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Water-Quality Assessment of the Central Nebraska Basins: Summary of Data for Recent Conditions Through 1990

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WATER-QUALITY ASSESSMENT OF THE CENTRAL NEBRASKA BASINS: SUMMARY OF DATA FOR RECENT CONDITIONS THROUGH 1990

By R.B. Zelt and P.R. Jordan

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Multiply	*By*	*To obtain*
millimeter (mm)	0.03937	inch
centimeter (cm)	0.3937	inch
meter (m)	3.281	foot
kilometer (km)	0.6214	mile
square hectometer (hm^2)	2.471	acre
square kilometer (km^2)	0.3861	square mile
degree Celsius (°C)	([1])	degree Fahrenheit (°F)

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[1]Temperature can be converted to degrees Fahrenheit (°F) or degrees Celsius (°C) by the equations:

$$°F = 9/5\ (°C) + 32,$$

$$°C = 5/9\ (°F - 32).$$

WATER-QUALITY ASSESSMENT OF THE CENTRAL NEBRASKA BASINS: SUMMARY OF DATA FOR RECENT CONDITIONS THROUGH 1990

By R.B. Zelt and P.R. Jordan

ABSTRACT

Among the first activities undertaken in each National Water-Quality Assessment (NAWQA) investigation are the compilation, screening, and statistical summary of available data concerning recent water-quality conditions in the study unit. The water-quality conditions of interest in addressing the objectives of the NAWQA program are those that are representative of the general water quality of a given stream reach or area of an aquifer. This report (1) identifies which existing water-quality data are suitable for characterizing general conditions in a nationally consistent manner and (2) describes, to the extent possible, recent, general water-quality conditions in the Central Nebraska Basins. The study unit consists of the area drained by the Platte River between the confluence of the North Platte and South Platte Rivers near North Platte downstream to its confluence with the Missouri River south of Omaha.

The report includes (1) a description of the sources and characteristics of the water-quality data that are available, (2) a description of the approach used for screening data to identify a subset of the data suitable for summary and comparisons, (3) a presentation of statistical and graphical summaries of recent, general water-quality conditions, and (4) comparisons of recent, general water-quality conditions to established national water-quality criteria, where applicable. Stream- and lake-water data are summarized for 25 selected stream-water and 11 lake-water sampling sites. Data also are summarized by major subunits of the study unit (the Sandhills, Loess Hills, Glaciated Area, and Platte Valley subunits) for streambed-sediment, fish-tissue, aquatic-ecological, and ground-water samples. The summaries focus on the central tendencies and typical variation in the data and use nonparametric statistics such as frequencies and percentile values.

INTRODUCTION

Beginning in 1991, the U.S. Congress appropriated funds for the U.S. Geological Survey (USGS) to begin implementation of a full-scale National Water-Quality Assessment (NAWQA) Program. The long-term goals of the program are to (1) provide a nationally consistent description of current water-quality conditions for a large part of the Nation's water resources; (2) define long-term trends (or lack of trends) in water quality; and (3) identify, describe, and explain, to the extent possible, the major natural and human factors that affect measured water-quality conditions and trends (Leahy and others, 1990). In meeting these goals, the program provides information useful to policy makers and managers concerned with the Nation's water resources.

National assessments of water quality will be based primarily on investigations of both ground- and surface-water quality conducted in 60 study units nationwide. Collectively, the study units incorporate 60 to 70 percent of the Nation's water use as measured by total withdrawal and population served by public-water supplies. The Central Nebraska Basins area was among the first 20 NAWQA study units selected for study as part of the full-scale program.

Purpose and Scope

This report describes the first activities undertaken in each study-unit investigation, which are a compilation, screening, and statistical summary of available data concerning recent water-quality conditions in the study unit. In this report, water quality is defined to include physical, chemical, and biological characteristics of the freshwater environment. Water quality is described by measurements of constituents and properties in whole or filtered water, in bottom materials, and in tissues of aquatic organisms, and by measurements of aquatic-ecological characteristics. Water-quality data are collected by various organizations for different purposes (for example, sampling of wastewater effluent to determine permit compliance). The water-quality conditions of interest in addressing the objectives of the NAWQA program are those that are representative of the general water quality of a given stream reach or area of an aquifer, and are sometimes termed "ambient" water-quality conditions (Hren and others, 1987). In this report, such conditions are referred to as general conditions. Samples that are more representative of special conditions, such as treated drinking water, effluent discharge, or seepage from a landfill, may not be useful for defining general water-quality conditions.

Recent water-quality conditions are of interest because they serve (1) to guide the collection of additional data for a more complete definition of the spatial and temporal variability of water-quality conditions and (2) as a point of reference to document water quality prior to the NAWQA study for comparison with data collected during the study. The time period for which recent water-quality conditions are summarized should be of suitable length to include an adequate quantity of data to allow meaningful results, yet brief enough that the results are representative of a period that may be described as recent. The time period selected for summarizing recent conditions for the Central Nebraska Basins was 1981-90, with the following exceptions: streambed-sediment data were summarized for 1979-90, and ground-water data were summarized for 1978-90.

The purposes of this report are (1) to identify which of the existing water-quality data are suitable for characterizing general conditions in a nationally consistent manner and (2) to describe, to the extent possible, recent, general water-quality conditions in the Central Nebraska Basins. This summary of recent conditions is intended (1) to help establish priorities for additional data-collection activities that are needed to achieve the long-term goals of the program in this study unit, and, (2) in conjunction with additional analysis and interpretation, to identify implications for regional and national water-quality issues. The scope of the report includes (1) a description of the sources and characteristics of water-quality data that are available, (2) a description of the approach used for screening available data to identify a subset of the data suitable for summary and comparisons, (3) a presentation of statistical and graphical summaries of recent water-quality conditions, and (4) results of comparisons of recent water-quality conditions to established national water-quality criteria where applicable. The summaries focus on the central tendencies and typical variation in the data and use nonparametric statistics such as frequencies and percentile values.

Acknowledgments

The authors wish to thank the various Federal and State agencies, private organizations, and members of the Central Nebraska Basins Liaison Committee for their cooperation in providing information and data that were used in preparing this report. Specifically, the assistance of the Nebraska Department of Environmental Quality, the Nebraska Department of Health, the Nebraska Game and Parks Commission, the Nebraska Natural Resources Commission, the several Natural Resources Districts, the Platte River Whooping Crane Maintenance Trust, the U.S. Army Corps of Engineers, Region VII of the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the University of Nebraska is gratefully acknowledged.

DESCRIPTION OF THE CENTRAL NEBRASKA BASINS

The Central Nebraska Basins study unit consists of the area drained by the Platte River between the confluence of the North Platte and South Platte Rivers near North Platte downstream to its confluence with the Missouri River south of Omaha. The study unit is about 78,000 km^2 in area and coincides with the areas defined by the U.S. Water Resources Council as hydrologic subregions 1020, 1021, and 1022 (Seaber and others, 1986). As shown in figure 1, the study unit includes the Loup and Elkhorn River Basins as well as basins of smaller tributaries to the Platte River. The Central Nebraska Basins have been described in detail by T.L. Huntzinger and M.J. Ellis (U.S. Geological Survey, written commun., 1993). The study unit is primarily agricultural, with livestock, feed grains, and soybeans being the principal products of that land-use activity.

On the basis of differences in environmental settings, Huntzinger and Ellis divided the study unit into four major subunits (fig. 1): (1) the Sandhills, (2) the Loess Hills, (3) the Glaciated Area, and (4) the Platte Valley. Differentiated primarily by their physiographic, hydrogeologic,

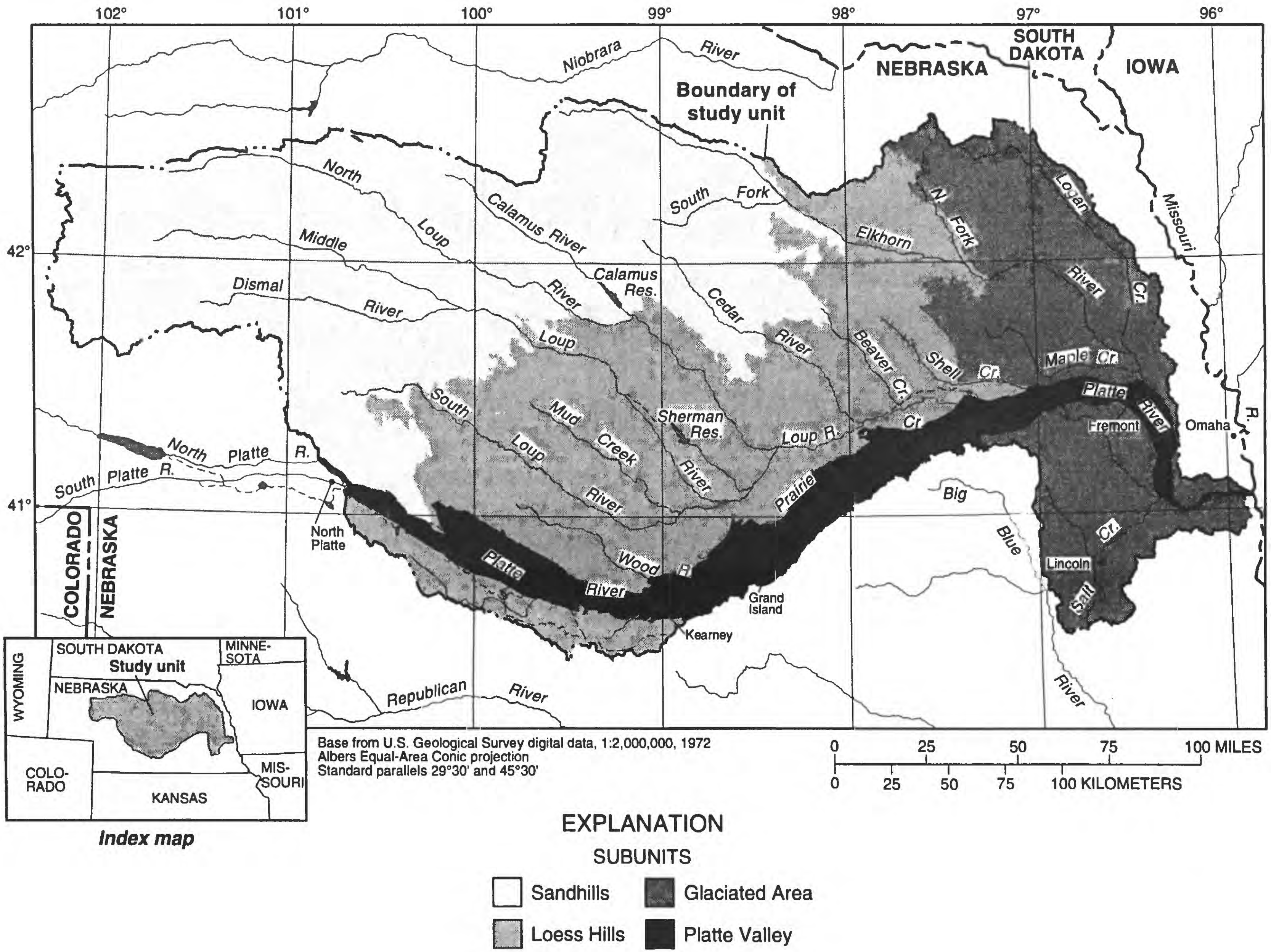


Figure 1. Major streams, surface-water impoundments, cities, and subunits of Central Nebraska Basins study unit.

and land-cover characteristics, the environmental settings that typify the four subunits are an aggregation of the major natural and anthropogenic factors thought to affect water quality in the study unit. The overall water-quality assessment of the study unit is designed to evaluate differences in water-quality conditions among the subunits in relation to differences in environmental setting.

The Sandhills subunit is characterized by vegetated sand dunes ranging in topographic relief from a few meters to more than 100 m (Bleed and Flowerday, 1990). Range grasses are the primary land cover on the dunes. Between the dunes the water table often is near the surface, and wetlands frequently occur in these interdune valleys. The Loess Hills subunit is an area of loess-mantled, dissected plains. The principal land use is for crop production, although significant areas of rangeland occur, particularly in the western part of the subunit where local relief and dissection are most pronounced. The Glaciated Area subunit is characterized by dissected glacial till of relatively steep topography. Land use is chiefly crop production, with small pastures interspersed. In the Platte Valley subunit, the nearly level alluvium is used primarily for crop production, but many small- to medium-size cities are also located there. In addition, there are riparian wetland areas that serve as important habitat for threatened and endangered bird species.

The percentage of each subunit in each of several categories of land use and land cover was computed from 1:250,000-scale maps of the U.S. Geological Survey (1979a, 1979b, 1979c, 1979d, 1979e, 1979f, 1979g, 1981, 1982a, 1982b, 1982c, 1984a, 1984b) using a geographic-information-system (GIS) map-overlay analysis (Environmental Systems Research Institute, 1992) of digital maps of the subunit boundaries and the land-use and land-cover boundaries. The cropland-and-pasture land-use category accounted for 95 percent of the Glaciated Area, 82 percent of the Platte Valley, 68 percent of the Loess Hills, and 19 percent of the Sandhills subunit. In contrast, the proportion of area in the rangeland category was 80 percent in the Sandhills, 31 percent in the Loess Hills, 5 percent in the Platte Valley, and 1 percent in the Glaciated Area. The proportion of area in urban and built-up land ranged from 3 percent in the Platte Valley to less than 0.1 percent of the Sandhills subunit. The Platte Valley subunit also had about 6 percent of its area mapped as wetlands.

SOURCES OF AVAILABLE WATER-QUALITY DATA

A large amount of water-quality data has been collected in the study unit by a variety of organizations for diverse purposes. Organizations that have made water-quality data available to the public include the Lincoln-Lancaster County Health Department, the Nebraska Department of Environmental Quality (NDEQ), the Nebraska Department of Health (NDOH), the Nebraska Game and Parks Commission, Nebraska's several Natural Resources Districts (NRDs), the Platte River Whooping Crane Maintenance Trust, the U.S. Army Corps of Engineers (USACOE), the U.S. Department of Energy (USDOE), the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), the USGS, and the University of Nebraska-Lincoln (UNL). Most of the general water-quality data from the study unit has been collected by the USGS, the NDEQ, and the various NRDs.

To achieve the purposes of this report it was sufficient to define available data as those records made available to the public in machine-readable formats. One exception to the requirement for machine-readable format was made and is described below in the section on UNL activities. The sources and quantities of water-quality data compiled are listed in table 1. Available water-quality data that were not retrieved include (1) results from NDOH routine sampling of public-water distribution systems, which are typically representative of multiple sources of water withdrawals rather than a single well location (Nebraska Depart- ment of Health, 1985); and (2) aquatic biological community data collected by the Platte River Whooping Crane Maintenance Trust because none of those data were collected during 1981-90 (B.S. Goldowitz, Platte River Whooping Crane Maintenance Trust, oral commun., 1992).

Brief descriptions of the agency programs responsible for collecting the data summarized in this report are presented in the following

Table 1. *Summary of sources and quantities of water-quality data compiled for the summary of recent water-quality conditions within Central Nebraska Basins*

[STORET, U.S. Environmental Protection Agency's Storage and Retrieval System; USGS, U.S. Geological Survey; USFWS, U.S. Fish and Wildlife Service, Grand Island, Nebr.; NWIS, USGS National Water Information System; UNL, University of Nebraska-Lincoln; NNRC, Nebraska Natural Resources Commission]

Source agency or organization	Number of sites	Number of samples	Data storage location
Surface-Water-Quality Data			
Nebraska Department of Environmental Quality	555	12,046	STORET
Nebraska Game and Parks Commission	578	599	STORET
U.S. Department of Energy	1,369	1,369	USGS
U.S. Army Corps of Engineers	59	3,653	STORET
U.S. Environmental Protection Agency	197	2,412	STORET
U.S. Fish and Wildlife Service	1	14	STORET
U.S. Fish and Wildlife Service	2	6	USFWS
U.S. Geological Survey	231	15,132	NWIS
U.S. Geological Survey	8	32	USGS
Ground-Water-Quality Data			
Lincoln-Lancaster County Health Department	61	62	UNL
Nebraska Department of Environmental Quality	292	306	STORET
Nebraska Department of Environmental Quality	304	311	UNL
Nebraska Department of Health	2,120	2,125	UNL
Nebraska Natural Resources Districts	2,120	2,728	NNRC
Nebraska Natural Resources Districts	3,214	3,300	UNL
U.S. Department of Energy	1,344	1,344	USGS
U.S. Environmental Protection Agency	13	26	STORET
U.S. Geological Survey	1,464	4,387	NWIS
U.S. Geological Survey	423	427	UNL
University of Nebraska, Conservation and Survey Division	447	460	UNL
University of Nebraska, Conservation and Survey Division	240	600	USGS

sections. Not all of the retrieved data were included in the summary for reasons explained in the "Summary Approach" section, and therefore, not all of the agencies and programs represented in table 1 are referred to in the following sections.

Nebraska Department of Environmental Quality

The primary programs of the NDEQ that collected general surface-water-quality data are the Ambient Water-Quality Monitoring Network, the Biological Stream Classification study, the Ambient Biological Network, and the Clean Lakes Survey. The NDEQ also collected general ground-water-quality data in parts of the study unit for its Special Protection Area program. Although its official name prior to 1992 was the Nebraska Department of Environmental Control, the NDEQ is referred to by its current name throughout this report, except in reference to publications bearing their former name.

The Ambient Water-Quality Monitoring Network (AWQMN) project plan (Nebraska Department of Environmental Quality, written commun., 1990) states that the primary objective is to monitor long-term trends in the water quality of major rivers and streams, and that secondary objectives include defining water-quality conditions for purposes of comparison to standards and evaluation of the effectiveness of State water-quality programs. Monthly sampling at fixed sites typically located near the mouth of a major drainage unit is the principal field activity of the program. From 1980 to 1986, sampling and analysis at about one-half of the network sites were conducted by the NDEQ and at the other half of the sites by the USGS. From October 1986 to 1989, all of the analyses were performed by the NDEQ laboratory, while the USGS maintained its involvement in sample collection. In 1990, the NDEQ conducted all sampling and analysis for the network. Throughout 1981-90, grab sampling was the sample-collection method used by the NDEQ, whereas the USGS used the methods it has established for data collection for its own programs (described below).

The NDEQ conducted the Biological Stream Classification study (Nebraska Department of Environmental Control, 1991a) to (1) develop an approach to classification of perennial stream reaches on the basis of existing or attainable uses and (2) develop biological assessment techniques to measure aquatic-life health based on regionally expected fauna. Samples of water and aquatic faunal communi- ties were collected during base-flow conditions from 1984 through 1988. In addition, sites in the Sandhills subunit were sampled in the spring, summer, and fall of 1989 to assess seasonal variability in the macroinvertebrate and fish communities. The NDEQ collected all samples and performed all analyses, except that assistance in identification of fish species was provided for some specimens by faculty of the University of Nebraska-Lincoln, the University of Nebraska-Omaha, and the University of Kansas (Lawrence). Only onsite physical properties were determined for the water samples collected.

Another aquatic-ecology study was sponsored by the NDEQ during 1985-86 to test habitat evaluation procedures for correlating habitat suitability with fish populations (Zaroban, 1987). The study was conducted at 17 sites in the Elkhorn River Basin.

In 1990, the NDEQ began the Ambient Biological Network project (Nebraska Department of Environmental Control, 1990b) to assess aquatic life by sampling macroinvertebrate and fish populations and surveying habitat conditions at two groups of sites: (1) fixed-reference sites to be sampled annually for long-term monitoring and (2) rotational sites to be sampled once during each 6-year cycle of the project. Fixed-reference sites were located to provide one or two sites per major drainage basin, whereas rotational sites were distributed among the basins in proportion to the total stream-network length in each basin.

The Clean Lakes Survey, begun in 1989, was intended to characterize and classify 64 Nebraska lakes and to develop an initial set of limnological data for an ambient lake-water-quality monitoring network (P.A. Brakhage, Nebraska Department of Environmental Quality, written commun., 1990). The lakes studied were selected to represent a variety of environmental settings. The study approach included seasonal monitoring of benthic macroinvertebrate communities, with samples collected at two locations in each lake during spring and fall surveys.

Data collection for the Special Protection Area (SPA) program began in 1988 to study reported ground-water contamination from agricultural chemicals (Nebraska Department of Environmental Control, 1990a). Of the three areas studied in 1988 for possible SPA designation, only the area near Fremont is within the NAWQA study unit. The northwestern part of an area south of Kearney, studied in 1989, also is located in the NAWQA study unit. Water samples were collected by the NDEQ and the NRDs from domestic and irrigation wells and were analyzed for specific conductance, pH, major ions, and nitrate, but only selected samples were analyzed also for bicarbonate, coliform bacteria, and pesticides (Verstraeten, 1989; Link, 1990). Only samples collected from domestic wells were analyzed for bicarbonate and coliform bacteria. Only samples from irrigation wells selected on the following basis were analyzed for pesticides: (1) If an onsite test indicated that large concentrations of nitrate were present, then (2) an onsite test for triazine herbicides was performed, and wells having test results that indicated the presence of triazine herbicides were sampled for pesticides (Verstraeten, 1989; Link, 1990). Laboratory analysis of samples collected for the two SPA studies were performed by the NDEQ, the

NDOH, and the USDOE's Ames Laboratory at Ames, Iowa (Verstraeten, 1989; Link, 1990).

The NDEQ provided documentation of its laboratory methodology and quality-assurance and quality-control programs (Nebraska Department of Environmental Quality, written commun., 1992). The NDEQ laboratory participates in the USEPA Performance Evaluation Program and, during the period when it analyzed samples collected by the USGS, participated in the USGS Standard Reference Water Sample Program. The NDEQ routinely stores their water-quality data in the USEPA's national data bases.

In July and September 1992, the NDEQ ecological survey data were retrieved from the USEPA Storage and Retrieval (STORET) system. The retrieval was confined to (1) sites having hydrologic unit codes that indicated they were located in the study unit, (2) surveys conducted during 1981-90, and (3) fish or macroinvertebrate community surveys only.

Nebraska Department of Health

A statewide study of the quality of rural drinking water was conducted by the NDOH during 1985-89 (R.F. Spalding, UNL, written commun., 1991), in cooperation with the U.S. Centers for Disease Control in Atlanta, Ga. Random sets of rural domestic wells were selected and sampled in each of 15 separate, but arbitrarily defined, sampling strata. Samples were collected and analyzed by the NDOH for pesticides, nitrate, coliform bacteria, and gross alpha radioactivity (C.A. Jacobs and others, Nebraska Department of Health, written commun., 1988). In September 1992, the atrazine and nitrate data collected for the rural domestic-well survey were retrieved from the UNL Water Center where an assessment of those data was being conducted.

Nebraska's Natural Resources Districts

Nebraska's 23 NRDs are autonomous local agencies with regulatory responsibilities for resources that include ground water. Supporting information was requested from each NRD that was the source of retrieved data that satisfied the screening criteria for ground-water data (described below).

The summary of data in this report includes ground-water samples collected by the Lower Elkhorn, Upper Elkhorn, Lewis and Clark, Lower Platte South, and Twin Platte NRDs that were analyzed by the NDOH (Paul Mann, Upper Elkhorn NRD, oral commun., 1992; Kent Miller, Twin Platte NRD, oral commun., 1992; Tom Moser, Lewis and Clark NRD, oral commun., 1992; Dan Schulz, Lower Platte South NRD, oral commun., 1992; Rick Wozniak, Lower Elkhorn NRD, written commun., 1992). Ground-water samples collected by the Central Platte NRD were analyzed for inorganic constituents by the Grand Island-Hall County Health Department; pesticide analyses were performed either at the UNL or the Ames Laboratory of the USDOE (Ron Bishop, Central Platte NRD, oral commun., 1992). Ground-water samples collected by the Tri-Basin NRD were analyzed for nitrate by Ward Laboratories, Kearney, Nebr.; the NDOH provided the analytical services for pesticide determinations (Richard Anderbery, Tri-Basin NRD, oral commun., 1992). The NRDs generally collected ground-water samples at different sites each year, except that follow-up samples often were used to verify measurements of large concentrations of regulated constituents such as nitrate.

Many of the NRDs routinely store their water-quality data in a data system maintained by the Nebraska Natural Resources Commission (NNRC). Retrievals of ground-water-quality data from the NNRC were made in June 1991 and in August 1992 for this study. The 1991 retrieval included data from the following 11 NRDs that are at least partially within the study unit: Upper Elkhorn, Lower Elkhorn, Lewis and Clark, Upper Loup, Lower Loup, Papio-Missouri River, Central Platte, Lower Platte North, Lower Platte South, Twin Platte, and Tri-Basin NRDs. The 1992 retrieval was made on the basis of county codes associated with each site and included data for all 60 of the Nebraska counties that are at least partially within the study unit. The 1992 retrieval also differed from the earlier one by including only data from samples analyzed by the NDOH, most of which had not been included in the 1991 retrieval. Additional NRD ground-water data were included in a September 1992 retrieval from the UNL (described below).

U.S. Army Corps of Engineers

The USACOE has sampled and analyzed water from 11 lakes in the Salt Creek Basin upstream from Lincoln. The lakes are flood-control reservoirs constructed by the USACOE and are used also for recreation (Kevin Grode, USACOE, Omaha, oral commun., 1993). The dams were completed during 1962-67, and the areas draining to the lakes range from 14 to 230 km^2 (K.S. Willcuts, USACOE, Omaha, written commun., 1993) (see table 6 for selected data pertaining to the lakes). The lakes were sampled by the USACOE at one or more sites within each lake. Each sample analyzed was a composite collected at standard intervals of depth at each site. The samples were analyzed by the USACOE's Missouri River Division Laboratory, which participates in the USEPA Performance Evaluation Program (Prem Arora, USACOE, Omaha, oral commun., 1992). A July 1991 retrieval from the USEPA STORET system included the USACOE lake-water-quality data.

U.S. Department of Energy

The Hydrogeochemical and Stream Sediment Reconnaissance Survey (HSSRS) was the only USDOE program that collected water-quality data in the study unit. The purpose and procedures of the HSSRS activities in the study unit are described by Arendt and others (1979) and by Union Carbide Corporation, Nuclear Division (1978a, 1978b), who conducted the HSSRS in Nebraska during 1978-79 under contract with the USDOE. The HSSRS was conducted as part of the National Uranium Resource Evaluation (NURE) Program, established by the USDOE, and was intended to characterize the hydrogeochemistry and streambed-sediment geochemistry of selected areas throughout the United States. Ground-water and streambed-sediment samples were collected at an average density of one site per 26 km^2. Stream sites having drainage areas from 5.2 to 52 km^2 were selected for streambed-sediment sampling. Ground-water samples were collected by the UNL's Conservation and Survey Division, and streambed-sediment samples were collected by Biospheric Consultants International. All analyses were performed by Union Carbide Corporation personnel at laboratories in Oak Ridge, Tenn. (Union Carbide Corporation, Nuclear Division, 1980a, 1980b, 1981a, 1981b, 1981c, 1981d, 1981e, 1981f). The quality-assurance plan for the HSSRS included (1) an internal laboratory-quality-control program, (2) quality-control samples for uranium analysis as part of the Multilaboratory Analytical Quality Control for the HSSRS (D'Silva and others, 1979), and (3) computerized procedures for verification of field, map, and laboratory data.

In May 1991, a retrieval was made of the HSSRS streambed-sediment and ground-water data collected in eight 1- by 2-degree quadrangles of latitude and longitude that were at least partially within the study unit. The data were subsequently partitioned on the basis of a digital map overlay of the study-unit boundary to exclude the data from outside the study unit. The totals shown in table 1 do not include the HSSRS samples collected outside the study unit.

U.S. Environmental Protection Agency

The Regional Ambient Fish Tissue (RAFT) Monitoring Program was the only USEPA program that collected general water-quality data in the study unit. The RAFT monitoring work plan (Bruce Littell, USEPA, written commun., 1992) states that the program's objectives included (1) fixed-station sampling upstream and downstream from industrial areas to measure the effectiveness of urban pollution-control programs, (2) sampling to screen "fishable" water bodies for contaminants, and (3) follow-up sampling at locations where previously collected data indicated that tissue contamination had occurred. RAFT samples were collected in the study unit by the NDEQ and the Nebraska Game and Parks Commission and analyzed by the USEPA, Region VII, Kansas City, Kans. (Littell, 1982; U.S. Environmental Protection Agency, 1985, 1986; Christiansen, 1987, 1988; Christiansen and others, 1989; Callam and others, 1990).

In July 1991, available data were retrieved from the USEPA STORET system. The STORET retrieval was for all non-USGS sites (NDEQ sites plus any others) that were presumed to be in the study unit based on the associated hydrologic unit code. In addition, STORET data were retrieved for 95 non-USGS sites based on the associated latitude and longitude coordinates. Another STORET retrieval was made in September 1992 to acquire data for samples of fish tissue collected in the study unit, after it was learned that parts of that data set had been added to STORET subsequent to the earlier retrieval. A third STORET retrieval was made in October 1992 to acquire only records for samples of ground water collected in three counties for two SPA program studies conducted by the NDEQ, after it was learned that parts of that data set also had been added to STORET subsequent to the initial retrieval.

U.S. Fish and Wildlife Service

The principal water-quality data-collection activity of the USFWS is the National Contaminant Biomonitoring Program (NCBP), which has collected and analyzed tissue samples to document temporal and geographic trends in concentrations of persistent environmental contaminants that may threaten fish and wildlife (Lowe and others, 1985; Schmitt and others, 1985, 1990; Jacknow and others, 1986; Schmitt and Brumbaugh, 1990). The NCBP was begun in 1967 as the National Pesticide Monitoring Program, a multi-agency effort designed to monitor organochlorine pesticides in the Nation's water supplies. When the program was expanded in the mid-1980's to include industrial chemicals and metals in addition to pesticides, it was renamed the NCBP.

NCBP samples of fish tissue were collected biennially at a network of fixed sites. Three samples generally were collected at each site--two replicate samples of bottom-feeding species and one sample of a predatory species. Quality-assurance procedures established for the laboratory analyses include biological reference materials, spiked samples, triplicate determinations, and procedural blanks (Schmitt and others, 1985). Data collected for the NCBP were retrieved in September 1992 during the same STORET retrieval of fish-tissue data described above.

U.S. Geological Survey

The USGS has collected and analyzed stream-water and ground-water samples as part of Congressionally funded programs, jointly funded programs with State and local agencies, and programs funded by other Federal agencies. The resulting data generally have been published in a yearly series of reports, "Water Resources Data for Nebraska, Water Year 19xx" and have been entered into the USGS National Water Information System (NWIS) and the USEPA STORET system.

Specific conductance and pH measurements onsite were made with meters calibrated and operated according to the instruction manuals provided by the manufacturers. Water temperature was measured by using techniques outlined by Stevens and others (1975). Analysis of alkalinity onsite was performed on filtered water samples in accordance with USGS, Quality of Water Branch Technical Memorandum 82.05 (December 11, 1981). Dissolved-oxygen measurements were made onsite using meters calibrated and operated according to USGS, Quality of Water Branch Technical Memorandum Number 79.10 (March 14, 1979). Samples for analysis of inorganic compounds, nutrients, and suspended sediment were collected using USGS-approved depth-integrated samplers and methods described by Guy and Norman (1970). Inorganic compounds, including major and minor ions and nutrients, were analyzed using methods compiled by Fishman and Friedman (1985). Suspended-sediment concentration and particle-size distribution analyses were performed using methods described by Guy (1977).

Quality-assurance procedures were followed during sample collection, handling, shipment, and analyses to ensure that (1) the risks of sample contamination and sample mix-up were minimized, and (2) analytical results were verifiably accurate. Laboratory analyses of samples collected for USGS programs were performed primarily at the USGS National Water-Quality Laboratory, Arvada, Colo. However, a number of pesticide analyses were performed by Harris Laboratories, Lincoln, Nebr.

In May 1991, available data were retrieved from the USGS NWIS for all surface-water sites that had associated hydrologic codes indicating that they were located in the study unit and for all ground-water sites that had associated latitude and longitude coordinates indicating locations within 16.1 km of the study unit (the ground-water boundary of the study unit had not been finalized at that time). Additional USGS surface-water data from a 1989-90 study of herbicides in the midwestern United States (Thurman and others, 1992) were acquired in September 1992 prior to their entry into NWIS.

University of Nebraska-Lincoln

Ground-water samples have been collected in the study unit by the Conservation and Survey Division (CSD) of the UNL for a variety of water-quality studies (Junk and others, 1980; Spalding and Exner, 1980; Exner, 1984, 1985; as examples). A comprehensive summary of nitrate and atrazine concentrations in ground water was published by Exner and Spalding (1990) and included available CSD nitrate data collected during 1984-88 and atrazine data collected during 1975-88. One of the largest sets of CSD data included in their summary were those collected for a cooperative study between the CSD and the Papio-Missouri River, Lower Platte North, and Lower Platte South NRDs (Spalding and Exner, 1990). The objectives of the study included determining rates of increase in nitrate concentrations and increasing the areal density of available data in areas considered vulnerable to ground-water contamination. To determine the change in nitrate concentrations, samples were collected at many of the same sites used by the USDOE for the HSSRS in 1978-79. Samples were collected by the NRDs in 1988 and 1989 and were analyzed for nitrates at the UNL, and for pesticides at the USDOE's Ames Laboratory.

The data base that Exner and Spalding (1990) summarized is a compilation of data from six sources: the CSD, the Lincoln-Lancaster County Health Department, the NDEQ, the NDOH, the NRDs, and the USGS. All of the CSD samples included in their summary were analyzed either at the UNL or at the Ames Laboratory. In September 1992, a retrieval of the nitrate and atrazine data presented in their summary was received from the UNL.

A large amount of nitrate data was collected for a CSD ground-water study conducted in conjunction with the USDOE's HSSRS in 1978-79 (University of Nebraska, Conservation and Survey Division, 1980a, 1980b, 1980c, 1980d, 1980e, 1980f). Those samples were collected by the CSD and analyzed for nutrients by the NDEQ. That data set was available only in written form (A.D. Druliner, U.S. Geological Survey, written commun., 1992). These nutrient data comprise the exception to the requirement that data be in machine-readable format to be included in this report. Because they were associated with well-distributed sampling sites and because most of the data for those samples had already been received in machine-readable form, it was deemed appropriate to automate and include these nutrient data in this report.

In September 1992, additional ground-water-quality data were acquired that had been collected for other studies conducted by the CSD (Wehtje and others, 1983; Exner, 1985). Computer files of these data were obtained from USGS sources because they were not available in machine-readable form from the UNL.

SUMMARY APPROACH

Selection of Constituents and Properties to be Summarized

The NAWQA Program design includes the identification of a set of water-quality constituents and properties that will comprise the target variables on which the activities of each study unit focus (Hirsch and others, 1988). The list of target variables is compiled on the basis of national and local water-quality issues of interest. Many of the target variables are the subject of Federal regulations, such as those developed under the Safe Drinking Water Act of 1987. For this report, all quantitative physical values (that is, not categorical values or values from an index that uses nonphysical units) of individual water-quality constituents and properties were considered target variables.

Suitability of Data for Inclusion in the Summary

The methods used for identifying those data that were suitable for the purposes of this report are described in this section. For each type of water-quality data, a set of criteria were applied systematically to screen sampling sites and samples. Available supporting information was gathered from agencies as part of the screening process. This information, which describes the purpose of data collection and methods of sample collection, handling, analysis, and quality control, was reviewed to assist in identifying data that were suitable for inclusion in this summary. In this section, specific mention is made of some groups of data that were excluded from the summary on the basis of the supporting information to permit other investigators to duplicate the results presented in this report.

Onsite and laboratory methods are important in obtaining reliable data that are comparable to those compiled for other NAWQA study units for purposes of national assessment. Established procedures were required for sample handling, which includes the filtering, preservation, and transport of samples. Laboratory analyses were considered reliable if they were performed by the USEPA or a laboratory certified through the USEPA's laboratory-certification programs.

Data reliability can be adversely affected by inaccuracies introduced during recording or transcribing data into machine-readable form. This aspect of data reliability is difficult to evaluate, but the following procedures were used to detect certain types of errors: (1) the frequency of occurrence of each constituent code in each data set was reviewed to identify codes that were invalid or inconsistent with the documentation related to the data set; (2) the frequency of occurrence of each analytical remarks code in each data set was reviewed to identify codes that were invalid or undocumented; and (3) the frequency of occurrence of other available codes and characteristics associated with sites, samples, or analyses (for example, USGS NWIS codes for analysis source, sample type, and quality assurance) also were reviewed to identify data that were unsuitable for inclusion in this summary. Due to the multiple retrievals from some data bases and the presence of overlap between some data bases, it was also important to include as part of the overall screening process a check for, and removal of, duplicate entries of sites, samples, and analyses.

Stream Water

The following set of screening criteria were applied to identify data from stream-water sampling sites that would be included in summarizing recent water-quality conditions in the Central Nebraska Basins:

(a) Site location is inside the study unit and adequately recorded to permit an onsite inspection (though none were made);

(b) Data are available for public use;

(c) Samples represent general conditions;

(d) Supporting information is available that describes the purpose of data collection and methods of sample collection, handling, analysis, and quality control;

(e) To be representative of recent conditions, the site was sampled at least quarterly for at least 5 years during 1981-90;

(f) To provide sufficient data to describe the typical variation, the site was sampled on at least 30 days during 1981-90; and

(g) Samples are associated with either instantaneous or mean daily streamflow measurements. The availability of mean daily streamflow measurements was defined to include measurements made at a nearby gaging station if there were no intervening confluences with ungaged, perennial tributary streams.

Because it was anticipated that some sampling sites would have records stored under multiple site identities, a spatial proximity analysis was performed to detect site records having locational coordinates within 2,000 m of one another. Stream-water data criteria (e) and (f) were evaluated using the total number of days on which samples were collected at each common sampling location.

For stream-water data, it is important to ensure that analysis results are not biased by the uneven distribution of suspended sediment within the stream cross section. Therefore, data for water-quality constituents associated with suspended sediment were summarized only from stream-water samples collected using depth integration at three or more verticals in the stream cross section (Guy and Norman, 1970).

One of the NDEQ's sampling sites on the Loup River initially appeared to satisfy all screening criteria. However, during review of supporting information, it was determined that streamflow data associated with samples at that site had been estimated from measurements made at nearby gaging stations using a procedure that failed to satisfy screening criterion (g) due to the occurrence of intervening confluences with ungaged perennial tributaries. Therefore, that site was not included in the summary of stream-water-quality conditions.

Other data not used in the summary were available for one of the included sites, Salt Creek below Stevens Creek near Waverly, Nebr. (site 34, fig. 2). A special study of Salt Creek near Lincoln was conducted for the USEPA by the University of Iowa, Hygienic Laboratory (Miller, 1988). The Salt Creek Survey work plan (University of Iowa, Hygienic Laboratory, written commun., 1988) indicates that the objectives of water-quality sampling during that study were to (1) determine if stream water below two municipal wastewater-treatment plants satisfied water-quality regulations, (2) identify source(s) of increased concentrations of dissolved copper, and (3) calibrate and verify a waste-load allocation simulation. The work plan states that samples for the calibration and verification surveys were collected at the times when a pollution plume was expected to be passing the monitoring sites.

Samples collected by the NDEQ for determinations of fecal-bacteria densities were not required to be analyzed within 6 hours of collection (Nebraska Department of Environmental Quality, written commun., 1990). Therefore, determinations of fecal-bacteria densities in samples collected by the NDEQ were excluded from this summary.

Lake Water

Data from lake-water sampling sites were required to satisfy screening criteria (a) through (d) and (f) listed for stream-water data. For lakes having surface areas less than 1,000 hm^2, data from multiple sampling sites in the lake that satisfied criteria (a) through (d) were considered as though they were collected from a single site for the purposes of this report.

Streambed Sediment

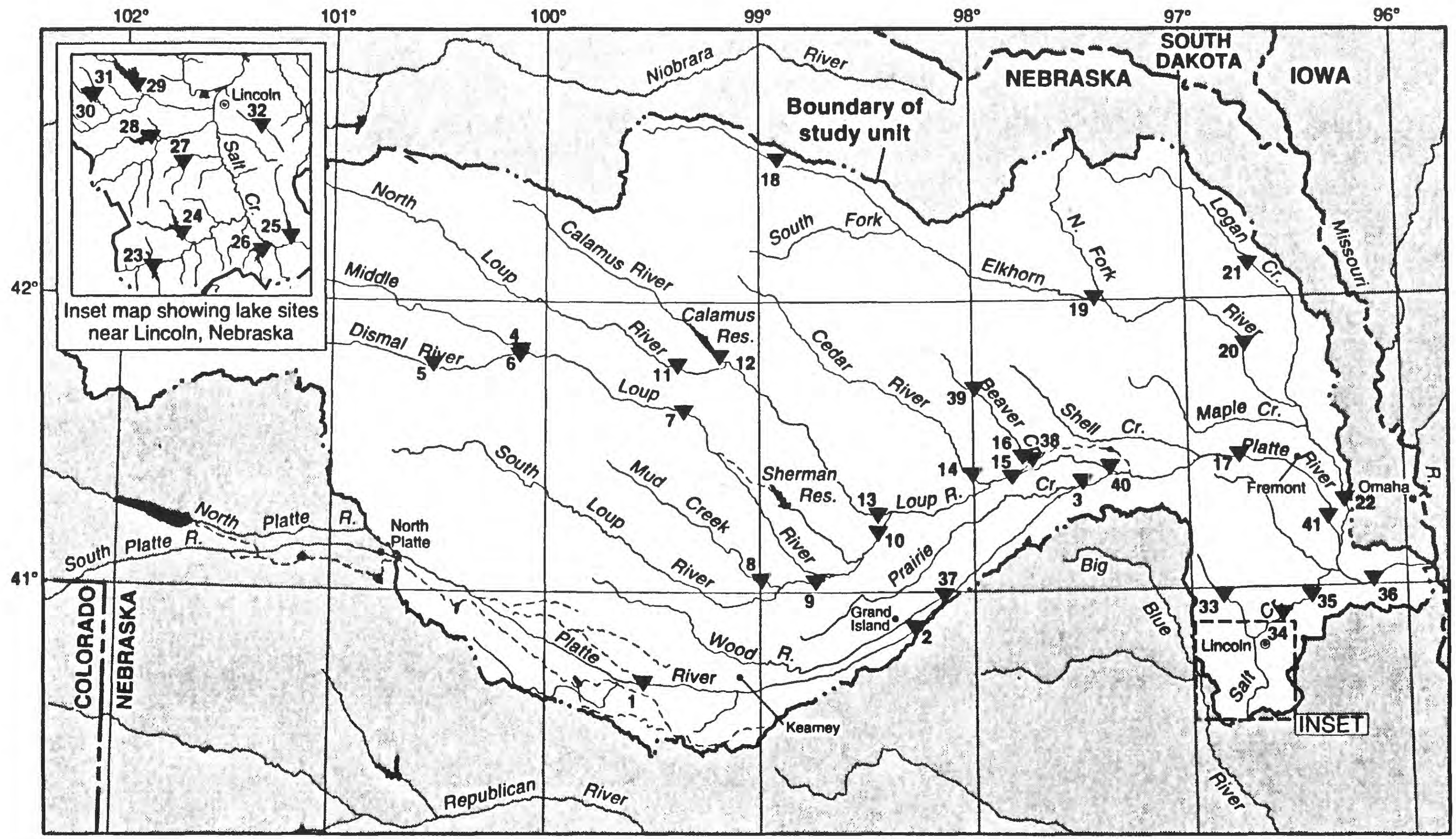
Data from streambed-sediment sampling sites were required to satisfy screening criteria (a) through (d) listed for stream-water data. Due to the extensive reconnaissance survey (HSSRS) conducted during 1979 for the USDOE and the lack of any other suitable streambed-sediment data for the study unit, the time period used for summarizing recent streambed-sediment data was expanded to 1979-90.

Spatial compositing of streambed-sediment samples collected from several areas of deposition is important to obtain results that are representative of general conditions at a site. Data from streambed-sediment samples collected during low flow from the active stream channel and composed of multiple subsamples of the top 2.5 to 5.0 cm of fine, recently deposited sediment were considered suitable for inclusion in this summary. Constituent concentrations in streambed sediment exhibit much less temporal variability than do concentrations in water; therefore, data from short-term (up to several hours) temporal composite samples that result from spatial compositing were used in this summary.

Fish Tissue

The only data from aquatic-biological-tissue samples that were available for use in this report were from fish-tissue samples. Data from fish-tissue sampling sites were required to satisfy screening criteria (a) through (d) listed for stream-water data. In addition, a minimum of two samples were required to have been collected at a site during 1981-90. The two samples may have been collected on a single date.

To obtain results that were representative of general conditions at a site, fish-tissue samples were composites from multiple specimens. Each fish-tissue sample was a composite of a minimum of two specimens of a single species. In addition, for comparison of fish-tissue data from multiple samples or sites, it was important that samples be differentiated on the basis of two factors: (1) species or the most specific



Base from U.S. Geological Survey digital data, 1:2,000,000, 1972
Albers Equal-Area Conic projection
Standard parallels 29°30' and 45°30'

EXPLANATION

2▼ SURFACE-WATER OR FISH-TISSUE SAMPLING SITE--Number is sampling-site number used in tables 2 and 4

Figure 2. Location of surface-water or fish-tissue sampling sites included in summary of recent water-quality conditions.

taxonomic group applicable and (2) anatomical part, such as whole fish, edible portion, or fillet. Data from each combination of those factors were summarized separately. Specific taxa were recommended for collection from different species categories (Ludke and Schmitt, 1980; May and McKinney, 1981): (1) carp (*Cyprinus carpio*) was the preferred bottom-dwelling species to collect, but in areas where carp are not found, members of the sucker or catfish families were acceptable substitutes; (2) largemouth bass (*Micropterus salmoides*) was the preferred warm-water predator, followed by members of the sunfish family, such as crappie, that prey primarily on other fish. No data for other taxa were included in this summary. To optimize data comparability, samples were required to have been collected using an established procedure to minimize variation in specimen size. Samples also were required to be collected using nonchemically based methods, such as by electrofishing or seining.

During the review of the fish-tissue data, five constituent codes were found that were invalid for fish tissue. Communication with the USEPA (Bruce Littell, U.S. Environmental Protection Agency, oral commun., 1992) resulted in correction of the codes for two constituents, but three others were excluded from the summary as unidentified constituents. Discrepancies were noted for constituent identities and analytical results between those retrieved from STORET and those published by Schmitt and others (1985, 1990). Communication with the USFWS (C.J. Schmitt, U.S. Fish and Wildlife Service, oral commun., 1992) confirmed that the published data were correct. Necessary changes were made to the computer files included in the summary.

Aquatic Ecology

Data from aquatic-ecological survey sites were required to satisfy screening criteria (a) through (d) listed for stream-water data. Samples were included only from surveys of fish and macroinvertebrate communities.

Documentation of methods used for the NDEQ ecological surveys of macroinvertebrate communities indicates that organism enumerations often were recorded as 100+ when counts exceeded 100 (Nebraska Department of Environmental Control, 1990b, 1991a). Therefore, the relative abundance values that were calculated and summarized for this report excluded samples of macroinvertebrates that included any taxon count that was equal to 100 exactly because that calculation was dependent on the total number of organisms in a sample.

Two additional ecological data-collection activities were conducted during the period of interest, but these activities had study objectives directed toward special water-quality problems rather than general conditions. One of the objectives of the NDEQ's Lost Creek Survey was to assess the effects of wastewater discharge from a meat-packing plant on the biological communities downstream (Christiansen and Maret, 1985). The NDEQ also conducted Rapid Bioassessment Studies beginning in 1990, as part of their sewage-treatment-plant monitoring activities (Ken Bazata, NDEQ, oral commun., 1992). Data from those two studies were excluded from this summary.

Ground Water

Data from ground-water sampling sites (springs or wells) were required to satisfy screening criteria (a) through (d) listed for stream-water data. In addition, for sites that are wells, data were included only for sites where the well depth was known. An exception to the definition of the period of "recent conditions" was allowed to include ground-water samples collected during 1978-80 in the summary, thus encompassing a data set collected for the HSSRS of the NURE Program. A major part of the available ground-water data for dissolved metals and trace elements were collected for the HSSRS at a set of sites that were well distributed spatially through a large part of the study unit.

Ground-water samples included in this summary were collected as close to the spring or well head as feasible. Data were excluded from the summary for samples collected from water that had entered a filtering or softening system. Supporting information for included data indicated that appropriate methods were used to collect samples that were representative of water in the aquifer rather than water that had been stagnant in the well.

Some ground-water data were excluded from the summary because they were associated with invalid or unidentified constituent codes. In addition, samples collected by the NDEQ for determination of fecal-bacteria densities were not required to be analyzed within 6 hours of collection (Ehrman, 1988; Nebraska Department of Environmental Quality, written commun., 1990). Therefore, determinations of fecal-bacteria densities in samples collected by the NDEQ were excluded from this summary. Also, determinations of 2,4-D concentrations made by the NDEQ laboratory used an unapproved method (Karyn Kennedy, NDEQ, oral commun., 1992), and these data were not included in the summary.

The Lower Loup NRD collected annual ground-water samples at some sites, but because many of their analyses were performed using onsite test kits and the remainder by their laboratory which has not participated in certification programs, data from the Lower Loup NRD were not included in this report.

Methods of Data Summary

Methods used for summarizing recent water-quality conditions included (1) preparation of the data for summary, (2) statistical summary of the data, and (3) comparison of recent conditions with national water-quality criteria.

Data Preparation

Appropriate methods of data preparation were identified according to the specific type of samples to be summarized and are described separately in the following sections of the report.

Stream water

Preparation of stream-water data was done in an attempt to reduce bias that might have been present in the summary statistics if some seasons of the year had been overrepresented in the data used. Most sampling schedules were monthly, and some were quarterly; therefore, the goal in data preparation was to decrease the data quantity to no more than one measurement of any constituent or property in any given month. The result was not precisely equal distribution by month or quarter, but neither was the distribution grossly unequal. The most common occurrences of more than one sample in a month were the result of sampling by more than one agency. In many of these cases, one agency's measurements covered most of the same constituents and properties as the other agency's, plus additional measurements. In these cases, the sample having the largest number of measurements was retained for summary purposes. In some cases, two samples had been collected in each month for one or more full years; in these cases, no season would be overrepresented, and data from all samples were retained for summary. In other cases, data from the sample collected closest to the middle of the month were retained. The exception was when one of the samples was in the first few days of the month and was obviously a substitute for a sample intended but not obtained in the previous month, in which case data from both samples were retained.

Lake water

The lake-water data included in this summary were those from samples collected from deep water near dams and those collected from shallow water, sometimes identified as "near inflow," usually collected on the same day. Data from the two types of samples were summarized together as one group for each lake. Data from a few special-purpose samples collected near boat ramps and in outflows were not included in the summaries.

Streambed sediment

Preparation of streambed-sediment data involved the assignment of each sampling site to one of the four study-unit subunits that were used as summary groups. A digital map-overlay analysis was performed using GIS computer software (Environmental Systems Research Institute, 1992) to locate each sampling site within the corresponding subunit.

Fish tissue

Ideally, the fish-tissue data would have been summarized separately for each sampling site. However, an inadequate number of samples were available from any site for any of the desired sample groups (that is, combinations of anatomical-part category and species group). Therefore, the fish-tissue data were summarized by sampling-site groups, distinguished by both water-body type and site location with respect to the subunits of the Central Nebraska Basins. Each sampling site was assigned to either the "streams" or "lakes" category for water-body type. Sites were assigned by individual inspection to one of the subunits or to a special subunit category defined for sampling sites having drainage areas that were representative of multiple subunits. Table 2 lists the subunit assignment for each sampling site. Each fish-tissue sample also was assigned to a single category for each of two additional categorical variables--anatomical part and species group. Three categories were identified for grouping samples according to the anatomical part analyzed--whole organism, edible portion, and filet. Each sample was assigned to one of these categories on the basis of codes included in the data retrieval. Each sample likewise was assigned to a species group on the basis of included codes. Two species groups were used--bottom dwellers (carp, suckers, and catfish species) and predators (largemouth bass and sunfish family).

Aquatic ecology

The aquatic-ecological surveys conducted in the study unit involved a large number of sites and an inadequate number of samples at each site to be summarized separately for each site. Between-site variability of many of the data collected for the surveys is thought to be related to stream size (Nebraska Department of Environmental Control, 1991a). Therefore, preparation of aquatic-ecological data involved the assignment of each sampling site to a stream-order class. Stream-order codes were included in the retrieved data and were used as the basis for grouping sites into one of three categories (first- to third-order streams, fourth-

Table 2. *Fish-tissue sampling sites and subunit assignments included in the summary of recent water-quality conditions within Central Nebraska Basins*

[USEPA, U.S. Environmental Protection Agency; USFWS, U.S. Fish and Wildlife Service; Integrated, integrates multiple subunits; Glaciated, Glaciated Area subunit; Valley, Platte Valley subunit]

Sampling-site number (fig.2)	Agency and site number	Site name	Number of samples	Period of sampling	Subunit assignment
1	USEPA 006003	Platte River near Overton, Nebr.	2	1981-83	Integrated
2	USEPA 006827	Platte River near Grand Island, Nebr.	4	1984-86	Integrated
17	USEPA 006826	Platte River at North Bend, Nebr.	8	1984-90	Integrated
19	USEPA 006821	Elkhorn River at Norfolk, Nebr.	3	1984-85	Integrated
20	USEPA 006822	Elkhorn River at West Point, Nebr.	6	1984-88	Integrated
21	USEPA 006823	Logan Creek at Pender, Nebr.	4	1984-86	Glaciated
22	USEPA 005935	Elkhorn River at Waterloo, Nebr.	5	1982-89	Integrated
24	USEPA 007729	Bluestem Lake, Nebr.	3	1986	Glaciated
28	USEPA 007731	Conestoga Lake, Nebr.	2	1986	Glaciated
29	USEPA 007733	Pawnee Lake, Nebr.	2	1986	Glaciated
31	USEPA 007732	East Twin Lake, Nebr.	2	1986	Glaciated
33	USEPA 007730	Branched Oak Lake, Nebr.	2	1986	Glaciated
35	USEPA 006825	Salt Creek at Greenwood, Nebr.	11	1984-90	Glaciated
36	USEPA 005947, USFWS 89	Platte River at Louisville, Nebr.	9	1981-86	Integrated
37	USEPA 007219	Wood River near Chapman, Nebr.	2	1987-89	Valley
38	USEPA 005939	Loup River at Genoa, Nebr.	3	1982-86	Integrated
39	USEPA 007216	Beaver Creek at Albion, Nebr.	4	1987-90	Integrated
40	USEPA 008327	Loup River at Columbus, Nebr.	2	1989-90	Integrated
41	USEPA 008332	Platte River near Valley, Nebr.	2	1989-90	Integrated

to sixth-order streams, and lakes). For a few sites, a stream-order code was not present in the retrieved data, and those sites were assigned to a class consistent with adjacent sites in the stream network. The retrieved stream-order codes for some sites were inconsistent with those of adjacent sites, and those sites also were reassigned. In addition, each sampling site was assigned to the subunit in which it is located on the basis of the same map-overlay procedure used for streambed-sediment sites.

To decrease bias that might have been present in the summaries due to the overrepresentation of aquatic-ecological sites that were sampled more frequently, a single determination for each ecological characteristic was selected to represent each site. To minimize the effect of any time trend in the data, the determination made from the sample collected closest to the beginning of 1986 was selected to represent each site. Data on habitat characteristics collected during surveys of either fish or macroinvertebrates were summarized together, whereas data on other ecological characteristics were summarized separately for fish and macroinvertebrates.

Ground water

General preparation of the ground-water data involved a three-stage procedure. First, each sampling site was assigned to one of eight summary groups distinguished by the combination of well-depth category and subunit. Guidelines developed by the NAWQA Program to improve national consistency of results from available data (D.R. Helsel, U.S. Geological Survey, written commun., 1992) state that constituent concentrations in samples from the shallower and deeper parts of the aquifer should be distinguished. The depth criterion dividing the deep- and shallow-well categories was specific for each subunit and was selected by examining a histogram of the well depths of sites in a subunit to identify a depth that was both a multiple of 25 m and was clearly larger than the modal interval on the histogram. The depths selected that divided the deep and shallow well-depth categories were: 50 m for Sandhills wells, 75 m for Loess Hills wells, 50 m for Glaciated Area wells, and 25 m for Platte Valley wells. Sampling sites were assigned to subunits using the same map-overlay procedure described for streambed-sediment sites.

The second stage of ground-water-data preparation was to decrease the possible bias in the summary caused by the different temporal frequency of sample collection at different sites. A single analysis for each constituent was selected to represent each sampling site. To maximize the use of data that were subjected to the same quality-assurance procedures, non-USGS data were excluded from consideration for sites that had suitable USGS data available. For the remaining sites, the analysis from the sample collected closest to the beginning of 1986 was selected to minimize the effect of possible time trends in the data.

The third stage of data preparation was intended to decrease the possible bias caused by uneven areal distribution of sampling sites. To accomplish this, a 15-minute grid of latitude and longitude was used to subdivide the study unit into subsampling cells. Each sampling site was assigned a code number identifying the subsampling cell it was located in. Through the use of statistical functions of GIS computer software, the number of analyses selected in the second-stage procedure was totaled for each subsampling cell for each summary group. The areal density of sampling sites was computed (as density equals the number of sites divided by the area of the subsampling cell) for each summary group and subsampling cell combination that had five or more analyses. (Summary group and subsampling cell enumeration units having fewer than five analyses were considered to be underrepresented.) The minimum density was identified for each summary group through the use of statistical functions of GIS computer software. A target size for the subsample of analyses from each summary group and subsampling cell combination was computed as the product of the summary-group minimum density and the area of the subsampling cell that was within the subunit corresponding to the summary group. The target size was set to at least one in all cases. A subsample of the analyses in each summary group and subsampling cell was selected if the number of analyses available for subsampling exceeded the target size for the subsample. The subsample was selected using a two-part selection procedure: (1) If USGS data were available for the subsampling cell, analyses were selected randomly from among the USGS data; (2) if the subsample target size was larger than the number of USGS analyses, then all the USGS analyses were selected and the additional number of analyses needed were selected randomly from among the non-USGS data.

By repeating the second and third stages of the data-preparation procedure for each target variable, a ground-water data set was obtained that was more representative of the entire summary-group population than would be the case otherwise. However, other biases still may be present in the data, including those caused by uneven vertical distribution of samples within the well-depth classes (Parkhurst and others, 1989). No additional adjustments were made to account for these potential biases.

In addition to the general preparation procedure used for all ground-water constituent summaries, there were several constituent-code pairs that required additional preparation to allow a combined summary that treated the data as though they were assigned to a single constituent code. There were two types of constituent-code pairs summarized in combination: (1) those that were determined to be duplicate codes for essentially the same constituent (for example, codes 39033 and 39630 for atrazine); and (2) those that were determined to be environmentally equivalent on the basis of technical and statistical results reported in USGS, Office of Water Quality Technical Memorandum 93.04 (December 2, 1992). Three combined constituent-code pairs were of the latter type: codes 00618 and 00620 for nitrate as nitrogen, codes 00630 and 00631 for nitrite plus nitrate as nitrogen, and codes 00608 and 00610 for ammonia as nitrogen.

Statistical Summary

Selected percentile values of the data form the statistical basis for most of the summary tables and illustrations in this report. The rationale for this nonparametric method of summarizing data is presented in detail in statistical methods texts (Ott, 1988; Helsel and Hirsch, 1992), and a distillation of the rationale adapted from Jordan (1991) is presented here. The median (50th percentile) was selected as the principal measure of central tendency because it is resistant to the effect of extreme values. The 25th and 75th percentiles span the central one-half of the data and thus provide information on both central tendency and variation. The 10th and 90th percentiles provide a reasonable estimate of the typical variation in the data because they account for all but the most extreme 10 percent of the data at each end of the distribution.

The number of analyses summarized should be large enough to provide a valid estimate of conditions during the time period selected for summary. For example, although a median value may be calculated for a set of two or three analyses, it would not be expected that such a median is a good estimate of the median of all values of that water-quality constituent that occurred during a 10-year period. To achieve the purposes of this report, it was sufficient to define the minimum number of analyses required for percentile computations to be 10 values for the 25th, 50th, and 75th percentiles, and a minimum of 30 values for the 10th and 90th percentiles (Jordan, 1991). A single exception to the requirement for the median was made for analyses of fish-tissue samples; a median was computed for as few as two analyses. This exception was allowed because the fish-tissue analyses included in the summary are all composite samples of several individual fish, typically three to five individuals. The summary tables presented in this report include the number of analyses involved in each percentile computation to aid the reader in evaluating the adequacy of the data.

For constituents that had censored values (concentrations less than some reporting level) included in the data, the summary statistics were computed as follows: (1) percentile values were first computed treating each censored value as equal to the reporting level; (2) percentile values were computed a second time, treating each censored value as equal to zero; (3) the two resulting values for each of the computed summary statistics were compared and, if not equal, the result was reported as less than the larger value. This procedure is illustrated by the following table of results for the three steps as applied to an example constituent--arsenic in whole-fish tissue of bottom-dwelling species from stream sites that represent an integration of multiple subunits:

Procedural step	Value at indicated percentile, in milligrams per kilogram				
	10th	25th	50th (median)	75th	90th
(1) Set equal to reporting level	0.05	0.05	0.08	0.11	0.143
(2) Set equal to zero	0	0	.05	.11	.143
(3) Reported results	< .05	< .05	< .08	.11	.14

An additional consideration was applied to constituents that had data values of zero included in the retrievals. For those constituents for which values of zero cannot be measured, such values were treated as censored values for purposes of statistical summary. There were two sizable groups of ground-water data that contained such zero values: (1) some older USGS data on nutrients, major ions, and trace elements; and (2) most of the NRD data on synthetic-organic compounds retrieved from the NNRC. For those constituents that had zero values but also had additional censored values from the same agency and time period that quantified the reporting level, the zero values were treated as equal to the largest reporting level so quantified. However, for most of the synthetic-organic compounds, no information was readily available to indicate what those reporting levels may have been. Therefore, those data were simply treated as being less than an unknown reporting level assumed to be less than any quantified values for that constituent (that is, they were treated as equal to zero in the computations, but reported as "less than reporting level" in the summary).

Comparison with Water-Quality Criteria

Currently established national water-quality criteria were defined for the purposes of this report to be: (1) the "Drinking Water Regulations and Health Advisories" published by the U.S. Environmental Protection Agency (1992a); (2) the USEPA's Section 304(a) freshwater aquatic-life acute and chronic criteria published as Federal water-quality standards (U.S. Environmental Protection Agency, 1992b); (3) the U.S. Food and Drug Administration Action Levels for concentrations in edible fish (U.S. Food and Drug Administration, 1992); (4) the National Academy of Sciences recommended maximum tissue concentrations in whole-fish tissue (National Academy of Sciences, 1972); and (5) the USEPA's criteria for nonpriority pollutants listed in its "Toxic Substance Spreadsheet" (U.S. Environmental Protection Agency, Region IV, written commun., 1993). Many of the relevant criteria are summarized on a poster (U.S. Environmental Protection Agency, 1991) that also was used as a reference. It should be noted that in many cases the water-quality constituents and properties summarized are not strictly comparable with the criteria because the summary is based on instantaneous samples of environmental conditions (except for fish tissue and streambed sediment, which were composited samples), whereas many criteria are stated in terms of averages of analyses, composited samples, or relate to treated water. However, for those water-quality constituents having currently established national criteria that may be applied independently (that is, the criterion is not dependent on the value of a second constituent), results of comparing the statistical summaries with the criteria are reported if the value of a summary statistic exceeded a water-quality criterion value.

CHARACTERISTICS OF WATER-QUALITY DATA

Table 3 presents a summary by agency of the quantity of water-quality data, in terms of numbers of sites and samples, that by application of the screening criteria just described were determined to be suitable for inclusion in this report. Several general characteristics of those data sets are presented in this section. The distribution of the summarized determinations through time, space, and the range of hydrologic conditions can be important for evaluating the significance of the summary statistics.

Table 3. *Summary of sources and quantities of water-quality data included in the summary of recent water-quality conditions within Central Nebraska Basins*

Source agency or organization	Number of sites	Number of samples
Stream-Water Data		
Nebraska Department of Environmental Quality	14	765
U.S. Geological Survey	22	1,957
Lake-Water Data		
U.S. Army Corps of Engineers	11	1,024
Streambed-Sediment Data		
U.S. Department of Energy	1,369	1,369
Fish-Tissue Data		
Nebraska Department of Environmental Quality	19	70
U.S. Fish and Wildlife Service	1	6
Aquatic-Ecological Survey Data		
Nebraska Department of Environmental Quality	185	513
Ground-Water Data		
Nebraska Department of Environmental Quality	82	82
Nebraska Department of Health	763	763
Nebraska Natural Resources Districts	1,065	1,195
U.S. Department of Energy	1,343	1,343
U.S. Geological Survey	553	1,594
University of Nebraska, Conservation and Survey Division	241	522

Stream Water

The spatial distribution of suitable stream-water data is shown in figure 2. The 25 stream-sampling sites shown satisfied the set of criteria for inclusion in the summary and are listed in table 4. All major drainages within the study unit are represented by this set of sampling sites. The range of years sampled during 1981-90 for the stream-water sampling sites also are listed in table 4. There were several sites at which water-quality monitoring activi- ties began or ceased during the period, resulting in uneven sample frequencies for some years. For example, due to funding constraints, the NDEQ decreased the size of its AWQMN in 1990 and also modified sample-collection methods at some sites, affecting 12 of the 25 sites included in this summary.

Table 5 summarizes the distribution of selected stream-water analyses relative to the streamflow conditions that occurred during 1981-90. For each percentile, the value listed is the ratio of the percentile value of streamflows at the times of sampling to the percentile value of all streamflows during 1981-90. Ratios of 1.00 would be ideal, whereas large departures from 1.00 might indicate that the available analyses of the property or constituent did not represent typical conditions for 1981-90.

Table 4. *Stream-water sampling sites included in the summary of recent water-quality conditions within Central Nebraska Basins*

[USGS, U.S. Geological Survey; NDEQ, Nebraska Department of Environmental Quality; --, not applicable]

Sampling-site number (fig. 2)	Agency site numbers		Site name	Period of sampling
	USGS	NDEQ		
1	06768000	301484, 301486	Platte River near Overton, Nebr.	1981-90
2	06770500	301036	Platte River near Grand Island, Nebr.	1981-90
3	06774000	--	Platte River near Duncan, Nebr.	1981-90
4	--	300990	Middle Loup River north of Dunning, Nebr.	1981-89
5	06775900	LO3088	Dismal River near Thedford, Nebr.	1981-90
6	--	300993	Dismal River at Dunning, Nebr.	1983-89
7	--	300989	Middle Loup River at Sargent, Nebr.	1981-89
8	06783500	--	Mud Creek near Sweetwater, Nebr.	1981-89
9	06784000	300922	South Loup River at St. Michael, Nebr.	1981-90
10	06785000	--	Middle Loup River at St. Paul, Nebr.	1981-90
11	06786000	300983	North Loup River at Taylor, Nebr.	1981-89
12	06787500	300986	Calamus River near Burwell, Nebr.	1981-89
13	06790500	300920	North Loup River near St. Paul, Nebr.	1981-90
14	06792000	300935	Cedar River near Fullerton, Nebr.	1981-90
15	06792499	--	Loup River Power Canal at diversion near Genoa, Nebr.	1981-86
16	06794000	--	Beaver Creek at Genoa, Nebr.	1981-89
17	06796000	--	Platte River at North Bend, Nebr.	1981-90
18	06796973	--	Elkhorn River near Atkinson, Nebr.	1982-89
19	06799000	--	Elkhorn River at Norfolk, Nebr.	1981-89
20	06799350	--	Elkhorn River at West Point, Nebr.	1981-89
21	06799450	--	Logan Creek at Pender, Nebr.	1981-90
22	06800500	301001	Elkhorn River at Waterloo, Nebr.	1981-90
34	06803525	--	Salt Creek below Stevens Creek near Waverly, Nebr.	1981-90
35	06803555	301292	Salt Creek at Greenwood, Nebr.	1981-90
36	06805500	301170	Platte River at Louisville, Nebr.	1981-90

Lake Water

The lake-water data included in the summary were collected from the 11 lakes listed in table 6. These lakes are all in Salt Creek basin upstream from Lincoln, as shown in figure 2. Because of the concentration of sampling sites in one small part of the Glaciated Area subunit, the statistical summary of lake-water data may not be representative of recent water-quality conditions in the entire subunit or study unit, and no comparisons with water-quality criteria were made. Some lake samples were collected in every month but December; however, 87 percent were collected in May through October and only 13 percent in November through April. No adjustments of the data were made for seasonal distribution of samples, so the summaries represent generally May-through-October conditions.

Table 5. *Ratio of streamflow at times of sampling to streamflow for all days during 1981-90 for analyses of selected chemical properties and constituents*

[Number in parentheses is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System. --, not determined for fewer than 30 analyses]

Sampling-site number (fig. 2)	Site name	Number of analyses	Streamflow ratio at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Streamflow ratios for pH (00400) analyses						
1	Platte River near Overton, Nebr.	104	0.69	0.60	0.83	1.01	1.18
2	Platte River near Grand Island, Nebr.	101	1.13	1.12	1.03	1.14	1.13
3	Platte River near Duncan, Nebr.	64	1.02	.96	.96	.95	.78
5	Dismal River near Thedford, Nebr.	44	1.03	1.02	1.00	.99	.98
8	Mud Creek near Sweetwater, Nebr.	101	1.25	1.03	1.04	1.05	1.11
9	South Loup River at St. Michael, Nebr.	179	.99	1.00	.98	.98	.89
10	Middle Loup River at St. Paul, Nebr.	125	.96	.98	1.00	.95	.88
11	North Loup River at Taylor, Nebr.	84	1.12	1.03	1.00	1.02	1.07
12	Calamus River near Burwell, Nebr.	55	.45	1.02	.98	1.04	1.06
13	North Loup River near St. Paul, Nebr.	173	1.04	1.00	.98	.94	.94
14	Cedar River near Fullerton, Nebr.	157	1.02	1.04	1.03	1.03	.98
16	Beaver Creek at Genoa, Nebr.	93	1.04	.98	1.01	1.04	.86
17	Platte River at North Bend, Nebr.	98	1.08	1.12	1.19	1.09	1.07
18	Elkhorn River near Atkinson, Nebr.[1]	78	1.21	1.13	1.35	1.53	1.73
19	Elkhorn River at Norfolk, Nebr.	83	1.12	1.16	1.13	1.10	1.32
20	Elkhorn River at West Point, Nebr.	87	1.16	1.15	1.10	1.29	2.08
21	Logan Creek at Pender, Nebr.	91	.96	1.07	1.10	1.08	1.01
22	Elkhorn River at Waterloo, Nebr.	106	1.10	1.30	1.08	1.17	1.12
35	Salt Creek at Greenwood, Nebr.	95	.99	1.11	1.12	1.01	1.21
36	Platte River at Louisville, Nebr.	102	.94	.96	.99	1.10	1.01
	Streamflow ratios for sulfate (00945) analyses						
1	Platte River near Overton, Nebr.	97	.73	.64	.89	1.09	1.19
2	Platte River near Grand Island, Nebr.	101	1.13	1.12	1.03	1.14	1.13
3	Platte River near Duncan, Nebr.	66	1.09	.97	.97	.98	.78
5	Dismal River near Thedford, Nebr.	43	1.03	1.02	1.00	.99	.98
8	Mud Creek near Sweetwater, Nebr.	101	1.25	1.03	1.04	1.05	1.11
9	South Loup River at St. Michael, Nebr.	20	--	1.01	1.27	1.22	--
10	Middle Loup River at St. Paul, Nebr.	29	--	.73	.64	.95	--
13	North Loup River near St. Paul, Nebr.	20	--	.95	1.03	1.04	--
14	Cedar River near Fullerton, Nebr.	119	.99	1.01	1.03	1.04	1.02
16	Beaver Creek at Genoa, Nebr.	96	1.05	1.00	1.03	1.10	.86
17	Platte River at North Bend, Nebr.	102	1.11	1.12	1.21	1.09	1.07
18	Elkhorn River near Atkinson, Nebr.[1]	76	1.19	1.11	1.35	1.54	1.86
19	Elkhorn River at Norfolk, Nebr.	89	1.13	1.07	1.13	1.06	1.21
20	Elkhorn River at West Point, Nebr.	91	1.14	1.12	1.01	1.25	1.87
21	Logan Creek at Pender, Nebr.	92	.96	1.07	1.09	1.08	1.01
22	Elkhorn River at Waterloo, Nebr.	108	1.11	1.25	1.08	1.17	1.11
35	Salt Creek at Greenwood, Nebr.	97	1.00	1.12	1.11	1.01	1.20
36	Platte River at Louisville, Nebr.	104	.93	.94	.97	1.08	1.00

Table 5. *Ratio of streamflow at times of sampling to streamflow for all days during 1981-90 for analyses of selected chemical properties and constituents*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Streamflow ratio at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Streamflow ratios for dissolved-solids (70301) analyses						
1	Platte River near Overton, Nebr.	63	0.80	0.62	1.03	1.47	1.40
2	Platte River near Grand Island, Nebr.	37	.96	.76	.70	.80	1.58
3	Platte River near Duncan, Nebr.	66	1.09	.97	.97	.98	.78
5	Dismal River near Thedford, Nebr.	40	1.03	1.02	1.00	.99	.99
8	Mud Creek near Sweetwater, Nebr.	15	--	1.00	1.00	1.29	--
9	South Loup River at St. Michael, Nebr.	20	--	1.01	1.27	1.22	--
10	Middle Loup River at St. Paul, Nebr.	29	--	.73	.64	.95	--
13	North Loup River near St. Paul, Nebr.	19	--	.94	1.00	1.06	--
14	Cedar River near Fullerton, Nebr.	117	1.00	1.01	1.06	1.04	1.02
16	Beaver Creek at Genoa, Nebr.	14	--	.80	.95	1.36	--
17	Platte River at North Bend, Nebr.	15	--	1.09	1.04	1.74	--
19	Elkhorn River at Norfolk, Nebr.	14	--	1.02	.92	1.32	--
20	Elkhorn River at West Point, Nebr.	14	--	1.18	.88	1.67	--
21	Logan Creek at Pender, Nebr.	15	--	.70	.89	.93	--
22	Elkhorn River at Waterloo, Nebr.	62	1.04	1.11	1.07	1.25	1.23
35	Salt Creek at Greenwood, Nebr.	16	--	.90	.84	3.65	--
36	Platte River at Louisville, Nebr.	44	.75	.71	.77	1.07	1.16
	Streamflow ratios for dissolved nitrite-plus-nitrate (00631) analyses						
1	Platte River near Overton, Nebr.	92	.64	.59	.83	1.06	1.18
2	Platte River near Grand Island, Nebr.	37	.96	.76	.70	.80	1.58
3	Platte River near Duncan, Nebr.	66	1.09	.97	.97	.98	.78
5	Dismal River near Thedford, Nebr.	43	1.03	1.02	1.00	.99	.98
8	Mud Creek near Sweetwater, Nebr.	18	--	.97	.98	1.12	--
9	South Loup River at St. Michael, Nebr.	20	--	1.01	1.27	1.22	--
10	Middle Loup River at St. Paul, Nebr.	29	--	.73	.64	.95	--
13	North Loup River near St. Paul, Nebr.	20	--	.95	1.03	1.04	--
14	Cedar River near Fullerton, Nebr.	119	.99	1.01	1.06	1.04	1.03
16	Beaver Creek at Genoa, Nebr.	15	--	.83	.86	1.32	--
17	Platte River at North Bend, Nebr.	17	--	.95	.97	1.55	--
18	Elkhorn River near Atkinson, Nebr.[1]	11	--	1.19	1.39	1.54	--
19	Elkhorn River at Norfolk, Nebr.	15	--	1.02	.93	1.12	--
20	Elkhorn River at West Point, Nebr.	14	--	1.10	.88	1.67	--
21	Logan Creek at Pender, Nebr.	16	--	.77	.97	.96	--
22	Elkhorn River at Waterloo, Nebr.	59	1.07	1.12	1.14	1.39	1.28
35	Salt Creek at Greenwood, Nebr.	16	--	.90	.84	3.65	--
36	Platte River at Louisville, Nebr.	46	.76	.68	.77	1.04	1.11

Table 5. *Ratio of streamflow at times of sampling to streamflow for all days during 1981-90 for analyses of selected chemical properties and constituents*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Streamflow ratio at indicated percentile 10th	25th	50th (median)	75th	90th
	Streamflow ratios for dissolved-selenium (01145) analyses						
3	Platte River near Duncan, Nebr.	40	0.87	1.07	1.06	1.01	0.87
5	Dismal River near Thedford, Nebr.	27	--	1.04	1.02	1.01	--
14	Cedar River near Fullerton, Nebr.	17	--	1.11	1.25	1.25	--
22	Elkhorn River at Waterloo, Nebr.	42	.93	1.11	1.28	1.49	1.34
36	Platte River at Louisville, Nebr.	36	.76	.90	.99	1.14	1.34

[1]Daily streamflow data not available for 1981-82.

Streambed Sediment

The spatial distribution of suitable streambed-sediment data is shown in figure 3. The 1,369 sampling sites are unevenly distributed through the study unit because (1) HSSRS samples were not collected in the area between 100° and 102° W longitude, and (2) there were insufficient streambed sediments of the desired particle size in several other areas where sand channels are typical of the lower order streams that were targeted for that survey. All of the streambed-sediment samples were collected during the 4-month period of August through November 1979.

Fish Tissue

The summary of fish-tissue data was based on a data set consisting of 76 samples collected at the 19 sites listed in table 2 and shown in figure 2. Table 2 indicates which sites were sampled most frequently during 1981-90. Summary statistics may be biased toward the conditions measured at the sites sampled more frequently.

The temporal distribution of samples also was uneven, with five or fewer samples collected during 5 years in 1981-90 and 10 to 20 samples collected during 3 years--1985, 1986, and 1989. All samples were collected during the months of July through October, with sampling most common during September (32 samples).

Aquatic Ecology

The summary of aquatic-ecological data was based on samples collected at the stream-survey sites shown in figure *4A* and the lake-survey sites shown in figure *4B*. There were 112 sites where both fish and macroinvertebrate community samples were collected, 10 sites sampled only for fish, and 63 sites sampled only for macroinvertebrates. The 52 lake sites (fig. *4B*) were sampled only for macroinvertebrates. Two hundred twenty-nine (229) samples of fish communities and 284 samples of macroinvertebrate communities were considered suitable for inclusion in this summary. Habitat characteristics were measured during surveys of both fish and macroinvertebrate communities.

The temporal distribution of the fish samples was somewhat uneven, with no samples collected prior to 1984 and only five collected in 1987. For the other years during 1981-90, the number of fish samples ranged from 21 in 1986 to 61 in 1985. All fish community samples were collected during the months of May through November, with the largest numbers collected in July and August (61 and 48, respectively). Of the 222 macroinvertebrate samples from streams, only 11 were collected prior to 1984 and only 12 during 1986-87; the number collected in the remaining years ranged from 29 in 1990 to 57 in 1984. The monthly distribution of macroinvertebrate samples from

Table 6. *Lake-water sampling sites included in the summary of recent water-quality conditions within Central Nebraska Basins*

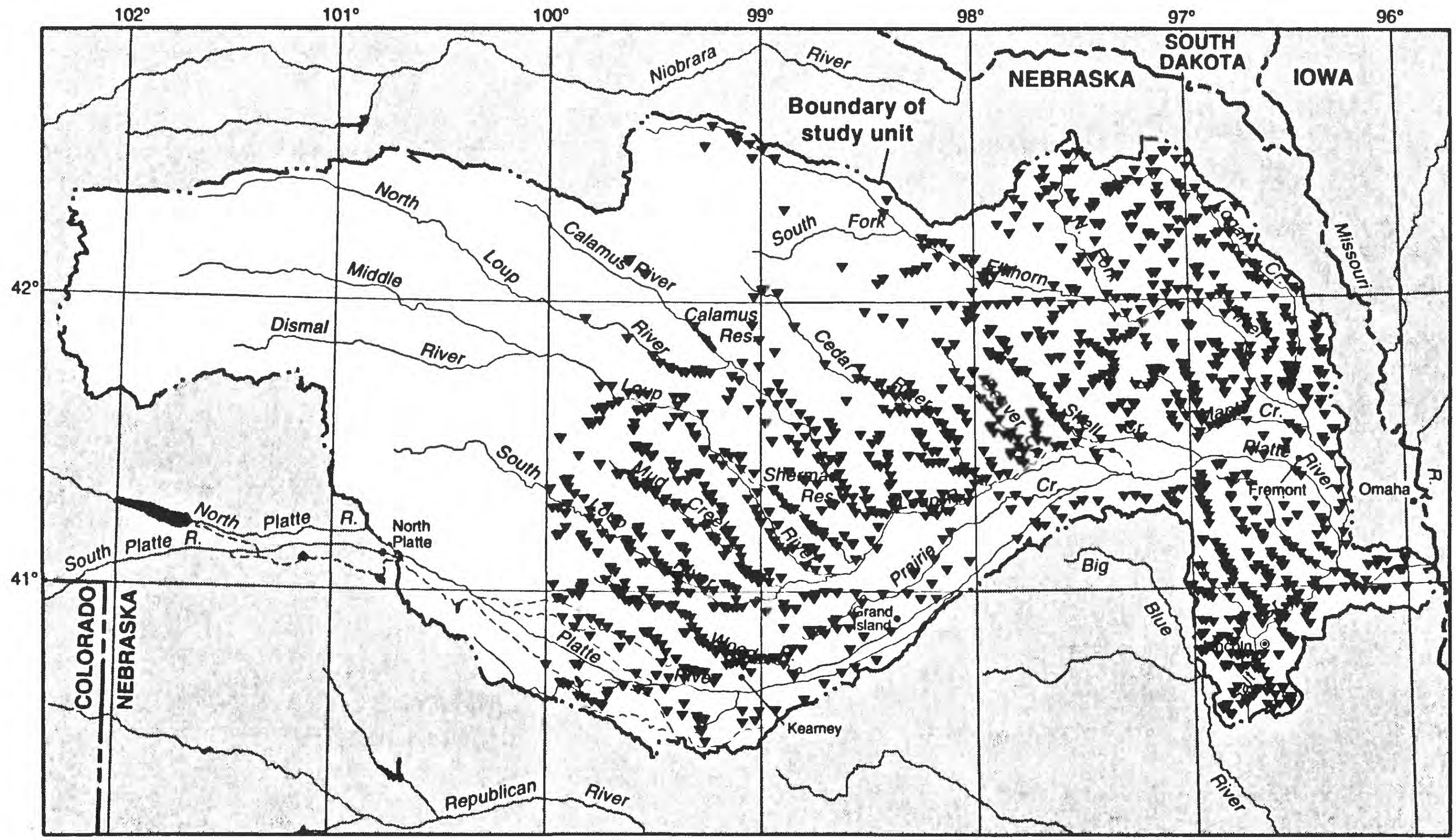
[Surface area is at conservation pool level; USACOE, U.S. Army Corps of Engineers; km^2, square kilometers; hm^2, square hectometers]

Sampling-site number (fig. 2)	USACOE site number(s)	Site name	Drainage area (km^2)	Surface area (hm^2)	Number of samples	Period of sampling
23	30CEO1, 30CEO3	Olive Creek Lake, Nebr.	21.2	70.4	80	1981-90
24	30CEL1, 30CEL2	Bluestem Lake, Nebr.	43.0	128	80	1981-90
25	30CEW1, 30CEW2	Wagon Train Lake, Nebr.	40.4	123	91	1981-90
26	30CES1, 30CES2	Stagecoach Lake, Nebr.	25.1	79.3	78	1981-90
27	30CEY1, 30CEY2, 30CEY3	Yankee Hill Lake, Nebr.	21.8	84.2	135	1981-90
28	30CEC1, 30CEC2	Conestoga Lake, Nebr.	39.1	93.1	90	1981-90
29	30CEP1, 30CEP2	Pawnee Lake, Nebr.	93.0	295	90	1981-90
30	30CET1	West Twin Lake, Nebr.	28.5 (30 and 31 combined)	103 (30 and 31 combined)	35	1981-90
31	300352, 30CET3	East Twin Lake, Nebr.			76	1981-90
32	30CEH1, 30CEH2, 30CEH3	Holmes Lake, Nebr.	14.0	40.5	135	1981-90
33	30CEB1, 30CEB2, 30CEB3	Branched Oak Lake, Nebr.	230	720	134	1981-90

streams was concentrated in the warmer months of June through August, but some samples were collected in each month from May through November. The 62 macroinvertebrate samples from lakes were all collected during 1989-90, with 40 samples collected during April and 4 to 10 samples collected in each of three other months (May, June, and October).

Ground Water

Data from 5,499 ground-water samples that were suitable for inclusion in the summary were collected at 4,047 sampling sites--all wells. There were 2,845 wells assigned to the shallow-depth category, and 1,202 assigned as deep wells. Because of the extensive NURE HSSRS activity, more samples were collected in



Base from U.S. Geological Survey digital data, 1:2,000,000, 1972
Albers Equal-Area Conic projection
Standard parallels 29°30' and 45°30'

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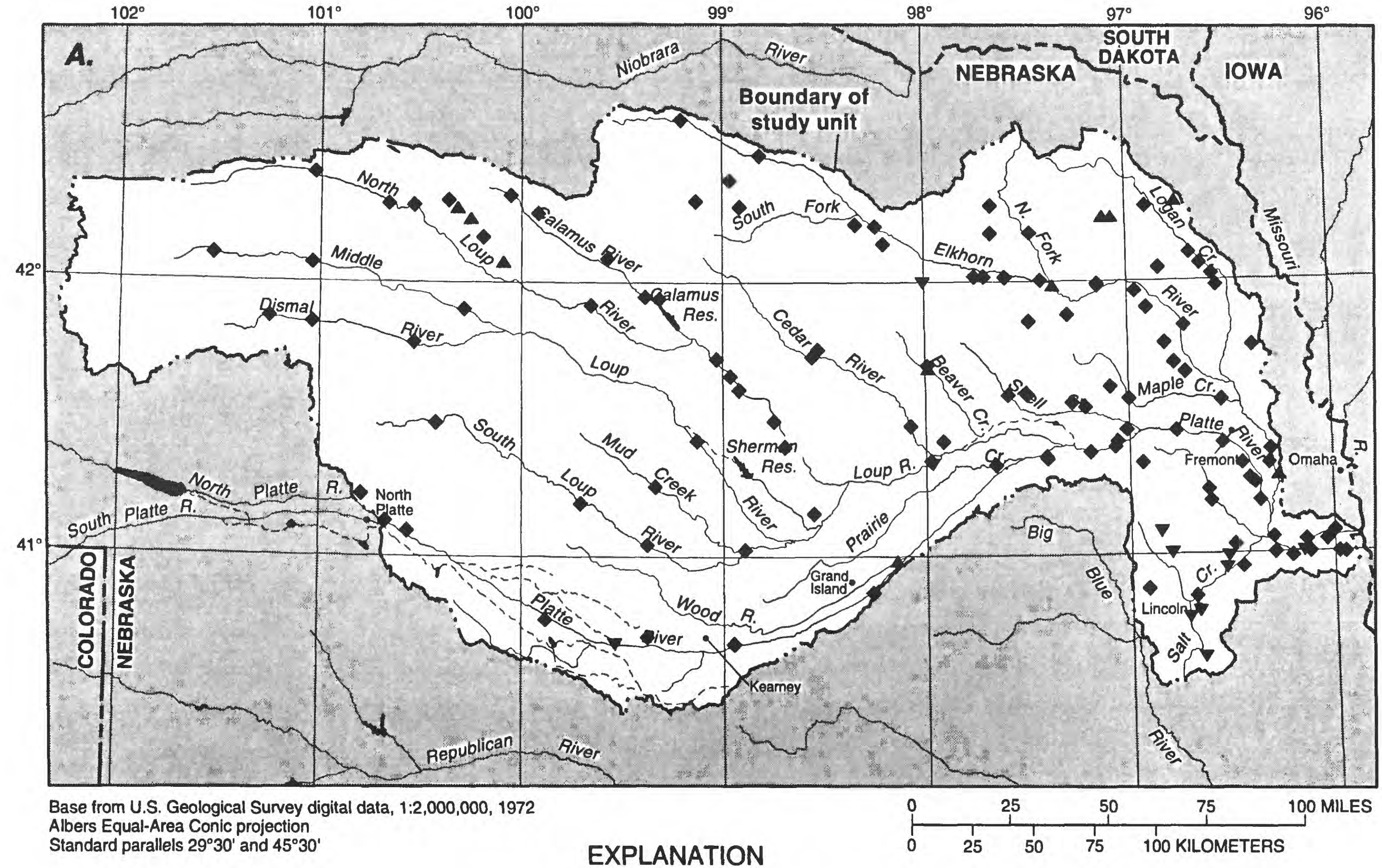
EXPLANATION

▼ STREAMBED-SEDIMENT SAMPLING SITE

Figure 3. Location of streambed-sediment sampling sites included in summary of recent water-quality conditions.



Base from U.S. Geological Survey digital data, 1:2,000,000, 1972
Albers Equal-Area Conic projection
Standard parallels 29°30' and 45°30'

EXPLANATION

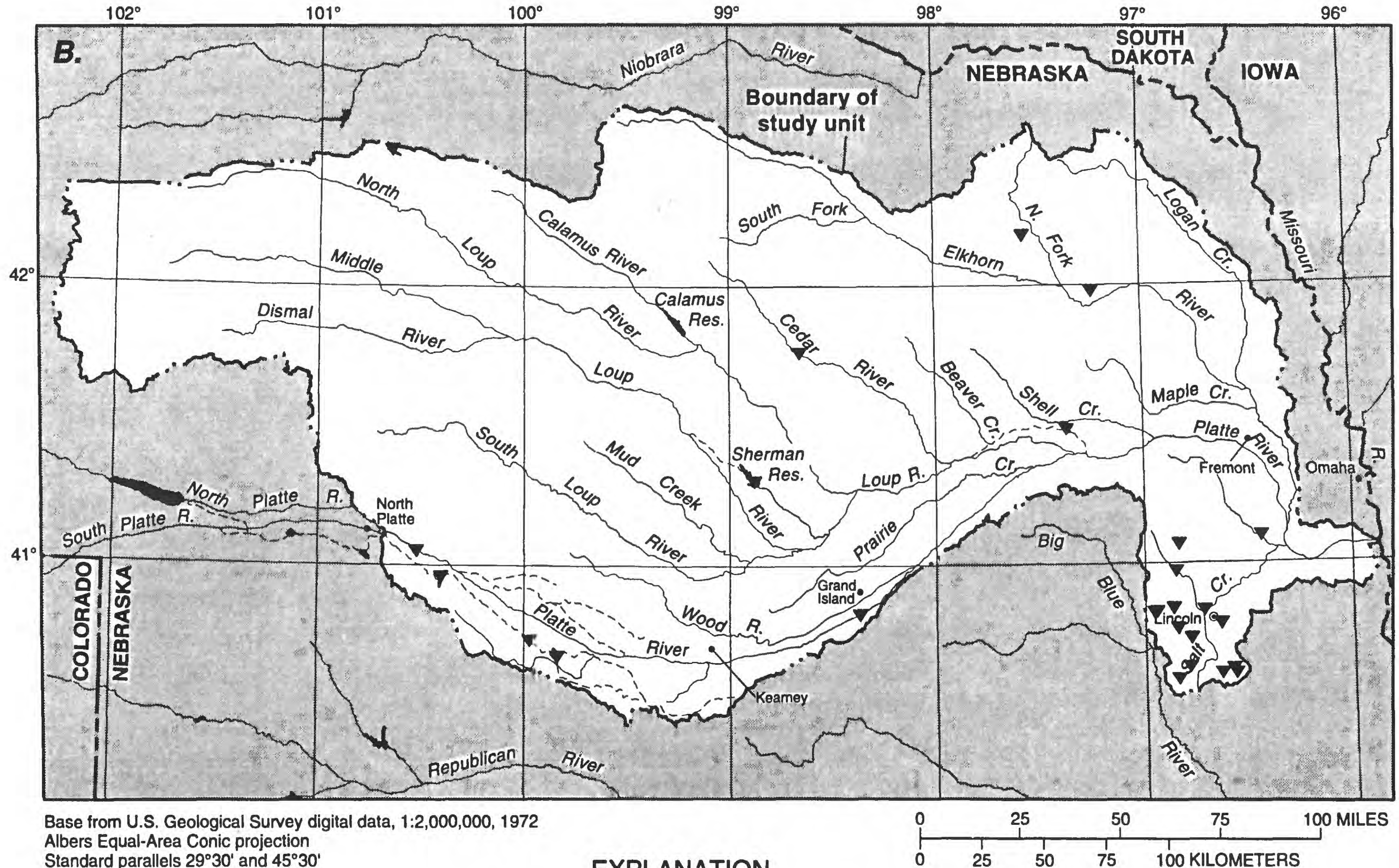
AQUATIC-ECOLOGICAL STREAM-SURVEY SITES

◆ Site where both fish and macroinvertebrate samples were collected

▲ Site where only fish samples were collected

▼ Site where only macroinvertebrate samples were collected

Figure 4. Location of aquatic-ecological (*A*) stream- and (*B*) lake-survey sites included in summary of recent water-quality conditions.



EXPLANATION

AQUATIC-ECOLOGICAL LAKE-SURVEY SITES

▼ Site where only macroinvertebrate samples were collected

Figure 4. Location of aquatic-ecological (*A*) stream- and (*B*) lake-survey sites included in summary of recent water-quality conditions--Continued.

1978 (1,011) than in any other year during 1981-90. There were 3 years (1982-83 and 1990) that had fewer than 100 samples each included, and 4 additional years (1979, 1984, 1987-88) that had more than 500 samples each.

The spatial and temporal distribution of ground-water analyses varied considerably for different water-quality constituents. The sampling-site locations summarized for four constituents (pH, dissolved sulfate, nitrite plus nitrate as nitrogen, and atrazine) are shown in figures 5 through 8 as examples of the variability in spatial distribution of the analyzed samples.

SUMMARY OF RECENT WATER-QUALITY CONDITIONS

This section presents the results of the statistical summaries of water-quality constituents and properties determined from data collected within the study unit. With the exception of the lake-water data, each table is accompanied by one or more graphs showing summary results for one or more constituents or properties in relation to one or more water-quality criteria, or simply presenting the results graphically if no criteria exist or if none of the percentile values exceeded a water-quality criterion value.

Stream Water

Table 7 (at the end of the report) presents the statistical summary for recent stream-water conditions at the sampling sites selected for inclusion on the basis of the study approach. Results for sites that had fewer than 10 measurements of a particular constituent or property are not reported. The results for pH in relation to the Secondary Maximum Contaminant Levels (SMCLs) of 6.5 and 8.5 standard units (U.S. Environmental Protection Agency, 1992a) and the freshwater aquatic-life chronic criteria of 6.5 and 9.0 standard units (U.S. Environmental Protection Agency, 1991) are shown in figure 9.

There were two major ions for which percentile values exceeded established water-quality criteria values. The results for dissolved sulfate, with a Secondary Maximum Contaminant Level (SMCL) of 250 mg/L (milligrams per liter) (U.S. Environmental Protection Agency, 1992a), are shown in figure 10. Although no graph is included in this report for dissolved chloride, the freshwater aquatic-life chronic and acute criteria values of 230 and 860 mg/L (U.S. Environmental Protection Agency, 1991), respectively, and the SMCL of 250 mg/L (U.S. Environmental Protection Agency, 1992a) were exceeded by 90 percent of the concentrations at the two sampling sites on Salt Creek.

The summary results for dissolved solids in relation to the SMCL of 500 mg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 11. The results for dissolved nitrite plus nitrate as nitrogen and the drinking-water Maximum Contaminant Level (MCL) of 10 mg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 12. Although none of the computed percentile values exceed the MCL for nitrate, figure 12 was included to permit the reader to graphically compare and contrast the stream- and ground-water results.

Percentile values exceeded water-quality criteria values for two constituents in the trace metals and other minor constituents group. For dissolved manganese (no graph shown), the SMCL of 50 μg/L (micrograms per liter) (U.S. Environmental Protection Agency, 1992a) was exceeded by the 75th-percentile concentration at three sites: Mud Creek near Sweetwater, Logan Creek at Pender, and Salt Creek at Greenwood. The summary results for total selenium in relation to the freshwater aquatic-life chronic criterion of 5 μg/L and acute criterion of 20 μg/L (U.S. Environmental Protection Agency, 1992b) are presented in figure 13.

Lake Water

Recent water-quality conditions in the lakes selected for inclusion in this summary are presented in table 8 (at the end of the report). All of the data summarized in table 8 are from samples collected and analyzed by the USACOE, Omaha, Nebr. Results for sites that had fewer than 10 measurements of a particular constituent or property are not reported. Lake sites were the only surface-water sites that had sufficient suitable data on pesticides to be summarized in this report. Because the spatial distribution of the summarized data for lakes

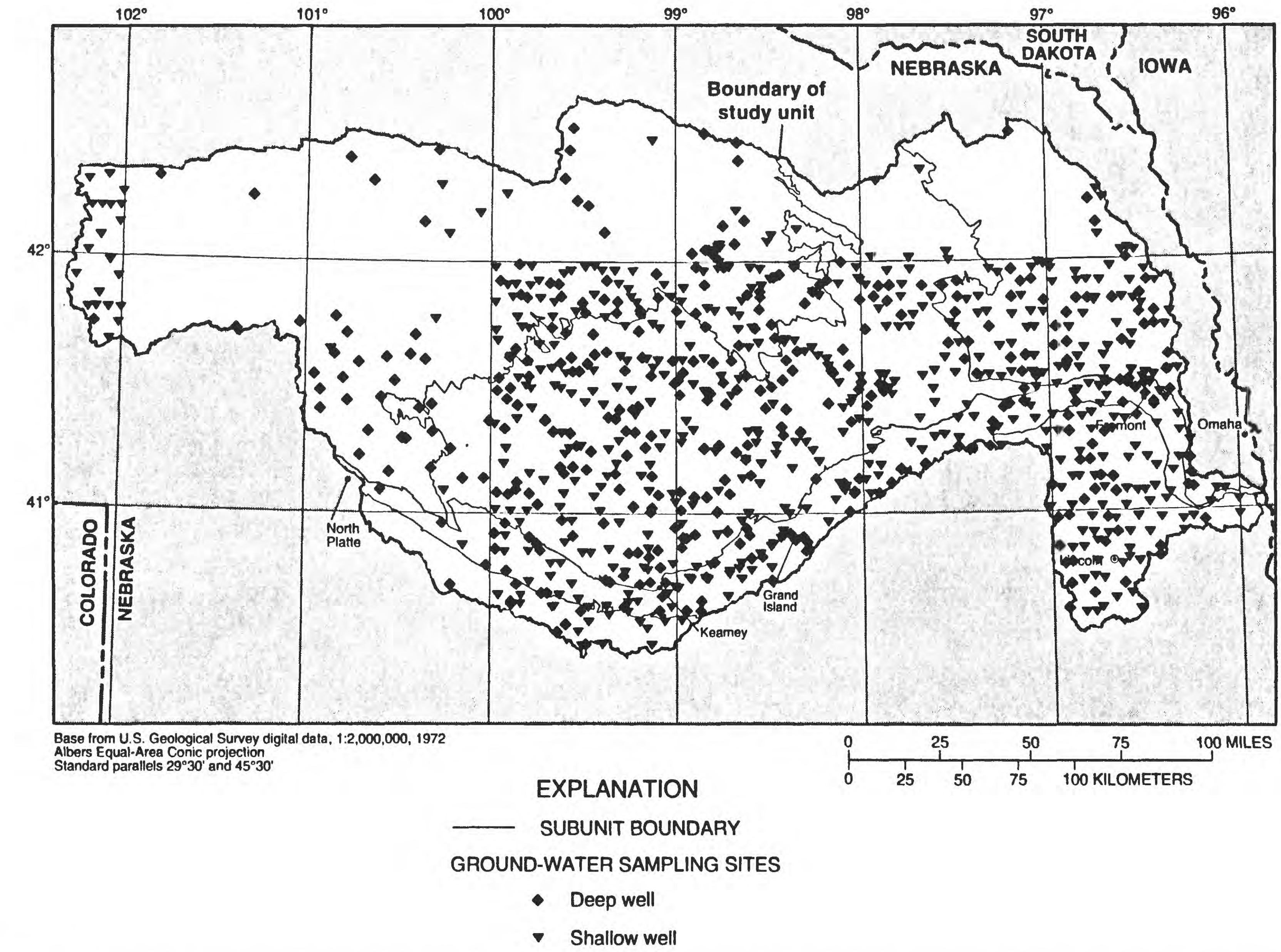


Figure 5. Location of ground-water sampling sites that had onsite measurements of pH included in summary of recent water-quality conditions.

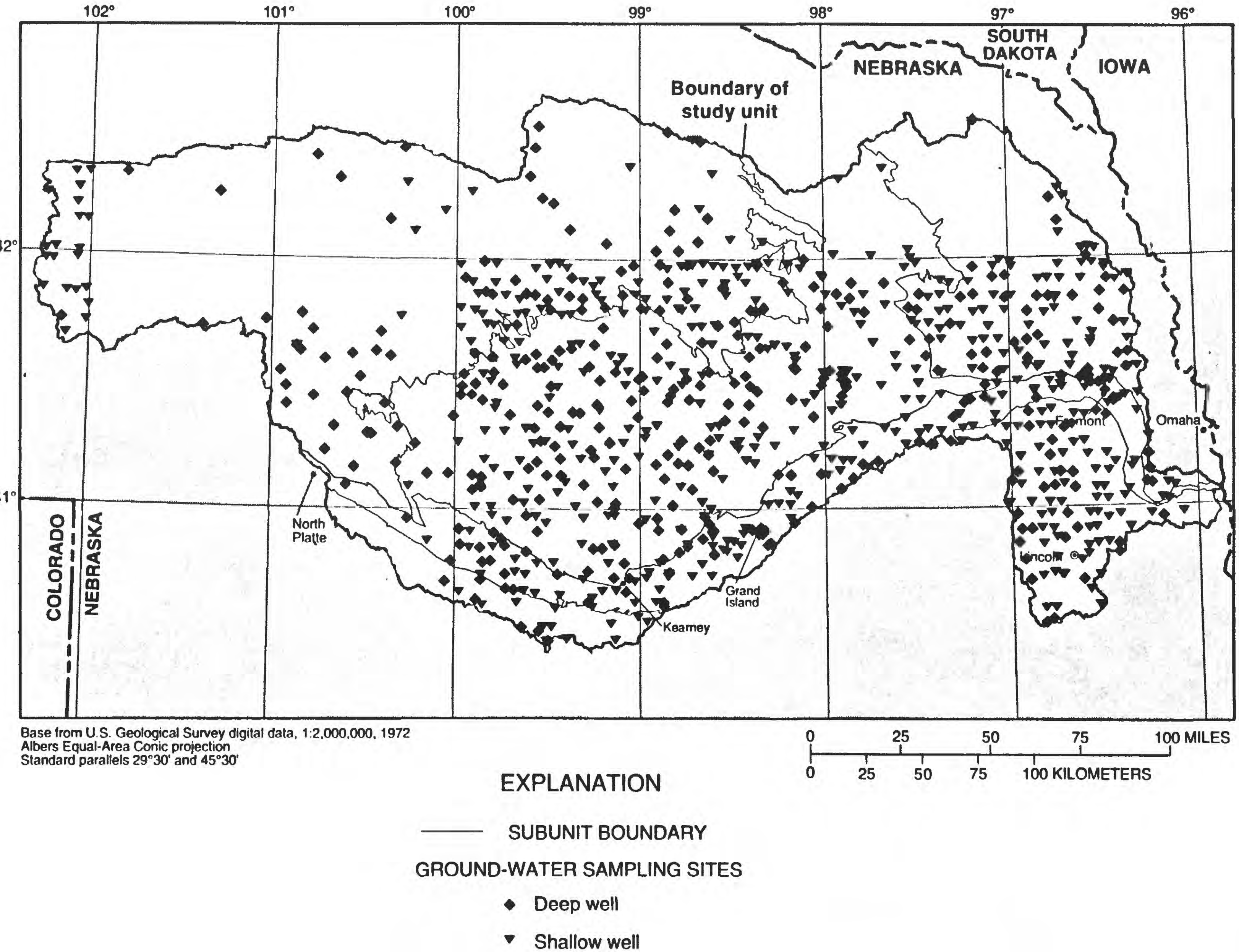


Figure 6. Location of ground-water sampling sites that had analyses of dissolved sulfate included in summary of recent water-quality conditions.

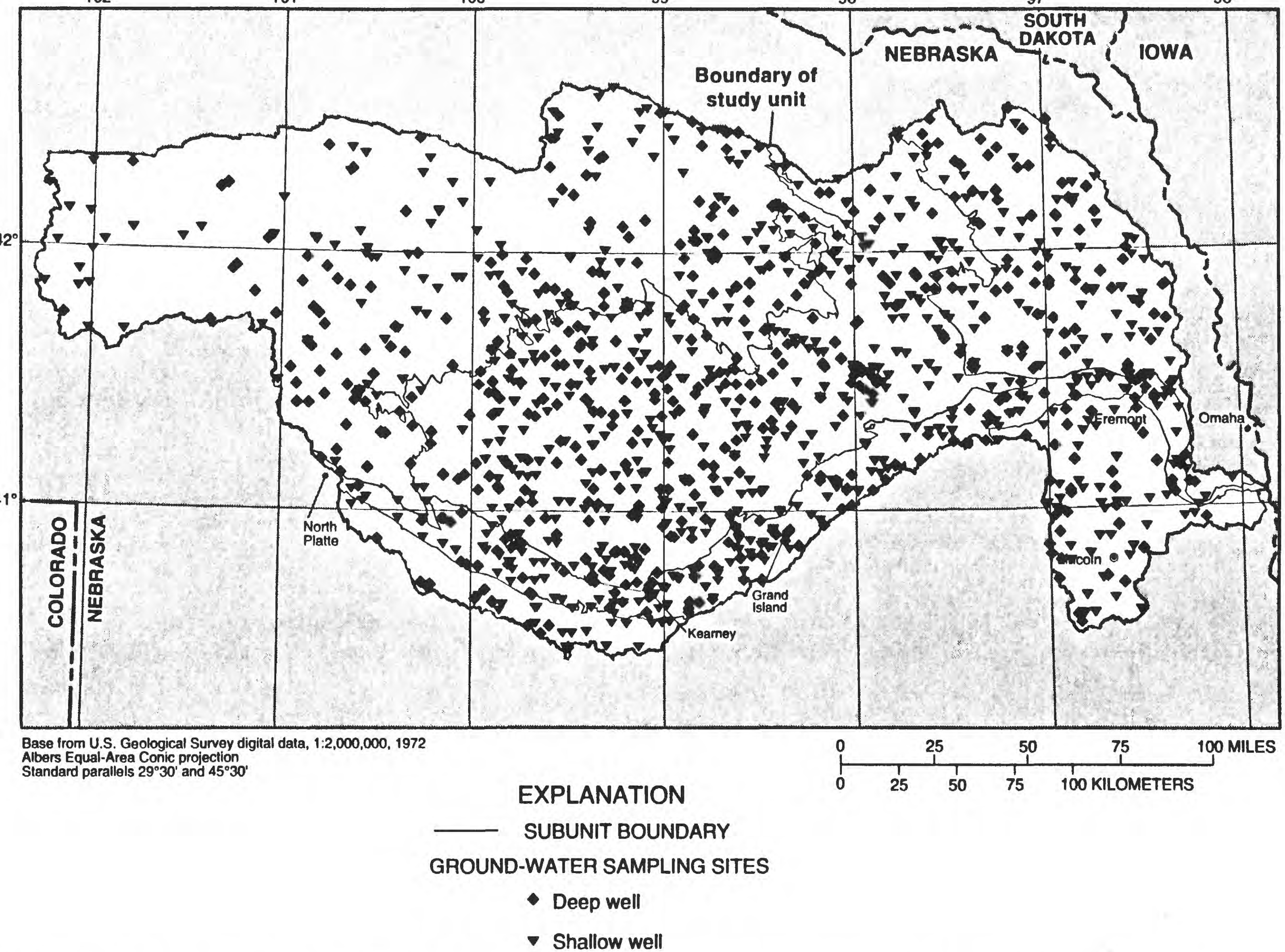


Figure 7. Location of ground-water sampling sites that had analyses of nitrite plus nitrate as nitrogen included in summary of recent water-quality conditions.

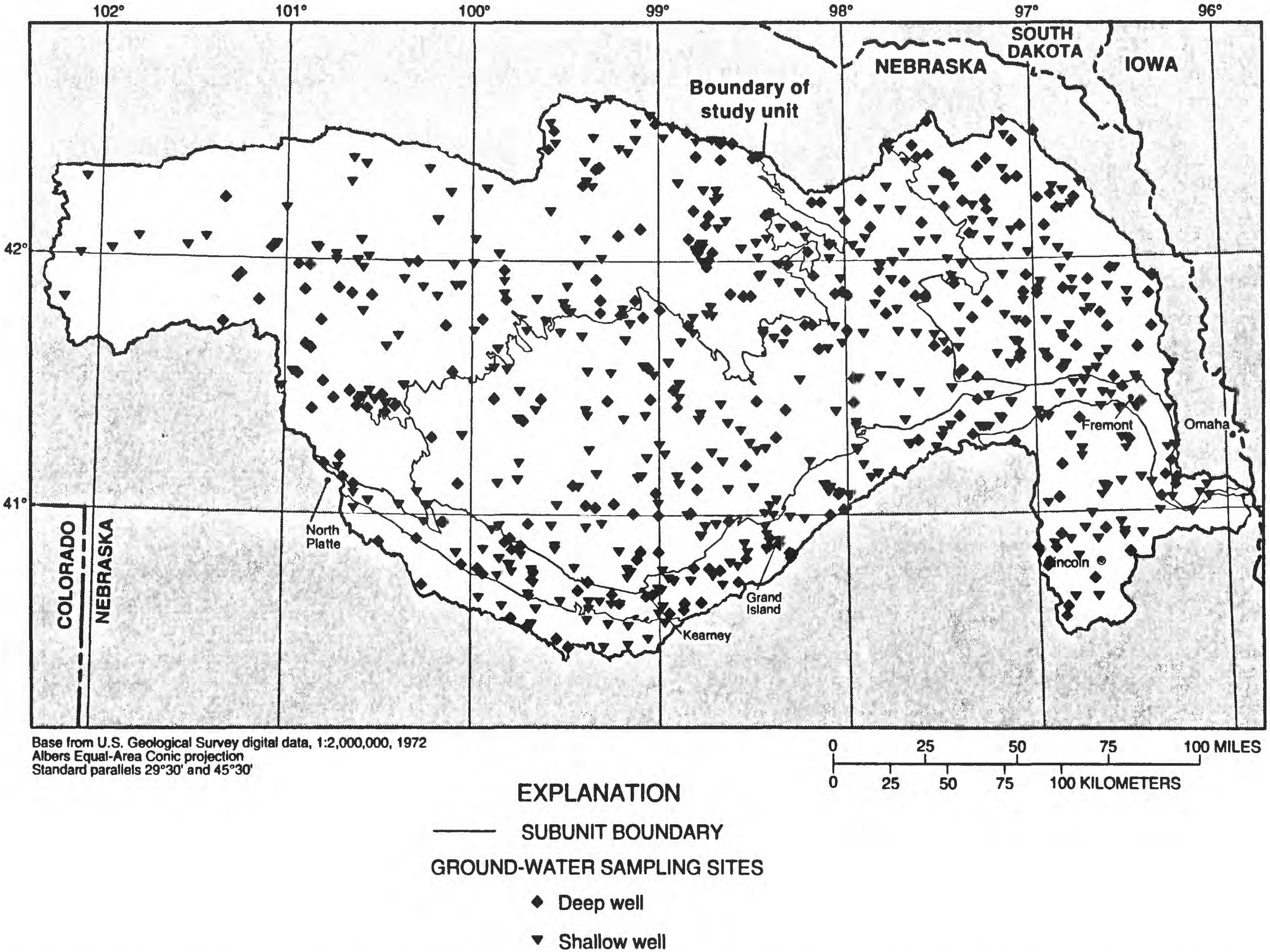


Figure 8. Location of ground-water sampling sites that had analyses of atrazine included in summary of recent water-quality conditions.

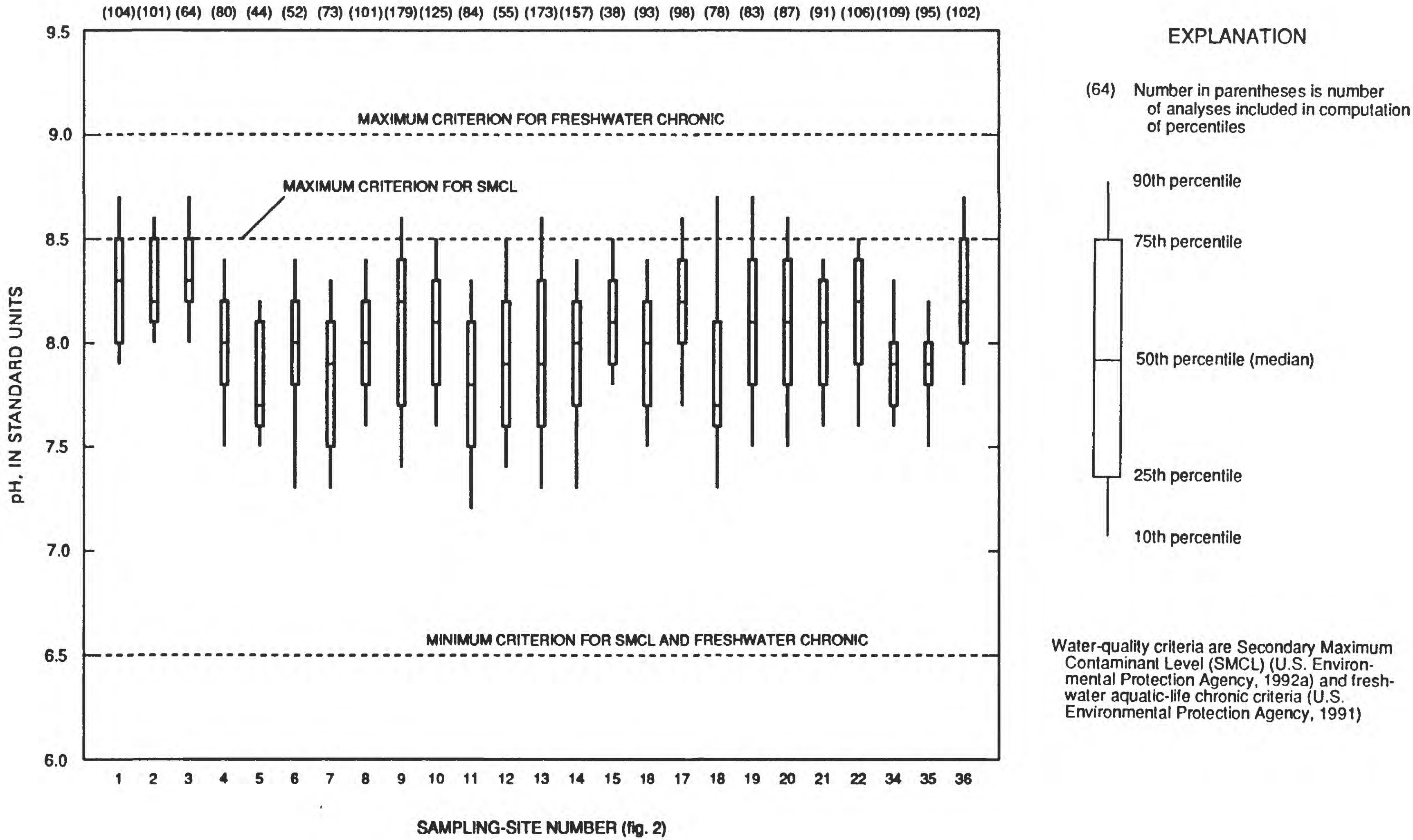


Figure 9. Distribution of pH values measured onsite in stream-water samples collected from Central Nebraska Basins in relation to water-quality criteria, 1981-90.

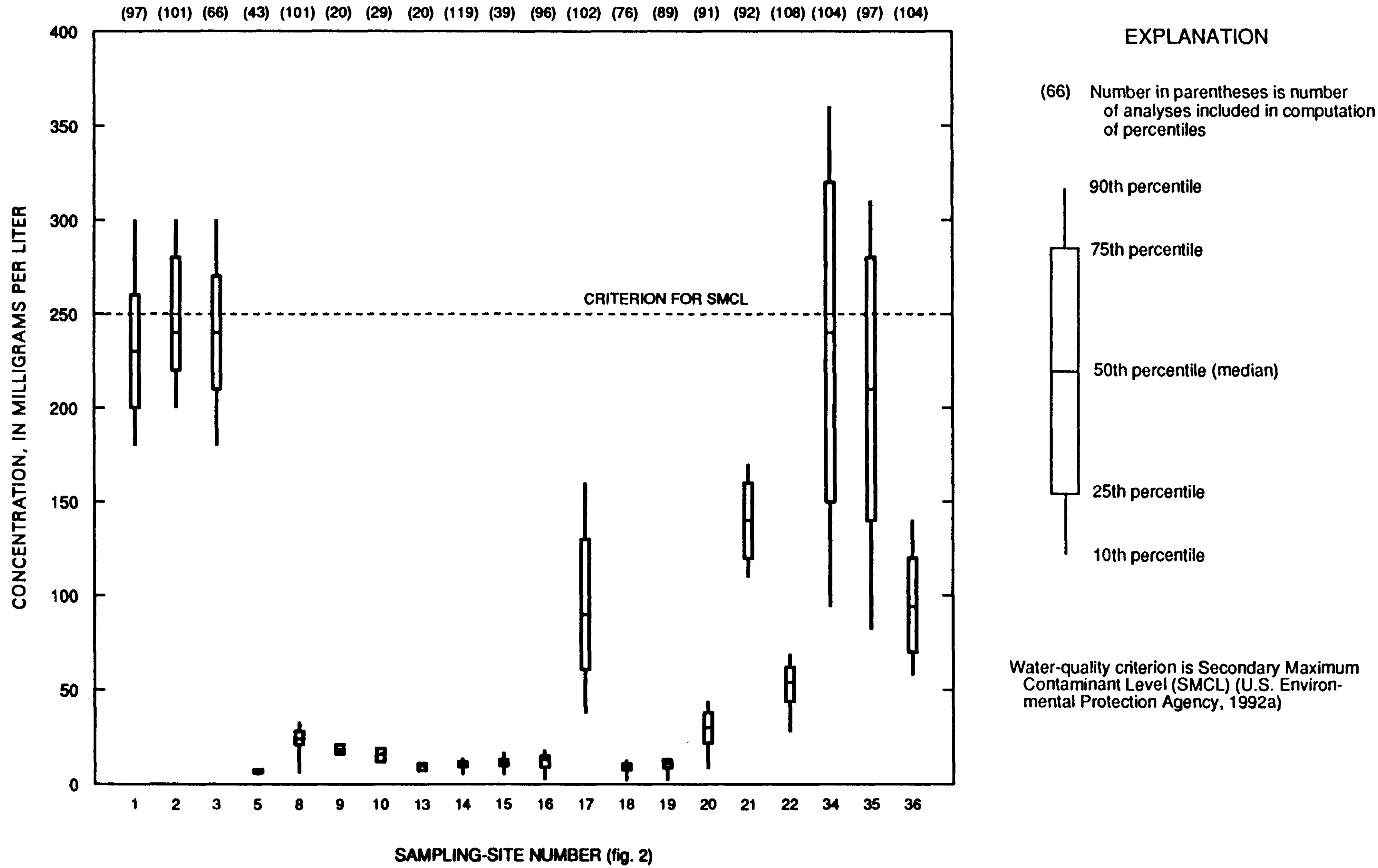


Figure 10. Distribution of concentrations of dissolved sulfate in stream-water samples collected from Central Nebraska Basins in relation to water-quality criterion, 1981-90.

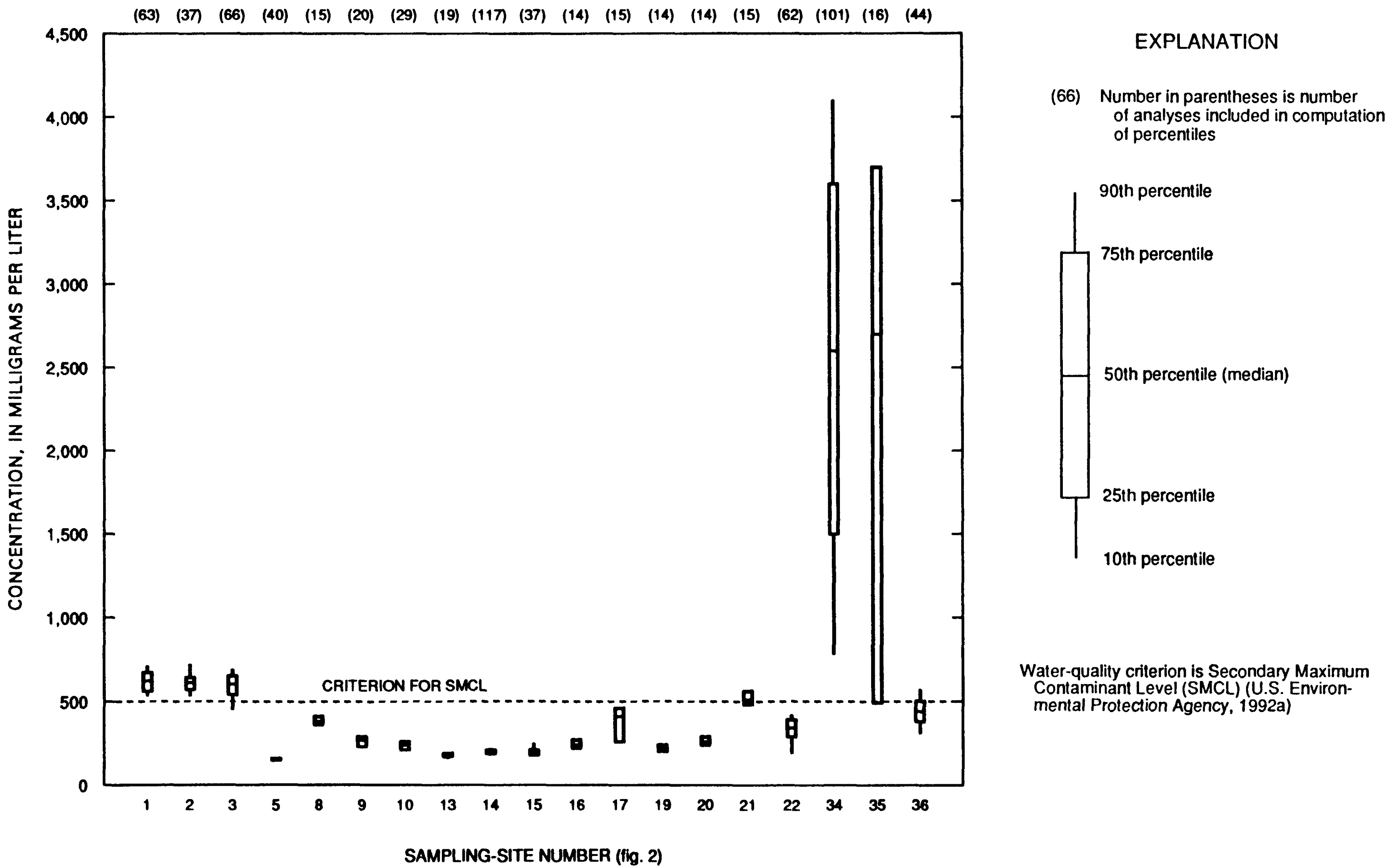


Figure 11. Distribution of concentrations of dissolved solids, sum of constituents, in stream-water samples collected from Central Nebraska Basins in relation to water-quality criterion, 1981-90.

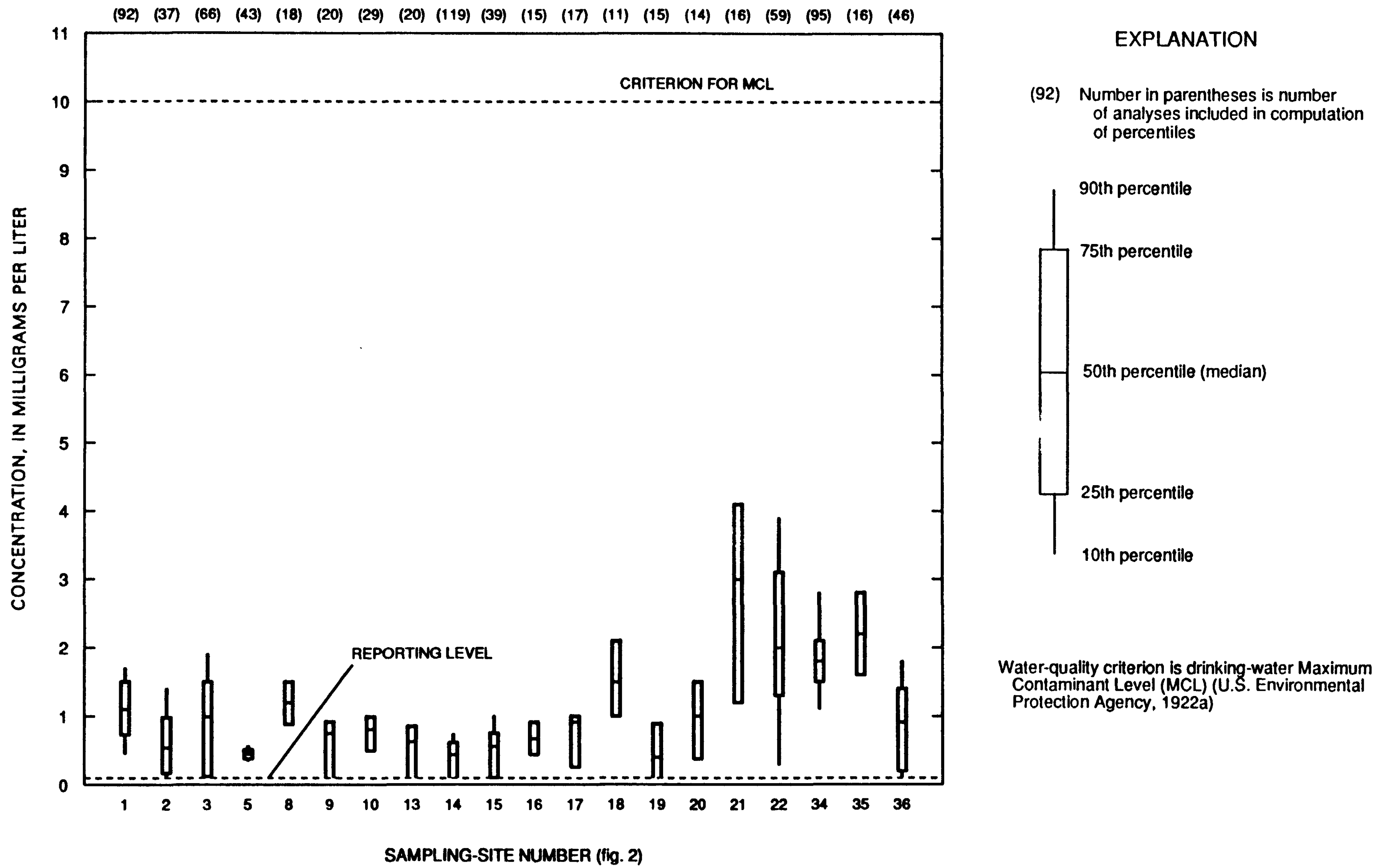


Figure 12. Distribution of concentrations of dissolved nitrite plus nitrate as nitrogen in stream-water samples collected from Central Nebraska Basins in relation to water-quality criterion, 1981-90.

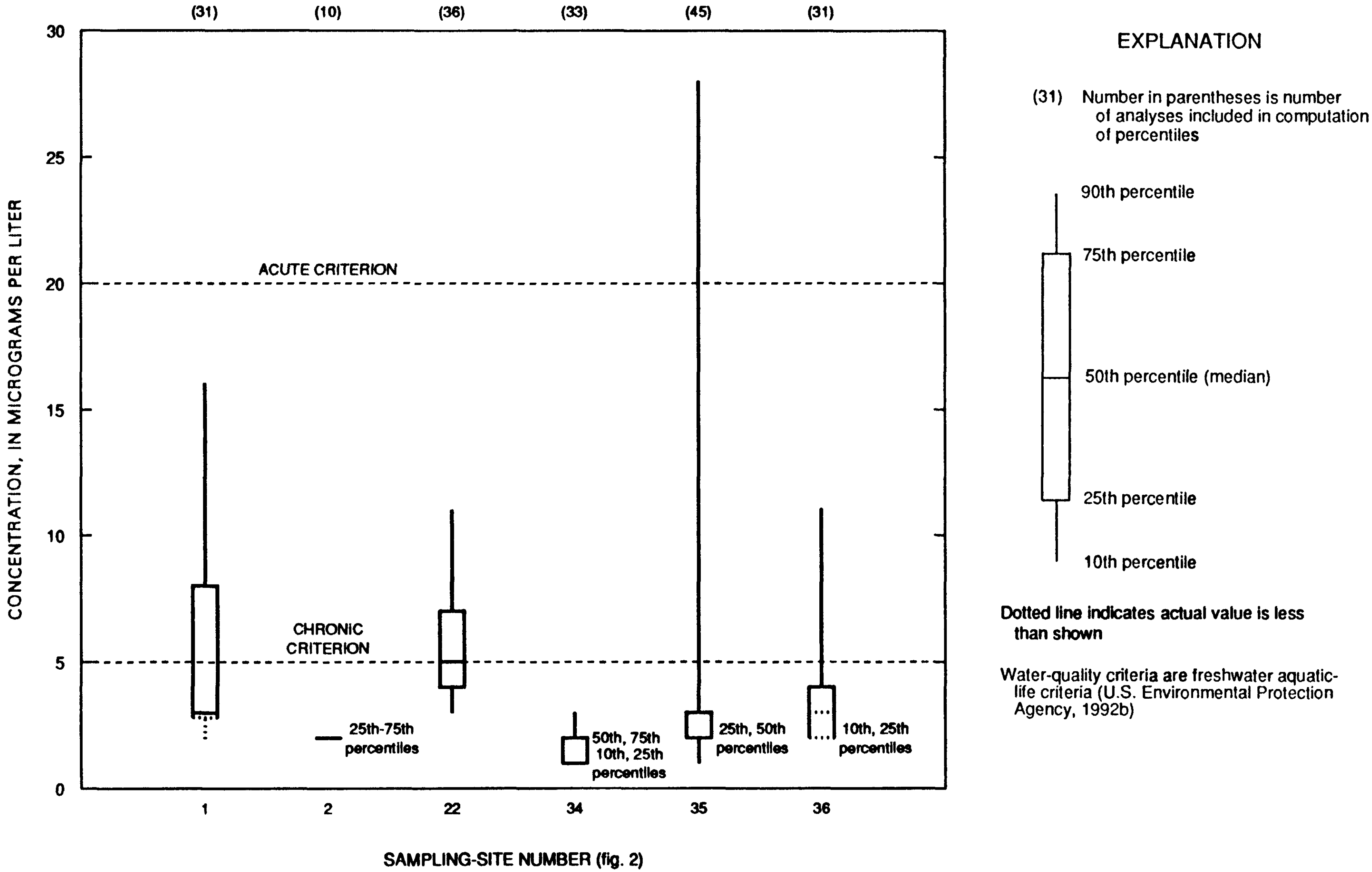


Figure 13. Distribution of concentrations of total selenium in stream-water samples collected from Central Nebraska Basins in relation to water-quality criteria, 1981-90.

was extremely limited, no comparisons with water-quality criteria were made.

Streambed Sediment

Statistical summaries for recent conditions in streambed sediment within the four subunits are presented in table 9 (at the end of the report). Sediment criteria have not been established yet. The distribution of phosphorus concentrations in streambed sediment is shown in figure 14. Phosphorus is typically abundant in sediment and is an essential nutrient for aquatic biota (Hem, 1989). The summary results for arsenic and selenium in the streambed sediments of the four subunits are presented in figure 15. These two nonmetallic elements are toxic to aquatic biota (Hem, 1989). Selenium can accumulate in the tissues of fish, but although arsenic generally does not bioaccumulate through the food chain, it is more toxic than selenium at small concentrations (May and McKinney, 1981).

Fish Tissue

The descriptive statistics summarizing recent water-quality conditions measured in fish-tissue samples are presented in table 10 (at the end of the report). The summaries were computed for aggregations of samples that were grouped by anatomical part and species group and for aggregations of sites grouped by water-body type and subunit, as previously described. Only two of the three subunits represented in table 2 appear in table 10 because there was an insufficient number of suitable data available from the Platte Valley subunit with which to compute any of the summary statistics. Results for summary groups that had fewer than two analyses of a particular constituent are not reported. Because reporting levels were variable throughout the summary period for most constituents, many of the percentile computations yielded a concentration range rather than a specific concentration. The distributions of arsenic, cadmium, copper, mercury, and selenium concentrations for two subunit categories are presented in figure 16. Those five elements are potentially toxic to fish and wildlife (Schmitt and Brumbaugh, 1990).

Aquatic Ecology

Aquatic habitat characteristics are summarized in table 11 (at the end of the report) for samples grouped by stream-order category and by subunit. There were insufficient data from the higher order (fourth- to sixth-order) streams to compute summary statistics for any of the habitat characteristics. Results for sites that had fewer than 10 measurements of a particular characteristic were not reported. The distribution of one habitat characteristic of the first- to third-order streams--the sand component of the channel substrate--is shown in figure 17.

The fish and macroinvertebrate taxa that were collected at the largest number of sampling sites are listed in table 12 (at the end of the report) along with the corresponding number of sites. Only the taxa that occurred at the 10 highest frequencies in each summary group are listed, and only frequencies of two or more sites are included. The relative abundance of fish and macroinvertebrate taxa collected in the study unit is summarized in table 13 (at the end of the report). Relative abundance was computed as the percentage of a sample that was composed of a specific taxon. The distribution of relative-abundance values for the taxa that were collected at the largest number of sampling sites on the first- to third-order streams of each subunit is shown in figure 18. Relative abundance was not computed for summary groups that had fewer than 10 determinations selected for inclusion in the summary, and therefore only three fish taxa are shown for the Platte Valley subunit.

The statistical summaries for two additional ecological characteristics related to the concept of biological diversity are presented in table 14 (at the end of the report). The two additional ecological characteristics are (1) taxonomic richness of the sampled community, defined as the number of different taxa included in a single sample, and (2) taxonomic dominance, defined as the percentage of a sample that was composed of the single most abundant taxon. The distributions of these two ecological characteristics in first- to third-order streams of each subunit are shown in figures 19 and 20.

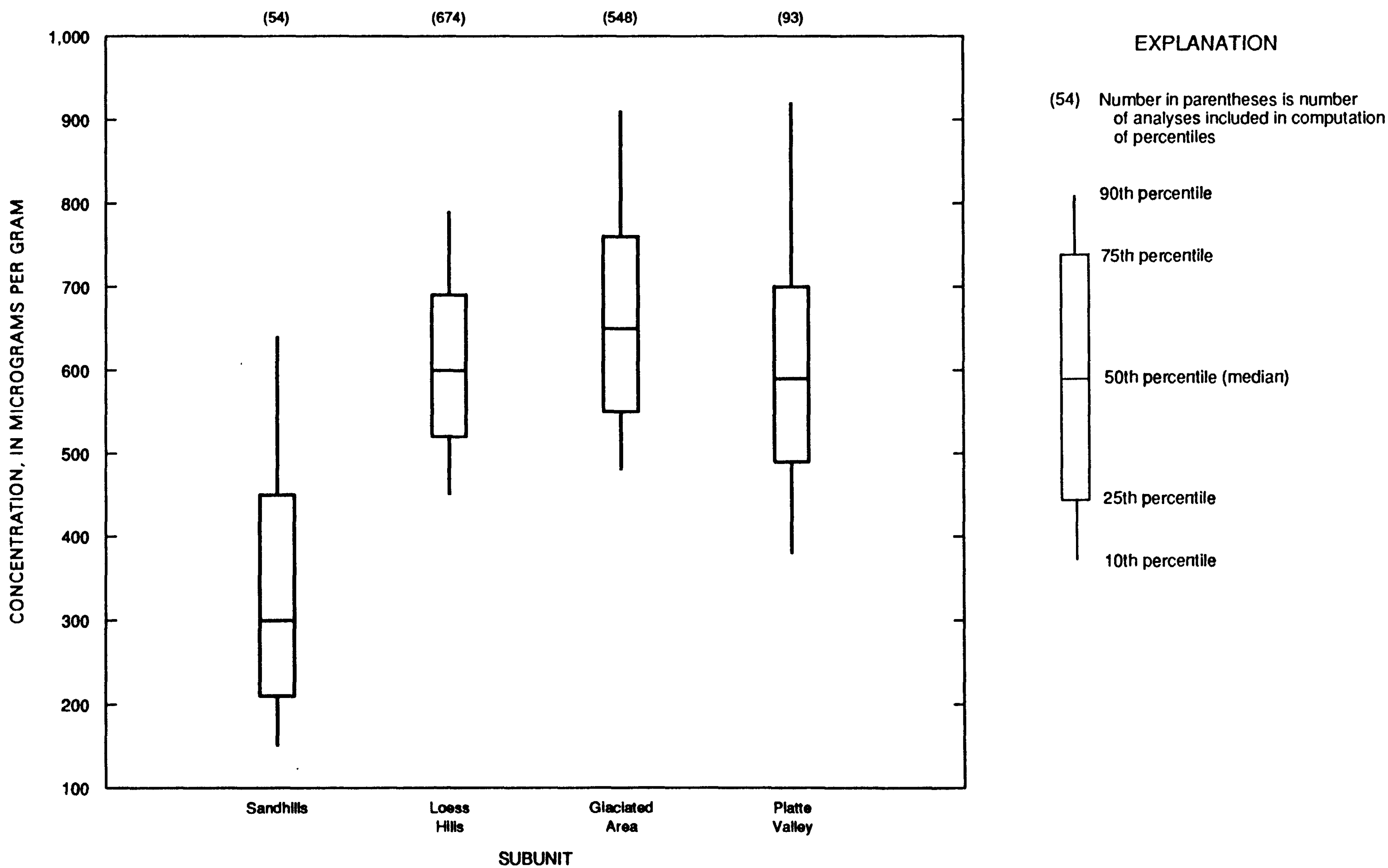


Figure 14. Distribution of concentrations of phosphorus in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979.

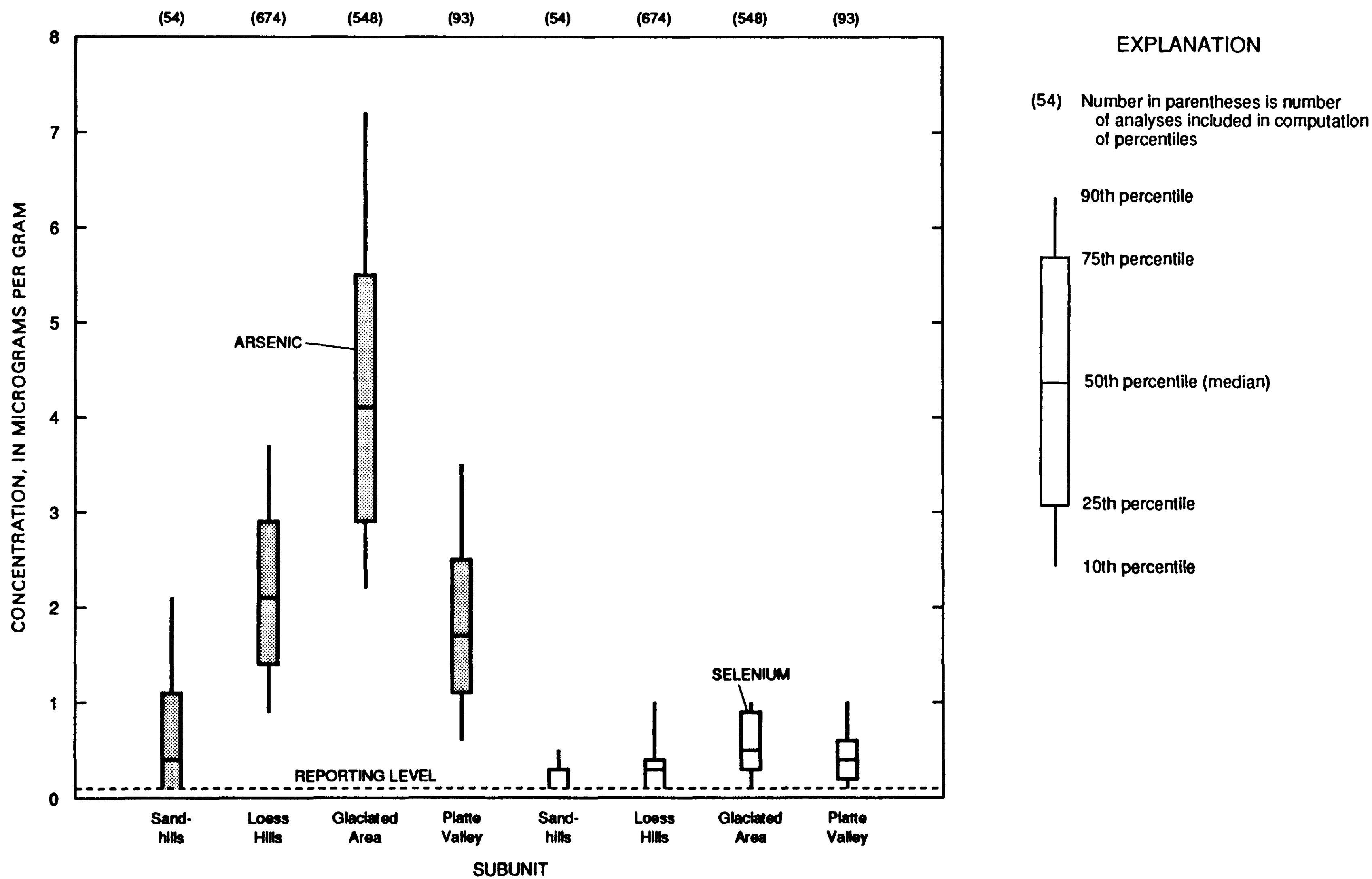


Figure 15. Distribution of concentrations of arsenic and selenium in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979.

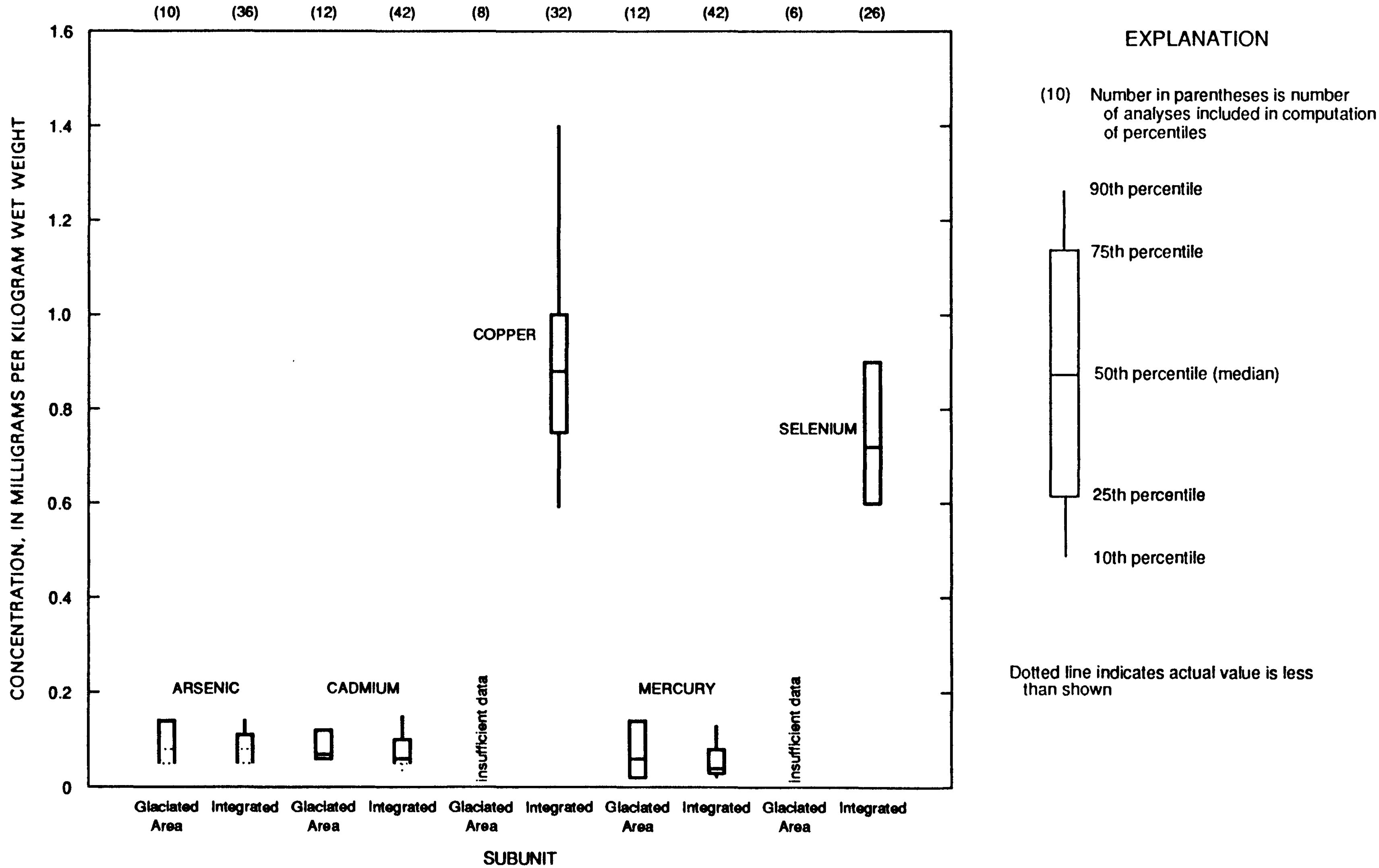


Figure 16. Distribution of concentrations of arsenic, cadmium, copper, mercury, and selenium in tissue samples from whole, bottom-dwelling fish collected at sampling sites representing Glaciated Area and at sampling sites integrating multiple subunits of Central Nebraska Basins, 1981-90.

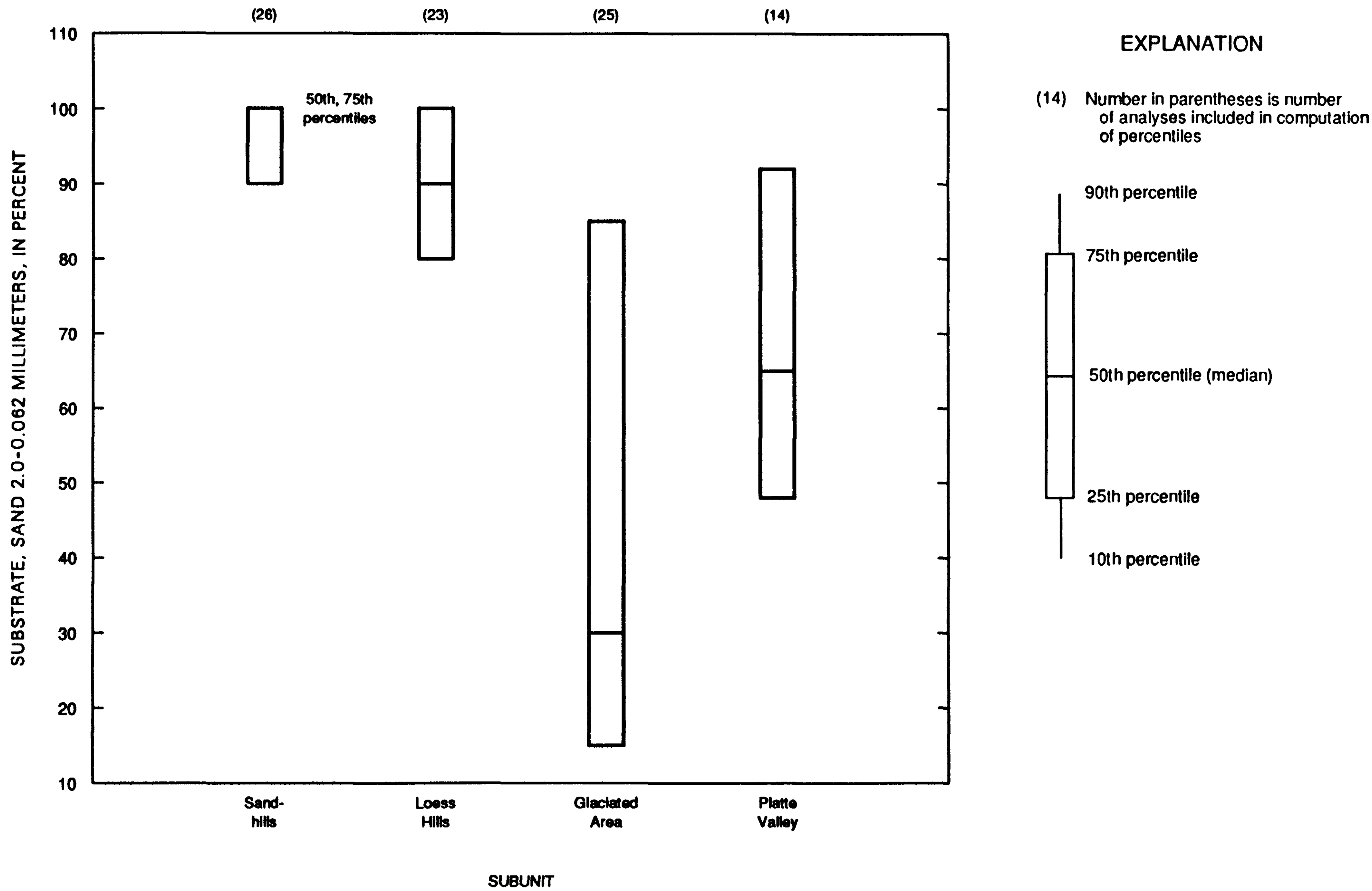


Figure 17. Distribution of percentage of channel substrate that is sand, 2.0-0.062 millimeters, in samples collected from first- to third-order streams within subunits of Central Nebraska Basins, 1981-90.

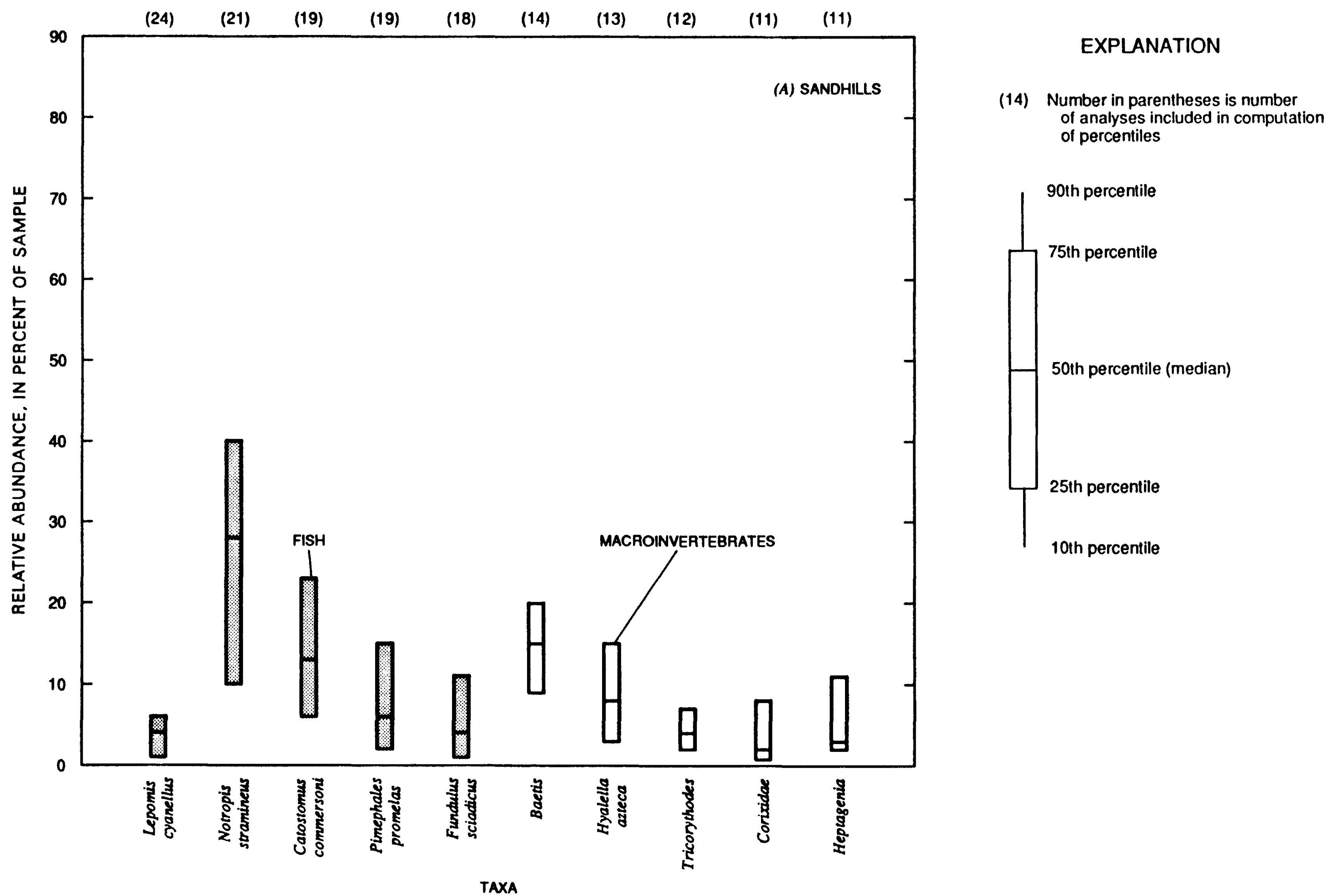


Figure 18. Distribution of relative abundance of most frequently occurring fish and macroinvertebrate taxa in first- to third-order streams within subunits of Central Nebraska Basins, 1981-90.

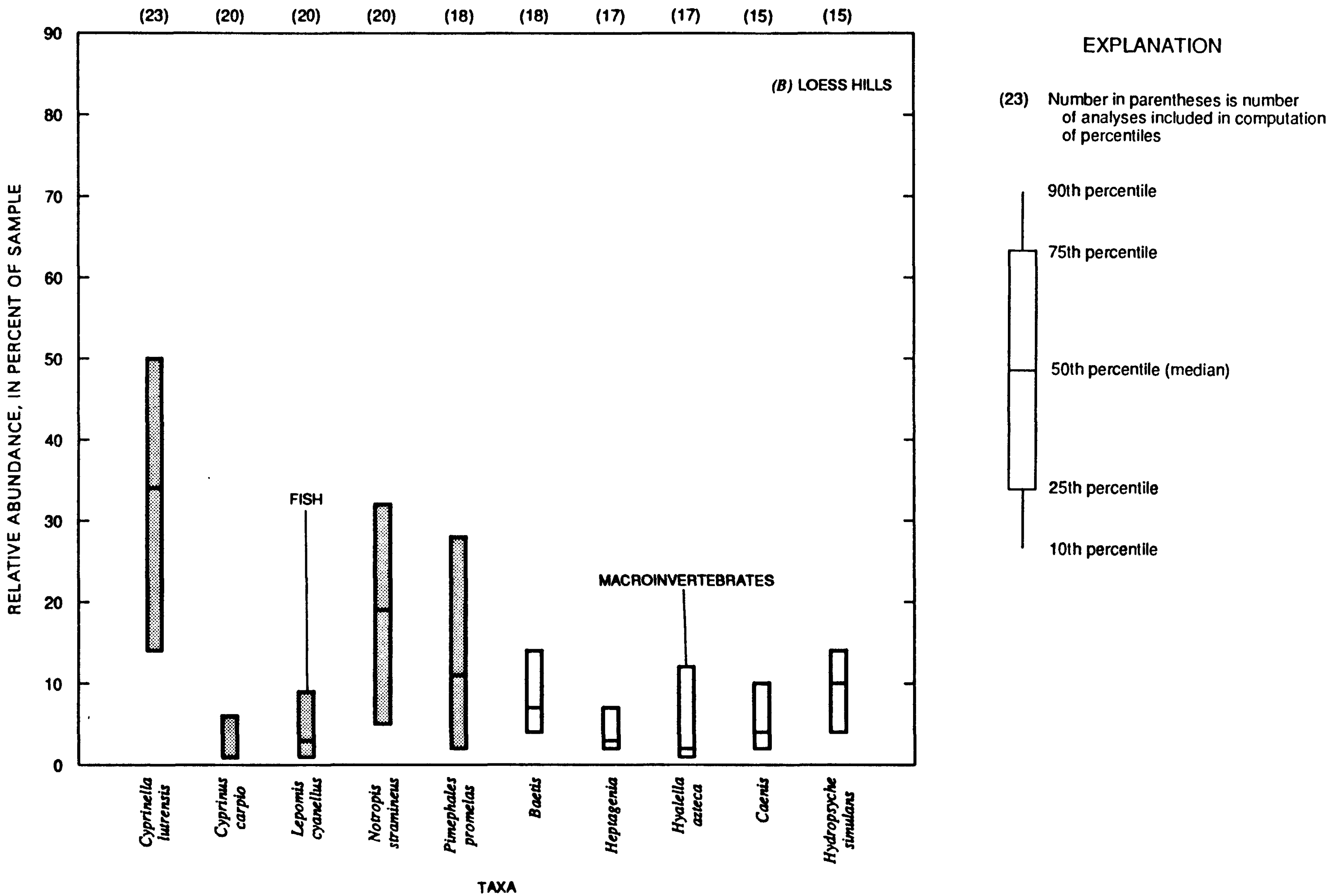


Figure 18. Distribution of relative abundance of most frequently occurring fish and macroinvertebrate taxa in first- to third-order streams within subunits of Central Nebraska Basins, 1981-90--Continued.

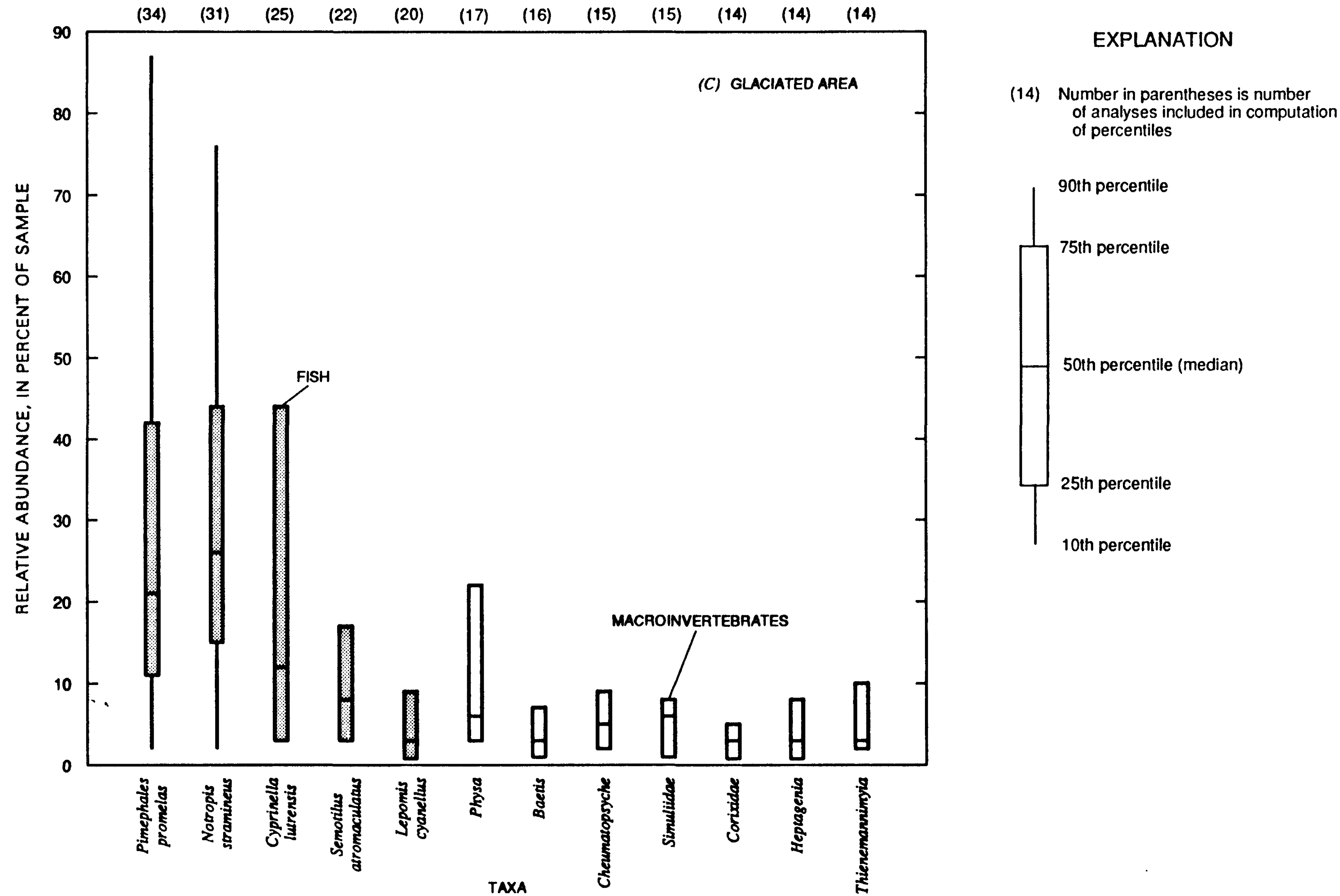


Figure 18. Distribution of relative abundance of most frequently occurring fish and macroinvertebrate taxa in first- to third-order streams within subunits of Central Nebraska Basins, 1981-90--Continued.

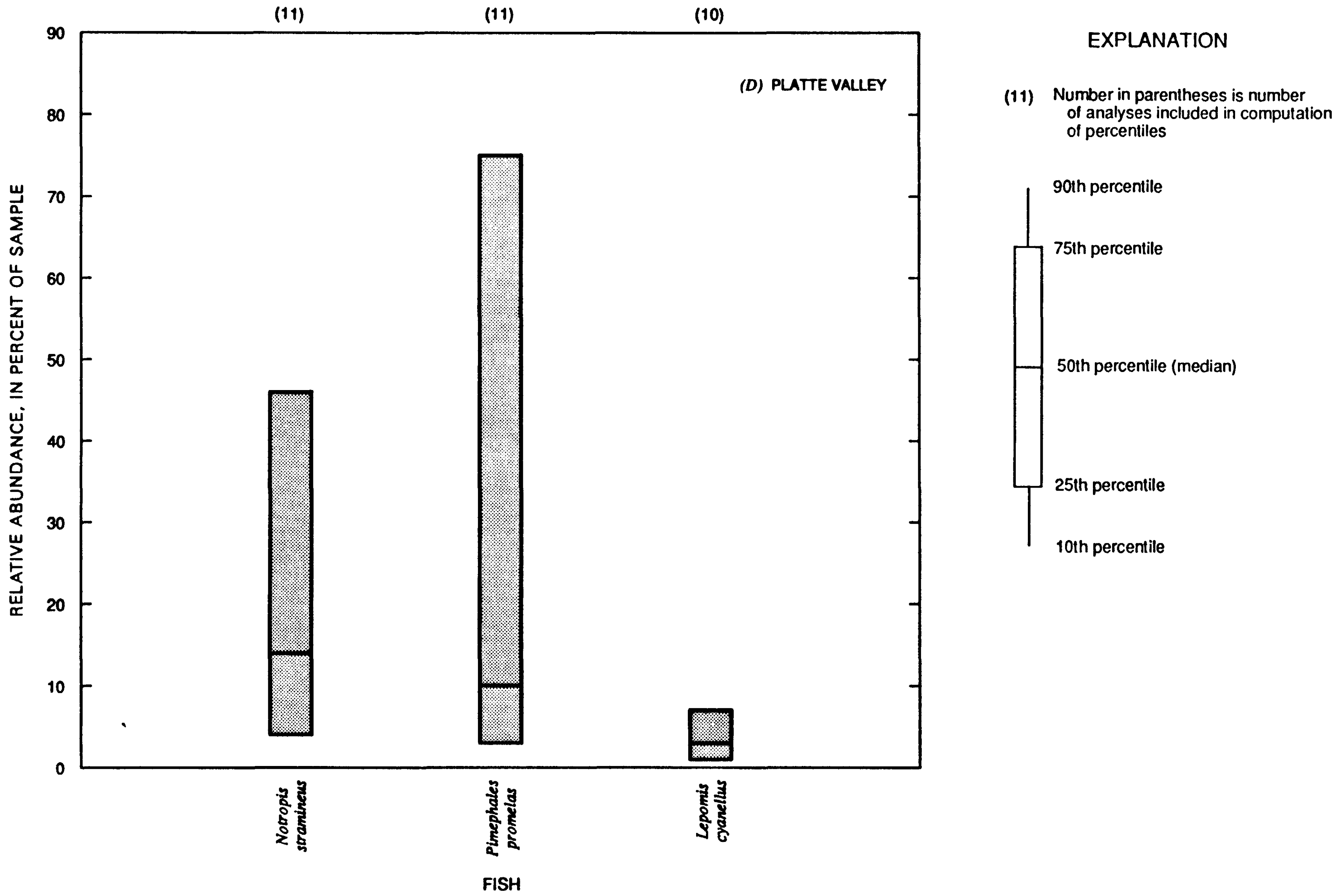


Figure 18. Distribution of relative abundance of most frequently occurring fish and macroinvertebrate taxa in first- to third-order streams within subunits of Central Nebraska Basins, 1981-90--Continued.

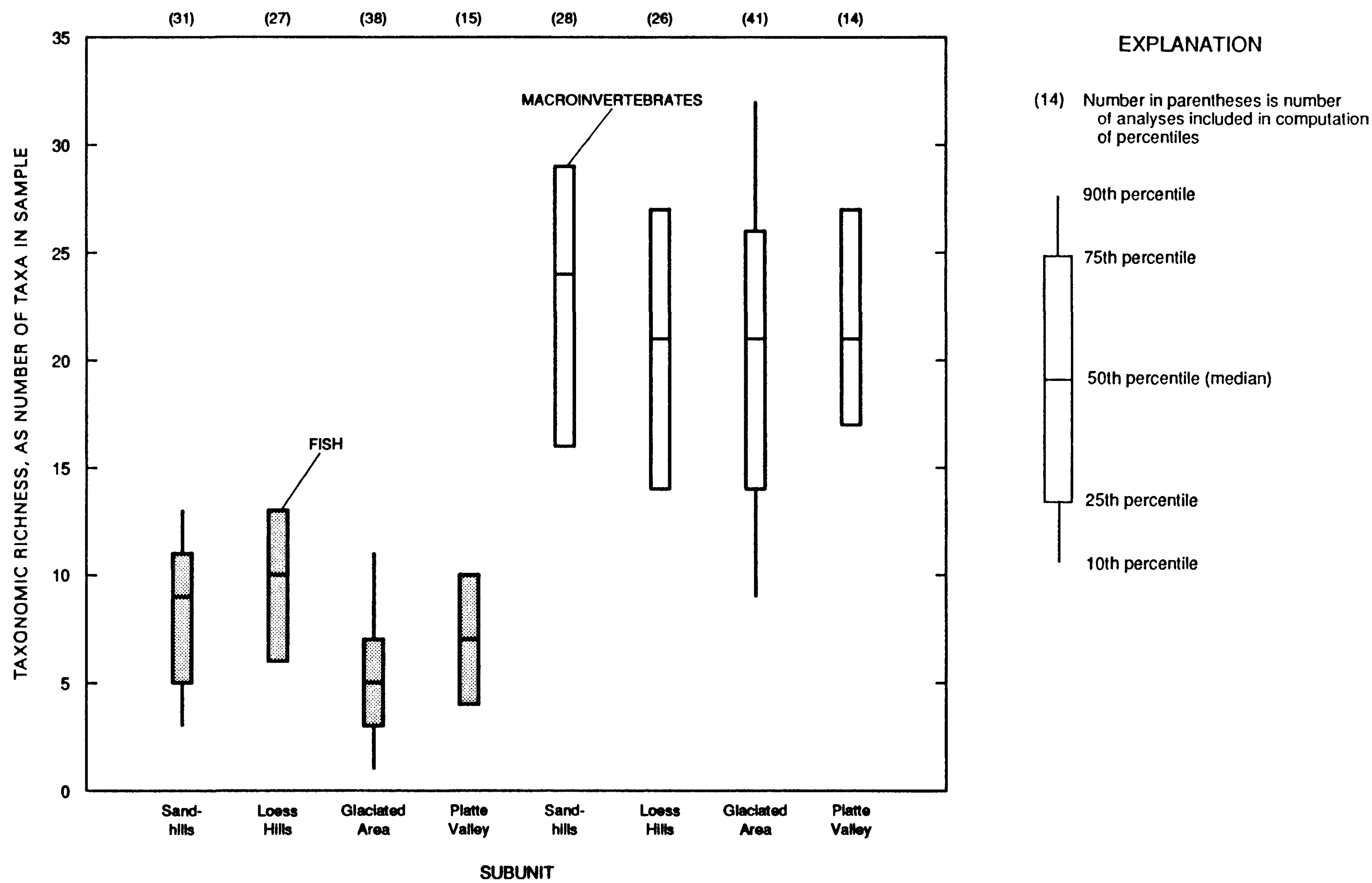


Figure 19. Distribution of taxonomic richness of fish and macroinvertebrate communities in first- to third-order streams within subunits of Central Nebraska Basins, 1981-90.

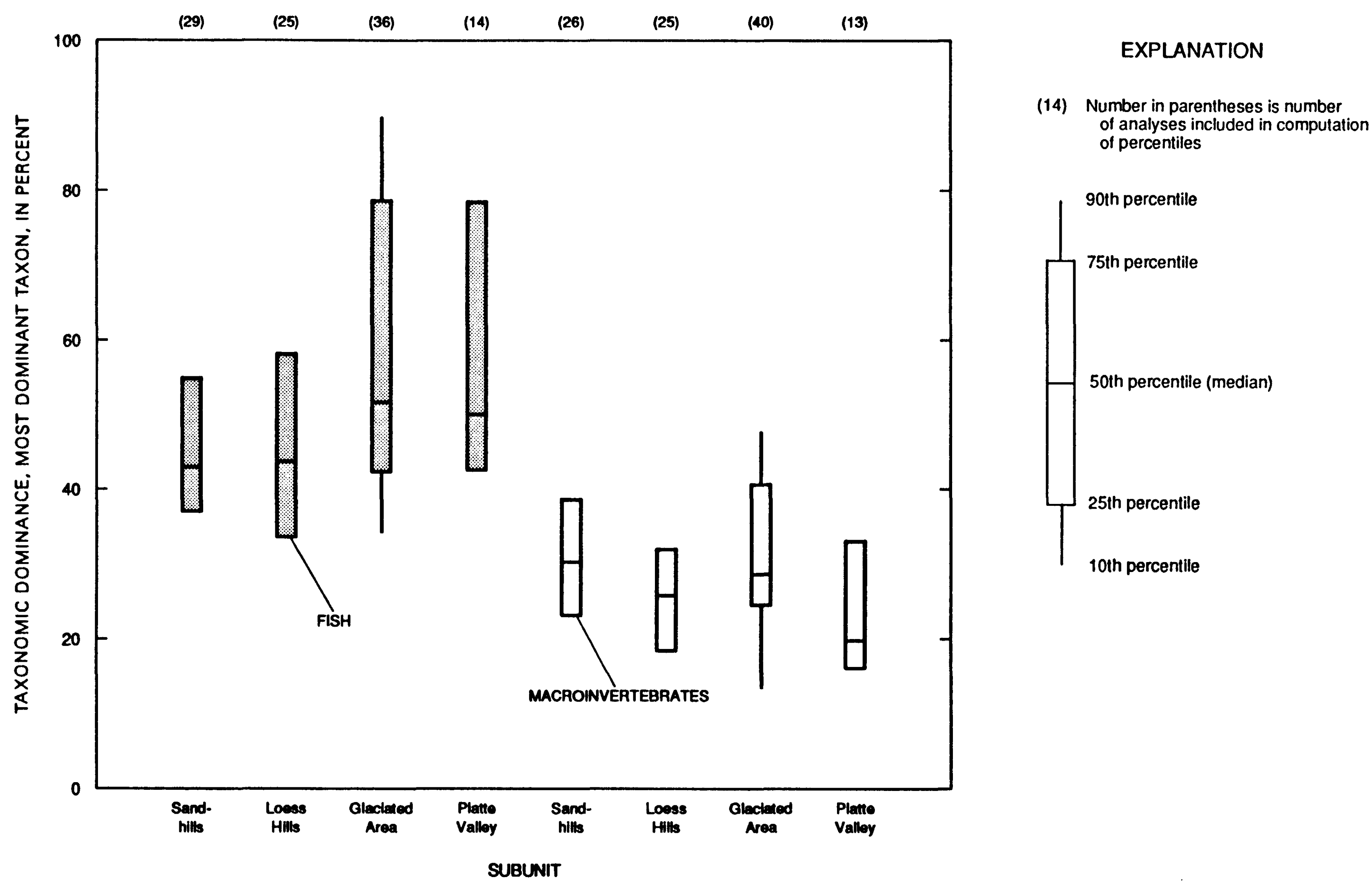


Figure 20. Distribution of taxonomic dominance of fish and macroinvertebrate communities in first- to third-order streams within subunits of Central Nebraska Basins, 1981-90.

Ground Water

Statistical summaries for the water-quality constituents and properties determined from ground-water samples are presented in tables 15 and 16 (at the end of the report). These results were computed for summary groups defined by well-depth category and by subunit as previously described. Results for summary groups that had fewer than 10 measurements of a particular constituent or property are not reported.

Statistical summaries for ground-water constituents were compared only with drinking-water Maximum Contaminant Levels (MCLs) and SMCLs because other established water-quality criteria are not applicable. The percentile values for pH in relation to the SMCLs of 6.5 and 8.5 standard units (U.S. Environmental Protection Agency, 1992a) are shown in figure 21. Although none of the computed percentile values for pH exceeded the SMCL values, figure 21 was included to permit the reader to graphically compare and contrast the stream- and ground-water results for a common physical property.

The percentile values for dissolved sulfate in relation to the SMCL of 250 mg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 22. The percentile values for dissolved solids and the SMCL of 500 mg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 23. There were fewer than 10 analyses summarized for two of the summary groups, and therefore, no summary statistics were reported in table 15 nor are percentile values for those groups included in figure 23.

Summary results for two nutrient constituents in ground water are presented graphically in this report. The percentile values for nitrate as nitrogen in relation to the drinking-water MCL for nitrate of 10 mg/L (U.S. Environmental Protection Agency, 1992a) are shown for the Loess Hills and Platte Valley subunits in figure 24. The other subunits had insufficient data for the computation of summary statistics. The percentile values for nitrite plus nitrate as nitrogen in relation to the drinking-water MCL for nitrate of 10 mg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 25 for all four subunits.

Two of the dissolved metals had 90th-percentile values that exceeded water-quality regulation values. The percentile values for dissolved iron and the SMCL of 300 µg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 26. The percentile values for dissolved manganese and the SMCL of 50 µg/L (U.S. Environmental Protection Agency, 1992a) are shown in figure 27.

There were a considerable number of the synthetic organic compounds that had been analyzed from a sufficient number of ground-water samples for summary statistics to be computed, but for which all the resulting percentile values were less than an unknown reporting level assumed to be less than any specified values in the respective summary groups. The number of analyses that were summarized for each of these constituents for each summary group that had a sufficient number of analyses to compute summary statistics (10 or more analyses) are listed in table 16 (at the end of the report). Both the deep-well and shallow-well summary groups in the Platte Valley subunit had insufficient data and are not included in table 16.

REPORT SUMMARY

Among the first activities undertaken in the Central Nebraska Basins water-quality assessment were compilation, screening, and statistical summary of available data concerning recent water-quality conditions in the study unit. The water-quality conditions of interest in addressing the objectives of the NAWQA Program are those that are representative of the general water quality of a given stream reach or area of an aquifer. This report was prepared (1) to identify which of the existing water-quality data are available and suitable for characterizing general conditions in a nationally consistent manner and (2) to describe, to the extent possible, recent, general water-quality conditions in the Central Nebraska Basins. The study unit consists of the area drained by the Platte River between the confluence of the North Platte and South Platte Rivers near North Platte downstream to its confluence with the Missouri River south of Omaha.

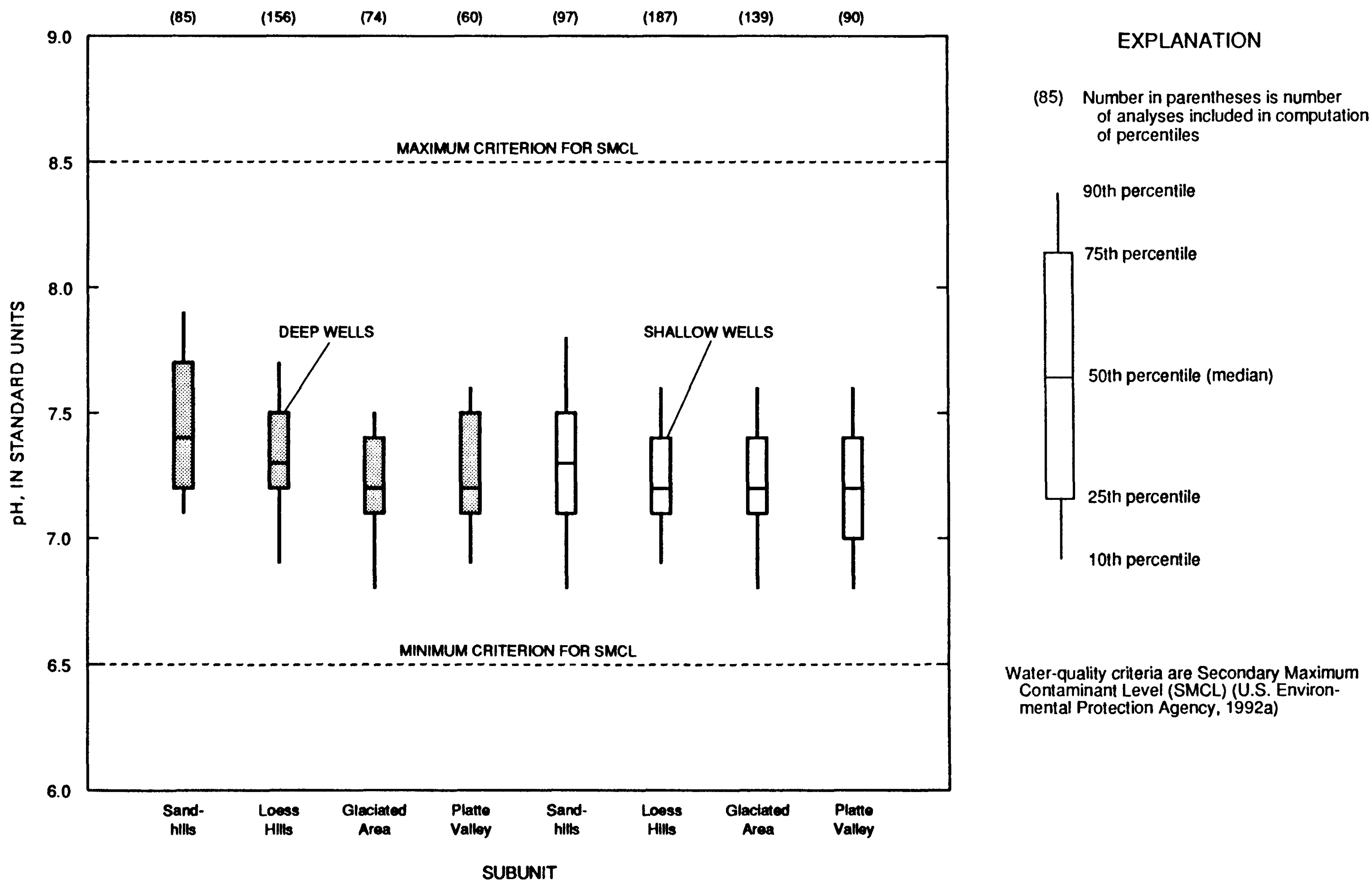


Figure 21. Distribution of pH values measured onsite in ground-water samples collected from subunits of Central Nebraska Basins in relation to water-quality criteria, 1978-90.

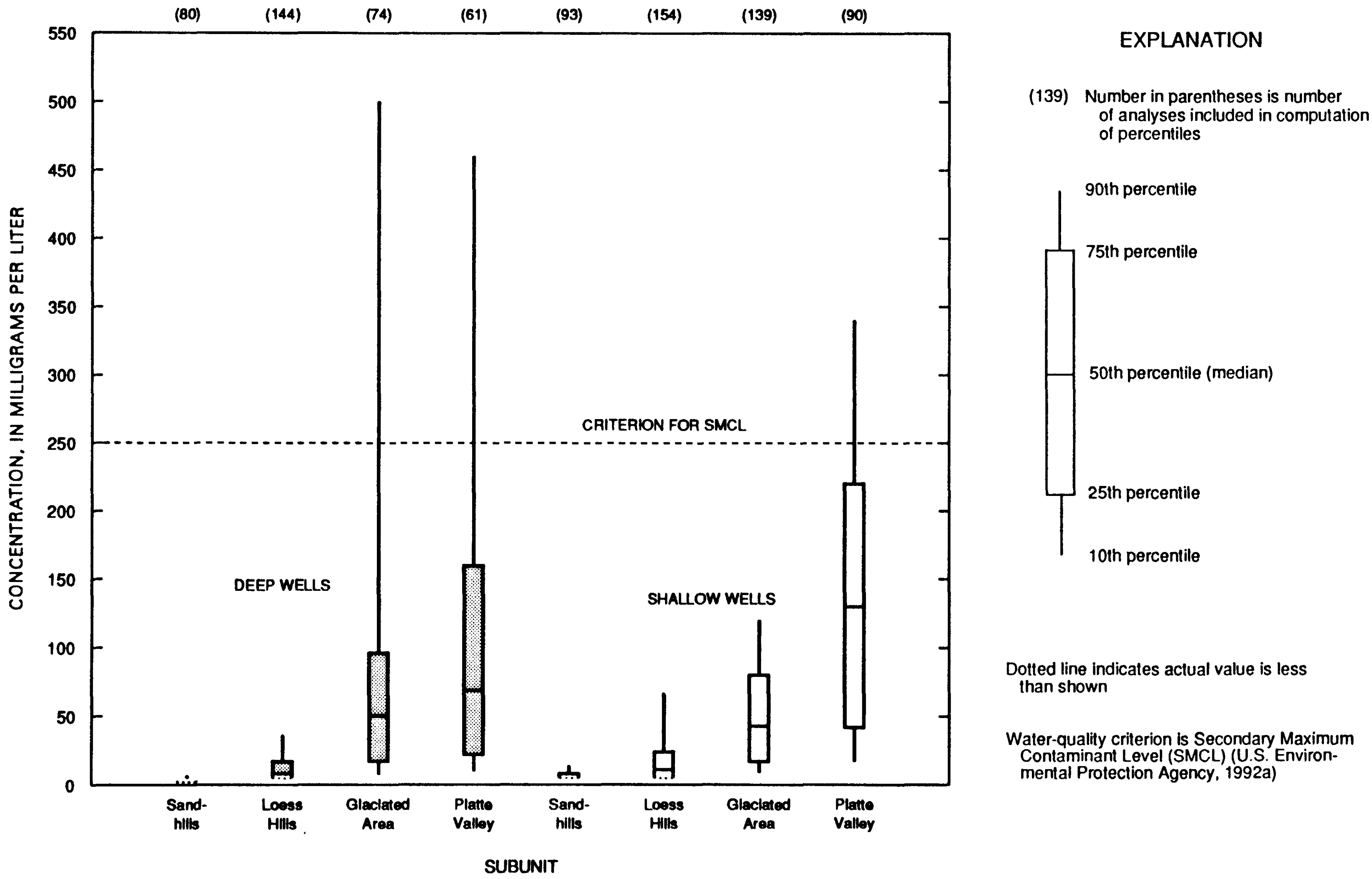


Figure 22. Distribution of concentrations of dissolved sulfate in ground-water samples collected from subunits of Central Nebraska Basins in relation to water-quality criterion, 1978-90.

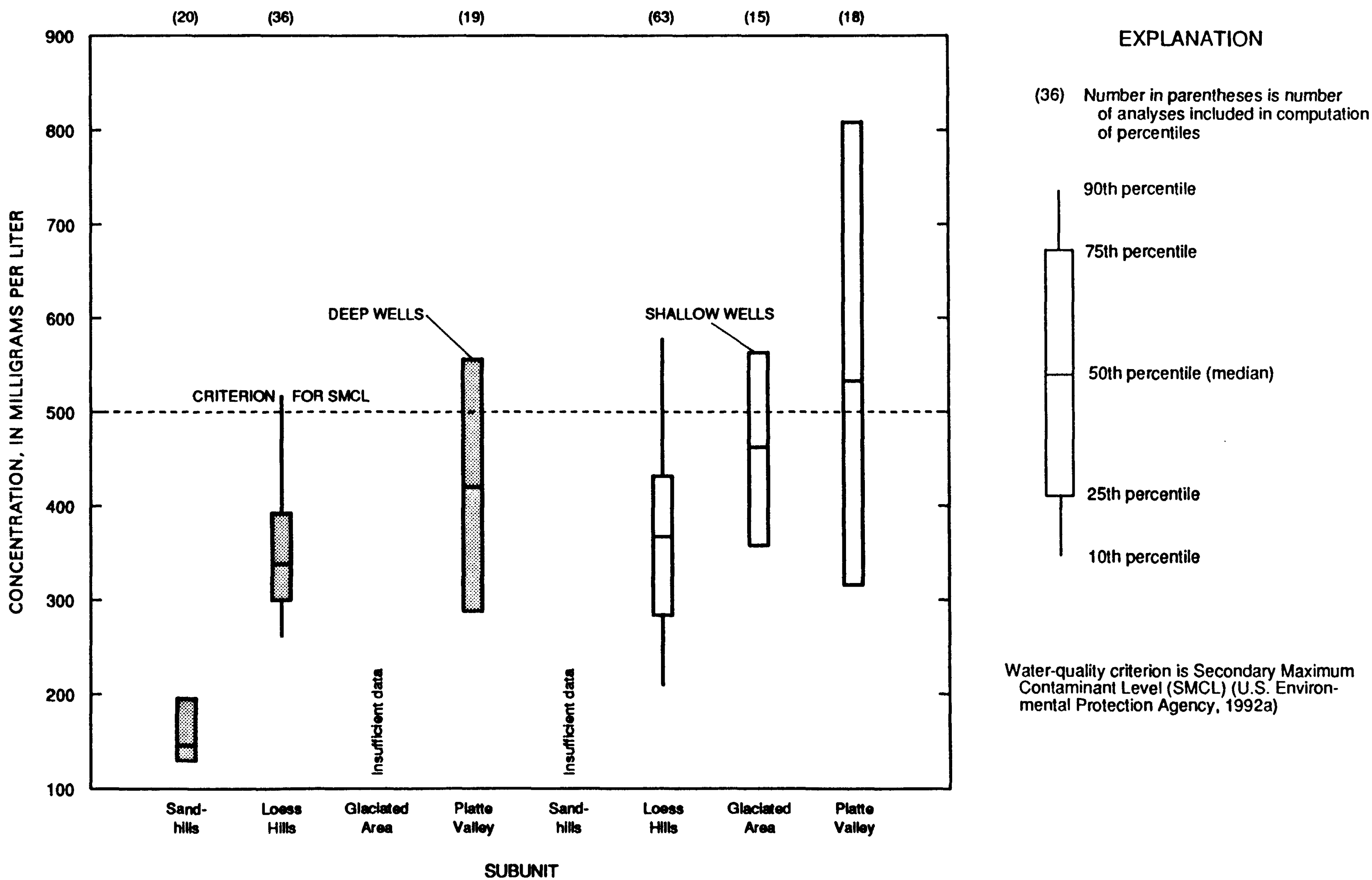


Figure 23. Distribution of concentrations of dissolved solids, sum of constituents, in ground-water samples collected from subunits of Central Nebraska Basins in relation to water-quality criterion, 1978-90.

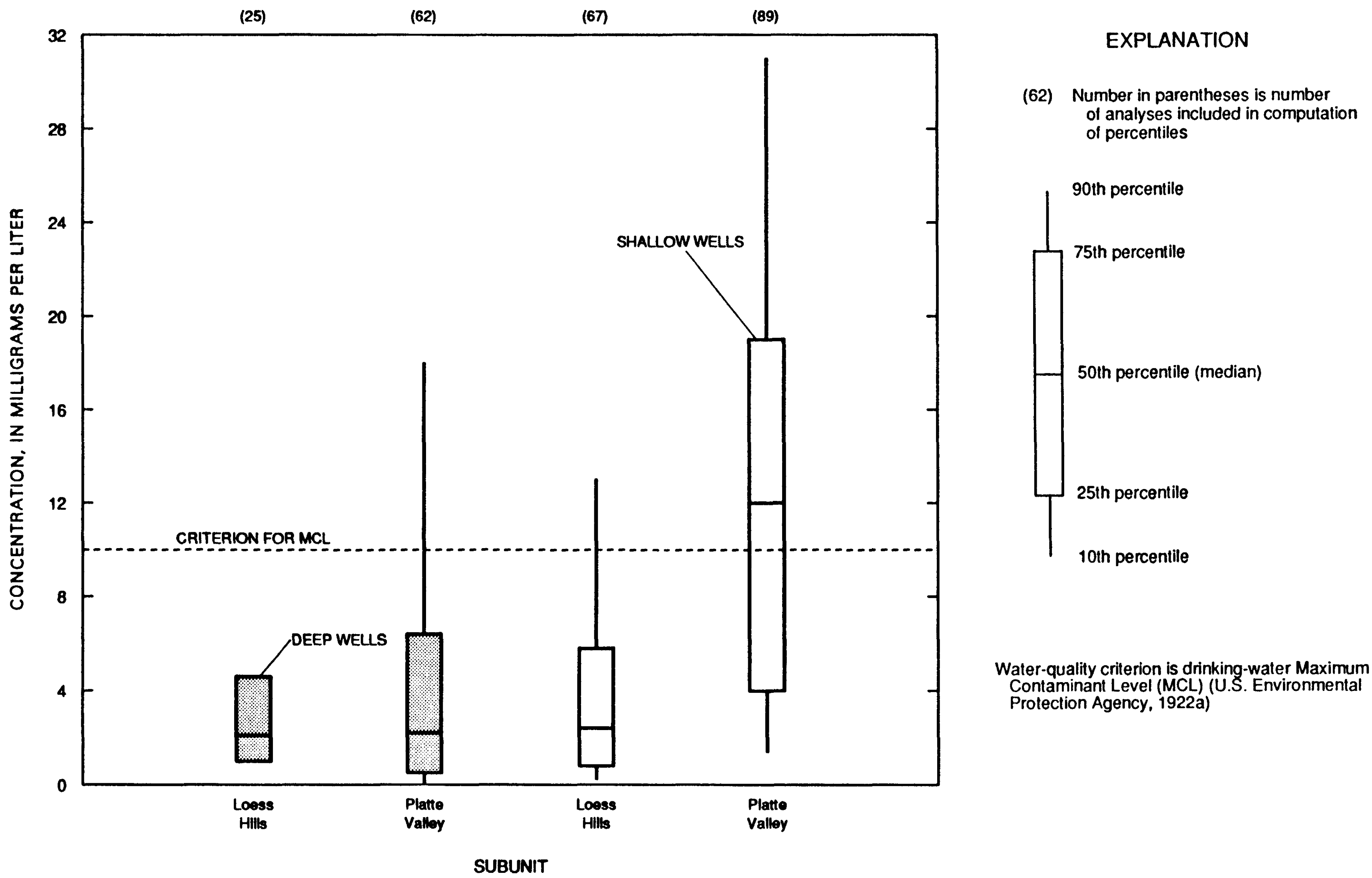


Figure 24. Distribution of concentrations of nitrate as nitrogen in ground-water samples collected from Loess Hills and Platte Valley subunits of Central Nebraska Basins in relation to water-quality criterion, 1978-90.

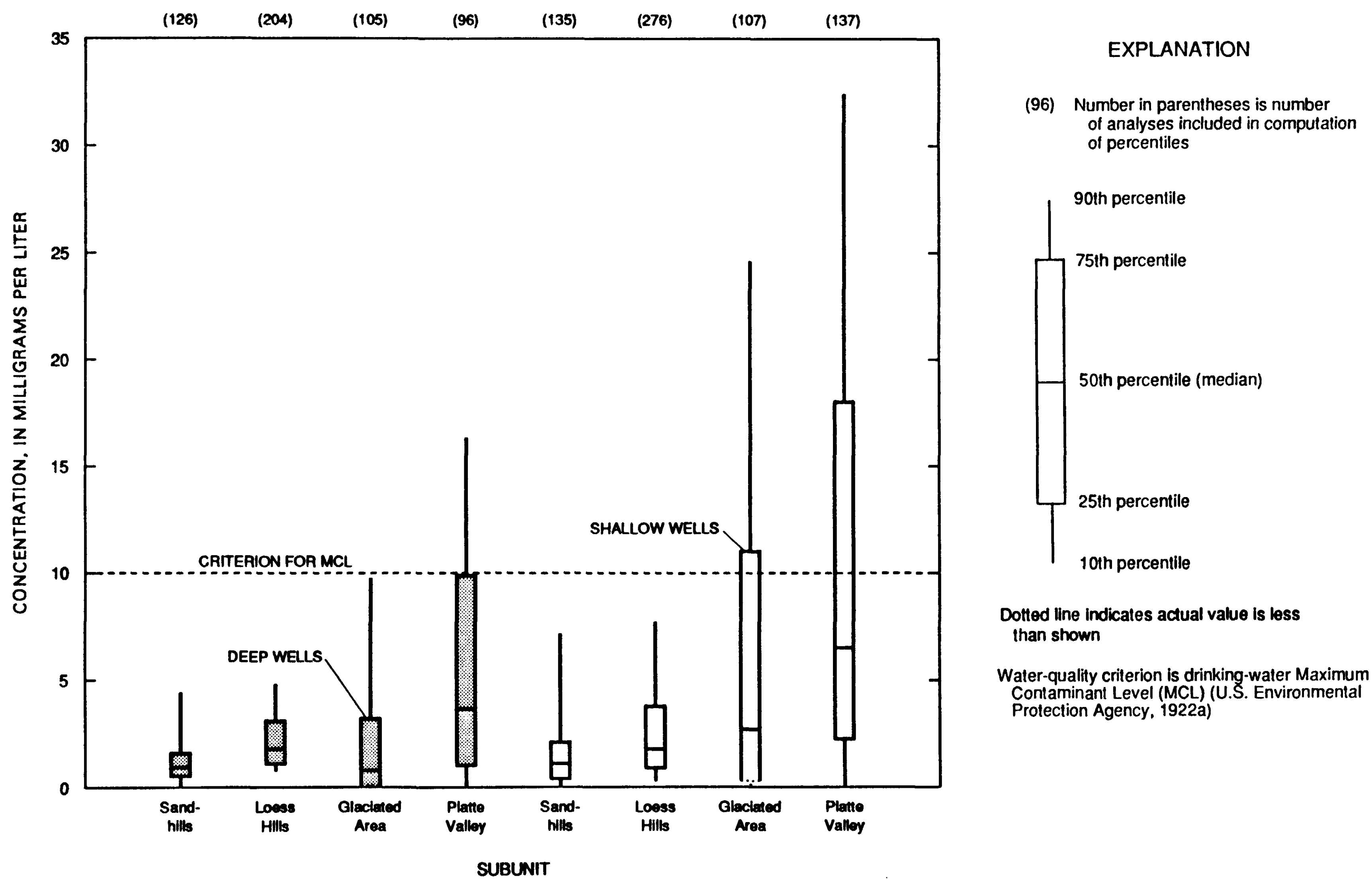


Figure 25. Distribution of concentrations of nitrite plus nitrate as nitrogen in ground-water samples collected from subunits of Central Nebraska Basins in relation to water-quality criterion, 1978-90.

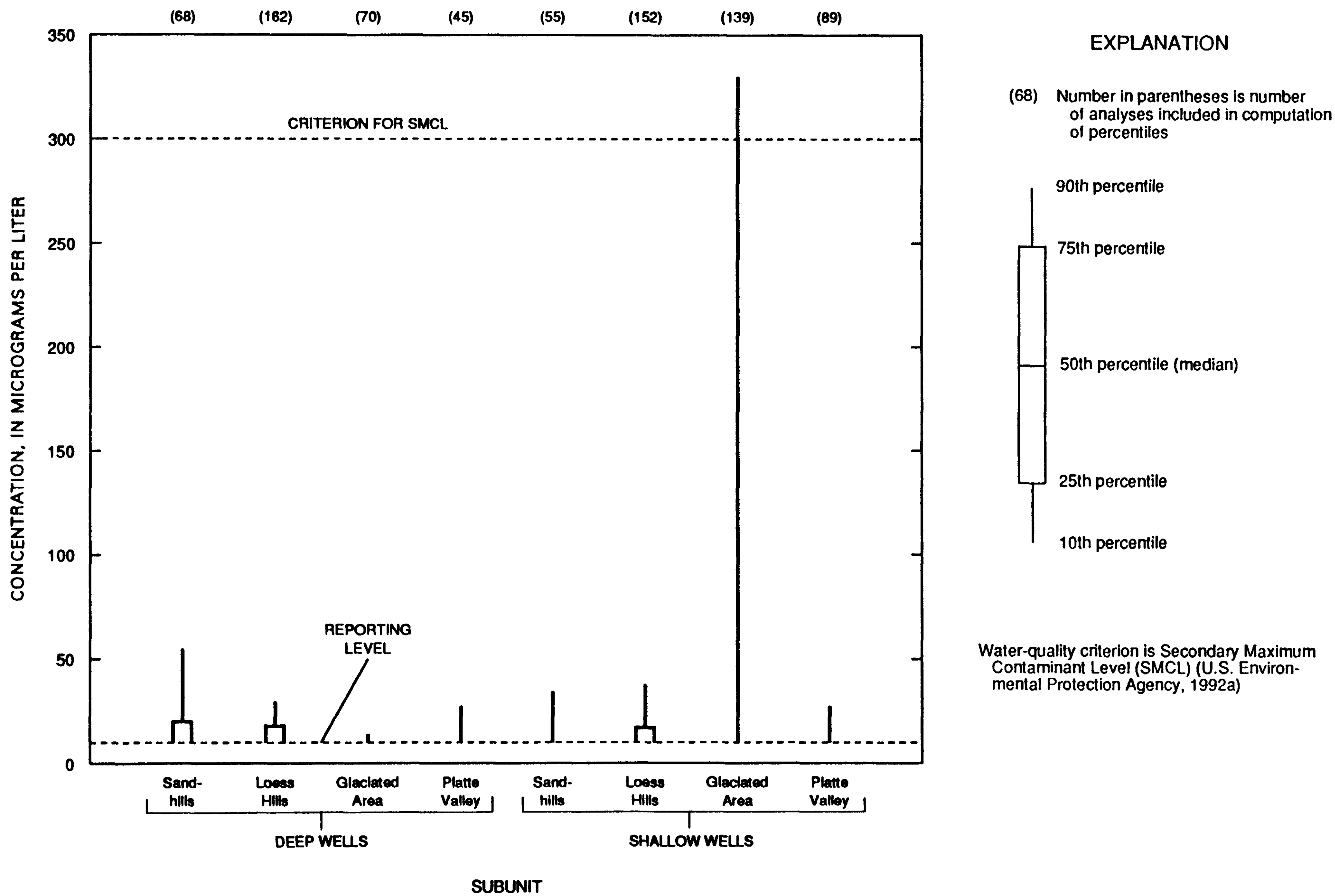


Figure 26. Distribution of concentrations of dissolved iron in ground-water samples collected from subunits of Central Nebraska Basins in relation to water-quality criterion, 1978-90.

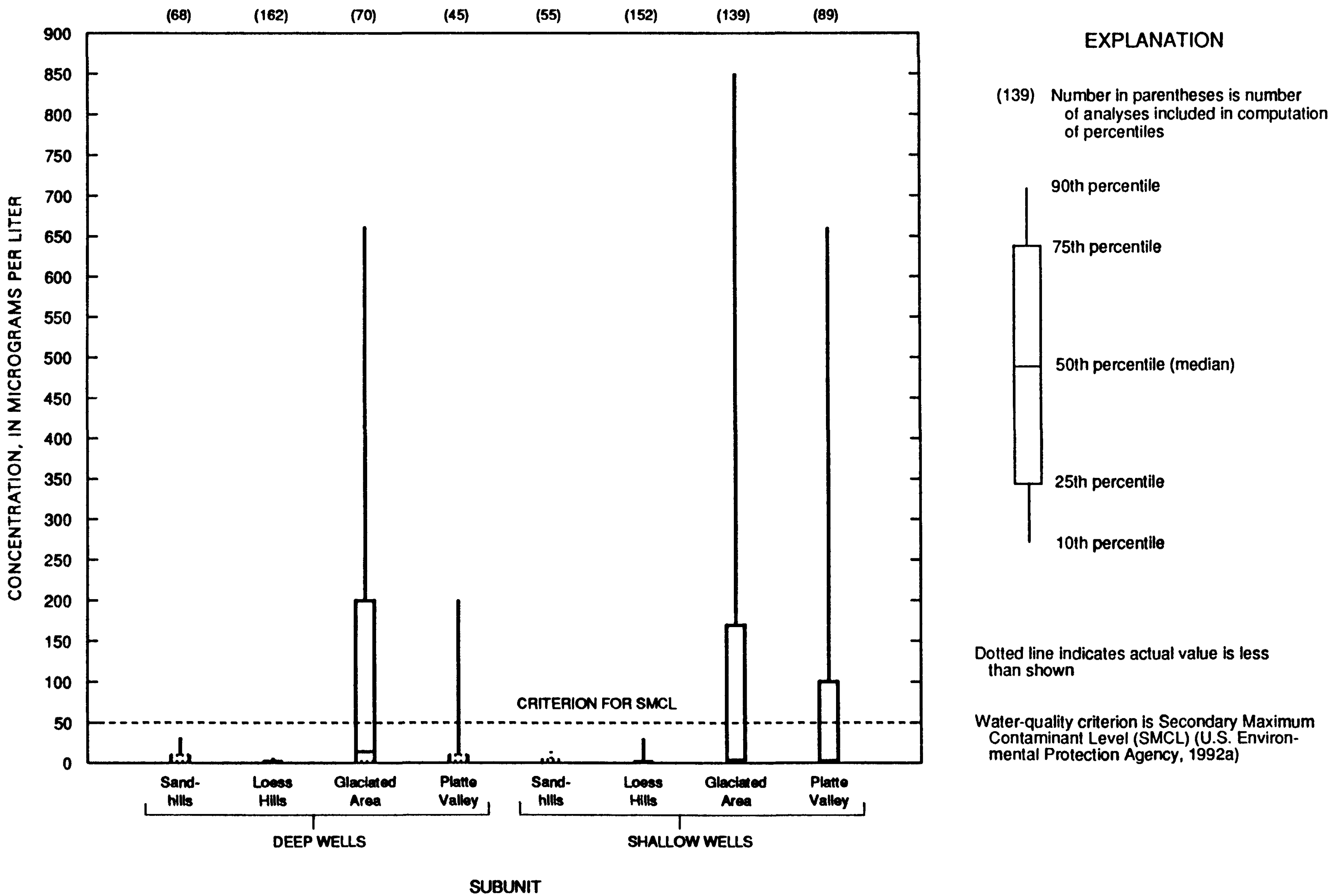


Figure 27. Distribution of concentrations of dissolved manganese in ground-water samples collected from subunits of Central Nebraska Basins in relation to water-quality criterion, 1978-90.

The report includes (1) a description of the sources and characteristics of water-quality data that are available, (2) a description of the approach used for screening data to identify a subset of the data suitable for summary and comparisons, (3) a presentation of statistical and graphical summaries of recent water-quality conditions, and (4) results from comparisons of recent water-quality conditions to established national water-quality criteria, where applicable. Data from 11 different agencies were compiled. Screening criteria were applied to identify those data suitable for inclusion in the summary computations. Six types of samples were included in the summary--stream water, lake water, streambed sediment, fish tissue, aquatic ecology, and ground water. Preparation of the data for summary was specific to each type of sample and may have included grouping sites and samples or adjustments for decreasing potential effects of sources of bias that were recognized in the data. Stream- and lake-water data were summarized for selected sampling sites, and data were summarized by major subunits of the study unit for streambed-sediment, fish-tissue, aquatic-ecological, and ground-water samples.

The statistical summaries focused on the central tendencies and typical variation in the data and used nonparametric statistics such as frequencies and percentile values. Comparisons of selected recent water-quality conditions to established national water-quality criteria were performed for stream water, fish tissue, and ground water. Summary statistics describing recent water-quality conditions exceeded water-quality criteria values for several properties and constituents: (1) for pH, dissolved sulfate, dissolved chloride, dissolved solids, dissolved manganese, and total selenium in stream water; and (2) for dissolved sulfate, dissolved solids, nitrate as nitrogen, nitrite plus nitrate as nitrogen, dissolved iron, and dissolved manganese in ground water.

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Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*

[Number in parentheses following constituent or property name is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System; <, less than; --, value not determined for fewer than 30 analyses]

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Specific conductance, onsite, in microsiemens per centimeter, at 25 degrees Celsius (00095)						
1	Platte River near Overton, Nebr.	112	790	850	890	960	1,000
2	Platte River near Grand Island, Nebr.	110	830	870	910	1,000	1,100
3	Platte River near Duncan, Nebr.	60	750	830	900	960	1,000
4	Middle Loup River north of Dunning, Nebr.	101	170	180	190	200	210
5	Dismal River near Thedford, Nebr.	44	170	170	170	180	180
6	Dismal River at Dunning, Nebr.	69	160	160	170	170	180
7	Middle Loup River at Sargent, Nebr.	102	160	170	190	200	210
8	Mud Creek near Sweetwater, Nebr.	101	520	590	630	660	710
9	South Loup River at St. Michael, Nebr.	207	330	380	410	440	480
10	Middle Loup River at St. Paul, Nebr.	125	270	280	310	350	380
11	North Loup River at Taylor, Nebr.	113	150	160	170	180	200
12	Calamus River near Burwell, Nebr.	81	140	140	150	170	180
13	North Loup River near St. Paul, Nebr.	206	200	220	230	250	260
14	Cedar River near Fullerton, Nebr.	174	250	270	280	300	320
15	Loup River Power Canal at diversion near Genoa, Nebr.	37	240	260	290	300	330
16	Beaver Creek at Genoa, Nebr.	88	300	320	360	380	420
17	Platte River at North Bend, Nebr.	93	360	460	530	630	740
18	Elkhorn River near Atkinson, Nebr.	76	220	230	240	270	310
19	Elkhorn River at Norfolk, Nebr.	85	290	320	330	350	370
20	Elkhorn River at West Point, Nebr.	85	360	400	450	490	530
21	Logan Creek at Pender, Nebr.	90	710	780	840	900	920
22	Elkhorn River at Waterloo, Nebr.	107	440	500	560	610	670
34	Salt Creek below Stevens Creek near Waverly, Nebr.	97	1,300	2,800	4,300	6,500	7,300
35	Salt Creek at Greenwood, Nebr.	89	1,300	2,400	3,600	5,200	6,400
36	Platte River at Louisville, Nebr.	100	460	550	650	740	840

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	pH, whole water, onsite, in standard units (00400)						
1	Platte River near Overton, Nebr.	104	7.9	8.0	8.3	8.5	8.7
2	Platte River near Grand Island, Nebr.	101	8.0	8.1	8.2	8.5	8.6
3	Platte River near Duncan, Nebr.	64	8.0	8.2	8.3	8.5	8.7
4	Middle Loup River north of Dunning, Nebr.	80	7.5	7.8	8.0	8.2	8.4
5	Dismal River near Thedford, Nebr.	44	7.5	7.6	7.7	8.1	8.2
6	Dismal River at Dunning, Nebr.	52	7.3	7.8	8.0	8.2	8.4
7	Middle Loup River at Sargent, Nebr.	73	7.3	7.5	7.9	8.1	8.3
8	Mud Creek near Sweetwater, Nebr.	101	7.6	7.8	8.0	8.2	8.4
9	South Loup River at St. Michael, Nebr.	179	7.4	7.7	8.2	8.4	8.6
10	Middle Loup River at St. Paul, Nebr.	125	7.6	7.8	8.1	8.3	8.5
11	North Loup River at Taylor, Nebr.	84	7.2	7.5	7.8	8.1	8.3
12	Calamus River near Burwell, Nebr.	55	7.4	7.6	7.9	8.2	8.5
13	North Loup River near St. Paul, Nebr.	173	7.3	7.6	7.9	8.3	8.6
14	Cedar River near Fullerton, Nebr.	157	7.3	7.7	8.0	8.2	8.4
15	Loup River Power Canal at diversion near Genoa, Nebr.	38	7.8	7.9	8.1	8.3	8.5
16	Beaver Creek at Genoa, Nebr.	93	7.5	7.7	8.0	8.2	8.4
17	Platte River at North Bend, Nebr.	98	7.7	8.0	8.2	8.4	8.6
18	Elkhorn River near Atkinson, Nebr.	78	7.3	7.6	7.7	8.1	8.7
19	Elkhorn River at Norfolk, Nebr.	83	7.5	7.8	8.1	8.4	8.7
20	Elkhorn River at West Point, Nebr.	87	7.5	7.8	8.1	8.4	8.6
21	Logan Creek at Pender, Nebr.	91	7.6	7.8	8.1	8.3	8.4
22	Elkhorn River at Waterloo, Nebr.	106	7.6	7.9	8.2	8.4	8.5
34	Salt Creek below Stevens Creek near Waverly, Nebr.	109	7.6	7.7	7.9	8.0	8.3
35	Salt Creek at Greenwood, Nebr.	95	7.5	7.8	7.9	8.0	8.2
36	Platte River at Louisville, Nebr.	102	7.8	8.0	8.2	8.5	8.7
	Temperature, water, in degrees Celsius (00010)						
1	Platte River near Overton, Nebr.	116	0	2.5	13.0	20.5	27.0
2	Platte River near Grand Island, Nebr.	113	.5	2.0	12.5	21.0	26.5
3	Platte River near Duncan, Nebr.	66	.5	4.5	14.0	22.0	25.5
4	Middle Loup River north of Dunning, Nebr.	99	0	3.0	11.0	17.0	20.5
5	Dismal River near Thedford, Nebr.	45	4.0	6.0	12.5	18.5	20.0

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Temperature, water, in degrees Celsius (00010)--Continued						
6	Dismal River at Dunning, Nebr.	69	1.0	3.0	11.0	17.5	20.0
7	Middle Loup River at Sargent, Nebr.	100	0	1.0	8.0	18.0	22.0
8	Mud Creek near Sweetwater, Nebr.	102	.5	1.0	11.0	18.5	23.0
9	South Loup River at St. Michael, Nebr.	206	.5	1.0	10.5	19.0	24.0
10	Middle Loup River at St. Paul, Nebr.	123	.5	3.0	14.0	22.5	27.5
11	North Loup River at Taylor, Nebr.	111	0	1.0	9.0	19.0	21.0
12	Calamus River near Burwell, Nebr.	80	1.0	3.0	9.0	19.0	22.0
13	North Loup River near St. Paul, Nebr.	206	.5	1.0	10.0	20.0	25.0
14	Cedar River near Fullerton, Nebr.	186	0	1.0	10.0	20.0	25.0
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	0	1.0	12.0	23.0	27.0
16	Beaver Creek at Genoa, Nebr.	96	0	1.5	12.0	20.5	26.5
17	Platte River at North Bend, Nebr.	102	0	1.0	10.5	21.5	26.0
18	Elkhorn River near Atkinson, Nebr.	79	.5	3.0	13.0	22.5	26.0
19	Elkhorn River at Norfolk, Nebr.	89	0	3.0	13.0	23.0	28.0
20	Elkhorn River at West Point, Nebr.	92	0	.5	11.0	20.5	25.0
21	Logan Creek at Pender, Nebr.	92	0	1.5	11.5	20.0	25.0
22	Elkhorn River at Waterloo, Nebr.	114	0	1.5	13.0	20.5	26.0
34	Salt Creek below Stevens Creek near Waverly, Nebr.	110	1.0	5.0	14.0	21.5	26.5
35	Salt Creek at Greenwood, Nebr.	97	.5	3.5	12.0	22.0	26.5
36	Platte River at Louisville, Nebr.	112	0	3.0	12.0	22.0	26.5
	Turbidity, in nephelometric turbidity units (00076)						
3	Platte River near Duncan, Nebr.	65	3.1	8.4	15	35	70
5	Dismal River near Thedford, Nebr.	32	6.8	10	15	20	29
14	Cedar River near Fullerton, Nebr.	25	--	14	22	36	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	8.3	18	29	50	130
22	Elkhorn River at Waterloo, Nebr.	59	12	22	40	85	330
36	Platte River at Louisville, Nebr.	45	14	24	39	85	470

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Dissolved oxygen, in milligrams per liter (00300)						
1	Platte River near Overton, Nebr.	115	7.6	8.6	10	12	13
2	Platte River near Grand Island, Nebr.	113	8.4	9.1	10	12	13
3	Platte River near Duncan, Nebr.	64	7.8	9.5	11	13	14
4	Middle Loup River north of Dunning, Nebr.	99	7.6	8.4	9.9	12	13
5	Dismal River near Thedford, Nebr.	44	7.8	8.4	9.2	11	11
6	Dismal River at Dunning, Nebr.	68	7.8	8.5	9.9	12	13
7	Middle Loup River at Sargent, Nebr.	97	7.6	8.5	10	12	13
8	Mud Creek near Sweetwater, Nebr.	100	6.3	7.0	8.7	12	13
9	South Loup River at St. Michael, Nebr.	204	7.9	8.6	9.9	12	13
10	Middle Loup River at St. Paul, Nebr.	115	8.1	8.6	9.7	12	13
11	North Loup River at Taylor, Nebr.	100	8.1	8.8	10	12	12
12	Calamus River near Burwell, Nebr.	71	7.8	8.9	11	13	14
13	North Loup River near St. Paul, Nebr.	201	7.8	8.9	10	12	13
14	Cedar River near Fullerton, Nebr.	102	7.3	8.3	10	12	14
15	Loup River Power Canal at diversion near Geneoa, Nebr.	38	8.0	9.5	11	13	15
16	Beaver Creek at Genoa, Nebr.	95	7.6	9.0	10	12	14
17	Platte River at North Bend, Nebr.	102	8.0	9.8	11	13	14
18	Elkhorn River near Atkinson, Nebr.	78	7.4	8.6	9.9	12	13
19	Elkhorn River at Norfolk, Nebr.	89	7.7	9.4	11	12	14
20	Elkhorn River at West Point, Nebr.	91	8.3	9.6	11	13	14
21	Logan Creek at Pender, Nebr.	92	7.9	8.8	10	12	13
22	Elkhorn River at Waterloo, Nebr.	112	6.7	8.3	10	13	15
34	Salt Creek below Stevens Creek near Waverly, Nebr.	106	6.0	6.9	9.5	11	14
35	Salt Creek at Greenwood, Nebr.	95	6.0	7.0	9.2	11	13
36	Platte River at Louisville, Nebr.	109	7.7	8.8	11	13	15
	Coliform, fecal, M-FC media, in colonies per 100 milliliters (31616)						
1	Platte River near Overton, Nebr.	12	--	120	300	860	--
2	Platte River near Grand Island, Nebr.	12	--	22	36	92	--
4	Middle Loup River north of Dunning, Nebr.	100	7	20	67	140	280
6	Dismal River at Dunning, Nebr.	68	16	40	80	140	310
7	Middle Loup River at Sargent, Nebr.	101	4	9	20	74	320

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Coliform, fecal, M-FC media, in colonies per 100 milliliters (31616)--Continued						
9	South Loup River at St. Michael, Nebr.	91	16	48	170	630	2,200
11	North Loup River at Taylor, Nebr.	103	5	10	33	81	200
12	Calamus River near Burwell, Nebr.	71	4	7	7	29	120
13	North Loup River near St. Paul, Nebr.	101	10	26	64	220	910
14	Cedar River near Fullerton, Nebr.	72	24	43	160	560	1,300
	Coliform, fecal, 0.7-micrometer membrane filter, in colonies per 100 milliliters (31625)						
1	Platte River near Overton, Nebr.	92	21	59	180	520	1,200
2	Platte River near Grand Island, Nebr.	100	16	38	140	360	1,200
3	Platte River near Duncan, Nebr.	62	8	28	86	420	1,400
5	Dismal River near Thedford, Nebr.	43	12	24	73	180	320
8	Mud Creek near Sweetwater, Nebr.	99	37	94	370	2,100	7,300
14	Cedar River near Fullerton, Nebr.	25	--	140	230	1,100	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	14	66	220	1,400	4,400
16	Beaver Creek at Genoa, Nebr.	95	110	420	970	3,500	20,000
17	Platte River at North Bend, Nebr.	97	65	110	320	1,000	12,000
18	Elkhorn River near Atkinson, Nebr.	78	140	380	840	1,900	3,300
19	Elkhorn River at Norfolk, Nebr.	84	41	100	380	1,100	7,000
20	Elkhorn River at West Point, Nebr.	87	140	260	770	2,200	22,000
21	Logan Creek at Pender, Nebr.	87	60	200	490	2,500	26,000
22	Elkhorn River at Waterloo, Nebr.	104	350	760	1,400	4,100	17,000
34	Salt Creek below Stevens Creek near Waverly, Nebr.	102	92	350	4,200	28,000	50,000
35	Salt Creek at Greenwood, Nebr.	94	90	320	5,400	17,000	36,000
36	Platte River at Louisville, Nebr.	103	56	140	330	1,800	12,000
	Streptococci, fecal, M-enterococcus agar medium, in colonies per 100 milliliters (31679)						
1	Platte River near Overton, Nebr.	12	--	66	130	200	--
2	Platte River near Grand Island, Nebr.	12	--	28	72	340	--
4	Middle Loup River north of Dunning, Nebr.	67	18	43	100	150	290
6	Dismal River at Dunning, Nebr.	67	17	32	81	150	350
7	Middle Loup River at Sargent, Nebr.	68	10	27	57	120	320

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Streptococci, fecal, M-enterococcus agar medium, in colonies per 100 milliliters (31679)--Continued						
9	South Loup River at St. Michael, Nebr.	60	50	81	190	640	2,900
11	North Loup River at Taylor, Nebr.	70	10	30	48	100	220
12	Calamus River near Burwell, Nebr.	70	7	7	20	55	250
13	North Loup River near St. Paul, Nebr.	72	25	40	130	440	2,400
14	Cedar River near Fullerton, Nebr.	72	61	130	320	990	1,700
	Streptococci, fecal, KF agar medium, in colonies per 100 milliliters (31673)						
1	Platte River near Overton, Nebr.	95	39	100	300	1,400	6,000
2	Platte River near Grand Island, Nebr.	100	48	79	160	620	2,400
3	Platte River near Duncan, Nebr.	63	27	100	240	920	1,800
5	Dismal River near Thedford, Nebr.	43	40	54	90	280	600
8	Mud Creek near Sweetwater, Nebr.	99	140	400	1,200	4,300	12,000
14	Cedar River near Fullerton, Nebr.	25	--	300	760	1,200	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	90	120	820	3,500	18,000
16	Beaver Creek at Genoa, Nebr.	96	360	1,000	3,200	9,300	55,000
17	Platte River at North Bend, Nebr.	101	80	190	520	2,300	18,000
18	Elkhorn River near Atkinson, Nebr.	77	110	260	600	1,200	2,600
19	Elkhorn River at Norfolk, Nebr.	86	90	160	480	2,600	10,000
20	Elkhorn River at West Point, Nebr.	88	140	370	1,000	7,100	42,000
21	Logan Creek at Pender, Nebr.	89	130	280	960	5,500	60,000
22	Elkhorn River at Waterloo, Nebr.	104	380	770	4,500	21,000	49,000
34	Salt Creek below Stevens Creek near Waverly, Nebr.	107	69	230	2,000	8,200	49,000
35	Salt Creek at Greenwood, Nebr.	96	210	500	2,000	9,700	35,000
36	Platte River at Louisville, Nebr.	101	100	250	1,000	5,000	53,000
	Hardness, total, as $CaCO_3$, in milligrams per liter (00900)						
1	Platte River near Overton, Nebr.	107	250	280	300	330	350
2	Platte River near Grand Island, Nebr.	113	240	270	290	330	350
3	Platte River near Duncan, Nebr.	66	210	250	280	310	340
4	Middle Loup River north of Dunning, Nebr.	98	60	66	70	74	83
5	Dismal River near Thedford, Nebr.	43	67	69	71	72	75
6	Dismal River at Dunning, Nebr.	68	56	59	62	66	70
7	Middle Loup River at Sargent, Nebr.	101	61	67	73	78	83

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Hardness, total, as $CaCO_3$, in milligrams per liter (00900)--Continued						
8	Mud Creek near Sweetwater, Nebr.	101	240	280	300	320	340
9	South Loup River at St. Michael, Nebr.	111	140	160	190	210	220
10	Middle Loup River at St. Paul, Nebr.	29	--	120	140	160	--
11	North Loup River at Taylor, Nebr.	112	56	61	65	70	79
12	Calamus River near Burwell, Nebr.	81	49	52	56	60	66
13	North Loup River near St. Paul, Nebr.	119	75	85	92	100	110
14	Cedar River near Fullerton, Nebr.	187	100	120	120	130	140
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	100	110	120	130	150
16	Beaver Creek at Genoa, Nebr.	95	120	140	160	170	200
17	Platte River at North Bend, Nebr.	102	140	160	180	210	250
18	Elkhorn River near Atkinson, Nebr.	77	84	89	95	110	120
19	Elkhorn River at Norfolk, Nebr.	89	130	140	150	160	160
20	Elkhorn River at West Point, Nebr.	92	143	170	200	220	240
21	Logan Creek at Pender, Nebr.	92	310	360	420	450	460
22	Elkhorn River at Waterloo, Nebr.	114	170	210	240	270	300
34	Salt Creek below Stevens Creek near Waverly, Nebr.	104	180	270	340	360	380
35	Salt Creek at Greenwood, Nebr.	97	190	280	330	350	370
36	Platte River at Louisville, Nebr.	112	160	170	200	230	250
	Hardness, noncarbonate, as $CaCO_3$, in milligrams per liter (00904)						
3	Platte River near Duncan, Nebr.	30	54	73	98	120	150
22	Elkhorn River at Waterloo, Nebr.	27	--	15	19	31	--
36	Platte River at Louisville, Nebr.	18	--	18	31	49	--
	Calcium, dissolved, in milligrams per liter (00915)						
1	Platte River near Overton, Nebr.	107	65	72	79	86	92
2	Platte River near Grand Island, Nebr.	113	60	68	77	85	92
3	Platte River near Duncan, Nebr.	66	50	62	74	83	90
4	Middle Loup River north of Dunning, Nebr.	99	19	22	23	25	27
5	Dismal River near Thedford, Nebr.	43	21	22	23	23	24
6	Dismal River at Dunning, Nebr.	68	17	19	20	21	23
7	Middle Loup River at Sargent, Nebr.	101	19	21	24	25	27

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Calcium, dissolved, in milligrams per liter (00915)--Continued						
8	Mud Creek near Sweetwater, Nebr.	101	74	88	95	100	110
9	South Loup River at St. Michael, Nebr.	111	43	50	61	65	69
10	Middle Loup River at St. Paul, Nebr.	29	--	40	44	50	--
11	North Loup River at Taylor, Nebr.	112	17	19	21	23	25
12	Calamus River near Burwell, Nebr.	81	15	17	18	19	21
13	North Loup River near St. Paul, Nebr.	119	24	27	29	32	34
14	Cedar River near Fullerton, Nebr.	187	33	37	39	42	44
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	33	34	38	41	46
16	Beaver Creek at Genoa, Nebr.	95	38	45	51	54	62
17	Platte River at North Bend, Nebr.	102	40	46	52	60	68
18	Elkhorn River near Atkinson, Nebr.	77	27	29	31	35	39
19	Elkhorn River at Norfolk, Nebr.	89	40	44	47	50	52
20	Elkhorn River at West Point, Nebr.	92	43	51	59	65	70
21	Logan Creek at Pender, Nebr.	92	84	100	120	120	130
22	Elkhorn River at Waterloo, Nebr.	114	48	60	68	79	86
34	Salt Creek below Stevens Creek near Waverly, Nebr.	104	50	76	89	95	100
35	Salt Creek at Greenwood, Nebr.	97	52	74	87	93	98
36	Platte River at Louisville, Nebr.	112	45	50	56	65	69
	Magnesium, dissolved, in milligrams per liter (00925)						
1	Platte River near Overton, Nebr.	107	21	23	25	27	30
2	Platte River near Grand Island, Nebr.	113	22	23	26	28	30
3	Platte River near Duncan, Nebr.	66	19	21	24	27	29
4	Middle Loup River north of Dunning, Nebr.	99	2.6	3.0	3.1	3.6	4.0
5	Dismal River near Thedford, Nebr.	43	3.2	3.3	3.4	3.5	3.6
6	Dismal River at Dunning, Nebr.	69	2.5	2.8	3.0	3.3	3.6
7	Middle Loup River at Sargent, Nebr.	101	2.7	3.0	3.4	3.8	4.1
8	Mud Creek near Sweetwater, Nebr.	101	12	14	16	17	18
9	South Loup River at St. Michael, Nebr.	111	6.9	7.7	9.0	10	12
10	Middle Loup River at St. Paul, Nebr.	29	--	6.4	7.5	8.6	--
11	North Loup River at Taylor, Nebr.	112	2.4	3.0	3.1	3.5	4.0
12	Calamus River near Burwell, Nebr.	81	2.3	2.6	2.8	3.1	3.4

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Magnesium, dissolved, in milligrams per liter (00925)--Continued						
13	North Loup River near St. Paul, Nebr.	119	3.8	4.2	4.7	5.1	5.9
14	Cedar River near Fullerton, Nebr.	187	5.5	6.0	6.6	7.1	7.5
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	5.3	5.5	6.2	6.8	7.6
16	Beaver Creek at Genoa, Nebr.	96	6.4	7.5	8.3	9.1	10
17	Platte River at North Bend, Nebr.	102	8.6	11	14	16	19
18	Elkhorn River near Atkinson, Nebr.	77	3.7	4.1	4.3	5.3	5.9
19	Elkhorn River at Norfolk, Nebr.	89	6.4	7.0	7.5	7.9	8.3
20	Elkhorn River at West Point, Nebr.	92	9.2	10	12	14	15
21	Logan Creek at Pender, Nebr.	92	22	26	30	33	35
22	Elkhorn River at Waterloo, Nebr.	114	12	14	17	19	21
34	Salt Creek below Stevens Creek near Waverly, Nebr.	104	14	21	28	30	32
35	Salt Creek at Greenwood, Nebr.	97	15	22	26	28	31
36	Platte River at Louisville, Nebr.	112	11	12	15	17	19
	Sodium, dissolved, in milligrams per liter (00930)						
1	Platte River near Overton, Nebr.	113	68	75	82	86	91
2	Platte River near Grand Island, Nebr.	105	77	82	88	93	100
3	Platte River near Duncan, Nebr.	66	66	77	82	90	96
4	Middle Loup River north of Dunning, Nebr.	99	5.5	6.5	7.0	7.4	8.2
5	Dismal River near Thedford, Nebr.	43	6.6	6.7	6.9	7.0	7.4
6	Dismal River at Dunning, Nebr.	68	4.8	5.8	6.3	6.5	6.9
7	Middle Loup River at Sargent, Nebr.	100	5.7	6.4	6.8	7.2	7.7
8	Mud Creek near Sweetwater, Nebr.	71	10	14	16	17	20
9	South Loup River at St. Michael, Nebr.	110	8.3	10	11	13	14
10	Middle Loup River at St. Paul, Nebr.	29	--	9.5	11	12	--
11	North Loup River at Taylor, Nebr.	111	5.1	5.8	6.1	6.6	7.4
12	Calamus River near Burwell, Nebr.	81	5.0	5.4	5.9	6.5	7.0
13	North Loup River near St. Paul, Nebr.	118	6.4	7.1	7.7	8.3	9.1
14	Cedar River near Fullerton, Nebr.	187	7.1	7.7	8.4	9.1	11
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	7.9	8.3	9.2	9.8	11
16	Beaver Creek at Genoa, Nebr.	69	7.4	9.0	9.9	11	12
17	Platte River at North Bend, Nebr.	74	18	24	36	46	54

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Sodium, dissolved, in milligrams per liter (00930)--Continued						
18	Elkhorn River near Atkinson, Nebr.	61	9.1	9.8	11	12	16
19	Elkhorn River at Norfolk, Nebr.	65	8.7	9.3	10	11	13
20	Elkhorn River at West Point, Nebr.	69	13	15	17	18	21
21	Logan Creek at Pender, Nebr.	68	23	26	27	30	34
22	Elkhorn River at Waterloo, Nebr.	106	16	21	23	25	26
34	Salt Creek below Stevens Creek near Waverly, Nebr.	104	200	470	840	1,300	1,400
35	Salt Creek at Greenwood, Nebr.	70	180	390	640	930	1,300
36	Platte River at Louisville, Nebr.	101	31	40	56	76	90
	Potassium, dissolved, in milligrams per liter (00935)						
1	Platte River near Overton, Nebr.	90	9.5	10	12	13	15
2	Platte River near Grand Island, Nebr.	37	9.6	11	12	13	15
3	Platte River near Duncan, Nebr.	66	9.6	10	12	13	14
5	Dismal River near Thedford, Nebr.	43	4.7	4.8	4.9	5.1	5.3
8	Mud Creek near Sweetwater, Nebr.	15	--	12	14	19	--
9	South Loup River at St. Michael, Nebr.	20	--	8.7	9.9	12	--
10	Middle Loup River at St. Paul, Nebr.	29	--	7.4	8.3	11	--
13	North Loup River near St. Paul, Nebr.	20	--	6.7	7.4	7.8	--
14	Cedar River near Fullerton, Nebr.	119	6.2	6.6	7.0	7.6	8.4
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	6.4	6.9	7.5	8.4	9.0
16	Beaver Creek at Genoa, Nebr.	15	--	6.9	7.9	9.7	--
17	Platte River at North Bend, Nebr.	15	--	8.6	9.3	10	--
19	Elkhorn River at Norfolk, Nebr.	15	--	6.9	7.4	8.0	--
20	Elkhorn River at West Point, Nebr.	15	--	7.6	8.2	8.8	--
21	Logan Creek at Pender, Nebr.	15	--	6.5	6.8	9.4	--
22	Elkhorn River at Waterloo, Nebr.	62	6.9	7.5	8.4	9.6	11
34	Salt Creek below Stevens Creek near Waverly, Nebr.	103	7.9	9.4	11	14	16
35	Salt Creek at Greenwood, Nebr.	16	--	9.2	11	14	--
36	Platte River at Louisville, Nebr.	45	7.9	8.4	9.3	9.8	11

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Bicarbonate, dissolved, field, in milligrams per liter (00453)						
3	Plate River near Duncan, Nebr.	30	130	160	210	230	270
5	Dismal River near Thedford, Nebr.	19	--	94	97	99	--
14	Cedar River near Fullerton, Nebr.	23	--	150	160	170	--
22	Elkhorn River at Waterloo, Nebr.	27	--	220	250	290	--
36	Platte River at Louisville, Nebr.	17	--	180	200	210	--
	Carbonate, dissolved, onsite, in milligrams per liter (00452)						
3	Platte River near Duncan, Nebr.	30	0	0	11	14	22
5	Dismal River near Thedford, Nebr.	19	--	0	0	0	--
14	Cedar River near Fullerton, Nebr.	23	--	0	0	4	--
22	Elkhorn River at Waterloo, Nebr.	27	--	0	0	12	--
36	Platte River at Louisville, Nebr.	17	--	0	0	10	--
	Alkalinity, total, onsite, as $CaCO_3$, in milligrams per liter (39086)						
3	Platte River near Duncan, Nebr.	30	120	150	180	210	220
5	Dismal River near Thedford, Nebr.	19	--	77	79	81	--
14	Cedar River near Fullerton, Nebr.	23	--	130	130	140	--
22	Elkhorn River at Waterloo, Nebr.	27	--	190	220	240	--
36	Platte River at Louisville, Nebr.	18	--	160	170	170	--
	Alkalinity, titration to pH 4.5, laboratory, as $CaCO_3$, in milligrams per liter (90410)						
1	Platte River near Overton, Nebr.	90	170	180	200	210	220
2	Platte River near Grand Island, Nebr.	37	160	180	190	200	220
3	Platte River near Duncan, Nebr.	65	140	160	180	200	210
5	Dismal River near Thedford, Nebr.	43	76	80	81	83	85
8	Mud Creek near Sweetwater, Nebr.	15	--	240	290	300	--
9	South Loup River at St. Michael, Nebr.	20	--	160	180	210	--
10	Middle Loup River at St. Paul, Nebr.	29	--	130	150	170	--
13	North Loup River near St. Paul, Nebr.	20	--	110	120	120	--
14	Cedar River near Fullerton, Nebr.	118	120	130	140	140	150
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	110	120	130	140	150
16	Beaver Creek at Genoa, Nebr.	15	--	160	180	200	--
17	Platte River at North Bend, Nebr.	15	--	140	160	180	--
19	Elkhorn River at Norfolk, Nebr.	15	--	150	160	170	--

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Alkalinity, titration to pH 4.5, laboratory, as $CaCO_3$, in milligrams per liter (90410)--Continued						
20	Elkhorn River at West Point, Nebr.	15	--	160	180	200	--
21	Logan Creek at Pender, Nebr.	15	--	270	290	300	--
22	Elkhorn River at Waterloo, Nebr.	60	120	190	220	240	260
34	Salt Creek below Stevens Creek near Waverly, Nebr.	102	160	240	280	300	320
35	Salt Creek at Greenwood, Nebr.	16	--	150	290	300	--
36	Platte River at Louisville, Nebr.	44	140	150	170	190	200
	Sulfate, dissolved, in milligrams per liter (00945)						
1	Platte River near Overton, Nebr.	97	180	200	230	260	300
2	Platte River near Grand Island, Nebr.	101	200	220	240	280	300
3	Platte River near Duncan, Nebr.	66	180	210	240	270	300
5	Dismal River near Thedford, Nebr.	43	5.0	6.0	7.0	7.7	8.4
8	Mud Creek near Sweetwater, Nebr.	101	6.0	21	24	28	33
9	South Loup River at St. Michael, Nebr.	20	--	16	18	21	--
10	Middle Loup River at St. Paul, Nebr.	29	--	12	16	19	--
13	North Loup River near St. Paul, Nebr.	20	--	7.3	10	11	--
14	Cedar River near Fullerton, Nebr.	119	5.0	9.3	10	12	14
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	5.0	9.9	11	13	17
16	Beaver Creek at Genoa, Nebr.	96	2.3	9.2	13	15	18
17	Platte River at North Bend, Nebr.	102	38	61	90	130	160
18	Elkhorn River near Atkinson, Nebr.	76	2.0	7.8	10	11	13
19	Elkhorn River at Norfolk, Nebr.	89	2.0	8.8	11	13	14
20	Elkhorn River at West Point, Nebr.	91	8.4	22	30	38	44
21	Logan Creek at Pender, Nebr.	92	110	120	140	160	170
22	Elkhorn River at Waterloo, Nebr.	108	28	44	54	62	69
34	Salt Creek below Stevens Creek near Waverly, Nebr.	104	94	150	240	320	360
35	Salt Creek at Greenwood, Nebr.	97	82	140	210	280	310
36	Platte River at Louisville, Nebr.	104	58	70	94	120	140
	Chloride, dissolved, in milligrams per liter (00940)						
1	Platte River near Overton, Nebr.	109	22	25	29	35	38
2	Platte River near Grand Island, Nebr.	113	25	27	32	36	40
3	Platte River near Duncan, Nebr.	66	24	27	32	36	41

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Chloride, dissolved, in milligrams per liter (00940)--Continued						
4	Middle Loup River north of Dunning, Nebr.	101	1.0	1.3	2.5	5.0	5.0
5	Dismal River near Thedford, Nebr.	43	.5	.8	.9	1.0	1.3
6	Dismal River at Dunning, Nebr.	68	1.0	1.3	2.3	5.0	5.0
7	Middle Loup River at Sargent, Nebr.	102	1.0	1.2	2.7	5.0	5.0
8	Mud Creek near Sweetwater, Nebr.	101	6.4	8.9	11	14	17
9	South Loup River at St. Michael, Nebr.	112	3.5	4.3	5.0	5.5	6.7
10	Middle Loup River at St. Paul, Nebr.	29	--	2.8	3.7	4.4	--
11	North Loup River at Taylor, Nebr.	112	1.0	1.1	2.2	5.0	5.0
12	Calamus River near Burwell, Nebr.	80	1.0	1.2	3.8	5.0	5.0
13	North Loup River near St. Paul, Nebr.	120	1.5	1.8	2.7	5.0	5.0
14	Cedar River near Fullerton, Nebr.	187	1.6	2.0	2.7	5.0	5.0
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	1.9	2.4	2.9	3.4	3.7
16	Beaver Creek at Genoa, Nebr.	95	2.9	3.4	4.2	5.0	6.0
17	Platte River at North Bend, Nebr.	101	7.1	10	14	18	21
18	Elkhorn River near Atkinson, Nebr.	77	2.6	3.2	3.6	5.0	5.0
19	Elkhorn River at Norfolk, Nebr.	89	3.1	3.4	4.0	5.0	5.2
20	Elkhorn River at West Point, Nebr.	92	6.3	7.9	9.0	10	12
21	Logan Creek at Pender, Nebr.	92	7.6	8.6	10	12	15
22	Elkhorn River at Waterloo, Nebr.	114	8.8	11	12	16	21
34	Salt Creek below Stevens Creek near Waverly, Nebr.	109	290	740	1,200	1,800	2,100
35	Salt Creek at Greenwood, Nebr.	97	250	580	930	1,400	1,900
36	Platte River at Louisville, Nebr.	111	14	21	42	67	95
	Fluoride, dissolved, in milligrams per liter (00950)						
1	Platte River near Overton, Nebr.	91	.5	.5	.6	.6	.6
2	Platte River near Grand Island, Nebr.	37	.5	.5	.5	.6	.7
3	Platte River near Duncan, Nebr.	66	.4	.5	.5	.6	.6
5	Dismal River near Thedford, Nebr.	43	.2	.3	.3	.3	.4
8	Mud Creek near Sweetwater, Nebr.	15	--	.2	.2	.3	--
9	South Loup River at St. Michael, Nebr.	20	--	.3	.3	.3	--
10	Middle Loup River at St. Paul, Nebr.	29	--	.3	.3	.3	--
13	North Loup River near St. Paul, Nebr.	20	--	.3	.3	.4	--

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Fluoride, dissolved, in milligrams per liter (00950)--Continued						
14	Cedar River near Fullerton, Nebr.	119	0.2	0.2	0.2	0.3	0.3
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	.3	.3	.3	.3	.4
16	Beaver Creek at Genoa, Nebr.	15	--	.3	.3	.3	--
17	Platte River at North Bend, Nebr.	15	--	.4	.4	.5	--
19	Elkhorn River at Norfolk, Nebr.	16	--	.3	.3	.3	--
20	Elkhorn River at West Point, Nebr.	15	--	.3	.3	.3	--
21	Logan Creek at Pender, Nebr.	15	--	.2	.3	.3	--
22	Elkhorn River at Waterloo, Nebr.	62	.3	.3	.3	.4	.4
34	Salt Creek below Stevens Creek near Waverly, Nebr.	103	.3	.4	.6	.6	.7
35	Salt Creek at Greenwood, Nebr.	16	--	.3	.6	.7	--
36	Platte River at Louisville, Nebr.	45	.3	.3	.4	.4	.4
	Silica, dissolved, in milligrams per liter (00955)						
1	Platte River near Overton, Nebr.	90	19	22	26	31	36
2	Platte River near Grand Island, Nebr.	37	17	20	23	27	29
3	Platte River near Duncan, Nebr.	65	15	17	21	24	26
5	Dismal River near Thedford, Nebr.	43	53	55	56	58	59
8	Mud Creek near Sweetwater, Nebr.	15	--	40	42	46	--
9	South Loup River at St. Michael, Nebr.	20	--	41	46	48	--
10	Middle Loup River at St. Paul, Nebr.	29	--	46	49	52	--
13	North Loup River near St. Paul, Nebr.	20	--	41	46	48	--
14	Cedar River near Fullerton, Nebr.	119	32	36	39	43	45
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	39	42	46	50	54
16	Beaver Creek at Genoa, Nebr.	15	--	31	35	43	--
17	Platte River at North Bend, Nebr.	15	--	24	29	40	--
19	Elkhorn River at Norfolk, Nebr.	15	--	35	38	40	--
20	Elkhorn River at West Point, Nebr.	15	--	24	30	34	--
21	Logan Creek at Pender, Nebr.	15	--	16	20	22	--
22	Elkhorn River at Waterloo, Nebr.	61	14	19	25	28	30
34	Salt Creek below Stevens Creek near Waverly, Nebr.	102	11	16	21	23	25
35	Salt Creek at Greenwood, Nebr.	16	--	11	20	23	--
36	Platte River at Louisville, Nebr.	45	21	24	29	36	39

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Dissolved solids, residue on evaporation at 180 degrees Celsius, in milligrams per liter (70300)						
3	Platte River near Duncan, Nebr.	65	460	550	600	660	700
5	Dismal River near Thedford, Nebr.	43	140	150	150	150	160
14	Cedar River near Fullerton, Nebr.	25	--	180	200	210	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	180	190	200	220	240
22	Elkhorn River at Waterloo, Nebr.	58	270	320	360	380	410
36	Platte River at Louisville, Nebr.	43	300	400	450	510	580
	Dissolved solids, sum of constituents, in milligrams per liter (70301)						
1	Platte River near Overton, Nebr.	63	530	560	620	670	710
2	Platte River near Grand Island, Nebr.	37	530	570	610	640	720
3	Platte River near Duncan, Nebr.	66	450	540	600	650	690
5	Dismal River near Thedford, Nebr.	40	150	150	150	160	160
8	Mud Creek near Sweetwater, Nebr.	15	--	360	390	410	--
9	South Loup River at St. Michael, Nebr.	20	--	230	270	290	--
10	Middle Loup River at St. Paul, Nebr.	29	--	210	240	260	--
13	North Loup River near St. Paul, Nebr.	19	--	170	180	190	--
14	Cedar River near Fullerton, Nebr.	117	180	190	200	210	220
15	Loup River Power Canal at diversion near Genoa, Nebr.	37	180	180	200	210	250
16	Beaver Creek at Genoa, Nebr.	14	--	220	240	270	--
17	Platte River at North Bend, Nebr.	15	--	260	410	460	--
19	Elkhorn River at Norfolk, Nebr.	14	--	200	220	240	--
20	Elkhorn River at West Point, Nebr.	14	--	240	260	290	--
21	Logan Creek at Pender, Nebr.	15	--	480	510	560	--
22	Elkhorn River at Waterloo, Nebr.	62	190	290	340	390	420
34	Salt Creek below Stevens Creek near Waverly, Nebr.	101	780	1,500	2,600	3,600	4,100
35	Salt Creek at Greenwood, Nebr.	16	--	490	2,700	3,700	--
36	Platte River at Louisville, Nebr.	44	310	380	440	500	570
	Nitrite, dissolved, as N, in milligrams per liter (00613)						
3	Platte River near Duncan, Nebr.	31	<.01	<.01	<.01	.02	.02
5	Dismal River near Thedford, Nebr.	21	--	<.01	<.01	<.01	--
14	Cedar River near Fullerton, Nebr.	27	--	<.01	<.01	<.01	--
22	Elkhorn River at Waterloo, Nebr.	31	.01	.02	.04	.06	.10
36	Platte River at Louisville, Nebr.	20	--	.01	.02	.02	--

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Nitrite plus nitrate, total, as N, in milligrams per liter (00630)						
1	Platte River near Overton, Nebr.	111	0.51	0.84	1.2	1.5	1.9
2	Platte River near Grand Island, Nebr.	116	<.02	.13	.72	1.2	1.5
3	Platte River near Duncan, Nebr.	10	--	.05	.43	.94	--
4	Middle Loup River north of Dunning, Nebr.	101	.54	.67	.76	.86	.93
5	Dismal River near Thedford, Nebr.	12	--	.38	.42	.51	--
6	Dismal River at Dunning, Nebr.	68	.43	.48	.56	.63	.69
7	Middle Loup River at Sargent, Nebr.	102	.36	.43	.56	.67	.78
8	Mud Creek near Sweetwater, Nebr.	102	.39	.89	1.2	1.6	2.0
9	South Loup River at St. Michael, Nebr.	105	<.02	.13	.76	1.0	1.3
11	North Loup River at Taylor, Nebr.	104	.17	.38	.61	.80	.93
12	Calamus River near Burwell, Nebr.	73	.05	.11	.26	.52	.73
13	North Loup River near St. Paul, Nebr.	116	<.02	<.04	.68	.89	1.0
14	Cedar River near Fullerton, Nebr.	60	<.02	.05	.38	.61	.72
16	Beaver Creek at Genoa, Nebr.	100	.40	.60	.78	.90	1.1
17	Platte River at North Bend, Nebr.	103	<.02	<.10	.92	1.2	1.4
18	Elkhorn River near Atkinson, Nebr.	78	.12	.73	1.6	2.2	2.6
19	Elkhorn River at Norfolk, Nebr.	98	<.02	.10	.50	.86	1.1
20	Elkhorn River at West Point, Nebr.	102	<.02	.38	1.0	1.6	2.0
21	Logan Creek at Pender, Nebr.	100	1.0	1.9	3.1	3.8	5.1
22	Elkhorn River at Waterloo, Nebr.	106	.32	1.2	2.0	3.1	3.7
34	Salt Creek below Stevens Creek near Waverly, Nebr.	108	1.1	1.5	1.8	2.1	2.7
35	Salt Creek at Greenwood, Nebr.	102	1.5	1.7	2.2	2.6	2.9
36	Platte River at Louisville, Nebr.	112	<.10	.28	1.1	1.7	1.9
	Nitrite plus nitrate, dissolved, as N, in milligrams per liter (00631)						
1	Platte River near Overton, Nebr.	92	.45	.73	1.1	1.5	1.7
2	Platte River near Grand Island, Nebr.	37	.10	.17	.54	.98	1.4
3	Platte River near Duncan, Nebr.	66	<.10	.12	.98	1.5	1.9
5	Dismal River near Thedford, Nebr.	43	.34	.38	.45	.51	.57
8	Mud Creek near Sweetwater, Nebr.	18	--	.88	1.2	1.5	--
9	South Loup River at St. Michael, Nebr.	20	--	<.10	.75	.92	--
10	Middle Loup River at St. Paul, Nebr.	29	--	.50	.81	.99	--
13	North Loup River near St. Paul, Nebr.	20	--	<.10	.63	.85	--

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Nitrite plus nitrate, dissolved, as N, in milligrams per liter (00631)--Continued						
14	Cedar River near Fullerton, Nebr.	119	<0.10	<0.10	0.44	0.61	0.74
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	<.10	.10	.56	.75	1.0
16	Beaver Creek at Genoa, Nebr.	15	--	.44	.67	.91	--
17	Platte River at North Bend, Nebr.	17	--	.26	.92	1.0	--
18	Elkhorn River near Atkinson, Nebr.	11	--	1.0	1.5	2.1	--
19	Elkhorn River at Norfolk, Nebr.	15	--	<.10	.40	.89	--
20	Elkhorn River at West Point, Nebr.	14	--	.38	1.0	1.5	--
21	Logan Creek at Pender, Nebr.	16	--	1.2	3.0	4.1	--
22	Elkhorn River at Waterloo, Nebr.	59	.29	1.3	2.0	3.1	3.9
34	Salt Creek below Stevens Creek near Waverly, Nebr.	95	1.1	1.5	1.8	2.1	2.8
35	Salt Creek at Greenwood, Nebr.	16	--	1.6	2.2	2.8	--
36	Platte River at Louisville, Nebr.	46	<.10	.20	.91	1.4	1.8
	Nitrogen, ammonia, total, as N, in milligrams per liter (00610)						
1	Platte River near Overton, Nebr.	115	.02	.05	.08	.12	.20
2	Platte River near Grand Island, Nebr.	116	<.02	.04	.07	.11	.17
3	Platte River near Duncan, Nebr.	38	.02	.03	.05	.10	.19
4	Middle Loup River north of Dunning, Nebr.	101	<.02	<.02	<.02	.03	.05
5	Dismal River near Thedford, Nebr.	31	<.01	.01	.03	.06	.12
6	Dismal River at Dunning, Nebr.	68	<.02	<.02	<.02	.03	.05
7	Middle Loup River at Sargent, Nebr.	101	<.02	<.02	<.02	.04	.08
8	Mud Creek near Sweetwater, Nebr.	101	.04	.08	.16	.31	.58
9	South Loup River at St. Michael, Nebr.	105	<.02	.04	.08	.17	.26
11	North Loup River at Taylor, Nebr.	104	<.02	<.02	.02	.03	.05
12	Calamus River near Burwell, Nebr.	72	<.02	<.02	.03	.06	.19
13	North Loup River near St. Paul, Nebr.	116	<.02	<.02	.02	.05	.07
14	Cedar River near Fullerton, Nebr.	80	<.02	<.02	.05	.08	.12
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	.06	.06	.11	--
16	Beaver Creek at Genoa, Nebr.	100	.03	.06	.11	.22	.36
17	Platte River at North Bend, Nebr.	103	<.02	.04	.08	.17	.27
18	Elkhorn River near Atkinson, Nebr.	78	.02	.05	.09	.16	.23
19	Elkhorn River at Norfolk, Nebr.	98	.03	.05	.09	.20	.33

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Nitrogen, ammonia, total, as N, in milligrams per liter (00610)--Continued						
20	Elkhorn River at West Point, Nebr.	102	0.03	0.06	0.16	0.34	0.61
21	Logan Creek at Pender, Nebr.	100	.04	.07	.14	.26	.50
22	Elkhorn River at Waterloo, Nebr.	119	.04	.07	.15	.39	.64
34	Salt Creek below Stevens Creek near Waverly, Nebr.	112	.59	1.1	2.2	3.2	4.8
35	Salt Creek at Greenwood, Nebr.	101	.39	.69	1.3	2.2	3.0
36	Platte River at Louisville, Nebr.	117	<.02	.05	.10	.18	.32
	Nitrogen, ammonia, dissolved, as N, in milligrams per liter (00608)						
3	Platte River near Duncan, Nebr.	63	<.01	.03	.06	.12	.19
5	Dismal River near Thedford, Nebr.	43	<.01	<.01	.03	.06	.10
14	Cedar River near Fullerton, Nebr.	27	--	.02	.04	.07	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	38	.04	.05	.07	.14	.18
22	Elkhorn River at Waterloo, Nebr.	60	.03	.06	.15	.36	.65
36	Platte River at Louisville, Nebr.	46	<.01	.04	.08	.20	.34
	Nitrogen, total organic, as N, in milligrams per liter (00605)						
1	Platte River near Overton, Nebr.	100	.52	.68	.89	1.2	1.7
2	Platte River near Grand Island, Nebr.	99	.50	.77	1.2	1.5	2.1
3	Platte River near Duncan, Nebr.	36	.55	.78	.95	1.4	2.1
5	Dismal River near Thedford, Nebr.	22	--	.34	.50	.79	--
8	Mud Creek near Sweetwater, Nebr.	93	.35	.67	1.0	1.8	2.8
14	Cedar River near Fullerton, Nebr.	20	--	.29	.49	.87	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	.70	.94	1.4	--
16	Beaver Creek at Genoa, Nebr.	93	.57	.88	1.4	2.1	4.5
17	Platte River at North Bend, Nebr.	90	.48	.92	1.4	2.5	3.6
18	Elkhorn River near Atkinson, Nebr.	66	.34	.50	.89	1.5	2.0
19	Elkhorn River at Norfolk, Nebr.	91	.47	.83	1.2	1.8	2.9
20	Elkhorn River at West Point, Nebr.	95	.48	.81	1.3	2.1	3.2
21	Logan Creek at Pender, Nebr.	90	.37	.56	.97	1.6	3.3
22	Elkhorn River at Waterloo, Nebr.	116	.65	.93	1.7	2.4	3.5
34	Salt Creek below Stevens Creek near Waverly, Nebr.	108	.59	.90	1.3	2.2	4.3
35	Salt Creek at Greenwood, Nebr.	98	.60	1.0	1.4	1.9	4.4
36	Platte River at Louisville, Nebr.	109	.51	.87	1.4	2.1	3.4

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Nitrogen, total ammonia plus organic, as N, in milligrams per liter (00625)						
1	Platte River near Overton, Nebr.	115	<0.50	0.71	1.0	1.3	1.8
2	Platte River near Grand Island, Nebr.	116	.50	.75	1.2	1.6	2.2
3	Platte River near Duncan, Nebr.	65	.58	.85	1.1	1.6	2.6
5	Dismal River near Thedford, Nebr.	42	.20	.30	.50	.80	.98
8	Mud Creek near Sweetwater, Nebr.	100	<.50	.85	1.2	2.0	2.9
13	North Loup River near St. Paul, Nebr.	13	--	.62	.75	1.1	--
14	Cedar River near Fullerton, Nebr.	24	--	.33	.55	.98	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	.60	.80	1.2	1.5	2.3
16	Beaver Creek at Genoa, Nebr.	99	.72	.91	1.5	2.1	4.5
17	Platte River at North Bend, Nebr.	103	.52	.99	1.4	2.4	3.6
18	Elkhorn River near Atkinson, Nebr.	78	<.50	.62	.96	1.5	2.1
19	Elkhorn River at Norfolk, Nebr.	98	.65	.92	1.3	1.9	3.1
20	Elkhorn River at West Point, Nebr.	100	.80	1.1	1.6	2.4	3.7
21	Logan Creek at Pender, Nebr.	98	.50	.65	1.1	1.9	3.4
22	Elkhorn River at Waterloo, Nebr.	118	.81	1.2	1.9	2.7	4.4
34	Salt Creek below Stevens Creek near Waverly, Nebr.	110	2.3	2.9	3.8	4.9	7.1
35	Salt Creek at Greenwood, Nebr.	99	1.5	2.2	3.0	4.1	6.0
36	Platte River at Louisville, Nebr.	117	.70	1.1	1.5	2.1	3.5
	Nitrogen, total, as N, in milligrams per liter (00600)						
1	Platte River near Overton, Nebr.	102	1.6	1.8	2.2	2.7	3.3
2	Platte River near Grand Island, Nebr.	94	1.3	1.6	2.0	2.5	3.2
3	Platte River near Duncan, Nebr.	10	--	1.3	1.9	2.1	--
5	Dismal River near Thedford, Nebr.	11	--	.98	1.2	1.3	--
8	Mud Creek near Sweetwater, Nebr.	94	1.2	2.0	2.7	3.5	4.8
16	Beaver Creek at Genoa, Nebr.	95	1.4	1.8	2.2	3.0	5.4
17	Platte River at North Bend, Nebr.	85	1.5	1.7	2.3	3.4	4.8
18	Elkhorn River near Atkinson, Nebr.	74	1.5	2.1	2.7	3.1	3.5
19	Elkhorn River at Norfolk, Nebr.	82	1.2	1.5	1.9	2.6	4.1
20	Elkhorn River at West Point, Nebr.	86	1.8	2.2	2.8	3.7	5.6
21	Logan Creek at Pender, Nebr.	95	1.8	2.8	4.4	5.9	8.2
22	Elkhorn River at Waterloo, Nebr.	101	2.3	3.1	3.9	5.8	7.1

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Nitrogen, total, as N, in milligrams per liter (00600)--Continued						
34	Salt Creek below Stevens Creek near Waverly, Nebr.	106	4.0	4.8	5.7	6.6	8.4
35	Salt Creek at Greenwood, Nebr.	99	3.7	4.5	5.2	6.2	7.9
36	Platte River at Louisville, Nebr.	100	1.7	2.0	2.6	3.6	5.3
	Phosphorus, total, as P, in milligrams per liter (00665)						
1	Platte River near Overton, Nebr.	115	.07	.09	.13	.20	.24
2	Platte River near Grand Island, Nebr.	116	.08	.11	.16	.24	.31
3	Platte River near Duncan, Nebr.	65	.09	.13	.17	.28	.36
4	Middle Loup River north of Dunning, Nebr.	101	.06	.12	.16	.20	.27
5	Dismal River near Thedford, Nebr.	43	.14	.17	.19	.22	.30
6	Dismal River at Dunning, Nebr.	68	.18	.20	.22	.25	.31
7	Middle Loup River at Sargent, Nebr.	101	.07	.15	.21	.24	.30
8	Mud Creek near Sweetwater, Nebr.	102	.36	.44	.68	.93	1.5
9	South Loup River at St. Michael, Nebr.	104	.11	.18	.30	.39	.54
11	North Loup River at Taylor, Nebr.	104	.07	.13	.17	.20	.27
12	Calamus River near Burwell, Nebr.	81	.08	.12	.16	.21	.24
13	North Loup River near St. Paul, Nebr.	116	.08	.12	.17	.22	.31
14	Cedar River near Fullerton, Nebr.	120	.19	.22	.28	.37	.47
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	.20	.24	.28	.34	.56
16	Beaver Creek at Genoa, Nebr.	100	.30	.35	.49	.74	.96
17	Platte River at North Bend, Nebr.	103	.17	.22	.27	.37	.63
18	Elkhorn River near Atkinson, Nebr.	78	.10	.18	.23	.28	.33
19	Elkhorn River at Norfolk, Nebr.	98	.18	.23	.27	.36	.48
20	Elkhorn River at West Point, Nebr.	102	.22	.28	.34	.48	.69
21	Logan Creek at Pender, Nebr.	101	.14	.19	.25	.41	.63
22	Elkhorn River at Waterloo, Nebr.	119	.31	.41	.52	.68	1.1
34	Salt Creek below Stevens Creek near Waverly, Nebr.	111	.70	1.2	1.7	2.6	3.5
35	Salt Creek at Greenwood, Nebr.	102	.58	.97	1.5	2.0	2.9
36	Platte River at Louisville, Nebr.	117	.23	.29	.37	.50	.96

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Phosphorus, dissolved, as P, in milligrams per liter (00666)						
1	Platte River near Overton, Nebr.	91	0.02	0.04	0.06	0.11	0.15
2	Platte River near Grand Island, Nebr.	37	.01	.02	.05	.08	.10
3	Platte River near Duncan, Nebr.	65	.01	.03	.08	.12	.17
5	Dismal River near Thedford, Nebr.	41	.12	.13	.13	.15	.16
8	Mud Creek near Sweetwater, Nebr.	16	--	.46	.68	.83	--
9	South Loup River at St. Michael, Nebr.	20	--	.13	.19	.32	--
10	Middle Loup River at St. Paul, Nebr.	18	--	.18	.19	.21	--
13	North Loup River near St. Paul, Nebr.	18	--	.09	.13	.16	--
14	Cedar River near Fullerton, Nebr.	116	.11	.15	.17	.21	.24
15	Loup River Power Canal at diversion near Genoa, Nebr.	39	.09	.13	.16	.20	.23
16	Beaver Creek at Genoa, Nebr.	15	--	.26	.30	.35	--
17	Platte River at North Bend, Nebr.	16	--	.10	.16	.22	--
19	Elkhorn River at Norfolk, Nebr.	15	--	.14	.18	.23	--
20	Elkhorn River at West Point, Nebr.	15	--	.18	.23	.26	--
21	Logan Creek at Pender, Nebr.	16	--	.12	.16	.22	--
22	Elkhorn River at Waterloo, Nebr.	62	.16	.22	.28	.35	.40
35	Salt Creek at Greenwood, Nebr.	16	--	.32	1.6	2.4	--
36	Platte River at Louisville, Nebr.	46	.10	.16	.21	.24	.32
	Phosphorus, dissolved orthophosphate, as P, in milligrams per liter (00671)						
3	Platte River near Duncan, Nebr.	57	.01	.04	.07	.12	.14
5	Dismal River near Thedford, Nebr.	33	.10	.11	.13	.14	.15
14	Cedar River near Fullerton, Nebr.	28	--	.13	.15	.17	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	31	.09	.13	.16	.18	.21
22	Elkhorn River at Waterloo, Nebr.	54	.12	.19	.24	.31	.36
36	Platte River at Louisville, Nebr.	37	.07	.13	.17	.22	.25
	Aluminum, dissolved, in micrograms per liter (01106)						
3	Platte River near Duncan, Nebr.	32	<10	<10	10	20	30
5	Dismal River near Thedford, Nebr.	24	--	<20	20	40	--
14	Cedar River near Fullerton, Nebr.	17	--	<10	20	40	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	10	30	50	--
22	Elkhorn River at Waterloo, Nebr.	32	<10	<10	20	30	50
36	Platte River at Louisville, Nebr.	30	<10	<10	20	30	50

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Arsenic, total, in micrograms per liter (01002)						
1	Platte River near Overton, Nebr.	31	4	4	7	11	19
2	Platte River near Grand Island, Nebr.	10	--	4	4	6	--
22	Elkhorn River at Waterloo, Nebr.	41	5	7	9	16	25
34	Salt Creek below Stevens Creek near Waverly, Nebr.	36	3	4	5	7	10
35	Salt Creek at Greenwood, Nebr.	47	4	5	7	15	25
36	Platte River at Louisville, Nebr.	34	5	7	10	16	22
	Arsenic, dissolved, in micrograms per liter (01000)						
3	Platte River near Duncan, Nebr.	40	3	4	4	5	5
5	Dismal River near Thedford, Nebr.	27	--	5	6	6	--
14	Cedar River near Fullerton, Nebr.	17	--	6	6	7	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	6	7	9	--
22	Elkhorn River at Waterloo, Nebr.	42	3	4	5	7	8
36	Platte River at Louisville, Nebr.	36	3	4	6	8	9
	Barium, total, in micrograms per liter (01007)						
1	Platte River near Overton, Nebr.	10	--	<100	<100	100	--
2	Platte River near Grand Island, Nebr.	10	--	<100	100	100	--
22	Elkhorn River at Waterloo, Nebr.	16	--	200	200	400	--
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	<100	<100	200	300	400
35	Salt Creek at Greenwood, Nebr.	32	<100	100	200	200	500
36	Platte River at Louisville, Nebr.	14	--	<100	200	400	--
	Barium, dissolved, in micrograms per liter (01005)						
3	Platte River near Duncan, Nebr.	40	70	70	80	90	100
5	Dismal River near Thedford, Nebr.	27	--	50	50	50	--
14	Cedar River near Fullerton, Nebr.	17	--	120	130	140	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	22	--	110	120	130	--
22	Elkhorn River at Waterloo, Nebr.	40	140	150	170	190	210
36	Platte River at Louisville, Nebr.	36	100	110	120	140	140

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Beryllium, dissolved, in micrograms per liter (01010)						
3	Platte River near Duncan, Nebr.	31	<0.5	<0.5	<0.5	<0.5	<1.0
5	Dismal River near Thedford, Nebr.	27	--	<.5	<.5	<1.0	--
14	Cedar River near Fullerton, Nebr.	17	--	<.5	<.5	<.5	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	<.5	<.5	<.5	--
22	Elkhorn River at Waterloo, Nebr.	32	<.5	<.5	<.5	<.5	<1.0
36	Platte River at Louisville, Nebr.	30	<.5	<.5	<.5	<.5	<1.0
	Boron, dissolved, in micrograms per liter (01020)						
1	Platte River near Overton, Nebr.	91	110	120	140	150	160
2	Platte River near Grand Island, Nebr.	37	110	130	140	150	170
8	Mud Creek near Sweetwater, Nebr.	15	--	50	70	70	--
9	South Loup River at St. Michael, Nebr.	20	--	40	40	50	--
10	Middle Loup River at St. Paul, Nebr.	20	--	30	40	50	--
13	North Loup River near St. Paul, Nebr.	20	--	20	30	30	--
14	Cedar River near Fullerton, Nebr.	111	20	20	30	30	30
16	Beaver Creek at Genoa, Nebr.	14	--	30	30	40	--
17	Platte River at North Bend, Nebr.	15	--	60	90	100	--
19	Elkhorn River at Norfolk, Nebr.	15	--	20	30	30	--
20	Elkhorn River at West Point, Nebr.	15	--	30	40	50	--
21	Logan Creek at Pender, Nebr.	16	--	60	70	80	--
35	Salt Creek at Greenwood, Nebr.	16	--	100	420	550	--
	Cadmium, total, in micrograms per liter (01027)						
1	Platte River near Overton, Nebr.	31	<1	<1	<15	<15	<15
2	Platte River near Grand Island, Nebr.	10	--	<1	<1	<1	--
22	Elkhorn River at Waterloo, Nebr.	37	<1	<1	<15	<15	<15
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	<1	<1	<1	1	2
35	Salt Creek at Greenwood, Nebr.	48	<1	<1	<15	<15	<15
36	Platte River at Louisville, Nebr.	31	<1	<1	<15	<15	<15

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Cadmium, dissolved, in micrograms per liter (01025)						
3	Platte River near Duncan, Nebr.	40	<1	<1	<1	<1	2
5	Dismal River near Thedford, Nebr.	27	--	<1	<1	<1	--
14	Cedar River near Fullerton, Nebr.	17	--	<1	<1	<1	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	<1	<1	<1	--
22	Elkhorn River at Waterloo, Nebr.	42	<1	<1	<1	<3	<3
36	Platte River at Louisville, Nebr.	36	<1	<1	<1	1	2
	Chromium, total, in micrograms per liter (01034)						
1	Platte River near Overton, Nebr.	31	<10	<10	<10	10	10
2	Platte River near Grand Island, Nebr.	10	--	<10	<10	10	--
22	Elkhorn River at Waterloo, Nebr.	40	<10	<10	10	20	50
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	<10	<10	<10	20	30
35	Salt Creek at Greenwood, Nebr.	45	<10	<10	10	20	30
36	Platte River at Louisville, Nebr.	32	<10	<10	<10	20	30
	Chromium, dissolved, in micrograms per liter (01030)						
3	Platte River near Duncan, Nebr.	36	<1	<1	<1	2	10
5	Dismal River near Thedford, Nebr.	26	--	<1	1	2	--
14	Cedar River near Fullerton, Nebr.	17	--	<1	<1	1	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	16	--	<1	<1	1	--
22	Elkhorn River at Waterloo, Nebr.	36	<1	<1	<1	1	10
36	Platte River at Louisville, Nebr.	33	<1	<1	<1	1	9
	Cobalt, dissolved, in micrograms per liter						
3	Platte River near Duncan, Nebr.	40	<3	<3	<3	<3	<3
5	Dismal River near Thedford, Nebr.	27	--	<3	<3	<3	--
14	Cedar River near Fullerton, Nebr.	17	--	<3	<3	<3	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	<3	<3	<3	--
22	Elkhorn River at Waterloo, Nebr.	42	<3	<3	<3	<3	<3
36	Platte River at Louisville, Nebr.	36	<3	<3	<3	<3	<3

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Copper, total, in micrograms per liter (01042)						
1	Platte River near Overton, Nebr.	32	<10	<10	<10	11	20
2	Platte River near Grand Island, Nebr.	10	--	4	8	8	--
22	Elkhorn River at Waterloo, Nebr.	41	<10	<10	16	30	89
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	4	5	9	17	40
35	Salt Creek at Greenwood, Nebr.	48	<10	<10	10	21	33
36	Platte River at Louisville, Nebr.	34	<10	<10	20	30	52
	Copper, dissolved, in micrograms per liter (01040)						
3	Platte River near Duncan, Nebr.	40	2	3	4	6	10
5	Dismal River near Thedford, Nebr.	27	--	<1	<2	<4	--
14	Cedar River near Fullerton, Nebr.	17	--	<1	<1	4	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	22	--	2	3	4	--
22	Elkhorn River at Waterloo, Nebr.	43	2	3	5	7	13
36	Platte River at Louisville, Nebr.	37	2	3	5	7	10
	Iron, total, as Fe, in micrograms per liter (01045)						
1	Platte River near Overton, Nebr.	10	--	570	1,600	2,600	--
2	Platte River near Grand Island, Nebr.	10	--	280	720	2,400	--
22	Elkhorn River at Waterloo, Nebr.	18	--	2,600	7,600	21,000	--
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	420	510	840	6,400	30,000
35	Salt Creek at Greenwood, Nebr.	32	480	670	1,600	12,000	26,000
36	Platte River at Louisville, Nebr.	14	--	3,000	6,200	24,000	--
	Iron, dissolved, as Fe, in micrograms per liter (01046)						
1	Platte River near Overton, Nebr.	91	<3	<4	<7	10	25
2	Platte River near Grand Island, Nebr.	37	<3	<7	<10	16	20
3	Platte River near Duncan, Nebr.	40	<4	<6	<9	14	44
5	Dismal River near Thedford, Nebr.	27	--	13	20	26	--
8	Mud Creek near Sweetwater, Nebr.	15	--	11	15	20	--
9	South Loup River at St. Michael, Nebr.	20	--	10	20	40	--
10	Middle Loup River at St. Paul, Nebr.	20	--	9	20	23	--

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Iron, dissolved, as Fe, in micrograms per liter (01046)--Continued						
13	North Loup River near St. Paul, Nebr.	20	--	19	26	53	--
14	Cedar River near Fullerton, Nebr.	110	14	20	29	48	74
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	16	22	44	--
16	Beaver Creek at Genoa, Nebr.	15	--	10	30	44	--
17	Platte River at North Bend, Nebr.	15	--	12	24	60	--
19	Elkhorn River at Norfolk, Nebr.	15	--	17	40	59	--
20	Elkhorn River at West Point, Nebr.	15	--	10	20	50	--
21	Logan Creek at Pender, Nebr.	16	--	<6	<10	30	--
22	Elkhorn River at Waterloo, Nebr.	41	<6	<9	15	24	140
35	Salt Creek at Greenwood, Nebr.	22	--	30	50	98	--
36	Platte River at Louisville, Nebr.	36	5	6	10	20	86
	Lead, total, in micrograms per liter (01051)						
1	Platte River near Overton, Nebr.	32	<4	<7	<20	<20	20
2	Platte River near Grand Island, Nebr.	10	--	2	4	5	--
22	Elkhorn River at Waterloo, Nebr.	40	<4	<15	<20	32	59
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	<1	<2	<5	10	29
35	Salt Creek at Greenwood, Nebr.	48	<1	<3	<9	<20	40
36	Platte River at Louisville, Nebr.	34	<7	<12	<20	27	50
	Lead, dissolved, in micrograms per liter (01049)						
3	Platte River near Duncan, Nebr.	38	<1	<1	<1	<5	<5
5	Dismal River near Thedford, Nebr.	24	--	<1	<4	<5	--
14	Cedar River near Fullerton, Nebr.	16	--	<1	<5	<5	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	22	--	<1	1	3	--
22	Elkhorn River at Waterloo, Nebr.	41	<1	<1	<2	<5	<5
36	Platte River at Louisville, Nebr.	35	<1	<1	<5	<5	5

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Lithium, dissolved, in micrograms per liter (01130)						
3	Platte River near Duncan, Nebr.	32	28	33	36	38	40
5	Dismal River near Thedford, Nebr.	27	--	11	13	14	--
14	Cedar River near Fullerton, Nebr.	17	--	14	15	16	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	15	17	20	--
22	Elkhorn River at Waterloo, Nebr.	32	16	21	23	26	31
36	Platte River at Louisville, Nebr.	30	21	24	26	30	35
	Manganese, total, in micrograms per liter (01055)						
1	Platte River near Overton, Nebr.	10	--	90	170	250	--
2	Platte River near Grand Island, Nebr.	10	--	60	100	290	--
22	Elkhorn River at Waterloo, Nebr.	18	--	270	420	880	--
34	Salt Creek below Stevens Creek near Waverly, Nebr.	38	250	310	440	760	1,200
35	Salt Creek at Greenwood, Nebr.	32	170	240	340	680	1,100
36	Platte River at Louisville, Nebr.	14	--	190	300	680	--
	Manganese, dissolved, in micrograms per liter (01056)						
1	Platte River near Overton, Nebr.	90	2	4	6	11	19
2	Platte River near Grand Island, Nebr.	37	1	2	5	6	11
3	Platte River near Duncan, Nebr.	40	1	2	4	9	14
5	Dismal River near Thedford, Nebr.	27	--	2	3	4	--
8	Mud Creek near Sweetwater, Nebr.	15	--	17	38	66	--
9	South Loup River at St. Michael, Nebr.	20	--	3	6	11	--
10	Middle Loup River at St. Paul, Nebr.	20	--	3	4	8	--
13	North Loup River near St. Paul, Nebr.	20	--	3	4	6	--
14	Cedar River near Fullerton, Nebr.	110	4	8	12	19	25
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	4	6	12	--
16	Beaver Creek at Genoa, Nebr.	15	--	8	12	30	--
17	Platte River at North Bend, Nebr.	15	--	3	5	8	--
19	Elkhorn River at Norfolk, Nebr.	15	--	7	12	20	--
20	Elkhorn River at West Point, Nebr.	15	--	10	12	31	--
21	Logan Creek at Pender, Nebr.	16	--	34	100	170	--

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Manganese, dissolved, in micrograms per liter (01056)--Continued						
22	Elkhorn River at Waterloo, Nebr.	42	3	5	12	40	81
35	Salt Creek at Greenwood, Nebr.	22	--	93	180	310	--
36	Platte River at Louisville, Nebr.	36	2	3	6	10	90
	Mercury, total, in micrograms per liter (71900)						
1	Platte River near Overton, Nebr.	33	≤.1	<.1	<.2	<.5	<.9
2	Platte River near Grand Island, Nebr.	10	--	<.1	.1	.1	--
22	Elkhorn River at Waterloo, Nebr.	39	<.1	<.2	<.2	.5	.6
34	Salt Creek below Stevens Creek near Waverly, Nebr.	36	<.1	<.1	.1	.2	.2
35	Salt Creek at Greenwood, Nebr.	48	<.1	<.1	.1	.2	.2
36	Platte River at Louisville, Nebr.	29	--	<.1	<.2	<.5	--
	Mercury, dissolved, in micrograms per liter (71890)						
3	Platte River near Duncan, Nebr.	40	<.1	<.1	<.1	<.1	.1
5	Dismal River near Thedford, Nebr.	27	--	<.1	<.1	.1	--
14	Cedar River near Fullerton, Nebr.	17	--	<.1	<.1	<.1	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	<.1	<.1	<.1	--
22	Elkhorn River at Waterloo, Nebr.	40	<.1	<.1	<.1	.1	.2
36	Platte River at Louisville, Nebr.	36	<.1	<.1	<.1	.1	.3
	Molybdenum, dissolved, in micrograms per liter (01060)						
3	Platte River near Duncan, Nebr.	32	<10	<10	<10	<10	<10
5	Dismal River near Thedford, Nebr.	27	--	<10	<10	<10	--
14	Cedar River near Fullerton, Nebr.	17	--	<10	<10	<10	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	<10	<10	<10	--
22	Elkhorn River at Waterloo, Nebr.	32	<10	<10	<10	<10	<10
36	Platte River at Louisville, Nebr.	30	<10	<10	<10	<10	<10

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Nickel, dissolved, in micrograms per liter (01065)						
3	Platte River near Duncan, Nebr.	40	<1	1	2	4	5
5	Dismal River near Thedford, Nebr.	24	--	<1	1	2	--
14	Cedar River near Fullerton, Nebr.	17	--	<1	2	4	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	<1	1	4	--
22	Elkhorn River at Waterloo, Nebr.	40	1	2	3	6	11
36	Platte River at Louisville, Nebr.	36	<1	1	2	4	6
	Selenium, total, in micrograms per liter (01147)						
1	Platte River near Overton, Nebr.	31	<2	<3	3	8	16
2	Platte River near Grand Island, Nebr.	10	--	2	2	2	--
22	Elkhorn River at Waterloo, Nebr.	36	3	4	5	7	11
34	Salt Creek below Stevens Creek near Waverly, Nebr.	33	1	1	2	2	3
35	Salt Creek at Greenwood, Nebr.	45	1	2	2	3	28
36	Platte River at Louisville, Nebr.	31	<2	<2	<3	4	11
	Selenium, dissolved, in micrograms per liter (01145)						
3	Platte River near Duncan, Nebr.	40	1	2	2	2	3
5	Dismal River near Thedford, Nebr.	27	--	<1	<1	<1	--
14	Cedar River near Fullerton, Nebr.	17	--	<1	1	1	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	1	1	1	--
22	Elkhorn River at Waterloo, Nebr.	42	2	3	4	6	7
36	Platte River at Louisville, Nebr.	36	1	1	2	2	3
	Silver, total, in micrograms per liter (01077)						
1	Platte River near Overton, Nebr.	31	<1	<1	<1	<1	<2
2	Platte River near Grand Island, Nebr.	10	--	<1	<1	<1	--
22	Elkhorn River at Waterloo, Nebr.	35	<1	<1	<1	<1	1
34	Salt Creek below Stevens Creek near Waverly, Nebr.	41	<1	<1	<1	1	1
35	Salt Creek at Greenwood, Nebr.	47	<1	<1	<1	<1	1
36	Platte River at Louisville, Nebr.	30	<1	<1	<1	<1	1

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Silver, dissolved, in micrograms per liter (01075)						
3	Platte River near Duncan, Nebr.	37	<1	<1	<1	<1	<1
5	Dismal River near Thedford, Nebr.	26	--	<1	<1	<1	--
14	Cedar River near Fullerton, Nebr.	17	--	<1	<1	<1	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	20	--	<1	<1	<1	--
22	Elkhorn River at Waterloo, Nebr.	36	<1	<1	<1	<1	1
36	Platte River at Louisville, Nebr.	34	<1	<1	<1	<1	2
	Strontium, dissolved, in micrograms per liter (01080)						
3	Platte River near Duncan, Nebr.	32	550	660	720	760	810
5	Dismal River near Thedford, Nebr.	27	--	110	120	120	--
14	Cedar River near Fullerton, Nebr.	17	--	210	230	240	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	200	200	210	--
22	Elkhorn River at Waterloo, Nebr.	32	280	330	370	400	410
36	Platte River at Louisville, Nebr.	30	310	370	430	470	540
	Vanadium, dissolved, in micrograms per liter (01085)						
3	Platte River near Duncan, Nebr.	32	<6	<6	<6	6	10
5	Dismal River near Thedford, Nebr.	27	--	9	10	10	--
14	Cedar River near Fullerton, Nebr.	17	--	<6	<6	9	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	15	--	8	9	13	--
22	Elkhorn River at Waterloo, Nebr.	32	<6	<6	<6	7	9
36	Platte River at Louisville, Nebr.	30	<6	<6	<6	9.3	11
	Zinc, total, in micrograms per liter (01092)						
1	Platte River near Overton, Nebr.	32	<30	<30	<30	40	50
2	Platte River near Grand Island, Nebr.	10	--	20	30	40	--
22	Elkhorn River at Waterloo, Nebr.	41	<30	<30	40	70	240
34	Salt Creek below Stevens Creek near Waverly, Nebr.	47	20	20	30	50	140
35	Salt Creek at Greenwood, Nebr.	48	<30	<30	40	60	120
36	Platte River at Louisville, Nebr.	34	<30	<30	40	80	180

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Zinc, dissolved, in micrograms per liter (01090)						
3	Platte River near Duncan, Nebr.	40	3	6	9	20	34
5	Dismal River near Thedford, Nebr.	27	--	<3	6	10	--
14	Cedar River near Fullerton, Nebr.	17	--	5	7	18	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	23	--	5	9	15	--
22	Elkhorn River at Waterloo, Nebr.	41	3	7	13	22	34
36	Platte River at Louisville, Nebr.	36	<3	4	8	14	19
	Carbon, organic, total, in milligrams per liter (00680)						
1	Platte River near Overton, Nebr.	112	3.6	4.2	5.0	7.2	9.6
2	Platte River near Grand Island, Nebr.	116	3.6	4.4	5.4	8.3	11
4	Middle Loup River north of Dunning, Nebr.	90	1.2	1.4	1.8	2.6	3.9
6	Dismal River at Dunning, Nebr.	67	1.1	1.3	1.7	2.3	3.3
7	Middle Loup River at Sargent, Nebr.	92	1.4	1.6	2.0	2.6	3.7
8	Mud Creek near Sweetwater, Nebr.	102	3.5	4.2	5.8	11	17
9	South Loup River at St. Michael, Nebr.	95	2.7	3.3	4.4	6.2	8.7
11	North Loup River at Taylor, Nebr.	94	1.7	2.4	2.9	4.0	6.7
12	Calamus River near Burwell, Nebr.	71	2.0	2.6	3.9	5.4	5.9
13	North Loup River near St. Paul, Nebr.	107	2.2	2.6	3.4	5.1	7.0
14	Cedar River near Fullerton, Nebr.	59	2.0	2.5	3.7	5.4	7.5
16	Beaver Creek at Genoa, Nebr.	97	3.6	4.8	7.5	12	18
17	Platte River at North Bend, Nebr.	102	3.4	4.3	6.4	11	16
18	Elkhorn River near Atkinson, Nebr.	78	2.7	3.4	4.4	12	17
19	Elkhorn River at Norfolk, Nebr.	96	3.8	4.4	7.0	12	20
20	Elkhorn River at West Point, Nebr.	102	3.7	5.1	7.8	13	19
21	Logan Creek at Pender, Nebr.	99	2.7	3.3	4.7	8.2	17
22	Elkhorn River at Waterloo, Nebr.	109	4.0	5.9	9.2	15	24
34	Salt Creek below Stevens Creek near Waverly, Nebr.	102	6.1	7.2	8.8	13	26
35	Salt Creek at Greenwood, Nebr.	101	5.4	6.4	7.9	12	20
36	Platte River at Louisville, Nebr.	111	3.5	5.5	7.2	12	27

Table 7. *Statistical summary of data on water-quality constituents and properties in stream-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Sediment, suspended, in milligrams per liter (80154)						
3	Platte River near Duncan, Nebr.	54	74	110	210	320	720
5	Dismal River near Thedford, Nebr.	27	--	390	580	690	--
14	Cedar River near Fullerton, Nebr.	24	--	280	370	890	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	17	--	150	210	320	--
22	Elkhorn River at Waterloo, Nebr.	55	120	180	510	1,100	2,800
36	Platte River at Louisville, Nebr.	46	160	240	400	1,300	2,700
	Sediment, suspended, finer than 0.062 millimeter, in percent (70331)						
3	Platte River near Duncan, Nebr.	30	14	37	60	82	89
5	Dismal River near Thedford, Nebr.	20	--	16	18	20	--
14	Cedar River near Fullerton, Nebr.	19	--	41	56	72	--
15	Loup River Power Canal at diversion near Genoa, Nebr.	10	--	81	93	97	--
22	Elkhorn River at Waterloo, Nebr.	30	53	62	74	84	92
36	Platte River at Louisville, Nebr.	17	--	42	68	78	--

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*

[Number in parentheses following constituent or property name is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System; <, less than; --, value not determined for fewer than 30 analyses]

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Color, in platinum cobalt scale units (00800)						
23	Olive Creek Lake, Nebr.	14	--	15	30	72	--
24	Bluestem Lake, Nebr.	14	--	19	32	62	--
25	Wagon Train Lake, Nebr.	12	--	21	32	39	--
26	Stagecoach Lake, Nebr.	14	--	15	25	31	--
27	Yankee Hill Lake, Nebr.	21	--	15	30	52	--
28	Conestoga Lake, Nebr.	14	--	15	18	41	--
29	Pawnee Lake, Nebr.	14	--	10	18	50	--
31	East Twin Lake, Nebr.	13	--	18	20	30	--
32	Holmes Lake, Nebr.	21	--	15	30	78	--
33	Branched Oak Lake, Nebr.	21	--	10	15	25	--
	Turbidity, in nephelometric turbidity units (00076)						
23	Olive Creek Lake, Nebr.	74	0	12	28	41	72
24	Bluestem Lake, Nebr.	74	0	6	17	34	98
25	Wagon Train Lake, Nebr.	85	0	5	12	20	38
26	Stagecoach Lake, Nebr.	72	0	6	10	17	27
27	Yankee Hill Lake, Nebr.	125	0	8	14	20	83
28	Conestoga Lake, Nebr.	84	0	5	14	20	31
29	Pawnee Lake, Nebr.	85	0	7	13	20	28
30	West Twin Lake, Nebr.	32	0	4	14	27	39
31	East Twin Lake, Nebr.	71	0	4	10	15	22
32	Holmes Lake, Nebr.	126	0	11	20	30	81
33	Branched Oak Lake, Nebr.	125	0	6	10	14	19
	Hardness, total as $CaCO_3$, in milligrams per liter (00900)						
23	Olive Creek Lake, Nebr.	78	100	110	130	140	160
24	Bluestem Lake, Nebr.	78	100	120	150	160	180
25	Wagon Train Lake, Nebr.	89	110	120	140	160	180
26	Stagecoach Lake, Nebr.	76	110	130	140	180	200
27	Yankee Hill Lake, Nebr.	132	100	120	140	170	190
28	Conestoga Lake, Nebr.	88	150	170	180	220	240
29	Pawnee Lake, Nebr.	88	140	160	180	200	210

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Hardness, total as $CaCO_3$, in milligrams per liter (00900)--Continued						
30	West Twin Lake, Nebr.	34	160	180	200	240	280
31	East Twin Lake, Nebr.	74	120	130	150	180	210
32	Holmes Lake, Nebr.	131	80	95	110	140	150
33	Branched Oak Lake, Nebr.	131	160	170	180	190	210
	Calcium, total, in milligrams per liter (00916)						
23	Olive Creek Lake, Nebr.	35	28	34	40	46	50
24	Bluestem Lake, Nebr.	35	26	34	40	45	50
25	Wagon Train Lake, Nebr.	39	23	29	32	38	40
26	Stagecoach Lake, Nebr.	35	24	28	36	43	56
27	Yankee Hill Lake, Nebr.	57	21	25	31	42	50
28	Conestoga Lake, Nebr.	39	37	40	47	54	57
29	Pawnee Lake, Nebr.	39	37	40	44	48	52
30	West Twin Lake, Nebr.	16	--	46	56	64	--
31	East Twin Lake, Nebr.	33	29	32	40	49	59
32	Holmes Lake, Nebr.	59	23	25	31	37	41
33	Branched Oak Lake, Nebr.	58	35	41	44	48	54
	Magnesium, total, in milligrams per liter (00927)						
23	Olive Creek Lake, Nebr.	35	6	7	8	9	10
24	Bluestem Lake, Nebr.	35	7	10	11	13	14
25	Wagon Train Lake, Nebr.	39	10	14	15	16	16
26	Stagecoach Lake, Nebr.	35	11	13	15	15	16
27	Yankee Hill Lake, Nebr.	58	8	11	13	15	17
28	Conestoga Lake, Nebr.	39	12	16	20	22	23
29	Pawnee Lake, Nebr.	39	13	14	17	19	20
30	West Twin Lake, Nebr.	16	--	15	18	22	--
31	East Twin Lake, Nebr.	34	11	13	15	17	19
32	Holmes Lake, Nebr.	58	7	7	9	11	14
33	Branched Oak Lake, Nebr.	57	15	16	18	19	21
	Alkalinity, onsite, total as $CaCO_3$, in milligrams per liter (00410)						
23	Olive Creek Lake, Nebr.	80	110	130	140	150	180
24	Bluestem Lake, Nebr.	80	100	130	150	170	190
25	Wagon Train Lake, Nebr.	91	130	160	180	200	220

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Alkalinity, onsite, total as $CaCO_3$, in milligrams per liter (00410)--Continued						
26	Stagecoach Lake, Nebr.	78	120	140	160	170	190
27	Yankee Hill Lake, Nebr.	135	110	140	160	170	190
28	Conestoga Lake, Nebr.	90	140	150	170	190	210
29	Pawnee Lake, Nebr.	90	160	170	190	200	220
30	West Twin Lake, Nebr.	35	150	170	190	200	230
31	East Twin Lake, Nebr.	76	130	150	160	180	190
32	Holmes Lake, Nebr.	135	85	100	130	150	160
33	Branched Oak Lake, Nebr.	134	170	170	180	200	210
	Sulfate, dissolved, in milligrams per liter (00945)						
23	Olive Creek Lake, Nebr.	62	13	17	21	26	73
24	Bluestem Lake, Nebr.	62	18	21	27	33	72
25	Wagon Train Lake, Nebr.	69	25	30	43	57	72
26	Stagecoach Lake, Nebr.	60	17	26	34	54	67
27	Yankee Hill Lake, Nebr.	101	28	33	43	56	85
28	Conestoga Lake, Nebr.	68	37	45	70	89	105
29	Pawnee Lake, Nebr.	70	24	26	34	51	68
30	West Twin Lake, Nebr.	28	--	38	60	74	--
31	East Twin Lake, Nebr.	58	19	23	35	49	79
32	Holmes Lake, Nebr.	102	17	22	32	48	86
33	Branched Oak Lake, Nebr.	101	32	34	40	44	56
	Chloride, dissolved, in milligrams per liter (00940)						
23	Olive Creek Lake, Nebr.	43	3	4	5	6	9
24	Bluestem Lake, Nebr.	43	6	6	8	10	11
25	Wagon Train Lake, Nebr.	45	5	7	9	10	11
26	Stagecoach Lake, Nebr.	41	8	12	16	18	21
27	Yankee Hill Lake, Nebr.	67	3	6	7	10	11
28	Conestoga Lake, Nebr.	45	8	10	13	15	16
29	Pawnee Lake, Nebr.	46	5	6	7	8	9
30	West Twin Lake, Nebr.	20	--	5	10	12	--
31	East Twin Lake, Nebr.	39	4	5	7	9	10
32	Holmes Lake, Nebr.	68	6	8	13	15	18
33	Branched Oak Lake, Nebr.	68	4	5	6	7	8

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Nitrogen, ammonia, total as N, in milligrams per liter (00610)						
23	Olive Creek Lake, Nebr.	80	<0.02	0.02	0.05	0.13	0.42
24	Bluestem Lake, Nebr.	80	<.02	<.02	.04	.12	.20
25	Wagon Train Lake, Nebr.	91	<.02	.02	.05	.10	.22
26	Stagecoach Lake, Nebr.	78	<.02	.02	.06	.16	.49
27	Yankee Hill Lake, Nebr.	131	<.02	<.02	.03	.09	.20
28	Conestoga Lake, Nebr.	91	<.02	<.02	.07	.17	.29
29	Pawnee Lake, Nebr.	90	<.02	<.02	.03	.07	.17
30	West Twin Lake, Nebr.	35	<.02	.02	.07	.17	.42
31	East Twin Lake, Nebr.	76	<.02	.03	.08	.17	.27
32	Holmes Lake, Nebr.	135	<.02	<.02	.03	.07	.14
33	Branched Oak Lake, Nebr.	134	<.02	<.02	.06	.11	.19
	Nitrite, total as N, in milligrams per liter (00615)						
23	Olive Creek Lake, Nebr.	45	<.01	<.01	<.01	<.01	<.01
24	Bluestem Lake, Nebr.	45	<.01	<.01	<.01	<.01	<.01
25	Wagon Train Lake, Nebr.	56	<.01	<.01	<.01	<.01	.01
26	Stagecoach Lake, Nebr.	42	<.01	<.01	<.01	<.01	.01
27	Yankee Hill Lake, Nebr.	79	<.01	<.01	<.01	<.01	.01
28	Conestoga Lake, Nebr.	56	<.01	<.01	<.01	<.01	.01
29	Pawnee Lake, Nebr.	56	<.01	<.01	<.01	<.01	<.01
30	West Twin Lake, Nebr.	17	--	<.01	<.01	<.01	--
31	East Twin Lake, Nebr.	42	<.01	<.01	<.01	<.01	<.01
32	Holmes Lake, Nebr.	82	<.01	<.01	<.01	<.01	<.01
33	Branched Oak Lake, Nebr.	82	<.01	<.01	<.01	<.01	<.01
	Ammonia, un-ionized as N, in milligrams per liter (00619)						
23	Olive Creek Lake, Nebr.	80	<.01	<.01	<.01	.01	.03
24	Bluestem Lake, Nebr.	78	<.01	<.01	<.01	.01	.01
25	Wagon Train Lake, Nebr.	89	<.01	<.01	<.01	<.01	.01
26	Stagecoach Lake, Nebr.	78	<.01	<.01	<.01	.01	.02
27	Yankee Hill Lake, Nebr.	131	<.01	<.01	<.01	<.01	.01
28	Conestoga Lake, Nebr.	91	<.01	<.01	<.01	.01	.02
29	Pawnee Lake, Nebr.	90	<.01	<.01	<.01	<.01	.01
30	West Twin Lake, Nebr.	35	<.01	<.01	<.01	.01	.03

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Ammonia, un-ionized as N, in milligrams per liter (00619)--Continued						
31	East Twin Lake, Nebr.	75	<0.01	<0.01	<0.01	0.01	0.02
32	Holmes Lake, Nebr.	134	<.01	<.01	<.01	.01	.01
33	Branched Oak Lake, Nebr.	134	<.01	<.01	<.01	.01	.01
	Nitrate, total as N, in milligrams per liter (00620)						
23	Olive Creek Lake, Nebr.	77	.02	.10	.34	.88	1.3
24	Bluestem Lake, Nebr.	76	<.01	.03	.17	.81	1.2
25	Wagon Train Lake, Nebr.	87	<.01	.02	.08	.27	.63
26	Stagecoach Lake, Nebr.	74	<.01	.02	.08	.50	1.7
27	Yankee Hill Lake, Nebr.	127	<.01	.02	.18	.43	.80
28	Conestoga Lake, Nebr.	87	<.01	.01	.07	.27	.61
29	Pawnee Lake, Nebr.	87	<.01	.01	.05	.23	.65
30	West Twin Lake, Nebr.	33	<.01	.02	.05	.18	.88
31	East Twin Lake, Nebr.	72	<.01	.01	.06	.25	.55
32	Holmes Lake, Nebr.	129	<.01	.01	.05	.34	.84
33	Branched Oak Lake, Nebr.	130	.01	.05	.15	.31	.59
	Nitrogen, total ammonia plus organic as N, in milligrams per liter (00625)						
23	Olive Creek Lake, Nebr.	65	.6	.7	.9	1.2	1.5
24	Bluestem Lake, Nebr.	65	.5	.7	.8	1.0	1.2
25	Wagon Train Lake, Nebr.	76	.5	.6	.8	1.0	1.4
26	Stagecoach Lake, Nebr.	63	.4	.6	.9	1.3	1.8
27	Yankee Hill Lake, Nebr.	109	.5	.6	.8	1.0	1.2
28	Conestoga Lake, Nebr.	76	.5	.6	.9	1.2	1.5
29	Pawnee Lake, Nebr.	73	.4	.6	.8	1.0	1.1
30	West Twin Lake, Nebr.	27	--	.9	1.1	1.4	--
31	East Twin Lake, Nebr.	62	.5	.7	.9	1.4	1.7
32	Holmes Lake, Nebr.	113	.4	.6	.9	1.1	1.4
33	Branched Oak Lake, Nebr.	112	.4	.5	.7	.9	1.1
	Phosphorus, total as P, in milligrams per liter (00665)						
23	Olive Creek Lake, Nebr.	78	.06	.10	.13	.17	.27
24	Bluestem Lake, Nebr.	78	.05	.08	.12	.15	.30
25	Wagon Train Lake, Nebr.	89	.07	.09	.14	.19	.28

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Phosphorus, total as P, in milligrams per liter (00665)--Continued						
26	Stagecoach Lake, Nebr.	76	0.04	0.08	0.13	0.19	0.28
27	Yankee Hill Lake, Nebr.	130	.05	.06	.09	.12	.27
28	Conestoga Lake, Nebr.	89	.04	.08	.09	.11	.18
29	Pawnee Lake, Nebr.	88	.03	.06	.09	.12	.16
30	West Twin Lake, Nebr.	34	.07	.11	.16	.22	.28
31	East Twin Lake, Nebr.	75	.05	.08	.10	.13	.20
32	Holmes Lake, Nebr.	132	.06	.08	.12	.19	.25
33	Branched Oak Lake, Nebr.	131	.04	.05	.07	.09	.12
	Phosphorus, total ortho as P, in milligrams per liter (70507)						
23	Olive Creek Lake, Nebr.	72	.02	.03	.05	.07	.12
24	Bluestem Lake, Nebr.	72	.01	.03	.04	.08	.14
25	Wagon Train Lake, Nebr.	83	.01	.04	.06	.11	.16
26	Stagecoach Lake, Nebr.	70	.01	.02	.04	.07	.09
27	Yankee Hill Lake, Nebr.	122	<.01	.01	.02	.05	.08
28	Conestoga Lake, Nebr.	81	<.01	.01	.02	.04	.08
29	Pawnee Lake, Nebr.	81	<.01	.01	.02	.03	.05
30	West Twin Lake, Nebr.	30	.01	.02	.04	.07	.08
31	East Twin Lake, Nebr.	68	<.01	.01	.02	.03	.09
32	Holmes Lake, Nebr.	122	<.01	.01	.03	.06	.10
33	Branched Oak Lake, Nebr.	121	<.01	.01	.02	.03	.05
	Antimony, total, in micrograms per liter (01097)						
23	Olive Creek Lake, Nebr.	20	--	<2	<3	<5	--
24	Bluestem Lake, Nebr.	20	--	<2	<4	<5	--
25	Wagon Train Lake, Nebr.	24	--	<2	<2	<5	--
26	Stagecoach Lake, Nebr.	20	--	<2	<3	<5	--
27	Yankee Hill Lake, Nebr.	36	<2	<2	<2	<5	<10
28	Conestoga Lake, Nebr.	24	--	<2	<2	<5	--
29	Pawnee Lake, Nebr.	23	--	<2	<2	<5	--
31	East Twin Lake, Nebr.	19	--	<2	<3	<5	--
32	Holmes Lake, Nebr.	36	<2	<2	<2	<5	<10
33	Branched Oak Lake, Nebr.	36	<2	<2	<3	<5	<20

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile 10th	25th	50th (median)	75th	90th
	Arsenic, total, in micrograms per liter (01002)						
23	Olive Creek Lake, Nebr.	30	<2	2	3	4	9
24	Bluestem Lake, Nebr.	30	<2	<2	3	5	11
25	Wagon Train Lake, Nebr.	34	2	4	5	9	12
26	Stagecoach Lake, Nebr.	28	--	<2	3	6	--
27	Yankee Hill Lake, Nebr.	51	<2	2	4	5	7
28	Conestoga Lake, Nebr.	34	<2	2	3	5	6
29	Pawnee Lake, Nebr.	33	<2	<2	3	3	6
30	West Twin Lake, Nebr.	11	--	5	5	8	--
31	East Twin Lake, Nebr.	27	--	<2	3	5	--
32	Holmes Lake, Nebr.	51	<2	<2	3	5	6
33	Branched Oak Lake, Nebr.	51	<2	<2	2	3	4
	Barium, total, in micrograms per liter (01007)						
23	Olive Creek Lake, Nebr.	20	--	130	140	170	--
24	Bluestem Lake, Nebr.	20	--	120	140	150	--
25	Wagon Train Lake, Nebr.	24	--	80	90	100	--
26	Stagecoach Lake, Nebr.	20	--	140	150	170	--
27	Yankee Hill Lake, Nebr.	36	70	100	130	130	140
28	Conestoga Lake, Nebr.	24	--	120	130	160	--
29	Pawnee Lake, Nebr.	23	--	120	170	180	--
31	East Twin Lake, Nebr.	19	--	80	120	170	--
32	Holmes Lake, Nebr.	36	80	120	130	140	160
33	Branched Oak Lake, Nebr.	36	80	140	150	160	170
	Beryllium, total, in micrograms per liter (01012)						
23	Olive Creek Lake, Nebr.	20	--	<2	<2	<5	--
24	Bluestem Lake, Nebr.	20	--	<2	<2	<5	--
25	Wagon Train Lake, Nebr.	24	--	<2	<2	<5	--
26	Stagecoach Lake, Nebr.	20	--	<2	<2	<5	--
27	Yankee Hill Lake, Nebr.	36	<2	<2	<2	<5	<5
28	Conestoga Lake, Nebr.	24	--	<2	<2	<5	--
29	Pawnee Lake, Nebr.	23	--	<2	<2	<5	--
31	East Twin Lake, Nebr.	19	--	2	2	5	--
32	Holmes Lake, Nebr.	36	<2	<2	<2	<5	<5
33	Branched Oak Lake, Nebr.	36	<2	<2	<2	<5	<5

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
			Boron, total, in micrograms per liter (01022)				
23	Olive Creek Lake, Nebr.	20	--	29	40	78	--
24	Bluestem Lake, Nebr.	20	--	32	50	62	--
25	Wagon Train Lake, Nebr.	24	--	50	64	75	--
26	Stagecoach Lake, Nebr.	20	--	42	54	71	--
27	Yankee Hill Lake, Nebr.	36	33	39	52	72	99
28	Conestoga Lake, Nebr.	24	--	52	56	78	--
29	Pawnee Lake, Nebr.	23	--	43	58	70	--
31	East Twin Lake, Nebr.	19	--	37	61	71	--
32	Holmes Lake, Nebr.	36	35	38	43	62	100
33	Branched Oak Lake, Nebr.	36	26	42	56	61	120
			Cadmium, total, in micrograms per liter (01027)				
23	Olive Creek Lake, Nebr.	29	--	<.2	<.4	<.5	--
24	Bluestem Lake, Nebr.	29	--	<.2	<.4	<.5	--
25	Wagon Train Lake, Nebr.	33	<.2	<.2	<.3	<.5	1
26	Stagecoach Lake, Nebr.	27	--	<.2	<.5	<.5	--
27	Yankee Hill Lake, Nebr.	49	<.2	<.2	<.4	<.5	1
28	Conestoga Lake, Nebr.	33	<.2	<.2	<.3	<.5	<3
29	Pawnee Lake, Nebr.	32	<.2	<.2	<.2	<.5	1
30	West Twin Lake, Nebr.	12	--	<.5	.5	.9	--
31	East Twin Lake, Nebr.	28	--	<.2	<.4	<.5	--
32	Holmes Lake, Nebr.	50	<.2	<.2	<.3	<.5	<2
33	Branched Oak Lake, Nebr.	48	<.2	<.2	<.3	<.5	<2
			Chromium, total, in micrograms per liter (01034)				
23	Olive Creek Lake, Nebr.	20	--	<5	<5	7	--
24	Bluestem Lake, Nebr.	20	--	<5	<5	7	--
25	Wagon Train Lake, Nebr.	24	--	<5	<5	<5	--
26	Stagecoach Lake, Nebr.	20	--	<5	<5	<5	--
27	Yankee Hill Lake, Nebr.	36	<3	<5	<5	<5	<7
28	Conestoga Lake, Nebr.	24	--	<5	<5	<5	--
29	Pawnee Lake, Nebr.	23	--	<5	<5	<5	--
31	East Twin Lake, Nebr.	19	--	<5	<5	<5	--
32	Holmes Lake, Nebr.	36	<3	<5	<5	<5	<5
33	Branched Oak Lake, Nebr.	36	<3	<5	<5	<5	<5

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Copper, total, in micrograms per liter (01042)						
23	Olive Creek Lake, Nebr.	32	<4	<5	<5	7	10
24	Bluestem Lake, Nebr.	32	<5	<5	6	11	21
25	Wagon Train Lake, Nebr.	36	<3	<5	<5	8	25
26	Stagecoach Lake, Nebr.	30	<3	<5	<5	6	9
27	Yankee Hill Lake, Nebr.	54	<5	<5	<5	5	9
28	Conestoga Lake, Nebr.	36	<5	<5	<5	5	7
29	Pawnee Lake, Nebr.	34	<5	<5	<5	5	6
30	West Twin Lake, Nebr.	12	--	5	6	9	--
31	East Twin Lake, Nebr.	29	--	<5	<5	5	--
32	Holmes Lake, Nebr.	55	<5	<5	<5	7	15
33	Branched Oak Lake, Nebr.	55	<3	<5	<5	<5	7
	Iron, total as Fe, in micrograms per liter (01045)						
23	Olive Creek Lake, Nebr.	39	950	1,600	2,000	2,800	4,300
24	Bluestem Lake, Nebr.	39	430	1,100	1,500	2,900	4,400
25	Wagon Train Lake, Nebr.	45	310	590	850	1,800	4,100
26	Stagecoach Lake, Nebr.	37	530	630	960	1,200	2,700
27	Yankee Hill Lake, Nebr.	67	600	840	1,100	1,800	7,700
28	Conestoga Lake, Nebr.	45	640	740	970	1,600	2,300
29	Pawnee Lake, Nebr.	44	520	680	980	1,900	2,400
30	West Twin Lake, Nebr.	16	--	960	1,400	2,800	--
31	East Twin Lake, Nebr.	38	190	360	570	1,100	1,700
32	Holmes Lake, Nebr.	67	640	920	1,600	4,500	6,400
33	Branched Oak Lake, Nebr.	66	330	490	670	1,100	1,400
	Lead, total, in micrograms per liter (01051)						
23	Olive Creek Lake, Nebr.	20	--	<1	4	7	--
24	Bluestem Lake, Nebr.	20	--	<5	5	8	--
25	Wagon Train Lake, Nebr.	24	--	<2	6	11	--
26	Stagecoach Lake, Nebr.	20	--	<3	<5	8	--
27	Yankee Hill Lake, Nebr.	36	<.5	2	5	10	13
28	Conestoga Lake, Nebr.	24	--	<1	<5	7	--
29	Pawnee Lake, Nebr.	23	--	<.5	5	9	--
31	East Twin Lake, Nebr.	19	--	<.5	5	20	--
32	Holmes Lake, Nebr.	36	<.5	<3	<5	9	14
33	Branched Oak Lake, Nebr.	35	<.5	<2	4	6	14

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Manganese, total, in micrograms per liter (01055)						
23	Olive Creek Lake, Nebr.	39	70	100	140	290	440
24	Bluestem Lake, Nebr.	39	60	90	130	180	230
25	Wagon Train Lake, Nebr.	45	90	120	150	250	440
26	Stagecoach Lake, Nebr.	37	70	180	270	360	450
27	Yankee Hill Lake, Nebr.	67	60	100	130	170	280
28	Conestoga Lake, Nebr.	45	90	110	140	180	270
29	Pawnee Lake, Nebr.	44	90	100	130	190	240
30	West Twin Lake, Nebr.	15	--	290	470	560	--
31	East Twin Lake, Nebr.	38	120	190	260	320	470
32	Holmes Lake, Nebr.	68	90	120	180	230	280
33	Branched Oak Lake, Nebr.	66	50	60	110	140	200
	Mercury, total, in micrograms per liter(71900)						
23	Olive Creek Lake, Nebr.	80	<.2	<.2	<.2	.2	.3
24	Bluestem Lake, Nebr.	80	<.2	<.2	<.2	.2	.3
25	Wagon Train Lake, Nebr.	90	<.2	<.2	<.2	<.3	.3
26	Stagecoach Lake, Nebr.	78	<.2	<.2	<.2	.2	.4
27	Yankee Hill Lake, Nebr.	133	<.2	<.2	<.2	.2	.3
28	Conestoga Lake, Nebr.	91	<.2	<.2	<.2	.2	.3
29	Pawnee Lake, Nebr.	90	<.2	<.2	<.2	.2	.4
30	West Twin Lake, Nebr.	35	<.2	<.2	<.2	.2	.4
31	East Twin Lake, Nebr.	75	<.2	<.2	<.2	<.3	<.5
32	Holmes Lake, Nebr.	135	<.2	<.2	<.2	<.2	.4
33	Branched Oak Lake, Nebr.	132	<.2	<.2	<.2	.2	.4
	Nickel, total, in micrograms per liter (01067)						
23	Olive Creek Lake, Nebr.	29	--	<5	5	12	--
24	Bluestem Lake, Nebr.	29	--	<5	<6	<8	--
25	Wagon Train Lake, Nebr.	35	<5	<5	<5	<10	26
26	Stagecoach Lake, Nebr.	29	--	<5	<5	<10	--
27	Yankee Hill Lake, Nebr.	52	<5	<5	<6	<14	<20
28	Conestoga Lake, Nebr.	35	<5	<5	<5	13	18
29	Pawnee Lake, Nebr.	35	<5	<5	<5	<10	15
30	West Twin Lake, Nebr.	12	--	<5	<7	<12	--

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Nickel, total, in micrograms per liter (01067)--Continued						
31	East Twin Lake, Nebr.	26	--	<5	<5	<10	--
32	Holmes Lake, Nebr.	53	<5	<5	<6	<10	22
33	Branched Oak Lake, Nebr.	51	<5	<5	<5	<8	<10
	Selenium, total, in micrograms per liter (01147)						
23	Olive Creek Lake, Nebr.	20	--	<2	<2	<2	--
24	Bluestem Lake, Nebr.	20	--	<2	<2	<2	--
25	Wagon Train Lake, Nebr.	24	--	<2	<2	<2	--
26	Stagecoach Lake, Nebr.	20	--	<2	<2	<2	--
27	Yankee Hill Lake, Nebr.	36	<2	<2	<2	<2	<5
28	Conestoga Lake, Nebr.	24	--	<2	<2	<2	--
29	Pawnee Lake, Nebr.	23	--	<2	<2	<2	--
31	East Twin Lake, Nebr.	19	--	<2	<2	<5	--
32	Holmes Lake, Nebr.	36	<2	<2	<2	<2	<4
33	Branched Oak Lake, Nebr.	35	<2	<2	<2	2	3
	Silver, total, in micrograms per liter (01077)						
23	Olive Creek Lake, Nebr.	20	--	<.2	<.2	<.5	--
24	Bluestem Lake, Nebr.	20	--	<.2	<.2	<.5	--
25	Wagon Train Lake, Nebr.	24	--	<.2	<.2	<.5	--
26	Stagecoach Lake, Nebr.	20	--	<.2	<.2	<.5	--
27	Yankee Hill Lake, Nebr.	36	<.2	<.2	<.2	<.5	<.5
28	Conestoga Lake, Nebr.	24	--	<.2	<.2	<.5	--
29	Pawnee Lake, Nebr.	23	--	<.2	<.2	<.5	--
31	East Twin Lake, Nebr.	20	--	<.2	<.2	<.5	--
32	Holmes Lake, Nebr.	36	<.2	<.2	<.2	<.5	<.5
33	Branched Oak Lake, Nebr.	36	<.2	<.2	<.2	<.5	1
	Zinc, total, in micrograms per liter (01092)						
23	Olive Creek Lake, Nebr.	34	<2	5	10	15	52
24	Bluestem Lake, Nebr.	35	<2	5	7	13	58
25	Wagon Train Lake, Nebr.	39	<2	4	6	12	36
26	Stagecoach Lake, Nebr.	33	<2	4	6	12	40
27	Yankee Hill Lake, Nebr.	58	<2	3	7	12	41
28	Conestoga Lake, Nebr.	39	<2	4	8	10	21
29	Pawnee Lake, Nebr.	38	<2	<2	6	11	22

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Zinc, total, in micrograms per liter (01092)--Continued						
30	West Twin Lake, Nebr.	14	--	4	9	17	--
31	East Twin Lake, Nebr.	32	<2	3	6	10	17
32	Holmes Lake, Nebr.	59	<2	4	8	18	35
33	Branched Oak Lake, Nebr.	58	<2	2	5	11	23
	Cyanide, total as CN, in milligrams per liter (00720)						
23	Olive Creek Lake, Nebr.	30	<.01	<.01	<.01	<.01	<.02
24	Bluestem Lake, Nebr.	30	<.01	<.01	<.01	<.01	<.02
25	Wagon Train Lake, Nebr.	34	<.01	<.01	<.01	<.01	<.02
26	Stagecoach Lake, Nebr.	28	--	<.01	<.01	<.01	--
27	Yankee Hill Lake, Nebr.	51	<.01	<.01	<.01	<.01	<.02
28	Conestoga Lake, Nebr.	34	<.01	<.01	<.01	<.01	<.02
29	Pawnee Lake, Nebr.	33	<.01	<.01	<.01	<.01	<.02
30	West Twin Lake, Nebr.	11	--	<.01	<.01	<.02	--
31	East Twin Lake, Nebr.	28	--	<.01	<.01	<.01	--
32	Holmes Lake, Nebr.	51	<.01	<.01	<.01	<.01	<.02
33	Branched Oak Lake, Nebr.	51	<.01	<.01	<.01	<.01	<.02
	Polychlorinated biphenyls, total, in micrograms per liter (39516)						
23	Olive Creek Lake, Nebr.	28	--	<.1	<.1	<1	--
24	Bluestem Lake, Nebr.	27	--	<.1	<.1	<1	--
25	Wagon Train Lake, Nebr.	32	<.1	<.1	<.1	<1	<1
26	Stagecoach Lake, Nebr.	26	--	<.1	<.1	<1	--
27	Yankee Hill Lake, Nebr.	48	<.1	<.1	<.1	<1	<1
28	Conestoga Lake, Nebr.	34	<.1	<.1	<.1	<1	<1
29	Pawnee Lake, Nebr.	32	<.1	<.1	<.1	<1	<1
30	West Twin Lake, Nebr.	10	--	<.1	<.1	<1	--
31	East Twin Lake, Nebr.	26	--	<.1	<.1	<1	--
32	Holmes Lake, Nebr.	48	<.1	<.1	<.1	<1	<1
33	Branched Oak Lake, Nebr.	48	<.1	<.1	<.1	<1	<1

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Benzene hexachloride, total, in micrograms per liter (81283)						
23	Olive Creek Lake, Nebr.	24	--	<0.02	<0.02	<0.02	--
24	Bluestem Lake, Nebr.	24	--	<.02	<.02	<.02	--
25	Wagon Train Lake, Nebr.	26	--	<.02	<.02	<.02	--
26	Stagecoach Lake, Nebr.	22	--	<.02	<.02	<.02	--
27	Yankee Hill Lake, Nebr.	39	<0.02	<.02	<.02	<.02	0.03
28	Conestoga Lake, Nebr.	27	--	<.02	<.02	<.02	--
29	Pawnee Lake, Nebr.	26	--	<.02	<.02	<.02	--
30	West Twin Lake, Nebr.	10	--	<.02	<.02	<.02	--
31	East Twin Lake, Nebr.	22	--	<.02	<.02	<.02	--
32	Holmes Lake, Nebr.	40	<.02	<.02	<.02	<.02	.03
33	Branched Oak Lake, Nebr.	39	<.02	<.02	<.02	<.02	<.02
	Bis (2-ethylhexyl) phthalate, total, in micrograms per liter (39100)						
27	Yankee Hill Lake, Nebr.	12	--	<2	<2	<2	--
32	Holmes Lake, Nebr.	12	--	<2	<2	<2	--
33	Branched Oak Lake, Nebr.	12	--	<2	<2	<2	--
	N-butyl benzyl phthalate, total, in micrograms per liter (34292)						
27	Yankee Hill Lake, Nebr.	12	--	<.34	<.34	<.34	--
32	Holmes Lake, Nebr.	12	--	<.34	<.34	<.34	--
33	Branched Oak Lake, Nebr.	12	--	<.34	<.34	<.34	--
	Di-n-butyl phthalate, total, in micrograms per liter (39110)						
27	Yankee Hill Lake, Nebr.	12	--	<.36	<.36	<.36	--
32	Holmes Lake, Nebr.	12	--	<.36	<.36	<.36	--
33	Branched Oak Lake, Nebr.	12	--	<.36	<.36	<.36	--
	Diethyl phthalate, total, in micrograms per liter (34336)						
27	Yankee Hill Lake, Nebr.	12	--	<.49	<.49	<.49	--
32	Holmes Lake, Nebr.	12	--	<.49	<.49	<.49	--
33	Branched Oak Lake, Nebr.	12	--	<.49	<.49	<.49	--

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Dimethyl phthalate, total, in micrograms per liter (34341)						
27	Yankee Hill Lake, Nebr.	12	--	<0.29	<0.29	<0.29	--
32	Holmes Lake, Nebr.	12	--	<.29	<.29	<.29	--
33	Branched Oak Lake, Nebr.	12	--	<.29	<.29	<.29	--
	Di-n-octyl phthalate, total, in micrograms per liter (34596)						
27	Yankee Hill Lake, Nebr.	12	--	<3	<3	<3	--
32	Holmes Lake, Nebr.	12	--	<3	<3	<3	--
33	Branched Oak Lake, Nebr.	12	--	<3	<3	<3	--
	Alachlor, total recoverable, in micrograms per liter (77825)						
23	Olive Creek Lake, Nebr.	18	--	<.1	<.1	.1	--
24	Bluestem Lake, Nebr.	18	--	<.1	<.1	.1	--
25	Wagon Train Lake, Nebr.	20	--	<.1	<.1	.1	--
26	Stagecoach Lake, Nebr.	14	--	<.1	<.1	<.1	--
27	Yankee Hill Lake, Nebr.	30	<0.1	<.1	<.1	.1	0.5
28	Conestoga Lake, Nebr.	20	--	<.1	<.1	<.1	--
29	Pawnee Lake, Nebr.	19	--	<.1	<.1	.2	--
31	East Twin Lake, Nebr.	14	--	<.1	<.1	.5	--
32	Holmes Lake, Nebr.	30	<.1	<.1	<.1	<.1	.2
33	Branched Oak Lake, Nebr.	30	<.1	<.1	<.1	<.1	.4
	Aldrin, total, in micrograms per liter (39330)						
23	Olive Creek Lake, Nebr.	28	--	<.01	<.01	<.01	--
24	Bluestem Lake, Nebr.	27	--	<.01	<.01	<.01	--
25	Wagon Train Lake, Nebr.	32	<.01	<.01	<.01	<.01	<.01
26	Stagecoach Lake, Nebr.	26	--	<.01	<.01	<.01	--
27	Yankee Hill Lake, Nebr.	45	<.01	<.01	<.01	<.01	<.01
28	Conestoga Lake, Nebr.	33	<.01	<.01	<.01	<.01	<.01
29	Pawnee Lake, Nebr.	32	<.01	<.01	<.01	<.01	<.01
30	West Twin Lake, Nebr.	10	--	<.01	<.01	<.01	--
31	East Twin Lake, Nebr.	26	--	<.01	<.01	<.01	--
32	Holmes Lake, Nebr.	48	<.01	<.01	<.01	<.01	<.01
33	Branched Oak Lake, Nebr.	48	<.01	<.01	<.01	<.01	<.01

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Atrazine, total, in micrograms per liter (39033)						
23	Olive Creek Lake, Nebr.	20	--	0.8	2.2	5.8	--
24	Bluestem Lake, Nebr.	20	--	.7	2.1	4.8	--
25	Wagon Train Lake, Nebr.	24	--	.7	1.3	3.6	--
26	Stagecoach Lake, Nebr.	18	--	.6	2.3	5.4	--
27	Yankee Hill Lake, Nebr.	36	<0.1	1.4	2.7	4.1	7.8
28	Conestoga Lake, Nebr.	20	--	<.1	1.1	1.4	--
29	Pawnee Lake, Nebr.	21	--	.4	1.0	1.4	--
31	East Twin Lake, Nebr.	17	--	.5	1.1	3.4	--
32	Holmes Lake, Nebr.	34	<.1	.2	.6	1.4	3.4
33	Branched Oak Lake, Nebr.	33	<.1	<.1	.9	1.6	2.8
	Chlordane, total, in micrograms per liter (39350)						
23	Olive Creek Lake, Nebr.	28	--	<.04	<.04	<.04	--
24	Bluestem Lake, Nebr.	27	--	<.04	<.04	<.04	--
25	Wagon Train Lake, Nebr.	32	<.04	<.04	<.04	<.04	<.04
26	Stagecoach Lake, Nebr.	26	--	<.04	<.04	<.04	--
27	Yankee Hill Lake, Nebr.	45	<.04	<.04	<.04	<.04	<.04
28	Conestoga Lake, Nebr.	33	<.04	<.04	<.04	<.04	.04
29	Pawnee Lake, Nebr.	32	<.04	<.04	<.04	<.04	<.04
30	West Twin Lake, Nebr.	10	--	<.04	<.04	<.04	--
31	East Twin Lake, Nebr.	26	--	<.04	<.04	<.04	--
32	Holmes Lake, Nebr.	48	<.04	<.04	<.04	<.04	<.04
33	Branched Oak Lake, Nebr.	48	<.04	<.04	<.04	<.04	<.04
	o, p' DDD, total, in micrograms per liter (39315)						
24	Bluestem Lake, Nebr.	13	--	<.03	<.03	<.03	--
33	Branched Oak Lake, Nebr.	21	--	<.03	<.03	<.03	--
28	Conestoga Lake, Nebr.	15	--	<.03	<.03	<.03	--
31	East Twin Lake, Nebr.	14	--	<.03	<.03	<.03	--
32	Holmes Lake, Nebr.	21	--	<.03	<.03	<.03	--
23	Olive Creek Lake, Nebr.	14	--	<.03	<.03	<.03	--
29	Pawnee Lake, Nebr.	15	--	<.03	<.03	<.03	--
26	Stagecoach Lake, Nebr.	14	--	<.03	<.03	<.03	--
25	Wagon Train Lake, Nebr.	14	--	<.03	<.03	<.03	--
27	Yankee Hill Lake, Nebr.	18	--	<.03	<.03	<.03	--

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
			DDE, total, in micrograms per liter (39365)				
23	Olive Creek Lake, Nebr.	28	--	<0.03	<0.03	<0.03	--
24	Bluestem Lake, Nebr.	27	--	<.03	<.03	<.03	--
25	Wagon Train Lake, Nebr.	32	<0.03	<.03	<.03	<.03	<0.03
26	Stagecoach Lake, Nebr.	26	--	<.03	<.03	<.03	--
27	Yankee Hill Lake, Nebr.	45	<.03	<.03	<.03	<.03	<.03
28	Conestoga Lake, Nebr.	33	<.03	<.03	<.03	<.03	<.03
29	Pawnee Lake, Nebr.	32	<.03	<.03	<.03	<.03	<.03
30	West Twin Lake, Nebr.	10	--	<.03	<.03	<.03	--
31	East Twin Lake, Nebr.	26	--	<.03	<.03	<.03	--
32	Holmes Lake, Nebr.	48	<.03	<.03	<.03	<.03	<.03
33	Branched Oak Lake, Nebr.	48	<.03	<.03	<.03	<.03	<.03
			DDT, total, in micrograms per liter (39370)				
23	Olive Creek Lake, Nebr.	28	--	<.03	<.03	<.03	--
24	Bluestem Lake, Nebr.	27	--	<.03	<.03	<.03	--
25	Wagon Train Lake, Nebr.	32	<.03	<.03	<.03	<.03	.03
26	Stagecoach Lake, Nebr.	26	--	<.03	<.03	<.03	--
27	Yankee Hill Lake, Nebr.	45	<.03	<.03	<.03	<.03	<.03
28	Conestoga Lake, Nebr.	33	<.03	<.03	<.03	<.03	<.03
29	Pawnee Lake, Nebr.	32	<.03	<.03	<.03	<.03	<.03
30	West Twin Lake, Nebr.	10	--	<.03	<.03	<.03	--
31	East Twin Lake, Nebr.	26	--	<.03	<.03	<.03	--
32	Holmes Lake, Nebr.	48	<.03	<.03	<.03	<.03	<.03
33	Branched Oak Lake, Nebr.	48	<.03	<.03	<.03	<.03	<.03
			Dieldrin, total, in micrograms per liter (39380)				
23	Olive Creek Lake, Nebr.	28	--	<.02	<.02	<.02	--
24	Bluestem Lake, Nebr.	28	--	<.02	<.02	<.02	--
25	Wagon Train Lake, Nebr.	32	<.02	<.02	<.02	<.02	<.02
26	Stagecoach Lake, Nebr.	26	--	<.02	<.02	<.02	--
27	Yankee Hill Lake, Nebr.	45	<.02	<.02	<.02	<.02	<.02
28	Conestoga Lake, Nebr.	33	<.02	<.02	<.02	<.02	<.02
29	Pawnee Lake, Nebr.	32	<.02	<.02	<.02	<.02	<.02
30	West Twin Lake, Nebr.	10	--	<.02	<.02	<.02	--

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Dieldrin, total, in micrograms per liter (39380)--Continued						
31	East Twin Lake, Nebr.	26	--	<0.02	<0.02	<0.02	--
32	Holmes Lake, Nebr.	48	<0.02	<.02	<.02	<.02	<0.02
33	Branched Oak Lake, Nebr.	48	<.02	<.02	<.02	<.02	<.02
	Endosulfan, total, in micrograms per liter (39388)						
23	Olive Creek Lake, Nebr.	28	--	<.02	<.02	<.02	--
24	Bluestem Lake, Nebr.	27	--	<.02	<.02	<.02	--
25	Wagon Train Lake, Nebr.	32	<.02	<.02	<.02	<.02	<.02
26	Stagecoach Lake, Nebr.	26	--	<.02	<.02	<.02	--
27	Yankee Hill Lake, Nebr.	45	<.02	<.02	<.02	<.02	<.02
28	Conestoga Lake, Nebr.	33	<.02	<.02	<.02	<.02	<.02
29	Pawnee Lake, Nebr.	32	<.02	<.02	<.02	<.02	<.02
30	West Twin Lake, Nebr.	10	--	<.02	<.02	<.02	--
31	East Twin Lake, Nebr.	26	--	<.02	<.02	<.02	--
32	Holmes Lake, Nebr.	48	<.02	<.02	<.02	<.02	<.02
33	Branched Oak Lake, Nebr.	48	<.02	<.02	<.02	<.02	<.02
	Endrin, total, in micrograms per liter (39390)						
23	Olive Creek Lake, Nebr.	28	--	<.03	<.03	<.03	--
24	Bluestem Lake, Nebr.	27	--	<.03	<.03	<.03	--
25	Wagon Train Lake, Nebr.	32	<.03	<.03	<.03	<.03	<.03
26	Stagecoach Lake, Nebr.	26	--	<.03	<.03	<.03	--
27	Yankee Hill Lake, Nebr.	45	<.03	<.03	<.03	<.03	<.03
28	Conestoga Lake, Nebr.	33	<.03	<.03	<.03	<.03	<.03
29	Pawnee Lake, Nebr.	32	<.03	<.03	<.03	<.03	<.03
30	West Twin Lake, Nebr.	10	--	<.03	<.03	<.03	--
31	East Twin Lake, Nebr.	26	--	<.03	<.03	<.03	--
32	Holmes Lake, Nebr.	48	<.03	<.03	<.03	<.03	<.03
33	Branched Oak Lake, Nebr.	48	<.03	<.03	<.03	<.03	<.03
	Lindane, total, in micrograms per liter (39782)						
23	Olive Creek Lake, Nebr.	28	--	<.01	<.01	<.01	--
24	Bluestem Lake, Nebr.	27	--	<.01	<.01	<.01	--
25	Wagon Train Lake, Nebr.	32	<.01	<.01	<.01	<.01	<.01

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Lindane, total, in micrograms per liter (39782)--Continued						
26	Stagecoach Lake, Nebr.	26	--	<0.01	<0.01	<0.01	--
27	Yankee Hill Lake, Nebr.	45	<0.01	<.01	<.01	<.01	<0.01
28	Conestoga Lake, Nebr.	33	<.01	<.01	<.01	<.01	<.01
29	Pawnee Lake, Nebr.	32	<.01	<.01	<.01	<.01	<.01
30	West Twin Lake, Nebr.	10	--	<.01	<.01	<.01	--
31	East Twin Lake, Nebr.	26	--	<.01	<.01	<.01	--
32	Holmes Lake, Nebr.	48	<.01	<.01	<.01	<.01	<.01
33	Branched Oak Lake, Nebr.	48	<.01	<.01	<.01	<.01	<.01
	Methoxychlor, total, in micrograms per liter (39480)						
23	Olive Creek Lake, Nebr.	28	--	<.04	<.04	<.04	--
24	Bluestem Lake, Nebr.	27	--	<.04	<.04	<.04	--
25	Wagon Train Lake, Nebr.	32	<.04	<.04	<.04	<.04	<.04
26	Stagecoach Lake, Nebr.	26	--	<.04	<.04	<.04	--
27	Yankee Hill Lake, Nebr.	45	<.04	<.04	<.04	<.04	<.04
28	Conestoga Lake, Nebr.	33	<.04	<.04	<.04	<.04	<.04
29	Pawnee Lake, Nebr.	32	<.04	<.04	<.04	<.04	<.04
30	West Twin Lake, Nebr.	10	--	<.04	<.04	<.04	--
31	East Twin Lake, Nebr.	26	--	<.04	<.04	<.04	--
32	Holmes Lake, Nebr.	48	<.04	<.04	<.04	<.04	<.04
33	Branched Oak Lake, Nebr.	48	<.04	<.04	<.04	<.04	<.04
	Metolachlor in whole-water sample, in micrograms per liter (39356)						
23	Olive Creek Lake, Nebr.	16	--	<.1	<.1	<.1	--
24	Bluestem Lake, Nebr.	16	--	<.1	<.1	<.1	--
25	Wagon Train Lake, Nebr.	20	--	<.1	<.1	<.1	--
26	Stagecoach Lake, Nebr.	14	--	<.1	<.1	.3	--
27	Yankee Hill Lake, Nebr.	32	<.1	<.1	<.1	.7	1.2
28	Conestoga Lake, Nebr.	20	--	<.1	<.1	<.1	--
29	Pawnee Lake, Nebr.	19	--	<.1	<.1	.2	--
31	East Twin Lake, Nebr.	14	--	<.1	<.1	<.1	--
32	Holmes Lake, Nebr.	30	<.1	<.1	<.1	.1	.2
33	Branched Oak Lake, Nebr.	30	<.1	<.1	<.1	<.1	<.1

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile				
			10th	25th	50th (median)	75th	90th
	Metribuzin in whole-water sample, in micrograms per liter (81408)						
23	Olive Creek Lake, Nebr.	12	--	<0.1	<0.1	<0.1	--
24	Bluestem Lake, Nebr.	14	--	<.1	<.1	<.1	--
25	Wagon Train Lake, Nebr.	18	--	<.1	<.1	<.1	--
26	Stagecoach Lake, Nebr.	12	--	<.1	<.1	<.1	--
27	Yankee Hill Lake, Nebr.	27	--	<.1	<.1	<.1	--
28	Conestoga Lake, Nebr.	18	--	<.1	<.1	<.1	--
29	Pawnee Lake, Nebr.	17	--	<.1	<.1	<.1	--
31	East Twin Lake, Nebr.	10	--	<.1	<.1	<.1	--
32	Holmes Lake, Nebr.	27	--	<.1	<.1	<.1	--
33	Branched Oak Lake, Nebr.	27	--	<.1	<.1	<.1	--
	Propachlor in whole-water sample, in micrograms per liter (77729)						
23	Olive Creek Lake, Nebr.	12	--	<.1	<.1	<.1	--
24	Bluestem Lake, Nebr.	14	--	<.1	<.1	<.1	--
25	Wagon Train Lake, Nebr.	18	--	<.1	<.1	<.1	--
26	Stagecoach Lake, Nebr.	12	--	<.1	<.1	<.1	--
27	Yankee Hill Lake, Nebr.	27	--	<.1	<.1	<.1	--
28	Conestoga Lake, Nebr.	18	--	<.1	<.1	<.1	--
29	Pawnee Lake, Nebr.	17	--	<.1	<.1	<.1	--
31	East Twin Lake, Nebr.	10	--	<.1	<.1	<.1	--
32	Holmes Lake, Nebr.	27	--	<.1	<.1	<.1	--
33	Branched Oak Lake, Nebr.	27	--	<.1	<.1	<.1	--
	Simazine, total, in micrograms per liter (39055)						
23	Olive Creek Lake, Nebr.	16	--	<.1	<.1	<.1	--
24	Bluestem Lake, Nebr.	16	--	<.1	<.1	<.1	--
25	Wagon Train Lake, Nebr.	20	--	<.1	<.1	<.1	--
26	Stagecoach Lake, Nebr.	14	--	<.1	<.1	<.1	--
27	Yankee Hill Lake, Nebr.	30	<0.1	<.1	<.1	<.1	<0.2
28	Conestoga Lake, Nebr.	20	--	<.1	<.1	<.1	--
29	Pawnee Lake, Nebr.	19	--	<.1	<.1	<.1	--
31	East Twin Lake, Nebr.	14	--	<.1	<.1	<.1	--
32	Holmes Lake, Nebr.	30	<.1	<.1	<.1	<.1	<.1
33	Branched Oak Lake, Nebr.	30	<.1	<.1	<.1	<.1	<.1

Table 8. *Statistical summary of data on water-quality constituents and properties in lake-water samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Sampling-site number (fig. 2)	Site name	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
	Strobane, total, in micrograms per liter (39026)						
23	Olive Creek Lake, Nebr.	28	--	<0.1	<0.1	<0.8	--
24	Bluestem Lake, Nebr.	27	--	<.1	<.1	<.8	--
25	Wagon Train Lake, Nebr.	32	<0.1	<.1	<.1	<.8	<.08
26	Stagecoach Lake, Nebr.	26	--	<.1	<.1	<.8	--
27	Yankee Hill Lake, Nebr.	45	<.1	<.1	<.1	<.8	<.8
28	Conestoga Lake, Nebr.	33	<.1	<.1	<.1	<.8	<.8
29	Pawnee Lake, Nebr.	32	<.1	<.1	<.1	<.8	<.8
30	West Twin Lake, Nebr.	10	--	<.1	<.1	<.8	--
31	East Twin Lake, Nebr.	26	--	<.1	<.1	<.8	--
32	Holmes Lake, Nebr.	48	<.1	<.1	<.1	<.8	<.8
33	Branched Oak Lake, Nebr.	48	<.1	<.1	<.1	<.8	<.8
	Toxaphene, total, in micrgrams per liter (39400)						
23	Olive Creek Lake, Nebr.	28	--	<.1	<.1	<.8	--
24	Bluestem Lake, Nebr.	27	--	<.1	<.1	<.8	--
25	Wagon Train Lake, Nebr.	32	<.1	<.1	<.1	<.8	<.8
26	Stagecoach Lake, Nebr.	26	--	<.1	<.1	<.8	--
27	Yankee Hill Lake, Nebr.	45	<.1	<.1	<.1	<.8	<.8
28	Conestoga Lake, Nebr.	33	<.1	<.1	<.1	<.8	<.8
29	Pawnee Lake, Nebr.	32	<.1	<.1	<.1	<.8	<.8
30	West Twin Lake, Nebr.	10	--	<.1	<.1	<.8	--
31	East Twin Lake, Nebr.	26	--	<.1	<.1	<.8	--
32	Holmes Lake, Nebr.	48	<.1	<.1	<.1	<.8	<.8
33	Branched Oak Lake, Nebr.	48	<.1	<.1	<.1	<.8	<.8

Table 9. *Statistical summary of data on water-quality constituents in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979*

[Arsenic and selenium determined by atomic absorption; uranium-FL by fluorometry; uranium-NT by neutron activation; and remaining elements by plasma-source emission spectrometry; <, less than]

Subunit	Number of analyses	Value at indicated percentile				
		10th	25th	50th (median)	75th	90th
	Calcium, in grams per kilogram					
Sandhills	54	8.9	9.6	10	11	12
Loess Hills	674	7.9	8.8	9.7	11	13
Glaciated Area	548	6.0	6.8	8.1	10	13
Platte Valley	93	7.5	8.7	10	12	16
	Magnesium, in grams per kilogram					
Sandhills	54	1.1	1.4	2.0	3.6	4.4
Loess Hills	674	4.0	4.8	5.5	6.2	7.0
Glaciated Area	548	4.2	4.7	5.4	6.0	6.7
Platte Valley	93	3.4	4.4	5.0	6.0	7.3
	Sodium, in grams per kilogram					
Sandhills	54	9.4	11	12	13	13
Loess Hills	674	8.3	9.1	9.9	11	12
Glaciated Area	548	7.3	7.8	8.5	9.2	9.7
Platte Valley	93	7.9	8.9	9.9	11	12
	Potassium, in grams per kilogram					
Sandhills	54	12	13	15	16	16
Loess Hills	674	15	16	16	17	18
Glaciated Area	548	13	14	15	16	16
Platte Valley	93	14	15	16	17	18
	Phosphorus, in micrograms per gram					
Sandhills	54	150	210	300	450	640
Loess Hills	674	450	520	600	690	790
Glaciated Area	548	480	550	650	760	910
Platte Valley	93	380	490	590	700	920
	Aluminum, in grams per kilogram					
Sandhills	54	42	44	46	48	51
Loess Hills	674	48	50	53	56	59
Glaciated Area	548	47	51	54	56	59
Platte Valley	93	44	48	51	54	58
	Arsenic, in micrograms per gram					
Sandhills	54	<.1	<.1	.4	1.1	2.1
Loess Hills	674	.9	1.4	2.1	2.9	3.7
Glaciated Area	548	2.2	2.9	4.1	5.5	7.2
Platte Valley	93	.6	1.1	1.7	2.5	3.5

Table 9. *Statistical summary of data on water-quality constituents in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979*--Continued

Subunit	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
		Barium, in micrograms per gram				
Sandhills	54	780	810	840	880	900
Loess Hills	674	820	850	870	910	950
Glaciated Area	548	800	840	880	920	980
Platte Valley	93	750	780	840	880	900
		Beryllium, in micrograms per gram				
Sandhills	54	1	1	1	1	1
Loess Hills	674	1	1	1	1	2
Glaciated Area	548	1	1	1	1	1
Platte Valley	93	1	1	1	2	2
		Boron, in micrograms per gram				
Sandhills	54	<10	<10	11	15	24
Loess Hills	674	15	19	23	26	29
Glaciated Area	548	18	22	26	29	33
Platte Valley	93	12	16	20	24	28
		Cerium, in micrograms per gram				
Sandhills	54	41	50	56	67	84
Loess Hills	674	53	57	62	67	73
Glaciated Area	548	59	63	67	74	81
Platte Valley	93	48	54	59	66	78
		Chromium, in micrograms per gram				
Sandhills	54	12	15	20	27	32
Loess Hills	674	25	30	34	38	41
Glaciated Area	548	35	37	41	44	47
Platte Valley	93	24	26	31	36	39
		Cobalt, in micrograms per gram				
Sandhills	54	<4	<4	<4	4	5
Loess Hills	674	<4	4	5	7	8
Glaciated Area	548	7	8	10	12	15
Platte Valley	93	<4	4	5	6	7
		Copper, in micrograms per gram				
Sandhills	54	4	6	7	11	14
Loess Hills	674	10	12	14	17	20
Glaciated Area	548	14	16	19	21	24
Platte Valley	93	8	11	13	15	18

Table 9. *Statistical summary of data on water-quality constituents in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979*--Continued

Subunit	Number of analyses	Value at indicated percentile				
		10th	25th	50th (median)	75th	90th
		Hafnium, in micrograms per gram				
Sandhills	54	<15	<15	<15	<15	54
Loess Hills	673	<3	<15	<15	<15	40
Glaciated Area	548	<15	<15	<15	15	45
Platte Valley	93	<3	<3	<7	<15	19
		Iron, in grams per kilogram				
Sandhills	54	5.2	6.6	8.5	12	16
Loess Hills	674	14	16	18	20	22
Glaciated Area	548	17	19	21	24	26
Platte Valley	93	13	16	17	21	24
		Lanthanum, in micrograms per gram				
Sandhills	54	62	66	76	86	120
Loess Hills	673	65	70	76	82	92
Glaciated Area	548	62	66	71	78	84
Platte Valley	93	63	72	79	85	93
		Lead, in micrograms per gram				
Sandhills	54	<10	10	16	22	26
Loess Hills	613	<10	<10	17	23	29
Glaciated Area	548	11	16	21	27	33
Platte Valley	72	<2	<7	13	22	29
		Lithium, in micrograms per gram				
Sandhills	54	8	10	12	15	19
Loess Hills	674	16	19	21	23	26
Glaciated Area	548	18	20	22	25	27
Platte Valley	93	13	16	20	23	27
		Manganese, in micrograms per gram				
Sandhills	54	120	150	220	290	340
Loess Hills	674	260	290	330	410	520
Glaciated Area	548	440	570	740	1,000	1,400
Platte Valley	93	230	280	330	440	1,000
		Molybdenum, in micrograms per gram				
Sandhills	54	<4	<4	<4	<4	<4
Loess Hills	674	<4	<4	<4	<4	4
Glaciated Area	548	<4	<4	<4	<4	4
Platte Valley	93	<4	<4	<4	<4	<4

Table 9. *Statistical summary of data on water-quality constituents in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979*--Continued

Subunit	Number of analyses	Value at indicated percentile				
		10th	25th	50th (median)	75th	90th
		Nickel, in micrograms per gram				
Sandhills	54	<2	4	9	14	18
Loess Hills	674	8	12	15	19	24
Glaciated Area	548	15	19	24	29	35
Platte Valley	93	9	11	14	18	23
		Niobium, in micrograms per gram				
Sandhills	54	<4	4	5	7	10
Loess Hills	674	5	6	7	8	9
Glaciated Area	548	<4	5	6	7	8
Platte Valley	93	5	6	7	8	9
		Scandium, in micrograms per gram				
Sandhills	54	2	2	3	4	5
Loess Hills	674	4	5	5	6	6
Glaciated Area	548	5	5	6	6	7
Platte Valley	93	4	4	5	6	7
		Selenium, in micrograms per gram				
Sandhills	54	<.1	<.1	<.1	.3	.5
Loess Hills	674	<.1	<.1	.3	.4	1
Glaciated Area	548	<.1	.3	.5	.9	1
Platte Valley	93	<.1	.2	.4	.6	1
		Silver, in micrograms per gram				
Sandhills	54	<2	<2	<2	<2	<2
Loess Hills	674	<2	<2	<2	<2	<2
Glaciated Area	548	<2	<2	<2	<2	<2
Platte Valley	93	<2	<2	<2	<2	<2
		Strontium, in micrograms per gram				
Sandhills	54	210	260	300	330	350
Loess Hills	674	170	180	200	230	250
Glaciated Area	548	140	150	160	170	180
Platte Valley	93	180	190	210	230	240
		Thorium, in micrograms per gram				
Sandhills	54	<2	3	5	8	12
Loess Hills	674	2	5	7	10	13
Glaciated Area	548	<2	4	7	9	12
Platte Valley	93	2	6	9	11	14

Table 9. *Statistical summary of data on water-quality constituents in streambed-sediment samples collected from subunits of Central Nebraska Basins, 1979*--Continued

Subunit	Number of analyses	Value at indicated percentile				
		10th	25th	50th (median)	75th	90th
			Titanium, in grams per kilogram			
Sandhills	54	1.2	1.4	1.7	2.0	2.4
Loess Hills	674	1.9	2.1	2.2	2.4	2.5
Glaciated Area	548	2.2	2.3	2.4	2.5	2.7
Platte Valley	93	1.8	2.1	2.3	2.4	2.8
			Vanadium, in micrograms per gram			
Sandhills	54	17	21	29	40	60
Loess Hills	674	45	53	62	70	79
Glaciated Area	548	64	73	80	89	96
Platte Valley	93	42	48	58	68	76
			Yttrium, in micrograms per gram			
Sandhills	54	8	9	11	13	14
Loess Hills	674	13	14	15	17	18
Glaciated Area	548	14	14	15	16	17
Platte Valley	93	12	14	16	17	19
			Zinc, in micrograms per gram			
Sandhills	54	16	23	35	48	64
Loess Hills	674	43	51	58	66	76
Glaciated Area	548	50	58	66	75	85
Platte Valley	93	39	48	62	74	86
			Zirconium, in micrograms per gram			
Sandhills	54	36	47	58	68	80
Loess Hills	674	70	77	83	90	96
Glaciated Area	548	71	75	80	87	94
Platte Valley	93	62	76	88	97	100
			Uranium-FL, in micrograms per gram			
Sandhills	54	.7	1.0	1.1	1.6	1.9
Loess Hills	674	1.5	1.8	2.1	2.4	2.9
Glaciated Area	548	1.6	1.8	2.1	2.4	2.7
Platte Valley	93	1.4	1.9	2.4	3.5	4.6
			Uranium-NT, in micrograms per gram			
Sandhills	53	1.7	1.9	2.1	2.6	3.3
Loess Hills	672	2.5	2.7	2.9	3.1	3.4
Glaciated Area	546	2.7	2.9	3.1	3.3	3.6
Platte Valley	92	2.7	2.9	3.2	4.1	5.7

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*

[Number in parentheses is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System; concentrations are in wet-weight units; values are reported only for summary groups that had two or more analyses; --, 10th- and 90th-percentile values not determined for fewer than 30 analyses, 25th- and 75th-percentile values not determined for fewer than 10 analyses. Species group: Bottom, bottom dweller. Subunit: Glaciated, Glaciated Area; Integrated, integrates multiple subunits; <, less than]

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
							Percent lipids (39105)		
Edible	Bottom	Streams	Glaciated	3	--	--	2.9	--	--
Edible	Bottom	Streams	Integrated	3	--	--	3.7	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	.5	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	3.2	--	--
Filet	Bottom	Streams	Integrated	3	--	--	3.3	--	--
Whole	Bottom	Streams	Glaciated	11	--	3.1	4.8	6.1	--
Whole	Bottom	Streams	Integrated	40	2.7	3.4	5.1	7.0	8.2
							Magnesium, in milligrams per kilogram (81656)		
Whole	Bottom	Streams	Glaciated	6	--	--	430	--	--
Whole	Bottom	Streams	Integrated	20	--	370	410	500	--
							Sodium, in milligrams per kilogram (79020)		
Whole	Bottom	Streams	Glaciated	4	--	--	1,400	--	--
Whole	Bottom	Streams	Integrated	8	--	--	1,400	--	--
							Aluminum, in milligrams per kilogram (81666)		
Whole	Bottom	Streams	Glaciated	2	--	--	33	--	--
Whole	Bottom	Streams	Integrated	12	--	29	66	180	--
							Arsenic, in milligrams per kilogram (01004)		
Edible	Predator	Lakes	Glaciated	7	--	--	< .05	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .05	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .05	< .08	.14	--
Whole	Bottom	Streams	Integrated	36	< .05	< .05	< .08	.11	.14
							Antimony, in milligrams per kilogram (01099)		
Whole	Bottom	Streams	Glaciated	8	--	--	< .3	--	--
Whole	Bottom	Streams	Integrated	24	--	< .05	< .5	< .5	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
					Barium, in milligrams per kilogram (81658)				
Whole	Bottom	Streams	Glaciated	8	--	--	4.2	--	--
Whole	Bottom	Streams	Integrated	26	--	3.9	5.8	11	--
					Beryllium, in milligrams per kilogram (34252)				
Whole	Bottom	Streams	Glaciated	6	--	--	< .05	--	--
Whole	Bottom	Streams	Integrated	20	--	< .05	< .05	< .05	--
					Cadmium, in milligrams per kilogram (71940)				
Edible	Predator	Lakes	Glaciated	7	--	--	.02	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	12	--	.06	.07	.12	--
Whole	Bottom	Streams	Integrated	42	< 0.03	< .05	.06	.10	0.15
					Chromium, in milligrams per kilogram (71939)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .10	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .10	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	.36	--	--
Whole	Bottom	Streams	Integrated	26	--	.31	.38	.52	--
					Cobalt, in milligrams per kilogram (81659)				
Whole	Bottom	Streams	Glaciated	8	--	--	< .10	--	--
Whole	Bottom	Streams	Integrated	24	--	< .10	< .10	.19	--
					Copper, in milligrams per kilogram (71937)				
Edible	Predator	Lakes	Glaciated	7	--	--	.23	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	.24	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	1.1	--	--
Whole	Bottom	Streams	Integrated	32	.59	.75	.88	1.0	1.4
					Iron, in milligrams per kilogram (81660)				
Whole	Bottom	Streams	Glaciated	6	--	--	55	--	--
Whole	Bottom	Streams	Integrated	20	--	34	77	260	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				Lead, in milligrams per kilogram (71936)					
Edible	Predator	Lakes	Glaciated	7	--	--	0.10	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	.10	--	--
Whole	Bottom	Streams	Glaciated	4	--	--	< .10	--	--
Whole	Bottom	Streams	Integrated	18	--	< 0.10	< .12	0.25	--
				Manganese, in milligrams per kilogram (81741)					
Whole	Bottom	Streams	Glaciated	6	--	--	7.7	--	--
Whole	Bottom	Streams	Integrated	20	--	4.9	10	30	--
				Mercury, in milligrams per kilogram (71930 and 71935)					
Edible	Predator	Lakes	Glaciated	7	--	--	.07	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	.04	--	--
Whole	Bottom	Streams	Glaciated	12	--	.02	.06	.14	--
Whole	Bottom	Streams	Integrated	42	0.02	.03	.04	.08	0.13
				Molybdenum, in milligrams per kilogram (81662)					
Whole	Bottom	Streams	Glaciated	8	--	--	< .10	--	--
Whole	Bottom	Streams	Integrated	24	--	< .10	< .10	.17	--
				Nickel, in milligrams per kilogram (01069)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .20	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .20	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .20	--	--
Whole	Bottom	Streams	Integrated	26	--	< .20	.22	.41	--
				Thallium, in milligrams per kilogram (01073)					
Whole	Bottom	Streams	Glaciated	4	--	--	< .05	--	--
Whole	Bottom	Streams	Integrated	8	--	--	< .05	--	--
				Selenium, in milligrams per kilogram (01149)					
Whole	Bottom	Streams	Glaciated	6	--	--	.82	--	--
Whole	Bottom	Streams	Integrated	26	--	.60	.72	.90	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
Silver, in milligrams per kilogram (34474 and 81742)									
Whole	Bottom	Streams	Glaciated	6	--	--	< 0.10	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.05	< .05	< 0.05	--
Titanium, in milligrams per kilogram (81664)									
Whole	Bottom	Streams	Integrated	4	--	--	< .05	--	--
Vanadium, in milligrams per kilogram (81665)									
Whole	Bottom	Streams	Glaciated	8	--	--	.21	--	--
Whole	Bottom	Streams	Integrated	24	--	.14	< .18	.68	--
Zinc, in milligrams per kilogram (71938)									
Edible	Predator	Lakes	Glaciated	7	--	--	8.1	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	6.5	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	46	--	--
Whole	Bottom	Streams	Integrated	32	15	17	19	57	63
Alachlor, in milligrams per kilogram (82571)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .013	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .013	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .013	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .008	< .013	< .013	--
Whole	Bottom	Streams	Integrated	24	--	< .008	< .013	< .013	--
Aldrin, in milligrams per kilogram (34680)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .004	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .004	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .004	--	--
Whole	Bottom	Streams	Glaciated	12	--	< .004	< .004	< .004	--
Whole	Bottom	Streams	Integrated	38	< .004	< .004	< .004	< .018	<.022
Atrazine, in milligrams per kilogram (82404)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .3	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .3	--	--
Whole	Bottom	Streams	Glaciated	12	--	< .3	< .3	< .3	--
Whole	Bottom	Streams	Integrated	34	< .3	< .3	< .3	< 4	< 4

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal-yses	Value of indicated percentile				
Anatom-ical part	Spe-cies group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
					Azinphos-methyl, in milligrams per kilogram (81802)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 40	--	--
Whole	Bottom	Streams	Integrated	12	--	< 40	< 40	< 40	--
					α-Benzene hexachloride, in milligrams per kilogram (39074)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .002	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .002	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .002	< .002	< .002	--
Whole	Bottom	Streams	Integrated	42	<0.002	< .002	< .002	< .008	< 0.01
					β-Benzene hexachloride, in milligrams per kilogram (34258)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .003	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .003	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .003	< .003	< .003	--
Whole	Bottom	Streams	Integrated	36	< .003	< .003	< .003	< .004	< .02
					γ-Benzene hexachloride (Lindane), in milligrams per kilogram (39781 and 39785)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .002	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .002	--	--
Whole	Bottom	Streams	Glaciated	12	--	< .002	< .005	< .01	--
Whole	Bottom	Streams	Integrated	42	< .002	< .002	< .002	< .006	< .01
					δ-Benzene hexachloride, in milligrams per kilogram (34263)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .002	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .002	< .002	< .004	--
Whole	Bottom	Streams	Integrated	27	--	< .002	< .002	< .008	--
					cis-Chlordane, in milligrams per kilogram (39063)				
Edible	Bottom	Streams	Glaciated	3	--	--	0.02	--	--
Edible	Bottom	Streams	Integrated	3	--	--	.004	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	3	--	--	.008	--	--
Whole	Bottom	Streams	Glaciated	12	--	.01	.03	.03	--
Whole	Bottom	Streams	Integrated	42	< .003	< .006	< .01	< .03	< .04

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group: Anatom-ical part	Summary group: Spe-cies group	Summary group: Water-body type	Summary group: Sub-unit	Number of anal-yses	Value of indicated percentile: 10th	25th	50th (median)	75th	90th
trans-Chlordane, in milligrams per kilogram (39066)									
Edible	Bottom	Streams	Glaciated	3	--	--	0.01	--	--
Edible	Bottom	Streams	Integrated	3	--	--	.003	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	.002	--	--
Filet	Bottom	Streams	Integrated	3	--	--	.006	--	--
Whole	Bottom	Streams	Glaciated	12	--	0.009	.02	0.03	--
Whole	Bottom	Streams	Integrated	42	< 0.002	< .005	< .01	< .02	< 0.04
α-Chlordene, in milligrams per kilogram (78457)									
Edible	Bottom	Streams	Glaciated	3	--	--	.004	--	--
Edible	Bottom	Streams	Integrated	3	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .003	--	--
Whole	Bottom	Streams	Integrated	2	--	--	< .003	--	--
β-Chlordene, in milligrams per kilogram (78458)									
Edible	Bottom	Streams	Glaciated	3	--	--	< .003	--	--
Edible	Bottom	Streams	Integrated	3	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .003	--	--
Whole	Bottom	Streams	Integrated	2	--	--	< .003	--	--
γ-Chlordene, in milligrams per kilogram (78459)									
Edible	Bottom	Streams	Glaciated	3	--	--	.006	--	--
Edible	Bottom	Streams	Integrated	3	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .003	--	--
Whole	Bottom	Streams	Integrated	2	--	--	< .003	--	--
Chlorpyrifos, in milligrams per kilogram (81807)									
Whole	Bottom	Streams	Glaciated	2	--	--	< .2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .04	< .07	< .2	--
Cyanazine, in milligrams per kilogram (80886)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .1	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .1	--	--
Whole	Bottom	Streams	Glaciated	4	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	10	--	< .1	< .1	< .1	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal-yses	Value of indicated percentile				
Anatom-ical part	Spe-cies group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
				DCPA (Dacthal), in milligrams per kilogram (82004)					
Whole	Bottom	Streams	Integrated	6	--	--	< 0.01	--	--
				o,p'-DDD, in milligrams per kilogram (39325)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .008	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .008	--	--
Whole	Bottom	Streams	Glaciated	10	--	< 0.004	< .008	< 0.02	--
Whole	Bottom	Streams	Integrated	30	< 0.004	< .004	< .008	< .04	< 0.04
				p,p'-DDD, in milligrams per kilogram (39312)					
Edible	Bottom	Streams	Integrated	2	--	--	< .007	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .005	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .005	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .02	< .03	--
Whole	Bottom	Streams	Integrated	41	< .005	< .005	< .01	< .02	< .03
				o,p'-DDE, in milligrams per kilogram (39329)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .02	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .02	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .02	< .04	< .04	--
Whole	Bottom	Streams	Integrated	30	<.02	< .02	< .02	< .04	< .08
				p,p'-DDE, in milligrams per kilogram (39322)					
Edible	Bottom	Streams	Integrated	2	--	--	.02	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .004	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .004	--	--
Filet	Bottom	Streams	Integrated	2	--	--	.05	--	--
Whole	Bottom	Streams	Glaciated	12	--	.03	.06	.11	--
Whole	Bottom	Streams	Integrated	42	< .02	< .02	< .04	.05	.06
				o,p'-DDT, in milligrams per kilogram (39307)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .004	< .01	< .02	--
Whole	Bottom	Streams	Integrated	30	< .004	< .004	< .01	< .02	< .05

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal-yses	Value of indicated percentile				
Anatom-ical part	Spe-cies group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
							***p,p'*-DDT, in milligrams per kilogram (39302)**		
Edible	Bottom	Streams	Integrated	2	--	--	< 0.009	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .009	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .009	--	--
Filet	Bottom	Streams	Integrated	2	--	--	.01	--	--
Whole	Bottom	Streams	Glaciated	9	--	--	< .009	--	--
Whole	Bottom	Streams	Integrated	32	< 0.009	< 0.009	< .009	0.01	0.03
							Demeton, in milligrams per kilogram (82401)		
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
							Dieldrin, in milligrams per kilogram (34684 and 39404)		
Edible	Bottom	Streams	Glaciated	2	--	--	.01	--	--
Edible	Bottom	Streams	Integrated	2	--	--	.02	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .007	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .007	--	--
Filet	Bottom	Streams	Integrated	3	--	--	.02	--	--
Whole	Bottom	Streams	Glaciated	12	--	.01	.02	< .04	--
Whole	Bottom	Streams	Integrated	42	< .01	< .02	.02	< .04	.06
							α-Endosulfan, in milligrams per kilogram (34365)		
Edible	Predator	Lakes	Glaciated	7	--	--	< .003	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .003	--	--
Whole	Bottom	Streams	Glaciated	12	--	< .003	< .003	< .01	--
Whole	Bottom	Streams	Integrated	36	< .003	< .003	< .003	< .02	< .02
							β-Endosulfan, in milligrams per kilogram (34360)		
Edible	Predator	Lakes	Glaciated	7	--	--	< .005	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .005	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .005	< .005	< .01	--
Whole	Bottom	Streams	Integrated	30	< .005	< .005	< .005	< .02	< .03
							Endosulfan sulfate, in milligrams per kilogram (34355)		
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .02	--
Whole	Bottom	Streams	Integrated	30	< .01	< .01	< .01	< .05	< .08

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				Endrin, in milligrams per kilogram (34685)					
Edible	Predator	Lakes	Glaciated	7	--	--	< 0.005	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .005	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .005	--	--
Whole	Bottom	Streams	Glaciated	12	--	< 0.005	< .005	< 0.005	--
Whole	Bottom	Streams	Integrated	32	< 0.005	< .005	< .005	< .005	< 0.01
				Endrin aldehyde, in milligrams per kilogram (34370)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .008	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .008	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .008	< .008	< .02	--
Whole	Bottom	Streams	Integrated	30	< .008	< .008	< .008	< .04	< .08
				Endrin ketone, in milligrams per kilogram (78211)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .007	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .007	--	--
Whole	Bottom	Streams	Glaciated	4	--	--	< .007	--	--
Whole	Bottom	Streams	Integrated	10	--	< .007	< .007	< .007	--
				Fonofos, in milligrams per kilogram (82407)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				Heptachlor epoxide, in milligrams per kilogram (34686)					
Edible	Bottom	Streams	Glaciated	3	--	--	.003	--	--
Edible	Bottom	Streams	Integrated	3	--	--	.003	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .002	--	--
Filet	Bottom	Streams	Integrated	3	--	--	.003	--	--
Whole	Bottom	Streams	Glaciated	12	--	< .002	< .006	< .009	--
Whole	Bottom	Streams	Integrated	31	< .002	< .002	< .003	< .008	< .01
				Heptachlor, in milligrams per kilogram (34687)					
Edible	Bottom	Streams	Glaciated	3	--	--	< .002	--	--
Edible	Bottom	Streams	Integrated	3	--	--	< .002	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .002	--	--
Filet	Bottom	Streams	Integrated	3	--	--	< .002	--	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Anatom-ical part	Spe-cies group	Water-body type	Sub-unit	Number of anal-yses	10th	25th	50th (median)	75th	90th
					Heptachlor, in milligrams per kilogram (34687)--Continued				
Whole	Bottom	Streams	Glaciated	12	--	< 0.002	< 0.002	< 0.004	--
Whole	Bottom	Streams	Integrated	42	< 0.002	< .002	< .002	< .01	< 0.02
					Hexachlorobenzene, in milligrams per kilogram (34688)				
Whole	Bottom	Streams	Glaciated	2	--	--	:002	--	--
Whole	Bottom	Streams	Integrated	6	--	--	< .001	--	--
					Malathion, in milligrams per kilogram (39534)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .25	--	--
Whole	Bottom	Streams	Integrated	12	--	< .10	< .18	< .25	--
					Methoxychlor, in milligrams per kilogram (39482 and 81644)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .02	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .02	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .02	< .03	--
Whole	Bottom	Streams	Integrated	30	< .01	< .01	< .02	< .08	< .2
					Metolachlor, in milligrams per kilogram (39346)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .05	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .05	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .05	--	--
Whole	Bottom	Streams	Integrated	18	--	< .05	< .05	< .05	--
					Metribuzin, in milligrams per kilogram (82405)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
					Mirex, in milligrams per kilogram (81645)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .04	--	--
Whole	Bottom	Streams	Integrated	18	--	< .01	< .04	< .1	--
					***cis*-Nonachlor, in milligrams per kilogram (39069)**				
Edible	Bottom	Streams	Glaciated	3	--	--	.004	--	--
Edible	Bottom	Streams	Integrated	3	--	--	< .002	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				cis-Nonachlor, in milligrams per kilogram (39069)--Continued					
Filet	Bottom	Lakes	Glaciated	4	--	--	< 0.002	--	--
Filet	Bottom	Streams	Integrated	3	--	--	< .002	--	--
Whole	Bottom	Streams	Glaciated	10	--	< 0.002	< .004	0.008	--
Whole	Bottom	Streams	Integrated	40	< 0.002	< .003	< .009	< .02	< 0.02
				trans-Nonachlor, in milligrams per kilogram (39072)					
Edible	Bottom	Streams	Glaciated	3	--	--	.01	--	--
Edible	Bottom	Streams	Integrated	3	--	--	.006	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	< .002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .003	--	--
Filet	Bottom	Streams	Integrated	3	--	--	.01	--	--
Whole	Bottom	Streams	Glaciated	12	--	< .01	.02	.03	--
Whole	Bottom	Streams	Integrated	42	< .005	< .008	< .02	< .03	< .04
				Oxychlordane, in milligrams per kilogram (82029)					
Edible	Bottom	Streams	Glaciated	2	--	--	<.003	--	--
Edible	Bottom	Streams	Integrated	3	--	--	<.002	--	--
Edible	Predator	Lakes	Glaciated	7	--	--	<.002	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	<.002	--	--
Filet	Bottom	Streams	Integrated	3	--	--	<.002	--	--
Whole	Bottom	Streams	Glaciated	10	--	<.002	<.002	<.006	--
Whole	Bottom	Streams	Integrated	30	<.002	<.002	<.002	<.006	<.01
				Parathion, in milligrams per kilogram (81810)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .08	--	--
Whole	Bottom	Streams	Integrated	12	--	< .04	< .06	< .08	--
				Pendimethalin, in milligrams per kilogram (82411)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				Pentachloroanisole, in milligrams per kilogram (81823)					
Whole	Bottom	Streams	Glaciated	2	--	--	.003	--	--
Whole	Bottom	Streams	Integrated	6	--	--	< .002	--	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				Pentachlorophenol, in milligrams per kilogram (39060)					
Edible	Predator	Lakes	Glaciated	2	--	--	< 0.1	--	--
Filet	Bottom	Lakes	Glaciated	2	--	--	< .1	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< 8	--	--
Whole	Bottom	Streams	Integrated	25	--	< 2	< 6	< 10	--
				***cis*-Permethrin, in milligrams per kilogram (82419)**					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				***trans*-Permethrin, in milligrams per kilogram (82422)**					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				Prometon, in milligrams per kilogram (82403)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				Propazine, in milligrams per kilogram (82533)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				Simazine, in milligrams per kilogram (82406)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 4	< 4	--
				Trichlorfon, in milligrams per kilogram (82413)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	9	--	--	< 1	--	--
				Trifluralin, in milligrams per kilogram (81652)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .005	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .005	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .006	--	--
Whole	Bottom	Streams	Glaciated	4	--	--	< .005	--	--
Whole	Bottom	Streams	Integrated	12	--	< .005	< .005	< .005	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				Toxaphene, in milligrams per kilogram (34691)					
Edible	Predator	Lakes	Glaciated	2	--	--	< 0.04	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .04	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .04	--	--
Whole	Bottom	Streams	Integrated	28	--	< 0.04	< .04	< 0.2	--
				Acenaphthylene, milligrams per kilogram (34204)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .4	--	--
Whole	Bottom	Streams	Integrated	12	--	< .2	< .4	< .4	--
				Acenaphthene, milligrams per kilogram (34209)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .2	< .5	< .6	--
				Acrolein, milligrams per kilogram (34214)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .01	< .1	< .1	--
				Acrylonitrile, milligrams per kilogram (34219)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .02	< .1	< .2	--
				Anthracene, milligrams per kilogram (34224)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	10	--	< .6	< 1	< 1	--
				Benzene, milligrams per kilogram (34238)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .05	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .05	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .04	< .05	< .05	--
Whole	Bottom	Streams	Integrated	11	--	< .01	< .02	< .02	--
				Benzidine, milligrams per kilogram (34241)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 8	--	--
Whole	Bottom	Streams	Integrated	9	--	--	< 8	--	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal-yses	Value of indicated percentile				
Anatom-ical part	Spe-cies group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
				Benzo(*a*)anthracene, milligrams per kilogram (34530)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	10	--	< 1	< 2	< 2	--
				Benzo(*b*)fluoranthene, milligrams per kilogram (34234)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 2	< 4	< 4	--
				Benzo(*k*)fluoranthene, milligrams per kilogram (34246)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	10	--	< 2	< 4	< 4	--
				Benzo(*ghi*)perylene, milligrams per kilogram (34525)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< 1	< 2	--
				Benzo(*a*)pyrene, milligrams per kilogram (34251)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .6	< 2	< 2	--
				Bromoform, milligrams per kilogram (34291)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	5	--	--	< .005	--	--
				Bromomethane, milligrams per kilogram (34417)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .02	< .1	< .2	--
				4-Bromophenyl phenyl ether, milligrams per kilogram (34640)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .8	< 1	< 2	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				N-Butyl benzyl phthalate, milligrams per kilogram (34296)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.3	< .8	< 1	--
				Carbon tetrachloride, milligrams per kilogram (34300)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .01	--
Whole	Bottom	Streams	Integrated	31	< 0.004	< .01	< .01	< .01	< 0.02
				Chlorobenzene, milligrams per kilogram (34305)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .05	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .05	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .05	--	--
Whole	Bottom	Streams	Integrated	6	--	--	< .002	--	--
				Chlorodibromomethane, milligrams per kilogram (34310)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	12	--	< .004	< .007	< .01	--
				Chloroethane, milligrams per kilogram (34315)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .01	< .06	< .1	--
				bis(2-Chloroethoxy) methane, milligrams per kilogram (34282)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .2	< .6	< .6	--
				bis(2-Chloroethyl) ether, milligrams per kilogram (34277)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .8	< .8	--
				2-Chloroethyl vinyl ether, milligrams per kilogram (34580)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .02	< .1	< .2	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal-yses	Value of indicated percentile				
Anatom-ical part	Spe-cies group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
				Chloroform, milligrams per kilogram (34319)					
Edible	Predator	Lakes	Glaciated	7	--	--	< 0.01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< 0.01	< .01	< 0.01	--
Whole	Bottom	Streams	Integrated	30	< 0.002	< .01	< .01	< .01	< 0.02
				bis(2-Chloroisopropyl) ether, milligrams per kilogram (34287)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .3	< .6	< .6	--
				Chloromethane, milligrams per kilogram (34422)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .1	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .1	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	25	--	< .06	< .1	< 200	--
				2-Chloronaphthalene, milligrams per kilogram (34585)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .3	< .5	< .6	--
				2-Chlorophenol, milligrams per kilogram (34590)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .6	< .8	--
				4-Chlorophenyl phenyl ether, milligrams per kilogram (34645)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 10	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 6	< 10	--
				Chrysene, milligrams per kilogram (34324)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 2	< 2	--
				1,2,5,6-Dibenzanthracene, milligrams per kilogram (34560)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 3	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 2	< 3	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
Di-*N*-butyl phthalate, milligrams per kilogram (34683)									
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.5	< .8	< 1	--
1,2-Dichloroethane, milligrams per kilogram (34535)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .01	--
Whole	Bottom	Streams	Integrated	31	< 0.003	< .01	< .01	< .01	< 0.02
trans-1,2-Dichloroethylene, milligrams per kilogram (34550)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	25	--	< .007	< .01	< .01	--
1,2-Dichlorobenzene, milligrams per kilogram (34540)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .1	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .1	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	24	--	< .1	< .1	< 2	--
1,3-Dichlorobenzene, milligrams per kilogram (34570)									
Whole	Bottom	Streams	Glaciated	6	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	20	--	< .1	< .1	< 2	--
1,4-Dichlorobenzene, milligrams per kilogram (34575)									
Edible	Predator	Lakes	Glaciated	7	--	--	< .1	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .1	--	--
Whole	Bottom	Streams	Glaciated	6	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	24	--	< .1	< .1	< 2	--
3,3'-Dichlorobenzidine, milligrams per kilogram (34635)									
Whole	Bottom	Streams	Glaciated	2	--	--	< 8	--	--
Whole	Bottom	Streams	Integrated	12	--	< 4	< 6	< 8	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				Dichlorobromomethane, milligrams per kilogram (34331)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 0.01	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.002	< .006	< 0.01	--
				Dichlorodifluoromethane, milligrams per kilogram (34335)					
Whole	Bottom	Streams	Integrated	2	--	--	< .02	--	--
				1,1-Dichloroethane, milligrams per kilogram (34500)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	12	--	< .003	< .006	< .01	--
				1,1-Dichloroethylene, milligrams per kilogram (34505)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .01	--
Whole	Bottom	Streams	Integrated	31	< 0.002	< .01	< .01	< .01	< 0.02
				2,4-Dichlorophenol, milligrams per kilogram (34605)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 2	< 2	--
				1,2-Dichloropropane, milligrams per kilogram (34545)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	12	--	< .002	< .006	< .01	--
				cis-1,3-Dichloropropene, milligrams per kilogram (34703)					
Whole	Bottom	Streams	Glaciated	4	--	--	< .02	--	--
Whole	Bottom	Streams	Integrated	18	--	< .003	< .01	< .02	--
				trans-1,3-Dichloropropene, milligrams per kilogram (34698)					
Whole	Bottom	Streams	Glaciated	4	--	--	< .02	--	--
Whole	Bottom	Streams	Integrated	18	--	< .004	< .01	< .02	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
				Diethyl phthalate, milligrams per kilogram (34340)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 0.6	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.2	< .4	< 0.6	--
				2,4-Dimethylphenol, milligrams per kilogram (34610)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .6	< .8	< 1	--
				Dimethyl phthalate, milligrams per kilogram (34345)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .4	--	--
Whole	Bottom	Streams	Integrated	12	--	< .2	< .3	< .4	--
				4,6-Dinitro-ortho-cresol, milligrams per kilogram (34661)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 6	--	--
Whole	Bottom	Streams	Integrated	12	--	< 2	< 5	< 6	--
				2,4-Dinitrophenol, milligrams per kilogram (34620)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 10	--	--
Whole	Bottom	Streams	Integrated	12	--	< 3	< 8	< 10	--
				2,4-Dinitrotoluene, milligrams per kilogram (34615)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .8	< 1	< 2	--
				2,6-Dinitrotoluene, milligrams per kilogram (34630)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .8	< 1	< 2	--
				Di-*N*-octyl phthalate, milligrams per kilogram (34600)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .2	< .7	< .8	--
				1,2-Diphenylhydrazine, milligrams per kilogram (34350)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .5	< 1	< 1	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
			Ethylbenzene, milligrams per kilogram (34375)						
Edible	Predator	Lakes	Glaciated	7	--	--	< 0.5	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .5	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .5	--	--
Whole	Bottom	Streams	Integrated	25	--	< 0.03	< .5	< 0.5	--
			bis(2-Ethylhexyl)phthalate, milligrams per kilogram (39099)						
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< .8	< 2	< 2	--
			Fluoranthene, milligrams per kilogram (34380)						
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .8	< .8	--
			Fluorene, milligrams per kilogram (34385)						
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .3	< .5	< .6	--
			Hexachlorocyclopentadiene, milligrams per kilogram (34390)						
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .6	< .8	< 1	--
			Hexachlorobutadiene, milligrams per kilogram (34395)						
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .6	< .8	--
			Hexachloroethane, milligrams per kilogram (34400)						
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .6	< .8	--
			Indeno(1,2,3-*cd*)pyrene, milligrams per kilogram (34407)						
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	<.6	< 1	< 2	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal-yses	Value of indicated percentile				
Anatom-ical part	Spe-cies group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
					Isophorone, milligrams per kilogram (34412)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.4	< 1	< 2	--
					Methylene chloride, milligrams per kilogram (34427)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	2	--	--	< .02	--	--
					Naphthalene, milligrams per kilogram (34446)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .3	< .5	< .6	--
					2-Nitrophenol, milligrams per kilogram (34595)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 2	< 2	--
					N-Nitrosodiphenylamine, milligrams per kilogram (34437)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .5	< .8	< 1	--
					N-Nitroso-*N*-dipropylamine, milligrams per kilogram (34432)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 4	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 3	< 4	--
					Nitrobenzene, milligrams per kilogram (34451)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .6	--	--
Whole	Bottom	Streams	Integrated	12	--	< .3	< .6	< .6	--
					4-Nitrophenol, milligrams per kilogram (34650)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 8	--	--
Whole	Bottom	Streams	Integrated	11	--	< 4	< 8	< 8	--
					PCB 1016, milligrams per kilogram (34674)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .4	--	--
Whole	Bottom	Streams	Integrated	12	--	< .08	< .1	< .4	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Subunit		10th	25th	50th (median)	75th	90th
					PCB 1221, milligrams per kilogram (34664)				
Whole	Bottom	Streams	Glaciated	4	--	--	< 0.2	--	--
Whole	Bottom	Streams	Integrated	18	--	< 0.06	< .1	< 0.3	--
					PCB 1232, milligrams per kilogram (34667)				
Whole	Bottom	Streams	Glaciated	2	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	12	--	< .03	< .05	< .1	--
					PCB 1242, milligrams per kilogram (34689)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .07	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .07	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .07	< .07	< .1	--
Whole	Bottom	Streams	Integrated	30	<0.07	< .07	< .07	< .08	< 0.4
					PCB 1248, milligrams per kilogram (34669)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .07	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .07	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .07	--	--
Whole	Bottom	Streams	Integrated	26	--	< .07	< .07	< .08	--
					PCB 1254, milligrams per kilogram (34690)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .08	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .08	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .08	--	--
Whole	Bottom	Streams	Glaciated	9	--	--	< .08	--	--
Whole	Bottom	Streams	Integrated	29	--	< .08	< .08	< .1	--
					PCB 1260, milligrams per kilogram (34670)				
Edible	Predator	Lakes	Glaciated	7	--	--	< .02	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .02	--	--
Filet	Bottom	Streams	Integrated	2	--	--	< .02	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .02	< .03	.07	--
Whole	Bottom	Streams	Integrated	35	< .02	< .02	< .02	< .1	< .1
					Parachlorometacresol, milligrams per kilogram (34456)				
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 2	< 2	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of analyses	Value of indicated percentile				
Anatomical part	Species group	Water-body type	Sub-unit		10th	25th	50th (median)	75th	90th
				Phenanthrene, milligrams per kilogram (34465)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.6	< 1	< 1	--
				Phenol, milligrams per kilogram (34468)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .6	< .8	--
				Pyrene, milligrams per kilogram (34473)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .8	--	--
Whole	Bottom	Streams	Integrated	12	--	< .4	< .8	< .8	--
				Styrene, milligrams per kilogram (76164)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .02	--	--
Whole	Bottom	Streams	Integrated	6	--	--	< .02	--	--
				2,3,7,8-Tetrachlorodibenzo-*p*-dioxin, milligrams per kilogram (34679 and 34754, units converted)					
Whole	Bottom	Streams	Glaciated	2	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	11	--	< .04	< .1	< .1	--
				1,1,2,2-Tetrachloroethane, milligrams per kilogram (34520)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .02	--
Whole	Bottom	Streams	Integrated	24	--	< .01	< .01	< .01	--
				Tetrachloroethylene, milligrams per kilogram (34479)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .01	--
Whole	Bottom	Streams	Integrated	31	< 0.004	< .01	< .01	< .01	< 0.02
				Toluene, milligrams per kilogram (34484)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .05	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .05	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .05	--	--
Whole	Bottom	Streams	Integrated	25	--	< .03	< .05	< .05	--

Table 10. *Statistical summary of data on water-quality constituents in fish-tissue samples collected from selected sites within Central Nebraska Basins, 1981-90*--Continued

Summary group				Number of anal- yses	Value of indicated percentile				
Anatom- ical part	Spe- cies group	Water- body type	Sub- unit		10th	25th	50th (median)	75th	90th
				1,2,4-Trichlorobenzene, milligrams per kilogram (34555)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 1	--	--
Whole	Bottom	Streams	Integrated	12	--	< 0.3	< .7	< 1	--
				1,1,1-Trichloroethane, milligrams per kilogram (34510)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	8	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	25	--	< .008	< .01	< .01	--
				Trichloroethylene, milligrams per kilogram (34692)					
Edible	Predator	Lakes	Glaciated	7	--	--	< .01	--	--
Filet	Bottom	Lakes	Glaciated	4	--	--	< .01	--	--
Whole	Bottom	Streams	Glaciated	10	--	< .01	< .01	< .01	--
Whole	Bottom	Streams	Integrated	31	<0 .003	< .01	< .01	< .01	< 0.02
				Trichlorofluoromethane, milligrams per kilogram (34492)					
Whole	Bottom	Streams	Integrated	2	--	--	< .003	--	--
				2,4,6-Trichlorophenol, milligrams per kilogram (34625)					
Whole	Bottom	Streams	Glaciated	2	--	--	< 2	--	--
Whole	Bottom	Streams	Integrated	12	--	< 1	< 2	< 2	--
				Vinyl chloride, milligrams per kilogram (34693)					
Whole	Bottom	Streams	Glaciated	4	--	--	< .1	--	--
Whole	Bottom	Streams	Integrated	18	--	< .01	< .07	< .1	--
				Vinyl trichloride, milligrams per kilogram (34515)					
Whole	Bottom	Streams	Glaciated	8	--	--	< .01	--	--
Whole	Bottom	Streams	Integrated	26	--	< .008	< .01	< .01	--

Table 11. *Statistical summary of habitat data from aquatic-ecological surveys within Central Nebraska Basins, 1981-90*

[Number in parentheses following property name is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System; values are reported only for summary groups that had 10 or more sites where a specific habitat characteristic was determined; --, value not computed for summary groups that had fewer than 30 determinations]

Summary group: Stream order or lake class	Summary group: Sub-unit	Number of determinations	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
			Stream width, in meters (00004, units converted)				
1st - 3rd	Sandhills	28	--	2.8	5.6	13	--
1st - 3rd	Loess Hills	24	--	3.2	5.0	23	--
1st - 3rd	Glaciated Area	37	1.5	2.4	4.0	6.6	9.4
1st - 3rd	Platte Valley	14	--	2.1	4.1	7.5	--
			Depth of stream or lake, mean, in meters (00064, units converted)				
Lakes	Loess Hills	10	--	.91	1.8	3.2	--
Lakes	Glaciated Area	30	.64	.91	1.2	3.7	4.3
1st - 3rd	Sandhills	27	--	.18	.30	.40	--
1st - 3rd	Loess Hills	24	--	.19	.27	.30	--
1st - 3rd	Glaciated Area	37	.09	.12	.21	.34	.54
1st - 3rd	Platte Valley	13	--	.15	.24	.30	--
			Substrate, bedrock, solid rock, in percent (83516)				
1st - 3rd	Glaciated Area	27	--	20	50	70	--
			Substrate, gravel 16-2 millimeters, in percent (83544)				
1st - 3rd	Glaciated Area	14	--	10	10	20	--
			Substrate, sand 2.0-0.062 millimeters, in percent (83545)				
1st - 3rd	Sandhills	26	--	90	100	100	--
1st - 3rd	Loess Hills	23	--	80	90	100	--
1st - 3rd	Glaciated Area	25	--	15	30	85	--
1st - 3rd	Platte Valley	14	--	48	65	92	--
			Substrate, silt 0.062-0.004 millimeters, in percent (83546)				
Lakes	Glaciated Area	24	--	100	100	100	--
1st - 3rd	Sandhills	10	--	5	10	10	--
1st - 3rd	Loess Hills	12	--	10	10	29	--
1st - 3rd	Glaciated Area	40	10	10	30	60	99
			Substrate, clay and fine particulate organic material 0.004-0.00024 millimeters, in percent (83547)				
Lakes	Loess Hills	10	--	40	55	90	--

Table 12. *Summary of most frequently occurring fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*

[Values are reported only for taxa that were identified at two or more sites in a summary group and occurred at 1 of the 10 highest frequencies within a summary group]

Summary group: Stream order or lake class	Summary group: Subunit	Number of sites sampled	Scientific name of taxon	Frequency of occurrence, as number of sites where identified
			FISH TAXA	
1st - 3rd	Sandhills	31	*Lepomis cyanellus*	24
			Notropis stramineus	21
			Catostomus commersoni	19
			Pimephales promelas	19
			Fundulus sciadicus	18
			Cyprinella lutrensis	17
			Semotilus atromaculatus	17
			Hybognathus hankinsoni	15
			Rhinichthys cataractae	15
			Notropis dorsalis	13
1st - 3rd	Loess Hills	27	*Cyprinella lutrensis*	23
			Cyprinus carpio	20
			Lepomis cyanellus	20
			Notropis stramineus	20
			Pimephales promelas	18
			Carpiodes carpio	15
			Ictalurus punctatus	14
			Micropterus salmoides	13
			Hybognathus hankinsoni	11
			Ictalurus melas	11
			Lepomis macrochirus	11
			Moxostoma macrolepidotum	11
1st - 3rd	Glaciated Area	38	*Pimephales promelas*	34
			Notropis stramineus	31
			Cyprinella lutrensis	25
			Semotilus atromaculatus	22
			Lepomis cyanellus	20
			Ictalurus melas	18
			Notropis dorsalis	16
			Hybognathus hankinsoni	15
			Carpiodes carpio	11
			Ictalurus punctatus	9

Table 12. *Summary of most frequently occurring fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Subunit	Number of sites sampled	Scientific name of taxon	Frequency of occurrence, as number of sites where identified
		FISH TAXA--Continued		
1st - 3rd	Platte Valley	15	*Notropis stramineus*	11
			Pimephales promelas	11
			Lepomis cyanellus	10
			Cyprinella lutrensis	9
			Semotilus atromaculatus	8
			Hybognathus hankinsoni	7
			Cyprinus carpio	6
			Fundulus sciadicus	6
			Notropis dorsalis	5
			Campostoma anomalum	4
			Catostomus commersoni	4
			Ictalurus punctatus	4
			Lepomis macrochirus	4
			Moxostoma macrolepidotum	4
4th - 6th	Glaciated Area	3	*Cyprinus carpio*	3
			Ictalurus punctatus	3
			Lepomis cyanellus	3
			Notropis stramineus	3
			Carpiodes carpio	2
			Carpiodes cyprinus	2
			Dorosoma cepedianum	2
			Lepisosteus platostomus	2
			Cyprinella lutrensis	2
			Pylodictis olivaris	2
4th - 6th	Platte Valley	7	*Cyprinus carpio*	5
			Ictalurus punctatus	5
			Cyprinella lutrensis	5
			Carpiodes carpio	4
			Lepomis cyanellus	4
			Moxostoma macrolepidotum	4
			Notropis stramineus	4
			Aplodinotus grunniens	3
			Carpiodes cyprinus	3
			Hybognathus placitus	3
			Notropis blennius	3

Table 12. *Summary of most frequently occurring fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group				
Stream order or lake class	Subunit	Number of sites sampled	Scientific name of taxon	Frequency of occurrence, as number of sites where identified
		MACROINVERTEBRATE TAXA		
Lakes	Sandhills	4	*Cryptochironomus*	4
			Chironomus	3
			Tubificidae	3
			Cladotanytarsus	2
			Dicrotendipes	2
			Erpobdella punctata	2
			Helobdella stagnalis	2
			Hyalella azteca	2
			Nais	2
			Simuliidae	2
Lakes	Loess Hills	12	*Chironomus*	7
			Procladius	7
			Tubificidae	7
			Enchytraeidae	3
			Limnodrilus hoffmeisteri	3
			Caenis	2
			Cryptochironomus	2
			Hexagenia limbata	2
			Hyalella azteca	2
			Limnodrilus claparedianus	2
			Parakiefferiella	2
			Pisidium compressum	2
			Pseudochironomus	2
Lakes	Glaciated Area	32	*Tubificidae*	23
			Procladius	20
			Chironomus	19
			Limnodrilus hoffmeisteri	18
			Ceratopogonidae	13
			Chaoborus punctipennis	12
			Hyalella azteca	11
			Ilyodrilus templetoni	11
			Coelotanypus	8
			Nais	8
			Physa	8

Table 12. *Summary of most frequently occurring fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Subunit	Number of sites sampled	Scientific name of taxon	Frequency of occurrence, as number of sites where identified
		MACROINVERTEBRATE TAXA--Continued		
Lakes	Platte Valley	4	*Chironomus*	4
			Tubificidae	3
			Cladotanytarsus	2
			Cryptochironomus	2
			Hyalella azteca	2
			Limnodrilus hoffmeisteri	2
			Microtendipes	2
			Nematoda	2
			Parakiefferiella	2
			Procladius	2
			Pseudochironomus	2
1st - 3rd	Sandhills	28	*Baetis*	14
			Hyalella azteca	13
			Tricorythodes	12
			Corixidae	11
			Heptagenia	11
			Physa	10
			Caenis	9
			Elmidae	9
			Hydropsyche simulans	9
			Isonychia	9
			Simuliidae	9
			Thienemannimyia	9
1st - 3rd	Loess Hills	26	*Baetis*	18
			Heptagenia	17
			Hyalella azteca	17
			Caenis	15
			Hydropsyche simulans	15
			Hetaerina	14
			Polypedilum convictum	13
			Simuliidae	13
			Cheumatopsyche	12
			Cricotopus bicinctus	12
			Thienemannimyia	12

Table 12. *Summary of most frequently occurring fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Subunit	Number of sites sampled	Scientific name of taxon	Frequency of occurrence, as number of sites where identified
			MACROINVERTEBRATE TAXA--Continued	
1st - 3rd	Glaciated Area	41	*Physa*	17
			Baetis	16
			Cheumatopsyche	15
			Simuliidae	15
			Corixidae	14
			Heptagenia	14
			Thienemannimyia	14
			Caenis	13
			Cricotopus bicinctus	13
			Hyalella azteca	13
			Polypedilum convictum	13
1st - 3rd	Platte Valley	14	*Baetis*	7
			Physa	7
			Corixidae	6
			Caenis	5
			Cheumatopsyche	5
			Chironomus	5
			Heptagenia	5
			Tubificidae	5
			Cricotopus bicinctus	4
			Dugesia tigrina	4
			Hyalella azteca	4
			Isonychia	4
			Thienemannimyia	4
			Tricorythodes	4
4th - 6th	Loess Hills	2	*Baetis*	2
			Caenis	2
			Corixidae	2
			Heptagenia	2
			Hetaerina	2
			Polypedilum convictum	2
			Rheotanytarsus	2
			Simuliidae	2

Table 12. *Summary of most frequently occurring fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Subunit	Number of sites sampled	Scientific name of taxon	Frequency of occurrence, as number of sites where identified
		MACROINVERTEBRATE TAXA--Continued		
4th - 6th	Glaciated Area	5	*Polypedilum convictum*	5
			Thienemannimyia	5
			Caenis	4
			Cheumatopsyche	4
			Chironomus	4
			Hydropsyche simulans	4
			Simuliidae	4
			Stenonema integrum	4
			Tubificidae	4
			Argia	3
			Baetis	3
			Brachycercus	3
			Corixidae	3
			Dero digitata	3
			Glyptotendipes	3
			Hemerodromia	3
			Heptagenia	3
			Hyalella azteca	3
			Isonychia	3
			Larsia	3
			Nais	3
			Nais bretscheri	3
			Potamyia flava	3
			Rheotanytarsus	3
			Stenelmis	3
			Tanytarsus	3
			Tricorythodes	3
4th - 6th	Platte Valley	7	*Baeti*	6
			Tanytarsus	6
			Argia	5
			Caenis	5
			Cheumatopsyche	5
			Heptagenia	5
			Hydropsyche simulans	5
			Rheotanytarsus	5
			Simuliidae	5
			Stenonema integrum	5
			Thienemannimyia	5
			Tricorythodes	5

Table 13. *Statistical summary of relative abundance of selected fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*

[Common name of fish taxon is enclosed in parentheses; values are reported only for summary groups that had 10 or more determinations; --, value not determined for fewer than 30 determinations]

Summary group: Stream order or lake class	Summary group: Subunit	Number of sites where identified (number of determinations)	Relative abundance, in percent of sample, at indicated percentile: 10th	25th	50th (median)	75th	90th
			FISH TAXA				
			Ameiurus melas (black bullhead)				
1st - 3rd	Sandhills	12	--	0.5	2	5	--
1st - 3rd	Loess Hills	11	--	.6	.8	4	--
1st - 3rd	Glaciated Area	18	--	.7	2	6	--
			Carpiodes carpio (river carpsucker)				
1st - 3rd	Loess Hills	15	--	4	6	10	--
1st - 3rd	Glaciated Area	11	--	2	4	5	--
			Catostomus commersoni (white sucker)				
1st - 3rd	Sandhills	19	--	6	13	23	--
			Cyprinella lutrensis (red shiner)				
1st - 3rd	Sandhills	17	--	2	6	15	--
1st - 3rd	Loess Hills	23	--	14	34	50	--
1st - 3rd	Glaciated Area	25	--	3	12	44	--
			Cyprinus carpio (carp)				
1st - 3rd	Sandhills	12	--	1	2	6	--
1st - 3rd	Loess Hills	20	--	.9	1	6	--
			Fundulus sciadicus (plains topminnow)				
1st - 3rd	Sandhills	18	--	1	4	11	--
			Hybognathus hankinsoni (brassy minnow)				
1st - 3rd	Sandhills	15	--	2	4	9	--
1st - 3rd	Loess Hills	11	--	3	5	19	--
1st - 3rd	Glaciated Area	15	--	.3	2	10	--

Table 13. *Statistical summary of relative abundance of selected fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Sub-unit	Number of sites where identified (number of determinations)	Relative abundance, in percent of sample, at indicated percentile: 10th	25th	50th (median)	75th	90th
			FISH TAXA--Continued				
			<u>*Ictalurus punctatus* (channel catfish)</u>				
1st - 3rd	Loess Hills	14	--	2	5	9	--
			<u>*Lepomis cyanellus* (green sunfish)</u>				
1st - 3rd	Sandhills	24	--	1	4	6	--
1st - 3rd	Loess Hills	20	--	1	3	9	--
1st - 3rd	Glaciated Area	20	--	.8	3	9	--
1st - 3rd	Platte Valley	10	--	1	3	7	--
			<u>*Lepomis macrochirus* (bluegill sunfish)</u>				
1st - 3rd	Loess Hills	11	--	.2	.6	1	--
			<u>*Micropterus salmoides* (largemouth bass)</u>				
1st - 3rd	Sandhills	12	--	.8	3	7	--
1st - 3rd	Loess Hills	13	--	.5	1	2	--
			<u>*Moxostoma macrolepidotum* (shorthead redhorse)</u>				
1st - 3rd	Loess Hills	11	--	1	2	5	--
			<u>*Notropis dorsalis* (bigmouth shiner)</u>				
1st - 3rd	Sandhills	13	--	2	6	16	--
1st - 3rd	Glaciated Area	16	--	5	10	17	--
			<u>*Notropis stramineus* (sand shiner)</u>				
1st - 3rd	Sandhills	21	--	10	28	40	--
1st - 3rd	Loess Hills	20	--	5	19	32	--
1st - 3rd	Glaciated Area	31	2	15	26	44	76
1st - 3rd	Platte Valley	11	--	4	14	46	--
			<u>*Noturus flavus* (stonecat)</u>				
1st - 3rd	Sandhills	12	--	.7	2	4	--

Table 13. *Statistical summary of relative abundance of selected fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Sub-unit	Number of sites where identified (number of determinations)	Relative abundance, in percent of sample, at indicated percentile: 10th	25th	50th (median)	75th	90th
FISH TAXA--Continued							
Pimephales promelas (fathead minnow)							
1st - 3rd	Sandhills	19	--	2	6	15	--
1st - 3rd	Loess Hills	18	--	2	11	28	--
1st - 3rd	Glaciated Area	34	2	11	21	42	87
1st - 3rd	Platte Valley	11	--	3	10	75	--
Rhinichthys cataractae (longnose dace)							
1st - 3rd	Sandhills	15	--	3	5	24	--
Semotilus atromaculatus (creek chub)							
1st - 3rd	Sandhills	17	--	2	4	7	--
1st - 3rd	Glaciated Area	22	--	3	8	17	--
MACROINVERTEBRATE TAXA							
Argia							
1st - 3rd	Glaciated Area	11	--	.7	2	4	--
Baetis							
1st - 3rd	Sandhills	14	--	9	15	20	--
1st - 3rd	Loess Hills	18	--	4	7	14	--
1st - 3rd	Glaciated Area	16	--	1	3	7	--
Caenis							
1st - 3rd	Loess Hills	15	--	2	4	10	--
1st - 3rd	Glaciated Area	13	--	1	2	3	--
Ceratopogonidae							
Lakes	Glaciated Area	13	--	3	5	9	--

Table 13. *Statistical summary of relative abundance of selected fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Sub-unit	Number of sites where identified (number of determinations)	Relative abundance, in percent of sample, at indicated percentile: 10th	25th	50th (median)	75th	90th
MACROINVERTEBRATE TAXA--Continued							
Chaoborus punctipennis							
Lakes	Glaciated Area	12	--	5	9	29	--
Cheumatopsyche							
1st - 3rd	Loess Hills	12	--	2	3	9	--
1st - 3rd	Glaciated Area	15	--	2	5	9	--
Chironomus							
Lakes	Glaciated Area	19	--	4	7	32	--
1st - 3rd	Glaciated Area	12	--	.5	1	8	--
Corixidae							
1st - 3rd	Sandhills	11	--	.8	2	8	--
1st - 3rd	Loess Hills	10	--	.9	2	5	--
1st - 3rd	Glaciated Area	14	--	.8	3	5	--
Cricotopus bicinctus							
1st - 3rd	Loess Hills	12	--	.8	2	12	--
1st - 3rd	Glaciated Area	13	--	.9	4	12	--
Cryptochironomus							
1st - 3rd	Glaciated Area	11	--	.5	.9	1	--
Erpobdella punctata							
1st - 3rd	Glaciated Area	12	--	1	2	4	--
Heptagenia							
1st - 3rd	Sandhills	11	--	2	3	11	--
1st - 3rd	Loess Hills	17	--	2	3	7	--
1st - 3rd	Glaciated Area	14	--	.8	3	8	--

Table 13. *Statistical summary of relative abundance of selected fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Sub-unit	Number of sites where identified (number of determinations)	Relative abundance, in percent of sample, at indicated percentile: 10th	25th	50th (median)	75th	90th
MACROINVERTEBRATE TAXA--Continued							
Hetaerina							
1st - 3rd	Loess Hills	14	--	0.8	6	14	--
Hyalella azteca							
Lakes	Glaciated Area	11	--	3	7	11	--
1st - 3rd	Sandhills	13	--	3	8	15	--
1st - 3rd	Loess Hills	17	--	1	2	12	--
1st - 3rd	Glaciated Area	13	--	.8	2	12	--
Hydropsyche betteni							
1st - 3rd	Glaciated Area	11	--	2	5	12	--
Hydropsyche simulans							
1st - 3rd	Loess Hills	15	--	4	10	14	--
1st - 3rd	Glaciated Area	12	--	.7	5	32	--
Ilyodrilus templetoni							
Lakes	Glaciated Area	11	--	2	3	6	--
Limnodrilus hoffmeisteri							
Lakes	Glaciated Area	18	--	3	7	16	--
Physa							
1st - 3rd	Sandhills	10	--	1	3	4	--
1st - 3rd	Loess Hills	10	--	.6	4	4	--
1st - 3rd	Glaciated Area	17	--	3	6	22	--
Polypedilum convictum							
1st - 3rd	Loess Hills	13	--	1	3	7	--
1st - 3rd	Glaciated Area	13	--	2	4	11	--

Table 13. *Statistical summary of relative abundance of selected fish and macroinvertebrate taxa identified during aquatic-ecological surveys within Central Nebraska Basins, 1981-90*--Continued

Summary group: Stream order or lake class	Summary group: Sub-unit	Number of sites where identified (number of determinations)	Relative abundance, in percent of sample, at indicated percentile: 10th	25th	50th (median)	75th	90th
		MACROINVERTEBRATE TAXA--Continued					
		Procladius					
Lakes	Glaciated Area	20	--	5	10	14	--
		Rheotanytarsus					
1st - 3rd	Loess Hills	10	--	.6	3	9	--
		Simuliidae					
1st - 3rd	Loess Hills	13	--	2	10	19	--
1st - 3rd	Glaciated Area	15	--	1	6	8	--
		Stenacron interpunctatum					
1st - 3rd	Loess Hills	10	--	2	6	12	--
		Thienemannimyia					
1st - 3rd	Loess Hills	12	--	.7	2	4	--
1st - 3rd	Glaciated Area	14	--	2	3	10	--
		Tricorythodes					
1st - 3rd	Sandhills	12	--	2	4	7	--
1st - 3rd	Loess Hills	10	--	1	3	5	--
		Tubificidae					
Lakes	Glaciated Area	23	--	11	21	38	--
1st - 3rd	Glaciated Area	10	--	.7	2	7	--

Table 14. *Statistical summary of taxonomic richness and dominance of sampled communities from aquatic-ecological surveys within Central Nebraska Basins, 1981-90*

[Values are reported only for summary groups that had 10 or more sites where a specific community was sampled; --, value not computed for summary groups that had fewer than 30 determinations]

Summary group		Number of sites sampled (number of determinations)	Value at indicated percentile				
Stream order or lake class	Subunit		10th	25th	50th (median)	75th	90th
		Fish community richness, as number of species in sample					
1st - 3rd	Sandhills	31	3	5	9	11	13
1st - 3rd	Loess Hills	27	--	6	10	13	--
1st - 3rd	Glaciated Area	38	1	3	5	7	11
1st - 3rd	Platte Valley	15	--	4	7	10	--
		Fish community dominance, single most-dominant species, in percent					
1st - 3rd	Sandhills	29	--	37	43	55	--
1st - 3rd	Loess Hills	25	--	34	44	58	--
1st - 3rd	Glaciated Area	36	34	42	52	79	90
1st - 3rd	Platte Valley	14	--	43	50	78	--
		Macroinvertebrate community richness, as number of taxa in sample					
Lakes	Loess Hills	12	--	0	3	8	--
Lakes	Glaciated Area	32	0	5	7	11	16
1st - 3rd	Sandhills	28	--	16	24	29	--
1st - 3rd	Loess Hills	26	--	14	21	27	--
1st - 3rd	Glaciated Area	41	9	14	21	26	32
1st - 3rd	Platte Valley	14	--	17	21	27	--
		Macroinvertebrate community dominance, single most-dominant taxon, in percent					
Lakes	Loess Hills	10	--	25	49	77	--
Lakes	Glaciated Area	28	--	30	36	51	--
1st - 3rd	Sandhills	26	--	23	30	39	--
1st - 3rd	Loess Hills	25	--	18	26	32	--
1st - 3rd	Glaciated Area	40	13	25	29	41	48
1st - 3rd	Platte Valley	13	--	16	20	33	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*

[Number in parentheses is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System; values are reported only for summary groups that had 10 or more analyses. µS/cm, microsiemens per centimeter; °C, degrees Celsius; mg/L, milligrams per liter; µg/L, micrograms per liter; pCi/L picocuries per liter; --, value not determined for fewer than 30 analyses; <, less than]

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Specific conductance, onsite, total, in µS/cm at 25 °C (00095)				
Deep	Sandhills	59	110	130	150	220	360
Deep	Loess Hills	49	240	450	490	610	760
Deep	Glaciated Area	10	--	600	1,400	2,000	--
Deep	Platte Valley	39	350	520	750	900	1,100
Shallow	Sandhills	24	--	140	170	200	--
Shallow	Loess Hills	86	330	460	560	670	900
Shallow	Glaciated Area	25	--	480	670	790	--
Shallow	Platte Valley	60	440	570	920	1,200	1,400
			pH, onsite, in standard units (00400)				
Deep	Sandhills	85	7.1	7.2	7.4	7.7	7.9
Deep	Loess Hills	156	6.9	7.2	7.3	7.5	7.7
Deep	Glaciated Area	74	6.8	7.1	7.2	7.4	7.5
Deep	Platte Valley	60	6.9	7.1	7.2	7.5	7.6
Shallow	Sandhills	97	6.8	7.1	7.3	7.5	7.8
Shallow	Loess Hills	187	6.9	7.1	7.2	7.4	7.6
Shallow	Glaciated Area	139	6.8	7.1	7.2	7.4	7.6
Shallow	Platte Valley	90	6.8	7.0	7.2	7.4	7.6
			Temperature, water, in °C (00010)				
Deep	Sandhills	86	12.0	12.5	13.0	14.0	15.0
Deep	Loess Hills	146	12.0	13.0	14.0	15.0	15.5
Deep	Glaciated Area	74	12.0	13.0	13.5	14.5	15.5
Deep	Platte Valley	59	12.0	12.5	13.0	14.0	14.5
Shallow	Sandhills	98	11.0	12.0	12.5	13.0	14.0
Shallow	Loess Hills	187	12.0	13.0	13.5	14.5	15.0
Shallow	Glaciated Area	139	12.0	12.5	13.5	14.5	16.0
Shallow	Platte Valley	90	11.0	12.0	13.0	14.0	15.5

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Dissolved oxygen, in mg/L (00300)				
Shallow	Sandhills	45	0.3	0.4	0.6	2.9	6.5
Shallow	Platte Valley	31	1.4	3.0	5.8	7.0	9.5
			Carbon dioxide, total as CO_2, in mg/L (00405)				
Deep	Platte Valley	10	--	12	15	26	--
Shallow	Loess Hills	29	--	20	29	35	--
			Hardness, total as $CaCO_3$, in mg/L (00900)				
Deep	Sandhills	36	44	50	60	100	150
Deep	Loess Hills	42	120	200	230	270	330
Deep	Platte Valley	19	--	190	270	300	--
Shallow	Sandhills	11	--	39	54	76	--
Shallow	Loess Hills	66	140	200	260	300	410
Shallow	Glaciated Area	15	--	260	330	420	--
Shallow	Platte Valley	39	150	260	370	420	590
			Noncarbonate hardness, onsite, in mg/L (00902)				
Deep	Sandhills	20	--	0	0	11	--
Deep	Loess Hills	31	0	0	0	18	92
Deep	Platte Valley	12	--	56	92	110	--
Shallow	Loess Hills	53	0	0	4	58	140
Shallow	Platte Valley	23	--	61	94	140	--
			Noncarbonate hardness, laboratory, in mg/L (95902)				
Deep	Loess Hills	10	--	0	2	41	--
Shallow	Loess Hills	32	0	0	0	24	120
Shallow	Glaciated Area	15	--	0	16	32	--
Shallow	Platte Valley	30	9	66	100	160	260

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Alkalinity, onsite, total as $CaCO_3$, in mg/L (00410)				
Deep	Sandhills	64	50	59	74	120	180
Deep	Loess Hills	142	160	200	240	280	320
Deep	Glaciated Area	66	230	280	320	360	380
Deep	Platte Valley	56	140	170	210	260	300
Shallow	Sandhills	55	42	50	67	92	150
Shallow	Loess Hills	146	150	190	230	280	300
Shallow	Glaciated Area	133	200	260	320	360	410
Shallow	Platte Valley	88	140	200	240	330	380
			Calcium, dissolved as Ca, in mg/L (00915)				
Deep	Sandhills	80	13	15	18	29	47
Deep	Loess Hills	144	39	52	67	79	96
Deep	Glaciated Area	74	51	71	83	110	160
Deep	Platte Valley	61	49	62	79	98	120
Shallow	Sandhills	59	10	13	21	28	43
Shallow	Loess Hills	154	40	58	74	91	100
Shallow	Glaciated Area	139	53	66	86	100	130
Shallow	Platte Valley	90	51	73	99	120	150
			Magnesium, dissolved as Mg, in mg/L (00925)				
Deep	Sandhills	80	2.0	2.3	2.7	4.6	7.3
Deep	Loess Hills	144	6.0	9.3	11	12	16
Deep	Glaciated Area	74	12	16	21	29	50
Deep	Platte Valley	61	2.9	9.8	14	17	22
Shallow	Sandhills	59	1.5	2.0	2.9	4.2	7.3
Shallow	Loess Hills	154	7.0	9.4	12	13	17
Shallow	Glaciated Area	139	12	15	20	26	34
Shallow	Platte Valley	90	7.8	12	19	25	32
			Sodium, dissolved as Na, in mg/L (00930)				
Deep	Sandhills	80	4.3	5.1	5.7	6.9	8.2
Deep	Loess Hills	144	5.8	6.6	8.3	11	16
Deep	Glaciated Area	74	11	17	22	38	150
Deep	Platte Valley	61	7.6	14	23	37	70

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Sodium, dissolved as Na, in mg/L (00930)--Continued				
Shallow	Sandhills	59	3.7	4.4	5.2	6.9	12
Shallow	Loess Hills	154	6.2	7.3	9.0	11	22
Shallow	Glaciated Area	139	13	20	26	41	59
Shallow	Platte Valley	90	11	18	31	64	110
			Potassium, dissolved as K, in mg/L (00935)				
Deep	Sandhills	80	4	4	5	6	10
Deep	Loess Hills	144	5	6	7	9	11
Deep	Glaciated Area	74	3	4	7	10	16
Deep	Platte Valley	61	5	6	9	12	14
Shallow	Sandhills	59	3	4	5	6	8
Shallow	Loess Hills	154	5	6	8	9	12
Shallow	Glaciated Area	139	3	4	6	8	10
Shallow	Platte Valley	90	6	8	12	14	21
			Bicarbonate, as HCO_3, in mg/L (00440)				
Deep	Platte Valley	15	--	200	220	290	--
Shallow	Loess Hills	32	160	260	320	360	390
Shallow	Platte Valley	19	--	190	260	340	--
			Carbonate, as CO_3, in mg/L (00445)				
Deep	Platte Valley	11	--	0	0	0	--
Shallow	Loess Hills	29	--	0	0	0	--
			Sulfate, dissolved as SO_4, in mg/L (00945)				
Deep	Sandhills	80	<1.6	<2.2	<3.9	<5.0	6.9
Deep	Loess Hills	144	<5.0	<5.0	8.5	17	35
Deep	Glaciated Area	74	7.5	17	50	96	500
Deep	Platte Valley	61	10	22	69	160	460
Shallow	Sandhills	93	<4.0	<5.0	<5.0	8.0	13
Shallow	Loess Hills	154	<5.0	<5.0	11	24	66
Shallow	Glaciated Area	139	9.0	17	43	80	120
Shallow	Platte Valley	90	17	42	130	220	340

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Chloride, dissolved as Cl, in mg/L (00940)				
Deep	Sandhills	80	<0.5	<0.7	<1.0	<10	<10
Deep	Loess Hills	144	<2.2	<7.4	<10	<10	<10
Deep	Glaciated Area	74	<10	<10	<10	20	85
Deep	Platte Valley	61	<6.1	<10	<10	19	29
Shallow	Sandhills	59	<1.2	<10	<10	<10	12
Shallow	Loess Hills	154	<2.2	<4.6	<10	<10	16
Shallow	Glaciated Area	139	<7.7	<10	<10	10	38
Shallow	Platte Valley	90	<10	<10	19	34	46
			Fluoride, dissolved as F, in mg/L (00950)				
Deep	Sandhills	55	.2	.2	.3	.3	.4
Deep	Loess Hills	45	.2	.2	.2	.3	.3
Deep	Platte Valley	19	--	.2	.3	.5	--
Shallow	Sandhills	15	--	.1	.2	.3	--
Shallow	Loess Hills	75	.2	.2	.3	.4	.4
Shallow	Glaciated Area	23	--	.2	.4	.5	--
Shallow	Platte Valley	37	.1	.1	.2	.4	.5
			Silica, dissolved as SiO_2, in mg/L (00955)				
Deep	Sandhills	55	45	47	52	57	60
Deep	Loess Hills	45	45	49	53	57	62
Deep	Platte Valley	19	--	29	47	55	--
Shallow	Sandhills	15	--	45	55	57	--
Shallow	Loess Hills	75	35	43	51	56	60
Shallow	Glaciated Area	23	--	24	28	33	--
Shallow	Platte Valley	20	--	22	28	36	--
			Dissolved solids, residue at 180°C, in mg/L (70300)				
Deep	Sandhills	26	--	118	128	161	--
Deep	Loess Hills	10	--	202	281	328	--
Shallow	Loess Hills	14	--	197	292	372	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Dissolved solids, calculated, sum of constituents, in mg/L (70301)				
Deep	Sandhills	20	--	130	146	195	--
Deep	Loess Hills	36	261	300	338	392	517
Deep	Platte Valley	19	--	288	420	556	--
Shallow	Loess Hills	63	209	284	367	431	578
Shallow	Glaciated Area	15	--	358	462	563	--
Shallow	Platte Valley	18	--	316	533	808	--
			Nitrate, as N, in mg/L (00618 and 00620)				
Deep	Loess Hills	25	--	1.0	2.1	4.6	--
Deep	Platte Valley	62	< .02	.50	2.2	6.4	18
Shallow	Loess Hills	67	.21	.80	2.4	5.8	13
Shallow	Platte Valley	89	1.4	4.0	12	19	31
			Nitrite plus nitrate, as N, in mg/L (00630 and 00631)				
Deep	Sandhills	126	.10	.52	.96	1.6	4.4
Deep	Loess Hills	204	.76	1.1	1.8	3.1	4.8
Deep	Glaciated Area	105	< .02	< .10	.80	3.2	9.7
Deep	Platte Valley	96	< .10	1.0	3.6	9.9	16
Shallow	Sandhills	135	< .10	.40	1.1	2.1	7.1
Shallow	Loess Hills	276	.28	.92	1.8	3.8	7.7
Shallow	Glaciated Area	107	< .10	< .30	2.7	11	25
Shallow	Platte Valley	137	< .10	2.2	6.5	18	32
			Nitrogen, ammonia, as N, in mg/L (00608 and 00610)				
Deep	Platte Valley	21	--	< .01	< .01	.02	--
Shallow	Platte Valley	30	< .01	< .07	< .09	.10	.13
			Nitrogen, ammonia, total as NH_4, in mg/L (71845)				
Shallow	Platte Valley	17	--	.04	.07	.08	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group: Well-depth category	Summary group: Sub-unit	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
		Nitrogen, total organic as N, in mg/L (00605)					
Deep	Platte Valley	10	--	0.28	0.42	0.67	--
Shallow	Platte Valley	26	--	.56	.90	1.5	--
		Nitrogen, total ammonia plus organic as N, in mg/L (00625)					
Deep	Platte Valley	10	--	.38	.56	.77	--
Shallow	Platte Valley	26	--	.59	.90	1.4	--
		Nitrogen, dissolved ammonia plus organic as N, in mg/L (00623)					
Deep	Platte Valley	22	--	< .20	.40	.80	--
Shallow	Platte Valley	11	--	.40	.60	.80	--
		Nitrogen, total as N, in mg/L (00600)					
Shallow	Platte Valley	26	--	3.4	4.6	12	--
		Nitrogen, total as NO_3, in mg/L (71887)					
Shallow	Platte Valley	26	--	16	20	46	--
		Phosphorus, dissolved as P, in mg/L (00666)					
Deep	Sandhills	36	< 0.04	< .04	< .04	.17	0.29
Deep	Loess Hills	135	< .04	< .04	< .04	< .04	.10
Deep	Glaciated Area	68	< .04	< .04	< .04	.07	.15
Deep	Platte Valley	56	< .04	< .04	< .04	.10	.19
Shallow	Sandhills	82	< .04	< .04	.09	.19	.31
Shallow	Loess Hills	146	< .04	< .04	< .04	.11	.24
Shallow	Glaciated Area	139	< .04	< .04	< .04	.13	.27
Shallow	Platte Valley	88	< .04	< .04	< .04	.06	.14

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Aluminum, dissolved as Al, in µg/L (01106)				
Deep	Sandhills	34	<10	<10	<10	16	18
Deep	Loess Hills	133	<10	<10	<10	<10	12
Deep	Glaciated Area	65	<10	<10	<10	<14	<43
Deep	Platte Valley	38	<10	<10	<10	<10	22
Shallow	Sandhills	79	<10	<10	<10	18	27
Shallow	Loess Hills	145	<10	<10	<10	<10	<22
Shallow	Glaciated Area	133	<10	<10	<10	12	24
Shallow	Platte Valley	88	<10	<10	<10	<11	<22
			Arsenic, dissolved as As, in µg/L (01000)				
Deep	Sandhills	58	2.4	3.0	6.5	8.4	10
Deep	Loess Hills	155	1.1	2.0	3.2	4.5	6.8
Deep	Glaciated Area	69	< .5	< .5	1.0	2.1	5.3
Deep	Platte Valley	54	< .9	1.1	2.0	4.1	6.0
Shallow	Sandhills	83	.8	1.7	3.0	5.0	8.2
Shallow	Loess Hills	146	1.2	2.1	3.0	4.5	6.6
Shallow	Glaciated Area	139	< .5	.5	1.1	2.1	4.2
Shallow	Platte Valley	88	.5	.8	1.7	3.0	6.1
			Barium, dissolved as Ba, in µg/L (01005)				
Deep	Sandhills	38	34	46	67	130	170
Deep	Loess Hills	133	85	110	150	180	220
Deep	Glaciated Area	66	< 7	21	<54	<92	190
Deep	Platte Valley	54	48	<62	130	200	300
Shallow	Sandhills	80	37	44	62	110	170
Shallow	Loess Hills	146	<98	130	170	210	280
Shallow	Glaciated Area	133	38	68	110	190	240
Shallow	Platte Valley	88	35	68	110	200	380
			Beryllium, dissolved as Be, in µg/L (01010)				
Deep	Sandhills	34	<1	<1	<1	<1	<1
Deep	Loess Hills	131	<1	<1	<1	<1	<1
Deep	Glaciated Area	65	<1	<1	<1	<1	1
Deep	Platte Valley	52	<1	<1	<1	<1	<1

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group: Well-depth category	Summary group: Sub-unit	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
			Beryllium, dissolved as Be, in µg/L (01010)--Continued				
Shallow	Sandhills	80	<1	<1	<1	<1	<1
Shallow	Loess Hills	139	<1	<1	<1	<1	<1
Shallow	Glaciated Area	133	<1	<1	<1	<1	1
Shallow	Platte Valley	84	<1	<1	<1	<1	1
			Boron, dissolved as B, in µg/L (01020)				
Deep	Sandhills	68	<17	<20	27	100	130
Deep	Loess Hills	162	31	42	50	60	78
Deep	Glaciated Area	71	47	59	80	170	510
Deep	Platte Valley	46	31	40	56	70	120
Shallow	Sandhills	55	<14	<16	22	33	75
Shallow	Loess Hills	152	29	40	50	60	75
Shallow	Glaciated Area	139	43	58	74	91	130
Shallow	Platte Valley	89	30	43	62	110	180
			Cadmium, dissolved as Cd, in µg/L (01025)				
Deep	Platte Valley	21	--	<1	<1	<1	--
Shallow	Loess Hills	11	--	<2	<2	4	--
			Cerium, dissolved as Ce, in µg/L (01110)				
Deep	Loess Hills	74	<30	<30	<30	<30	<30
Deep	Glaciated Area	62	<30	<30	<30	<30	<30
Deep	Platte Valley	29	--	<30	<30	<30	--
Shallow	Sandhills	19	--	<30	<30	<30	--
Shallow	Loess Hills	97	<30	<30	<30	<30	<30
Shallow	Glaciated Area	114	<30	<30	<30	<30	<30
Shallow	Platte Valley	73	<30	<30	<30	<30	<30
			Chromium, dissolved as Cr, in µg/L (01030)				
Deep	Sandhills	35	<4	<4	<4	<4	<10
Deep	Loess Hills	146	<4	<4	<4	4	6
Deep	Glaciated Area	65	<4	<4	<4	<4	<4
Deep	Platte Valley	51	<4	<4	<4	<8	<10

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Chromium, dissolved as Cr, in µg/L (01030)--Continued				
Shallow	Sandhills	79	<4	<4	<4	<4	<4
Shallow	Loess Hills	137	<4	<4	<4	4	6
Shallow	Glaciated Area	133	<4	<4	<4	<4	<4
Shallow	Platte Valley	80	<4	<4	<4	<4	<4
			Cobalt, dissolved as Co, in µg/L (01035)				
Deep	Sandhills	34	<2	<2	<2	4	6
Deep	Loess Hills	133	<2	<2	<2	3	7
Deep	Glaciated Area	65	<2	<2	<2	<2	<3
Deep	Platte Valley	39	<2	<2	<2	2	4
Shallow	Sandhills	80	<2	<2	<2	4	7
Shallow	Loess Hills	145	<2	<2	<2	3	8
Shallow	Glaciated Area	133	<2	<2	<2	<2	3
Shallow	Platte Valley	88	<2	<2	<2	2	5
			Copper, dissolved as Cu, in µg/L (01040)				
Deep	Sandhills	58	<2	<2	<2	2	3
Deep	Loess Hills	155	<2	<2	<2	<2	2
Deep	Glaciated Area	66	<2	<2	<2	<2	<2
Deep	Platte Valley	54	<2	<2	<2	2	4
Shallow	Sandhills	83	<2	<2	<2	<2	2
Shallow	Loess Hills	146	<2	<2	<2	<2	4
Shallow	Glaciated Area	133	<2	<2	<2	<2	4
Shallow	Platte Valley	88	<2	<2	<2	2	8
			Iron, dissolved as Fe, in µg/L (01046)				
Deep	Sandhills	68	<10	<10	<10	20	54
Deep	Loess Hills	162	<10	<10	<10	18	29
Deep	Glaciated Area	70	<10	<10	<10	<10	14
Deep	Platte Valley	45	<10	<10	<10	<10	27
Shallow	Sandhills	55	<10	<10	<10	<10	34
Shallow	Loess Hills	152	<10	<10	<10	17	37
Shallow	Glaciated Area	139	<10	<10	<10	<10	330
Shallow	Platte Valley	89	<10	<10	<10	<10	27

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
				Lead, dissolved as Pb, in µg/L (01049)			
Deep	Sandhills	28	--	<2	<2	3	--
Deep	Platte Valley	21	--	<1	<2	3	--
Shallow	Loess Hills	11	--	<2	3	9	--
				Lithium, dissolved as Li, in µg/L (01130)			
Deep	Sandhills	34	7	8	10	16	22
Deep	Loess Hills	133	15	17	19	22	30
Deep	Glaciated Area	65	16	20	31	54	160
Deep	Platte Valley	39	14	16	21	27	32
Shallow	Sandhills	80	5	7	9	12	16
Shallow	Loess Hills	145	14	17	20	23	29
Shallow	Glaciated Area	133	13	20	27	39	56
Shallow	Platte Valley	88	10	17	25	32	44
				Manganese, dissolved as Mn, in µg/L (01056)			
Deep	Sandhills	68	<2	<2	<3	<10	31
Deep	Loess Hills	162	<2	<2	<2	2	<6
Deep	Glaciated Area	70	<2	<2	14	200	660
Deep	Platte Valley	45	<2	<2	<2	<10	200
Shallow	Sandhills	55	<2	<2	<2	<4	<14
Shallow	Loess Hills	152	<1	<2	<2	2	30
Shallow	Glaciated Area	139	<2	<2	4	170	850
Shallow	Platte Valley	89	<2	<2	3	100	660
				Mercury, dissolved as Hg, in µg/L (71890)			
Deep	Sandhills	28	--	< .1	< .1	< .1	--
Deep	Platte Valley	21	--	< .1	< .1	< .1	--
Shallow	Loess Hills	11	--	< .1	< .1	< .1	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group: Well-depth category	Summary group: Sub-unit	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
			Molybdenum, dissolved as Mo, in µg/L (01060)				
Deep	Sandhills	34	<4	<4	<4	4	8
Deep	Loess Hills	133	<4	<4	<4	6	8
Deep	Glaciated Area	65	<4	<4	<4	<7	<10
Deep	Platte Valley	39	<4	<4	<4	5	10
Shallow	Sandhills	80	<4	<4	<4	4	7
Shallow	Loess Hills	145	<4	<4	<4	7	10
Shallow	Glaciated Area	133	<4	<4	<4	6	11
Shallow	Platte Valley	88	<4	<4	<4	7	14
			Nickel, dissolved as Ni, in µg/L (01065)				
Deep	Sandhills	34	<4	<4	<4	4	6
Deep	Loess Hills	133	<4	<4	<4	4	5
Deep	Glaciated Area	65	<4	<4	<4	<4	6
Deep	Platte Valley	54	<2	<4	<4	<4	6
Shallow	Sandhills	80	<4	<4	<4	5	7
Shallow	Loess Hills	145	<4	<4	<4	<4	6
Shallow	Glaciated Area	133	<4	<4	<4	<4	5
Shallow	Platte Valley	88	<4	<4	<4	6	8
			Scandium, dissolved as Sc, in µg/L (01187)				
Deep	Sandhills	34	<1	<1	<1	<1	<1
Deep	Loess Hills	132	<1	<1	<1	<1	<1
Deep	Glaciated Area	65	<1	<1	<1	<1	<1
Deep	Platte Valley	38	<1	<1	<1	<1	<1
Shallow	Sandhills	79	<1	<1	<1	<1	<1
Shallow	Loess Hills	143	<1	<1	<1	<1	<1
Shallow	Glaciated Area	133	<1	<1	<1	<1	<1
Shallow	Platte Valley	88	<1	<1	<1	<1	<1
			Selenium, dissolved as Se, in µg/L (01145)				
Deep	Sandhills	58	< .2	< .4	< .9	<1.0	1.2
Deep	Loess Hills	155	< .2	.2	.4	.7	2.0
Deep	Glaciated Area	69	< .2	.3	.4	.5	1.1
Deep	Platte Valley	54	< .2	< .3	< .3	1.0	3.9

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Selenium, dissolved as Se, in µg/L (01145)--Continued				
Shallow	Sandhills	83	< 0.2	< 0.2	< 0.3	0.5	<0 .8
Shallow	Loess Hills	146	< .2	.2	.4	< .7	1.1
Shallow	Glaciated Area	139	< .2	.3	.4	.5	1.0
Shallow	Platte Valley	88	< .2	< .3	< .4	< .6	<1.0
			Silicon, dissolved as Si, in µg/L (01140)				
Deep	Sandhills	34	15,000	18,000	22,000	25,000	26,000
Deep	Loess Hills	132	18,000	20,000	22,000	24,000	26,000
Deep	Glaciated Area	65	7,300	11,000	14,000	16,000	20,000
Deep	Platte Valley	38	8,400	11,000	15,000	22,000	25,000
Shallow	Sandhills	79	18,000	20,000	22,000	25,000	29,000
Shallow	Loess Hills	143	16,000	19,000	22,000	23,000	25,000
Shallow	Glaciated Area	133	8,600	11,000	13,000	16,000	20,000
Shallow	Platte Valley	88	8,500	11,000	12,000	15,000	17,000
			Silver, dissolved as Ag, in µg/L (01075)				
Deep	Sandhills	38	<1	<2	<2	<2	2
Deep	Loess Hills	133	<2	<2	<2	<2	2
Deep	Glaciated Area	66	<2	<2	<2	<2	3
Deep	Platte Valley	54	<2	<2	<2	<2	<2
Shallow	Sandhills	80	<2	<2	<2	<2	2
Shallow	Loess Hills	146	<2	<2	<2	<2	3
Shallow	Glaciated Area	133	<2	<2	<2	2	3
Shallow	Platte Valley	88	<2	<2	<2	<2	3
			Strontium, dissolved as Sr, in µg/L (01080)				
Deep	Sandhills	34	66	78	130	240	360
Deep	Loess Hills	133	250	330	390	450	540
Deep	Glaciated Area	65	270	350	550	960	1,300
Deep	Platte Valley	54	310	390	510	630	780
Shallow	Sandhills	80	53	70	110	170	290
Shallow	Loess Hills	145	230	310	370	430	520
Shallow	Glaciated Area	133	240	330	430	630	1,000
Shallow	Platte Valley	88	310	410	610	790	1,100

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Titanium, dissolved as Ti, in µg/L (01150)				
Deep	Sandhills	34	<2	<2	<2	<2	<2
Deep	Loess Hills	132	<2	<2	<2	<2	<2
Deep	Glaciated Area	65	<2	<2	<2	<2	<2
Deep	Platte Valley	38	<2	<2	<2	<2	<2
Shallow	Sandhills	79	<2	<2	<2	<2	<2
Shallow	Loess Hills	143	<2	<2	<2	<2	<2
Shallow	Glaciated Area	133	<2	<2	<2	<2	<2
Shallow	Platte Valley	88	<2	<2	<2	<2	<2
			Vanadium, dissolved as V, in µg/L (01085)				
Deep	Sandhills	34	<4	4	6	8	12
Deep	Loess Hills	133	<4	5	8	10	13
Deep	Glaciated Area	65	<4	<4	<4	5	18
Deep	Platte Valley	54	<4	<4	6	10	13
Shallow	Sandhills	80	<4	<4	6	10	15
Shallow	Loess Hills	145	<4	5	8	11	13
Shallow	Glaciated Area	133	<4	<4	<4	5	10
Shallow	Platte Valley	88	<4	<4	<4	5	9
			Yttrium, dissolved as Y, in µg/L (01201)				
Deep	Sandhills	34	<1	<1	<1	<1	1
Deep	Loess Hills	132	<1	<1	<1	<1	1
Deep	Glaciated Area	65	<1	<1	<1	1	1
Deep	Platte Valley	38	<1	<1	<1	<1	1
Shallow	Sandhills	79	<1	<1	<1	<1	1
Shallow	Loess Hills	143	<1	<1	<1	1	1
Shallow	Glaciated Area	133	<1	<1	<1	1	1
Shallow	Platte Valley	88	<1	<1	<1	1	1
			Zinc, dissolved as Zn, in µg/L (01090)				
Deep	Sandhills	58	<3	<10	<16	20	320
Deep	Loess Hills	155	<6	<9	12	20	110
Deep	Glaciated Area	66	<4	14	36	65	110
Deep	Platte Valley	54	<4	7	12	64	170

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Zinc, dissolved as Zn, in µg/L (01090)--Continued				
Shallow	Sandhills	83	<6	15	25	64	160
Shallow	Loess Hills	146	<8	<12	24	88	200
Shallow	Glaciated Area	133	<4	16	47	110	220
Shallow	Platte Valley	88	<6	<11	20	73	140
			Zirconium, dissolved as Zr, in µg/L (01160)				
Deep	Sandhills	34	<2	<2	<2	<2	<2
Deep	Loess Hills	132	<2	<2	<2	<2	<2
Deep	Glaciated Area	65	<2	<2	<2	2	3
Deep	Platte Valley	38	<2	<2	<2	<2	3
Shallow	Sandhills	79	<2	<2	<2	<2	<2
Shallow	Loess Hills	143	<2	<2	<2	<2	2
Shallow	Glaciated Area	133	<2	<2	<2	<2	3
Shallow	Platte Valley	88	<2	<2	<2	<2	2
			Alpha, gross, dissolved as U natural, in µg/L (80030)				
Deep	Platte Valley	17	--	48	50	52	--
			Beta, gross, dissolved as Cs-137, in pCi/L (03515)				
Deep	Platte Valley	17	--	13	15	16	--
			Beta, gross, dissolved as Sr-90/Y-90, in pCi/L (80050)				
Deep	Platte Valley	17	--	11	13	14	--
			Potassium-40, dissolved, in pCi/L (82068)				
Shallow	Glaciated Area	14	--	3.0	4.8	7.1	--
Shallow	Platte Valley	20	--	6.6	9.0	13	--
			Radium-226, dissolved, radon method, in pCi/L (09511)				
Deep	Platte Valley	17	--	.29	.34	.37	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group: Well-depth category	Summary group: Sub-unit	Number of analyses	Value at indicated percentile: 10th	25th	50th (median)	75th	90th
			Uranium, natural, dissolved, in µg/L (22703)				
Deep	Platte Valley	17	--	18	21	24	--
			Uranium, dissolved, extraction fluorometric, in µg/L (80020)				
Deep	Sandhills	34	< 0.20	< .21	.47	1.6	3.2
Deep	Loess Hills	132	2.0	3.0	4.2	5.7	7.7
Deep	Glaciated Area	64	< .22	1.1	2.6	5.7	17
Deep	Platte Valley	53	2.1	6.6	11	20	33
Shallow	Sandhills	79	< .20	< .20	.30	1.2	2.8
Shallow	Loess Hills	143	.90	2.7	4.4	6.2	9.6
Shallow	Glaciated Area	100	.40	1.4	4.9	9.8	32
Shallow	Platte Valley	88	.96	5.0	12	28	76
			Carbon, organic total as C, in mg/L (00680)				
Shallow	Platte Valley	15	--	2.0	2.3	3.4	--
			Carbon, organic dissolved as C, in mg/L (00681)				
Shallow	Sandhills	45	.9	1.1	1.4	2.3	3.8
Shallow	Platte Valley	17	--	1.1	1.6	2.2	--
			Alachlor, total recoverable, in µg/L (77825)				
Deep	Sandhills	19	--	(1)	(1)	(1)	--
Deep	Loess Hills	13	--	(1)	(1)	(1)	--
Deep	Glaciated Area	26	--	(1)	(1)	(1)	--
Deep	Platte Valley	10	--	< .2	< .3	< .4	--
Shallow	Sandhills	10	--	(1)	(1)	(1)	--
Shallow	Loess Hills	25	--	(1)	(1)	< .2	--
Shallow	Glaciated Area	25	--	(1)	(1)	(1)	--
Shallow	Platte Valley	30	< .1	< .1	< .2	< .5	< .5
			Ametryne, total recoverable, in µg/L (82184)				
Shallow	Sandhills	13	--	< .1	< .1	< .1	--
Shallow	Platte Valley	23	--	< .1	< .1	< .1	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Atrazine, total recoverable, µg/L (39033 and 39630)				
Deep	Sandhills	66	(1)	< 0.05	< 0.05	< 0.05	< 0.05
Deep	Loess Hills	66	(1)	< .05	< .05	< .05	< .05
Deep	Glaciated Area	68	(1)	(1)	< .05	< .05	< .05
Deep	Platte Valley	51	< 0.05	< .05	< .05	< .06	.3
Shallow	Sandhills	105	< .05	< .05	< .05	< .05	< .05
Shallow	Loess Hills	143	< .04	< .05	< .05	< .05	< .05
Shallow	Glaciated Area	92	(1)	< .05	< .05	< .05	< .05
Shallow	Platte Valley	89	< .05	< .05	.3	.9	2.1
			Cyanazine, total recoverable, in µg/L (81757)				
Deep	Sandhills	24	--	(1)	(1)	< .4	--
Deep	Loess Hills	20	--	(1)	(1)	< .3	--
Deep	Glaciated Area	26	--	(1)	(1)	(1)	--
Deep	Platte Valley	15	--	< .1	< .4	< .4	--
Shallow	Sandhills	24	--	(1)	< .1	< .1	--
Shallow	Loess Hills	40	(1)	(1)	< .1	< .4	< .4
Shallow	Glaciated Area	25	--	(1)	(1)	(1)	--
Shallow	Platte Valley	33	< .02	< .02	< .1	< .4	< .4
			Metolachlor, total recoverable, µg/L (39356 and 82612)				
Deep	Sandhills	15	--	(1)	(1)	(1)	--
Deep	Loess Hills	12	--	(1)	(1)	(1)	--
Deep	Glaciated Area	26	--	(1)	(1)	(1)	--
Shallow	Loess Hills	19	--	(1)	(1)	(1)	--
Shallow	Glaciated Area	25	--	(1)	(1)	(1)	--
Shallow	Platte Valley	25	--	< .1	< .1	< .2	--
			Metribuzin, total recoverable, µg/L (81408 and 82611)				
Deep	Sandhills	15	--	(1)	(1)	(1)	--
Deep	Loess Hills	12	--	(1)	(1)	(1)	--
Deep	Glaciated Area	26	--	(1)	(1)	(1)	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group			Value at indicated percentile				
Well-depth category	Sub-unit	Number of analyses	10th	25th	50th (median)	75th	90th
			Metribuzin, total recoverable, µg/L (81408 and 82611)--Continued				
Shallow	Loess Hills	19	—	(1)	(1)	(1)	--
Shallow	Glaciated Area	25	--	(1)	(1)	(1)	--
Shallow	Platte Valley	25	--	< 0.1	< 0.1	< 0.1	--
			Prometone, total recoverable, in µg/L (39056)				
Deep	Sandhills	11	--	< .04	< .04	< .1	--
Deep	Platte Valley	15	--	< .04	< .1	< .1	--
Shallow	Sandhills	15	--	< .1	< .1	< .1	--
Shallow	Loess Hills	21	--	< .04	< .04	< .1	--
Shallow	Platte Valley	33	<0.02	< .02	< .04	< .1	<0.1
			Prometryne, total recoverable, in µg/L (39057)				
Shallow	Sandhills	13	--	< .1	< .1	< .1	--
Shallow	Platte Valley	33	< .02	< .02	< .1	< .1	< .1
			Propazine, total recoverable, in µg/L (39024)				
Deep	Sandhills	11	--	< .04	< .04	< .1	--
Shallow	Sandhills	15	--	< .1	< .1	< .1	--
Shallow	Loess Hills	21	--	< .04	< .05	< .1	--
Shallow	Platte Valley	33	< .02	< .04	< .04	< .1	< .1
			Simazine, total recoverable, in µg/L (39055)				
Deep	Sandhills	11	--	< .05	< .05	< .1	--
Deep	Platte Valley	13	--	< .05	< .1	< .1	--
Shallow	Sandhills	15	--	< .1	< .1	< .1	--
Shallow	Loess Hills	13	--	< .05	< .05	< .05	--
Shallow	Platte Valley	33	< .02	< .02	< .05	< .1	.1
			Simetryne, total recoverable, in µg/L (39054)				
Shallow	Sandhills	13	--	< .1	< .1	< .1	--
Shallow	Platte Valley	23	--	< .1	< .1	< .1	--

Table 15. *Statistical summary of data on water-quality constituents and properties in ground-water samples collected from selected sites within Central Nebraska Basins, 1978-90*--Continued

Summary group		Number of analyses	Value at indicated percentile				
Well-depth category	Sub-unit		10th	25th	50th (median)	75th	90th
			Trifluralin, total recoverable, in µg/L (39030)				
Deep	Sandhills	15	--	(1)	(1)	(1)	--
Deep	Loess Hills	12	--	(1)	(1)	(1)	--
Deep	Glaciated Area	26	--	(1)	(1)	(1)	--
Shallow	Loess Hills	19	--	(1)	(1)	(1)	--
Shallow	Glaciated Area	25	--	(1)	(1)	(1)	--
Shallow	Platte Valley	18	--	< 0.1	< 0.1	< 0.1	--

[1]Percentile value is less than an unknown reporting level.

Table 16. *Synthetic organic compounds detected in ground water for which all computed percentile concentrations were less than an unknown reporting level, Central Nebraska Basins, 1978-90*

[Number in parentheses is parameter code used in U.S. Environmental Protection Agency's Storage and Retrieval System and U.S. Geological Survey's National Water Information System; reporting levels unknown for most analyses; --, value not reported for fewer than 10 analyses; both summary groups in Platte Valley subunit had fewer than 10 analyses for all compounds]

Compound	Number of analyses from indicated summary group					
	Sandhills		Loess Hills		Glaciated Area	
	Deep well	Shallow well	Deep well	Shallow well	Deep well	Shallow well
Aldrin, total (39330)	15	--	11	19	25	25
α-Benzene hexachloride, total (39337)	15	--	11	19	25	25
β-Benzene hexachloride, total (39338)	15	--	11	19	25	25
γ-Benzene hexachloride (lindane), total (39340)	15	--	11	19	25	25
δ-Benzene hexachloride, total (34259)	15	--	11	19	25	25
Butylate, total (81410)	15	--	11	19	25	25
Carbaryl, total (39750)	15	--	11	19	25	25
Carbofuran, total (81405)	15	--	11	19	25	25
Chlordane, technical, total (39350)	15	--	11	19	25	25
Chlorpyrifos, total recoverable (38932)	15	--	11	19	25	25
DDD, total (39310 and 39360)	15	--	11	19	25	25
DDE, total (39320 and 39365)	15	--	11	19	25	25
DDT, total (39300 and 39370)	15	--	11	19	25	25
Dieldrin, total (39380)	15	--	11	19	25	25
β-Endosulfan, total (34356)	15	--	11	19	25	25
Endosulfan sulfate, total (34351)	15	--	11	19	25	25
Endrin, total recoverable (39390)	15	--	11	19	25	25
Endrin aldehyde, total recoverable (34366)	15	--	11	19	25	25
Fonofos, total recoverable (39013)	15	--	11	19	25	25
Heptachlor epoxide, total (39420)	15	--	11	19	25	25
Heptachlor, total (39410)	15	--	11	19	25	25
Methoxychlor, total (39480)	15	--	11	19	25	25
Methyl parathion, total recoverable (39600)	15	--	11	19	25	25
Parathion, total recoverable (39015)	15	--	11	19	25	25
Terbufos, total recoverable (82088)	15	--	11	19	25	25
Toxaphene, total (39400)	15	--	11	19	25	25
Benzene, total (34030)	15	11	11	20	25	25

Table 16. *Synthetic organic compounds detected in ground water for which all computed percentile concentrations were less than an unknown reporting level, Central Nebraska Basins, 1978-90*--Continued

	Number of analyses from indicated summary group					
	Sandhills		Loess Hills		Glaciated Area	
Compound	Deep well	Shallow well	Deep well	Shallow well	Deep well	Shallow well
Bromodichloromethane, total (32101)	15	11	11	20	25	25
Bromoform, total (32104)	15	11	11	20	25	25
Bromomethane, total (34413)	15	11	11	20	25	25
Carbon tetrachloride, total (32102)	15	11	11	20	25	25
Chlorobenzene, total (34301)	15	11	11	20	25	25
Chloroethane, total (34311)	15	11	11	20	25	25
Chloroform, total (32106)	15	11	11	20	25	25
Dibromochloromethane, total (32105)	15	11	11	20	25	25
1,3-Dichlorobenzene, total (34566)	15	11	11	19	25	25
o-Dichlorobenzene, total (34536)	15	11	11	19	25	25
p-Dichlorobenzene, total (34571)	15	11	11	19	25	25
1,2-Dichloroethane, total (34531)	15	--	11	19	25	25
1,1-Dichloroethylene, total (34501)	15	11	11	20	25	25
cis-1,2-Dichloroethylene, total (81686)	15	--	11	19	25	25
trans-1,2-Dichloroethylene, total (34546)	15	11	11	20	25	25
1,2-Dichloropropane, total (34541)	15	11	11	20	25	25
cis-1,3-Dichloropropene, total (34704)	15	11	11	19	25	25
trans-1,3-Dichloropropene, total (34699)	15	11	11	19	25	25
Ethylbenzene, total (34371)	15	11	11	20	25	25
Ethylene dibromide, total (77651)	15	--	11	19	25	25
Ethylidene dichloride, total (34496)	15	11	11	20	25	25
Methylene chloride, total (34423)	15	11	11	20	25	25
PCB 1016, total (34671)	15	--	11	19	25	25
PCB 1221, total (39488)	15	--	11	19	25	25
PCB 1232, total (39492)	15	--	11	19	25	25
PCB 1242, total (39496)	15	--	11	19	25	25
PCB 1248, total (39500)	15	--	11	19	25	25
PCB 1254, total (39504)	15	--	11	19	25	25
PCB 1260, total (39508)	15	--	11	19	25	25
1,1,1,2-Tetrachloroethane, total (77562)	15	--	11	19	25	25