Estimated Water Use In Nebraska 1990

Nebraska Natural Resources Commission

State Water Planning And Review Process

December 1994

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ESTIMATED WATER USE IN NEBRASKA 1990

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DEDICATION

This report is dedicated to the memory of
Zachary D. Hill
U.S. Geological Survey, Nebraska District
who was responsible for the preparation of the major portion of the data and the early drafts of this report before his death on July 9, 1993.

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GLOSSARY

The terminology used by the U.S. Geological Survey in its series of reports on water use has evolved since 1950. Definitions of terms used in this report follow their usage in the 1990 national report.

acre-foot — the volume of water required to cover 1 acre of land to a depth of 1 foot; equal to 43,560 cubic feet or about 326,000 gallons.

aquifer — a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

consumptive use — that part of water withdrawn that is evaporated, transpired, incorporated into products or crops, consumed by humans or livestock, or otherwise removed from the immediate water environment.

conveyance loss — water that is lost in transit from a pipe, canal, conduit, or ditch by leakage or evaporation. Generally, the water is not available for the intended use; however, leakage from an irrigation ditch, for example, may percolate to a ground-water source and be available for further use.

cooling water — water used for cooling purposes, such as cooling condensers and nuclear reactors.

domestic water use — water for household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens.

evapotranspiration — a collective term that includes water discharged to the atmosphere as a result of evaporation from the soil and surface-water bodies and as a result of plant transpiration.

fossil-fuel power — electric power generated using fossil fuel (coal, oil, or natural gas).

gigawatthour (GWh) — a unit of energy equivalent to one billion watthours.

ground-water — generally, all subsurface-water as distinct from surface-water; specifically, that part of the subsurface-water in the saturated zone (a zone in which all voids are filled with water).

hydroelectric power water use — the use of falling water to drive turbines and generate electric power; usually an instream use.

hydrologic unit — a geographic area representing part or all of a surface-drainage basin or distinct hydrologic feature as delineated by the U.S. Geological Survey on State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number, the first four digits of which denote the region and subregion containing the unit.

instream use — water that is used, but not withdrawn, from a surface-water source for such purposes as hydroelectric power generation, navigation, water-quality improvement, fish propagation, and recreation.

offstream water use — water withdrawn or diverted from a ground- or surface-water source for public water supply, industry, irrigation, livestock, thermoelectric power generation, self-supplied domestic use, and other uses.

per capita use — the average quantity of water used per person per day, in gallons per day (gal/d) per capita.

public water supply — water withdrawn by public water systems and delivered for all uses, such as domestic, commercial, thermoelectric power, industrial, and public water use.

public water use — water supplied from a public water system and used for such purposes as firefighting, street washing, and municipal parks and swimming pools.

saline water — water that contains more than 1,000 milligrams per liter of dissolved solids.

self-supplied water — water withdrawn from a surface- or ground-water source by a user rather than being obtained from a public water supply.

standard industrial classification (SIC) code — four-digit codes established by the Office of Management and Budget, used in the classification of establishments by the type of activity in which they are engaged.

subregion — geographic area representing a drainage basin or distinct hydrologic feature as delineated by the U.S. Geological Survey on State Hydrologic Unit Maps comprising one or more hydrologic units, and identified by a four-digit number, the first two digits of which identify the region containing the subregion.

surface-water — an open body of water, such as a stream or a lake.

water use — (1) in a restrictive sense, the term refers to water that is actually used for a specific purpose, such as for domestic use, irrigation, or industrial processing. In this report, the quantity of water use for a specific category is the combination of self-supplied withdrawals and public-supply deliveries. (2) More broadly, water use pertains to humans' interaction with and influence on the hydrologic cycle, and includes elements such as water withdrawal, delivery, consumptive use, wastewater release, reclaimed wastewater, return flow, and instream use.

watthour (Wh) — an electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electrical circuit steadily for one hour.

CONVERSION FACTORS

MULTIPLY	BY	TO OBTAIN
Area		
acres	43,560	square feet
	4,047	square meters
	0.001562	square miles
square miles (mi^2)	2.590	square kilometers
Volume		
acre-foot (acre-ft)	1,233	cubic meters
inch per acre (in/ac)	2.540	meter per acre
cubic feet (ft^3)	0.02832	cubic meters
gallons (gal)	3.785	liters
Flow		
million gallons per day (Mgal/d)	1.121	thousand acre-feet per year
	0.001547	thousand cubic feet per second
	0.6944	thousand gallons per minute
thousand acre-feet per year (acre-ft/yr)	0.8921	million gallons per day
	0.001380	thousand cubic feet per second
	0.6195	thousand gallons per minute
	0.003377	million cubic meters per day

ABSTRACT

Nebraska water use in 1990 was estimated by federal and state agencies for the U.S. Geological Survey's water use program that reports on national water use every fifth year. Detailed data from individual industries and municipalities were aggregated and merged with less-detailed estimates of all types of uses to produce county- or hydrologic unit-level data or estimates. Total estimated water use in Nebraska was about 24,018,000 acre-feet, which is an average use rate of 21,426.7 million gallons per day. Surface-water provided 16,577.1 million gallons per day, 77.4 percent of total water use. Ground-water provided 4,849.6 million gallons per day, 22.6 percent of the total.

The largest use of surface-water in Nebraska was for power generation.

The largest use of water, 15,131.8 million gallons per day, was for power generation. More than 99.9 percent (15,123.9 million gallons per day) of this use was from surface-water. It accounted for 91.2 percent of the total surface-water used. Surface-water was withdrawn by public water systems for domestic, commercial, and industrial uses. It also was withdrawn for self-supplied industrial, mining, and power generation uses. Some was lost to evaporation from reservoirs, but streamflow was increased in some places by municipal wastewater treatment discharges and irrigation return flows.

The largest use of ground-water in Nebraska was for irrigation.

Irrigation was the largest use of ground-water, 4,408.2 million gallons per day. It accounted for 90.9 percent of the total ground-water used. Ground-water provided 78.2 percent of the water withdrawn for public water supplies, 235.4 million gallons per day, and all of the self-supplied domestic use, 47.1 million gallons per day. Only 4.7 million gallons per day of saline ground-water, 0.1 percent of ground-water withdrawals, were used, all for mining. Tables and choropleth maps show statewide distributions of water use by type, county, and subregion.

Chapter One
INTRODUCTION

In Nebraska, surface-water and ground-water are used for many, sometimes competing, purposes. Surface-water is used for instream uses and is diverted and withdrawn from streams and reservoirs for offstream uses. Ground-water is withdrawn from aquifers for many uses, including surface-water uses, either intentionally or as an unintended result of the original use. In several places it is pumped for uses such as maintaining water levels in lakes and wetlands. In other instances it provides instream flow after its intended use, such as public water supply.

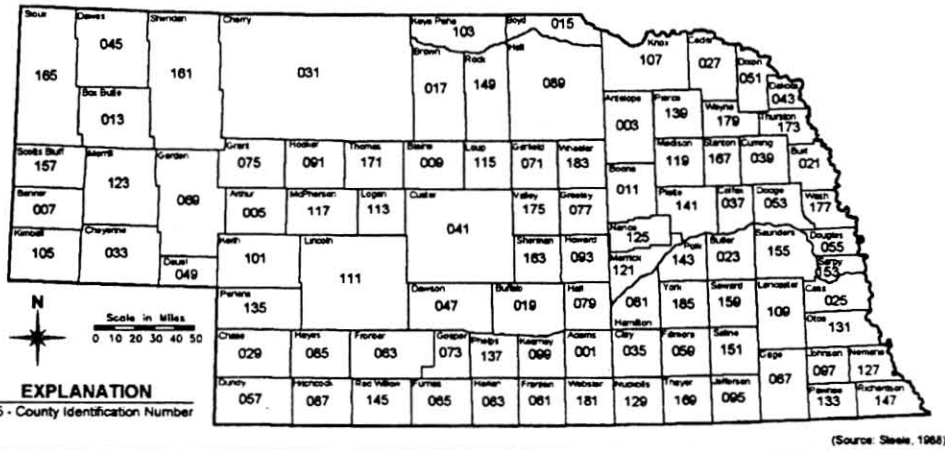
Increasing demand for water for domestic, industrial, agricultural, recreational, and fish and wildlife uses is creating increased competition for available water supplies in numerous instances. The resultant need for wise management of the state's water resources creates a need for data on which to base informed decisions. To effectively manage water resources, accurate and comprehensive water use data are needed on a state and national scale. The Natural Resources Commission (NRC), the state's water resources planning agency, is cooperating with the U.S. Geological Survey (USGS) to develop the type of water use data needed for planning and management.

The purpose of the USGS's National Water Use Program is to establish and operate a water use data system in each state that is responsive to the needs of water managers at the state and national levels. The system provides for the collection, storage, manipulation, and dissemination of water use data from government agencies, industrial and commercial establishments, public utility systems, agricultural and irrigation entities, and domestic developments. The system includes data on water withdrawals and returns. Estimates are used where adequate data are not available.

Since 1950, the USGS has published reports on estimated water use in the United States at 5-year intervals, and cooperated in the publication of reports on Nebraska use since 1965. The NRC cooperated with the USGS to collect and compile this information for 1990.

Water-use estimates for 1990 are given for Nebraska counties, hydrologic units, and subregions in tables located at the end of the report. County locations and identification numbers are shown in figure 1; hydrologic unit and subregion boundaries are shown in figure 2; and Nebraska river basins are shown in figure 3.

Figure 1
Location and Identification of Nebraska Counties



(Source: Steele, 1988)

Figure 2

Hydrologic Units and Subregions of Nebraska

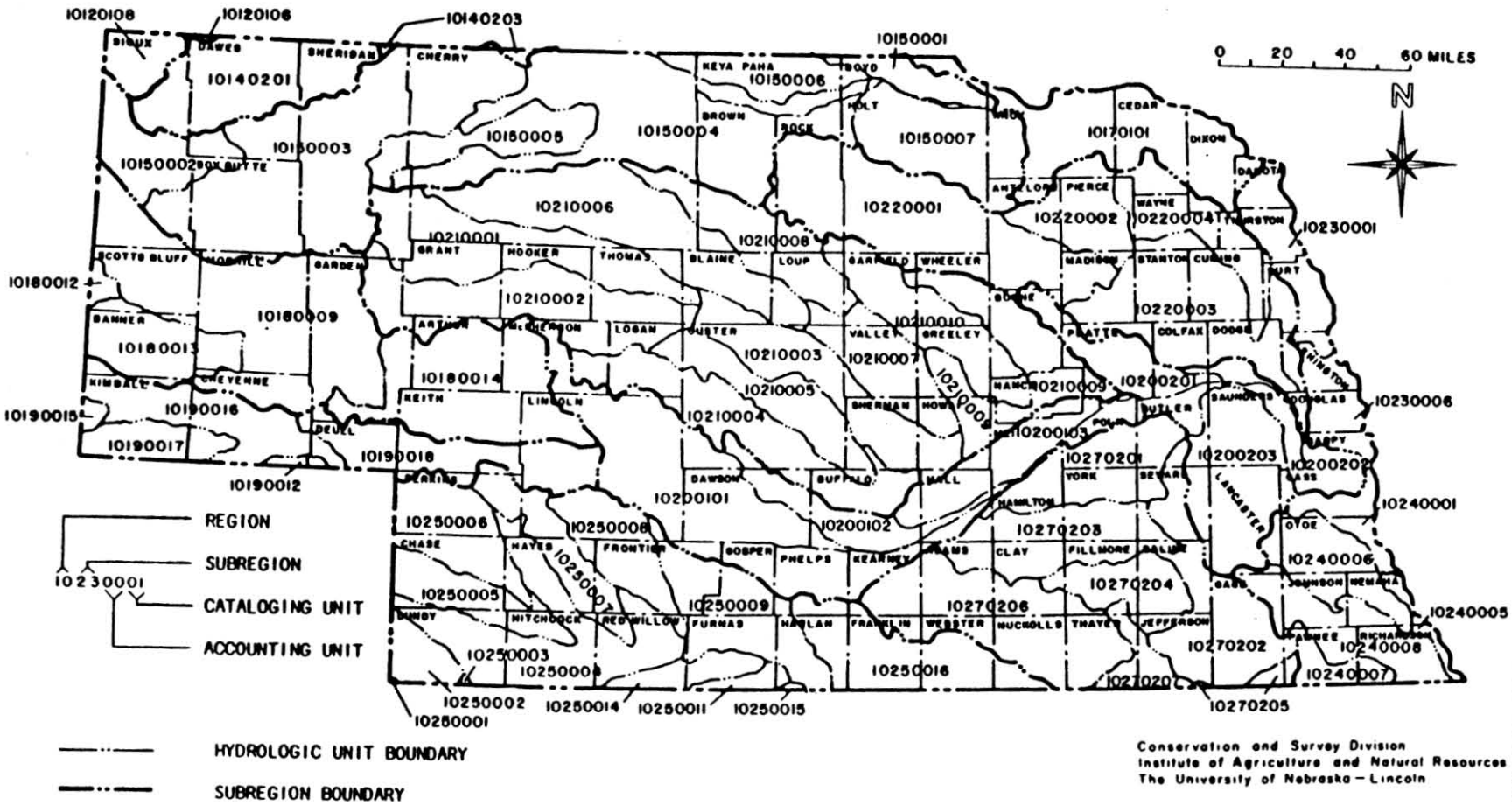
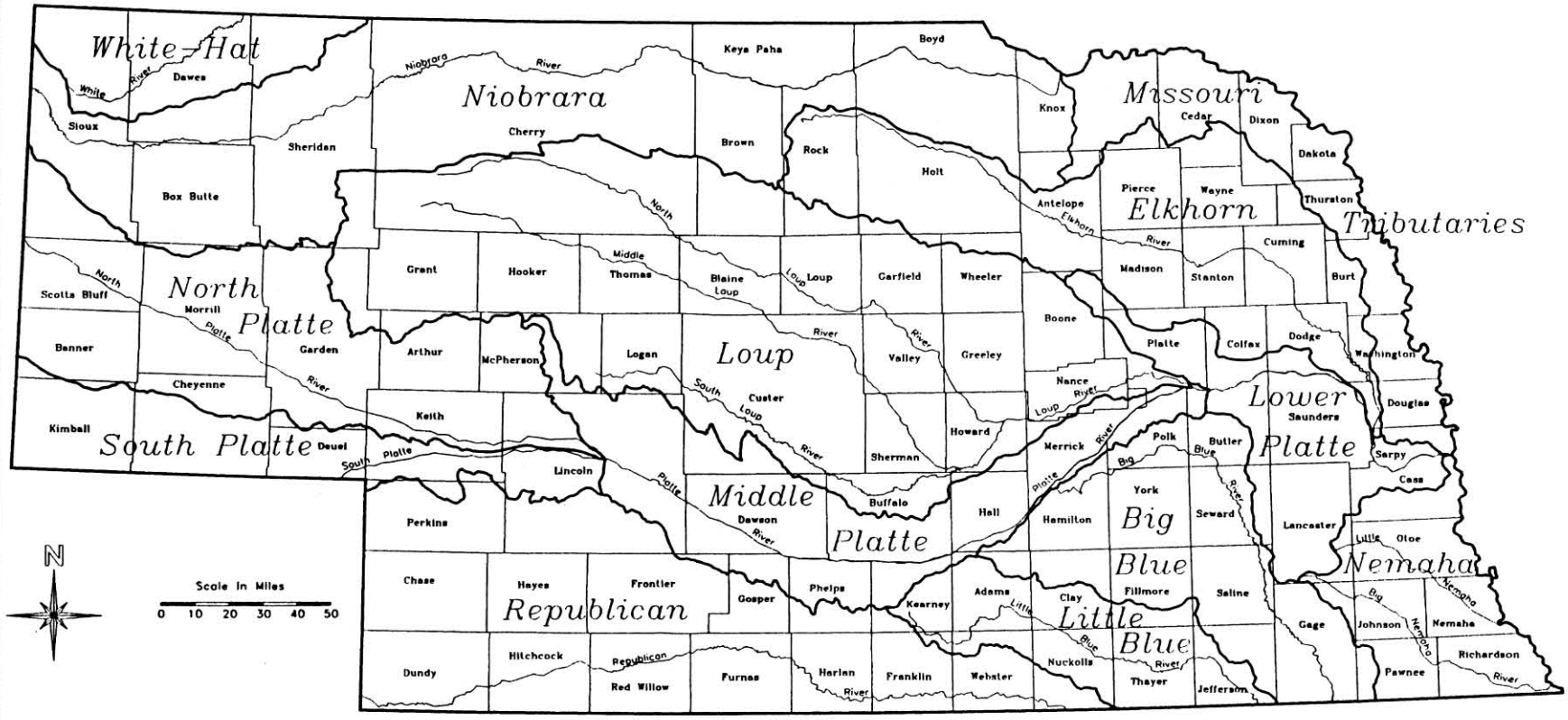


Figure 3
Nebraska River Basins



PURPOSE AND SCOPE

This report presents estimates of water use in Nebraska in 1990 as compiled for the USGS National Water Use Program. Detailed data from individual industries and municipalities have been aggregated and merged with less-detailed estimates of all types of uses to produce county- or hydrologic unit-level data or estimates. Variability in the methods of estimation and accuracy of the data produced less-detailed estimates of some types of uses. Results are presented with as much precision as warranted for individual uses, and totals of different types of uses are reported with the precision of the least detailed estimates. Estimates are reported by county, hydrologic unit, and subregion for 13 categories of use. Associated data, including power generated and the number of acres irrigated, are given also.

ACKNOWLEDGMENT

The NRC acknowledges the assistance given by personnel from the following federal and state agencies, and local power and irrigation districts: U.S. Army Corps of Engineers, Bureau of Reclamation, Environmental Protection Agency, Farmers Home Administration, Nebraska Agricultural Statistics Service, Nebraska Department of Economic Development, Nebraska Department of Environmental Quality, Nebraska Department of Water Resources, Central Nebraska Public Power and Irrigation District, Nebraska Public Power District, and Omaha Public Power District.

DESCRIPTION OF NEBRASKA AND THE WATER USE STUDY

Nebraska covers an area of 77,227 square miles. There are 93 counties and all or part of 68 hydrologic cataloging units in the state. The population in the 1990 census was 1,578,385 (U.S. Department of Commerce, 1991a). Ranges in population for counties and subregions are shown in figures 4 and 5 respectively.

In 1990 there were 534 incorporated cities and villages in Nebraska (U.S. Department of Commerce, 1991a). Three cities within Metropolitan Statistical Areas had a combined population of 537,444, which was 34.0 percent of the state's population (U.S. Department of Commerce, 1991b). Of the 534 incorporated municipalities, 75.7 percent (405) had a population less than 1,000 and nearly 16 percent (84) had a population under 100. Public water supplies were provided by 466 of the 534 municipalities.

The climate varies across Nebraska from east to west, especially the growing season and precipitation patterns, and departures from average vary significantly from year to year. These factors significantly influence the choice of crops grown and the amount of water used for irrigation and other purposes. The growing season, which is approximately 170 days in the southeast, decreases to 120 days in the extreme northwest. Normal precipitation ranges from about 34 inches in the southeast to about 14 inches in the western

Figure 4

Population in Nebraska Counties, 1990

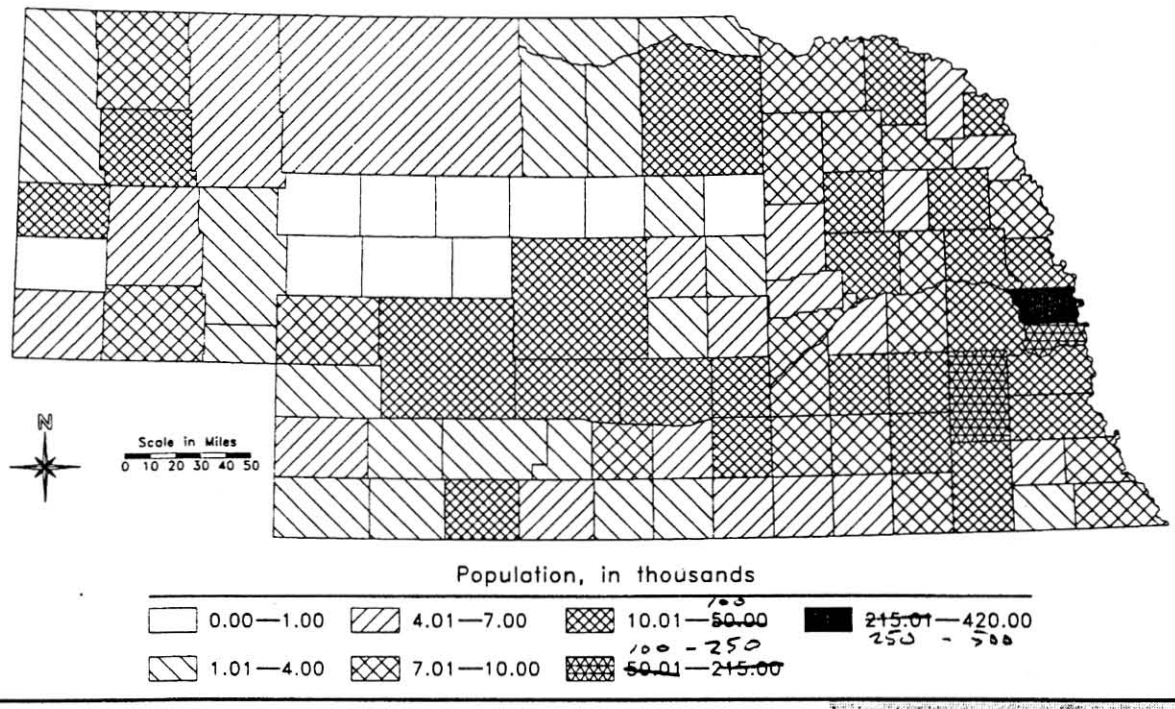
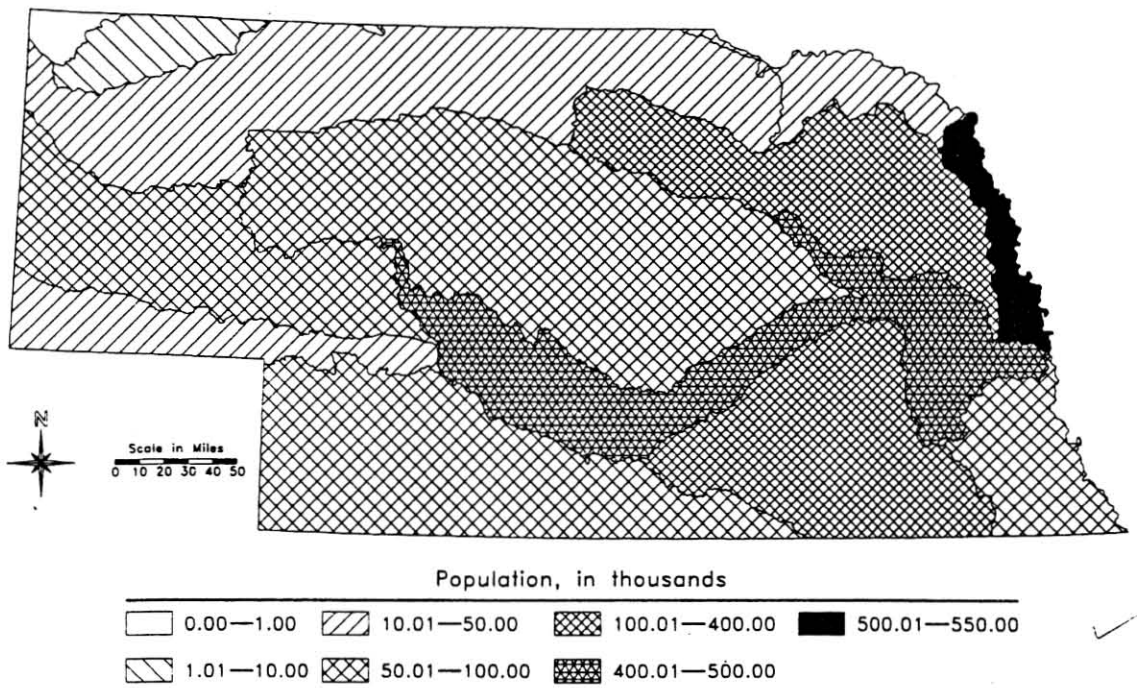


Figure 5

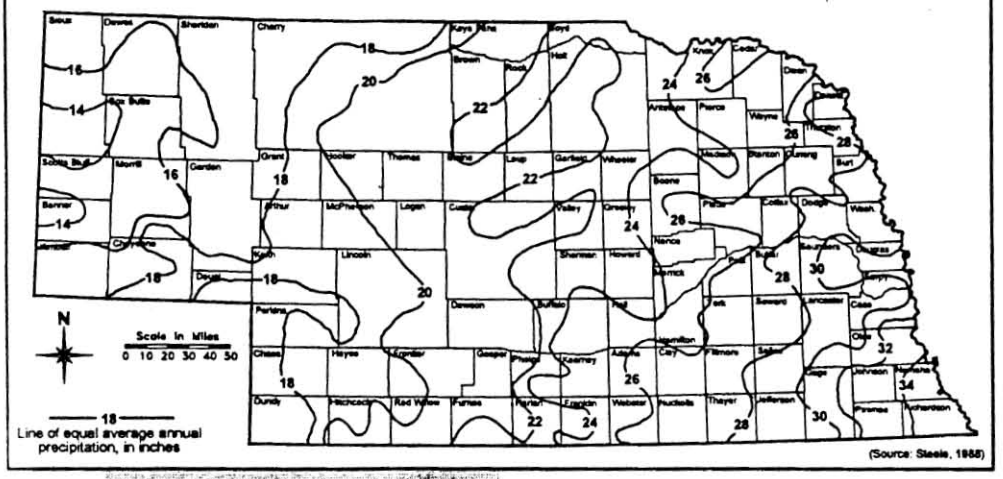
Population in Nebraska Subregions, 1990



Panhandle (Steele, 1988). Normal precipitation for Nebraska from 1951 through 1980 is shown in figure 6.

Weather is also highly variable during the year. For example, nearly two-thirds of the annual precipitation usually occurs during the growing season, but summer rainfall is often from thunderstorms. Such storms vary greatly in intensity, total rainfall, and areal coverage, creating significant disparities between regions. The departure from normal precipitation for the growing season and the entire year in 1990 in the eight National Oceanic and Atmospheric Administration climatic divisions in Nebraska are shown in figure 7 (National Oceanic and Atmospheric Administration, 1990). Below normal precipitation for April through September 1990 for all divisions affected irrigation, domestic, and other water uses.

Figure 6
Average Annual Precipitation in Nebraska, 1951-1980



Major surface-water sources include the Niobrara, Elkhorn, Loup, Platte, Republican, Big Blue, Little Blue, and Missouri Rivers. Ground-water supplies are predominantly contained in the High Plains aquifer, which underlies most of the state. The amount of ground-water in storage in the principal aquifer is shown in figure 8.

Of the 49,425,280 acres in Nebraska, 91.7 percent (45,305,441) were used for agricultural purposes in 1987 (U.S. Department of Commerce, 1989). Cropland made up 51.5 percent (23,320,162 acres) of the agricultural land use. About 5,682,000 acres of cropland and pasture were irrigated in 1987, which was less than the 6,039,000 acres irrigated in 1982. By 1990, irrigated land had increased to more than 6,967,000 acres.

Figure 7
1990 Departure from Normal Precipitation for National Oceanic and Atmospheric Administration Climatic Divisions in Nebraska

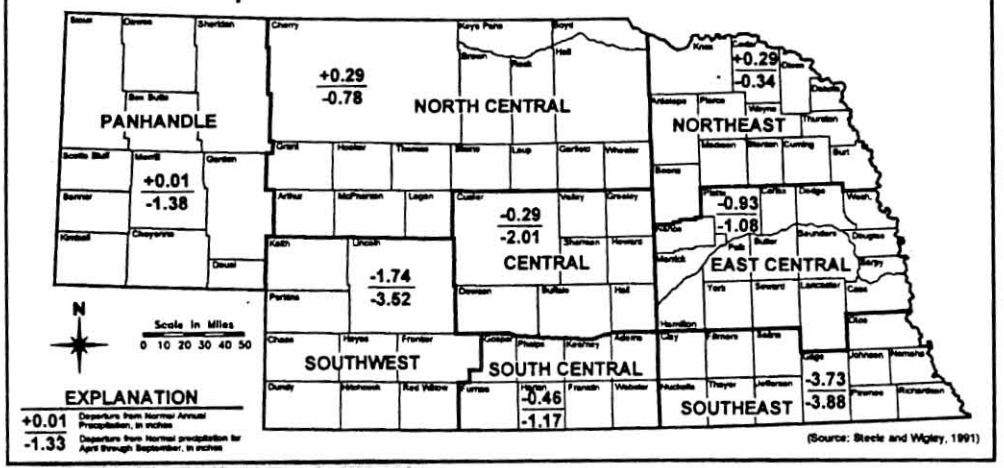
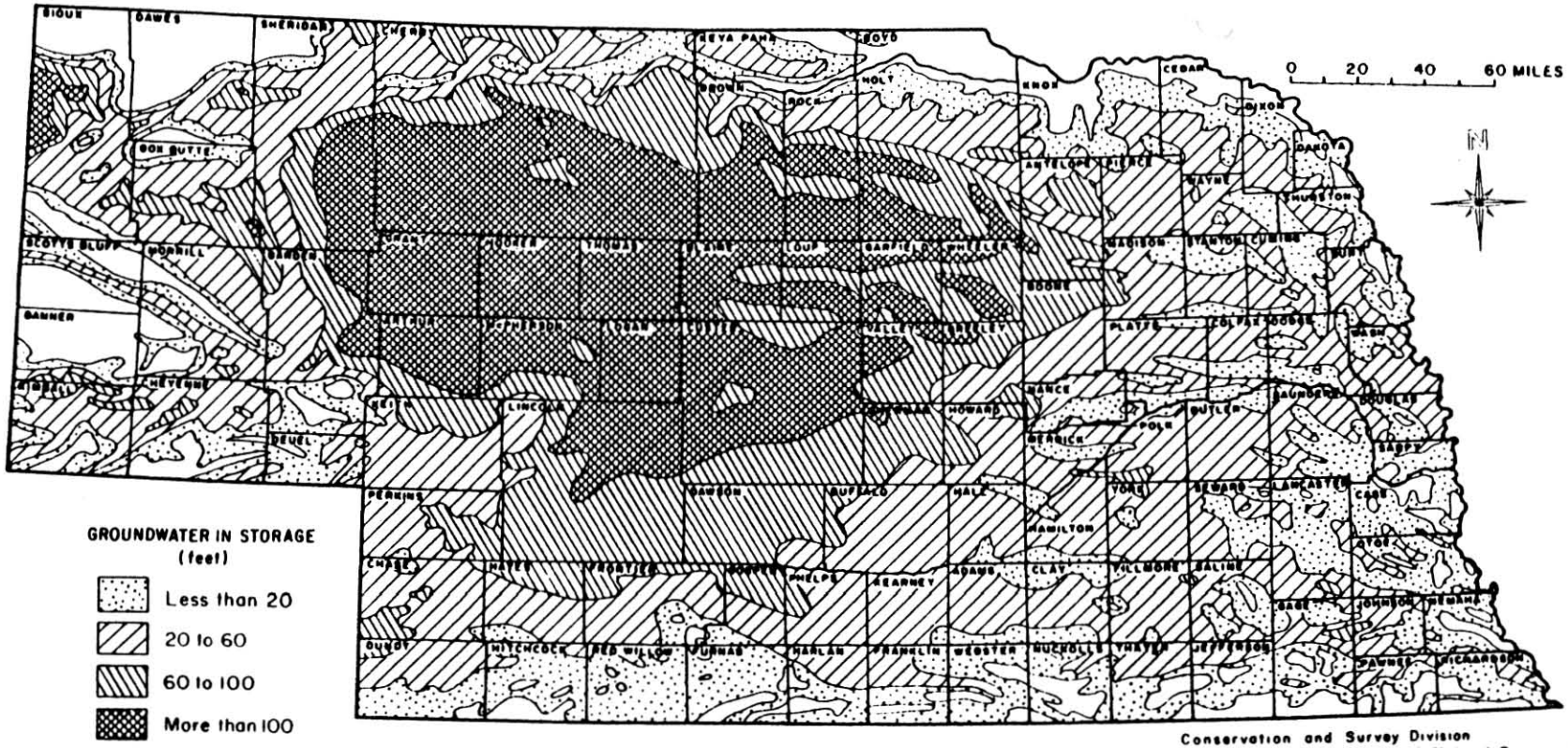


Figure 8
Groundwater in Storage in the Principal Aquifer



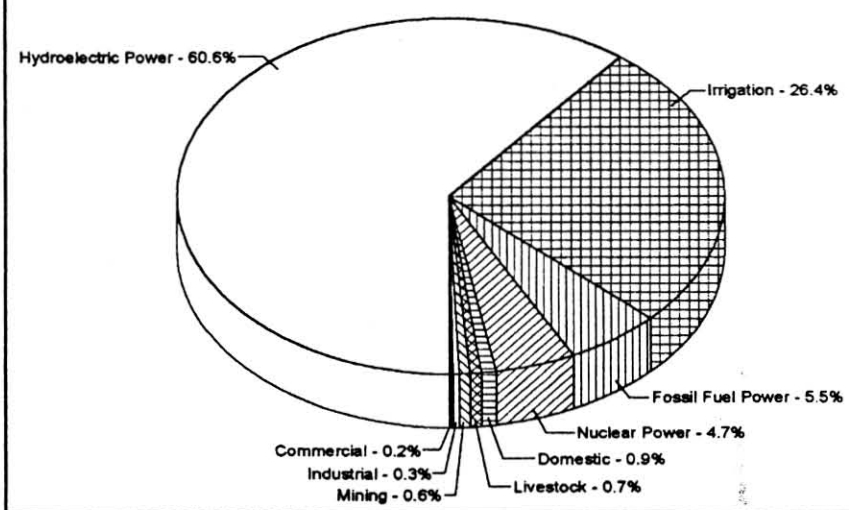
Conservation and Survey Division
Institute of Agriculture and Natural Resources
The University of Nebraska – Lincoln
1981

Chapter Two

ESTIMATED WATER USE IN NEBRASKA, 1990

The estimated volume of water used in Nebraska during 1990 was about 24,018,000 acre-feet. The average use rate was 21,246.7 million gallons per day (Mgal/d), a per capita use rate of 13,575 gal/d for the population of 1,578,385 (U.S. Department of Commerce, 1991a). Estimated total water use by category for Nebraska during 1990 is shown in figure 9.

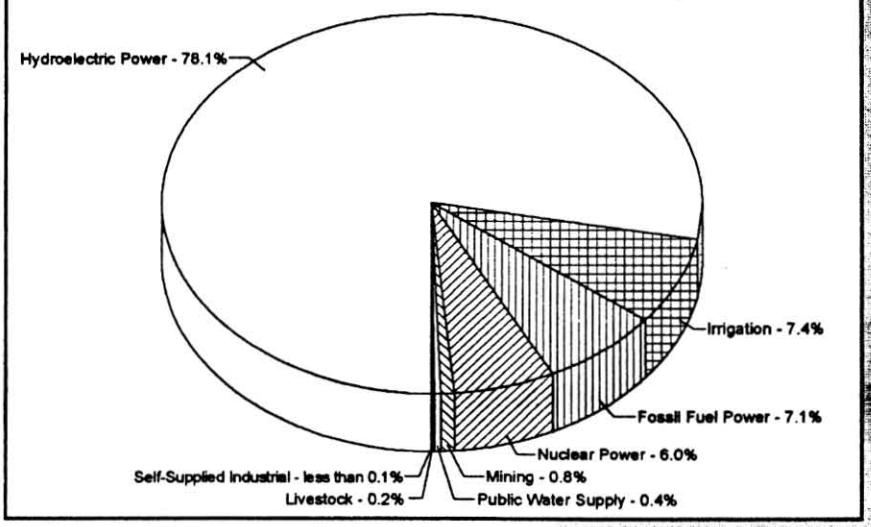
Figure 9
Estimated Total Water Use in Nebraska, 1990



Estimated use of fresh surface-water of 16,577.1 Mgal/d accounted for 77.4 percent of the total water used. No saline surface-water was used in Nebraska in 1990. Use of surface-water for hydroelectric power generation was 12,947.1 Mgal/d, 78.1 percent of all surface-water use. Electric power generation of all types used 15,123.9 Mgal/d of surface-water, 91.2 percent of the total surface-water use. Irrigation was the second largest use of surface-water, withdrawing 1,224.7 Mgal/d, which was only about 7.4 percent of the total. Estimated surface-water use by category is shown in figure 10.

Estimated ground-water use of 4,849.6 Mgal/d accounted for the remaining 22.6 percent of total water use in Nebraska during 1990. Only 4.7 Mgal/d of the ground-water used was saline water. Estimated irrigation use of 4,408.2 Mgal/d was 90.9 percent of the total ground-water used in 1990. The second largest use of ground-water, public water supplies, was 235.4 Mgal/d, which was only about five percent of irrigation use. In contrast with surface-water, ground-water use for electric power generation was only 7.9 Mgal/d, 0.1 percent of all ground-water use. Estimated ground-water use by category is shown in figure 11.

Figure 10
Estimated Surface-Water Use in Nebraska, 1990

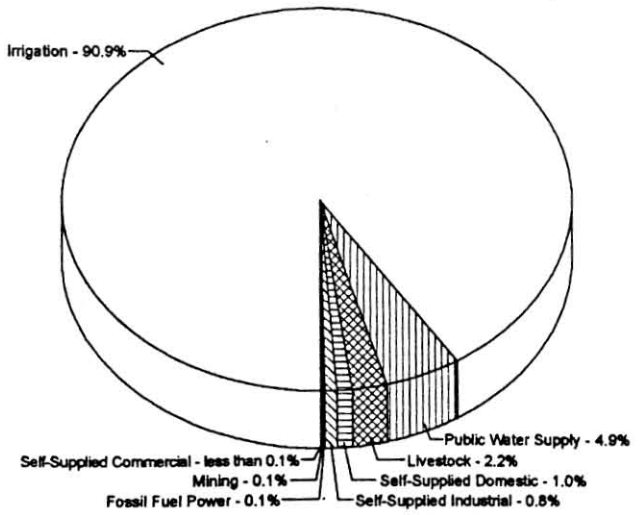


Excluding power production, estimated total water use in Nebraska in 1990 was 6,294.9 Mgal/d, or 7,056,300 acre-feet. Ground-water accounted for 76.9 percent (4,841.7 Mgal/d) of this total, and surface-water accounted for 23.1 percent.

PUBLIC WATER SUPPLY

The Nebraska Department of Health defines public water systems as provided in the federal Safe Drinking Water Act of 1974. Public water systems include municipal utilities, rural water districts, and privately owned systems, such as mobile-home parks and homeowners associations. Only withdrawals by municipal utilities and rural water districts were included in this category in 1990. Public water systems provided water for domestic, commercial, industrial, and public water uses, and thermoelectric power generation. Water withdrawn by these systems either was delivered to users or lost in transmission.

Figure 11
Estimated Ground-Water Use in Nebraska, 1990



Estimated water use by public water systems, 301.04 Mgal/d, was 1.4 percent of total water use in Nebraska during 1990. Ground-water provided 78.2 percent (235.38 Mgal/d), and surface-water provided the remaining 21.8 percent of public-supplied water use. Domestic water use of 138.22 Mgal/d was 45.9 percent of the total use by public water systems. The remaining 54.1 percent (162.82 Mgal/d) was accounted for by commercial, industrial, thermoelectric, and public water uses, and transmission losses.

Ranges of public-supplied water use are shown for counties and subregions in figures 12 and 13 respectively. Withdrawals of surface-water and ground-water for public-supplied water use are given for counties in table 1, and for hydrologic units and subregions in table 2.

Withdrawals and deliveries by public water systems in Nebraska in 1990 were estimated from data provided by the utilities serving the two largest metropolitan areas and a survey of municipalities and rural water districts. Estimates of water use for public water systems that did not respond to the survey were based on the survey data and 1990 population data.

Domestic water use in 1990 was estimated to be an average of 117 gal/day per capita.

DOMESTIC WATER USE

Domestic use includes watering lawns and gardens as well as general household uses. Domestic water supplies were provided by deliveries from public water systems or by self-supplied withdrawals. Domestic water use in 1990 was estimated to be 185.36 Mgal/d, an average of 117 gal/d per capita.

Figure 12

Public-Supplied Water ~~Use~~ in Nebraska Counties, 1990

Withdrawal

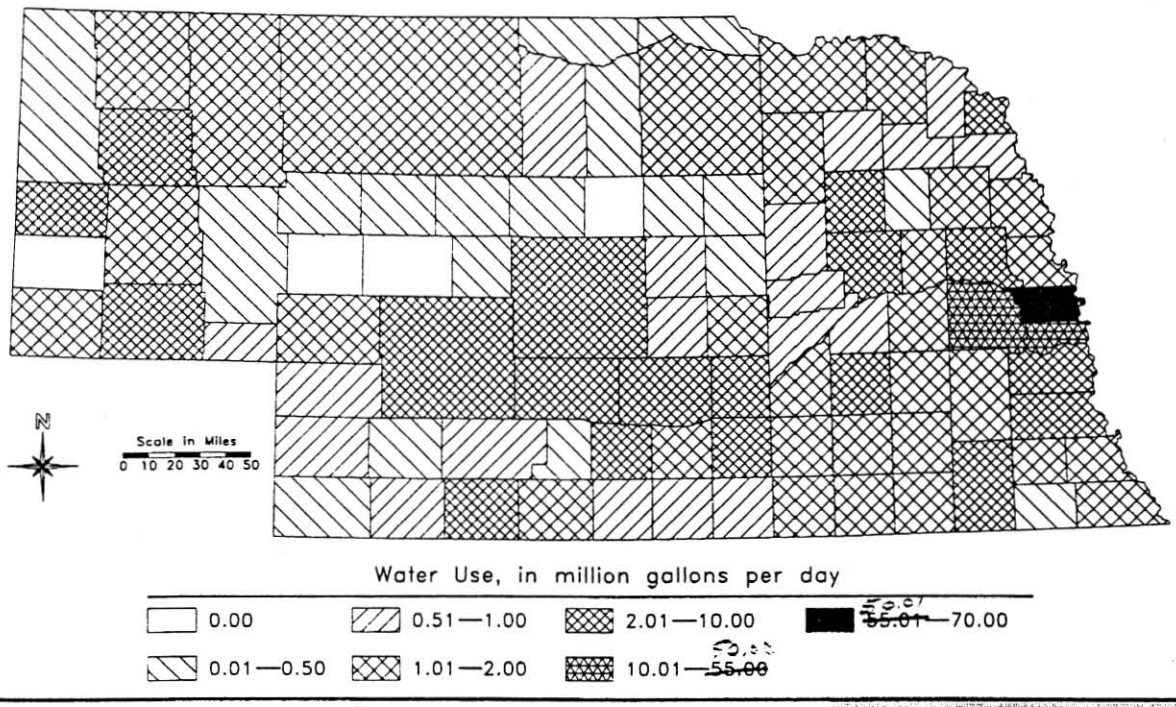
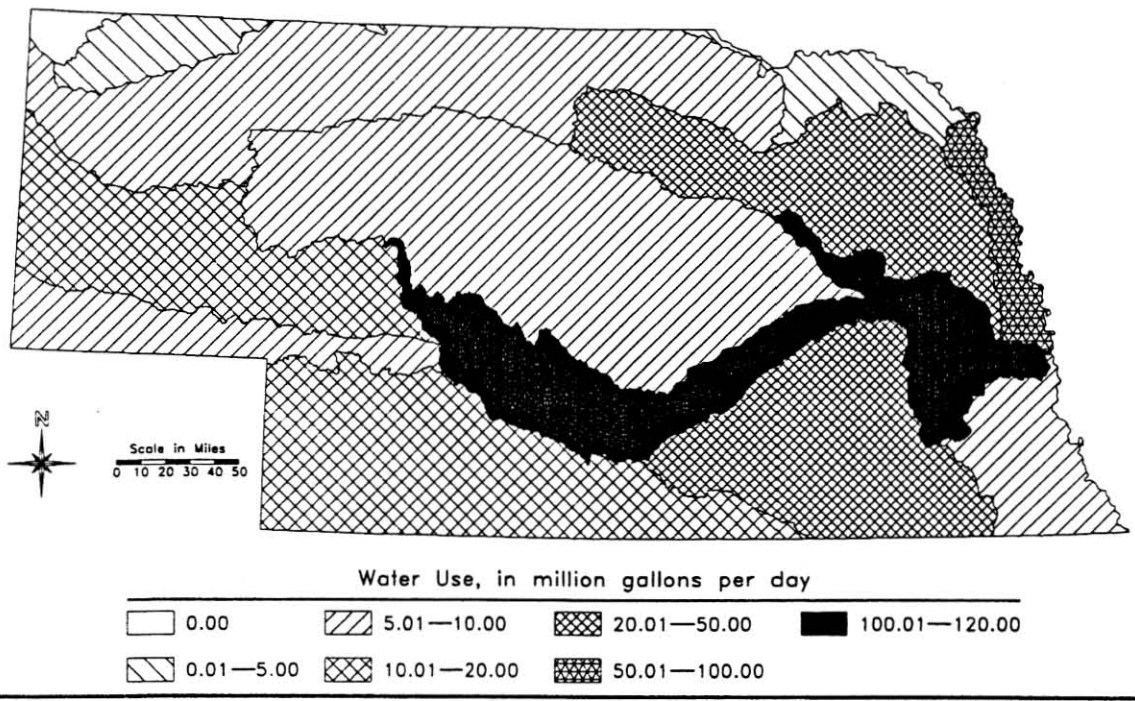


Figure 13

Public-Supplied Water ~~Use~~ in Nebraska Subregions, 1990

Withdrawal



Estimates of total domestic water use in counties and in hydrologic units and subregions during 1990 are given in tables 3 and 4, respectively. County domestic use ranged from 0.09 Mgal/d in Arthur County to 41.81 Mgal/d in Douglas County.

The average public-supplied domestic water use was 115 gal/day per capita.

Public-Supplied Domestic Water Use

Public-supplied domestic water use ranged from none in Arthur, Banner, Loup, and McPherson counties, which had no municipal systems or rural water districts, to 34.91 Mgal/d in Douglas County. The range in use by subregions was from slightly less than 0.01 Mgal/d in subregion 1012, in the northwestern corner of the state, to 41.42 Mgal/d in subregion 1023, which includes the Omaha metropolitan area. Estimates of public-supplied domestic water use in counties and in hydrologic units and subregions are given in tables 5 and 6, respectively. Domestic public-supplied water use in counties are shown in figure 14 and subregions in figure 15.

The average daily public-supplied domestic water use was 115 gal/d per capita. The average daily per capita public-supplied domestic water use in counties is shown in figure 16. The trend toward increased per capita use from east to west across the state, as annual precipitation decreases, is apparent in figure 16. The population served by public water supplied systems in counties and subregions are shown in figures 17 and 18 respectively.

Public-supplied water use for domestic purposes was based on average use rates determined from actual delivery data obtained from 14 municipal water systems. Estimates were made from

Figure 14

Public-Supplied Domestic Water Use in Nebraska Counties, 1990

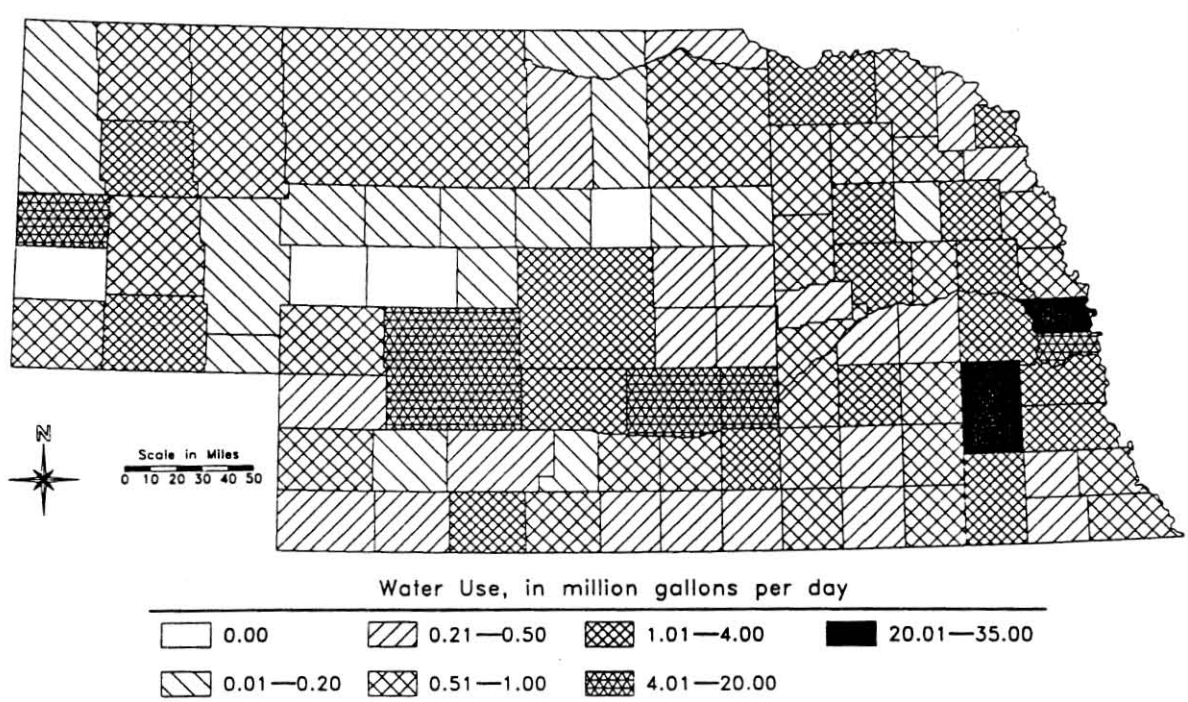


Figure 15

Public-Supplied Domestic Water Use in Nebraska Subregions, 1990

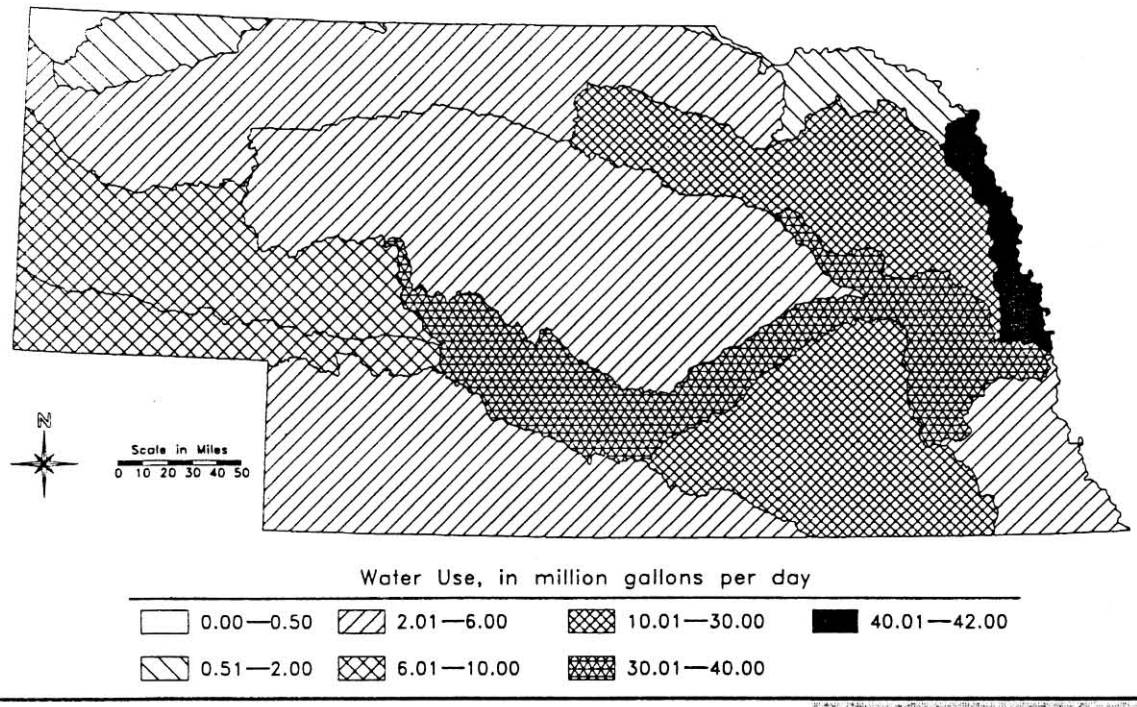


Figure 16

Average Daily Per Capita Public-Supplied Domestic Water Use in Nebraska Counties, 1990

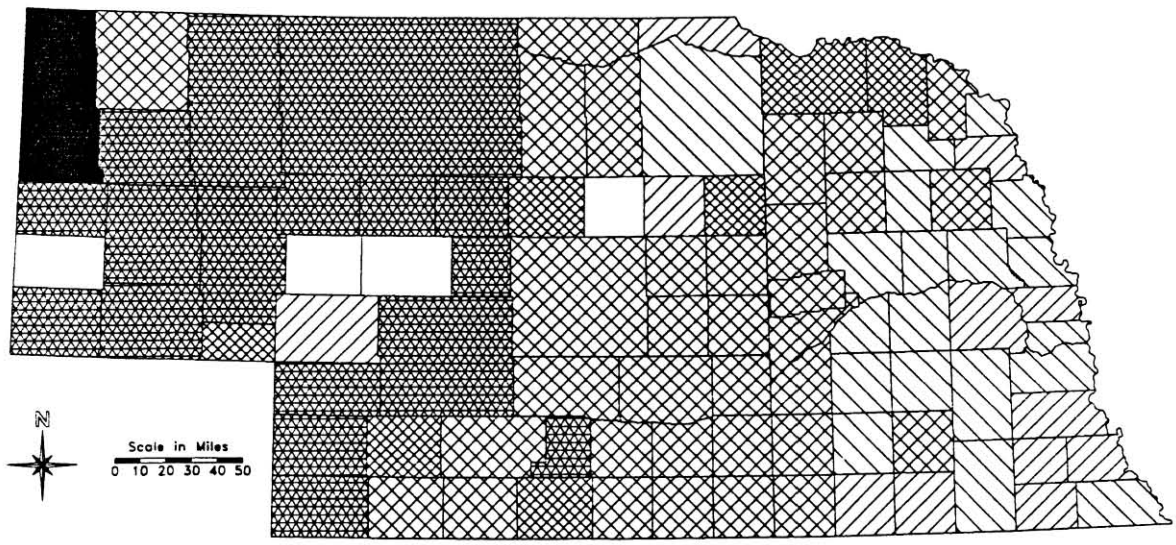


Figure 17

Population Served by Public Water Supply Systems in Nebraska Counties, 1990

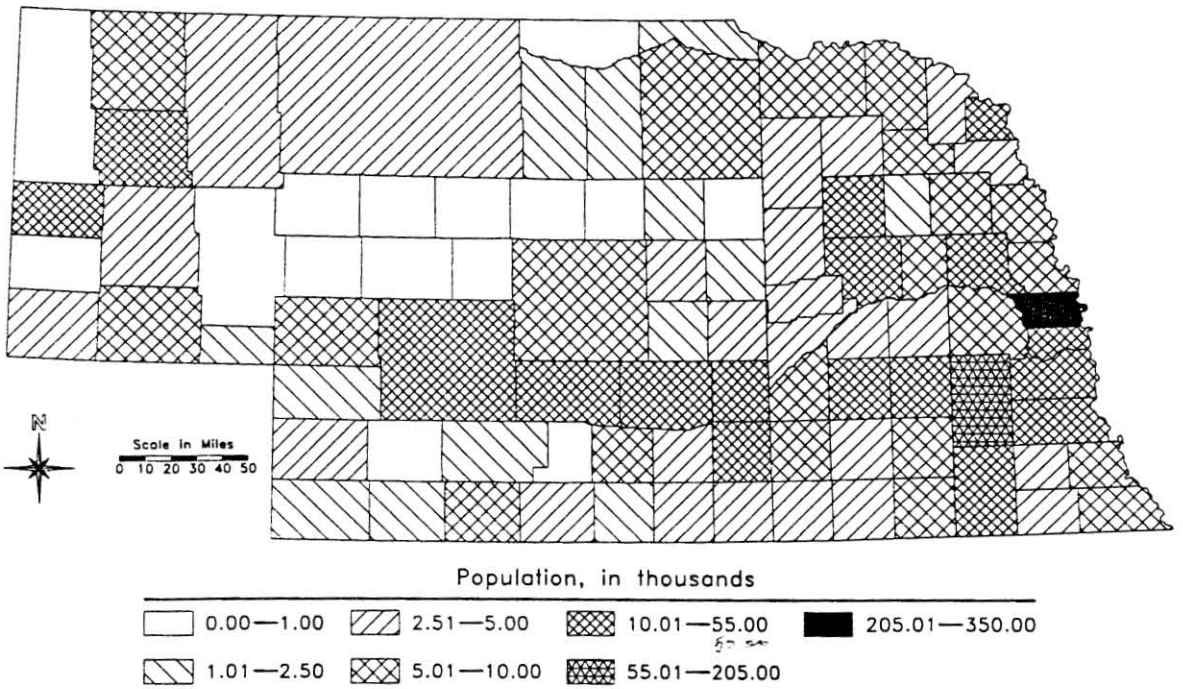
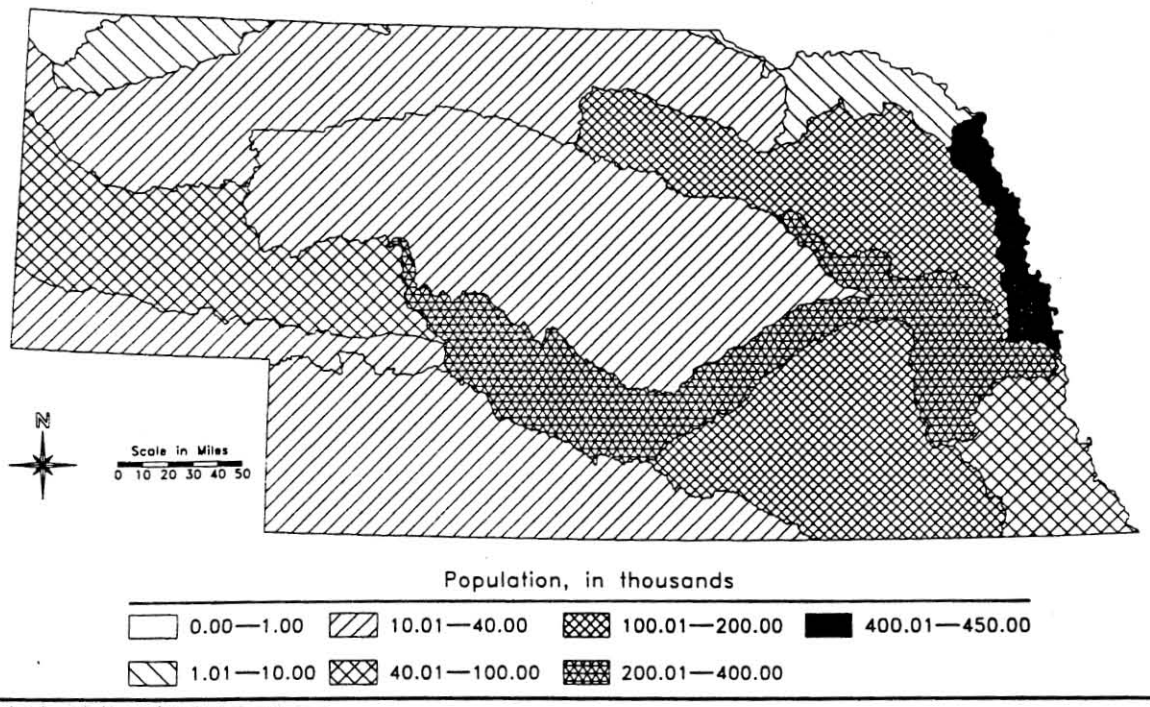


Figure 18

Population Served by Public Water Supply Systems in Nebraska Subregions, 1990



reported population served or 1990 census data (U.S. Department of Commerce, 1991a).

Self-Supplied Domestic Water Use

Self-supplied domestic water use by county ranged from 0.01 Mgal/d in Pawnee County, which is mostly served by municipalities and rural water systems, to 6.90 Mgal/d in Douglas County. Self-supplied domestic use for Nebraska subregions ranged from 0.06 Mgal/d in subregion 1012, in the White River-Hat Creek Basin, to 10.84 Mgal/d in subregion 1020 along the Platte River. Estimates of self-supplied domestic water use in counties and in hydrologic units and subregions are given in tables 7 and 8, respectively. Self-supplied domestic water use in Nebraska counties are shown in figure 19 and subregions are shown in figure 20.

Estimated self-supplied domestic water use in Nebraska during 1990 is based on the domestic water use rates from the survey of municipal water systems and the population in each county not supplied by public water systems. All self-supplied domestic water use was assumed to be ground-water.

COMMERCIAL WATER USE

The commercial water use category includes water withdrawn or delivered for use by facilities such as restaurants, lodging places, office buildings, wholesale and retail businesses, and governmental facilities. Water use in Nebraska for this category was estimated to be 50.45 Mgal/d during 1990. It was estimated that only a small percentage of commercial use was self-supplied, all from ground-water. Deliveries from public supplies were estimated to be 99.5 percent of this use, as in 1985 (Steele, 1988). Estimated commercial water use is given for counties in table 9 and for hydrologic units and subregions in table 10. Ranges of commercial water use in counties and subregions are shown in figures 21 and 22 respectively.

Estimates of public-supplied commercial water use were based on the average rate of use calculated from the number of commercial connections and deliveries reported by municipalities, and the number of commercial establishments in each county (U.S. Department of Commerce, 1990). Self-supplied commercial water use was calculated as 0.5 percent of the total commercial use in the county based on earlier inventories and estimates (Steele, 1988).

INDUSTRIAL WATER USE

Industrial water use includes deliveries from public water supplies and withdrawals by industrial facilities used in manufacturing processes. Industrial water use in Nebraska during 1990 was estimated to be 73.95 Mgal/d. Public-supplied deliveries of 33.03 Mgal/d accounted for 44.6 percent of the water used by industries, and self-supplied withdrawals of 40.92 Mgal/d accounted for 55.4 percent of industrial use. Ranges of industrial water use in counties

Figure 19

Self-Supplied Domestic Water Use in Nebraska Counties, 1990

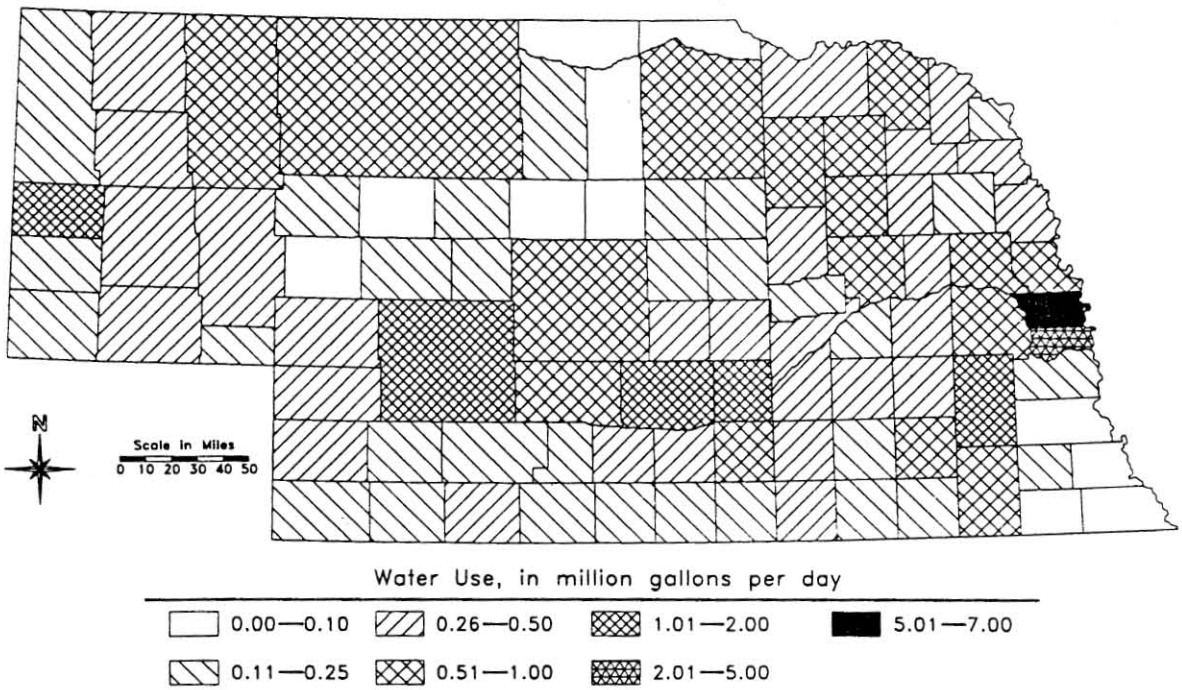


Figure 20

Self-Supplied Domestic Water Use in Nebraska Subregions, 1990

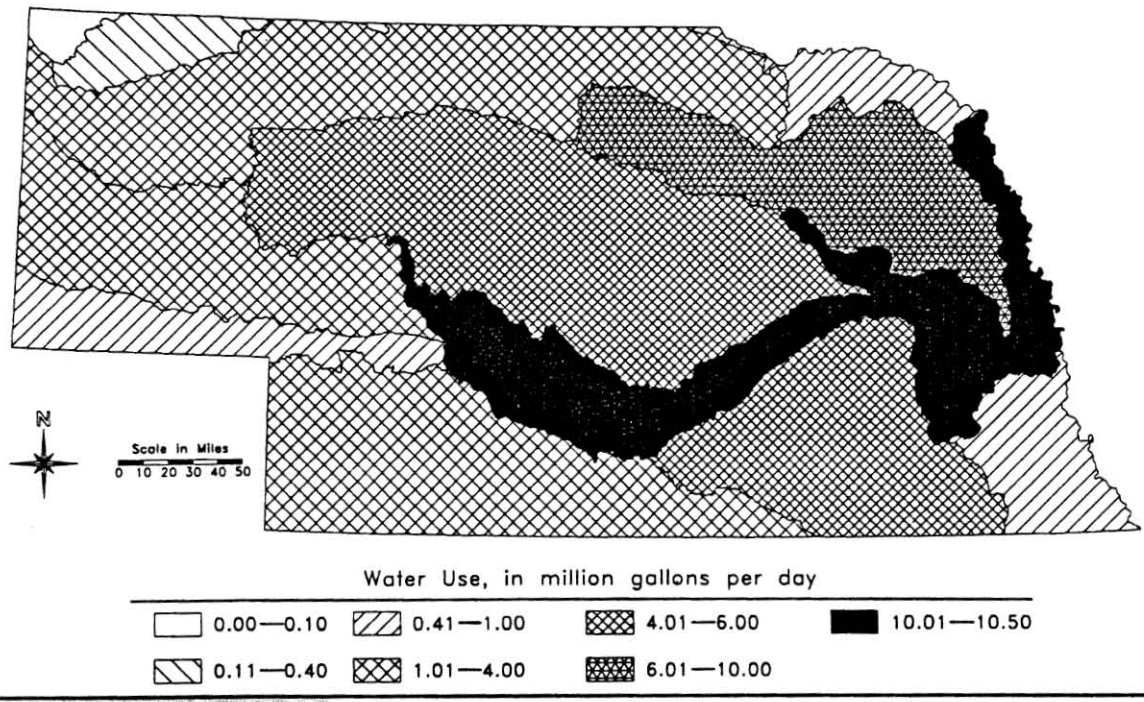


Figure 21

Commercial Water Use in Nebraska Counties, 1990

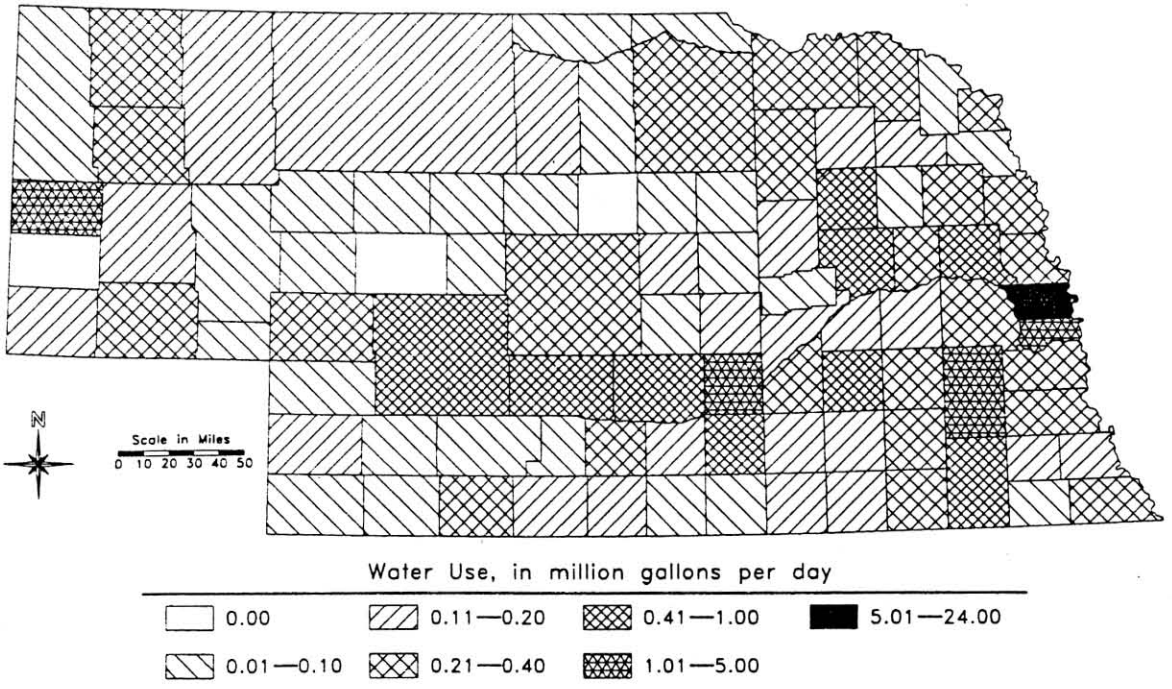
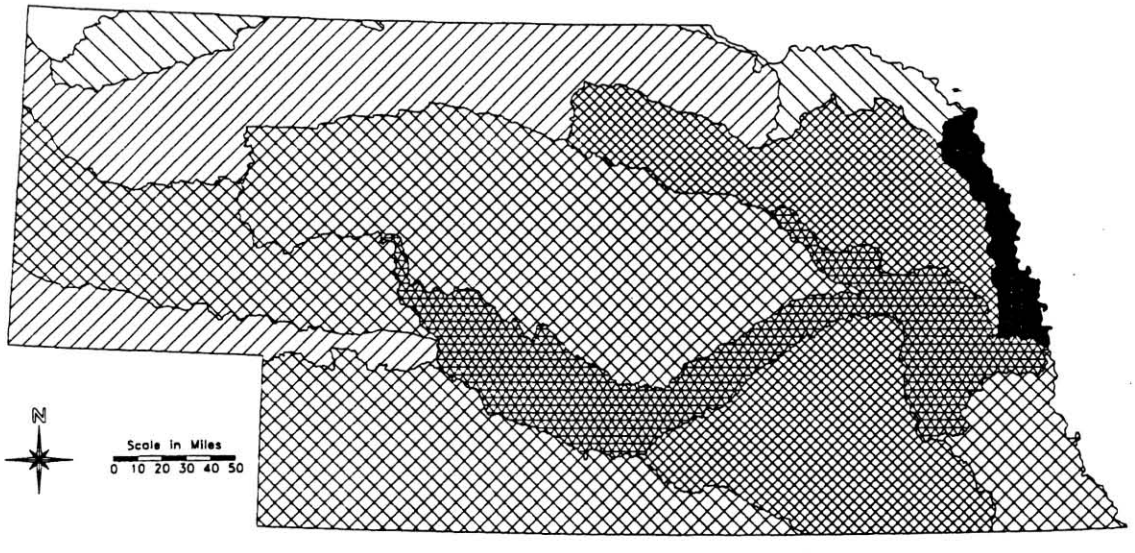


Figure 22

Commercial Water Use in Nebraska Subregions, 1990



and subregions are shown in figures 23 and 24 respectively. Estimated industrial water use is given for counties in table 9 and for hydrologic units and subregions in table 10.

Estimates of public-supplied industrial water use were based on municipal delivery data and data reported in an NRC survey of industries identified in the directory of manufacturers (Nebraska Department of Economic Development, 1991). Water use by industries that did not respond to the survey was estimated with an average use rate per employee for industries in each standard industrial classification (SIC) code, which was derived from reported data and national use rates. Self-supplied industrial water use was estimated with survey data, average use rates, and an updated inventory of facilities based on the data of Lawton and others (1983).

MINING WATER USE

In Nebraska, water use for mining includes water withdrawn for the extraction of petroleum, well operations for dewatering, normal operations in quarrying, mining clay, sand, and gravel, and other preparations customarily done at the mine site or as part of a mining activity. It does not include the processing of raw materials, such as refining petroleum.

The largest users of water in mining are sand-and-gravel operations. The estimated water use for mining operations during 1990 was 135.64 Mgal/d. Of that amount, 129.75 Mgal/d was supplied by surface-water for gravel washing and a few limestone quarrying operations, and 5.89 Mgal/d was supplied by ground-water for secondary recovery of oil. Of the water used for secondary recovery, 4.72 Mgal/d were saline ground-water.

Water use for mining operations in Nebraska counties and subregions during 1990 are shown, by range of quantity, in figures 25 and 26 respectively. Estimates of water use for mining operations in counties and in hydrologic units and subregions are given in tables 9 and 10, respectively.

A list of the mining operations in Nebraska was obtained from the U.S. Department of Labor, Mine Safety and Health Administration (written commun., 1990), and an inventory of oil wells was obtained from the Nebraska Oil and Gas Conservation Commission (written commun., 1991). Water use information also was collected through oral communication with mine owners and operators.

The amount of land irrigated in 1990 was estimated to be 6,967,100 acres.

IRRIGATION WATER USE

Irrigation is the controlled application of water to supply moisture requirements for crops not satisfied by precipitation. In Nebraska the amount of land irrigated and the amount of water applied varies each year, depending on location and weather.

The amount of land irrigated in 1990 was estimated to be 6,967,100 acres, with an average water application rate of about 11 in/acre for the irrigation season. The number of irrigated acres by county during 1990 ranged from 1,100 acres in Grant County to 248,600 acres in Hamilton County. The number of irrigated acres

Figure 23

Industrial Water Use in Nebraska Counties, 1990

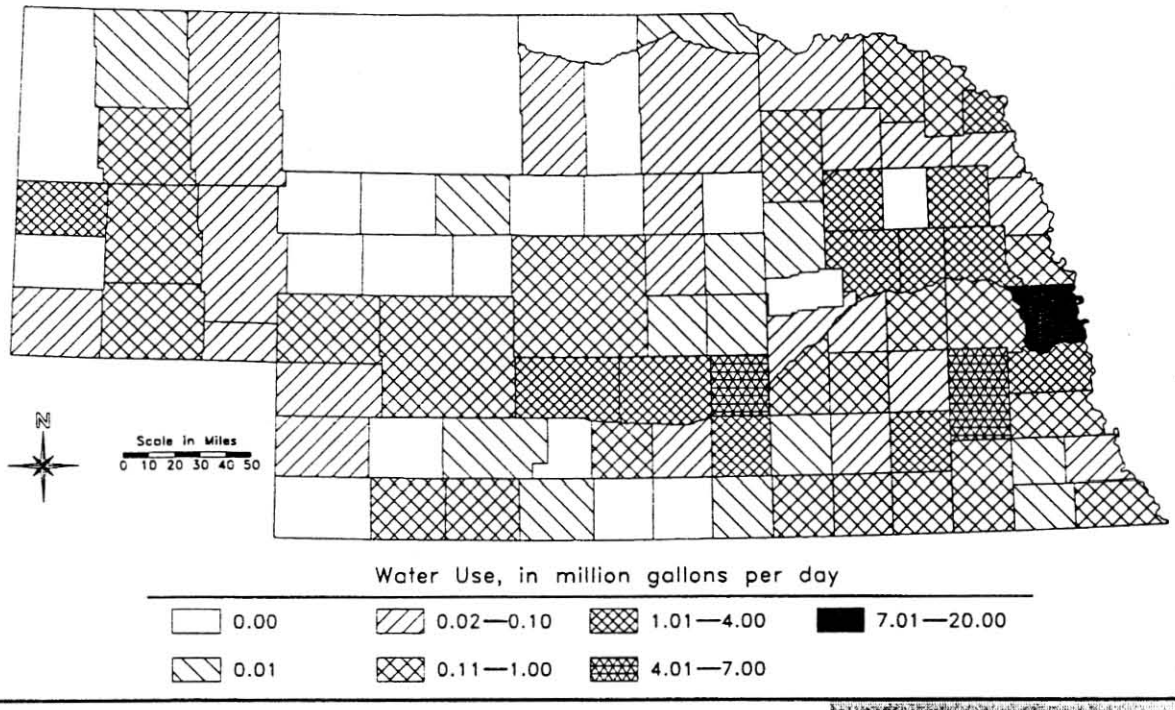


Figure 24

Industrial Water Use in Nebraska Subregions, 1990

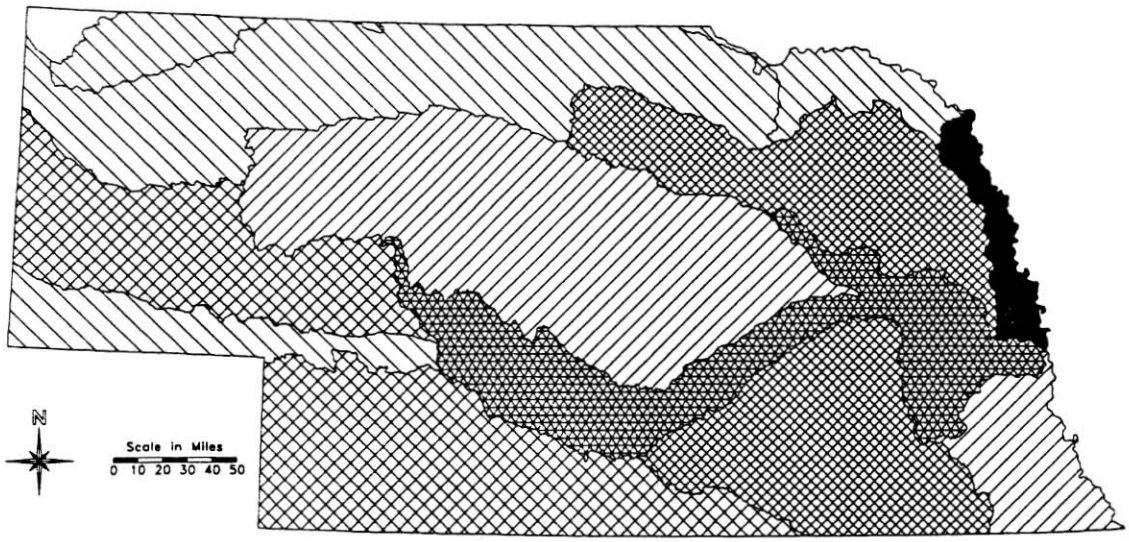


Figure 25

Mining Water Use in Nebraska Counties, 1990

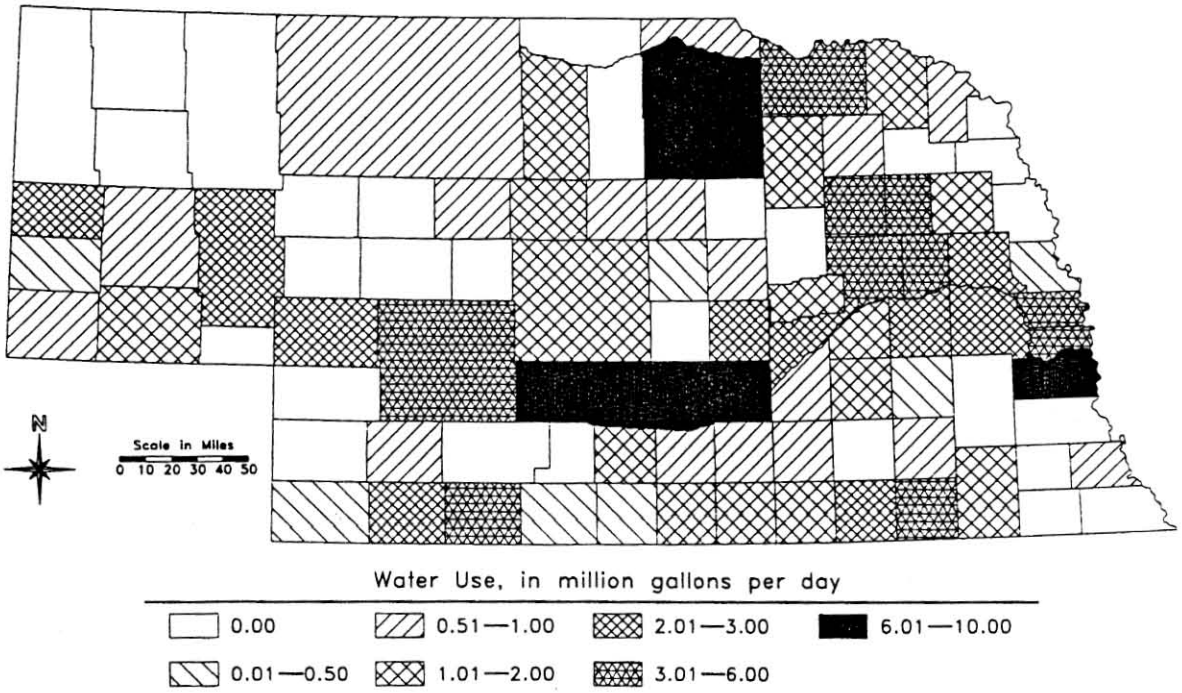
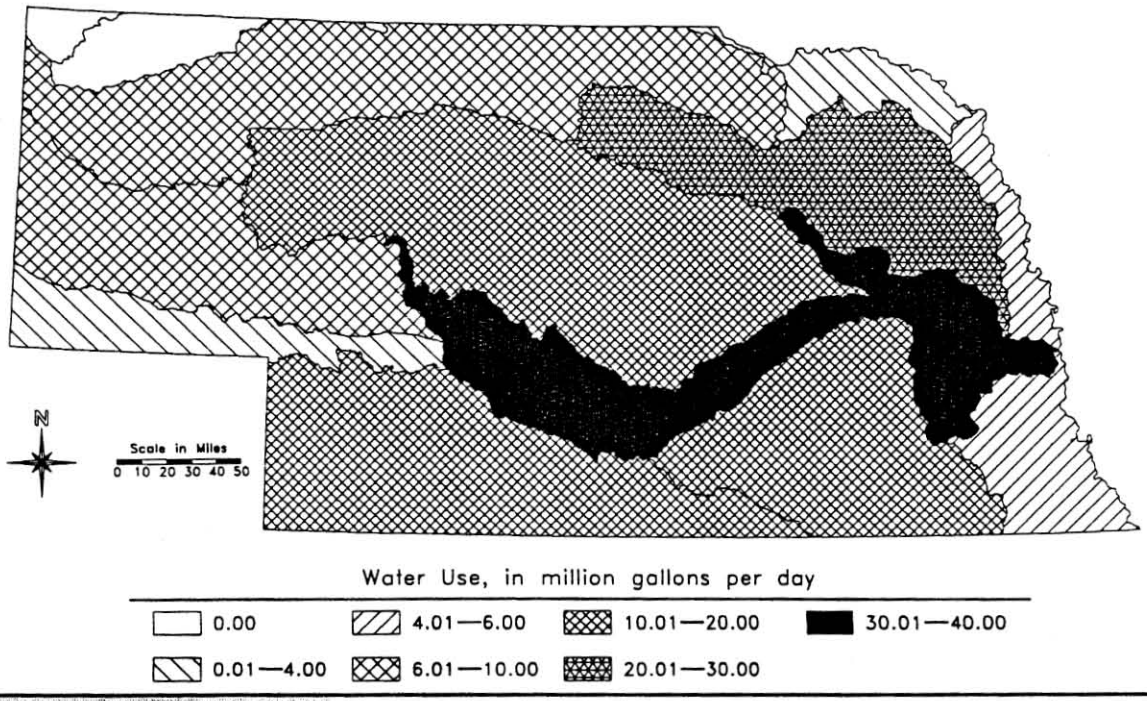


Figure 26

Mining Water Use in Nebraska Subregions, 1990



by hydrologic unit ranged from none in hydrologic unit 10120106 in the White River-Hat Creek Basin to 666,800 acres in hydrologic unit 10200101 in the Middle Platte River Basin. Estimated acres irrigated in counties and in hydrologic units and subregions are listed in tables 11 and 12, respectively. Irrigated acres in counties are shown in figure 27 and subregions in figure 28.

Irrigated crops included corn for grain (corn), corn harvested for silage (silage), sorghum harvested for grain (sorghum), soybeans, wheat, alfalfa hay (alfalfa), other hay and pasture, sugar beets, and dry, edible beans. The number of acres irrigated was estimated from the number of irrigated acres harvested and the number of acres of certain crops that were planted. The Nebraska Agricultural Statistics Service reported that corn was the principal irrigated grain crop grown and harvested in Nebraska during 1990, with an estimated 5,050,000 acres (Nebraska Department of Agriculture, 1991). This was 72.5 percent of the total irrigated acres in the state. It is more than seven times greater than soybeans, which is the second largest irrigated crop, with 685,000 acres.

Corn was the principal irrigated grain crop grown and harvested in Nebraska in 1990 with an estimated 5,050,000 acres.

Water used for irrigation in Nebraska during 1990 was estimated to be 5,632.8 Mgal/d. It ranged from 0.7 Mgal/d (annual volume of 800 acre-ft) in Richardson County to 356.4 Mgal/d (annual volume of 399,200 acre-ft) in Scotts Bluff County. Water used for irrigation by hydrologic unit ranged from none in hydrologic unit 10120106 to 588.5 Mgal/d (annual volume of 659,200 acre-ft) in hydrologic unit 10180009. Estimated total water use for irrigation in counties is given in table 11 and in hydrologic units and subregions in table 12. Ranges in total water use for irrigation in counties are shown in figure 29 and subregions in figure 30. The estimated number of acres irrigated was about 500,000 less in 1990 than in 1985, so the water-withdrawal values also are smaller.

Surface-water diversions and withdrawals provided 1,224.7 Mgal/d or 21.7 percent of the total irrigation water use. Surface-water use ranged from none in Arthur, Grant, McPherson, and Perkins counties to 318.9 Mgal/d (annual volume of 357,300 acre-feet) in Scotts Bluff County. It ranged from none in hydrologic unit 10120106 to 471.3 Mgal/d (annual volume of 527,900 acre-feet) in hydrologic unit 1018009 in the North Platte River Basin. The number of acres irrigated with surface-water and the amount of water used are given for counties in table 13 and for hydrologic units and subregions in table 14. Surface-water use in counties and subregions are shown in figures 31 and 32 respectively.

Withdrawals from ground-water provided 4,408.2 Mgal/d for irrigation, 78.3 percent of all water used for that purpose. Ground-water use ranged from about 0.3 Mgal/d (annual volume of 300 acre-feet) in Richardson County to 190.9 Mgal/d (annual volume of 213,900 acre-feet) in Chase County. It ranged from none in hydrologic units 10120106, 10120108, and 10140101 to 421.6 Mgal/d (annual volume of 472,300 acre-feet) in hydrologic unit 10200101 in the Middle Platte River Basin. Acres irrigated with ground-water and the amount of water used are given for counties in table 15 and for hydrologic units and subregions in table 16. Ground-water use for irrigation in counties and subregions are shown in figures 33 and 34 respectively.

Figure 27

Irrigated Acres in Nebraska Counties, 1990

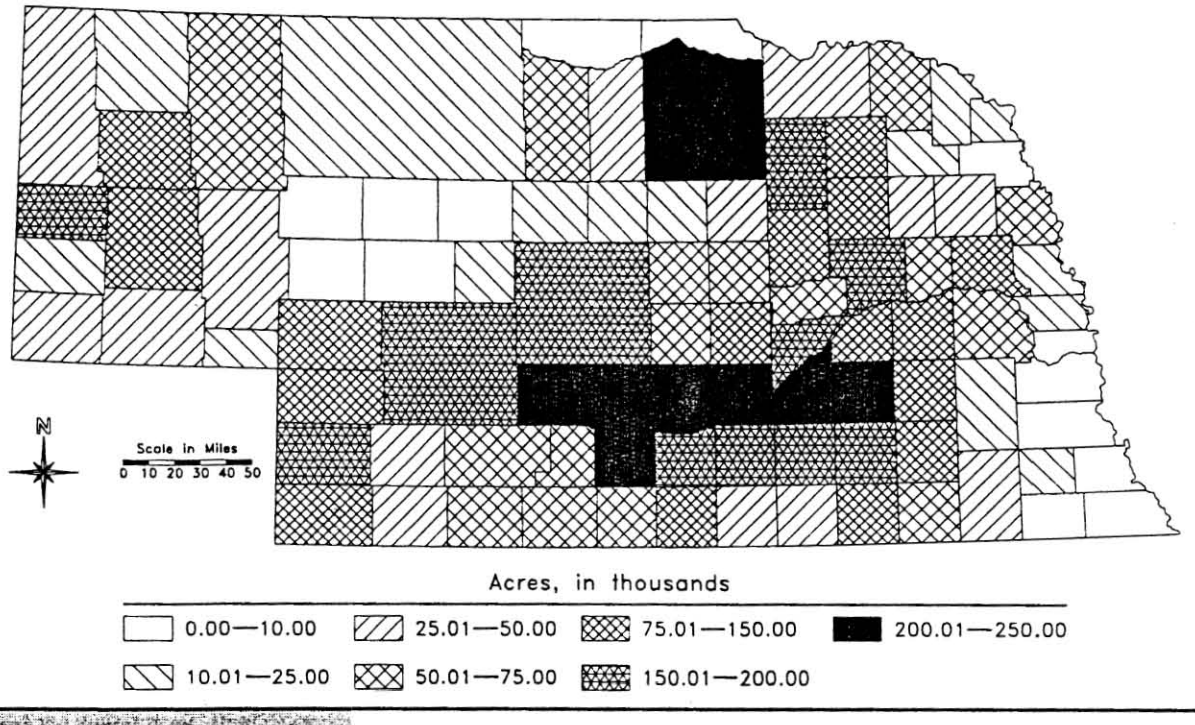


Figure 28

Irrigated Acres in Nebraska Subregions, 1990

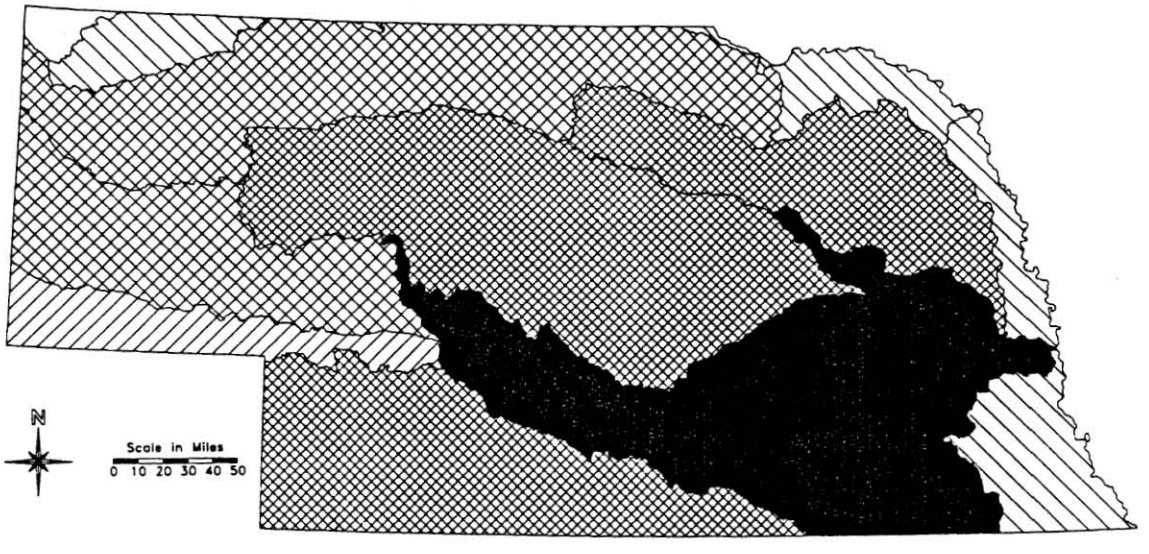


Figure 29

Total Irrigation Water Use in Nebraska Counties, 1990

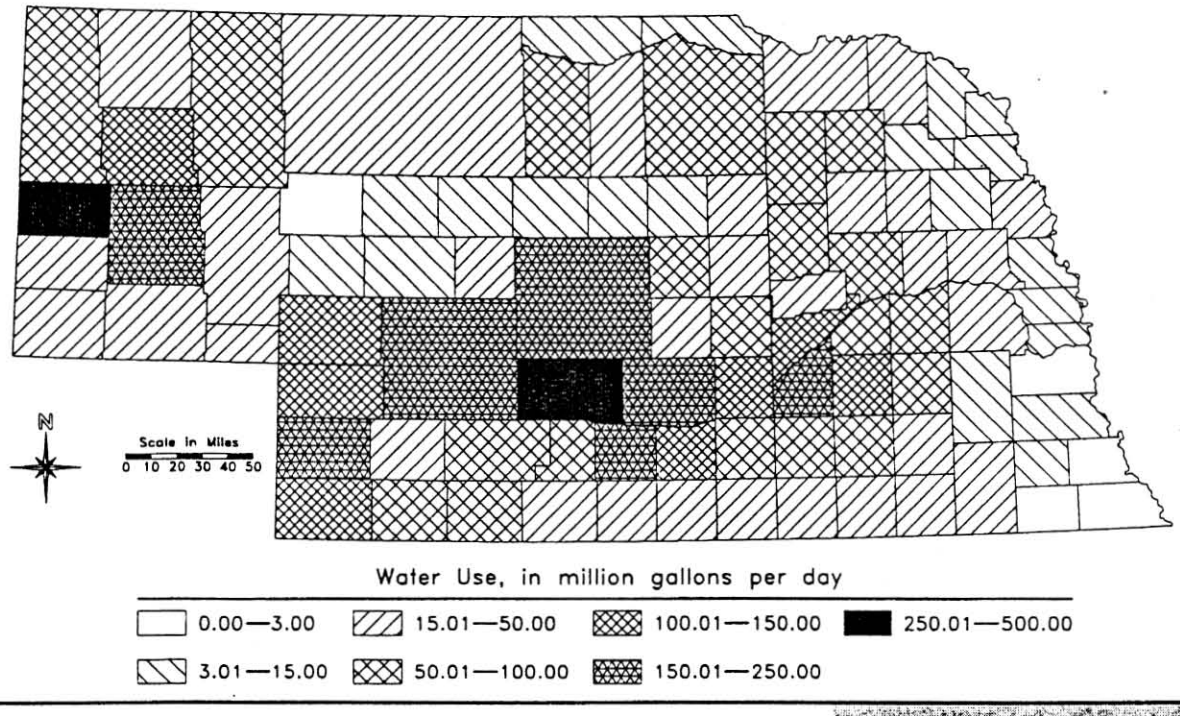


Figure 30

Total Irrigation Water Use in Nebraska Subregions, 1990

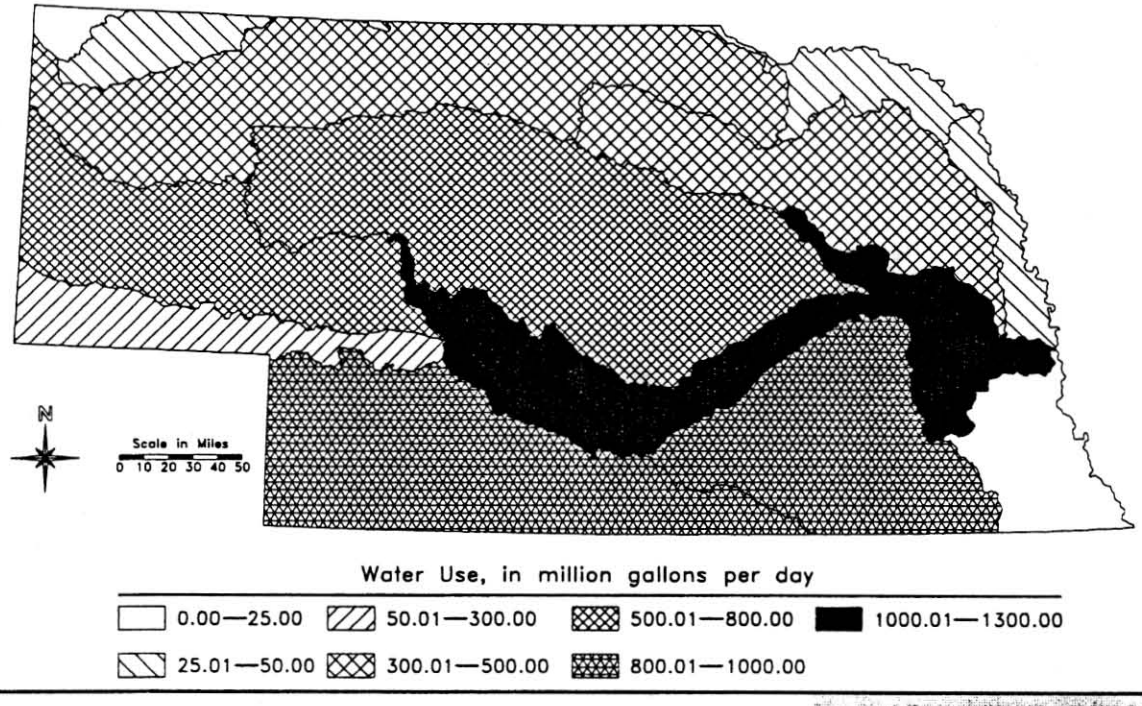


Figure 31

Irrigation Surface-Water Use in Nebraska Counties, 1990

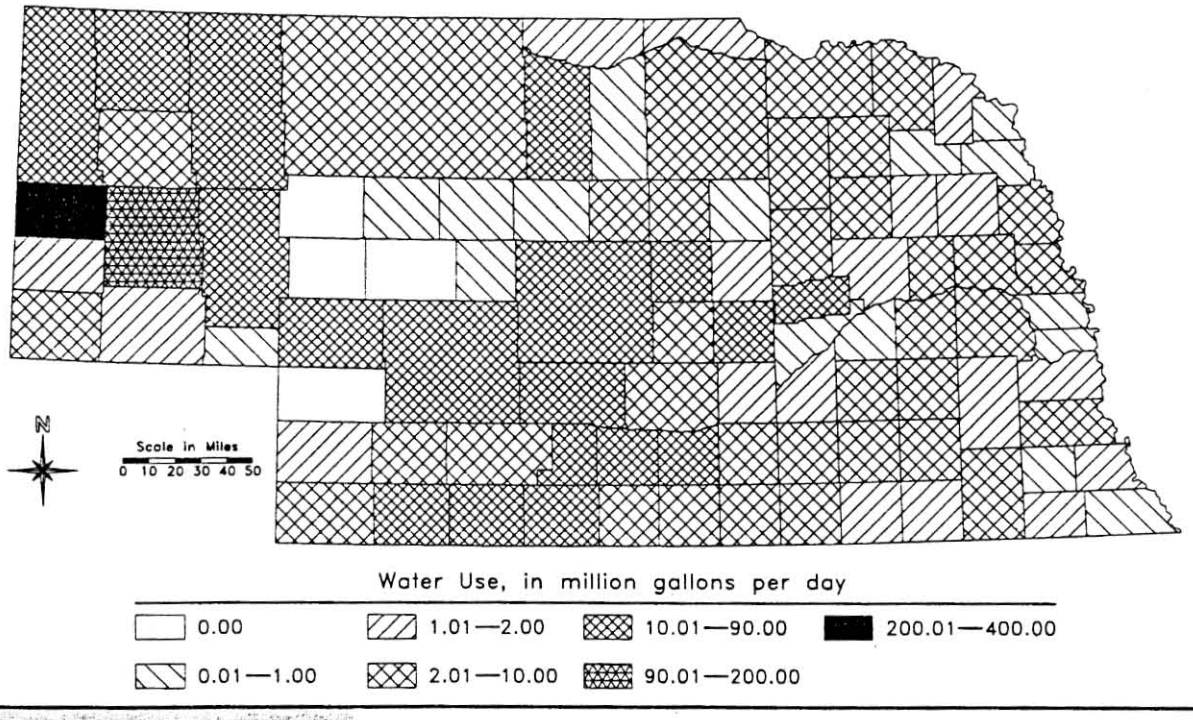


Figure 32

Irrigation Surface-Water Use in Nebraska Subregions, 1990

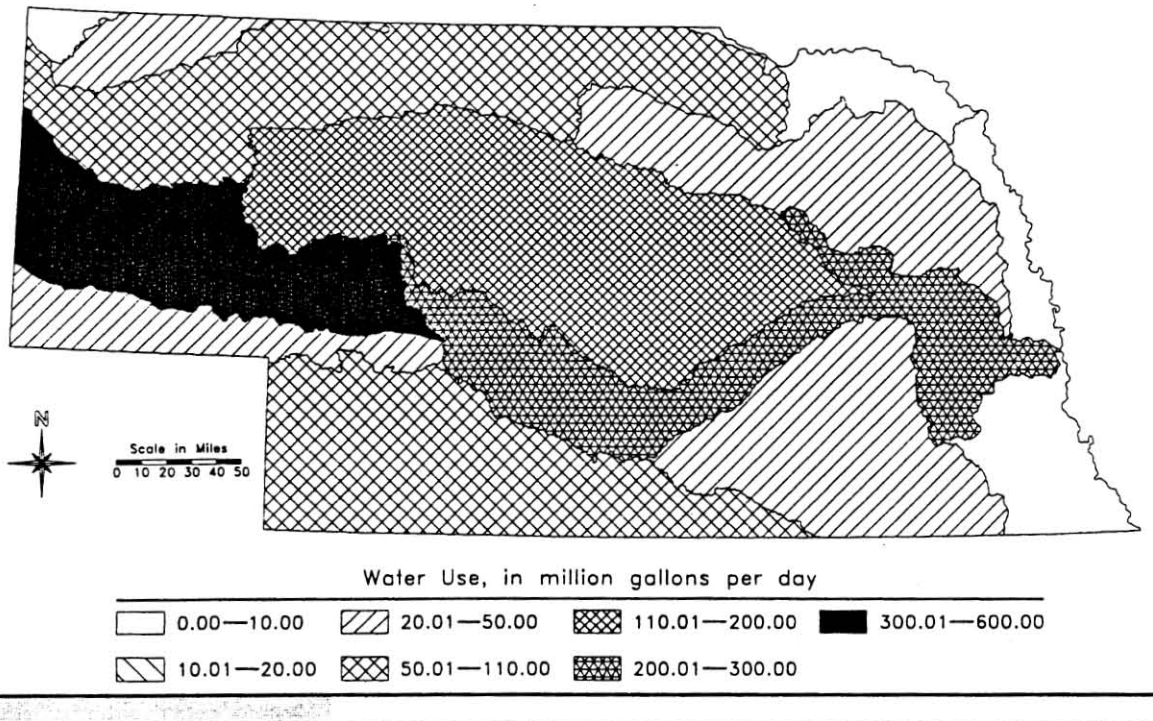


Figure 33

Irrigation Ground-Water Use in Nebraska Counties, 1990

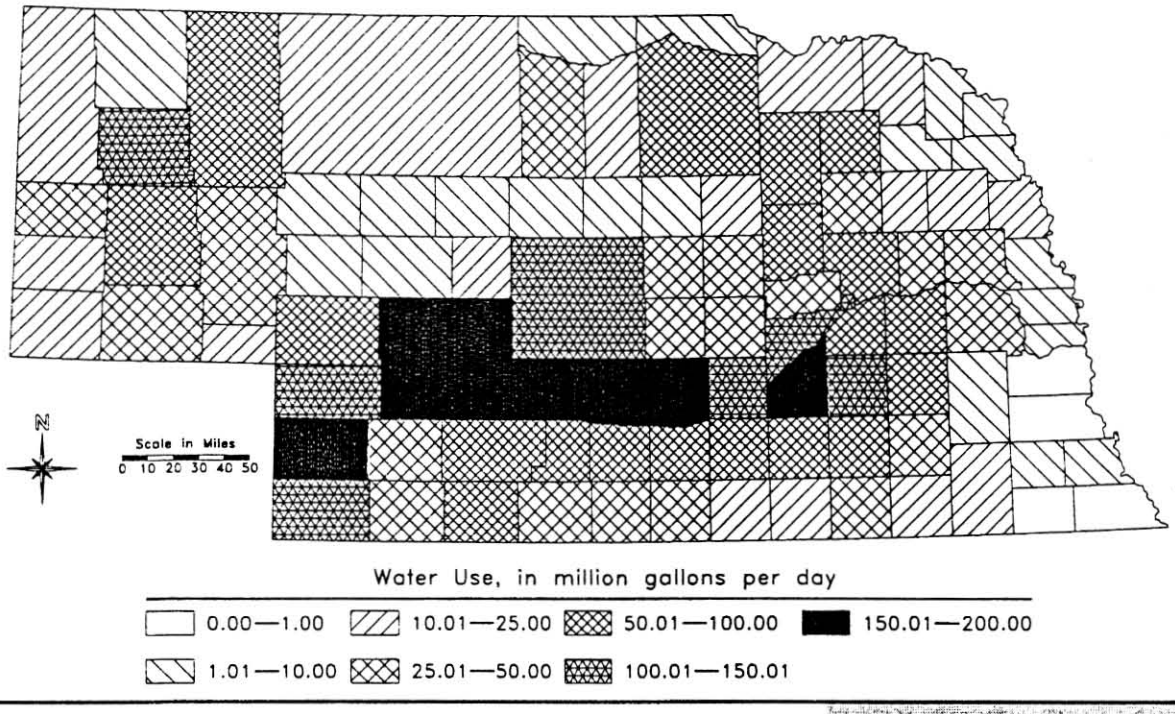
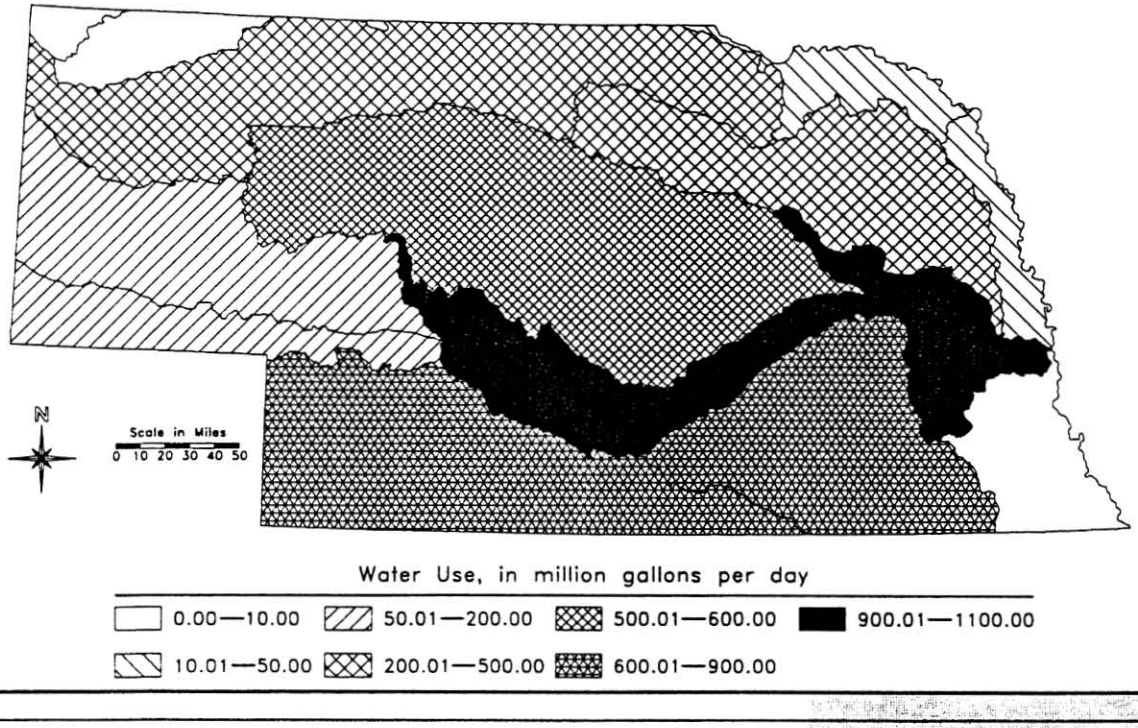


Figure 34

Irrigation Ground-Water Use in Nebraska Subregions, 1990



Total irrigation water use was estimated with data and computer programs from various sources. The number of irrigated acres was obtained from the 1990/91 Nebraska Agricultural Statistics (Nebraska Department of Agriculture, 1991) and the Census of Agriculture (U.S. Department of Commerce, 1989). The consumptive irrigation requirement (CIR) was calculated with a USGS computer program (Dugan and Zelt, in press). The number of acres irrigated with ground-water by gravity systems and center-pivot sprinklers, and the number of acres irrigated with surface-water by flood systems were calculated with values derived from Steele (1988). The consumptive-use coefficients and irrigation efficiency factors were based on previous estimates (E.K. Steele, U.S. Geological Survey, written commun., 1985). The number of acres of surface-water rights and wells in each hydrologic unit was determined by creating a geographic information system (GIS) coverage of each with Department of Water Resources data from NRC files and the Natural Resources Data Bank.

Estimated irrigation water use was based on the calculated CIR, the volume of water theoretically required to meet the evapotranspiration demand of a plant and to maintain soil moisture at an arbitrary level, taking into account infiltrated precipitation and change in soil moisture. Data needed in the computer program included temperature, precipitation, and the amount of sunlight.

To compute the CIR, all crop types were combined into four water-use types: (1) high water-use crops, which included corn, silage, and sugar beets, (2) low water-use crops, which included dry beans, sorghum, and soybeans, (3) pasture and hay, which included alfalfa, and (4) small grains, which included wheat. The CIR was calculated for 18 sites across Nebraska, and then lines of equal CIR were drawn in 1-in. increments for each of the four crop categories. Next, a single value was selected for each county for each crop type.

Consumptive use was assumed to be equal to the CIR. Total consumptive use for each county was determined by multiplying the number of acres in each crop type by the CIR and summing the consumptive use for all of the crop types.

Withdrawals were calculated using the percentage of acres in each irrigation type and the water use efficiency of each type. The volume of water withdrawn minus the volume of water consumed was assumed to be the conveyance loss.

The estimates of the number of acres irrigated by flood and sprinkler methods were based on 1985 data on irrigation types (Steele, 1988). The 1985 data for acres irrigated by gravity systems, center-pivot sprinklers, and flood irrigation were used to develop percentages of areas by county. These percentages were updated with 1990 data on surface-water rights and registered irrigation wells. The updated irrigation-type percentage then was multiplied by total irrigated acres per county to determine the number of acres irrigated by each type of irrigation system.

Withdrawals from surface and ground-water were determined by multiplying the volume of water consumed by the irrigation type percentage and dividing by the efficiency of each type. To simplify the calculation of withdrawals from each source, it was assumed that the source of supply for all gravity systems and center-pivot sprinklers was ground-water, and all surface-water was used in flood

irrigation, as defined by Steele (1988). Each irrigation type had a different efficiency factor that considered conveyance loss and application efficiency. The factors were 0.65 for gravity systems (this was an average of the 0.60 for systems without reuse pits and 0.70 for systems with reuse pits), 0.90 for center-pivot sprinklers (E.K. Steele, U.S. Geological Survey, written commun., 1988), and 0.50 for flood irrigation. The value of 0.50 was determined by dividing total volume of surface-water consumed by total volume of surface-water withdrawn in 1985 and rounding to the nearest tenth. The efficiency of 0.50 represents a statewide average. Ground-water withdrawals were considered to be the sum of center-pivot withdrawals and gravity system withdrawals.

The GIS coverage of registered irrigation wells was used to determine the percentage of a county's wells within each hydrologic unit, and the number of acres irrigated with ground-water by gravity and center pivot was calculated with that percentage. The number of acres irrigated with surface-water in each hydrologic unit was calculated from the unit's percentage of acres of water rights in the county determined by the GIS coverage of surface-water rights.

Factors affecting the accuracy of the irrigation water use estimates are: (1) rainfall and other weather inputs to the CIR program are never uniform between weather stations, (2) the calculated CIR is an ideal volume of water that is nearly impossible to achieve in practice because rainfall events cannot be reliably predicted, (3) data on acres of irrigated crops of all types and irrigated pasture were not available from a single source, and available sources were not always compatible, and (4) the efficiency of irrigation systems varies greatly within types of irrigation throughout the state. The accuracy of the data on which the estimates were based allowed irrigation use to be calculated only to the nearest 0.1 Mgal/d, although other uses could be estimated to the nearest 0.01 Mgal/d. Therefore, all irrigation water use numbers and other numbers that include irrigation use, such as total water use for the state, are reported with only as much precision as the irrigation estimates.

LIVESTOCK WATER USE AND ANIMAL SPECIALTIES

Livestock water use is defined as livestock watering, including feed lots and dairy operations, evaporation from stock ponds, and other on-farm needs, such as animal specialties. Livestock as used here includes cattle, sheep, goats, hogs, and poultry. Animal specialties include water use associated with fish farms and the production of fur-bearing animals and horses.

The livestock and animal-specialty categories accounted for 139.08 Mgal/d, or less than 0.7 percent of the total water use in the state. Ground-water supplied 108.32 Mgal/d (77.9 percent) and surface-water supplied 30.76 Mgal/d (22.1 percent) of the livestock water used. Ranges of livestock water use in counties are shown in figure 35 and in subregions in figure 36. Estimates of livestock water use in counties and in hydrologic units and subregions are given in tables 17 and 18, respectively.

Figure 35

Total Livestock and Animal Specialities Water Use in Nebraska Counties, 1990

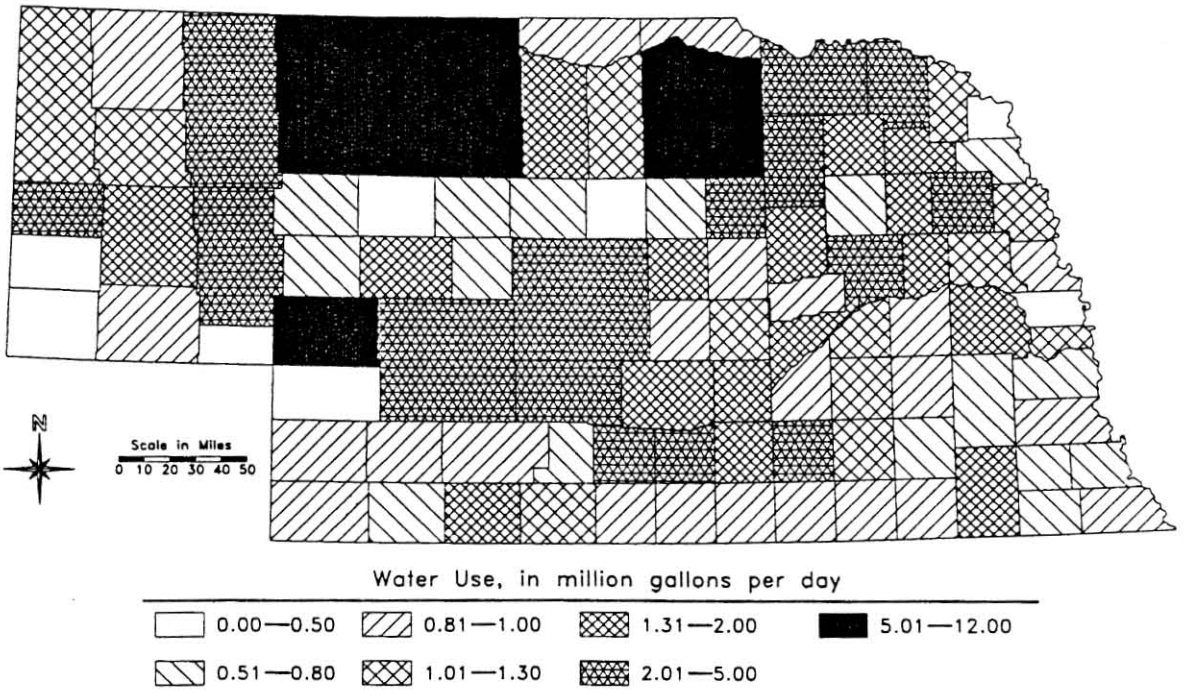
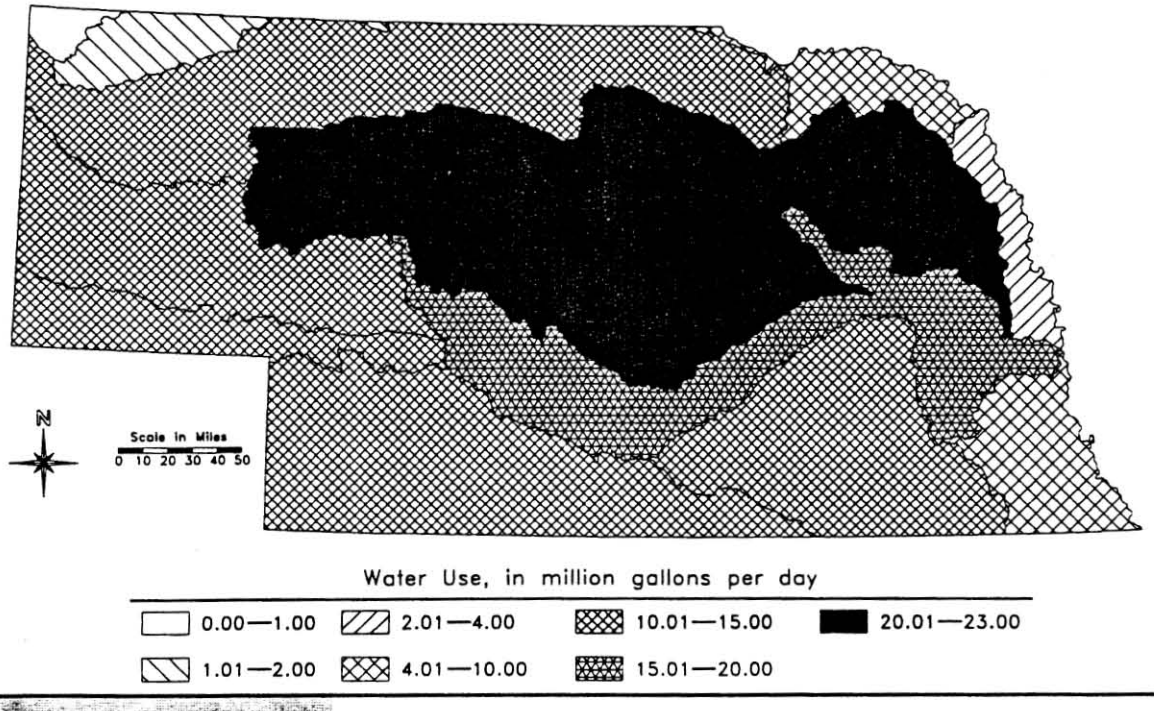


Figure 36

Total Livestock and Animal Specialities Water Use in Nebraska Subregions, 1990



The number of livestock was reported by county (Nebraska Department of Agriculture, 1991). Water use was estimated by multiplying the livestock numbers by the number of gallons per day per head used by each class of animal listed in table 19 (Steele, 1988). Total livestock water use by county was determined by summing the water used by each livestock type. Water use by hydrologic unit was estimated by assuming uniform livestock distribution in each county. The area percentage of each hydrologic unit was multiplied by the total livestock water use in each county, and then the portions of each hydrologic unit were summed.

Bentall and Shaffer (1979) estimated that 20 percent of the water used by livestock in Nebraska was supplied from surface-water. This estimate was used by Steele (1988) to calculate the surface-water used by livestock during 1985, and it was assumed to be a reasonable estimate for use by most cattle in 1990. However, milk cows, hogs, sheep, and lambs generally are kept in more confined lots and pastures, and in this report, it was assumed their use was all provided by ground-water.

A list of fish farms was obtained from the Nebraska Game and Parks Commission. The location of fish farms was site specific by county and by hydrologic unit. Therefore, the county and hydrologic unit water use totals were calculated independently.

Information on the number of horses was obtained from the 1987 Census of Agriculture (U.S. Department of Commerce, 1989). The water use by horses was calculated by proportional distribution of county data, the same as the livestock category.

POWER GENERATION

The 1990 estimated water use for power generation in Nebraska of 15,131.83 Mgal/d was 70.6 percent of the total water used for all purposes; more than 99.9 percent was from surface-water. Power generation was 21,306.35 gigawatthours (Bob Pierce, USGS, written commun., 1991). Water use for this category was divided into three types of power generation: hydroelectric, fossil fuel, and nuclear. Data obtained from public power districts indicated that no water for hydroelectric power generation was used consumptively, and only one percent of the cooling water used for fossil-fuel and nuclear-power generation was consumptively used.

Power generation water use in counties and in hydrologic units and subregions during 1990 is listed in tables 20 and 21, respectively. The amount of power generated is given for counties in table 22 and for hydrologic units and subregions in table 23.

Hydroelectric-power generation is supplied entirely by surface-water. The 12,947.09 Mgal/d of water used produced 833.16 gigawatthours of power. This was 85.6 percent of the total water used for power generation and only 3.9 percent of the electricity produced. The 1990 estimate differs significantly from the 1985 estimate, because one-half the water used and one-half the power produced at Gavins Point Dam on the Missouri River was included in 1990. The other half of the water used and power produced at that location was reported by South Dakota.

Estimated water use for power generation in Nebraska was 70.6% of the total water used for all purposes with more than 99.9% coming from surface-water.

Fossil-fuel power generation used 1,184.72 Mgal/d and produced 12,961.89 gigawatthours. This was only 7.8 percent of the water used for power generation and 60.8 percent of the power produced. All except 7.93 Mgal/d was supplied by surface-water; public water systems supplied 1.93 Mgal/d of the ground-water used. Ground-water was used for small powerplants that were brought on line to meet peak power demands.

Nuclear-power generation used 1,000.02 Mgal/d and produced 7,511.30 gigawatthours of electricity. This was 6.6 percent of the water used for power generation and 35.3 percent of the power produced.

WASTEWATER TREATMENT

This use category is defined as water returned to the hydrologic system by municipal wastewater treatment facilities. Estimated wastewater return flows, which totaled 165.77 Mgal/d for 1990, were based on reported data from the files of the Nebraska Department of Environmental Quality and responses to the municipal survey. Estimated wastewater treatment releases in counties are shown in figure 37 and subregions in figure 38. Releases in counties and in hydrologic units and subregions during 1990 are listed in tables 24 and 25, respectively.

RESERVOIR EVAPORATION

The reservoir evaporation category, considered to be a consumptive use associated with the storage of water, was new for the 1990 water use compilation. This category includes water lost by evaporation from reservoirs that have a normal storage capacity equal to or greater than 5,000 acre-ft. Normal capacity is defined as the total volume of water in a reservoir below the conservation pool level, including dead storage but excluding flood control and surcharge storage.

Information needed to calculate reservoir evaporation was available from federal, state and local sources for 24 reservoirs meeting the capacity requirement. Of the 24, 20 had known surface areas and evaporation rates. The surface area of the other four was obtained from a USGS report (Ruddy and Hitt, 1990). Evaporation rates for these four reservoirs were estimated from a plot of the 20 known rates and compared with previously published rates (Farnsworth and others, 1982). Total evaporation from reservoirs was estimated to be 282,820 acre-ft (252.28 Mgal/d). Reservoir evaporation is given for hydrologic subregions in table 26.

Figure 37

Wastewater Treatment Releases in Nebraska Counties, 1990

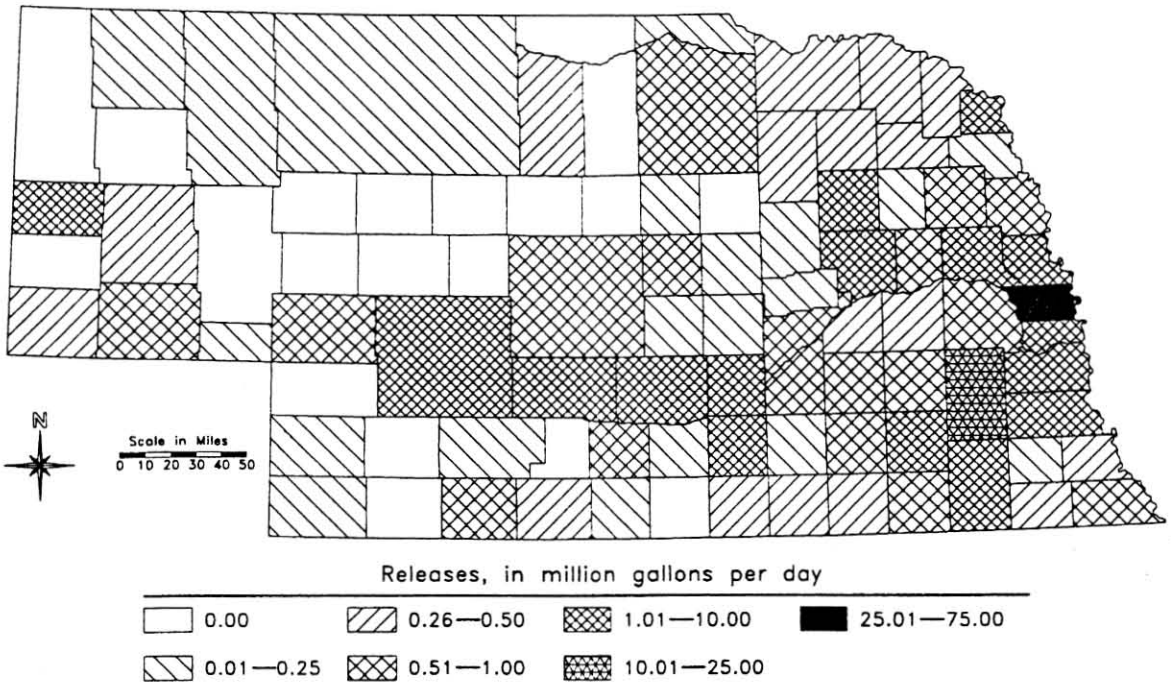
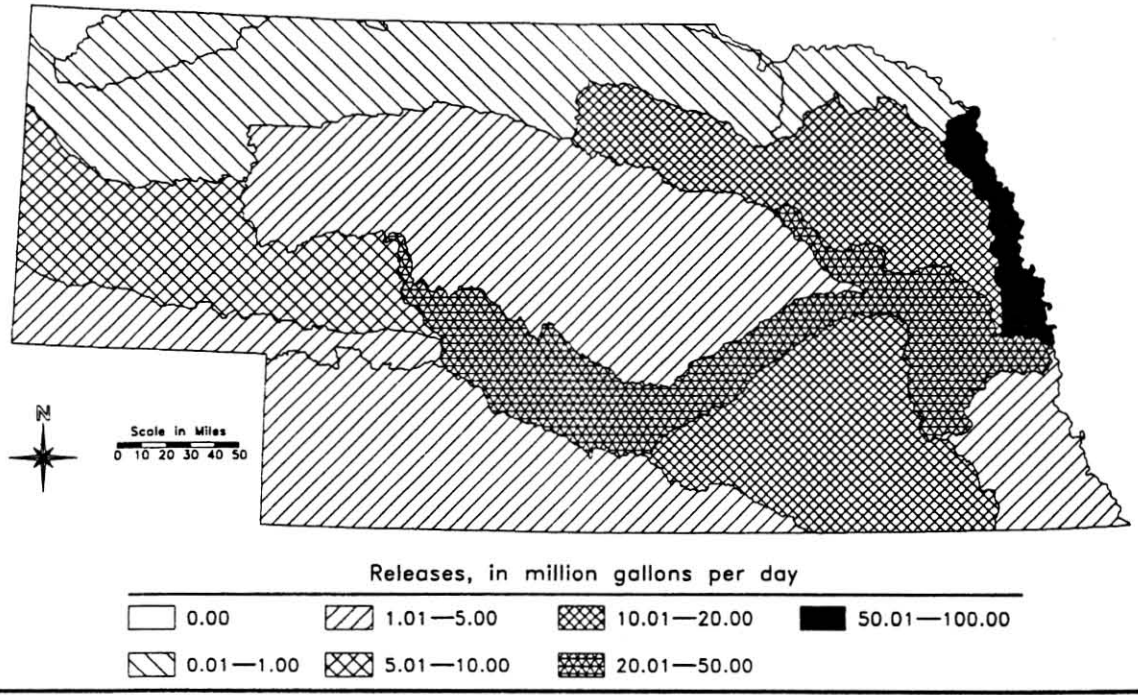


Figure 38

Wastewater Treatment Releases in Nebraska Subregions, 1990



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TABLES

County Number	County Name	Ground-Water (Mgal/d)	Surface-Water (Mgal/d)	Total (Mgal/d)
001	Adams	6.39	0.00	6.39
003	Antelope	1.07	0.00	1.07
005	Arthur	0.00	0.00	0.00
007	Banner	0.00	0.00	0.00
009	Blaine	0.04	0.00	0.04
011	Boone	0.99	0.00	0.99
013	Box Butte	2.82	0.00	2.82
015	Boyd	0.23	0.00	0.23
017	Brown	0.51	0.00	0.51
019	Buffalo	7.86	0.00	7.86
021	Burt	1.04	0.00	1.04
023	Butler	1.02	0.00	1.02
025	Cass	2.10	0.00	2.10
027	Cedar	1.20	0.00	1.20
029	Chase	0.96	0.00	0.96
031	Cherry	1.15	0.00	1.15
033	Cheyenne	2.65	0.00	2.65
035	Clay	1.52	0.00	1.52
037	Colfax	1.31	0.00	1.31
039	Cuming	1.82	0.00	1.82
041	Custer	2.45	0.00	2.45
043	Dakota	2.97	0.00	2.97
045	Dawes	1.32	0.39	1.71
047	Dawson	4.79	0.00	4.79
049	Deuel	0.63	0.00	0.63
051	Dixon	0.88	0.00	0.88
053	Dodge	5.84	0.00	5.84
055	Douglas	0.60	65.01	65.61
057	Dundy	0.43	0.00	0.43
059	Fillmore	1.34	0.00	1.34
061	Franklin	0.66	0.00	0.66
063	Frontier	0.55	0.00	0.55
065	Furnas	1.28	0.00	1.28
067	Gage	4.84	0.00	4.84
069	Garden	0.38	0.00	0.38
071	Garfield	0.27	0.00	0.27
073	Gosper	0.25	0.00	0.25
075	Grant	0.07	0.00	0.07
077	Greeley	0.46	0.00	0.46
079	Hall	9.89	0.00	9.89
081	Hamilton	1.14	0.00	1.14
083	Harlan	0.72	0.00	0.72
085	Hayes	0.08	0.00	0.08
087	Hitchcock	0.81	0.00	0.81
089	Holt	1.63	0.00	1.63
091	Hooker	0.27	0.00	0.27
093	Howard	1.04	0.00	1.04
095	Jefferson	1.63	0.00	1.63
097	Johnson	1.56	0.00	1.56
099	Kearney	1.07	0.00	1.07
101	Keith	1.58	0.00	1.58
103	Keya Paha	0.09	0.00	0.09
105	Kimball	1.02	0.00	1.02
107	Knox	1.18	0.26	1.44
109	Lancaster	1.18	0.00	1.18
111	Lincoln	8.78	0.00	8.78
113	Logan	0.10	0.00	0.10
115	Loup	0.00	0.00	0.00
117	McPherson	0.00	0.00	0.00
119	Madison	5.68	0.00	5.68
121	Merrick	0.99	0.00	0.99
123	Morrill	1.06	0.00	1.06
125	Nance	0.57	0.00	0.57
127	Nemaha	1.25	0.00	1.25
129	Nuckolls	1.13	0.00	1.13
131	Otoe	2.51	0.00	2.51
133	Pawnee	0.27	0.00	0.27
135	Perkins	0.77	0.00	0.77
137	Phelps	2.53	0.00	2.53
139	Pierce	0.98	0.00	0.98
141	Platte	5.46	0.00	5.46
143	Polk	0.71	0.00	0.71
145	Red Willow	3.08	0.00	3.08
147	Richardson	1.27	0.00	1.27
149	Rock	0.47	0.00	0.47
151	Saline	1.94	0.00	1.94
153	Sarpy	51.01	0.00	51.01
155	Saunders	35.45	0.00	35.45
157	Scotts Bluff	7.62	0.00	7.62
159	Seward	1.58	0.00	1.58
161	Sheridan	1.02	0.00	1.02
163	Sherman	0.53	0.00	0.53
165	Sioux	0.10	0.00	0.10
167	Stanton	0.43	0.00	0.43
169	Thayer	1.07	0.00	1.07
171	Thomas	0.18	0.00	0.18
173	Thurston	0.60	0.00	0.60
175	Valley	0.85	0.00	0.85
177	Washington	1.88	0.00	1.88
179	Wayne	0.91	0.00	0.91
181	Webster	0.68	0.00	0.68
183	Wheeler	0.10	0.00	0.10
185	York	2.24	0.00	2.24
Total		235.38	65.66	301.04

Table 2
Estimated Public-Supplied Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Ground-Water (Mgal/d)	Surface-Water (Mgal/d)	Total (Mgal/d)
White River - Hat Creek Basin			
10120106	0.00	0.00	0.00
10120108	0.00	0.00	0.00
Subregion 1012[1]	0.00	0.00	0.00
10140201	1.32	0.39	1.71
10140203	0.00	0.00	0.00
Subregion 1014	1.32	0.39	1.71
Niobrara River Basin			
10150001	0.30	0.00	0.30
10150002	0.10	0.00	0.10
10150003	3.85	0.00	3.85
10150004	1.64	0.00	1.64
10150005	0.00	0.00	0.00
10150006	0.16	0.00	0.16
10150007	0.56	0.00	0.56
Subregion 1015	6.61	0.00	6.61
Missouri River Tributaries Basin (upper part)			
10170101	1.81	0.26	2.07
Subregion 1017	1.81	0.26	2.07
North Platte River Basin			
10180009	9.25	0.00	9.25
10180012	0.16	0.00	0.16
10180013	0.00	0.00	0.00
10180014	7.87	0.00	7.87
Subregion 1018	17.28	0.00	17.28
South Platte River Basin			
10190012	0.00	0.00	0.00
10190015	0.04	0.00	0.04
10190016	4.09	0.00	4.09
10190017	0.00	0.00	0.00
10190018	2.17	0.00	2.17
Subregion 1019	6.30	0.00	6.30
Middle Platte River Basin			
10200101	12.69	0.00	12.69
10200102	10.54	0.00	10.54
10200103	1.29	0.00	1.29
Lower Platte River Basin			
10200201	6.34	0.00	6.34
10200202	49.85	0.00	49.85
10200203	36.34	0.00	36.34
Subregion 1020	117.05	0.00	117.05
Loup River Basin			
10210001	0.52	0.00	0.52
10210002	0.04	0.00	0.04
10210003	1.71	0.00	1.71
10210004	0.61	0.00	0.61
10210005	2.07	0.00	2.07
10210006	0.00	0.00	0.00
10210007	1.16	0.00	1.16
10210008	0.00	0.00	0.00
10210009	1.97	0.00	1.97
10210010	0.38	0.00	0.38
Subregion 1021	8.46	0.00	8.46
Elkhorn River Basin			
10220001	3.09	0.00	3.09
10220002	5.58	0.00	5.58
10220003	9.11	0.00	9.11
10220004	2.84	0.00	2.84
Subregion 1022	20.62	0.00	20.62
Missouri Tributaries River Basin (lower part)			
10230001	5.20	0.00	5.20
10230006	2.44	65.01	67.45
Subregion 1023	7.64	65.01	72.65
Nemaha River Basin			
10240001	3.21	0.00	3.21
10240005	0.40	0.00	0.40
10240006	1.85	0.00	1.85
10240007	0.25	0.00	0.25
10240008	3.49	0.00	3.49
Subregion 1024	9.20	0.00	9.20
Republican River Basin			
10250001	0.00	0.00	0.00
10250002	0.43	0.00	0.43
10250003	0.00	0.00	0.00
10250004	4.08	0.00	4.08
10250005	1.08	0.00	1.08
10250006	0.77	0.00	0.77
10250007	0.11	0.00	0.11
10250008	0.36	0.00	0.36
10250009	1.49	0.00	1.49
10250011	0.06	0.00	0.06
10250014	0.25	0.00	0.25
10250015	0.00	0.00	0.00
10250016	3.95	0.00	3.95
Subregion 1025	12.58	0.00	12.58
Big Blue River Basin			
10270201	3.34	0.00	3.34
10270202	6.91	0.00	6.91
10270203	3.78	0.00	3.78
10270204	1.06	0.00	1.06
10270205	0.04	0.00	0.04
Little Blue River Basin			
10270206	9.67	0.00	9.67
10270207	1.71	0.00	1.71
Subregion 1027	26.51	0.00	26.51
Total[1]	235.38	65.66	301.04

[1]Figures may not add to totals due to independent rounding.

Estimated Total Domestic Water Use in Nebraska Counties, 1990

County Number	County Name	Population Served[1]	Average Use (Mgal/d)	Per Capita Use[2] (gal/d)	Annual Volume (acre-ft)[3]
001	Adams	29,600	4.18	141	4,690
003	Antelope	8,000	1.10	138	1,230
005	Arthur	500	0.09	180	100
007	Banner	900	0.16	178	180
009	Blaine	700	0.10	143	110
011	Boone	6,700	0.93	139	1,040
013	Box Butte	13,100	2.54	194	2,850
015	Boyd	2,800	0.35	125	390
017	Brown	3,700	0.49	132	550
019	Buffalo	37,400	5.27	141	5,910
021	Burt	7,900	0.77	97	860
023	Butler	8,600	0.85	99	950
025	Cass	21,300	2.06	97	2,310
027	Cedar	10,100	1.50	149	1,680
029	Chase	4,400	0.85	193	950
031	Cherry	6,300	1.21	192	1,360
033	Cheyenne	9,500	1.82	192	2,040
035	Clay	7,100	0.98	138	1,100
037	Colfax	9,100	0.91	100	1,020
039	Cuming	10,100	1.30	129	1,460
041	Custer	12,300	1.72	140	1,930
043	Dakota	16,700	1.64	98	1,840
045	Dawes	9,000	1.35	150	1,510
047	Dawson	19,900	2.79	140	3,130
049	Deuel	2,200	0.41	186	460
051	Dixon	6,100	0.83	136	930
053	Dodge	34,500	3.35	97	3,760
055	Douglas	416,400	41.81	100	46,870
057	Dundy	2,600	0.49	188	550
059	Fillmore	7,100	0.70	99	780
061	Franklin	3,900	0.55	141	620
063	Frontier	3,100	0.44	142	490
065	Furnas	5,600	0.84	150	940
067	Gage	22,800	2.21	97	2,480
069	Garden	2,500	0.47	188	530
071	Garfield	2,100	0.32	152	360
073	Gosper	1,900	0.37	195	410
075	Grant	800	0.15	188	170
077	Greeley	3,000	0.43	143	480
079	Hall	48,900	6.97	143	7,810
081	Hamilton	8,900	1.24	139	1,390
083	Harlan	3,800	0.52	137	580
085	Hayes	1,200	0.18	150	200
087	Hitchcock	3,800	0.53	139	590
089	Holt	12,600	1.45	115	1,630
091	Hooker	800	0.16	200	180
093	Howard	6,000	0.98	161	1,100
095	Jefferson	8,800	0.88	100	990
097	Johnson	4,700	0.64	136	720
099	Kearney	6,600	0.93	141	1,040
101	Keith	8,600	1.18	137	1,320
103	Keya Paha	1,000	0.14	140	160
105	Kimball	4,100	0.79	193	890
107	Knox	9,500	1.42	149	1,590
109	Lancaster	213,600	21.29	100	23,870
111	Lincoln	32,500	6.27	193	7,030
113	Logan	900	0.17	189	190
115	Loup	700	0.10	143	110
117	McPherson	500	0.11	220	120
119	Madison	32,700	4.58	140	5,130
121	Merrick	8,000	1.14	143	1,280
123	Morrill	5,400	1.05	194	1,180
125	Nance	4,300	0.59	137	660
127	Nemaha	8,000	0.89	111	1,000
129	Nuckolls	5,800	0.80	138	900
131	Otoe	14,300	1.51	106	1,690
133	Pawnee	3,300	0.41	124	460
135	Perkins	3,400	0.63	185	710
137	Phelps	9,700	1.39	143	1,560
139	Pierce	7,800	1.11	142	1,240
141	Platte	29,800	2.92	98	3,270
143	Polk	5,700	0.56	98	630
145	Red Willow	11,700	1.63	139	1,830
147	Richardson	9,900	0.90	91	1,010
149	Rock	2,000	0.28	140	310
151	Saline	12,700	1.57	124	1,760
153	Sarpy	102,600	9.28	90	10,400
155	Saunders	18,300	1.84	101	2,060
157	Scotts Bluff	36,000	6.66	185	7,470
159	Seward	15,500	1.48	95	1,660
161	Sheridan	6,800	1.29	190	1,450
163	Sherman	3,700	0.53	143	590
165	Sioux	1,500	0.30	200	340
167	Stanton	6,200	0.62	100	700
169	Thayer	6,600	0.67	102	750
171	Thomas	900	0.17	189	190
173	Thurston	6,900	0.72	104	810
175	Valley	5,200	0.71	137	800
177	Washington	16,600	1.68	101	1,880
179	Wayne	9,400	1.02	109	1,140
181	Webster	4,300	0.59	137	660
183	Wheeler	900	0.14	155	160
185	York	14,400	1.42	99	1,590
Total[4]		1,578,400	185.36	--	207,790

[1]Population rounded to the nearest 100.
[2]Average use, in Mgal/d, divided by population served and multiplied by 10^6.
[3]Rounded to the nearest 10 acre-feet.
[4]Figures may not add to totals due to independent rounding.

Table 4
Estimated Total Domestic Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Population Served[1]	Average Use (Mgal/d)	Per Capita Use[2] (gal/d)	Annual Volume (acre-ft)[3]
White River - Hat Creek Basin				
10120106	100	0.02	200	20
10120108	300	0.05	167	60
Subregion 1012[5]	400	0.07	--	80
10140201	8,900	1.34	151	1,500
10140203	<50[4]	<0.01	<200	<5
Subregion 1014	9,000	1.34	--	1,500
Niobrara River Basin				
10150001	2,500	0.31	124	350
10150002	1,100	0.22	200	250
10150003	19,900	3.84	193	4,300
10150004	8,100	1.33	164	1,490
10150005	500	0.10	200	110
10150006	1,100	0.15	136	170
10150007	5,200	0.75	144	840
Subregion 1015	38,400	6.70	--	7,510
Missouri River Tributaries Basin (upper part)				
10170101	14,800	2.48	168	2,780
Subregion 1017	14,800	2.48	--	2,780
North Platte River Basin				
10180009	42,600	7.85	184	8,800
10180012	1,600	0.30	188	340
10180013	1,900	0.36	189	400
10180014	19,800	3.59	181	4,020
Subregion 1018	65,900	12.10	--	13,560
South Platte River Basin				
10190012	200	0.04	200	40
10190015	200	0.04	200	40
10190016	12,840	2.31	180	2,590
10190017	800	0.16	200	180
10190018	17,100	3.09	181	3,460
Subregion 1019	30,800	4.34	--	4,870
Middle Platte River Basin				
10200101	50,600	7.33	145	8,220
10200102	32,800	4.66	142	5,220
10200103	37,100	5.19	140	5,820
Lower Platte River Basin				
10200201	24,100	2.59	108	2,900
10200202	41,500	4.11	99	4,610
10200203	229,600	23.12	101	25,920
Subregion 1020	415,800	46.99	--	52,680
Loup River Basin				
10210001	2,300	0.44	191	490
10210002	1,500	0.28	187	310
10210003	9,800	1.46	149	1,640
10210004	7,200	1.05	146	1,180
10210005	9,000	1.26	140	1,410
10210006	1,400	0.24	171	270
10210007	7,600	1.02	134	1,140
10210008	1,000	0.15	150	170
10210009	23,800	2.71	114	3,040
10210010	4,100	0.58	141	650
Subregion 1021	67,700	8.17	--	9,160
Elkhorn River Basin				
10220001	33,500	4.61	138	5,170
10220002	22,200	2.94	132	3,300
10220003	77,400	8.13	105	9,110
10220004	23,000	2.73	119	3,060
Subregion 1022	156,100	18.40	--	20,630
Missouri Tributaries River Basin (lower part)				
10230001	31,400	3.10	99	3,480
10230006	472,100	46.46	94	52,080
Subregion 1023	503,500	49.56	--	55,560
Nemaha River Basin				
10240001	16,100	2.26	140	2,530
10240005	2,200	0.21	95	240
10240006	15,100	1.49	99	1,670
10240007	2,700	0.44	163	490
10240008	15,900	1.61	101	1,800
Subregion 1024	58,100	6.00	--	6,730
Republican River Basin				
10250001	<50	<0.01	<200	<5
10250002	2,000	0.39	195	440
10250003	<50	<0.01	<200	<5
10250004	15,900	2.29	144	2,570
10250005	4,500	0.82	182	920
10250006	3,800	0.70	184	780
10250007	1,800	0.32	178	360
10250008	3,300	0.53	161	590
10250009	7,900	1.14	144	1,280
10250011	700	0.11	157	120
10250014	2,300	0.33	143	370
10250015	100	0.02	200	20
10250016	16,900	2.36	140	2,650
Subregion 1025	59,200	9.00	--	10,090
Big Blue River Basin				
10270201	25,300	2.71	107	3,080
10270202	34,000	3.54	104	3,970
10270203	25,600	2.86	112	3,210
10270204	9,800	1.06	108	1,190
10270205	800	0.08	100	90
Little Blue River Basin				
10270206	47,600	6.43	135	7,210
10270207	8,200	0.82	100	920
Subregion 1027	151,400	17.51	--	19,630
Total[5]	1,578,400	185.36	117	207,790

[1]Population rounded to the nearest 100.
[2]Average use, in Mgal/d, divided by population served and multiplied by 10^6.
[3]Rounded to the nearest 10 acre-feet.
[4]The < symbol indicates the value is less than the number shown.
[5]Figures may not add to totals due to independent rounding.

Estimated Public-Supplied Domestic Water Use in Nebraska Counties, 1990

County Number	County Name	Estimated Population Served[1]	Average Use (Mgal/d)	Per Capita Use[2] (gal/d)	Annual Volume (acre-ft)[3]
001	Adams	24,900	3.52	141	3,950
003	Antelope	4,100	0.56	137	630
005	Arthur	0	0.00	0	0
007	Banner	0	0.00	0	0
009	Blaine	100	0.02	200	20
011	Boone	3,700	0.51	138	570
013	Box Butte	10,700	2.07	193	2,320
015	Boyd	2,100	0.25	119	280
017	Brown	2,400	0.32	133	360
019	Buffalo	29,800	4.20	141	4,710
021	Burt	5,200	0.51	98	570
023	Butler	4,400	0.43	98	480
025	Cass	18,900	1.82	96	2,040
027	Cedar	5,900	0.90	153	1,010
029	Chase	2,700	0.52	193	580
031	Cherry	3,400	0.65	191	730
033	Cheyenne	7,200	1.39	193	1,560
035	Clay	5,000	0.69	138	770
037	Colfax	5,900	0.59	100	660
039	Cuming	7,700	1.06	138	1,190
041	Custer	7,300	1.02	140	1,140
043	Dakota	14,400	1.41	98	1,580
045	Dawes	7,000	0.96	137	1,080
047	Dawson	14,800	2.06	139	2,310
049	Deuel	1,100	0.19	173	210
051	Dixon	3,300	0.43	130	480
053	Dodge	29,100	2.81	97	3,150
055	Douglas	347,500	34.91	100	39,130
057	Dundy	1,400	0.27	193	300
059	Fillmore	4,800	0.47	98	530
061	Franklin	2,500	0.35	140	390
063	Frontier	1,600	0.23	144	260
065	Furnas	3,800	0.60	158	670
067	Gage	17,200	1.65	96	1,850
069	Garden	1,000	0.19	190	210
071	Garfield	1,300	0.15	115	170
073	Gosper	700	0.14	200	160
075	Grant	200	0.04	200	40
077	Greeley	1,800	0.25	139	280
079	Hall	36,200	5.17	143	5,800
081	Hamilton	5,400	0.75	139	840
083	Harlan	2,300	0.30	130	340
085	Hayes	300	0.04	133	40
087	Hitchcock	2,300	0.32	139	360
089	Holt	7,000	0.66	94	740
091	Hooker	600	0.11	183	120
093	Howard	3,500	0.48	137	540
095	Jefferson	6,500	0.66	102	740
097	Johnson	4,000	0.45	113	500
099	Kearney	3,800	0.54	142	610
101	Keith	6,900	0.85	123	950
103	Keya Paha	300	0.04	133	40
105	Kimball	2,900	0.56	193	630
107	Knox	7,100	1.07	151	1,200
109	Lancaster	200,800	20.01	100	22,430
111	Lincoln	25,200	4.85	192	5,440
113	Logan	300	0.06	200	70
115	Loup	0	0.00	0	0
117	McPherson	0	0.00	0	0
119	Madison	26,800	3.75	140	4,200
121	Merrick	4,600	0.65	141	730
123	Morrill	2,900	0.57	197	640
125	Nance	2,800	0.38	136	430
127	Nemaha	7,200	0.81	113	910
129	Nuckolls	3,900	0.53	136	590
131	Otoe	13,600	1.44	106	1,610
133	Pawnee	3,200	0.40	125	450
135	Perkins	2,000	0.36	180	400
137	Phelps	6,900	1.00	145	1,120
139	Pierce	3,700	0.53	143	590
141	Platte	22,400	2.18	97	2,440
143	Polk	3,300	0.32	97	360
145	Red Willow	9,400	1.31	139	1,470
147	Richardson	8,900	0.80	90	900
149	Rock	1,400	0.19	136	210
151	Saline	6,200	0.92	148	1,030
153	Sarpy	54,800	4.50	82	5,040
155	Saunders	10,000	1.01	101	1,130
157	Scotts Bluff	27,900	5.10	183	5,720
159	Seward	10,700	1.00	93	1,120
161	Sheridan	3,700	0.70	189	780
163	Sherman	1,700	0.24	141	270
165	Sioux	300	0.06	200	70
167	Stanton	1,900	0.19	100	210
169	Thayer	4,300	0.44	102	490
171	Thomas	300	0.05	167	60
173	Thurston	3,200	0.34	106	380
175	Valley	3,400	0.46	135	520
177	Washington	9,600	0.95	99	1,060
179	Wayne	6,100	0.57	93	640
181	Webster	2,700	0.36	133	400
183	Wheeler	100	0.02	200	20
185	York	10,600	1.03	97	1,150
Total[4]		1,200,800	138.22	115	154,940

[1]Population rounded to the nearest 100.
[2]Average use, in Mgal/d, divided by population served and multiplied by 10^6.
[3]Rounded to the nearest 10 acre-feet.
[4]Figures may not add to totals due to independent rounding.

Table 6
Estimated Public-Supplied Domestic Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Estimated Population Served[1]	Average Use (Mgal/d)	Per Capita Use[2] (gal/d)	Annual Volume (acre-ft)[3]
White River - Hat Creek Basin				
10120106	<50[4]	<0.01	<200	10
10120108	0	0.00	0	0
Subregion 1012[5]	<50	<0.01	--	10
10140201	6,900	0.95	138	1,070
10140203	0	0.00	0	0
Subregion 1014	6,900	0.95	--	1,070
Niobrara River Basin				
10150001	1,900	0.23	121	260
10150002	300	0.06	200	60
10150003	14,500	2.80	193	3,140
10150004	5,700	0.94	165	1,060
10150005	0	0.00	0	0
10150006	500	0.06	120	70
10150007	1,600	0.24	150	270
Subregion 1015	24,500	4.33	--	4,860
Missouri Tributaries River Basin (upper part)				
10170101	7,000	1.42	203	1,590
Subregion 1017	7,000	1.42	--	1,590
North Platte River Basin				
10180009	32,400	5.87	181	6,580
10180012	500	0.08	180	90
10180013	0	0.00	0	0
10180014	16,900	3.05	180	3,420
Subregion 1018	49,800	9.00	--	10,090
South Platte River Basin				
10190012	0	0.00	0	0
10190015	100	0.02	200	20
10190016	10,700	2.03	190	2,270
10190017	0	0.00	0	0
10190018	14,200	2.54	179	2,850
Subregion 1019	24,900	3.21	--	5,140
Middle Platte River Basin				
10200101	35,500	5.05	142	5,660
10200102	26,300	3.74	142	4,190
10200103	25,500	3.62	142	4,060
Lower Platte River Basin				
10200201	16,500	1.78	108	2,000
10200202	8,500	0.81	95	910
10200203	209,900	21.15	101	23,710
Subregion 1020	322,300	36.15	--	40,530
Loup River Basin				
10210001	1,000	0.20	200	220
10210002	100	0.02	200	20
10210003	5,500	0.85	155	950
10210004	1,900	0.28	147	320
10210005	6,600	0.92	139	1,030
10210006	0	0.00	0	0
10210007	4,800	0.63	131	710
10210008	0	0.00	0	0
10210009	17,500	1.89	108	2,120
10210010	1,300	0.18	138	200
Subregion 1021	38,700	4.97	--	5,570
Elkhorn River Basin				
10220001	24,300	3.14	129	3,520
10220002	16,700	2.16	129	2,420
10220003	43,300	4.50	104	5,040
10220004	16,000	1.85	116	2,080
Subregion 1022	100,200	11.65	--	13,060
Missouri Tributaries River Basin (lower part)				
10230001	24,400	2.40	98	2,690
10230006	397,700	39.02	98	43,740
Subregion 1023	422,100	41.42	--	46,430
Nemaha River Basin				
10240001	20,900	2.13	102	2,390
10240005	1,900	0.18	95	200
10240006	13,000	1.28	98	1,430
10240007	2,400	0.41	171	460
10240008	13,200	1.34	102	1,500
Subregion 1024	51,500	5.34	--	5,990
Republican River Basin				
10250001	0	0.00	0	0
10250002	1,400	0.27	193	300
10250003	0	0.00	0	0
10250004	11,900	1.68	141	1,880
10250005	3,100	0.57	180	640
10250006	2,000	0.36	180	400
10250007	300	0.06	200	70
10250008	1,200	0.17	142	190
10250009	4,500	0.66	147	740
10250011	200	0.03	150	30
10250014	1,100	0.17	155	190
10250015	0	0.00	0	0
10250016	12,300	1.72	140	1,930
Subregion 1025	38,000	5.68	--	6,370
Big Blue River Basin				
10270201	18,000	1.92	107	2,150
10270202	25,300	2.67	106	2,990
10270203	16,300	1.73	106	1,940
10270204	4,100	0.48	102	540
10270205	300	0.03	100	30
Little Blue River Basin				
10270206	37,100	5.05	136	5,660
10270207	6,300	0.64	102	720
Subregion 1027	107,400	12.53	--	14,050
Total[5]	1,200,800	138.22	--	154,940

[1]Population rounded to the nearest 100.
[2]Average use, in Mgal/d, divided by population served and multiplied by 10^6.
[3]Rounded to the nearest 10 acre-feet.
[4]The < symbol indicates the value is less than the number shown.
[5]Figures may not add to totals due to independent rounding.

Estimated Self-Supplied Domestic Water Use in Nebraska Counties, 1990

County Number	County Name	Self-Supplied Population[1]	Average Use (Mgal/d)	Per Capita Use[2] (gal/d)	Annual Volume (acre-ft)[3]
001	Adams	4,700	0.66	140	740
003	Antelope	3,900	0.54	138	610
005	Arthur	500	0.09	180	100
007	Banner	900	0.16	178	180
009	Blaine	500	0.08	160	90
011	Boone	3,000	0.42	140	470
013	Box Butte	2,400	0.47	196	530
015	Boyd	700	0.10	143	110
017	Brown	1,200	0.17	142	190
019	Buffalo	7,600	1.07	141	1,200
021	Burt	2,600	0.26	100	290
023	Butler	4,200	0.42	100	470
025	Cass	2,400	0.24	100	270
027	Cedar	4,200	0.60	143	670
029	Chase	1,700	0.33	194	370
031	Cherry	2,900	0.56	193	630
033	Cheyenne	2,200	0.43	195	480
035	Clay	2,100	0.29	138	330
037	Colfax	3,200	0.32	100	360
039	Cuming	2,400	0.24	100	270
041	Custer	4,900	0.70	143	780
043	Dakota	2,300	0.23	100	260
045	Dawes	2,000	0.39	195	440
047	Dawson	5,200	0.73	140	820
049	Deuel	1,100	0.22	200	250
051	Dixon	2,900	0.40	138	450
053	Dodge	5,400	0.54	100	610
055	Douglas	69,000	6.90	100	7,730
057	Dundy	1,100	0.22	200	250
059	Fillmore	2,300	0.23	100	260
061	Franklin	1,400	0.20	143	220
063	Frontier	1,500	0.21	140	240
065	Furnas	1,700	0.24	141	270
067	Gage	5,600	0.56	100	630
069	Garden	1,500	0.28	187	310
071	Garfield	900	0.17	189	190
073	Gosper	1,200	0.23	192	260
075	Grant	600	0.11	183	120
077	Greeley	1,200	0.18	150	200
079	Hall	12,700	1.80	142	2,020
081	Hamilton	3,500	0.49	140	550
083	Harlan	1,500	0.22	147	250
085	Hayes	1,000	0.14	140	160
087	Hitchcock	1,500	0.21	140	240
089	Holt	5,600	0.79	141	890
091	Hooker	200	0.05	250	60
093	Howard	2,600	0.50	192	560
095	Jefferson	2,200	0.22	100	250
097	Johnson	700	0.19	271	210
099	Kearney	2,800	0.39	139	440
101	Keith	1,700	0.33	194	370
103	Keya Paha	700	0.10	143	110
105	Kimball	1,200	0.23	192	260
107	Knox	2,500	0.35	140	390
109	Lancaster	12,800	1.28	100	1,430
111	Lincoln	7,300	1.42	195	1,590
113	Logan	600	0.11	183	120
115	Loup	700	0.10	143	110
117	McPherson	500	0.11	220	120
119	Madison	5,900	0.83	141	930
121	Merrick	3,400	0.49	144	550
123	Morrill	2,500	0.48	192	540
125	Nance	1,500	0.21	140	240
127	Nemaha	800	0.08	100	90
129	Nuckolls	1,900	0.27	142	300
131	Otoe	700	0.07	100	80
133	Pawnee	100	0.01	100	10
135	Perkins	1,400	0.27	193	300
137	Phelps	2,800	0.39	139	440
139	Pierce	4,100	0.58	141	650
141	Platte	7,400	0.74	100	830
143	Polk	2,400	0.24	100	270
145	Red Willow	2,300	0.32	139	360
147	Richardson	1,000	0.10	100	110
149	Rock	600	0.09	150	100
151	Saline	6,500	0.65	100	730
153	Sarpy	47,800	4.78	100	5,360
155	Saunders	8,300	0.83	100	930
157	Scotts Bluff	8,100	1.56	193	1,750
159	Seward	4,800	0.48	100	540
161	Sheridan	3,100	0.59	190	660
163	Sherman	2,100	0.29	138	330
165	Sioux	1,300	0.24	185	270
167	Stanton	4,300	0.43	100	480
169	Thayer	2,300	0.23	100	260
171	Thomas	600	0.12	200	130
173	Thurston	3,800	0.38	100	430
175	Valley	1,800	0.25	139	280
177	Washington	7,000	0.73	104	820
179	Wayne	3,200	0.45	141	500
181	Webster	1,600	0.23	144	260
183	Wheeler	800	0.12	150	130
185	York	3,900	0.39	100	440
Total[4]		377,600	47.14	–	52,880

[1]Population rounded to the nearest 100.
[2]Average use, in Mgal/d, divided by population served and multiplied by 10^6.
[3]Rounded to the nearest 10 acre-feet.
[4]Figures may not add to totals due to independent rounding.

Table 8
Estimated Self-Supplied Domestic Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Self-Supplied Population[1]	Average Use (Mgal/d)	Per Capita Use[2] (gal/d)	Annual Volume (acre-ft)[3]
White River - Hat Creek Basin				
10120106	<50[4]	<0.01	<200	10
10120108	300	0.05	167	60
Subregion 1012[5]	300	0.06	--	70
10140201	2,000	0.39	195	440
10140203	<50	<0.01	188	<5
Subregion 1014	2,000	0.39	--	440
Niobrara River Basin				
10150001	500	0.08	160	90
10150002	800	0.16	200	180
10150003	5,400	1.04	193	1,170
10150004	2,400	0.39	163	440
10150005	500	0.10	200	110
10150006	600	0.09	150	100
10150007	3,600	0.51	142	580
Subregion 1015	13,900	2.37	--	2,650
Missouri Tributaries River Basin (upper part)				
10170101	7,800	1.06	136	1,190
Subregion 1017	7,800	1.06	--	1,190
North Platte River Basin				
10180009	10,200	1.98	194	2,220
10180012	1,100	0.22	200	250
10180013	1,900	0.36	189	400
10180014	2,900	0.54	186	600
Subregion 1018	16,100	3.10	--	3,470
South Platte River Basin				
10190012	200	0.04	200	40
10190015	100	0.02	200	20
10190016	1,900	0.28	147	310
10190017	800	0.16	200	180
10190018	2,900	0.55	190	620
Subregion 1019	5,900	1.13	--	1,270
Middle Platte River Basin				
10200101	15,100	2.28	151	2,560
10200102	6,500	0.92	142	1,030
10200103	11,600	1.57	135	1,760
Lower Platte River Basin				
10200201	7,600	0.81	107	910
10200202	33,000	3.30	100	3,700
10200203	19,700	1.97	100	2,200
Subregion 1020	93,500	10.84	--	12,160
Loup River Basin				
10210001	1,300	0.24	185	270
10210002	1,400	0.26	186	300
10210003	4,300	0.61	142	680
10210004	5,300	0.77	145	860
10210005	2,400	0.34	142	380
10210006	1,400	0.24	171	270
10210007	2,800	0.39	139	440
10210008	1,000	0.15	150	170
10210009	6,300	0.82	130	910
10210010	2,800	0.40	143	440
Subregion 1021	29,000	4.20	--	4,710
Elkhorn River Basin				
10220001	9,200	1.47	160	1,650
10220002	5,500	0.78	142	870
10220003	34,100	3.63	106	4,070
10220004	7,000	0.88	126	980
Subregion 1022	55,900	6.75	--	7,570
Missouri Tributaries River Basin (lower part)				
10230001	7,000	0.70	100	780
10230006	74,400	7.44	100	8,340
Subregion 1023	81,400	8.14	--	9,130
Nemaha River Basin				
10240001	1,300	0.13	100	150
10240005	300	0.03	100	30
10240006	2,100	0.21	100	230
10240007	300	0.03	100	30
10240008	2,700	0.27	100	300
Subregion 1024	6,600	0.66	--	740
Republican River Basin				
10250001	<50	<0.01	<200	<5
10250002	600	0.12	200	130
10250003	<50	<0.01	<200	<5
10250004	4,000	0.61	153	680
10250005	1,400	0.25	179	280
10250006	1,800	0.34	189	380
10250007	1,500	0.26	173	290
10250008	2,100	0.36	171	400
10250009	3,400	0.48	141	540
10250011	500	0.08	160	80
10250014	1,200	0.16	133	190
10250015	100	0.02	200	20
10250016	4,600	0.64	139	720
Subregion 1025	21,200	3.32	--	3,720
Big Blue River Basin				
10270201	7,300	0.79	108	880
10270202	8,700	0.87	100	970
10270203	9,300	1.13	122	1,260
10270204	5,700	0.58	102	650
10270205	500	0.05	100	60
Little Blue River Basin				
10270206	10,500	1.38	131	1,540
10270207	1,900	0.19	100	220
Subregion 1027	44,000	4.98	--	5,580
Total[5]	377,600	47.14	--	52,880

[1]Population rounded to the nearest 100.
[2]Average use, in Mgal/d, divided by population served and multiplied by 10^6.
[3]Rounded to the nearest 10 acre-feet.
[4]The < symbol indicates the value is less than the number shown.
[5]Figures may not add to totals due to independent rounding.

County Number	County Name	Commercial Self-Supplied (Mgal/d)	Commercial Public-Supplied (Mgal/d)	Industrial Self-Supplied (Mgal/d)	Industrial Public-Supplied (Mgal/d)	Mining All Self-Supplied (Mgal/d)
001	Adams	0.00	0.77	0.50	1.24	0.60
003	Antelope	0.00	0.21	0.11	0.02	1.39
005	Arthur	0.01	0.00	0.00	0.00	0.00
007	Banner	0.00	0.00	0.00	0.00	0.39
009	Blaine	0.00	0.01	0.00	0.00	1.20
011	Boone	0.00	0.18	0.00	0.01	0.00
013	Box Butte	0.00	0.32	0.00	0.19	0.00
015	Boyd	0.00	0.08	0.00	0.01	0.60
017	Brown	0.00	0.11	0.01	0.03	1.80
019	Buffalo	0.00	0.98	1.33	1.12	6.21
021	Burt	0.00	0.21	0.00	0.07	0.00
023	Butler	0.00	0.16	0.00	0.12	2.40
025	Cass	0.00	0.26	1.37	0.17	6.17
027	Cedar	0.00	0.23	0.04	0.11	1.36
029	Chase	0.00	0.12	0.00	0.06	0.00
031	Cherry	0.00	0.19	0.00	0.00	0.60
033	Cheyenne	0.00	0.30	0.06	0.05	1.54
035	Clay	0.00	0.18	0.00	0.01	0.60
037	Colfax	0.00	0.21	1.57	0.03	3.60
039	Cuming	0.00	0.30	0.62	0.39	1.58
041	Custer	0.00	0.32	0.01	0.43	1.33
043	Dakota	0.00	0.31	2.51	0.16	0.00
045	Dawes	0.00	0.26	0.00	0.01	0.00
047	Dawson	0.00	0.58	3.08	0.31	7.46
049	Deuel	0.00	0.06	0.04	0.00	0.00
051	Dixon	0.00	0.10	0.87	0.01	0.58
053	Dodge	0.00	0.89	1.29	1.00	2.85
055	Douglas	0.12	23.56	1.28	9.20	5.55
057	Dundy	0.00	0.07	0.00	0.00	0.17
059	Fillmore	0.00	0.19	0.00	0.05	0.00
061	Franklin	0.00	0.08	0.00	0.00	1.53
063	Frontier	0.00	0.06	0.00	0.01	0.00
065	Furnas	0.00	0.16	0.00	0.01	0.21
067	Gage	0.00	0.56	0.00	0.88	1.99
069	Garden	0.00	0.07	0.00	0.06	2.32
071	Garfield	0.00	0.04	0.00	0.03	0.58
073	Gosper	0.00	0.03	0.00	0.00	0.00
075	Grant	0.00	0.02	0.00	0.00	0.00
077	Greeley	0.00	0.06	0.00	0.01	0.58
079	Hall	0.01	1.30	2.06	3.12	8.71
081	Hamilton	0.00	0.21	0.86	0.12	0.58
083	Harlan	0.00	0.11	0.00	0.00	0.05
085	Hayes	0.00	0.02	0.00	0.00	0.58
087	Hitchcock	0.00	0.06	0.00	0.13	2.76
089	Holt	0.00	0.36	0.00	0.03	6.52
091	Hooker	0.00	0.02	0.00	0.00	0.00
093	Howard	0.00	0.12	0.00	0.01	2.13
095	Jefferson	0.00	0.23	0.33	0.16	3.37
097	Johnson	0.00	0.12	0.00	0.01	0.00
099	Kearney	0.00	0.15	0.00	0.09	0.64
101	Keith	0.00	0.32	0.00	0.1[illegible]	2.39
103	Keya Paha	0.00	0.02	0.00	0.00	0.00
105	Kimball	0.00	0.14	0.00	0.07	0.77
107	Knox	0.00	0.23	0.00	0.03	4.06
109	Lancaster	0.02	4.49	0.06	6.84	0.00
111	Lincoln	0.00	0.86	0.09	0.12	5.69
113	Logan	0.00	0.01	0.00	0.00	0.00
115	Loup	0.00	0.00	0.00	0.00	0.58
117	McPherson	0.00	0.00	0.00	0.00	0.00
119	Madison	0.00	0.99	2.06	0.11	3.85
121	Merrick	0.00	0.18	0.01	0.05	2.48
123	Morrill	0.00	0.11	0.90	0.01	0.85
125	Nance	0.00	0.10	0.00	0.00	1.05
127	Nemaha	0.00	0.18	0.00	0.04	0.58
129	Nuckolls	0.00	0.18	0.00	0.12	1.11
131	Otoe	0.00	0.35	0.00	0.35	0.00
133	Pawnee	0.00	0.07	0.00	0.01	0.00
135	Perkins	0.00	0.10	0.00	0.02	0.00
137	Phelps	0.00	0.29	0.00	0.45	1.16
139	Pierce	0.00	0.18	0.00	0.04	0.58
141	Platte	0.00	0.68	0.12	1.34	4.64
143	Polk	0.00	0.13	0.00	0.10	1.45
145	Red Willow	0.00	0.38	0.06	0.69	5.18
147	Richardson	0.00	0.22	0.00	0.18	0.00
149	Rock	0.00	0.05	0.00	0.00	0.00
151	Saline	0.00	0.28	1.58	0.12	0.58
153	Sarpy	0.01	1.23	16.44	0.74	4.02
155	Saunders	0.00	0.31	0.01	0.21	2.96
157	Scotts Bluff	0.01	1.04	1.61	0.94	2.04
159	Seward	0.00	0.33	0.01	0.05	0.01
161	Sheridan	0.00	0.18	0.02	0.02	0.00
163	Sherman	0.00	0.09	0.00	0.01	0.00
165	Sioux	0.00	0.03	0.00	0.00	0.00
167	Stanton	0.00	0.07	0.00	0.00	3.08
169	Thayer	0.00	0.20	0.00	0.13	2.22
171	Thomas	0.00	0.03	0.00	0.01	0.58
173	Thurston	0.00	0.10	0.00	0.06	0.00
175	Valley	0.00	0.16	0.00	0.03	0.17
177	Washington	0.00	0.32	0.01	0.10	0.13
179	Wayne	0.00	0.16	0.00	0.07	0.00
181	Webster	0.00	0.09	0.00	0.01	1.74
183	Wheeler	0.00	0.01	0.00	0.00	0.00
185	York	0.00	0.44	0.00	0.38	1.16
Total		0.18	50.27	40.92	33.03	135.64

Table 10
Estimated Commercial, Industrial, and Mining Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Commercial Self-Supplied (Mgal/d)	Commercial Public-Supplied (Mgal/d)	Industrial Self-Supplied (Mgal/d)	Industrial Public-Supplied (Mgal/d)	Mining All Self-Supplied (Mgal/d)
White River - Hat Creek Basin					
10120106	0.00	0.00	0.00	0.00	0.00
10120108	0.00	0.00	0.00	0.00	0.00
Subregion 1012	0.00	0.00	0.00	0.00	0.00
10140201	0.00	0.27	0.00	0.01	0.00
10140203	0.00	0.00	0.00	0.00	0.00
Subregion 1014	0.00	0.27	0.00	0.01	0.00
Niobrara River Basin					
10150001	0.00	0.08	0.00	0.01	0.52
10150002	0.00	0.03	0.00	0.00	0.00
10150003	0.00	0.47	0.02	0.22	0.12
10150004	0.00	0.31	0.01	0.03	1.63
10150005	0.00	0.00	0.00	0.00	0.08
10150006	0.00	0.03	0.00	0.00	0.10
10150007	0.00	0.06	0.08	0.02	4.07
Subregion 1015	0.00	0.98	0.11	0.28	6.52
Missouri Tributaries River Basin (upper part)					
10170101	0.00	0.27	0.04	0.11	3.87
Subregion 1017	0.00	0.27	0.04	0.11	3.87
North Platte River Basin					
10180009	0.00	0.73	2.51	0.97	4.28
10180012	0.00	0.02	0.00	0.03	0.28
10180013	0.00	0.00	0.00	0.00	0.67
10180014	0.01	0.81	0.09	0.11	2.49
Subregion 1018	0.01	1.56	2.60	1.11	7.72
South Platte River Basin					
10190012	0.00	0.00	0.00	0.00	0.08
10190015	0.00	0.01	0.00	0.00	0.07
10190016	0.00	0.10	0.09	0.12	1.07
10190017	0.00	0.00	0.00	0.00	0.56
10190018	0.00	0.36	0.00	0.11	1.93
Subregion 1019	0.00	0.47	0.09	0.23	3.71
Middle Platte River Basin					
10200101	0.01	1.61	3.65	0.78	12.31
10200102	0.00	1.35	2.60	3.76	5.30
10200103	0.00	0.21	0.01	0.08	7.90
Lower Platte River Basin					
10200201	0.00	0.87	1.69	1.33	5.09
10200202	0.01	0.25	1.87	0.26	5.27
10200203	0.02	4.86	0.07	7.05	3.70
Subregion 1020	0.04	9.15	9.89	13.26	39.57
Loup River Basin					
10210001	0.00	0.07	0.00	0.01	0.88
10210002	0.00	0.01	0.00	0.00	0.68
10210003	0.00	0.21	0.00	0.02	1.67
10210004	0.00	0.08	0.00	0.00	3.06
10210005	0.00	0.27	0.22	0.44	0.61
10210006	0.00	0.00	0.00	0.00	1.11
10210007	0.00	0.08	0.00	0.06	1.04
10210008	0.00	0.00	0.00	0.00	1.08
10210009	0.00	0.25	0.00	0.01	2.78
10210010	0.00	0.05	0.00	0.01	1.14
Subregion 1021	0.00	1.02	0.22	0.55	14.05
Elkhorn River Basin					
10220001	0.00	0.61	0.03	0.03	6.45
10220002	0.00	1.05	0.83	0.16	1.38
10220003	0.03	1.49	3.14	1.35	11.65
10220004	0.00	0.54	0.87	0.23	1.12
Subregion 1022	0.03	3.69	4.87	1.77	20.60
Missouri Tributaries River Basin (lower part)					
10230001	0.00	0.70	2.51	0.24	0.03
10230006	0.09	25.75	17.25	9.76	5.95
Subregion 1023	0.09	26.45	19.76	10.00	5.98
Nemaha River Basin					
10240001	0.00	0.45	0.00	0.50	2.95
10240005	0.00	0.05	0.00	0.00	0.11
10240006	0.00	0.32	0.00	0.07	0.61
10240007	0.00	0.06	0.00	0.01	0.00
10240008	0.00	0.38	0.00	0.21	0.37
Subregion 1024	0.00	1.26	0.00	0.79	4.04
Republican River Basin					
10250001	0.00	0.00	0.00	0.00	0.00
10250002	0.00	0.07	0.00	0.00	0.09
10250003	0.00	0.00	0.00	0.00	0.00
10250004	0.00	0.49	0.06	0.70	5.80
10250005	0.00	0.13	0.00	0.18	0.69
10250006	0.00	0.09	0.00	0.02	0.15
10250007	0.00	0.00	0.00	0.00	1.10
10250008	0.00	0.05	0.00	0.01	1.07
10250009	0.00	0.20	0.00	0.00	0.39
10250011	0.00	0.00	0.00	0.00	0.08
10250014	0.00	0.04	0.00	0.01	1.36
10250015	0.00	0.00	0.00	0.00	0.00
10250016	0.00	0.34	0.00	0.58	3.50
Subregion 1025	0.00	1.41	0.06	1.50	4.23
Big Blue River Basin					
10270201	0.00	0.60	0.87	0.35	2.46
10270202	0.00	0.84	1.58	0.98	2.98
10270203	0.00	0.68	0.00	0.41	2.47
10270204	0.00	0.16	0.00	0.04	0.74
10270205	0.00	0.01	0.00	0.00	0.17
Little Blue River Basin					
10270206	0.01	1.21	0.50	1.49	4.35
10270207	0.00	0.24	0.33	0.15	2.18
Subregion 1027	0.01	3.74	3.28	3.42	15.35
Total	0.18	50.27	40.92	33.03	135.64

Estimated Total Irrigated Area and Irrigation Water Use in Nebraska Counties, 1990

County Number	County Name	Irrigated Area[1]	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
001	Adams	178.7	6.7	88.9	99.6
003	Antelope	169.9	7.6	96.2	107.7
005	Arthur	8.7	15.5	10.0	11.2
007	Banner	15.2	15.0	17.0	19.1
009	Blaine	10.5	13.1	10.3	11.5
011	Boone	136.1	8.7	88.5	99.1
013	Box Butte	111.2	16.8	139.0	155.7
015	Boyd	6.6	6.8	3.3	3.7
017	Brown	54.0	13.4	53.7	60.2
019	Buffalo	220.2	9.6	157.7	176.7
021	Burt	51.9	5.2	20.1	22.6
023	Butler	104.0	8.2	63.8	71.4
025	Cass	4.2	7.9	2.5	2.8
027	Cedar	61.0	6.0	27.1	30.3
029	Chase	153.2	16.9	192.5	215.7
031	Cherry	23.7	16.8	29.7	33.2
033	Cheyenne	40.9	13.7	41.7	46.7
035	Clay	187.5	6.7	92.9	104.1
037	Colfax	61.5	8.3	38.1	42.7
039	Cuming	35.4	5.1	13.5	15.1
041	Custer	191.3	13.3	188.9	211.6
043	Dakota	14.9	4.8	5.4	6.0
045	Dawes	18.6	28.4	39.1	43.8
047	Dawson	232.9	15.3	264.6	296.4
049	Deuel	17.3	16.1	20.7	23.2
051	Dixon	18.5	5.1	7.0	7.9
053	Dodge	91.4	7.1	48.4	54.2
055	Douglas	12.6	7.7	7.2	8.1
057	Dundy	89.3	18.2	120.7	135.3
059	Fillmore	186.4	6.6	92.0	103.1
061	Franklin	82.1	5.7	34.9	39.1
063	Frontier	61.8	17.3	79.6	89.2
065	Furnas	52.5	12.7	49.5	55.5
067	Gage	49.7	5.8	21.3	23.8
069	Garden	30.8	19.2	44.0	49.2
071	Garfield	15.3	10.2	11.6	13.0
073	Gosper	71.5	12.8	68.2	76.5
075	Grant	1.1	16.6	1.4	1.6
077	Greeley	66.0	8.8	43.1	48.2
079	Hall	204.9	9.5	144.2	161.5
081	Hamilton	248.6	8.7	161.0	180.4
083	Harlan	70.3	8.0	41.7	46.7
085	Hayes	35.0	18.2	47.4	53.1
087	Hitchcock	33.2	22.4	55.2	61.9
089	Holt	200.5	6.4	95.1	106.6
091	Hooker	2.7	15.9	3.2	3.5
093	Howard	105.0	11.0	86.0	96.3
095	Jefferson	54.3	4.7	19.1	21.4
097	Johnson	10.4	6.1	4.7	5.3
099	Kearney	188.5	7.9	110.3	123.6
101	Keith	77.2	17.5	100.7	112.8
103	Keya Paha	8.9	9.2	6.1	6.9
105	Kimball	25.1	14.9	27.9	31.3
107	Knox	47.7	6.9	24.5	27.4
109	Lancaster	14.9	6.8	7.6	8.5
111	Lincoln	176.8	18.1	237.9	266.5
113	Logan	20.9	15.1	23.5	26.3
115	Loup	10.6	13.6	10.8	12.1
117	McPherson	7.0	15.0	7.8	8.8
119	Madison	75.6	8.0	44.8	50.2
121	Merrick	164.5	9.9	121.0	135.5
123	Morrill	106.8	22.0	174.8	195.8
125	Nance	57.6	10.6	45.3	50.7
127	Nemaha	5.1	6.7	2.5	2.8
129	Nuckolls	49.2	5.4	19.7	22.0
131	Otoe	6.4	7.9	3.8	4.2
133	Pawnee	4.0	6.7	2.0	2.2
135	Perkins	118.5	14.3	125.8	140.9
137	Phelps	231.6	9.5	163.5	183.2
139	Pierce	99.8	7.2	53.2	59.6
141	Platte	151.8	8.8	99.1	111.0
143	Polk	137.0	9.1	92.8	104.0
145	Red Willow	57.0	17.7	74.9	83.9
147	Richardson	2.0	4.5	0.7	0.8
149	Rock	36.8	8.0	21.8	24.4
151	Saline	82.0	6.8	41.5	46.5
153	Sarpy	8.3	7.2	4.4	4.9
155	Saunders	70.1	7.6	39.4	44.2
157	Scotts Bluff	173.7	27.6	356.4	399.2
159	Seward	111.7	7.4	61.7	69.2
161	Sheridan	55.1	19.9	81.5	91.3
163	Sherman	63.8	9.5	44.9	50.3
165	Sioux	34.0	27.9	70.8	79.3
167	Stanton	29.2	7.3	15.8	17.7
169	Thayer	114.4	4.8	40.6	45.5
171	Thomas	3.6	15.8	4.2	4.7
173	Thurston	9.7	5.2	3.8	4.2
175	Valley	74.6	12.0	66.7	74.8
177	Washington	18.6	7.1	9.8	11.0
179	Wayne	23.8	5.6	9.9	11.1
181	Webster	42.7	5.3	16.7	18.7
183	Wheeler	40.3	7.7	23.1	25.9
185	York	226.9	8.7	147.2	164.9
Total[3]		6,967.1		5,632.8	6,310.0

[1]Area in thousands of acres; rounded to the nearest 100.
[2]Volume in thousands of acre-feet; rounded to the nearest 100.
[3]Figures may not add to totals due to independent rounding.

Table 12
Estimated Total Irrigated Area and Irrigation Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Irrigated Area[1]	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
White River - Hat Creek Basin				
10120106	0.0	0.0	0.0	0.0
10120108	4.1	31.9	9.8	11.0
Subregion 1012[3]	4.1		9.8	11.0
10140101	0.0	0.0	0.0	0.0
10140201	18.1	27.9	37.6	42.2
10140203	0.0	27.1	0.0	0.0
Subregion 1014	18.1		37.6	42.2
Niobrara River Basin				
10150001	3.6	7.6	2.0	2.3
10150002	7.5	25.0	13.9	15.6
10150003	169.0	17.8	223.9	250.8
10150004	84.5	12.6	79.3	88.8
10150005	1.8	20.7	2.8	3.2
10150006	10.1	8.5	6.4	7.2
10150007	152.2	6.7	75.7	84.8
Subregion 1015	428.8		404.1	452.6
Missouri Tributaries River Basin (upper part)				
10170101	87.1	6.5	41.9	47.0
Subregion 1017	87.1		41.9	47.0
North Platte River Basin				
10180009	313.5	25.2	588.5	659.2
10180012	5.9	27.9	12.3	13.7
10180013	29.2	16.5	35.8	40.1
10180014	72.9	20.0	108.3	121.3
Subregion 1018	421.6		744.9	834.4
South Platte River Basin				
10190012	1.2	13.7	1.2	1.3
10190015	2.0	14.9	2.2	2.4
10190016	51.1	14.5	55.3	62.0
10190017	11.1	13.7	11.3	12.6
10190018	121.1	17.0	153.4	171.9
Subregion 1019	186.4		223.4	250.2
Middle Platte River Basin				
10200101	666.8	12.3	611.8	685.4
10200102	203.7	9.8	149.0	166.9
10200103	397.4	9.5	279.4	313.0
Lower Platte River Basin				
10200201	162.7	8.5	102.3	114.6
10200202	68.3	7.2	36.4	40.8
10200203	72.5	7.5	40.7	45.6
Subregion 1020	1,571.5		1,219.8	1,366.4
Loup River Basin				
10210001	5.4	16.4	6.6	7.4
10210002	9.0	15.1	10.1	11.3
10210003	169.4	12.7	160.2	179.4
10210004	110.6	11.7	96.4	108.0
10210005	84.9	11.4	71.7	80.4
10210006	17.6	13.3	17.5	19.6
10210007	117.5	11.3	98.6	110.4
10210008	12.7	9.5	9.0	10.0
10210009	230.3	9.0	155.0	173.6
10210010	96.8	8.8	63.6	71.3
Subregion 1021	854.3		688.6	771.4
Elkhorn River Basin				
10220001	258.1	7.3	140.2	157.1
10220002	140.4	7.2	75.4	84.4
10220003	163.4	7.1	86.3	96.7
10220004	81.5	5.6	33.9	38.0
Subregion 1022	643.4		335.9	376.2
Missouri Tributaries River Basin (lower part)				
10230001	60.9	0.0	23.9	26.8
10230006	8.9	7.3	4.8	5.4
Subregion 1023	69.9		28.7	32.2
Nemaha River Basin				
10240001	3.5	8.1	2.1	2.4
10240005	1.0	5.1	0.4	0.4
10240006	12.3	7.1	6.4	7.2
10240007	1.4	5.8	0.6	0.7
10240008	16.8	6.2	7.7	8.7
Subregion 1024	35.0		17.3	19.4
Republican River Basin				
10250001	1.1	23.1	1.9	2.2
10250002	72.5	18.0	97.0	108.6
10250003	0.3	17.9	0.3	0.4
10250004	157.9	17.7	208.4	233.5
10250005	122.0	17.5	159.1	178.2
10250006	135.0	15.2	152.2	170.5
10250007	13.8	17.6	18.1	20.3
10250008	47.1	16.8	59.0	66.1
10250009	149.8	11.7	130.3	145.9
10250011	15.0	9.9	11.0	12.3
10250014	20.2	13.6	20.4	22.9
10250015	3.2	8.1	1.9	2.2
10250016	218.1	6.7	109.0	122.1
Subregion 1025	955.9		968.7	1,085.2
Big Blue River Basin				
10270201	365.2	8.6	233.8	261.9
10270202	132.8	6.2	61.7	69.1
10270203	514.8	7.9	302.2	338.5
10270204	139.7	6.5	68.0	76.2
10270205	0.8	7.5	0.5	0.5
Little Blue River Basin				
10270206	508.6	6.2	235.5	263.8
10270207	29.1	4.9	10.6	11.8
Subregion 1027	1,691.1		912.3	1,022.0
Total[3]	6,967.1		5,632.8	6,310.0

[1]Area in thousands of acres; rounded to the nearest 100.
[2]Volume in thousands of acre-feet; rounded to the nearest 100.
[3]Figures may not add to totals due to independent rounding

Table 13
Estimated Surface-Water Irrigated Area and Water Use in Nebraska Counties, 1990

County Name	Land with Water Rights[1]	Irrigated Area[1]	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
Adams	8.4	4.4	9.5	3.1	3.5
Antelope	3.7	2.1	13.5	2.2	2.4
Arthur	0.0	0.0	0.0	0.0	0.0
Banner	3.0	1.0	24.0	1.8	2.0
Blaine	0.8	0.5	22.0	0.8	0.9
Boone	6.4	4.5	13.5	4.5	5.1
Box Butte	6.5	3.4	28.0	7.0	7.8
Boyd	6.5	2.7	9.2	1.8	2.1
Brown	38.4	21.0	18.3	28.5	31.9
Buffalo	6.3	5.6	13.7	5.8	6.4
Burt	5.5	4.7	7.2	2.5	2.8
Butler	5.8	3.1	11.9	2.7	3.0
Cass	8.5	2.1	9.4	1.5	1.7
Cedar	9.3	5.2	9.2	3.5	4.0
Chase	2.0	0.8	28.3	1.6	1.8
Cherry	20.6	3.2	27.1	6.4	7.2
Cheyenne	2.5	1.2	21.9	2.0	2.2
Clay	14.5	6.9	9.3	4.8	5.4
Colfax	4.1	2.4	11.3	2.1	2.3
Cuming	4.7	2.3	7.5	1.3	1.4
Custer	35.1	30.5	19.0	43.2	48.4
Dakota	0.3	0.3	7.0	0.1	0.2
Dawes	25.2	12.8	32.4	30.9	34.7
Dawson	116.2	56.0	19.1	79.7	89.3
Deuel	2.8	0.4	22.9	0.7	0.8
Dixon	3.6	3.2	7.2	1.7	1.9
Dodge	10.2	4.7	9.8	3.4	3.8
Douglas	1.1	0.2	10.4	0.1	0.1
Dundy	7.6	2.0	31.5	4.7	5.3
Fillmore	10.8	5.5	10.0	4.1	4.6
Franklin	15.2	12.7	7.7	7.3	8.2
Frontier	3.0	1.8	23.7	3.2	3.6
Furnas	22.9	15.3	15.6	17.8	19.9
Gage	20.8	7.2	8.0	4.3	4.8
Garden	12.1	8.5	26.8	16.9	18.9
Garfield	3.1	2.4	15.2	2.7	3.1
Gosper	12.9	11.1	16.7	13.8	15.5
Grant	8.8	0.0	0.0	0.0	0.0
Greeley	7.7	2.0	13.6	2.0	2.2
Hall	3.1	1.4	12.7	1.3	1.5
Hamilton	3.5	1.8	12.5	1.6	1.8
Harlan	10.9	7.7	10.7	6.1	6.9
Hayes	2.2	1.5	28.7	3.1	3.5
Hitchcock	18.0	5.1	28.8	10.9	12.2
Holt	20.3	7.0	10.9	5.7	6.4
Hooker	0.3	0.1	27.4	0.3	0.3
Howard	71.0	42.9	13.7	43.7	49.0
Jefferson	11.6	3.7	7.0	1.9	2.2
Johnson	6.5	1.5	8.4	1.0	1.1
Kearney	25.0	22.5	10.8	18.1	20.2
Keith	14.7	11.8	24.3	21.4	24.0
Keya Paha	6.4	1.4	14.8	1.5	1.7
Kimball	3.4	1.8	23.4	3.1	3.5
Knox	6.9	6.4	10.9	5.2	5.9
Lancaster	9.0	1.7	9.5	1.2	1.3
Lincoln	51.7	35.6	26.2	69.3	77.6
Logan	0.5	0.1	26.2	0.3	0.3
Loup	5.3	3.8	18.1	5.1	5.7
McPherson	0.0	0.0	0.0	0.0	0.0
Madison	4.1	2.7	12.8	2.6	2.9
Merrick	1.8	0.7	13.6	0.7	0.7
Morrill	130.3	60.4	26.6	119.4	133.8
Nance	26.6	16.2	13.5	16.3	18.3
Nemaha	5.5	2.3	7.8	1.3	1.5
Nuckolls	14.5	10.5	6.9	5.4	6.1
Otoe	12.0	4.8	8.6	3.1	3.4
Pawnee	2.8	2.5	7.6	1.4	1.6
Perkins	0.0	0.0	0.0	0.0	0.0
Phelps	60.6	73.9	11.9	65.5	73.4
Pierce	3.1	2.5	12.3	2.2	2.5
Platte	5.0	1.9	12.9	1.8	2.1
Polk	0.5	0.2	12.7	0.2	0.2
Red Willow	31.1	10.3	22.7	17.4	19.5
Richardson	10.5	1.0	5.9	0.4	0.5
Rock	4.3	0.9	14.1	0.9	1.0
Saline	11.3	6.5	9.6	4.6	5.2
Sarpy	1.7	0.4	10.0	0.3	0.3
Saunders	11.1	4.7	10.9	3.8	4.2
Scotts Bluff	245.2	150.0	28.6	318.9	357.3
Seward	16.0	10.5	10.6	8.3	9.3
Sheridan	16.2	10.6	29.1	22.9	25.7
Sherman	31.2	5.5	14.7	6.0	6.7
Sioux	56.0	22.3	31.9	52.9	59.2
Stanton	1.5	1.4	10.8	1.1	1.2
Thayer	5.7	2.9	7.0	1.5	1.7
Thomas	0.5	0.2	26.0	0.3	0.4
Thurston	1.2	1.0	6.9	0.5	0.6
Valley	45.0	28.5	15.5	32.8	36.8
Washington	5.9	4.5	8.8	3.0	3.3
Wayne	1.3	1.2	9.0	0.8	0.9
Webster	10.3	7.8	7.3	4.2	4.7
Wheeler	1.2	0.1	13.8	0.1	0.1
York	4.2	2.2	12.3	2.0	2.3
Total[3]	1,525.3	862.7		1,224.7	1,371.9

[1]Area in thousands of acres; rounded to the nearest 100.
[2]Volume in thousands of acre-feet; rounded to the nearest 100.
[3]Figures may not add to totals due to independent rounding.

Table 14
Estimated Surface-Water Irrigated Area and Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Land with Water Rights[1]	Irrigated Area[1]	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
White River - Hat Creek Basin					
10120106	0.0	0.0	0.0	0.0	0.0
10120108	10.4	4.1	31.9	9.8	11.0
Subregion 1012[3]	10.4	4.1		9.8	11.0
10140101	0.0	0.0	0.0	0.0	0.0
10140201	23.9	12.3	32.1	29.4	33.0
10140203	0.0	0.0	27.1	0.0	0.0
Subregion 1014	24.0	12.3		29.4	33.0
Niobrara River Basin					
10150001	4.3	1.9	9.4	1.3	1.5
10150002	8.4	3.7	30.8	8.4	9.4
10150003	24.9	13.8	29.2	30.1	33.7
10150004	62.7	26.1	18.1	35.1	39.4
10150005	5.3	0.8	27.1	1.7	1.9
10150006	4.6	1.3	11.9	1.2	1.3
10150007	16.4	8.5	10.9	6.9	7.7
Subregion 1015	126.6	56.1		84.7	94.9
Missouri Tributaries River Basin (upper part)					
10170101	12.7	8.5	9.4	6.0	6.7
Subregion 1017	12.7	8.5		6.0	6.7
North Platte River Basin					
10180009	409.2	224.3	28.2	471.3	527.9
10180012	8.8	5.4	28.6	11.5	12.8
10180013	8.5	3.6	25.9	6.9	7.7
10180014	41.6	29.4	25.9	56.7	63.5
Subregion 1018	468.2	262.7		546.3	612.0
South latte River Basin					
10190012	0.0	0.0	0.0	0.0	0.0
10190015	0.2	0.1	23.4	0.2	0.3
10190016	6.8	3.0	22.8	5.1	5.8
10190017	0.0	0.0	0.0	0.0	0.0
10190018	19.1	13.3	25.1	24.9	27.9
Subregion 1019	26.1	16.5		30.2	33.9
Middle Platte River Basin					
10200101	224.5	169.7	15.1	190.2	213.1
10200102	0.9	0.4	13.4	0.4	0.5
10200103	4.8	2.2	13.1	2.2	2.4
Lower Platte River Basin					
10200201	7.3	3.9	11.8	3.4	3.8
10200202	3.9	1.1	10.0	0.8	0.9
10200203	21.6	7.7	10.6	6.1	6.8
Subregion 1020	263.1	185.0		203.1	227.5
Loup River Basin					
10210001	7.7	0.4	25.3	0.8	0.9
10210002	2.1	0.0	26.0	0.0	0.0
10210003	123.7	70.6	15.9	83.7	93.8
10210004	5.6	4.6	16.8	5.7	6.4
10210005	5.1	3.1	16.8	3.9	4.4
10210006	2.5	1.2	20.5	1.8	2.0
10210007	64.0	38.2	15.1	43.1	48.2
10210008	0.6	0.3	18.0	0.4	0.5
10210009	27.5	16.4	13.5	16.4	18.4
10210010	10.2	5.8	13.6	5.9	6.6
Subregion 1021	249.0	140.7		161.8	181.2
Elkhorn River Basin					
10220001	9.0	4.2	12.5	3.9	4.4
10220002	3.4	2.7	12.3	2.5	2.8
10220003	22.1	13.3	9.3	9.2	10.3
10220004	11.6	8.0	8.0	4.8	5.4
Subregion 1022	46.2	28.2		20.4	22.8
Missouri Tributaries River Basin (lower part)					
10230001	2.7	2.2	7.9	1.3	1.4
10230006	1.2	0.8	8.9	0.5	0.6
Subregion 1023	3.9	3.0		1.8	2.0
Nemaha River Basin					
10240001	8.3	2.4	9.1	1.6	1.8
10240005	0.4	0.1	7.1	0.0	0.0
10240006	15.7	6.1	8.4	3.8	4.3
10240007	4.0	0.5	7.4	0.3	0.3
10240008	16.9	5.0	7.7	2.8	3.2
Subregion 1024	45.2	14.0		8.6	9.6
Republican River Basin					
10250001	1.6	0.4	31.5	1.0	1.1
10250002	5.1	1.3	31.5	3.2	3.5
10250003	0.0	0.0	0.0	0.0	0.0
10250004	44.0	14.3	24.2	25.7	28.8
10250005	8.2	2.9	28.7	6.1	6.9
10250006	0.6	0.3	28.4	0.5	0.6
10250007	1.4	0.7	26.4	1.4	1.6
10250008	3.7	2.2	22.8	3.7	4.2
10250009	26.1	18.0	14.3	19.1	21.4
10250011	4.0	2.7	13.5	2.8	3.1
10250014	2.3	1.3	16.9	1.7	1.9
10250015	0.7	0.5	10.7	0.4	0.4
10250016	37.8	29.9	7.8	17.3	19.4
Subregion 1025	135.5	74.6		82.9	92.8
Big Blue River Basin					
10270201	10.4	6.2	11.3	5.2	5.8
10270202	34.7	14.5	8.8	9.5	10.7
10270203	24.4	12.7	10.5	9.9	11.1
10270204	12.0	6.4	9.7	4.6	5.2
10270205	1.7	0.6	8.2	0.4	0.4
Little Blue River Basin					
10270206	26.1	14.6	8.5	9.2	10.3
10270207	5.1	1.8	7.0	0.9	1.1
Subregion 1027	114.5	56.9		39.8	44.6
Total[3]	1,525.3	862.7		1,224.7	1,371.9

[1]Area in thousands of acres; rounded to the nearest 100.
[2]Volume in thousands of acre-feet; rounded to the nearest 100.
[3]Figures may not add to totals due to independent rounding.

Estimated Ground-Water Irrigated Area and Water Use in Nebraska Counties, 1990

County Name	Registered Wells	Irrigated Area[1] Spray	Irrigated Area[1] Flood	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
Adams	1,943	61.7	112.6	6.6	85.8	96.2
Antelope	1,525	166.8	1.0	7.5	94.0	105.3
Arthur	83	8.7	0.0	15.5	10.0	11.2
Banner	282	11.2	3.0	14.4	15.2	17.0
Blaine	109	9.0	1.0	12.7	9.4	10.6
Boone	1,192	82.1	49.5	8.6	84.0	94.0
Box Butte	1,029	91.2	16.6	16.5	132.0	147.8
Boyd	62	3.8	0.1	5.2	1.5	1.7
Brown	457	32.2	0.9	10.3	25.2	28.3
Buffalo	3,240	75.4	139.1	9.5	152.0	170.3
Burt	439	15.2	31.9	5.0	17.6	19.7
Butler	1,087	41.8	59.2	8.1	61.1	68.4
Cass	104	0.9	1.2	6.4	1.0	1.1
Cedar	541	40.3	15.6	5.7	23.5	26.3
Chase	1,414	124.2	28.3	16.8	190.9	213.9
Cherry	407	20.0	0.5	15.2	23.2	26.0
Cheyenne	532	29.2	10.5	13.4	39.7	44.5
Clay	2,017	56.4	124.2	6.6	88.1	98.7
Colfax	838	11.5	47.6	8.2	36.0	40.4
Cuming	354	16.1	17.0	5.0	12.3	13.7
Custer	1,746	97.9	62.9	12.2	145.6	163.1
Dakota	136	6.0	8.6	4.8	5.2	5.8
Dawes	252	4.6	1.1	19.3	8.2	9.2
Dawson	3,498	28.3	148.6	14.1	184.9	207.2
Deuel	302	5.9	11.0	15.9	20.0	22.4
Dixon	151	9.4	5.9	4.6	5.3	5.9
Dodge	1,361	22.2	64.5	7.0	45.0	50.4
Douglas	373	1.9	10.6	7.7	7.1	8.0
Dundy	1,004	82.6	4.7	17.9	116.0	130.0
Fillmore	1,803	96.0	84.8	6.5	87.9	98.5
Franklin	911	23.9	45.5	5.3	27.6	30.9
Frontier	658	13.1	47.0	17.1	76.4	85.6
Furnas	675	6.3	31.0	11.5	31.8	35.6
Gage	547	20.0	22.5	5.4	17.0	19.0
Garden	321	16.7	5.6	16.3	27.1	30.3
Garfield	205	9.6	3.3	9.3	8.9	9.9
Gosper	607	12.2	48.2	12.1	54.4	61.0
Grant	24	1.1	0.0	16.6	1.4	1.6
Greeley	623	40.6	23.4	8.6	41.1	46.0
Hall	3,600	27.1	176.4	9.4	142.9	160.1
Hamilton	2,816	83.7	163.1	8.7	159.4	178.6
Harlan	904	15.9	46.7	7.6	35.5	39.8
Hayes	350	23.6	10.0	17.7	44.3	49.6
Hitchcock	515	4.1	24.0	21.2	44.4	49.7
Holt	2,389	181.9	11.5	6.2	89.4	100.2
Hooker	33	2.5	0.0	15.2	2.9	3.2
Howard	853	29.7	32.4	9.1	42.3	47.4
Jefferson	564	28.8	21.8	4.6	17.1	19.2
Johnson	144	3.6	5.3	5.7	3.8	4.2
Kearney	1,734	58.9	107.1	7.5	92.3	103.4
Keith	949	30.4	35.0	16.3	79.3	88.8
Keya Paha	167	7.5	0.0	8.2	4.6	5.2
Kimball	332	17.4	5.9	14.3	24.8	27.8
Knox	368	37.4	3.8	6.3	19.2	21.5
Lancaster	358	5.4	7.9	6.5	6.4	7.2
Lincoln	1,798	102.6	38.6	16.1	168.6	188.9
Logan	163	18.9	1.9	15.0	23.2	26.0
Loup	111	4.8	2.0	11.2	5.7	6.4
McPherson	99	7.0	0.0	15.0	7.8	8.8
Madison	740	54.4	18.5	7.8	42.2	47.3
Merrick	4,154	32.5	131.3	9.9	120.3	134.8
Morrill	686	36.4	10.1	16.0	55.3	62.0
Nance	801	14.3	27.1	9.4	29.0	32.4
Nemaha	78	0.4	2.3	5.7	1.2	1.3
Nuckolls	576	10.2	28.5	4.9	14.2	16.0
Otoe	70	0.7	0.9	5.8	0.7	0.8
Pawnee	13	0.7	0.8	5.1	0.6	0.6
Perkins	906	114.1	4.4	14.3	125.8	140.9
Phelps	1,832	50.7	107.0	8.4	98.0	109.8
Pierce	906	89.2	8.1	7.0	50.9	57.1
Platte	1,534	66.1	83.7	8.7	97.2	108.9
Polk	1,576	34.2	102.5	9.1	92.6	103.7
Red Willow	852	8.5	38.2	16.6	57.5	64.4
Richardson	43	1.1	0.0	3.3	0.3	0.3
Rock	637	35.9	0.0	7.8	20.9	23.4
Saline	980	28.7	46.8	6.6	36.9	41.3
Sarpy	204	2.5	5.3	7.0	4.1	4.6
Saunders	812	29.6	35.8	7.3	35.6	39.9
Scotts Bluff	653	2.8	20.9	21.3	37.4	41.9
Seward	1,205	47.5	53.7	7.1	53.4	59.8
Sheridan	557	33.6	10.8	17.7	58.6	65.6
Sherman	537	43.6	14.8	9.0	38.9	43.6
Sioux	251	7.1	4.7	20.4	17.9	20.0
Stanton	303	14.3	13.5	7.1	14.7	16.5
Thayer	1,239	50.7	60.9	4.7	39.1	43.8
Thomas	38	2.8	0.5	15.3	3.9	4.3
Thurston	92	1.5	7.2	5.0	3.3	3.6
Valley	515	28.5	17.6	9.9	33.9	38.0
Washington	117	1.8	12.3	6.6	6.9	7.7
Wayne	197	17.5	5.1	5.4	9.1	10.2
Webster	477	18.7	16.2	4.8	12.5	14.0
Wheeler	522	40.2	0.0	7.7	23.0	25.7
York	2,754	65.4	159.2	8.7	145.1	162.6
Total[3]	77,956	3,073.1	3,031.3		4,408.1	4,938.1

[1]Area in thousands of acres; rounded to the nearest 100.
[2]Volume in thousands of acre-feet; rounded to the nearest 100.
[3]Figures may not add to totals due to independent rounding.

Table 16
Estimated Ground-Water Irrigated Area and Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Registered Wells	Irrigated Area[1] Spray	Irrigated Area[1] Flood	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
White River - Hat Creek Basin						
10120106	0	0.0	0.0	0.0	0.0	0.0
10120108	0	0.0	0.0	0.0	0.0	0.0
Subregion 1012[3]	0	0.0	0.0		0.0	0.0
10140101	0	0.0	0.0	0.0	0.0	0.0
10140201	199	4.5	1.3	19.0	8.2	9.2
10140203	0	0.0	0.0	0.0	0.0	0.0
Subregion 1014	199	4.5	1.3		8.2	9.2
Niobrara River Basin						
10150001	26	1.7	0.1	5.5	0.7	0.8
10150002	84	2.6	1.2	19.4	5.5	6.2
10150003	1,698	127.8	27.3	16.8	193.8	217.1
10150004	907	56.9	1.6	10.2	44.2	49.5
10150005	19	1.0	0.1	15.6	1.2	1.3
10150006	178	8.7	0.1	8.0	5.2	5.8
10150007	1,657	136.0	7.7	6.4	68.8	77.0
Subregion 1015	4,569	334.6	38.0		319.4	357.8
Missouri Tributaries River Basin (upper part)						
10170101	734	64.4	14.1	6.2	36.0	40.3
Subregion 1017	734	64.4	14.1		36.0	40.3
North Platte River Basin						
10180009	1,652	52.4	36.8	17.7	117.2	131.3
10180012	14	0.1	0.4	21.3	0.8	0.9
10180013	454	19.8	5.9	15.2	28.9	32.4
10180014	562	32.2	11.3	15.9	51.6	57.8
Subregion 1018	2,682	104.5	54.4		198.5	222.4
South Platte River Basin						
10190012	16	0.8	0.3	13.7	1.2	1.3
10190015	26	1.4	0.5	14.3	1.9	2.2
10190016	684	33.5	14.7	14.0	50.2	56.2
10190017	151	8.2	2.9	13.7	11.3	12.6
10190018	1,485	62.5	45.3	16.0	128.6	144.0
Subregion 1019	2,362	106.3	63.7		193.1	216.3
Middle Platte River Basin						
10200101	7,334	153.9	343.2	11.4	421.6	472.3
10200102	3,264	58.3	145.0	9.8	148.6	166.5
10200103	7,411	93.0	302.2	9.4	277.2	310.6
Lower Platte River Basin						
10200201	1,819	61.6	97.3	8.4	99.0	110.9
10200202	1,136	19.1	48.1	7.1	35.6	39.9
10200203	988	28.7	36.1	7.2	34.6	38.8
Subregion 1020	21,952	414.7	971.8		1,016.7	1,138.9
Loup River Basin						
10210001	69	4.4	0.5	15.6	5.8	6.5
10210002	101	8.4	0.6	15.0	10.1	11.3
10210003	1,090	61.6	37.3	10.4	76.5	85.7
10210004	1,291	59.2	46.9	11.5	90.7	101.6
10210005	866	52.0	29.8	11.1	67.8	75.9
10210006	229	14.2	2.2	12.8	15.6	17.5
10210007	917	48.4	30.8	9.4	55.5	62.2
10210008	207	11.9	0.5	9.3	8.6	9.6
10210009	2,489	120.1	93.9	8.7	138.6	155.2
10210010	1,025	62.5	28.5	8.5	57.7	64.7
Subregion 1021	8,284	442.7	270.9		526.8	590.1

(Continued on Next Page)

Estimated Ground-Water Irrigated Area and Water Use in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Registered Wells	Irrigated Area[1] Spray	Irrigated Area[1] Flood	Average Seasonal Application (in./ac.)	Water Use Rate (Mgal/d)	Annual Volume[2]
Elkhorn River Basin						
10220001	2,821	235.1	18.8	7.2	136.3	152.7
10220002	1,277	127.0	10.7	7.1	72.9	81.7
10220003	1,949	61.1	89.1	6.9	77.2	86.4
10220004	708	44.7	28.7	5.3	29.1	32.6
Subregion 1022	6,755	467.9	147.3		315.5	353.4
Missouri Tributaries River Basin (lower part)						
10230001	541	18.4	40.3	5.2	22.6	25.3
10230006	180	1.7	6.5	7.1	4.3	4.8
Subregion 1023	721	20.1	46.8		26.9	30.1
Nemaha River Basin						
10240001	55	0.5	0.7	6.1	0.5	0.6
10240005	30	0.4	0.5	4.9	0.3	0.4
10240006	160	2.1	4.1	5.7	2.6	3.0
10240007	12	0.5	0.4	4.9	0.3	0.4
10240008	209	5.3	6.5	5.6	4.9	5.5
Subregion 1024	466	8.7	12.2		8.7	9.8
Republican River Basin						
10250001	8	0.7	0.0	17.9	0.9	1.0
10250002	796	66.0	5.1	17.7	93.8	105.1
10250003	3	0.2	0.0	17.9	0.3	0.4
10250004	1,948	81.7	62.0	17.1	182.7	204.7
10250005	1,204	89.7	29.4	17.3	152.9	171.3
10250006	1,113	122.1	12.6	15.1	151.7	169.9
10250007	168	4.8	8.3	17.2	16.7	18.7
10250008	536	21.0	23.9	16.6	55.3	61.9
10250009	1,682	30.0	101.8	11.3	111.1	124.5
10250011	194	2.7	9.5	9.0	8.3	9.3
10250014	343	3.3	15.6	13.4	18.8	21.0
10250015	39	0.7	2.0	7.6	1.5	1.7
10250016	2,362	67.1	121.0	6.6	91.7	102.8
Subregion 1025	10,396	489.9	391.3		885.8	992.3
Big Blue River Basin						
10270201	4,164	118.1	240.9	8.6	228.6	256.1
10270202	1,447	56.3	62.0	5.9	52.2	58.4
10270203	5,885	173.1	328.9	7.8	292.3	327.4
10270204	1,476	63.9	69.4	6.4	63.4	71.0
10270205	3	0.1	0.1	5.4	0.1	0.1
Little Blue River Basin						
10270206	5,557	189.1	305.0	6.2	226.3	253.5
10270207	304	14.2	13.1	4.7	9.6	10.8
Subregion 1027	18,836	614.7	1,019.4		872.5	977.4
Total[3]	77,956	3,073.1	3,031.3		4,408.1	4,938.1

[1]Area in thousands of acres; rounded to the nearest 100.
[2]Volume in thousands of acre-feet; rounded to the nearest 100.
[3]Figures may not add to totals due to independent rounding.

Table 17
Estimated Livestock Water Use in Nebraska Counties,1990

County Number and Name	Water Use Ground-Water	Water Use Surface-Water	Water Use Total	Annual Volume Ground-Water	Annual Volume Surface-Water	Annual Volume Total
	----- (Mgal/d) -----			----- (acre-ft)[1] -----		
001 Adams	1.34	0.28	1.62	1,500	310	1,820
003 Antelope	1.87	0.58	2.45	2,100	650	2,750
005 Arthur	0.47	0.11	0.58	530	120	650
007 Banner	0.37	0.09	0.46	410	100	510
009 Blaine	0.56	0.12	0.68	630	130	760
011 Boone	1.64	0.23	1.87	1,840	260	2,100
013 Box Butte	0.86	0.20	1.06	960	220	1,180
015 Boyd	0.80	0.15	0.95	900	170	1,070
017 Brown	1.09	0.24	1.33	1,220	270	1,490
019 Buffalo	1.53	0.32	1.85	1,720	360	2,080
021 Burt	0.92	0.11	1.03	1,030	120	1,150
023 Butler	0.76	0.11	0.87	850	120	970
025 Cass	0.53	0.07	0.60	590	80	670
027 Cedar	2.14	0.25	2.39	2,400	280	2,680
029 Chase	0.82	0.17	0.99	920	190	1,110
031 Cherry	4.07	0.99	5.06	4,560	1,110	5,670
033 Cheyenne	0.80	0.17	0.97	900	190	1,090
035 Clay	2.12	0.26	2.38	2,380	290	2,670
037 Colfax	1.51	0.20	1.71	1,690	220	1,910
039 Cuming	3.71	0.56	4.27	4,160	630	4,790
041 Custer	3.15	0.69	3.84	3,530	770	4,300
043 Dakota	0.31	0.05	0.36	350	60	410
045 Dawes	0.77	0.18	0.95	860	200	1,060
047 Dawson	3.48	0.67	4.15	3,900	750	4,650
049 Deuel	0.24	0.05	0.29	270	60	330
051 Dixon	1.07	0.16	1.23	1,200	180	1,380
053 Dodge	1.14	0.14	1.28	1,280	160	1,440
055 Douglas	0.40	0.07	0.47	450	80	530
057 Dundy	0.82	0.18	1.00	920	200	1,120
059 Fillmore	1.07	0.11	1.18	1,200	120	1,320
061 Franklin	0.70	0.14	0.84	780	160	940
063 Frontier	0.81	0.17	0.98	910	190	1,100
065 Furnas	1.11	0.16	1.27	1,240	180	1,420
067 Gage	1.47	0.13	1.60	1,650	150	1,800
069 Garden	3.73	0.31	4.04	4,180	350	4,530
071 Garfield	0.51	0.12	0.63	570	130	700
073 Gosper	0.54	0.11	0.65	610	120	730
075 Grant	0.62	0.15	0.77	700	170	870
077 Greeley	0.79	0.15	0.94	890	170	1,060
079 Hall	1.16	0.23	1.39	1,300	260	1,560
081 Hamilton	0.75	0.12	0.87	840	130	980
083 Harlan	0.71	0.15	0.86	800	170	970
085 Hayes	0.72	0.17	0.89	810	190	1,000
087 Hitchcock	0.61	0.12	0.73	680	130	810
089 Holt	4.14	3.29	7.43	4,640	3,690	8,330
091 Hooker	0.27	0.06	0.33	300	70	370
093 Howard	0.97	0.18	1.15	1,090	200	1,290
095 Jefferson	0.81	0.10	0.91	910	110	1,020
097 Johnson	0.53	0.07	0.60	590	80	670
099 Kearney	1.92	0.21	2.13	2,150	240	2,390
101 Keith	0.92	9.14	10.06	1,030	10,250	11,280
103 Keya Paha	0.76	0.16	0.92	850	180	1,030
105 Kimball	0.28	0.07	0.35	310	80	370
107 Knox	2.57	0.38	2.95	2,880	430	3,310
109 Lancaster	0.69	0.09	0.78	770	100	870
111 Lincoln	2.19	0.51	2.70	2,450	570	3,020
113 Logan	0.49	0.12	0.61	550	130	680
115 Loup	0.38	0.09	0.47	430	100	530
117 McPherson	1.24	0.17	1.41	1,390	190	1,580
119 Madison	0.45	0.10	0.55	500	110	610
121 Merrick	1.18	0.24	1.42	1,320	270	1,590
123 Morrill	1.26	0.30	1.56	1,410	340	1,750
125 Nance	0.74	0.14	0.88	830	160	990
127 Nemaha	0.60	0.07	0.67	670	80	750
129 Nuckolls	0.84	0.12	0.96	940	130	1,070
131 Otoe	0.86	0.10	0.96	960	110	1,070
133 Pawnee	0.61	0.07	0.68	680	80	760
135 Perkins	0.35	0.08	0.43	390	90	480
137 Phelps	1.65	0.37	2.02	1,850	410	2,260
139 Pierce	1.47	0.22	1.69	1,650	250	1,900
141 Platte	2.10	0.18	2.28	2,350	200	2,550
143 Polk	1.07	0.18	1.25	1,200	200	1,400
145 Red Willow	1.09	0.30	1.39	1,220	340	1,560
147 Richardson	0.72	0.10	0.82	810	110	920
149 Rock	1.03	0.25	1.28	1,150	280	1,430
151 Saline	0.62	0.09	0.71	700	100	800
153 Sarpy	1.11	0.10	1.21	1,240	110	1,350
155 Saunders	1.27	0.22	1.49	1,420	250	1,670
157 Scotts Bluff	1.98	0.46	2.44	2,220	520	2,740
159 Seward	0.83	0.11	0.94	930	120	1,050
161 Sheridan	1.68	0.40	2.08	1,880	450	2,330
163 Sherman	0.84	0.16	1.00	940	180	1,120
165 Sioux	0.85	0.21	1.06	950	240	1,190
167 Stanton	1.31	0.23	1.54	1,470	260	1,730
169 Thayer	0.77	0.14	0.91	860	160	1,020
171 Thomas	0.41	0.10	0.51	460	110	570
173 Thurston	0.68	0.09	0.77	760	100	860
175 Valley	1.12	0.20	1.32	1,260	220	1,480
177 Washington	0.87	0.10	0.97	980	110	1,090
179 Wayne	1.27	0.19	1.46	1,420	210	1,630
181 Webster	0.83	0.17	1.00	930	190	1,120
183 Wheeler	1.96	0.47	2.43	2,200	530	2,730
185 York	1.15	0.12	1.27	1,290	130	1,420
Total[2]	108.32	30.76	139.08	121,390	34,470	155,870

[1]Rounded to the nearest 10 acre-feet.
[2]Figures may not add to totals due to independent rounding.

Hydrologic Unit Number	Water Use Ground-Water	Water Use Surface-Water	Water Use Total	Annual Volume Ground-Water	Annual Volume Surface-Water	Annual Volume Total
	----- (Mgal/d) ----			----- (acre-ft)[1] ----		
White River - Hat Creek Basin						
10120106	0.02	0.00	0.02	20	0	20
10120108	0.18	0.04	0.22	200	40	240
Subregion 1012[2]	0.20	0.04	0.24	220	40	260
10140201	0.90	0.21	1.11	1,010	240	1,250
10140203	0.02	0.01	0.03	20	10	30
Subregion 1014	0.92	0.22	1.14	1,030	250	1,280
Niobrara River Basin						
10150001	0.59	0.10	0.69	660	110	770
10150002	0.42	0.10	0.52	470	110	580
10150003	2.80	0.67	3.47	3,140	750	3,890
10150004	2.71	0.61	3.32	3,040	680	3,720
10150005	0.60	0.15	0.75	670	170	840
10150006	0.69	0.14	0.83	770	160	930
10150007	2.90	0.79	3.69	3,250	890	4,140
Subregion 1015	10.71	2.56	13.27	12,000	2,870	14,870
Missouri Tributaries River Basin (upper part)						
10170101	4.12	0.56	4.68	4,620	630	5,250
Subregion 1017	4.12	0.56	4.68	4,620	630	5,250
North Platte River Basin						
10180009	6.30	0.91	7.21	7,060	1,020	8,080
10180012	0.28	0.07	0.35	310	80	390
10180013	0.69	0.17	0.86	770	190	960
10180014	2.02	0.42	2.44	2,260	470	2,730
Subregion 1018	9.29	1.57	10.86	10,400	1,760	12,160
South Platte River Basin						
10190012	0.06	0.01	0.07	70	10	80
10190015	0.03	0.01	0.04	30	10	40
10190016	0.57	0.13	0.70	640	150	790
10190017	0.24	0.05	0.29	270	60	330
10190018	0.96	9.14	10.10	1,080	10,250	11,330
Subregion 1019	1.86	9.34	11.20	2,090	10,480	12,570
Middle Platte River Basin						
10200101	7.34	1.33	8.67	8,230	1,490	9,720
10200102	1.45	0.29	1.74	1,630	330	1,960
10200103	2.48	0.46	2.94	2,780	520	3,300
Lower Platte River Basin						
10200201	2.16	0.26	2.42	2,420	290	2,710
10200202	0.85	0.13	0.98	950	150	1,100
10200203	2.01	0.31	2.32	2,250	350	2,600
Subregion 1020	16.29	2.78	19.07	18,260	3,130	21,390
Loup River Basin						
10210001	0.96	0.23	1.19	1,080	260	1,340
10210002	1.42	0.32	1.74	1,590	360	1,950
10210003	2.06	0.42	2.48	2,310	470	2,780
10210004	2.18	0.45	2.63	2,440	500	2,940
10210005	1.28	0.28	1.56	1,430	310	1,740
10210006	1.55	0.37	1.92	1,740	410	2,150
10210007	1.89	0.36	2.25	2,120	400	2,520
10210008	0.92	0.21	1.13	1,030	240	1,270
10210009	3.28	0.56	3.84	3,680	630	4,310
10210010	2.22	0.45	2.67	2,490	500	2,990
Subregion 1021	17.76	3.65	21.41	19,910	4,080	23,990
Elkhorn River Basin						
10220001	4.66	3.42	8.08	5,220	3,830	9,050
10220002	2.07	0.31	2.38	2,320	350	2,670
10220003	7.36	1.05	8.41	8,250	1,180	9,430
10220004	3.08	0.43	3.51	3,450	480	3,930
Subregion 1022	17.17	5.21	22.38	19,240	5,840	25,080
Missouri Tributaries River Basin (lower part)						
10230001	1.38	0.18	1.56	1,550	200	1,750
10230006	1.48	0.14	1.62	1,660	160	1,820
Subregion 1023	2.86	0.32	3.18	3,210	360	3,570
Nemaha River Basin						
10240001	0.45	0.06	0.51	500	70	570
10240005	0.22	0.03	0.25	250	30	280
10240006	1.21	0.14	1.35	1,360	160	1,520
10240007	0.48	0.06	0.54	540	70	610
10240008	1.34	0.17	1.51	1,500	190	1,690
Subregion 1024	3.70	0.46	4.16	4,150	520	4,670
Republican River Basin						
10250001	0.01	0.00	0.01	10	0	10
10250002	0.44	0.10	0.54	490	110	600
10250003	0.01	0.00	0.01	10	0	10
10250004	1.97	0.51	2.48	2,210	570	2,780
10250005	0.65	0.14	0.79	730	160	890
10250006	0.72	0.16	0.88	810	180	990
10250007	0.77	0.15	0.92	860	170	1,030
10250008	0.79	0.17	0.96	890	190	1,080
10250009	1.94	0.35	2.29	2,170	390	2,560
10250011	0.25	0.05	0.30	280	60	340
10250014	0.54	0.11	0.65	610	120	730
10250015	0.06	0.01	0.07	70	10	80
10250016	2.28	0.46	2.74	2,560	520	3,080
Subregion 1025	10.43	2.21	12.64	11,700	2,480	14,180
Big Blue River Basin						
10270201	1.79	0.27	2.06	2,010	300	2,310
10270202	1.94	0.21	2.15	2,170	240	2,410
10270203	2.95	0.38	3.33	3,310	430	3,740
10270204	1.06	0.13	1.19	1,190	150	1,340
10270205	0.22	0.02	0.24	250	20	270
Little Blue River Basin						
10270206	4.41	0.74	5.15	4,940	830	5,770
10270207	0.64	0.09	0.73	720	100	820
Subregion 1027	13.01	1.84	14.85	14,590	2,070	16,660
Total[2]	108.32	30.76	139.08	121,390	34,470	155,870

[1]Rounded to the nearest 10 acre-feet.
[2]Figures may not add to totals due to independent rounding.

Table 19
Water Use Rates for Various Livestock Classes

Livestock Class	Daily Use Rate[1] (gal/d/head)	Annual Use Rate[1] (gal/d/head)
Beef Cattle and Other Cattle[2]	15.0	15.0
Calves Raised[3]	6.0	4.0
Milk Cows[4]	30.0	30.0
Hogs[5]	4.0	4.0
Pigs Raised[6]	2.0	1.0
Sheep	2.0	2.0
Lambs Raised[7]	1.0	0.6
Turkeys	0.12	0.12

[1] Adjusted from Anderson (1966) and Sykes (1955); gal/d/head, gallons per day per head]

[2] Class includes breeding stock, herd-replacement stock, cattle in feedlots, and all other cattle, excluding milk cows.

[3] Based on no water use at birth to 12 gal/d/head at 8 months of age, for an average use of 6 gal/d/head for two-thirds of a year. For computational purposes, this is equal to an annual use rate of 4 gal/d/head.

[4] Most dairy herds in Nebraska are maintained for the marketing of Grade A or Grade B whole milk. Certain sanitary procedures are required for certification to sell to these markets, and the 30 gal/d/head water use includes an estimated 5 gal/d/head for sanitation purposes.

[5] Includes water for cooling during summer months and for sanitation of feeding floors and lots.

[6] Based on no water use at birth to 4 gal/d/head at market age of 6 months, for an average of 2 gal/d/head for one-half year. For computational purposes, this is equal to an annual use rate of 1 gal/d/head.

[7] Based on no water use at birth to 2 gal/d/head at market age of 7 months, for an average use rate of 1 gal/d/head. For computational purposes, this is equal to an annual use rate of 0.6 gal/d/head.

Table 20

Power Generation Water Use in Nebraska Counties, 1990

County Number	County Name	Hydroelectric Surface-Water (Mgal/d)	Fossil Fuel Ground-Water Self-Supplied (Mgal/d)	Fossil Fuel Ground-Water Public-Supplied (Mgal/d)	Fossil Fuel Surface-Water Self-Supplied (Mgal/d)	Nuclear Surface-Water Self-Supplied (Mgal/d)	Total (Mgal/d)
001	Adams	0.00	1.11	1.11	0.00	0.00	2.22
015	Boyd	896.45	0.00	0.00	0.00	0.00	896.45
019	Buffalo	9.30	0.00	0.00	0.00	0.00	9.30
031	Cherry	6.80	0.00	0.00	0.00	0.00	6.80
047	Dawson	518.35	0.00	0.00	0.90	0.00	519.25
053	Dodge	0.00	0.29	0.29	0.00	0.00	0.58
055	Douglas	0.00	0.00	0.00	321.89	0.00	321.89
073	Gosper	533.02	0.00	0.00	0.00	0.00	533.02
077	Greeley	20.41	0.00	0.00	0.00	0.00	20.41
079	Hall	0.00	0.47	0.47	0.00	0.00	0.94
101	Keith	700.75	0.00	0.00	0.00	0.00	700.75
107	Knox	6,643.00	0.00	0.00	0.00	0.00	6,643.00
109	Lancaster	0.00	4.07	0.00	0.00	0.00	4.07
111	Lincoln	1,376.63	0.00	0.00	535.15	0.00	1,911.78
127	Nemaha	0.00	0.00	0.00	0.00	632.10	632.10
131	Otoe	0.00	0.04	0.04	318.85	0.00	318.93
141	Platte	2,242.38	0.00	0.00	0.00	0.00	2,242.38
151	Saline	0.00	0.02	0.02	0.00	0.00	0.04
177	Washington	0.00	0.00	0.00	0.00	367.92	367.92
Total		12,947.09	6.00	1.93	1,176.79	1,000.02	15,131.83

Table 21
Power Generation Water Use in Nebraska Hydrologic Units, 1990

Hydrologic Unit Number	Hydroelectric Surface-Water (Mgal/d)	Fossil Fuel Ground-Water Self-Supplied (Mgal/d)	Fossil Fuel Ground-Water Public-Supplied (Mgal/d)	Fossil Fuel Surface-Water Self-Supplied (Mgal/d)	Nuclear Surface-Water Self-Supplied (Mgal/d)	Total (Mgal/d)
10150001	896.45	0.00	0.00	0.00	0.00	896.45
10150004	6.80	0.00	0.00	0.00	0.00	6.80
10170101	6,643.00	0.00	0.00	0.00	0.00	6,643.00
10180014	531.28	0.00	0.00	0.00	0.00	531.28
10190018	700.75	0.00	0.00	535.15	0.00	1,235.90
10200101	1,906.02	0.00	0.00	0.90	0.00	1,906.92
10200102	0.00	0.47	0.47	0.00	0.00	0.94
10210009	2,242.38	0.00	0.00	0.00	0.00	2,242.38
10210010	20.41	0.00	0.00	0.00	0.00	20.41
10220003	0.00	0.29	0.29	0.00	0.00	0.58
10230006	0.00	0.00	0.00	321.89	367.92	689.81
10240001	0.00	0.04	0.04	318.85	0.00	318.89
10240005	0.00	0.00	0.00	0.00	632.10	632.10
10270202	0.00	4.09	0.02	0.00	0.00	4.11
10270206	0.00	1.11	1.11	0.00	0.00	2.22
Total	12,947.09	6.00	1.93	1,176.79	1,000.02	15,131.83

Table 22
Power Generation in Nebraska Counties, 1990

County Number	County Name	Hydroelectric (GWh)	Fossil Fuel (GWh)	Nuclear (GWh)	Total (GWh)
001	Adams	0.00	217.87	0.00	217.87
015	Boyd	11.19	0.00	0.00	11.19
019	Buffalo	0.26	0.00	0.00	0.26
031	Cherry	0.19	0.00	0.00	0.19
047	Dawson	65.67	176.68	0.00	242.35
053	Dodge	0.00	273.18	0.00	273.18
055	Douglas	0.00	2,218.41	0.00	2,218.41
073	Gosper	54.72	0.00	0.00	54.72
077	Greeley	0.57	0.00	0.00	0.57
079	Hall	0.00	443.86	0.00	443.86
101	Keith	75.15	0.00	0.00	75.15
107	Knox	310.43	0.00	0.00	310.43
109	Lancaster	0.00	1,018.73	0.00	1,018.73
111	Lincoln	184.46	5,496.18	0.00	5,680.64
127	Nemaha	0.00	0.00	5,111.38	5,111.38
131	Otoe	0.00	3,112.29	0.00	3,112.29
141	Platte	130.52	0.00	0.00	130.52
151	Saline	0.00	4.69	0.00	4.69
177	Washington	0.00	0.00	2,399.92	2,399.92
Total		833.16	12,961.89	7,511.30	21,306.35

Table 23
Power Generation in Nebraska Hydrologic Units, 1990

Hydrologic Unit Number	Hydroelectric (GWh)	Fossil Fuel (GWh)	Nuclear (GWh)	Total (GWh)
10150001	11.19	0.00	0.00	11.19
10150004	0.19	0.00	0.00	0.19
10170101	310.43	0.00	0.00	310.43
10180014	97.42	0.00	0.00	97.42
10190018	75.15	5,496.18	0.00	5,571.33
10200101	207.69	176.68	0.00	384.37
10200102	0.00	443.86	0.00	443.86
10210009	130.52	0.00	0.00	130.52
10210010	0.57	0.00	0.00	0.57
10220003	0.00	273.18	0.00	273.18
10230006	0.00	2,218.41	2,399.92	4,618.33
10240001	0.00	3,112.29	0.00	3,112.29
10240005	0.00	0.00	5,111.38	5,111.38
10270202	0.00	1,023.42	0.00	1,023.42
10270206	0.00	217.87	0.00	217.87
Total	833.16	12,961.89	7,511.30	21,306.35

Table 24

Estimated Wastewater Treatment Water Releases in Nebraska Counties, 1990

County Number	County Name	Number of Systems Municipal	Number of Systems Other	Municipal Releases (Mgal/d)	Municipal Releases (acre-ft)[1]
001	Adams	2	10	2.65	2,970
003	Antelope	4	1	0.33	370
005	Arthur	0	0	0.00	0
007	Banner	0	2	0.00	0
009	Blaine	0	1	0.00	0
011	Boone	5	0	0.23	260
013	Box Butte	0	1	0.00	0
015	Boyd	2	1	0.09	100
017	Brown	2	0	0.27	300
019	Buffalo	5	1	2.73	3,060
021	Burt	4	1	0.54	610
023	Butler	3	0	0.36	400
025	Cass	12	8	1.17	1,310
027	Cedar	2	3	0.27	300
029	Chase	1	0	0.07	80
031	Cherry	1	1	0.22	250
033	Cheyenne	2	2	0.55	620
035	Clay	4	0	0.10	110
037	Colfax	4	3	0.60	670
039	Cuming	4	2	0.64	720
041	Custer	4	3	0.51	570
043	Dakota	4	5	1.43	1,600
045	Dawes	1	3	0.17	190
047	Dawson	4	10	2.14	2,400
049	Deuel	1	2	0.14	160
051	Dixon	5	1	0.27	300
053	Dodge	7	8	4.30	4,820
055	Douglas	6	41	73.34	82,210
057	Dundy	1	1	0.13	150
059	Fillmore	4	0	0.51	570
061	Franklin	0	0	0.00	0
063	Frontier	2	1	0.05	60
065	Furnas	6	1	0.45	500
067	Gage	7	6	2.48	2,780
069	Garden	0	1	0.00	0
071	Garfield	1	1	0.14	160
073	Gosper	0	0	0.00	0
075	Grant	0	0	0.00	0
077	Greeley	3	0	0.13	150
079	Hall	4	12	9.70	10,780
081	Hamilton	2	0	0.75	840
083	Harlan	1	0	0.14	160
085	Hayes	0	0	0.00	0
087	Hitchcock	1	1	0.00	0
089	Holt	4	0	0.62	700
091	Hooker	0	0	0.00	0
093	Howard	1	1	0.04	40
095	Jefferson	4	2	0.55	620
097	Johnson	2	0	0.23	260
099	Kearney	2	0	0.25	280
101	Keith	1	3	0.61	680
103	Keya Paha	0	0	0.00	0
105	Kimball	1	0	0.29	330
107	Knox	5	2	0.44	490
109	Lancaster	11	39	23.25	26,060
111	Lincoln	1	9	2.51	2,810
113	Logan	0	1	0.00	0
115	Loup	1	0	0.00	0
117	McPherson	0	0	0.00	0
119	Madison	6	12	3.46	3,880
121	Merrick	4	0	0.56	630
123	Morrill	2	2	0.31	350
125	Nance	2	0	0.09	100
127	Nemaha	3	3	0.28	310
129	Nuckolls	2	2	0.50	560
131	Otoe	7	4	1.07	1,200
133	Pawnee	4	2	0.26	290
135	Perkins	0	0	0.00	0
137	Phelps	1	0	0.68	760
139	Pierce	4	0	0.31	350
141	Platte	5	9	2.71	3,040
143	Polk	2	1	0.30	340
145	Red Willow	1	1	0.81	910
147	Richardson	6	20	0.82	920
149	Rock	1	0	0.00	0
151	Saline	6	4	1.11	1,240
153	Sarpy	3	6	6.01	6,740
155	Saunders	9	5	0.83	930
157	Scotts Bluff	3	7	4.04	4,530
159	Seward	5	1	0.82	920
161	Sheridan	3	0	0.20	220
163	Sherman	1	1	0.12	130
165	Sioux	0	0	0.00	0
167	Stanton	2	0	0.16	180
169	Thayer	5	0	0.29	330
171	Thomas	0	0	0.00	0
173	Thurston	2	0	0.21	240
175	Valley	2	0	0.53	590
177	Washington	5	4	1.24	1,390
179	Wayne	3	1	0.41	460
181	Webster	1	0	0.27	300
183	Wheeler	0	0	0.00	0
185	York	3	2	0.98	1,100
Total[2]		257	278	165.77	185,740

[1]Rounded to the nearest 10 acre-feet.
[2]Figures may not add to totals due to independent rounding.

Table 25
Estimated Wastewater Treatment Releases in Nebraska Hydrologic Units and Subregions, 1990

Hydrologic Unit Number	Number of Systems: Municipal	Number of Systems: Other	Municipal Releases (Mgal/d)	Municipal Releases (acre-ft)[1]
White River - Hat Creek Basin				
10120106	0	0	0.00	0
10120108	0	0	0.00	0
Subregion 1012[2]	0	0	0.00	0
10140201	1	2	0.17	190
10140203	0	0	0.00	0
Subregion 1014	1	2	0.17	190
Niobrara River Basin				
10150001	1	1	0.09	100
10150002	0	0	0.00	0
10150003	2	2	0.20	220
10150004	2	0	0.49	550
10150005	0	0	0.00	0
10150006	0	0	0.00	0
10150007	4	1	0.05	60
Subregion 1015	9	4	0.83	930
Missouri Tributaries River Basin (upper part)				
10170101	10	6	0.29	330
Subregion 1017	10	6	0.29	330
North Platte River Basin				
10180009	5	8	4.35	4,880
10180012	0	1	0.00	0
10180013	1	3	0.00	0
10180014	4	9	2.51	2,810
Subregion 1018	10	21	6.86	7,690
South Platte River Basin				
10190012	0	0	0.00	0
10190015	0	0	0.00	0
10190016	2	1	0.98	1,100
10190017	1	0	0.00	0
10190018	1	4	0.61	680
Subregion 1019	4	5	1.59	1,780
Middle Platte River Basin				
10200101	8	17	4.43	4,970
10200102	4	4	9.72	10,900
10200103	8	7	0.73	820
Lower Platte River Basin				
10200201	6	6	3.25	3,640
10200202	8	10	0.76	850
10200203	21	39	24.05	26,960
Subregion 1020	55	83	42.94	48,140
Loup River Basin				
10210001	0	0	0.00	0
10210002	1	3	0.00	0
10210003	3	2	0.49	550
10210004	4	4	0.03	30
10210005	2	1	0.75	840
10210006	1	1	0.00	0
10210007	4	1	0.45	500
10210008	2	0	0.00	0
10210009	7	3	0.40	450
10210010	4	1	0.04	40
Subregion 1021	28	16	2.16	2,410
Elkhorn River Basin				
10220001	5	1	1.23	1,380
10220002	5	0	3.34	3,740
10220003	18	21	5.50	6,170
10220004	7	3	1.30	1,460
Subregion 1022	35	25	11.37	12,750
Missouri Tributaries River Basin (lower part)				
10230001	7	5	2.73	3,060
10230006	8	34	78.85	88,390
Subregion 1023	15	39	81.58	91,450
Nemaha River Basin				
10240001	7	5	1.79	2,010
10240005	2	4	0.02	20
10240006	9	8	0.65	730
10240007	3	5	0.23	260
10240008	9	17	1.16	1,300
Subregion 1024	30	39	3.85	4,320
Republican River Basin				
10250001	0	0	0.00	0
10250002	1	1	0.13	150
10250003	0	0	0.00	0
10250004	2	2	0.95	1,060
10250005	1	0	0.08	90
10250006	0	0	0.00	0
10250007	1	1	0.00	0
10250008	1	2	0.05	60
10250009	4	1	0.37	410
10250011	1	0	0.00	0
10250014	2	1	0.08	90
10250015	0	0	0.00	0
10250016	2	1	1.38	1,550
Subregion 1025	15	9	3.04	3,410
Big Blue River Basin				
10270201	5	2	1.94	2,170
10270202	10	7	3.65	4,090
10270203	8	5	1.32	1,480
10270204	6	3	0.47	530
10270205	1	1	0.02	20
Little Blue River Basin				
10270206	12	10	3.19	3,580
10270207	3	1	0.50	560
Subregion 1027	45	29	11.09	12,430
Total[2]	257	278	165.77	185,740

[1]Rounded to the nearest 10 acre-feet.
[2]Figures may not add to totals due to independent rounding.

Reservoir Evaporation in Nebraska Hydrologic Units, 1990

Hydrologic Unit Number	Reservoir Area (1,000 acres)	Evaporation Rate (Mgal/d)	Annual Volume (1,000 acre-ft)
10140201	0.90	2.65	2.97
10150002	0.73	2.16	2.42
10150005	2.67	7.42	8.32
10170101	8.50	41.93	47.00
10180009	3.84	11.30	12.67
10180014	23.32	72.81	81.62
10190018	5.08	11.34	12.71
10200101	3.84	11.98	13.43
10200201	0.90	2.65	2.97
10200203	2.43	7.65	8.58
10210003	2.42	6.82	7.65
10210006	4.65	14.38	16.12
10220002	0.44	1.04	1.17
10230006	0.37	1.18	1.32
10250004	3.43	11.32	12.69
10250005	0.97	3.03	3.40
10250007	1.23	4.47	5.01
10250008	1.37	4.92	5.52
10250009	10.26	33.23	37.25
Total	77.35	252.28	282.82