<4
138	R	<2	51	50	14	38	<2	11	<8	<4
145	R	<2	74	75	23	39	<2	15	<8	<4
146	R	<2	63	65	15	28	<2	12	<8	<4
147	R	<2	59	60	17	28	<2	13	<8	<4
155	R	<2	62	71	18	33	<2	15	<8	<4
156	R	<2	56	58	11	23	<2	13	<8	<4
157	R	4	49	230	21	120	<2	11	<8	<4
159	R	<2	42	42	14	28	<2	10	<8	<4
163	R	<2	57	98	15	47	<2	14	<8	<4
168	R 14-1-1	<2	65	88	17	40	<2	16	<8	<4
170	R 15-1-1	<2	63	68	16	24	<2	14	<8	<4
172	14-2-2	<2	59	74	15	34	<2	16	<8	<4
172	14-2-2	<2	64	79	15	35	<2	17	<8	<4
173	14-2-1	<2	61	73	16	39	<2	15	<8	<4
174	R	<2	63	60	18	45	<2	14	<8	<4
175	R	<2	68	68	13	35	<2	15	<8	<4
176	15-2-2	<2	66	82	15	29	<2	14	<8	<4
176	15-2-2	<2	68	69	14	25	<2	16	<8	<4
177	15-2-1	<2	68	71	14	26	<2	15	<8	<4
182	R	<2	63	52	41	24	<2	11	<8	<4
183	R	<2	69	93	17	54	<2	16	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
184	R	<2	90	86	15	36	<2	9	<8	<4
185	R 17-1-1	<2	58	54	13	29	<2	11	<8	<4
188	R	<2	81	67	27	44	<2	13	<8	<4
189	R	<2	63	60	13	24	<2	12	<8	<4
190	R	<2	68	76	16	29	<2	14	<8	<4
191	17-2-2	<2	62	67	12	28	<2	14	<8	<4
192	17-2-1	<2	53	58	11	28	<2	12	<8	<4
193	17-2-2	<2	55	60	12	28	<2	13	<8	<4
195	R	<2	68	62	18	28	<2	13	<8	<4
197	R	<2	58	64	12	30	<2	13	<8	<4
198	R	<2	65	71	14	23	<2	15	<8	<4
202	R	<2	72	58	22	31	<2	13	<8	<4
203	R	<2	60	70	13	27	<2	12	<8	<4
204	R	<2	49	54	16	40	<2	11	<8	<4
206	R	<2	67	53	15	19	<2	11	<8	<4
207	R	<2	56	45	18	22	<2	10	<8	<4
209	R	<2	64	52	15	16	<2	11	<8	<4
210	R	<2	49	42	13	16	<2	9	<8	<4
212	R	<2	68	62	16	26	<2	11	<8	<4
213	R	<2	51	52	10	27	<2	10	<8	<4
214	R 12-1-1	<2	66	51	20	23	<2	11	<8	<4
216	11-2-2	<2	56	52	15	18	<2	11	<8	<4
216	11-2-2	<2	58	53	15	19	<2	11	<8	<4
217	11-2-1	<2	56	48	12	17	<2	11	<8	<4
218	12-2-2	<2	50	40	9	14	<2	8	<8	<4
218	12-2-2	<2	49	35	10	10	<2	8	<8	<4
219	12-2-1	<2	51	43	10	15	<2	9	<8	<4
220	R	<2	53	45	13	18	<2	10	<8	<4
221	R	<2	53	45	9	18	<2	11	<8	<4
222	R	<2	55	49	10	21	<2	11	<8	<4
223	R 11-1-1	<2	55	43	10	17	<2	10	<8	<4
225	R 13-1-1	<2	64	59	10	23	<2	12	<8	<4
227	R	<2	63	55	16	32	<2	13	<8	<4
228	R	<2	61	52	13	19	<2	12	<8	<4
229	13-2-1	<2	57	49	10	16	<2	12	<8	<4
230	13-2-2	<2	56	66	10	19	<2	13	<8	<4
230	13-2-2	<2	57	66	9	23	<2	12	<8	<4
231	R	<2	56	48	11	15	<2	12	<8	<4
232	R	<2	46	42	10	17	<2	9	<8	<4
235	R	<2	64	59	14	26	<2	13	<8	<4
236	R	<2	51	45	6	15	<2	10	<8	<4
237	R	<2	50	44	9	16	<2	10	<8	<4
238	R	<2	54	52	7	18	<2	10	<8	<4
239	R	<2	55	54	9	18	<2	11	<8	<4
240	16-2-2	<2	51	40	9	12	<2	10	<8	<4
241	16-2-2	<2	46	38	10	16	<2	9	<8	<4
243	16-2-1	<2	57	38	8	9	<2	8	<8	<4
244	R	<2	63	66	13	20	<2	13	<8	<4
246	R	<2	40	30	7	9	<2	7	<8	<4
247	R	<2	50	59	18	22	<2	11	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
248	R	<2	54	46	9	13	<2	10	<8	<4
249	R 16-1-1	<2	58	59	12	25	<2	13	<8	<4
250	R	<2	68	53	21	22	<2	12	<8	<4
252	R	<2	50	48	6	16	<2	10	<8	<4
253	R	<2	60	61	10	19	<2	12	<8	<4
255	21-2-2	<2	58	61	12	26	<2	13	<8	<4
255	21-2-2	<2	53	60	13	25	<2	13	<8	<4
256	21-2-1	<2	65	62	15	26	<2	13	<8	<4
257	R	<2	62	59	17	25	<2	12	<8	<4
258	R	<2	47	46	9	25	<2	11	<8	<4
259	R	<2	58	56	17	23	<2	12	<8	<4
260	R	<2	74	56	18	23	<2	13	<8	<4
263	R	<2	60	64	11	24	<2	13	<8	<4
265	R 21-1-1	<2	62	59	17	23	<2	13	<8	<4
266	R	<2	64	63	17	19	<2	14	<8	<4
268	R	<2	55	49	17	37	<2	11	<8	<4
269	22-2-2	<2	60	56	15	26	<2	12	<8	<4
269	22-2-2	<2	60	56	14	26	<2	12	<8	<4
270	22-2-1	<2	64	61	15	28	<2	13	<8	<4
272	R	<2	55	53	15	30	<2	12	<8	<4
275	R	<2	65	59	14	27	<2	11	<8	<4
278	R	<2	60	67	14	37	<2	14	<8	<4
280	R	<2	67	57	19	20	<2	13	<8	<4
281	R	<2	57	51	16	24	<2	11	<8	<4
282	R 22-1-1	<2	56	56	9	25	<2	13	<8	<4
283	R	5	57	75	18	91	<2	14	<8	<4
284	R	<2	52	56	14	24	<2	13	<8	<4
285	R	<2	69	84	20	24	<2	21	<8	<4
286	R	<2	58	55	7	24	<2	13	<8	<4
287	R	<2	71	75	12	28	<2	12	<8	<4
288	R	<2	48	48	9	20	<2	12	<8	<4
290	R	<2	59	55	7	21	<2	11	<8	<4
291	R	<2	66	56	17	25	<2	11	<8	<4
292	R	<2	53	56	12	19	<2	12	<8	<4
293	R	<2	63	64	11	28	<2	13	<8	<4
294	25-2-1	<2	56	65	12	35	<2	13	<8	<4
295	25-2-2	<2	57	64	12	23	<2	12	<8	<4
295	25-2-2	<2	55	54	12	21	<2	12	<8	<4
296	R 25-1-1	<2	64	60	23	23	<2	13	<8	<4
297	R	<2	54	53	16	21	<2	12	<8	<4
298	R	<2	57	55	7	19	<2	12	<8	<4
300	28-2-1	<2	63	62	11	20	<2	13	<8	<4
301	28-2-2	<2	57	58	10	22	<2	12	<8	<4
301	28-2-2	<2	61	63	9	25	<2	13	<8	<4
302	R	<2	55	56	10	24	<2	12	<8	<4
303	R	<2	63	72	11	21	<2	14	<8	<4
304	R 29-1-1	<2	59	55	13	23	<2	12	<8	<4
305	29-2-1	<2	64	78	15	23	<2	15	<8	<4
306	R	<2	59	63	17	21	<2	14	<8	<4
307	R 28-1-1	<2	61	56	9	18	<2	12	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
308	29-2-2	<2	68	79	17	28	<2	15	<8	<4
308	29-2-2	<2	61	62	16	31	<2	13	<8	<4
309	R	<2	56	63	14	27	<2	14	<8	<4
310	R	<2	66	81	21	32	<2	16	<8	<4
311	R	<2	60	46	11	22	<2	8	<8	<4
312	R	<2	48	45	22	20	<2	9	<8	<4
313	R	<2	34	36	14	18	<2	7	<8	<4
314	R	2	33	33	40	27	<2	8	<8	<4
315	R	<2	40	39	7	64	<2	9	<8	<4
316	R 26-1-1	5	260	44	59	19	5	9	<8	<4
317	R	<2	51	62	17	26	<2	12	<8	<4
318	27-2-2	<2	54	41	20	17	<2	10	<8	<4
318	27-2-2	<2	56	39	20	17	<2	9	<8	<4
319	27-2-1	<2	50	45	25	19	<2	9	<8	<4
320	R	<2	72	88	13	26	<2	18	<8	<4
321	26-2-2	<2	41	68	9	29	<2	9	<8	<4
321	26-2-2	<2	41	54	8	26	<2	9	<8	<4
322	26-2-1	<2	52	53	8	20	<2	9	<8	<4
324	R	<2	62	63	16	23	<2	13	<8	<4
325	R	<2	48	49	10	18	<2	11	<8	<4
326	R	<2	62	68	15	22	<2	14	<8	<4
327	R	<2	50	41	11	17	<2	10	<8	<4
328	R	<2	70	74	16	23	<2	14	<8	<4
329	R	<2	52	61	13	28	<2	14	<8	<4
330	R	<2	50	52	13	35	<2	11	<8	<4
331	R	<2	49	49	10	16	<2	10	<8	<4
333	R	<2	64	86	14	20	<2	17	<8	<4
334	R	<2	67	78	16	22	<2	15	<8	<4
335	R	<2	69	76	17	17	<2	15	<8	<4
336	R	<2	57	63	11	23	<2	13	<8	<4
338	R	<2	63	72	11	23	<2	15	<8	<4
339	R	<2	65	79	15	24	<2	17	<8	<4
340	R	<2	69	54	10	15	<2	10	<8	<4
341	R	<2	53	56	13	22	<2	13	<8	<4
344	R	<2	50	48	9	16	<2	11	<8	<4
345	R	<2	48	45	13	15	<2	11	<8	<4
347	R	<2	55	44	10	16	<2	10	<8	<4
349	R	<2	64	68	11	22	<2	14	<8	<4
350	R	<2	60	60	14	20	<2	13	<8	<4
353	R	<2	61	64	11	18	<2	13	<8	<4
354	R	<2	58	45	12	22	<2	10	<8	<4
355	R	<2	51	55	13	18	<2	12	<8	<4
356	R	<2	59	61	15	22	<2	13	<8	<4
357	R	<2	60	49	14	16	<2	11	<8	<4
358	R	<2	56	56	11	20	<2	12	<8	<4
359	R	<2	52	65	10	18	<2	12	<8	<4
360	R	<2	73	59	19	23	<2	14	<8	<4
361	R	<2	65	77	14	24	<2	16	<8	<4
362	R	<2	61	80	13	26	<2	14	<8	<4
363	30-2-1	<2	71	77	11	19	<2	15	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
364	30-2-2	<2	66	78	11	17	<2	15	<8	<4
364	30-2-2	<2	65	77	11	21	<2	15	<8	<4
365	R	<2	49	43	11	19	<2	10	<8	<4
366	R	<2	62	61	12	20	<2	12	<8	<4
367	R 30-1-1	<2	59	68	14	18	<2	14	<8	<4
368	R	<2	61	49	14	16	<2	11	<8	<4
369	R	<2	65	72	17	21	<2	15	<8	<4
370	R	<2	68	56	22	22	<2	13	<8	<4
371	R	<2	65	61	11	23	<2	13	<8	<4
372	R	<2	66	89	17	20	<2	16	<8	<4
373	R	<2	65	62	9	22	<2	13	<8	<4
374	R	<2	59	60	12	21	<2	13	<8	<4
375	R	<2	63	76	16	22	<2	14	<8	<4
376	R	<2	69	81	14	22	<2	17	<8	<4
377	R	<2	66	72	14	20	<2	15	<8	<4
378	R	<2	58	51	11	22	<2	12	<8	<4
379	R	<2	63	61	13	25	<2	12	<8	<4
380	R	<2	55	59	14	18	<2	12	<8	<4
381	R	<2	22	20	9	17	<2	5	<8	<4
382	R	<2	15	17	8	160	<2	5	<8	<4
383	R	<2	44	38	13	19	<2	9	<8	<4
384	R 18-1-1	<2	51	45	11	17	<2	10	<8	<4
385	R	<2	44	39	8	23	<2	9	<8	<4
386	R	<2	34	34	12	22	<2	8	<8	<4
387	R	<2	52	49	11	21	<2	12	<8	<4
388	R	<2	58	67	17	23	<2	13	<8	<4
389	R	<2	45	41	11	16	<2	10	<8	<4
390	R	<2	64	65	13	17	<2	14	<8	<4
391	18-2-2	<2	49	45	13	24	<2	10	<8	<4
391	18-2-2	<2	47	46	14	23	<2	9	<8	<4
392	18-2-1	<2	50	48	13	31	<2	10	<8	<4
393	19-2-1	<2	64	53	13	13	<2	8	<8	<4
394	19-2-2	<2	34	31	8	12	<2	7	<8	<4
394	19-2-2	<2	35	30	8	13	<2	7	<8	<4
396	R	<2	46	52	13	36	<2	11	<8	<4
397	R	<2	52	48	8	21	<2	10	<8	<4
398	R	<2	73	72	17	24	<2	14	<8	<4
399	20-2-2	<2	36	38	7	13	<2	9	<8	<4
399	20-2-2	<2	39	41	8	14	<2	9	<8	<4
400	20-2-1	<2	42	42	9	17	<2	10	<8	<4
401	R	<2	60	66	18	30	<2	15	<8	<4
402	R 20-1-1	2	37	41	13	33	<2	10	<8	<4
403	R 19-1-1	<2	35	32	8	13	<2	7	<8	<4
404	R	<2	65	76	16	26	<2	17	<8	<4
405	R	<2	44	48	65	24	<2	14	<8	<4
406	R	<2	49	43	10	20	<2	10	<8	<4
407	R	<2	55	49	13	20	<2	12	<8	<4
408	R	<2	53	53	15	23	<2	10	<8	<4
409	R	<2	72	53	39	29	<2	12	<8	<4
410	R	<2	45	46	16	32	<2	12	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Cadmium (micrograms per gram)	Cerium (micrograms per gram)	Chromium (micrograms per gram)	Cobalt (micrograms per gram)	Copper (micrograms per gram)	Europium (micrograms per gram)	Gallium (micrograms per gram)	Gold (micrograms per gram)	Holmium (micrograms per gram)
411	R	<2	44	46	18	32	<2	10	<8	<4
412	R 23-1-1	<2	40	39	20	19	<2	10	<8	<4
413	R	<2	60	56	11	18	<2	12	<8	<4
414	R	<2	58	60	10	24	<2	13	<8	<4
415	23-2-2	<2	59	42	9	15	<2	8	<8	<4
415	23-2-1	<2	73	60	9	13	<2	9	<8	<4
415	23-2-2	<2	42	44	10	20	<2	8	<8	<4
417	R	<2	47	42	10	21	<2	11	<8	<4
418	R	<2	63	51	10	18	<2	12	<8	<4
419	R	<2	43	41	15	27	<2	9	<8	<4
420	R	<2	57	54	9	21	<2	12	<8	<4
421	R	<2	55	52	13	26	<2	13	<8	<4
424	R	<2	52	60	33	20	<2	12	<8	<4
426	R	<2	53	49	9	29	<2	11	<8	<4
427	24-2-2	<2	61	64	15	29	<2	14	<8	<4
427	24-2-2	<2	63	65	16	29	<2	14	<8	<4
428	24-2-1	<2	61	68	13	29	<2	15	<8	<4
429	R 24-1-1	<2	66	59	13	21	<2	12	<8	<4
430	R	<2	51	47	12	25	<2	12	<8	<4
431	R	<2	47	39	11	20	<2	10	<8	<4
432	R	<2	38	37	33	23	<2	8	<8	<4
433	R	<2	98	70	11	20	<2	11	<8	<4
434	R	<2	37	31	12	10	<2	7	<8	<4
435	R	2	49	52	35	33	<2	10	<8	<4
440	R	<2	43	50	38	19	<2	10	<8	<4
441	R	<2	72	44	24	23	<2	8	<8	<4
442	R 27-1-1	<2	40	45	27	33	<2	10	<8	<4
444	R	<2	39	53	10	25	<2	10	<8	<4

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
2	R	1.7	27	21	17	450	0.06	<2	24	18
3	R	3.6	29	20	47	660	.06	<2	28	32
5	R	2.6	25	93	22	920	.16	<2	23	23
6	1-2-1	2.0	22	13	36	510	<.02	<2	18	22
7	1-2-2	1.9	25	23	17	690	.06	<2	21	15
7	1-2-2	1.9	24	23	16	690	.04	<2	20	14
8	R 1-1-1	2.8	32	34	25	920	.02	<2	29	23
9	R	2.4	27	35	22	830	.04	<2	24	21
10	3-2-2	2.1	19	17	13	840	.08	<2	16	13
10	3-2-2	2.0	19	19	13	820	.08	<2	15	13
11	3-2-1	2.2	19	15	12	780	.06	<2	15	12
12	R	2.7	29	37	30	560	.06	<2	26	25
14	R 3-1-1	2.1	13	11	12	280	.08	6	9	15
15	2-2-2	1.3	12	24	10	340	.12	<2	8	10
15	2-2-2	1.3	13	26	10	330	.08	<2	11	10
16	2-2-1	1.6	11	23	10	370	.08	<2	8	11
18	4-2-2	2.1	23	27	20	970	.04	<2	19	18
18	4-2-2	2.0	25	30	20	960	.04	<2	20	17
19	4-2-1	2.0	22	27	20	1,100	.02	<2	18	17
20	R 4-1-1	2.2	23	24	18	1,400	.04	<2	21	16
21	R	1.7	13	12	9	520	.04	<2	10	15
23	R	2.3	29	25	22	1,100	.06	<2	25	19
24	R	3.2	27	28	29	700	.08	<2	24	25
25	R	2.0	26	18	20	480	<.02	<2	23	15
26	R	3.1	25	20	24	1,100	.04	<2	24	24
27	5-2-2	2.9	30	21	22	1,100	.06	<2	27	20
27	5-2-2	3.1	32	21	25	1,200	.04	<2	30	21
28	5-2-1	2.8	28	20	22	1,400	.04	<2	24	18
30	R 5-1-1	3.1	28	19	21	1,600	.06	<2	26	18
31	R	5.8	17	230	16	2,300	.22	<2	14	14
32	R	1.8	14	43	13	640	.04	<2	11	13
33	R	5.9	15	45	13	1,000	.10	<2	11	15
34	R	1.7	22	23	17	690	.04	<2	18	13
35	R	2.6	33	17	28	370	.04	<2	29	21
36	R 6-1-1	3.2	32	17	12	7,500	.04	<2	29	17
38	R	2.0	20	55	16	870	.02	<2	17	16
49	R	3.3	31	27	34	1,900	.02	<2	27	29
40	6-2-1	2.2	24	15	22	560	.02	<2	22	18
41	6-2-2	2.3	26	18	23	430	.04	<2	25	20
41	6-2-2	2.3	27	20	23	430	.04	<2	24	21
43	R	2.3	28	21	25	660	.04	<2	25	21
44	7-2-1	3.4	35	100	52	590	.04	<2	30	33
45	7-2-2	2.7	29	29	50	340	.04	<2	28	29
45	7-2-2	2.8	31	35	51	360	.04	<2	28	32
46	R	3.1	30	34	35	1,100	.04	<2	27	29
47	R	2.3	25	15	15	1,000	.04	<2	20	19
50	R	3.2	32	29	40	1,000	.08	<2	29	27
51	R	2.1	24	19	19	430	.04	6	21	19
58	R	3.8	30	31	51	1,600	.12	3	27	36
59	R	2.9	32	88	24	830	.04	<2	29	25

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
60	9-2-2	2.3	27	21	25	440	0.04	<2	25	17
61	9-2-2	2.2	28	22	25	420	.04	<2	26	18
62	9-2-1	2.7	28	27	26	630	.04	<2	25	19
64	R 9-1-1	2.4	25	22	28	370	.04	<2	22	20
65	R	3.0	31	30	39	740	.02	<2	28	29
66	R	2.6	27	29	28	940	.10	<2	25	22
67	R	2.7	24	24	26	880	.04	<2	23	24
68	R	3.1	31	32	42	580	.06	<2	30	35
70	R	3.6	29	41	41	1,400	.06	<2	26	35
71	R 7-1-1	2.8	32	32	34	990	.04	2	29	27
74	R	3.1	32	28	43	760	.04	<2	28	30
75	R	3.3	28	22	43	900	.06	<2	25	31
79	R	2.5	27	52	25	680	.04	3	25	21
83	R	2.9	29	36	35	570	.04	<2	26	31
84	R 8-1-1	3.8	31	29	34	690	.04	7	29	29
89	8-2-1	3.7	33	60	41	650	.04	4	28	36
90	8-2-2	3.7	30	53	41	650	.06	4	29	34
90	8-2-2	3.6	34	54	40	650	.06	5	30	34
91	R	3.1	28	46	38	880	.12	<2	26	28
92	R	3.9	30	32	39	2,000	.16	3	28	35
99	R	3.8	33	30	48	670	.04	6	30	42
109	R	3.5	32	48	48	560	.06	17	30	35
114	R	3.4	30	47	39	870	.12	2	29	34
120	10-2-2	3.8	31	99	42	670	.08	3	28	37
120	10-2-2	3.8	29	86	41	650	.08	2	27	35
121	10-2-1	3.1	30	41	35	670	.04	<2	28	29
122	R 10-1-1	3.3	31	99	37	1,000	.04	<2	28	32
123	R	3.3	34	51	36	960	.78	<2	31	28
133	R	3.2	28	39	34	1,100	.06	3	27	30
138	R	2.6	28	55	26	820	.06	<2	24	23
145	R	3.9	34	39	43	710	<.02	4	32	40
146	R	3.2	33	37	32	1,200	.04	2	31	30
147	R	3.4	30	32	33	1,400	.04	2	28	34
155	R	3.5	31	39	45	660	.10	3	29	36
156	R	2.7	29	27	32	510	.04	<2	26	25
157	R	5.0	24	520	30	1,600	.28	7	23	47
159	R	3.6	23	30	26	850	.04	5	22	27
163	R	3.4	30	120	42	350	.20	3	28	38
168	R 14-1-1	3.5	34	46	50	650	.10	5	33	38
170	R 15-1-1	4.6	31	31	41	690	.04	<2	30	30
172	14-2-2	3.4	31	30	52	360	.08	3	29	36
172	14-2-2	3.4	35	37	53	360	.12	3	30	37
173	14-2-1	3.4	32	35	49	340	.12	<2	31	36
174	R	4.1	31	32	36	1,400	.04	6	28	33
175	R	3.2	36	29	37	600	.04	2	32	30
176	15-2-2	3.2	33	29	48	680	.04	3	30	33
176	15-2-2	3.1	33	29	46	690	.02	<2	30	31
177	15-2-1	3.0	33	36	45	270	.04	3	32	32
182	R	3.0	32	53	35	800	.12	<2	32	31
183	R	3.8	34	120	69	610	.16	<2	31	44

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
184	R	3.5	48	66	24	760	0.08	<2	45	27
185	R 17-1-1	2.9	29	35	33	650	.04	2	27	27
188	R	4.5	31	110	40	710	.20	9	30	40
189	R	2.8	31	33	35	620	.04	<2	28	27
190	R	3.0	33	33	42	530	<.02	3	32	32
191	17-2-2	2.9	33	25	36	440	.04	<2	30	28
192	17-2-1	2.8	28	24	36	430	.04	<2	25	25
193	17-2-2	2.9	29	28	37	410	.06	<2	27	26
195	R	3.3	36	29	31	1,400	.04	2	31	32
197	R	2.8	29	81	40	470	.16	<2	28	29
198	R	3.0	32	32	47	450	.06	<2	32	30
202	R	4.5	33	37	33	1,400	.04	7	31	37
203	R	2.7	31	35	38	540	.04	<2	29	26
204	R	2.9	27	32	26	1,100	.02	<2	23	27
206	R	3.3	33	30	28	780	.04	<2	31	23
207	R	2.7	27	30	24	1,100	.04	<2	25	26
209	R	2.8	31	22	24	610	.04	<2	31	24
210	R	2.2	24	26	26	820	<.02	<2	22	19
212	R	2.9	34	44	25	1,100	.04	<2	31	24
213	R	3.0	27	24	26	360	.06	<2	24	23
214	R 12-1-1	2.5	33	35	22	1,200	.04	<2	30	24
216	11-2-2	3.1	29	20	20	1,000	.06	<2	26	22
216	11-2-2	3.2	32	21	22	1,100	.02	<2	29	22
217	11-2-1	3.1	29	19	21	680	.04	<2	26	21
218	12-2-2	1.8	27	20	16	820	<.02	<2	23	14
218	12-2-2	1.8	25	18	17	830	<.02	<2	22	14
219	12-2-1	1.9	27	20	18	850	.02	<2	25	15
220	R	4.0	28	24	18	940	.04	<2	24	19
221	R	2.1	28	16	21	310	.04	<2	26	19
222	R	2.8	30	22	22	680	.04	<2	28	19
223	R 11-1-1	2.9	31	18	17	580	.04	<2	26	17
225	R 13-1-1	2.4	34	84	24	650	<.02	<2	29	21
227	R	3.4	34	90	27	890	.02	5	30	31
228	R	2.5	33	25	25	650	.08	<2	29	23
229	13-2-1	2.4	29	21	24	760	<.02	<2	28	19
230	13-2-2	2.7	30	25	27	610	.04	<2	27	22
230	13-2-2	2.7	31	23	28	620	.02	<2	28	22
231	R	2.5	29	60	24	1,700	.04	<2	27	18
232	R	2.0	25	23	22	620	.04	<2	22	18
235	R	2.7	35	27	27	810	.04	<2	31	27
236	R	2.0	29	17	21	350	<.02	<2	26	16
237	R	2.0	26	20	20	510	.02	<2	24	17
238	R	1.9	29	23	21	320	<.02	<2	27	17
239	R	2.0	29	26	20	520	.02	<2	25	16
240	16-2-2	2.1	26	17	20	570	.04	<2	25	16
241	16-2-2	2.1	24	16	20	560	.02	<2	20	16
243	16-2-1	1.9	30	15	15	620	<.02	<2	27	12
244	R	2.8	35	23	34	740	.02	<2	31	27
246	R	1.5	23	16	11	450	<.02	<2	21	9
247	R	3.0	27	25	28	1,100	.04	<2	25	29

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
248	R	2.1	27	19	23	450	<0.02	<2	26	17
249	R 16-1-1	3.0	33	26	28	530	.04	<2	30	23
250	R	3.4	34	26	27	1,600	.08	<2	32	27
252	R	1.8	28	18	20	280	.02	<2	24	13
253	R	2.3	33	24	24	620	.02	<2	30	21
255	21-2-2	3.1	29	24	38	630	.04	2	28	28
255	21-2-2	3.0	27	25	39	630	.02	2	25	27
256	21-2-1	3.1	31	30	37	840	.06	2	28	28
257	R	2.6	33	58	29	890	.04	<2	28	26
258	R	2.2	24	26	27	510	.04	<2	23	19
259	R	2.6	31	24	33	870	<.02	<2	28	30
260	R	3.3	33	27	28	1,100	.08	3	31	33
263	R	2.7	33	27	37	390	.04	<2	30	26
265	R 21-1-1	3.0	29	28	36	710	.04	<2	30	29
266	R	3.0	32	23	33	1,500	<.02	<2	30	28
268	R	2.6	28	25	30	840	.06	<2	25	26
269	22-2-2	2.9	30	26	30	820	.04	3	26	26
269	22-2-2	2.9	33	28	31	810	.04	3	31	25
270	22-2-1	3.1	34	29	33	760	.04	3	30	28
272	R	3.5	28	36	32	880	.06	4	26	29
275	R	3.5	33	29	30	730	<.02	3	30	27
278	R	3.5	33	27	35	530	.04	3	29	34
280	R	3.1	33	23	42	850	.02	<2	31	31
281	R	2.5	28	27	31	690	.02	2	27	28
282	R 22-1-1	2.5	30	34	31	370	.04	<2	27	22
283	R	3.6	30	140	47	910	.14	<2	27	44
284	R	2.7	27	27	37	800	.06	<2	25	29
285	R	4.4	36	38	76	1,000	.08	<2	33	41
286	R	2.5	30	25	31	310	<.02	<2	27	22
287	R	3.6	39	32	29	750	.10	<2	37	18
288	R	2.3	28	26	24	730	.04	<2	24	20
290	R	2.5	31	28	29	410	<.02	<2	29	21
291	R	2.5	30	53	27	850	.04	<2	27	27
292	R	2.6	29	19	30	600	<.02	<2	26	24
293	R	3.7	35	28	36	510	.02	<2	32	24
294	25-2-1	2.9	32	36	38	500	.08	<2	27	26
295	25-2-2	2.5	31	31	32	460	<.02	<2	27	23
295	25-2-2	2.6	28	31	32	460	.04	<2	24	23
296	R 25-1-1	3.0	31	29	32	1,200	<.02	<2	28	36
297	R	3.0	27	27	33	650	.02	3	26	28
298	R	2.3	34	17	25	330	<.02	<2	29	18
300	28-2-1	2.5	35	27	34	450	<.02	<2	29	23
301	28-2-2	2.8	30	24	35	320	.02	<2	28	24
301	28-2-2	2.8	34	23	35	340	.02	2	30	25
302	R	2.6	31	23	32	340	.04	2	27	24
303	R	2.9	32	25	39	460	<.02	<2	29	27
304	R 29-1-1	2.4	29	24	31	590	<.02	<2	27	25
305	29-2-1	3.2	33	25	40	970	.02	2	31	32
306	R	2.8	31	25	41	760	.04	<2	28	29
307	R 28-1-1	2.4	30	25	32	390	<.02	<2	28	21

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
308	29-2-2	3.3	34	26	41	670	0.02	3	32	35
308	29-2-2	3.1	30	24	39	620	.04	2	28	32
309	R	2.9	31	23	37	550	.04	4	28	30
310	R	3.7	33	27	40	560	.08	5	31	42
311	R	2.7	31	23	28	370	.02	<2	28	27
312	R	8.9	25	32	20	460	.10	<2	26	25
313	R	5.3	19	18	17	920	.04	2	15	17
314	R	7.4	20	34	13	1,400	.08	3	15	34
315	R	1.7	21	64	22	180	.20	2	18	15
316	R 26-1-1	5.2	170	25	19	690	.06	<2	110	68
317	R	3.3	28	28	35	880	.04	2	25	30
318	27-2-2	2.6	27	30	19	780	.04	<2	26	28
318	27-2-2	2.5	30	31	19	770	.04	<2	28	28
319	27-2-1	2.3	27	27	19	680	.04	<2	26	34
320	R	3.1	36	25	55	250	.04	2	34	33
321	26-2-2	3.2	23	33	24	210	.16	<2	21	18
321	26-2-2	3.1	21	30	22	200	.16	<2	20	18
322	26-2-1	3.4	27	19	18	330	.06	<2	27	17
324	R	2.7	33	25	35	700	<.02	<2	28	28
325	R	2.6	27	24	28	360	.06	<2	25	21
326	R	3.2	31	23	43	550	.02	<2	29	29
327	R	2.5	28	20	25	650	.02	<2	27	19
328	R	3.2	35	29	46	400	.04	<2	33	34
329	R	3.2	29	22	45	920	.04	<2	25	29
330	R	3.3	26	26	32	730	.04	3	24	24
331	R	2.4	26	24	20	610	.02	<2	24	18
333	R	3.3	33	23	50	350	.06	<2	32	34
334	R	3.2	33	21	54	470	.04	<2	30	35
335	R	3.1	34	22	47	780	<.02	<2	32	33
336	R	2.7	32	21	36	470	.04	<2	28	27
338	R	3.0	32	25	43	350	.06	<2	30	28
339	R	3.4	33	24	56	480	.06	<2	29	35
340	R	2.8	37	19	18	670	.02	<2	35	19
341	R	2.7	27	22	44	470	.04	<2	24	29
344	R	2.3	27	20	29	360	<.02	<2	25	22
345	R	2.4	25	20	28	660	<.02	<2	22	22
347	R	2.2	27	24	25	660	<.02	<2	25	18
349	R	2.9	35	25	37	680	.04	<2	31	26
350	R	2.7	32	27	39	560	.02	<2	29	25
353	R	2.6	30	24	39	210	.04	<2	30	28
354	R	2.4	29	32	22	600	.04	<2	27	19
355	R	2.8	26	22	36	520	.04	<2	24	25
356	R	2.8	31	29	34	740	<.02	<2	28	29
357	R	2.5	30	22	28	960	<.02	<2	27	24
358	R	2.5	30	19	33	550	.04	<2	28	22
359	R	2.5	29	23	30	330	.02	<2	27	21
360	R	3.1	36	26	38	760	.02	<2	31	35
361	R	3.3	33	23	51	410	.02	<2	31	32
362	R	3.0	33	24	43	480	.02	<2	30	30
363	30-2-1	2.9	34	25	44	400	<.02	<2	31	29

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
364	30-2-2	2.9	33	22	45	340	<0.02	<2	31	28
364	30-2-2	3.0	35	20	46	350	<.02	<2	30	30
365	R	2.4	26	20	22	800	.02	6	22	19
366	R	2.5	31	28	32	560	.04	<2	28	25
367	R 30-1-1	2.8	32	23	43	480	.02	<2	27	30
368	R	2.8	30	26	32	990	<.02	<2	28	28
369	R	3.3	32	23	46	570	<.02	<2	30	32
370	R	3.2	29	30	38	1,200	<.02	<2	27	33
371	R	2.5	34	26	33	460	.02	<2	32	25
372	R	3.2	33	23	51	580	.02	2	32	35
373	R	2.7	33	25	35	520	.04	<2	31	25
374	R	2.6	30	27	36	480	.06	<2	27	26
375	R	3.0	33	29	42	640	.02	<2	30	30
376	R	3.4	34	24	53	670	.06	<2	32	34
377	R	3.1	33	31	45	510	.04	<2	29	32
378	R	2.5	30	30	28	760	<.02	<2	25	23
379	R	2.7	32	57	27	1,400	.04	<2	28	28
380	R	3.1	28	22	34	910	.02	<2	25	22
381	R	5.4	13	20	11	990	.06	<2	8	14
382	R	3.4	10	100	9	1,100	.10	<2	5	9
383	R	4.0	22	23	20	500	.10	3	20	23
384	R 18-1-1	2.4	25	29	24	1,100	<.02	2	21	18
385	R	1.6	23	24	22	340	.04	<2	22	15
386	R	2.5	20	25	21	570	.04	2	17	21
387	R	2.9	27	22	32	1,700	.06	<2	26	21
388	R	2.7	28	35	35	910	.08	<2	29	30
389	R	2.2	23	16	27	720	.04	<2	20	19
390	R	3.2	31	25	38	460	.08	<2	29	23
391	18-2-2	3.4	24	28	22	1,400	.04	<2	20	20
391	18-2-2	3.5	24	29	22	1,400	.04	2	21	21
392	18-2-1	3.4	26	33	25	1,400	.08	3	24	22
393	19-2-1	3.4	33	18	15	1,500	.04	<2	32	18
394	19-2-2	2.7	19	20	15	710	.04	<2	17	13
394	19-2-2	2.6	19	21	15	680	.04	<2	18	12
396	R	2.7	23	140	30	370	.12	2	22	29
397	R	2.4	26	27	24	450	.08	<2	23	17
398	R	3.6	35	37	39	750	.04	3	34	31
399	20-2-2	6.6	20	19	25	630	.04	2	18	13
399	20-2-2	6.5	20	21	24	630	.02	<2	18	14
400	20-2-1	8.0	21	21	27	820	.04	<2	20	16
401	R	2.5	33	21	37	250	.04	<2	29	41
402	R 20-1-1	6.2	19	42	26	1,500	.12	2	16	24
403	R 19-1-1	2.7	18	28	17	530	.04	<2	17	15
404	R	4.3	31	33	56	660	.04	<2	30	34
405	R	12.0	24	25	29	3,500	.06	8	22	40
406	R	5.8	25	25	22	750	.08	10	25	20
407	R	2.7	27	32	31	1,200	.02	<2	25	23
408	R	2.9	25	30	29	730	.04	4	24	26
409	R	5.0	39	42	22	4,200	.20	<2	37	37
410	R	9.4	23	37	33	2,500	.10	4	21	23

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Iron (weight percent)	Lanthanum (micrograms per gram)	Lead (micrograms per gram)	Lithium (micrograms per gram)	Manganese (micrograms per gram)	Mercury (micrograms per gram)	Molybdenum (micrograms per gram)	Neodymium (micrograms per gram)	Nickel (micrograms per gram)
411	R	4.9	26	61	20	560	0.18	<2	21	27
412	R 23-1-1	3.0	22	15	21	830	.04	<2	18	26
413	R	2.4	29	26	37	830	.04	<2	27	24
414	R	2.7	30	40	37	490	.02	<2	27	25
415	23-2-2	3.9	31	12	13	940	.04	5	30	16
415	23-2-1	4.1	35	14	13	950	.02	<2	39	14
415	23-2-2	4.0	23	13	13	960	.02	4	22	15
417	R	3.0	24	23	22	1,200	.04	<2	23	21
418	R	2.2	30	23	30	550	<.02	<2	29	20
419	R	2.4	23	34	18	700	.18	2	20	27
420	R	2.4	32	24	29	570	.02	<2	29	22
421	R	6.7	28	27	31	1,500	.04	24	27	29
424	R	2.8	28	39	34	560	.06	2	25	31
426	R	3.3	28	37	32	550	.16	2	25	23
427	24-2-2	3.1	31	26	39	570	.06	<2	30	32
427	24-2-2	3.2	31	28	40	580	.04	<2	30	33
428	24-2-1	3.1	31	23	41	420	.02	<2	29	32
429	R 24-1-1	2.6	32	25	28	890	.04	<2	29	23
430	R	3.5	27	28	29	2,400	.10	<2	24	24
431	R	2.4	24	17	19	560	.06	<2	25	19
432	R	4.7	21	28	20	1,200	.12	4	18	38
433	R	2.9	50	18	15	670	<.02	<2	52	20
434	R	2.5	21	17	14	940	.02	<2	19	19
435	R	12.0	26	32	30	610	.12	3	25	28
440	R	3.0	25	34	20	1,100	.08	<2	22	45
441	R	3.8	36	24	15	580	.04	<2	32	31
442	R 27-1-1	13.0	23	36	21	1,600	.18	3	21	30
444	R	2.6	23	34	21	350	.06	2	20	20

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
2	R	<4	6	0.6	<2	380	<40	7	<10	0.28
3	R	6	12	1.8	<2	99	<40	9	<10	.26
5	R	4	7	.5	<2	160	<40	7	<10	.26
6	1-2-1	<4	7	.2	<2	120	<40	6	<10	.19
7	1-2-2	<4	6	.8	<2	130	<40	7	<10	.26
7	1-2-2	5	5	.7	<2	120	<40	6	<10	.26
8	R 1-1-1	6	9	.7	<2	110	<40	8	<10	.31
9	R	<4	8	.5	<2	110	<40	8	<10	.28
10	3-2-2	<4	5	1.0	<2	140	<40	4	<10	.21
10	3-2-2	<4	4	1.2	<2	140	<40	6	<10	.20
11	3-2-1	<4	5	.8	<2	140	<40	5	<10	.25
12	R	7	10	.5	<2	120	<40	9	<10	.28
14	R 3-1-1	<4	4	3.3	<2	76	<40	<4	<10	.13
15	2-2-2	<4	3	2.8	<2	61	<40	<4	<10	.10
15	2-2-2	<4	3	3.1	<2	61	<40	<4	<10	.12
16	2-2-1	<4	3	1.8	<2	61	<40	<4	<10	.10
18	4-2-2	4	6	1.0	<2	110	<40	7	<10	.28
18	4-2-2	4	6	1.7	<2	100	<40	7	<10	.28
19	4-2-1	6	6	1.9	<2	97	<40	5	<10	.26
20	R 4-1-1	<4	6	1.2	<2	100	<40	5	<10	.31
21	R	<4	5	.2	<2	110	<40	4	<10	.24
23	R	4	8	.5	<2	100	<40	7	<10	.28
24	R	5	9	1.2	<2	110	<40	7	<10	.28
25	R	4	7	1.0	<2	120	<40	6	<10	.27
26	R	<4	9	.4	<2	130	<40	8	<10	.34
27	5-2-2	5	7	.7	<2	130	<40	9	<10	.30
27	5-2-2	7	8	.5	<2	140	<40	9	<10	.32
28	5-2-1	6	7	.6	<2	120	<40	8	<10	.27
30	R 5-1-1	<4	7	.7	<2	140	<40	8	<10	.27
31	R	<4	5	1.2	<2	94	<40	5	40	.20
32	R	<4	4	.4	<2	120	<40	<4	<10	.17
33	R	<4	4	.7	<2	71	<40	5	10	.14
34	R	<4	5	.7	<2	120	<40	5	<10	.21
35	R	<4	9	.1	<2	110	<40	9	<10	.28
36	R 6-1-1	<4	6	.6	<2	150	<40	10	<10	.38
38	R	<4	6	.2	<2	100	<40	<4	<10	.18
39	R	5	9	.3	<2	100	<40	9	<10	.30
40	6-2-1	<4	7	.5	<2	140	<40	7	<10	.22
41	6-2-2	5	7	1.3	<2	140	<40	8	<10	.24
41	6-2-2	5	8	.8	<2	140	<40	8	<10	.25
43	R	8	8	.6	<2	110	<40	8	<10	.29
44	7-2-1	4	11	1.1	<2	99	<40	9	<10	.28
45	7-2-2	8	11	.7	<2	100	<40	9	<10	.26
45	7-2-2	8	12	.7	<2	100	<40	8	<10	.30
46	R	5	9	.8	<2	100	<40	9	<10	.30
47	R	<4	6	.5	<2	130	<40	7	<10	.28
50	R	6	10	1.0	<2	300	<40	9	<10	.29
51	R	4	6	.8	<2	120	<40	6	<10	.26
58	R	6	11	.6	<2	100	<40	9	<10	.23
59	R	5	8	.2	<2	120	<40	9	<10	.28

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
60	9-2-2	5	7	0.4	<2	150	<40	7	<10	0.23
61	9-2-2	<4	7	.7	<2	150	<40	8	<10	.24
62	9-2-1	<4	7	1.6	<2	140	<40	8	<10	.24
64	R 9-1-1	5	8	.8	<2	130	<40	7	<10	.23
65	R	5	10	1.3	<2	89	<40	9	<10	.25
66	R	4	8	.2	<2	110	<40	7	<10	.24
67	R	<4	8	.2	<2	100	<40	7	<10	.24
68	R	6	12	1.0	<2	98	<40	9	<10	.27
70	R	<4	10	.7	<2	97	<40	9	<10	.26
71	R 7-1-1	<4	9	.7	<2	110	<40	9	<10	.28
74	R	4	10	.6	<2	100	<40	8	<10	.25
75	R	4	10	.5	<2	99	<40	7	<10	.27
79	R	<4	7	.7	<2	120	<40	8	<10	.22
83	R	4	10	1.1	<2	120	<40	8	<10	.23
84	R 8-1-1	7	10	.9	<2	95	<40	9	<10	.26
89	8-2-1	5	10	.7	<2	110	<40	9	<10	.27
90	8-2-2	8	11	.6	<2	100	<40	9	<10	.27
90	8-2-2	5	11	.9	<2	100	<40	9	<10	.27
91	R	<4	9	.8	<2	120	<40	8	<10	.26
92	R	6	10	.7	<2	100	<40	10	<10	.24
99	R	<4	12	.5	<2	95	<40	10	<10	.20
109	R	8	11	1.2	<2	130	<40	10	<10	.28
114	R	5	10	.5	<2	120	<40	10	<10	.25
120	10-2-2	6	11	1.0	<2	88	<40	9	<10	.27
120	10-2-2	14	11	.8	22	85	<40	9	<10	.25
121	10-2-1	8	10	.7	<2	89	<40	10	<10	.27
122	R 10-1-1	8	10	.8	<2	98	<40	9	<10	.30
123	R	8	10	.7	<2	96	<40	12	<10	.27
133	R	8	9	.6	<2	100	<40	8	<10	.21
138	R	7	8	1.3	<2	110	<40	8	<10	.25
145	R	9	11	.7	<2	100	<40	10	<10	.31
146	R	<4	8	.5	<2	100	<40	10	<10	.27
147	R	7	9	.7	<2	95	<40	9	<10	.24
155	R	6	11	.6	<2	88	<40	9	<10	.26
156	R	6	9	1.7	<2	99	<40	8	<10	.25
157	R	6	8	1.2	<2	140	<40	7	20	.20
159	R	<4	7	1.1	<2	83	<40	7	<10	.15
163	R	8	11	1.1	<2	96	<40	9	<10	.25
168	R 14-1-1	7	12	1.1	<2	90	<40	11	<10	.28
170	R 15-1-1	7	11	.7	<2	87	<40	9	<10	.28
172	14-2-2	7	12	1.1	<2	93	<40	10	<10	.26
172	14-2-2	7	12	1.2	<2	93	<40	11	<10	.31
173	14-2-1	9	12	.5	<2	93	<40	9	<10	.27
174	R	6	10	.3	<2	97	<40	9	<10	.25
175	R	<4	10	.6	<2	96	<40	11	<10	.27
176	15-2-2	6	11	.7	<2	93	<40	10	<10	.30
176	15-2-2	6	11	.9	<2	89	<40	10	<10	.32
177	15-2-1	4	10	.9	<2	91	<40	10	<10	.30
182	R	6	7	.9	<2	100	<40	8	<10	.22
183	R	8	12	2.3	<2	100	<40	9	<10	.28

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
184	R	4	8	0.9	<2	130	<40	14	<10	0.40
185	R 17-1-1	6	8	.7	<2	100	<40	8	<10	.22
188	R	5	9	.6	<2	100	<40	8	<10	.21
189	R	6	10	.8	<2	92	<40	8	<10	.27
190	R	<4	10	.7	<2	89	<40	9	<10	.28
191	17-2-2	<4	10	.8	<2	120	<40	9	<10	.27
192	17-2-1	8	9	1.1	<2	110	<40	8	<10	.23
193	17-2-2	7	10	1.0	<2	110	<40	8	<10	.24
195	R	<4	9	.7	<2	110	<40	10	<10	.27
197	R	5	10	.8	<2	79	<40	9	<10	.23
198	R	8	11	.9	<2	87	<40	11	<10	.28
202	R	5	10	.7	<2	100	<40	9	<10	.25
203	R	<4	9	.6	<2	98	<40	11	<10	.29
204	R	<4	7	.5	<2	120	<40	7	<10	.21
206	R	6	8	.7	<2	100	<40	9	<10	.25
207	R	<4	7	.2	<2	100	<40	6	<10	.25
209	R	4	8	.2	<2	120	<40	9	<10	.28
210	R	<4	6	.3	<2	120	<40	7	<10	.22
212	R	<4	8	.6	<2	130	<40	9	<10	.30
213	R	6	8	1.0	<2	120	<40	8	<10	.25
214	R 12-1-1	<4	7	.9	<2	120	<40	9	<10	.28
216	11-2-2	5	7	.6	<2	130	<40	8	<10	.26
216	11-2-2	5	8	.6	<2	140	<40	9	<10	.28
217	11-2-1	7	8	.5	<2	130	<40	8	<10	.25
218	12-2-2	<4	6	.4	<2	120	<40	7	<10	.25
218	12-2-2	<4	6	.2	<2	120	<40	6	<10	.23
219	12-2-1	<4	6	.6	<2	120	<40	6	<10	.26
220	R	5	6	1.3	<2	140	<40	8	<10	.22
221	R	6	7	1.1	<2	140	<40	9	<10	.25
222	R	8	8	.8	<2	110	<40	9	<10	.26
223	R 11-1-1	<4	6	.5	<2	140	<40	8	<10	.27
225	R 13-1-1	7	8	.6	<2	120	<40	9	<10	.35
227	R	<4	8	.4	<2	99	<40	9	<10	.28
228	R	<4	8	.9	<2	120	<40	10	<10	.29
229	13-2-1	7	8	.4	<2	110	<40	8	<10	.27
230	13-2-2	7	9	.6	<2	96	<40	9	<10	.30
230	13-2-2	7	9	.7	<2	96	<40	10	<10	.29
231	R	5	7	.3	<2	110	<40	9	<10	.28
232	R	<4	6	.8	<2	110	<40	7	<10	.23
235	R	<4	8	.6	<2	100	<40	10	<10	.31
236	R	7	7	.4	<2	120	<40	7	<10	.28
237	R	6	7	.6	<2	110	<40	9	<10	.26
238	R	<4	7	.5	<2	140	<40	8	<10	.24
239	R	5	7	.5	<2	120	<40	8	<10	.28
240	16-2-2	5	6	.5	<2	120	<40	8	<10	.25
241	16-2-2	7	6	.3	<2	120	<40	6	<10	.23
243	16-2-1	<4	5	.1	<2	130	<40	7	<10	.31
244	R	5	9	.7	<2	120	<40	10	<10	.32
246	R	<4	4	.2	<2	120	<40	6	<10	.22
247	R	<4	8	.8	<2	100	<40	7	<10	.22

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
248	R	5	7	0.3	<2	110	<40	8	<10	0.27
249	R 16-1-1	5	8	1.2	<2	110	<40	8	<10	.27
250	R	5	8	.6	<2	110	<40	10	<10	.27
252	R	<4	7	.6	<2	120	<40	8	<10	.26
253	R	5	8	.4	<2	140	<40	9	<10	.31
255	21-2-2	9	10	.7	<2	89	<40	9	<10	.26
255	21-2-2	8	10	.6	<2	88	<40	8	<10	.23
256	21-2-1	6	10	.7	<2	85	<40	9	<10	.26
257	R	<4	8	.7	<2	110	<40	10	<10	.27
258	R	6	7	.4	<2	110	<40	8	<10	.22
259	R	4	8	.3	<2	120	<40	9	<10	.26
260	R	5	9	.7	<2	120	<40	8	<10	.26
263	R	<4	9	1.8	<2	110	<40	9	<10	.27
265	R 21-1-1	6	10	.4	<2	92	<40	9	<10	.25
266	R	6	10	.4	<2	110	<40	10	<10	.29
268	R	7	8	.4	<2	110	<40	8	<10	.24
269	22-2-2	6	8	1.1	<2	120	<40	9	<10	.26
269	22-2-2	5	8	1.7	<2	120	<40	10	<10	.27
270	22-2-1	4	9	1.0	<2	110	<40	11	<10	.29
272	R	5	9	.9	<2	130	<40	7	<10	.22
275	R	5	9	.7	<2	100	<40	10	<10	.30
278	R	6	10	.9	<2	96	<40	10	<10	.30
280	R	4	9	.3	<2	94	<40	9	<10	.23
281	R	<4	9	.4	<2	88	<40	8	<10	.23
282	R 22-1-1	12	9	.5	<2	100	<40	8	<10	.27
283	R	6	11	1.4	<2	130	<40	10	<10	.27
284	R	5	9	1.4	<2	110	<40	8	<10	.23
285	R	10	15	.8	<2	140	<40	10	<10	.38
286	R	7	9	.5	<2	100	<40	9	<10	.29
287	R	7	10	1.2	<2	160	<40	10	<10	.41
288	R	7	7	1.2	<2	86	<40	7	<10	.25
290	R	7	9	.7	<2	100	<40	9	<10	.30
291	R	7	8	.5	<2	110	<40	8	<10	.30
292	R	4	9	.4	<2	130	<40	8	<10	.24
293	R	7	9	.7	<2	100	<40	10	<10	.28
294	25-2-1	6	9	1.1	<2	210	<40	9	<10	.27
295	25-2-2	<4	8	.7	<2	120	<40	9	<10	.26
295	25-2-2	6	9	1.0	<2	120	<40	7	<10	.26
296	R 25-1-1	5	9	1.0	<2	120	<40	9	<10	.26
297	R	<4	9	.2	<2	90	<40	7	<10	.23
298	R	<4	8	.4	<2	130	<40	9	<10	.30
300	28-2-1	<4	9	.7	<2	90	<40	9	<10	.32
301	28-2-2	8	10	.8	<2	86	<40	8	<10	.28
301	28-2-2	4	9	.5	<2	87	<40	9	<10	.30
302	R	<4	9	1.0	<2	93	<40	9	<10	.27
303	R	9	10	.6	<2	110	<40	10	<10	.33
304	R 29-1-1	7	9	.7	<2	130	<40	9	<10	.25
305	29-2-1	5	10	1.2	<2	110	<40	11	<10	.30
306	R	4	10	1.0	<2	140	<40	8	<10	.25
307	R 28-1-1	8	9	.5	<2	87	<40	9	<10	.33

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
308	29-2-2	4	10	0.8	<2	110	<40	11	<10	0.30
308	29-2-2	6	10	1.0	<2	110	<40	9	<10	.26
309	R	<4	9	.7	<2	90	<40	10	<10	.27
310	R	8	12	.7	<2	92	<40	10	<10	.32
311	R	<4	7	.7	<2	29	<40	8	<10	.05
312	R	5	6	1.8	<2	94	<40	7	<10	.19
313	R	5	5	.8	<2	210	<40	5	<10	.17
314	R	<4	4	2.8	<2	160	<40	5	<10	.15
315	R	7	6	1.2	<2	170	<40	6	10	.26
316	R 26-1-1	7	7	.9	<2	140	<40	6	<10	.25
317	R	4	8	1.1	<2	120	<40	8	<10	.27
318	27-2-2	<4	7	.8	<2	150	<40	7	<10	.26
318	27-2-2	<4	7	.8	<2	150	<40	8	<10	.29
319	27-2-1	<4	7	.6	<2	160	<40	7	<10	.26
320	R	9	14	5.0	<2	100	<40	11	<10	.33
321	26-2-2	6	7	2.7	<2	85	<40	7	<10	.22
321	26-2-2	6	7	1.5	<2	78	<40	6	<10	.20
322	26-2-1	8	8	1.2	<2	130	<40	8	<10	.36
324	R	6	9	.9	<2	93	<40	10	<10	.28
325	R	9	8	2.1	<2	120	<40	7	<10	.25
326	R	8	11	.6	<2	92	<40	10	<10	.29
327	R	<4	7	1.0	<2	160	<40	7	<10	.22
328	R	7	10	1.7	<2	110	<40	10	<10	.32
329	R	7	10	2.2	<2	110	<40	8	<10	.24
330	R	6	9	1.3	<2	130	<40	8	<10	.23
331	R	<4	6	.7	<2	140	<40	7	<10	.28
333	R	9	12	.4	<2	120	<40	11	<10	.32
334	R	8	11	.6	<2	140	<40	9	<10	.31
335	R	7	12	.4	<2	120	<40	10	<10	.32
336	R	<4	9	1.0	<2	120	<40	9	<10	.27
338	R	8	11	.7	<2	96	<40	10	<10	.30
339	R	7	13	1.3	<2	110	<40	10	20	.28
340	R	<4	8	1.3	<2	160	<40	9	<10	.33
341	R	4	10	.9	<2	130	<40	8	<10	.22
344	R	<4	8	.8	<2	150	<40	7	<10	.22
345	R	5	8	.6	<2	140	<40	7	<10	.21
347	R	5	8	.7	<2	110	<40	7	<10	.26
349	R	7	10	.9	<2	110	<40	9	<10	.34
350	R	4	9	.8	<2	130	<40	9	<10	.29
353	R	8	11	.5	<2	100	<40	10	<10	.27
354	R	6	7	.7	<2	160	<40	7	<10	.27
355	R	4	9	1.3	<2	220	<40	7	<10	.22
356	R	9	10	.8	<2	94	<40	9	<10	.26
357	R	6	8	.6	<2	110	<40	9	<10	.25
358	R	8	9	.6	<2	100	<40	10	<10	.27
359	R	6	9	.6	<2	120	<40	8	<10	.27
360	R	<4	10	.6	<2	110	<40	10	<10	.31
361	R	11	12	.7	<2	100	<40	10	<10	.30
362	R	7	11	1.1	<2	110	<40	10	<10	.32
363	30-2-1	6	11	.8	<2	110	<40	10	<10	.35

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
364	30-2-2	7	11	0.8	<2	100	<40	12	<10	0.33
364	30-2-2	5	11	.5	<2	100	<40	10	<10	.32
365	R	4	7	.6	<2	120	<40	7	<10	.24
366	R	6	9	.9	<2	90	<40	9	<10	.28
367	R 30-1-1	<4	10	1.0	<2	100	<40	9	<10	.28
368	R	<4	8	.4	<2	92	<40	9	<10	.23
369	R	8	11	.8	<2	110	<40	10	<10	.30
370	R	5	9	.6	<2	87	<40	8	<10	.22
371	R	5	9	.6	<2	83	<40	10	<10	.30
372	R	7	12	.4	<2	100	<40	10	<10	.32
373	R	8	10	.5	<2	90	<40	9	<10	.30
374	R	<4	9	1.6	<2	87	<40	9	<10	.23
375	R	5	10	.6	<2	95	<40	10	<10	.30
376	R	7	13	.8	<2	83	<40	11	<10	.31
377	R	6	12	.8	<2	90	<40	10	<10	.29
378	R	9	8	.3	<2	81	<40	8	<10	.28
379	R	5	8	.8	<2	90	<40	10	<10	.28
380	R	<4	8	.5	<2	140	<40	7	<10	.24
381	R	<4	3	1.7	<2	110	<40	4	<10	.10
382	R	<4	2	1.0	<2	270	<40	4	<10	.06
383	R	6	6	1.0	<2	93	<40	7	<10	.18
384	R 18-1-1	6	6	.6	<2	91	<40	7	<10	.26
385	R	7	7	.7	<2	120	<40	7	<10	.25
386	R	<4	5	1.0	<2	120	<40	6	<10	.15
387	R	5	8	1.1	<2	110	<40	7	<10	.23
388	R	<4	9	.6	<2	97	<40	9	<10	.27
389	R	<4	7	.6	<2	140	<40	6	<10	.20
390	R	8	10	.5	<2	120	<40	10	<10	.31
391	18-2-2	5	7	.7	<2	89	<40	7	<10	.23
391	18-2-2	5	6	.6	<2	90	<40	7	<10	.22
392	18-2-1	6	8	.4	<2	86	<40	8	<10	.23
393	19-2-1	<4	7	1.2	<2	160	<40	11	<10	.37
394	19-2-2	<4	5	1.3	<2	150	<40	6	<10	.18
394	19-2-2	<4	5	1.3	<2	140	<40	5	<10	.19
396	R	7	8	1.1	<2	76	<40	7	<10	.21
397	R	5	7	.8	<2	140	<40	7	<10	.30
398	R	<4	11	.5	<2	83	<40	9	<10	.32
399	20-2-2	5	6	.6	<2	120	<40	7	<10	.17
399	20-2-2	4	6	.6	<2	120	<40	7	<10	.19
400	20-2-1	4	7	.6	<2	110	<40	6	<10	.17
401	R	<4	10	.7	<2	130	<40	9	<10	.28
402	R 20-1-1	4	6	1.9	<2	110	<40	6	<10	.17
403	R 19-1-1	4	5	.6	<2	140	<40	6	<10	.17
404	R	<4	12	1.0	<2	100	<40	10	<10	.22
405	R	4	7	1.0	<2	81	<40	8	<10	.21
406	R	5	7	1.1	<2	130	<40	8	<10	.25
407	R	4	9	.6	<2	94	<40	7	<10	.23
408	R	4	8	.5	<2	91	<40	7	<10	.21
409	R	7	7	3.6	<2	96	<40	8	<10	.20
410	R	5	7	1.2	<2	80	<40	8	<10	.19

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Niobium (micrograms per gram)	Scandium (micrograms per gram)	Selenium (micrograms per gram)	Silver (micrograms per gram)	Strontium (micrograms per gram)	Tantalum (micrograms per gram)	Thorium (micrograms per gram)	Tin (micrograms per gram)	Titanium (micrograms per gram)
411	R	5	6	2.8	<2	64	<40	6	<10	0.18
412	R 23-1-1	4	7	.8	<2	350	<40	5	<10	.18
413	R	6	9	.6	<2	82	<40	8	<10	.25
414	R	6	10	.9	<2	82	<40	9	<10	.26
415	23-2-2	<4	6	.7	<2	190	<40	9	<10	.32
415	23-2-1	<4	8	.2	<2	190	<40	12	<10	.59
415	23-2-2	5	6	.7	<2	190	<40	5	<10	.34
417	R	<4	8	1.4	<2	140	<40	7	<10	.24
418	R	7	8	.4	<2	84	<40	9	<10	.26
419	R	4	6	1.2	<2	110	<40	6	<10	.24
420	R	<4	8	.5	<2	83	<40	9	<10	.28
421	R	7	8	.5	<2	100	<40	9	<10	.22
424	R	6	8	1.2	<2	96	<40	9	<10	.33
426	R	6	8	1.3	<2	90	<40	9	<10	.22
427	24-2-2	6	11	.8	<2	93	<40	9	<10	.26
427	24-2-2	6	11	.8	<2	95	<40	9	<10	.26
428	24-2-1	8	11	1.2	<2	99	<40	9	<10	.26
429	R 24-1-1	6	8	.5	<2	93	<40	8	<10	.30
430	R	5	8	1.0	<2	130	<40	8	<10	.24
431	R	6	7	.8	<2	130	<40	7	<10	.26
432	R	6	6	1.2	<2	150	<40	6	<10	.21
433	R	<4	9	.6	<2	190	<40	15	<10	.44
434	R	<4	5	1.0	<2	130	<40	5	<10	.21
435	R	4	9	1.8	<2	98	<40	7	<10	.17
440	R	5	6	1.3	<2	110	<40	6	<10	.26
441	R	<4	7	.3	<2	140	<40	11	<10	.38
442	R 27-1-1	<4	6	1.7	<2	97	<40	8	<10	.18
444	R	5	7	2.2	<2	93	<40	6	<10	.20

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
2	R	0.55	49	2	16	89	4.44	2.14	2.30
3	R	3.6	88	2	19	130	5.52	4.37	1.15
5	R	.85	65	2	15	180	6.78	5.84	.94
6	1-2-1	.80	60	1	12	39	6.90	.17	6.73
7	1-2-2	.70	54	2	13	81	5.14	4.22	.92
7	1-2-2	.60	54	2	13	80	5.12	4.22	.90
8	R 1-1-1	.55	85	3	20	78	2.37	1.84	.53
9	R	.50	70	2	16	350	3.94	2.74	1.20
10	3-2-2	.45	41	1	10	44	11.4	7.03	4.37
10	3-2-2	.50	38	1	10	51	11.4	6.98	4.42
11	3-2-1	6.2	45	1	11	40	10.0	5.02	4.98
12	R	1.5	77	2	20	140	4.47	3.98	.49
14	R 3-1-1	1.1	33	<1	9	59	24.1	22.9	1.16
15	2-2-2	.65	31	<1	7	51	28.8	28.4	.43
15	2-2-2	.45	30	<1	7	55	28.8	28.4	.43
16	2-2-1	.50	30	<1	7	46	27.6	26.9	.70
18	4-2-2	.70	49	2	13	110	9.07	5.93	3.14
18	4-2-2	.60	49	2	12	110	8.96	5.91	3.05
19	4-2-1	.65	48	2	12	100	10.0	6.82	3.18
20	R 4-1-1	.75	51	2	13	96	9.68	6.07	3.61
21	R	.45	46	1	8	30	8.95	.31	8.64
23	R	.85	64	2	18	64	2.46	2.36	.10
24	R	1.9	83	2	17	110	6.07	5.16	.91
25	R	.55	55	2	15	53	4.21	2.86	1.35
26	R	1.5	74	2	17	74	5.60	2.16	3.44
27	5-2-2	.55	69	2	17	77	4.33	3.64	.69
27	5-2-2	.70	75	3	20	82	4.24	3.55	.69
28	5-2-1	.65	67	2	17	72	4.35	3.67	.68
30	R 5-1-1	.70	60	2	16	64	4.44	2.91	1.53
31	R	.35	49	1	9	240	12.7	10.4	2.28
32	R	.75	38	1	8	43	9.05	2.10	6.95
33	R	.90	40	<1	8	86	21.6	21.1	.48
34	R	.60	47	1	12	62	7.34	4.16	3.18
35	R	.70	84	2	20	59	3.11	1.39	1.72
36	R 6-1-1	1.1	59	2	17	360	4.59	2.84	1.75
38	R	.55	47	2	12	64	6.55	1.95	4.60
39	R	1.0	75	2	17	93	3.91	1.92	1.99
40	6-2-1	1.0	63	2	15	77	5.54	2.78	2.76
41	6-2-2	1.0	71	2	16	100	5.66	3.39	2.27
41	6-2-2	1.1	71	2	16	100	5.59	3.34	2.25
43	R	.80	68	2	17	72	4.63	4.32	.31
44	7-2-1	1.3	92	2	19	140	4.69	3.57	1.12
45	7-2-2	1.9	81	2	18	81	4.04	3.62	.42
45	7-2-2	1.4	88	2	19	84	4.03	3.61	.42
46	R	1.8	77	2	18	110	4.91	3.57	1.34
47	R	.80	52	2	13	67	6.09	2.89	3.20
50	R	1.3	81	2	18	100	4.61	4.01	.60
51	R	4.5	55	2	14	52	9.09	6.97	2.12
58	R	1.8	90	2	17	77	3.44	1.38	2.06
59	R	.65	78	2	19	110	3.22	1.87	1.35

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
60	9-2-2	1.1	64	2	16	69	4.69	2.36	2.33
61	9-2-2	1.3	63	2	15	68	4.79	2.43	2.36
62	9-2-1	1.5	67	2	15	87	5.88	3.23	2.65
64	R 9-1-1	1.3	69	2	15	73	5.76	3.07	2.69
65	R	1.4	82	2	19	73	4.60	3.50	1.10
66	R	1.1	68	2	16	64	4.05	1.57	2.48
67	R	.80	64	2	16	200	5.62	1.82	3.80
68	R	2.0	86	3	19	140	3.53	3.36	.17
70	R	1.6	83	2	16	110	5.49	2.01	3.48
71	R 7-1-1	1.6	71	2	18	85	3.44	3.22	.22
74	R	1.8	83	2	19	120	3.49	2.62	.87
75	R	1.1	82	2	17	61	4.84	1.80	3.04
79	R	.85	57	2	16	100	4.95	2.32	2.63
83	R	2.1	78	2	18	100	4.65	2.46	2.19
84	R 8-1-1	2.0	82	2	19	89	3.72	3.47	.25
89	8-2-1	2.4	88	2	18	130	3.64	3.01	.63
90	8-2-2	2.3	85	2	19	140	3.87	3.41	.46
90	8-2-2	2.4	87	2	18	150	3.96	3.49	.47
91	R	2.0	79	2	16	150	5.92	3.96	1.96
92	R	2.3	81	2	20	110	3.43	1.83	1.60
99	R	2.8	97	2	18	95	2.78	1.56	1.22
109	R	2.9	91	3	20	130	5.64	4.74	.90
114	R	2.5	85	2	19	120	3.43	2.63	.80
120	10-2-2	2.9	92	2	18	230	5.36	5.09	.27
120	10-2-2	1.9	87	2	17	210	5.20	3.78	1.42
121	10-2-1	2.3	78	2	18	120	3.78	3.58	.20
122	R 10-1-1	2.3	85	2	18	240	4.42	3.91	.51
123	R	1.9	83	2	20	210	3.81	3.57	.24
133	R	1.7	69	2	16	120	4.31	3.99	.32
138	R	1.1	68	2	17	130	5.98	3.83	2.15
145	R	2.5	98	3	21	110	2.23	2.07	.16
146	R	2.0	77	2	19	110	3.44	2.69	.75
147	R	1.9	78	2	19	110	3.85	3.37	.48
155	R	1.5	91	2	18	100	3.01	1.84	1.17
156	R	1.3	81	2	18	82	3.91	3.06	.85
157	R	2.4	91	2	16	720	7.70	4.25	3.45
159	R	1.9	61	2	16	67	6.08	1.11	4.97
163	R	2.9	80	2	19	410	5.87	5.54	.33
168	R 14-1-1	5.3	99	2	19	150	3.19	2.77	.42
170	R 15-1-1	3.0	89	3	20	100	3.06	2.95	.11
172	14-2-2	3.1	97	2	17	110	3.51	2.38	1.13
172	14-2-2	3.6	100	2	18	110	3.58	2.44	1.14
173	14-2-1	3.2	95	2	19	110	3.42	2.57	.85
174	R	1.5	82	2	19	120	3.29	2.18	1.11
175	R	1.9	87	2	19	120	2.70	2.49	.21
176	15-2-2	2.7	91	2	18	100	3.34	3.32	.02
176	15-2-2	2.3	90	3	18	96	3.39	3.36	.03
177	15-2-1	3.7	88	2	18	110	3.87	3.85	.02
182	R	4.4	63	2	20	240	4.82	4.79	.03
183	R	4.1	110	2	19	270	10.2	10.2	.04

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
184	R	1.7	92	3	24	210	6.04	4.07	1.97
185	R 17-1-1	1.7	69	2	16	150	3.17	2.64	.53
188	R	2.1	82	2	18	230	3.85	2.39	1.46
189	R	1.7	77	2	18	97	3.15	2.88	.27
190	R	2.8	82	2	18	88	2.64	2.40	.24
191	17-2-2	1.8	86	2	18	110	3.11	2.63	.48
192	17-2-1	1.5	76	2	17	100	4.39	3.43	.96
193	17-2-2	2.4	80	2	18	96	3.13	2.68	.45
195	R	1.5	84	2	19	100	3.16	2.53	.63
197	R	1.7	76	2	15	180	4.22	3.54	.68
198	R	2.1	85	2	18	130	3.39	3.28	.11
202	R	2.0	85	2	20	98	3.29	2.24	1.05
203	R	2.0	76	2	16	130	3.34	2.61	.73
204	R	1.3	66	2	15	100	5.48	1.53	3.95
206	R	1.5	74	2	20	100	3.25	2.47	.78
207	R	1.0	68	2	17	65	4.84	1.62	3.22
209	R	1.0	77	2	20	71	1.97	1.37	.60
210	R	.70	58	2	14	37	5.24	.93	4.31
212	R	1.1	76	2	19	110	3.44	1.99	1.45
213	R	1.9	78	2	17	100	6.07	3.49	2.58
214	R 12-1-1	1.0	71	2	17	120	2.61	2.13	.48
216	11-2-2	.80	76	2	17	77	3.15	1.90	1.25
216	11-2-2	.85	78	2	18	81	3.19	1.92	1.27
217	11-2-1	1.0	72	2	20	87	3.53	2.67	.86
218	12-2-2	.80	49	2	14	45	3.90	1.35	2.55
218	12-2-2	.75	48	2	15	43	3.91	1.47	2.44
219	12-2-1	1.0	53	2	15	52	3.73	1.65	2.08
220	R	.70	64	2	15	77	5.48	3.80	1.68
221	R	1.2	66	2	16	63	2.39	1.42	.97
222	R	.80	65	2	19	300	2.99	2.66	.33
223	R 11-1-1	.55	60	2	17	78	2.89	2.39	.50
225	R 13-1-1	2.0	80	2	19	110	2.77	2.68	.09
227	R	1.9	84	2	19	180	3.22	1.27	1.95
228	R	.75	70	2	18	73	3.12	1.99	1.13
229	13-2-1	1.5	69	2	18	75	3.31	2.88	.43
230	13-2-2	3.1	85	2	18	93	4.04	3.90	.14
230	13-2-2	2.6	85	2	18	94	4.03	3.90	.13
231	R	1.1	64	2	16	94	2.93	2.17	.76
232	R	.50	54	2	14	71	5.83	2.39	3.44
235	R	1.4	74	2	19	85	2.74	2.38	.36
236	R	1.1	64	2	18	59	2.36	2.34	.02
237	R	.90	61	2	15	73	2.80	2.31	.49
238	R	1.4	62	2	17	79	2.81	2.75	.06
239	R	1.6	65	2	16	88	2.87	2.76	.11
240	16-2-2	.70	53	2	15	67	3.55	2.65	.90
241	16-2-2	1.0	52	2	14	68	3.57	2.65	.92
243	16-2-1	.60	48	2	15	47	2.94	1.73	1.21
244	R	1.2	86	2	19	72	3.07	2.21	.86
246	R	.40	42	2	12	24	4.50	4.46	.04
247	R	1.7	73	2	16	78	5.15	2.13	3.02

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
248	R	1.3	62	2	15	58	2.42	2.10	0.32
249	R 16-1-1	1.2	80	2	18	110	4.75	3.61	1.14
250	R	1.3	78	2	21	95	3.83	2.53	1.30
252	R	1.9	61	2	14	76	2.79	2.64	.15
253	R	1.2	73	2	19	78	2.36	2.17	.19
255	21-2-2	2.3	80	2	16	92	2.64	2.57	.07
255	21-2-2	2.7	79	2	16	91	2.55	2.48	.07
256	21-2-1	2.0	82	2	18	81	2.40	2.36	.04
257	R	1.5	76	2	17	100	3.43	2.17	1.26
258	R	1.7	61	2	14	120	7.24	6.62	.62
259	R	1.1	73	2	16	58	4.21	1.83	2.38
260	R	1.2	85	3	21	81	2.67	1.70	.97
263	R	1.3	80	2	17	81	3.25	2.67	.58
265	R 21-1-1	1.9	76	2	18	92	2.86	2.33	.53
266	R	1.3	84	2	20	100	2.30	1.90	.40
268	R	1.3	67	2	16	79	3.98	2.22	1.76
269	22-2-2	1.4	76	2	17	88	3.34	2.59	.75
269	22-2-2	1.7	75	2	17	89	3.36	2.61	.75
270	22-2-1	1.5	82	2	19	96	3.16	2.62	.54
272	R	1.5	72	2	16	87	3.90	2.07	1.83
275	R	2.7	79	2	19	93	2.74	2.12	.62
278	R	2.4	87	2	18	150	3.05	1.95	1.10
280	R	2.3	69	2	17	85	4.07	1.79	2.28
281	R	1.6	66	2	16	71	4.23	1.98	2.25
282	R 22-1-1	2.7	77	2	16	94	3.76	3.74	.02
283	R	1.3	82	2	21	500	6.02	4.09	1.93
284	R	2.8	76	2	17	120	6.30	4.41	1.89
285	R	1.1	100	3	20	310	4.30	3.57	.73
286	R	2.5	78	2	18	82	2.90	2.79	.11
287	R	2.4	80	3	25	170	5.77	5.77	.01
288	R	1.7	68	2	15	92	8.64	7.65	.99
290	R	2.6	78	2	18	80	2.99	2.92	.07
291	R	1.3	74	2	17	120	3.66	2.84	.82
292	R	1.4	76	2	17	59	2.73	1.17	1.56
293	R	1.9	88	2	20	110	3.48	3.46	.02
294	25-2-1	1.5	82	2	17	190	4.86	3.89	.97
295	25-2-2	1.4	72	2	17	110	4.31	3.30	1.01
295	25-2-2	1.3	72	2	17	100	4.25	3.25	1.00
296	R 25-1-1	1.3	83	2	18	80	3.94	2.00	1.94
297	R	1.2	65	2	17	950	4.65	1.79	2.86
298	R	2.3	74	2	19	73	2.24	2.23	.01
300	28-2-1	2.5	76	2	18	130	2.76	2.52	.24
301	28-2-2	3.0	77	2	19	83	3.33	3.17	.16
301	28-2-2	3.5	78	2	19	93	3.27	3.10	.17
302	R	1.5	70	2	18	97	4.35	3.15	1.20
303	R	3.3	95	2	19	80	2.88	2.68	.20
304	R 29-1-1	2.0	75	2	19	64	2.41	1.87	.54
305	29-2-1	1.9	92	2	18	97	4.28	3.97	.31
306	R	2.3	84	2	16	84	4.41	2.33	2.08
307	R 28-1-1	2.0	74	2	17	86	3.70	3.68	.02

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
308	29-2-2	1.9	95	2	19	120	2.69	2.39	0.30
308	29-2-2	2.3	86	2	19	110	2.65	2.35	.30
309	R	2.3	77	2	16	96	3.96	2.56	1.40
310	R	2.9	100	2	19	120	2.12	1.55	.57
311	R	2.4	57	1	13	130	2.74	2.50	.24
312	R	.80	77	3	22	260	10.2	9.93	.27
313	R	.90	58	1	11	100	7.82	4.46	3.36
314	R	1.8	53	1	9	200	10.0	6.70	3.30
315	R	3.0	48	2	13	260	4.72	4.67	.05
316	R 26-1-1	1.5	61	7	120	290	6.16	5.53	.63
317	R	2.1	72	2	17	110	4.85	3.74	1.11
318	27-2-2	1.0	50	2	17	140	4.68	2.83	1.85
318	27-2-2	1.0	49	2	18	150	2.72	.87	1.85
319	27-2-1	1.3	50	2	18	140	4.50	3.34	1.16
320	R	1.7	110	3	21	86	2.30	2.23	.07
321	26-2-2	3.5	110	2	19	99	15.5	15.5	.04
321	26-2-2	2.1	100	2	19	89	15.4	15.4	.01
322	26-2-1	1.5	85	3	21	74	9.76	9.72	.04
324	R	2.7	75	2	18	81	3.46	3.30	.16
325	R	2.2	64	2	18	94	6.16	5.65	.51
326	R	2.9	87	2	17	79	3.01	2.90	.11
327	R	1.5	56	2	17	74	5.66	3.57	2.09
328	R	3.9	92	2	19	160	4.63	4.29	.34
329	R	2.3	85	2	17	100	6.14	4.96	1.18
330	R	2.3	70	2	17	110	5.16	3.54	1.62
331	R	2.3	57	2	15	71	5.33	3.47	1.86
333	R	2.0	110	2	19	96	1.67	1.24	.43
334	R	2.1	100	2	18	80	3.53	2.19	1.34
335	R	1.3	95	3	19	65	2.37	1.93	.44
336	R	1.4	79	2	17	98	4.08	2.67	1.41
338	R	3.3	96	2	19	92	4.11	3.99	.12
339	R	2.1	110	3	19	130	4.15	3.44	.71
340	R	1.1	68	3	22	110	5.18	2.53	2.65
341	R	5.3	77	2	15	110	5.37	2.24	3.13
344	R	1.3	68	2	17	100	4.71	2.30	2.41
345	R	1.6	61	2	15	76	5.42	2.92	2.50
347	R	.80	60	2	16	71	3.11	2.57	.54
349	R	3.2	88	2	19	270	3.07	3.02	.05
350	R	.80	76	2	17	280	4.08	3.36	.72
353	R	4.8	82	2	19	70	2.82	2.80	.02
354	R	1.2	59	2	17	90	3.93	1.92	2.01
355	R	1.3	71	2	15	290	4.69	2.26	2.43
356	R	1.6	73	2	17	92	3.17	2.90	.27
357	R	1.1	67	2	17	74	3.56	2.28	1.28
358	R	1.9	78	2	18	80	2.49	2.31	.18
359	R	2.3	74	2	17	75	2.95	2.91	.04
360	R	1.2	90	2	19	88	2.84	1.95	.89
361	R	2.7	100	3	18	81	2.82	2.64	.18
362	R	1.5	90	2	19	110	3.83	2.73	1.10
363	30-2-1	3.1	93	2	19	71	2.19	2.19	.01

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
364	30-2-2	2.9	94	2	18	73	2.28	2.28	0.01
364	30-2-2	3.1	93	2	17	75	2.78	2.78	.01
365	R	1.7	60	2	15	73	4.94	2.14	2.80
366	R	1.1	75	2	17	83	3.12	2.91	.21
367	R 30-1-1	1.1	81	2	16	84	3.64	2.50	1.14
368	R	1.0	65	2	17	75	3.33	1.72	1.61
369	R	2.3	90	2	18	120	3.50	3.25	.25
370	R	1.3	73	2	15	85	3.50	1.80	1.70
371	R	1.0	73	2	17	77	2.96	2.81	.15
372	R	1.7	98	2	18	71	1.74	1.10	.64
373	R	1.0	85	3	21	480	2.29	2.20	.09
374	R	.85	75	2	16	110	5.34	3.36	1.98
375	R	1.5	85	2	18	110	2.71	2.18	.53
376	R	1.8	100	3	18	87	2.99	2.78	.21
377	R	1.6	90	2	18	110	2.62	2.19	.43
378	R	1.0	69	2	17	180	3.85	3.83	.02
379	R	2.0	69	2	16	140	3.36	3.33	.03
380	R	1.1	67	2	17	79	3.54	1.57	1.97
381	R	1.1	31	<1	6	91	17.0	13.9	3.12
382	R	.85	23	<1	4	1,100	18.6	13.5	5.08
383	R	1.1	52	2	14	160	11.4	10.7	.66
384	R 18-1-1	2.2	60	2	13	110	2.28	2.21	.07
385	R	1.3	45	2	14	80	5.68	5.40	.28
386	R	1.9	50	1	9	130	10.6	6.08	4.52
387	R	.65	65	2	18	110	5.20	3.22	1.98
388	R	1.1	70	2	16	160	2.59	2.45	.14
389	R	.85	51	2	15	88	5.51	2.30	3.21
390	R	1.6	85	2	19	140	2.08	1.78	.30
391	18-2-2	1.9	57	2	13	170	5.84	4.46	1.38
391	18-2-2	1.7	58	2	13	170	5.91	4.53	1.38
392	18-2-1	2.9	69	2	16	180	5.13	4.15	.98
393	19-2-1	2.1	64	3	20	76	5.39	4.08	1.31
394	19-2-2	.65	39	1	11	58	8.72	6.51	2.21
394	19-2-2	.70	39	2	11	57	8.80	6.57	2.23
396	R	1.3	62	2	15	250	9.68	9.26	.42
397	R	.45	59	2	15	140	3.71	2.03	1.68
398	R	1.5	91	3	21	110	2.14	1.97	.17
399	20-2-2	.75	56	2	12	62	5.18	3.72	1.46
399	20-2-2	.70	58	1	12	64	5.12	3.67	1.45
400	20-2-1	1.0	65	2	12	65	5.55	4.21	1.34
401	R	1.7	88	2	19	180	2.10	1.47	.63
402	R 20-1-1	1.9	59	2	12	270	12.4	12.0	.38
403	R 19-1-1	7.3	42	2	12	80	8.87	6.72	2.15
404	R	1.1	92	2	18	120	3.73	3.59	.14
405	R	1.4	67	2	15	210	5.58	5.06	.52
406	R	1.8	69	2	17	85	6.73	5.80	.93
407	R	.80	62	2	16	130	5.14	3.65	1.49
408	R	2.6	59	2	15	100	3.69	2.51	1.18
409	R	3.9	73	3	36	230	14.9	14.8	.10
410	R	1.3	67	2	15	320	5.66	5.22	.44

Table 8.--Element concentrations in fine-fraction streambed sediment from low-order streams of the upper Illinois River basin--Continued

Map number	Design remark[1]	Uranium (micrograms per gram)	Vanadium (micrograms per gram)	Ytterbium (micrograms per gram)	Yttrium (micrograms per gram)	Zinc (micrograms per gram)	Total carbon (weight percent)	Organic carbon (weight percent)	Carbonate carbon (weight percent)
411	R	2.4	74	2	18	180	15.3	15.3	0.04
412	R 23-1-1	1.6	58	2	14	110	8.09	5.18	2.91
413	R	1.6	71	2	16	83	3.40	3.24	.16
414	R	1.7	80	2	16	250	4.15	3.54	.61
415	23-2-2	1.6	57	3	19	59	7.65	3.96	3.69
415	23-2-1	1.0	84	4	24	50	5.49	2.34	3.15
415	23-2-2	2.1	62	2	18	61	7.64	4.08	3.56
417	R	1.7	66	2	18	100	5.66	3.03	2.63
418	R	2.0	64	2	16	70	2.65	2.64	.01
419	R	1.5	50	2	13	140	14.0	12.9	1.14
420	R	2.0	68	2	16	87	3.11	3.09	.02
421	R	5.8	76	2	17	170	4.39	2.52	1.87
424	R	3.7	73	2	14	320	6.23	6.19	.04
426	R	4.1	71	2	17	470	7.64	6.30	1.34
427	24-2-2	2.1	87	2	18	100	2.97	2.38	.59
427	24-2-2	2.3	89	2	19	100	2.98	2.39	.59
428	24-2-1	2.3	86	2	18	110	3.08	2.52	.56
429	R 24-1-1	2.4	77	2	18	93	2.34	2.32	.02
430	R	1.4	65	2	18	120	5.77	3.74	2.03
431	R	1.1	53	2	16	94	7.95	6.59	1.36
432	R	1.0	48	2	14	190	5.50	3.98	1.52
433	R	2.5	77	4	32	79	3.96	2.02	1.94
434	R	.60	41	2	13	56	7.10	3.19	3.91
435	R	1.5	110	3	27	160	8.82	8.10	.72
440	R	1.3	60	2	15	140	8.95	8.49	.46
441	R	1.1	54	3	19	140	3.78	2.79	.99
442	R 27-1-1	2.0	68	2	14	170	6.86	6.13	.73
444	R	1.5	63	2	15	130	11.2	10.3	.92

[1] R means randomly selected site.

11-1-1 are nested ANOVA site, subbasin number, and resampling number, respectively. (Splits from the same sample would have the same sampling site, subbasin, and resampling numbers.)