

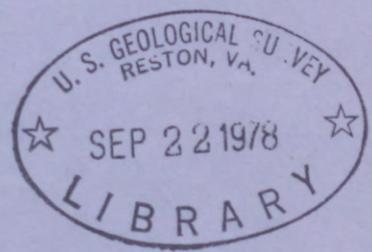
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NEBRASKA WATER DATA PROGRAMS, 1978

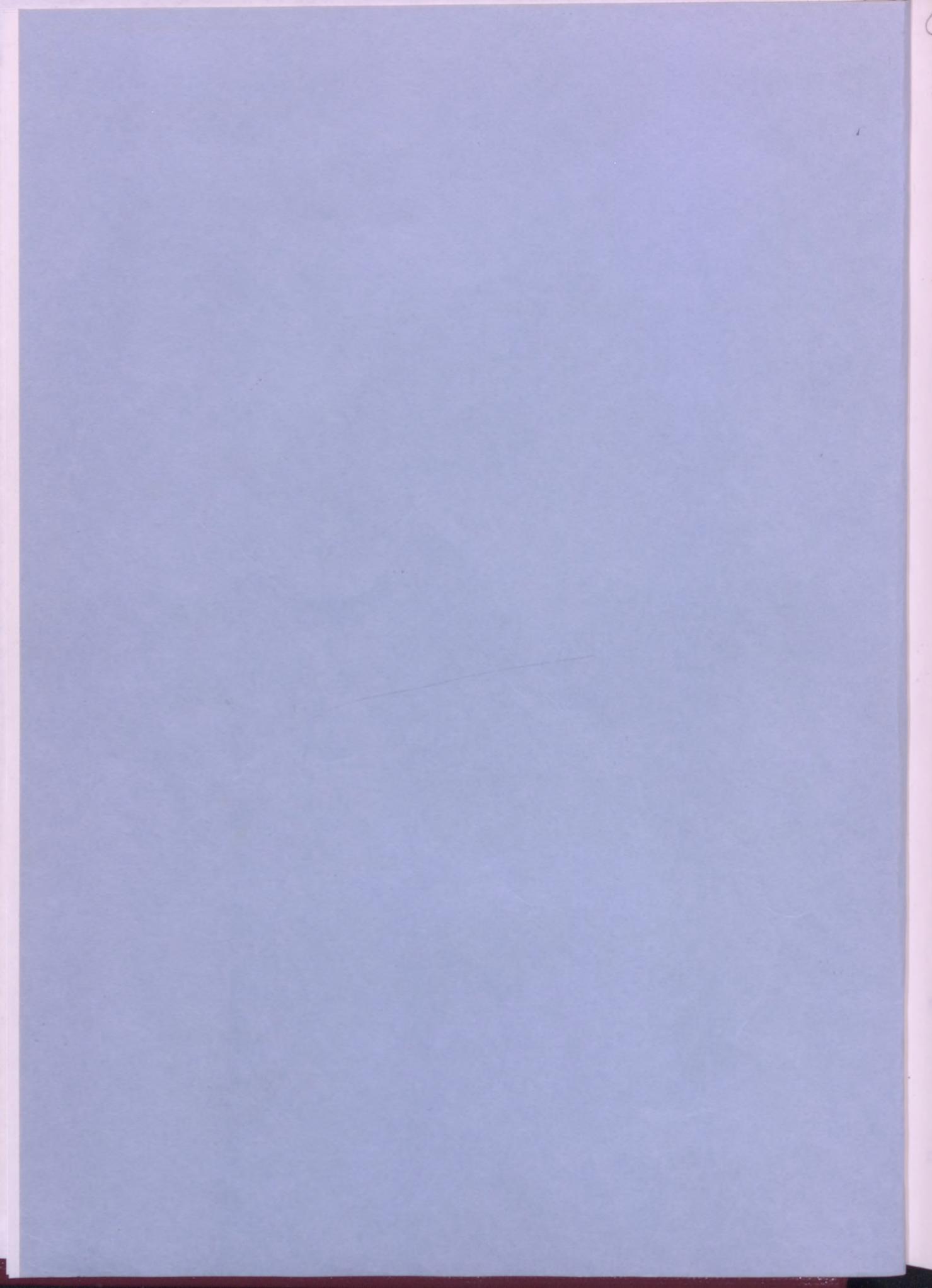
U.S. GEOLOGICAL SURVEY

Open-File Report 78-823



Prepared in cooperation with the
Nebraska Water Data Coordination Committee





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[Reports - Open file series]

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Lincoln, Nebraska

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NEBRASKA WATER DATA PROGRAMS FOR 1978

By

Nebraska District of the

U.S. Geological Survey

ABSTRACT

Projects of the Water Resources Division, U.S. Geological Survey, and of State agencies represented by members of the Nebraska Water Data Coordinating Committee are described. The committee members represent the Nebraska Department of Water Resources, Nebraska Department of Environmental Control, Nebraska Department of Health, Conservation and Survey Division of the University of Nebraska-Lincoln, Nebraska Water Resources Center of the University of Nebraska, Nebraska Natural Resources Commission, and Nebraska Game and Parks Commission.

Current measuring sites are listed. Indexes to streamflow records and flood-prone area maps and a list of recently published reports also are included. Sources of water-related information are given with names, addresses, and telephone numbers.

INTRODUCTION

The availability of usable water is a major determinant in meeting society's requirements for the good life. When demands for water exceed the available supplies, competition for use of those supplies develops and hard decisions must be made regarding how best to manage them. In Nebraska, as elsewhere, both demands for and actual use of water are increasing rapidly. According to Murray and Reeves (1977), water use in the State nearly tripled in the short period from 1970 to 1975. From this it is evident that conflicts in the use of water will increase and that decisions regarding water-resources management, use, and reuse will become increasingly difficult, increasingly urgent, and at times critical.

Improved management of Nebraska's water resources is a common goal of Federal, State, and local agencies alike. Achievement of this goal depends heavily on having reliable information from a continuing appraisal of the water resources themselves. The Water Resources Division of the U.S. Geological Survey has the principal responsibility for data collection and resource appraisals to meet Federal needs and, in addition, assists State agencies in meeting their needs.

The Water Resources Division of the U.S. Geological Survey conducts much of its work in Nebraska in close cooperation with State agencies. Some of these agencies are themselves deeply involved in water-resource appraisals and closely related activities. The Nebraska Water Data Coordination Committee, recently established at the direction of the Governor, has in its membership representatives from each of the State agencies having responsibilities in water-resource data collection, analysis, and appraisal. One of the committee's principal functions is to recommend ways in which State or Federal-State cooperative programs relating to water resources may be improved.

This report has been compiled to acquaint the reader with current water-data programs of the U.S. Geological Survey and State agencies, also with the sources from which water-related information may be obtained. Included in this report is a list of selected relatively recent publications of which nearly all pertain specifically to Nebraska.

Inquiries for additional information may be directed to:

District Chief, WRD
U.S. Geological Survey
Rm. 406, Federal Building
100 Centennial Mall - North
Lincoln, Nebr. 68508
Phone: (402) 471-5082

Director
Nebraska Department of Water Resources
301 Centennial Mall - South
P.O. Box 94676
Lincoln, Nebr. 68509
Phone: (402) 471-2363

Director
Conservation and Survey Division
Institute of Agriculture and Natural Resources
The University of Nebraska-Lincoln
Room 113, Nebraska Hall
901 North 17th Street
Lincoln, Nebr. 68588
Phone: (402) 472-3471

PROGRAMS OF THE U.S. GEOLOGICAL SURVEY

The role of the Water Resources Division of the Geological Survey is that of a scientific organization concerned with presenting impartial, factual information and analyses on which researchers, planners, regulators, engineers, and project managers can rely. The programs of the Survey, many of which are conducted in close cooperation with other Federal agencies or with State and local agencies, are designed to help it fulfill this role. Through the programs it develops, the Survey is involved in the following activities:

- (1) Systematically collecting data needed for the continuing determination and evaluation of the quantity, quality, and use of the Nation's water resources.
- (2) Data analysis and description of the occurrence, the availability, and the physical, chemical, and biological characteristics of surface and ground water.
- (3) Basic and problem-oriented research in hydraulics, hydrology, and related fields to improve the scientific basis for investigations and measurement techniques and to understand the response of hydrologic systems to natural and manmade stresses.
- (4) Dissemination of water data and the results of investigations and research through reports, maps, computerized information services, and other forms of public releases.
- (5) Coordination of the activities of Federal agencies in the acquisition of water data for streams, lakes, reservoirs, estuaries, and ground water.
- (6) Provision of scientific and technical assistance in hydrology to other Federal, State, and local agencies, to licensees of the Federal Power Commission, and to international agencies on the behalf of the U.S. Department of State.

Cooperating Agencies

Accomplishment of the Geological Survey program goals in Nebraska depends heavily on the cooperative efforts of other agencies, some of which provide financial assistance, some of which provide technical services, and some of which provide both for specific projects. Agencies cooperating with the Geological Survey in 1978 are as follows:

State:

Nebraska Department of Water Resources
University of Nebraska-Lincoln, Institute of Agriculture
and Natural Resources

1. Conservation and Survey Division
2. Nebraska Water Resources Center

Nebraska Natural Resources Commission
Nebraska Department of Roads
Kansas-Nebraska Big Blue River Compact Administration

Local:

Blue River Association of Ground Water Conservation Districts
Central Platte Natural Resources District
Lower Loup Natural Resources District
Middle Republican Natural Resources District
Twin Platte Natural Resources District
Lower Elkhorn Natural Resources District

Federal:

Corps of Engineers, U.S. Army
Kansas City District
Omaha District
U.S. Environmental Protection Agency
U.S. Department of Housing and Urban Development
Federal Insurance Administration
U.S. Department of Interior
Bureau of Reclamation, Lower Missouri Region
U.S. Fish and Wildlife Service

In addition to the above, the following Natural Resources Districts
supplied information on ground-water levels:

Lewis and Clark	Nemaha
Little Blue	North Platte
Lower Big Blue	South Platte
Lower Elkhorn	Tri-Basin
Lower Platte	Upper Big Blue
Lower Republican	Upper Elkhorn
Middle Missouri	Upper Loup
Middle Republican	Upper Niobrara-White
Middle Niobrara	Upper Republican

Current Budget

Funds available to the Nebraska District of the U.S. Geological Survey (hereafter referred to as the Nebraska District) are from three major sources: Funds appropriated directly to the Geological Survey, some of which are designated for matching with State and local agencies; matching funds from State and local agencies; and funds appropriated to other Federal agencies which are transferred to the Survey for specified work. The financial support for 1978 fiscal year is shown by figure 1.

Nebraska District funds are budgeted for three principal types of investigations--surface water, ground water, and quality of water as shown by figure 2.

Current Projects

Programs for acquiring a desired product are simply generalized plans agreed upon by the parties involved. In the Geological Survey, the detailed information as to what is being done or planned is indicated best by reference to individual projects. Descriptions of those individual projects in Nebraska are given on the following pages. The five-digit numbers beneath the project titles are management-control numbers.

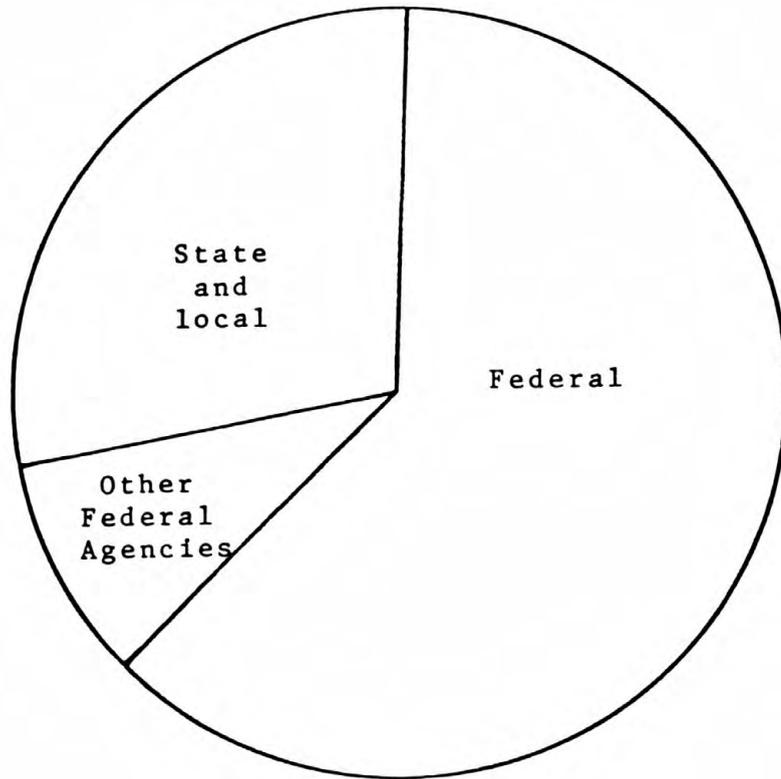


Figure 1.--Sources of Nebraska District funds in fiscal year 1978.

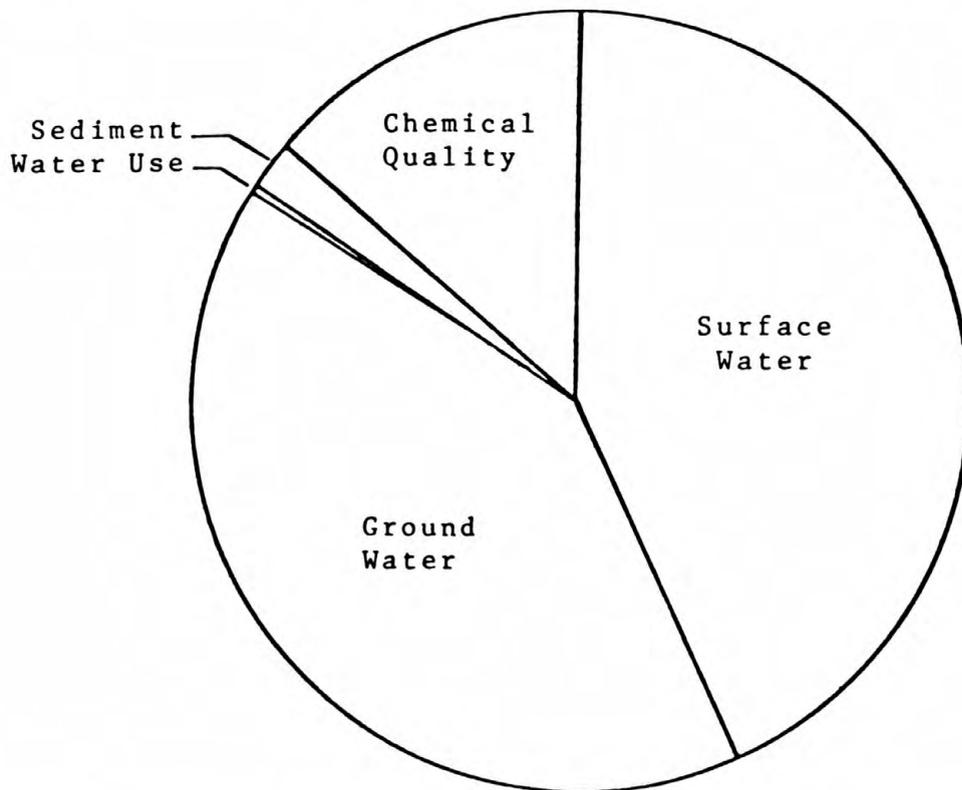


Figure 2.--Distribution of Nebraska District funds by activity in fiscal year 1978.

SURFACE-WATER GAGING STATIONS
NE 001

Project Leader: Glenn Engel

Field Location: Statewide

Cooperating Agencies: Nebraska Department of Roads; Nebraska Natural Resources Commission; Nebraska Department of Water Resources; Blue River Association of Ground-water Conservation Districts; Kansas-Nebraska Big Blue River Compact Administration; Corps of Engineers, Omaha District and Kansas City District; U.S. Bureau of Reclamation, Lower Missouri River Region.

Problem: Surface-water information is needed for purposes of surveillance, planning, design, hazard warning, operation, and management, in water-related fields such as water supply, hydroelectric power, flood control, irrigation, bridge and culvert design, wildlife management, pollution abatement, flood-plain management, and water-resources development. To provide this information an appropriate data base is necessary.

Objective: A. To collect surface-water data sufficient to satisfy needs for current-purpose uses, such as 1) assessment of water resources, 2) operation of reservoirs or industries, 3) forecasting of available supplies, 4) pollution control and disposal of wastes, 5) discharge data to accompany water-quality measurements, 6) compact and legal requirements, and 7) research or special studies. B. To collect data necessary for analytical studies to define for any location the statistical properties of, and trends in, the occurrence of water in streams, lakes, estuaries, etc., for use in planning and design.

Reports: U.S. Geological Survey, 1977, Water-resources data for Nebraska, 1976. Water-Data Report NE-76-1.

Machine-readable data can be obtained from the U.S. Geological Survey and the Nebraska Data Bank.

Plans for 1978: Publish the 1977 water-year report. See Appendix A for list of current stations.

PEAK-FLOW STATIONS

NE 001

Project Leader: Glenn Engel

Field Location: Statewide

Cooperating Agencies: Nebraska Department of Roads; Corps of Engineers,
Kansas City District.

Problem: Reliable information on the magnitude and frequency of floods is necessary to plan for use of flood plains and to design structures which must be placed in the flood plain to accommodate man's activities. Effective land utilization planning, design of culverts, bridges, highways, and floodways and establishment of flood insurance rates are some illustrated uses.

Objective: Streamflow stations having natural flow and 5 or more years of annual peaks will be utilized to compute the magnitude and frequency of floods by the log-Pearson Type III method. A regression analysis will be made using flood flows at several recurrence intervals as the dependent variable and climatic and basin characteristics as the independent variables. Based on the above correlations, the state will be divided into homogeneous regions and a regression equation will be computed for each region. Flood magnitude and frequency can be determined for some controlled streams which have an established control pattern.

Reports: U.S. Geological Survey, 1977, Water resources data for Nebraska, 1976. Water-Data Report NE-76-1.

Beckman, E. W., 1976, Magnitude and Frequency of Floods in Nebraska:
U.S. Geol. Survey Water Resources Investigation 76-109, 128 p.

Machine-readable data can be obtained from the U.S. Geological Survey and the Nebraska Data Bank.

Plans for 1978: Publish the 1977 water-year report. See Appendix B for list of current stations.

GROUND-WATER STATIONS
NE 002

Project Leaders: Michael J. Ellis (U.S. Geological Survey) and Darryll Pederson (Conservation and Survey Division, UN-L)

Field Location: Statewide

Cooperating Agencies: Conservation and Survey Division, University of Nebraska-Lincoln; Kansas-Nebraska Big Blue River Compact Administration; Blue River Association of Ground-Water Conservation Districts; 23 Natural Resources Districts.

Problem: Long-term water-level records are needed to evaluate the effects of climatic variations on recharge to and discharge from ground-water systems, to provide a data base needed for measurement of the effects of development, prediction of future supplies, and management of the resource.

Objective: A. To collect sufficient water-level data to provide a minimum long-term data base so that the general response of ground-water systems to natural climatic variations and induced stresses is known and that potential problems can be defined early enough to allow proper planning and management. B. To provide a data base against which the short-term records acquired in areal studies can be analyzed. This analysis must (1) provide an assessment of the ground-water resource; (2) allow prediction of future conditions; (3) detect and define pollution and supply problems; and (4) provide the data base necessary for management of the resource.

Approach: Evaluation of regional geology allows broad, general definition of aquifer systems and their boundary conditions. Within this framework and with some knowledge of the stress on the system in time and space and the hydrologic properties of the aquifers, a subjective decision can be made on the most advantageous locations for observation of long-term system behavior. This subjective network will be refined as records become available and detailed areal studies of the ground-water system more closely define the aquifers, their properties, and the stresses to which they are subjected.

Reports: Ellis, M. J., Pederson, D. T., 1977, Ground-water levels in Nebraska, 1976, Conservation and Survey Division, Nebraska Water Survey Report No. 44.

U.S. Geological Survey, 1977, Water Resources Data for Nebraska, 1976. Water-Data Report NE-76-1.

Machine-readable data can be obtained from the U.S. Geological Survey, the Conservation and Survey Division, and the Nebraska Data Bank.

Plans for 1978: More than 4,000 ground-water levels will be measured. About half of them will be read by the Natural Resources Districts and other agencies. See Appendix F for a list of current continuous-record stations.

Publish 1977 water levels.

WATER-QUALITY STATIONS
NE 003

Project Leader: Lester R. Petri

Field Location: Statewide

Cooperating Agencies: Nebraska Natural Resources Commission; Conservation and Survey Division, University of Nebraska-Lincoln.

Problem: Water-resource planning and water-quality assessment require a nationwide base of relatively standardized information. For intelligent planning and realistic assessment of the water resource, the chemical and physical quality of the rivers and streams must be defined and monitored.

Objective: To provide a national bank of water-quality data for broad federal planning and action programs and to provide data for federal management of interstate and international waters.

Approach: Operation of a network of water-quality stations to provide average chemical concentrations, loads, and time trends as required by planning and management agencies.

Reports: U.S. Geological Survey, 1977, Water Resources Data for Nebraska, Water Year 1976: Water-Data Report NE-76-1.

Machine-readable data can be obtained from the U.S. Geological Survey and the Nebraska Data Bank.

Plans for 1978: Publish 1977 data. See Appendix D for list of current sampling sites.

SEDIMENT STATIONS
NE 004

Project Leader: Lester R. Petri

Field Location: Statewide

Cooperating Agencies: Nebraska Natural Resources Commission; Nebraska Department of Water Resources; Corps of Engineers, Omaha District; Bureau of Reclamation, Lower Missouri Region.

Problem: Water-resource planning and water-quality assessment require a nationwide base of relatively standardized information. Sediment concentrations and discharges in rivers and streams must be defined and monitored.

Objective: To provide a national bank of sediment data for use in broad Federal and State planning and action programs and to provide data for Federal management of interstate and international waters.

Approach: Establish and operate a network of sediment stations to provide spatial and temporal averages and trends of sediment concentration, sediment discharge, and particle size of sediment transported by rivers and streams.

Reports: U.S. Geological Survey, 1977, Water Resources Data for Nebraska. Water-Data Report NE-76-1.

Plans for 1978: Publish 1977 data. See Appendix E for list of current sampling sites.

FLOOD INSURANCE STUDIES FOR HUD
NE 006

Project Leader: Gordon G. Jamison

Field Location: Cambridge, North Bend, and Norfolk

Cooperating Agency: U.S. Dept. of Housing and Urban Development, Flood Insurance Administration.

Problem: The National Flood Insurance Act of 1968 provides that the Dept. of Housing and Urban Development operate a flood insurance program through the Federal Insurance Administration. HUD needs flood studies in selected areas to determine applicable flood insurance premium rates.

Objective: To conduct the necessary hydrologic and hydraulic studies of the areas assigned by FIA, on a month to month basis, and to develop the most efficient procedures to attain the accuracy specified by FIA in the most appropriate format with minimum personnel requirements.

Approach: Conduct necessary surveys by ground and photogrammetric methods, prepare computer models of drainage networks, compute magnitudes and profiles of floods of specified frequencies, and furnish results in reports prepared to FIA specifications.

Reports: U.S. Dept. of Housing and Urban Development, Flood Insurance Study, City of Springfield, Nebraska, Sarpy County (preliminary), 14 p.

Plans for 1978: Complete the Cambridge and North Bend reports and continue work on the Norfolk report.

WATER IN LOUP RIVER BASIN
NE 020

Project Leader: Ray Bentall (Conservation and Survey Division, UN-L)

Field Location: Loup River Basin

Cooperating Agency: Conservation and Survey Division, University of
Nebraska-Lincoln

Problem: The Loup River Basin is nearly one-fifth of the State's area. The upper half of the basin is sand hills and the lower half is dissected loess plains. Irrigation has expanded in recent years, and development of sprinkler irrigation has greatly increased the acreage considered as irrigable. Considerable information on extent of aquifers capable of yielding water for irrigation has been obtained by test drilling but has not been formally published. There exists a need to synthesize and interpret the currently available geologic and hydrologic information of the Loup River Basin so that the impact of present and future developments on the water resources can be evaluated.

Objective: To make available to water-development planners an unbiased, factual appraisal of the current water resources of the Loup River Basin.

Approach: Hydrologic and related information will be compiled and analyzed on drainage-basin basis. Where historic data are insufficient for a reasonably well-balanced presentation, some additional field observations will be made. The report will be of the atlas type and will be published by the Conservation and Survey Division of the University of Nebraska. The publication will be 11 x 17 inches and will consist of several pages of maps, graphs, and explanatory text bound in booklet form.

Plans for 1978:

Continue work on report preparation.

PLATTE RIVER BASIN WATER RESOURCES
NE 022

Project Leader: Eric G. Lappala

Field Location: Platte River Basin

Support: U.S. Geological Survey

Problem: This project represents the Geological Survey's contribution to the Level B study being made in the Platte River Basin in Nebraska. The Level B study is a Federal and State interagency effort to formulate a comprehensive plan for the conservation, development, and management of the water and related land resources of the Platte River basin. The Missouri River Basin Commission will be responsible for the direction of the study. Technical input to the Level B study is to be provided by 14 task force committees. The Geological Survey is the lead agency for Task Force 13--Stream-Aquifer Hydrology. This project will provide most of the data and the interpretations that will be needed to complete the work of this task force.

Objective: The project will provide Federal and State agencies who are participating in the Level B study with a quantitative description of the operation of the hydrologic system in the Platte River Basin. This description will emphasize the relationship of ground and surface water in the basin. In order to make this description, a digital model will be developed to simulate the physical character and operation of the stream-aquifer system. After this model has been tested and calibrated with field data, it will be used to evaluate the effect of proposed water projects on the ground-water/surface-water system. For example, it will be used to evaluate the effects of changes in water use such as the effect of lowering the water table in areas that are now water-logged.

Approach: The approach to this study is listed in a report entitled, "Plan of Study of Water Resources of the Platte River Basin". A summary is as follows: (1) Assemble and analyze all available hydrologic data needed to define the stream-aquifer system. (2) Construct a preliminary digital model of the basin. (3) Collect data to refine estimates and to provide the field data needed to refine the model. (4) Construct and calibrate a digital simulation model of the entire basin in Nebraska, including tributaries. (5) Use model to evaluate proposed development and management plans.

Plans for 1978: Complete and publish final report.

GROUND-WATER QUALITY
NE 023

Project Leaders: Richard A. Engberg (USGS) and Roy F. Spalding (Conservation and Survey Division, UN-L).

Field Location: Statewide

Cooperating Agency: Conservation and Survey Division, University of Nebraska-Lincoln

Problem: Almost 3,000 ground-water samples have been analyzed. This work was accomplished under several programs each having a specific objective. Although the data have been published in the series "Water Data for Nebraska - Part 2", there is a need to make the results generally available in an easily usable form.

Objective: One of the objectives is to evaluate the data and prepare a report for general use. An equally important objective is to provide a sound basis for planning additional ground-water quality work.

Approach: Available analyses will be related to geographic area, aquifers, and depth to water. The quality of water in relation to environment will also be examined. Correlations between conductivity and the major ions will be determined and used in preparing the report. There will be no additional sampling specifically for this project.

Plans for 1978: The final report is scheduled for publication early in 1978.

MOVEMENT OF NITROGEN INTO AQUIFERS
NE 028

Project Leader: Lester R. Petri

Field Location: Central Platte Natural Resources District

Cooperating Agency: Conservation and Survey Division, University of
Nebraska-Lincoln

Problem: Nitrate concentrations in the ground water of the Central Platte Natural Resources District exceed the standards for drinking water in some places and approach the standards in others. Evidence indicating that the concentrations have increased markedly in some of the municipal wells serving Kearney and Grand Island has caused understandable concern that nitrate problems will intensify in the future. Studies by the cooperating agency define the present magnitude and extent of nitrate problems in the District. However, existing information is not adequate to provide a clear picture of the causes of local variations in nitrate concentrations or to suggest practicable remedial courses of action.

Objective: The objective of this study is to determine the causes of areal differences in nitrate levels and of seasonal variations or fluctuations.

Approach: Obtain detailed information from sites selected to represent varied hydrogeologic situations. Site selection criteria and data to be obtained includes: Key well installation within areas of each of five recognized soil associations to evaluate relation of soil type to water quality; compare nitrate concentrations in water from key wells with that of neighboring wells; sample key wells monthly for a year and quarterly for second-year analyzing for specific conductance, nitrate, nitrite, ammonium, and chloride with one standard analysis plus heavy metals, nutrients, and pesticides; relate chemical data to hydrogeology, precipitation and other factors.

Reports: Petri, L. R., and Engberg, R. A., 1977, Movement of Nitrogen into Aquifers in the Central Platte Natural Resources District, Nebraska: U.S. Geol. Survey Open-file report.

HYDROLOGY OF SOUTHWEST NEBRASKA
NE 031

Project Leader: Eric G. Lappala

Field Location: Upper Republican Natural Resources District.

Cooperation: Conservation and Survey Division, University of Nebraska-Lincoln; Upper Republican Natural Resources District.

Problem: As of the close of 1973, there were 1,299 registered irrigation wells in the Upper Republican NRD. Almost one-third (381) were drilled since 1970. This is a low precipitation area and pumpage for irrigation has caused the water table to decline almost 14 feet in some places. Frenchman Creek drains a large part of the area and is impounded within the area by Enders Dam. Water from this reservoir is used for irrigation in the McCook area. There is local concern about the effect of pumping on streamflow in Frenchman Creek as well as the effect of declining water levels on pumping lifts in the area.

Objective: To define the hydrogeologic system of the area and through the use of a stream-aquifer model, determine the effects of present and future development on water levels and streamflow. The results from the model can be used to evaluate alternative water-resources management schemes with the Natural Resources District.

Approach: This will be a comprehensive study of the water resources of the area and will include the following major work items: (1) Assemble and analyze all available hydrogeologic data to define the stream-aquifer system. (2) Construct a preliminary digital model of the area. (3) Collect data to refine estimates and to provide the field data needed to refine the model. (4) Construct and calibrate digital model of area and test management alternatives. (5) Document model for future use. (6) Prepare final report summarizing hydrogeology and model study results.

Reports: Lappala, E.G., 1976, Changes in the Water Supply in the Upper Republican Natural Resources District, Southwest Nebraska from 1952-75: U.S. Geol. Survey Open-File Rept. 76-498, 17 p.

_____, 1977, Coupled Models of the Soil and Saturated Zones for Use as a Water-Management Tool (abstract): Symposium on Unified Studies of the Saturated and Unsaturated Zones, Am. Geophys. Union Spring Meeting, May 28 - June 3, 1977.

Plans for 1978: Complete the project and write the final report.

TIME-OF-TRAVEL DATA FOR NEBRASKA
NE 032

Project Leader: Lester R. Petri

Field Location: Statewide

Cooperation: Nebraska Natural Resources Commission

Problem: Time-of-travel studies have been made in cooperation with State and other agencies for the Big Blue River, Elkhorn River, and Salt Creek. Also, a few measurements for short reaches of other streams in Nebraska have been made. These measurements were made in direct response to needs of State agencies in their formulation of basin-wide plans for water-quality management. Results of these measurements were provided to cooperating agencies and the Surface Water Branch, Water Resources Division, USGS; they were not incorporated into any formal report and are, therefore, not readily available to other agencies or the general public.

Objective: The objective of this project is to prepare a summary report that will make all pertinent data relating to time-of-travel studies readily available in a convenient and meaningful manner. The pertinent data will include both the basic measurements and the derived interpretive information so that the report will be useful as a basis for planning basin-wide management schemes and as a source of data for making any necessary special calculations.

Approach: The report will be prepared from existing data that need to be reviewed, revised, and reorganized into a uniform format. Pertinent data will be reanalyzed and incorporated into diagrams, charts, and tables. Basic measurements will be incorporated in appendices. Text will include a general discussion of time-of-travel techniques, the hydrologic conditions prevailing during each of the measurements and interpretation of the information given in the diagrams, charts, and tables.

Plans for 1978: Prepare draft of a report to be included in U.S. Geological Survey Water-Resources Investigations series.

NEBRASKA WATER RESOURCES CENTER AND THE U.S. GEOLOGICAL SURVEY

Artificial Recharge Methods - NE 033

Project leader: William F. Lichtler

Field location: Statewide

Cooperation: Nebraska Water Resources Center, University of Nebraska-Lincoln; Nebraska Natural Resources Commission; Old West Regional Commission.

Problem: A capability to irrigate farmland is of great economic importance to Nebraska and other western states. Ground-water levels are progressively declining in substantial areas of Nebraska because of withdrawals for irrigation, and decline rates are increasing as irrigation development increases. Studies indicate that aquifers may be seriously depleted in 20 to 30 years. State officials are interested in developing methods to solve problems which may occur within Nebraska's hydrologic framework, such as utilization of ground water normally lost from natural discharge areas by pumping it for use in artificially recharging aquifers where surface water is not available.

Objective: (1) To determine methods of artificially recharging aquifers having various hydraulic characteristics and in various hydrologic and climatic settings. (2) To determine criteria for selecting artificial recharge procedures at sites in Nebraska and the Old West Regional Commission area.

Approach: Study sites being considered are the Big Blue River basin, Imperial, and Alliance areas. Recharge through injection wells, canal and impoundment seepage, and water spreading will be investigated. Planned work items include: construction of a spreading basin and monitoring infiltration rates; making seepage runs on canals; examining aquifers by coring and geophysical methods; monitoring quality parameters including bacteria, suspended solids and chemical constituents of all input water; and determining well-clogging effects by pumping tests and monitoring of head build-up in injection wells. Aquifer properties affecting the chemical composition of recharge water and consequently pore geometry, will be evaluated before recharge.

Progress: The recharge well was drilled, the area instrumented and the injection started. An infiltrometer was installed at the test well site and the area instrumented. An interim report was started.

Plans for 1978: Testing of the recharge well will be completed. The interim report will be completed. Recharge using the infiltrometer, canals, etc., will be continued as will research on flow through the unsaturated zone.

HYDROLOGY OF WILLOW CREEK DAM SITE
NE 034

Project Leader: Eric G. Lappala

Field Location: Willow Creek basin in Pierce and Antelope counties

Cooperating Agency: Conservation and Survey Division, University of
Nebraska-Lincoln; Lower Elkhorn Natural Resources District.

Problem: The Lower Elkhorn Natural Resources District is evaluating the feasibility of a proposed recreational reservoir on Willow Creek upstream from Pierce, Nebr., and is concerned about potential effects of stream depletions caused by existing and probable future ground-water development in the watershed. Predictions by the Platte River Level B study indicate potential stream depletions of as much as 60 percent by the year 2020 in some parts of the Elkhorn River basin and significant water-level declines in the watershed. Refinement of these predictions for the feasibility study requires more detailed modeling of stream-aquifer relationships in the watershed.

Objective: To construct a digital model of the Willow Creek watershed and surrounding area so that reasonable predictions of future inflow to the proposed Willow Creek Reservoir can be made assuming various plans for development.

Approach: Field work, except seepage measurements, will be cooperator's responsibility, with data interpretations made in consultation with project chief. Model development will necessitate data collection and mapping of drainable porosity distribution, pumpage, consumptive use, and water-level changes. These data will be used as parameters and boundary conditions in digital model development. Steady-state model calibration will be used. Preliminary models will be used to guide collection of additional data needed to develop final model. Reasonable development and water-use rates will be applied to final model to predict inflow to proposed reservoir and effects of reservoir on water levels.

Progress: The project has been completed except for the report.

Plans for 1978: The final report will be completed and published.

GROUND-WATER AVAILABILITY IN THE HITCHCOCK-RED WILLOW,
FRENCHMAN VALLEY, AND MEEKER-DRIFTWOOD IRRIGATION DISTRICTS
NE 035

Project Leader: Eric G. Lappala

Field Location: Hitchcock, Red Willow, Hayes, and Frontier counties

Cooperating Agency: Bureau of Reclamation, Lower Missouri Region

Problem: Two irrigation districts serve 21,000 acres with water diverted from Frenchman Creek into the Culbertson Canal; Enders Reservoir, in Chase County, provides storage for release to the districts. Inflow to Enders Reservoir from Frenchman Creek is derived almost entirely from ground-water discharge. Reservoir inflow has diminished about 19 percent since 1967, from 54,000 to 44,000 acre-ft/yr. This reduction is directly attributable to irrigation-well development adjacent to Frenchman Creek upstream from Enders Reservoir. The available supply of project water is also reduced by larger transmission losses and smaller gains from ground water than were used in system design.

Objective: Determine ground-water availability in the irrigation districts, evaluate possible salvage and supplementary supply proposals, and evaluate potential effects of ground-water development on flow in the Republican River below irrigation district lands. The study area will include all district lands, plus a reasonable amount of surrounding lands to evaluate effects of private-well development.

Approach: Using available data and previous studies, determine and map ground-water storage changes since project began, usable ground water in storage, present and predevelopment water-table configuration, source and quantities of ground-water recharge, and aquifer potential. Maps will be used in preparing digital model of area to determine potential effects on Republican River flows below district lands of existing and potential private-well development, and of proposed project-well development. Model will also be used to evaluate effects on the aquifer of both well-development schemes as they relate to feasible operation of proposed project wells.

Progress: The project has been completed except for the report.

Plans for 1978: The report will be completed and published.

HYDROLOGY - PLATTE-LOUP AREA
NE 036

Project Leader: Eric G. Lappala

Field Location: Central Platte and Lower Loup Natural Resources Districts.

Cooperating Agencies: Central Platte Natural Resources District; Lower Loup Natural Resources District; Conservation and Survey Division, University of Nebraska-Lincoln.

Problem: Extensive ground-water/surface-water development has occurred in the project area, and further water-resources development by private individuals is unrestricted. Local Natural Resources Districts, however, may regulate ground-water usage where it is determined that problems exist. No significant problems as yet have developed, but in portions of the area progressive water-level declines are occurring. Several surface-water development schemes have been proposed for parts of the area, including both structural and nonstructural alternatives. Water-quality problems, especially high nitrate levels, are significant in shallow Pleistocene aquifers in the eastern part of the area.

Objective: Develop quantitative understanding of hydrology of area that will serve as basis for selecting and testing management plans to insure maximum benefit from the available water supply. Natural Resources Districts will select management plans. Study will provide tools necessary for: (1) Understanding more fully quantitative hydrologic relationships from both quantity and quality standpoint. (2) Predictive capability to evaluate effects of present and future water-resources development on water levels and streamflow. (3) Evaluating feasibility of using conservative mass-transport models as management tool. (4) Providing quantitative basis for establishing data-collection and monitoring programs.

Approach: Hydrologic models will be structured around existing models. These models will be refined in lateral and stratigraphic detail, evaluated, and provision made to evaluate seasonal and long-term effects of water-management schemes. Evaluate transport model feasibility as follows: (1) Develop general transport model linked to flow model, and subject to sensitivity analysis to determine parameters critical to geochemical system description. (2) Cross-sectional modeling to determine parameters needed for areal transport

Hydrology - Platte-Loup Area--Continued

modeling, and model requirements for source identification. (3) If results of first two modelings warrant, use transport models in conjunction with hydrologic models to evaluate effects of management schemes on conservative solute distribution.

Progress: Data have been assembled, interpreted, and coded for the ground-water flow model, including vertical variations in aquifer properties. Model calibration has been initiated and should be completed by June 1978.

Plans for 1978: Evaluate a limited number of future water-supply conditions caused by development plans supplied by the Natural Resources Districts. Start evaluation of the feasibility of transport modeling.

AVAILABILITY AND WATER USE IN NEBRASKA
NE 037

Project Leaders: Eugene K. Steele, U.S. Geological Survey and Ray Bentall,
Conservation and Survey Division, University of Nebraska-Lincoln

Field Location: Statewide

Cooperating Agency: Conservation and Survey Division, University of
Nebraska-Lincoln

Problem: The quantity of water used for all purposes in Nebraska has increased significantly in recent years. The largest increase has been in the use of water for irrigation; approximately 40 percent more land was irrigated in 1976 than was irrigated in 1972. Significant increases in water utilization for municipal and rural domestic supplies have also occurred. A lack of current information on the availability and use of water in the State makes it difficult for planners, managers, and legislators to make timely and realistic assessments of the needs for regulation and management of water resources.

Objective: To make an assessment of the availability and use of water in Nebraska on an annual basis and to refine the methods currently used so that more precise information is available on a timely basis.

Approach: In the past, reports summarizing water availability and use have been prepared from data collected for 5-year national water assessments. A similar report will be prepared based on the 1975 assessment. In addition to this report, procedures will be established so that data can be gathered annually and updates of the 5-year report prepared. Assumptions and methods used in estimating availability and use of water will be reviewed and refined so that more precise information can be made available. Adequacy of data sources will be evaluated and, if necessary and possible, additional and collateral sources of data will be added.

Reports: Murray, R. C., and Reeves, E. B., 1977, Estimated Use of Water in the United States in 1975: U.S. Geol. Survey Circ. 765, 39 p.

Plans for 1978: The 1975 State report will be completed. The project will be enlarged to partially meet the objectives of the National Water-use Investigation.

HYDROGEOLOGY OF BUTLER COUNTY
NE 038

Project Leader: Marilyn H. Ginsberg, Conservation and Survey Division

Field Location: Butler County

Cooperation: Conservation and Survey Division, University of Nebraska-Lincoln.

Problem: Substantial irrigation development, utilizing ground water, is occurring in Butler County. On Jan. 1, 1968, there were 444 registered irrigation wells, compared to 687 wells on Jan. 1, 1975--a 55 percent increase. Western Butler County is underlain by glacial sand and gravel, and adequate supplies of ground water generally can be obtained. The eastern half, however, is underlain by glacial till and irrigation development is causing water-supply problems. Development near Dwight has affected the community supply, making it necessary to lower pumps. A water-level decline of 32 feet has been monitored in a well near the center of the county between fall 1968 and fall 1976.

Objective: The Conservation and Survey Division of the University of Nebraska, as part of their cooperative program with the U.S. Geological Survey, will define and describe the geology and hydrogeology of Butler County and prepare a report evaluating the potential for development of ground-water supplies. This information will aid in the development of plans for the management and use of ground water in the area.

Approach: Assemble available data, including test-hole logs, water-level data, water-quality data, and maps from published reports. Determine deficiencies in data and drill test holes, measure water levels, and collect water-quality samples to provide needed data. Some test holes may be developed into observation wells. About 10 wells will be sampled for water quality. Maps of well location, bedrock configuration, water levels, transmissivity, aquifer thickness, and water-level change will be prepared, as well as appropriate cross sections. Analyze data on geology and hydrogeology and prepare water availability maps, appropriate illustrations of water-quality data, and write report.

Progress: Data are being analyzed. Several maps have been prepared and introductory part of report has been written.

Reports: Work to continue on preparation of report.

ANALYSIS OF SURFACE-WATER QUALITY
NE 039

Project Leader: Richard A. Engberg

Field Location: Statewide

Cooperation: Nebraska Natural Resources Commission

Problem: Much information on surface-water quality has been obtained during the past 30 years as part of a variety of U.S. Geological Survey studies. Although these data are available from NAWDEX and have been published in reports, they have not been organized and evaluated to facilitate use in water-resources management planning. Nebraska water agencies are currently preparing plans for water management in accordance with Section 208 of Public Law 92-500. In order for State agencies to use existing data effectively in preparing their water-management plans, the data need to be organized and summarized in a convenient format.

Objectives: The objective of this project is to characterize surface-water quality data for the State through statistical analyses of existing records. Results of such analyses should aid planners in identifying problem areas and in devising a systematic basis for sound planning and development of management schemes.

Approach: Retrieve records from computer storage for all stations with 25 or more sets of chemical-quality data. Compute descriptive statistics. Determine regression relations between specific conductance and selected constituents. Evaluate similar relations between discharge and selected constituents. Compute and analyze ratios between concentrations of the various forms of nitrogen and phosphorous to help determine relative importance of point and nonpoint pollution sources. Where certain parameters correlate well with water discharge or specific conductance it may be possible to estimate parameter concentrations, loads, and frequencies from regression equations. This possibility will be evaluated and the acceptability of such "derived data" determined.

Progress: Regressions have been made using specific conductance and discharge as independent variables and several constituents as dependent variables. Means, extremes, and values exceeded 25 and 75 percent of the time have been calculated.

Plans for 1978: The analyses will be completed and the final report written.

HYDROLOGY OF PLATTE-REPUBLICAN WATERSHED
NE 040

Project Leader James W. Goeke and Carl A. P. Fricke, Conservation and Survey Division.
Field Location: Frontier, Hayes, Hitchcock, Lincoln, and Red Willow counties.

Cooperating Agencies: Conservation and Survey Division, University of Nebraska-Lincoln; Middle Republican Natural Resources District; Twin Platte Natural Resources District.

Problem: Extensive water-resources development in the Platte-Republican watershed located in Frontier, Hayes, Hitchcock, Lincoln, and Red Willow counties has significantly affected ground-water resources. Water-level rises have been caused by seepage from surface-water storage and distribution systems, and water-level declines in upland areas have occurred because of extensive ground-water development for irrigation. Local Natural Resources Districts can regulate ground water use where it is determined that problems exist in ground water supplies. The scant information available on the hydrology and hydrogeologic framework makes it impossible to adequately assess current effects or to project future effects of development.

Objectives: To describe the hydrology, define the hydrogeologic framework, and quantify the water balance of the hydrologic system with sufficient detail so that projections of the effects of various potential water-resources development and management alternatives on streamflows and ground-water levels may be analyzed. This study should enable resource management personnel to more fully understand quantitative relationships among components of the hydrologic cycle, help determine what the effects of water-resources development have been, provide a quantitative basis for establishing data collection and monitoring programs, and aid in maximizing utility of data in water-resources planning and development.

Approach: Collect and analyze data needed to describe hydrology, define hydrogeologic framework, and quantify water balance. Data collection will include: establishing water-level monitoring programs; making mass water-level measurements and seepage measurements on streams; drilling test holes and installing observation wells; establishing network for collection of water-use data; and collecting and analyzing water-quality samples. Results of data analysis will be summarized in interpretive reports. Statistics and deterministic aquifer models will be used to evaluate adequacy of data collection networks, quantify balance of the hydrologic system, and provide a basis for developing predictive capabilities to evaluate management alternatives.

Hydrology of Platte-Republican Watershed--Continued.

Progress: A contract was let for drilling approximately 20 test holes.

Plans for 1978: Test drilling under the present contract will be completed and a second one let. Several of the test holes will be completed as wells and will be equipped with automatic water-level recorders.

HIGH PLAINS REGIONAL AQUIFER STUDY

NE 041

Project Leader: Vacant

Field Location: Western three-fourths of Nebraska. Concurrent studies are being made in South Dakota, Wyoming, Colorado, and Kansas.

Cooperation: Federal funds.

Problem: The Ogallala Formation and associated sediments in hydraulic connection with the Ogallala, overlying Pleistocene and Holocene deposits and underlying Oligocene and Miocene deposits, are Nebraska's principal source of ground water. This complex aquifer system contains about 1.7 billion acre-feet of water in storage. Intensive local ground-water development for irrigation has caused water-level declines and stream depletions. Irrigated agriculture's economic importance is recognized and water-management alternatives are being tried or investigated. Evaluation and selection of effective water-management alternatives, however, require a comprehensive knowledge of the aquifer system and surface-ground water relationships which are not available.

Objectives: This project is designed to collect, evaluate, and interpret data for the High Plains of Nebraska, so that a unified and balanced data base is available for the High Plains regional aquifer study. Although the data will be available for local use, the data base may not be adequate for the analyses necessary for selection of detailed or complex water-management alternatives.

Approach: The study will be accomplished through (1) compilation and analysis of existing data, (2) collection and analysis of data to provide information on parameters for which data are lacking, and (3) development of computer models. Data collection networks will be initiated in areas where existing networks are inadequate. Sensitivity analysis, using existing and/or preliminary ground-water models, will be used to guide all data collection efforts. Compiled and collected data will become part of a computerized data-management system which will provide a hydrologic (and related) data file for the entire High Plains region.

Plans for 1978: Test drilling will be started in some areas; some water samples will be taken and analyzed. Data from the files will be evaluated and entered into machine-readable files.

PROGRAMS OF STATE AND LOCAL AGENCIES

Introduction

An informal meeting of State water agencies that have cooperative agreements with the U.S. Geological Survey was held on December 1, 1977. It was unanimously agreed that State leadership to review and make recommendations on existing and future water-data collection programs and requirements by Federal agencies was of sufficient concern to make a recommendation to the Governor to form a State Water-Resources Data Coordination Committee.

On Dec. 30, 1977, Governor J. James Exon directed the Department of Water Resources Director to establish and chair a State Water Data Coordination Committee. The Committee membership was to be made up of representatives from all State agencies that have lead responsibilities in water-data collection and analysis. The committee's initial charge, as stated by the Governor's letter, contained the following tasks:

1. To prepare a summary of the State's water-data collection activities and make recommendations on how the Committee could organize and function to improve the cooperative State-Federal programs.
2. Increase Federal funding for cooperative programs.
3. Insure that local government and private data-collection needs are considered for inclusion in the state-wide system.
4. To make recommendations on applications and expanded uses of ongoing State Natural Resources Data Bank program.

This report on the programs of State and local agencies is in response to charge number one above. The following paragraphs of this introduction will identify in alphabetical order the State agencies represented on the Committee and briefly describe their responsibilities and role in water-data collection.

Conservation and Survey Division - UN-L

As provided by Legislative statute, the responsibility of the Conservation and Survey Division is to maintain a viable natural resource data base, to conduct research and investigations related to most

natural resources, to report its findings, and to assist citizens in the development and management of their resources. The Division is further authorized to enter into cooperative agreements with other agencies. Water-resources research, investigation, and data collection is a major Division program. Water-data collection is limited primarily to occurrence, use and quality of ground water. Several components of this program involve cooperation with the U.S. Geological Survey. Current cooperative efforts include an aquifer study for the Twin Platte and Middle Republican Natural Resources Districts, gathering and maintaining data files on ground-water levels, and a base line water quality study. These efforts are described under the U.S. Geological Survey section of this report. Programs not part of the cooperative program are described in this report.

Department of Environmental Control

The Department of Environmental Control is the agency responsible for the protection and improvement of the water quality in the State of Nebraska (Statute: 81-1501). To ensure that this responsibility is adequately carried out, the Department administers the National Pollutant Discharge Elimination System (NPDES) permit program and the water quality standards. The data base and compliance checks for these programs are obtained through monthly ambient stream monitoring, selected wastewater discharge monitoring, and by intensive surveys. Data are also used for planning and tracking purposes to meet the 1983 interim national goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.

Department of Water Resources

The Department is a code agency created to aid the Governor in executing and administering the so-called "water laws" of the State. A director, appointed by the Governor and subject to confirmation by the Legislature, heads the agency.

The Department has jurisdiction over matters pertaining to rights to the use of water. In addition to permitting water rights, the Department also regulates the use of water from natural streams in accordance with the concept of prior appropriation.

Other duties and powers of the Department are:

(1) To make surveys of streams showing the location of possible waterpower developments, irrigation, or drainage projects;

(2) To measure the quantity of water flowing in the streams of the State and make records;

(3) To examine and approve plans of all proposed dams to be constructed for reservoir purposes or across the channels of natural streams. The Department also approves the design of headgates and measuring devices at diversion points for irrigation or other purposes;

(4) To register all water wells in the State except those used for domestic purposes and to issue permits in designated Ground-Water Control Areas;

(5) To hold public hearings for the purpose of creating Ground-Water Control Areas. Subsequent to designation of a Control Area, rules and regulations adopted by an affected Natural Resources District board are approved by the Department prior to implementation.

Game and Parks Commission

The mission of the Game and Parks Commission is the husbandry of the State's fish and wildlife, State parks, and outdoor recreation resources. All of the fisheries resources, many of the wildlife resources, and many outdoor recreation activities are dependent upon adequate quality and quantity of water and aquatic habitats. The Commission's investigations involving water resources are related to management of the habitat resources base which is necessary for the perpetuation of fish and wildlife and meeting the needs for outdoor recreation activities. Statutory authorities are contained in the following sections of Nebraska statutes: 37-301, 37-406, 37-407, 37-422, 37-423.01, 37-424, 37-427 through 37-429, 37-430 through 37-438, and 81-805.

Natural Resources Commission

The Nebraska Natural Resources Information System, administered by the Nebraska Natural Resources Commission, was established in 1964 with the passage of a legislative bill. Operation of this so-called "Information System" was initiated to aid State, Federal, and local agencies and the public by providing them with adequate data. Soil and water data are stored, processed, and managed in the Information System in conformance with users' requirements. This information is greatly needed during planning, development, and formulation of water-resources projects.

State Health Department

The State Health Department conducts a Public Water System Program for the purpose of assuring the safety of drinking water delivered to consumers. An important element of the program is the routine monitoring of public water supplies for biological, chemical, and physical contaminants. The areal distribution of over 600 systems delivering untreated ground water provides a water-quality data source to complement other data collection efforts. The program also contributes to water use data by obtaining data on amounts of ground and surface water withdrawn by communities.

Water Resources Center - UN-L

The mission of the Water Resources Center is to foster, coordinate, administer and conduct water-related research, disseminate water information, and provide educational and training activities that are responsive to the water-resources needs of Nebraska, the surrounding region, and the nation. Essential elements of this mission are the collection, storage, and manipulation of current and accurate data and the development of data-acquisition systems which identify and describe available water resources, including the interrelationships between ground and surface water and between water quantity and quality.

Descriptions of State Agency Projects

Descriptions of current projects being conducted by the various State agencies are given on the following pages.

CONSERVATION AND SURVEY DIVISION - UNL

Chemistry of Alkaline Lakes in Sand Hills of Nebraska

(Water Quality)

Project leaders: Roy F. Spalding and Kelly G. Nash

Project location: Sheridan County, Nebraska

Support: Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Determine baseline chemistry of alkali lakes.

Approach: Collect samples of lake water and ground water near lakes and analyze for selected constituents; interpret analytical results.

Type of water data collected: Results of chemical analyses of water in alkaline lakes and of ground water adjacent to lakes.

Data-storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: 1978

CONSERVATION AND SURVEY DIVISION - UNL

Climatological Records for Nebraska

(Climatology)

Project leaders: Richard E. Myers and Esther M. Culwell

Project area: Nebraska--statewide

Supporting agencies: Administration and office space--Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln; supplier of weather data--National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

Objectives: Maintain climatological references and files formerly in office of Nebraska State Climatologist but on loan to the University of Nebraska-Lincoln since the closing of all State climatologists offices in 1973. Also maintain files of climatological information published by the National Weather Center since 1973. Make climatological records available to researchers and others requesting them. Prepare and distribute preliminary monthly climatological summaries to persons having need for weather data before they are published by the National Climatic Center.

Approach: Keep office open to public on all work days. File incoming published records promptly. Examine for obvious errors the raw weather records submitted by the 200 plus observers throughout the state. Tabulate monthly precipitation amounts and compute monthly departures from normal for about 85 stations. Prepare maps showing monthly precipitation amounts at all reporting stations, monthly average precipitation and departure from normal for eight subdivisions of the State, and seasonal total precipitation and departures from normal for the same subdivisions. Compute and tabulate average daily, maximum and minimum temperatures for selected well-distributed stations, also the monthly average temperature and departure from normal for each. Record the highest and lowest temperatures during each month and dates of occurrence for both.

Date-storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: Ongoing.

CONSERVATION AND SURVEY DIVISION - UNL

Drilling of Test Holes in Nebraska

(Hydrogeologic Studies)

Project leader: Carl A. P. Fricke

Project location: Nebraska--statewide

Support: Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln in cooperation with local and other governmental agencies.

Project objectives: Obtain detailed information on subsurface geologic conditions, depth to water, and thickness and texture of water-bearing materials. Such information is not only basic to interpretive geologic and hydrologic studies that are described in published reports but also is needed as source material for the answering of requests received from individuals, companies, and governmental agencies for hydrologic information.

Approach: Test holes are drilled by means of equipment owned and operated by the Conservation and Survey Division or by contracting with commercial drillers. Generally several holes are drilled along one or more relatively straight lines so as to facilitate compilation of geohydrologic sections. Materials penetrated are described in detail and each test hole is logged electrically before it is back-filled. Samples of the penetrated materials are saved for later microscopic examination.

Types of water data collected: Depth to water and texture and thickness of water-bearing material.

Data storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln. Much of the information is reproduced in publications of the Conservation and Survey Division and of the U.S. Geological Survey, also in graduate students' theses.

CONSERVATION AND SURVEY DIVISION - UNL

Herbicides and Pesticides in Nebraska Ground Water

(Water Quality)

Project leaders: Roy F. Spalding and Philip A. Lyon

Project location: Areas of high concentrations of $\text{NO}_3\text{-N}$ in ground water in Central Platte Natural Resources District.

Support: Central Platte Natural Resources District; Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Determine concentrations of potentially hazardous materials in ground water.

Approach: Analyze samples of ground water for herbicides and pesticides.

Types of water data collected: Results of analyses for pesticides and herbicides in ground water.

Data-storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: 1977-78.

CONSERVATION AND SURVEY DIVISION - UNL

Hydrogeology of Nebraska Panhandle

(Hydrogeologic Studies)

Project leader: Vernon L. Souders

Project location: Panhandle of Nebraska

Supporting agencies: Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln; also some Natural Resources Districts in Panhandle area.

Project objectives: Investigate the Tertiary geology of western Nebraska so the nature of the ground-water reservoir can be better understood. Knowledge of the occurrence of ground water in the area will permit proper development and management of the resource.

Approach: Test holes have been or are being drilled either in a grid pattern such as was used in Box Butte County or along lines connecting studied type areas, such as from Mitchell to Harrison. Additional drilling is anticipated. Data will be used to conceptualize the stratigraphy of the area. Eventually interpretive reports will be prepared and published.

Types of water data collected: Water levels, geologic logs, electric logs, and test-hole samples.

Data-storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln; also in reports that will be published.

Project duration: Ongoing

CONSERVATION AND SURVEY DIVISION - UNL

Hydrogeology of Upper Big Blue Natural Resources District

(Hydrogeologic studies)

Project leaders: Ralph E. Cady and Marilyn H. Ginsberg

Project location: Upper Big Blue Natural Resources District, Nebraska

Supporting agencies: Upper Big Blue Natural Resources District; Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objectives: Numerically simulate the ground-water flow system of the project area. Determine the system's response to stresses imposed by various hypothetical management-development schemes.

Approach: Compile available data needed as basic input for a numerical simulation of the area's ground-water flow system. Develop computer program for synthesis of those data and for the desired simulation model. Calibrate the model to the historical base period and then simulate hypothetical stresses.

Type of water data collected: Results obtained by stressing simulation model.

Data storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: 1975-78.

CONSERVATION AND SURVEY DIVISION - UNL

Identification of Sources of Nitrate in Nebraska Ground Water

(Water Quality)

Project leaders: Roy F. Spalding and James R. Gormly

Project location: Central Platte Natural Resources District

Support: Old West Regional Commission and Central Platte Natural Resources District; Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Identify sources of high concentrations of nitrate in ground water.

Approach: Determine nitrogen isotope ratio of potential sources of nitrate in ground water and compare with nitrogen isotope ratio of nitrate in water samples obtained from wells.

Types of water data collected: Concentration of $\text{NO}_3\text{-N}$ and the nitrogen isotope ratio of ground-water samples.

Data storage location: Office of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: May 1976 to April 1978.

CONSERVATION AND SURVEY DIVISION - UNL

Inventory of Center Pivots in Nebraska

(Remote Sensing)

Project leader: Richard O. Hoffman, Department of Industrial and Management Systems Engineering, University of Nebraska-Lincoln.

Project area: Nebraska--statewide

Supporting agencies: National Aeronautics and Space Administration (NASA); U.S. Department of Housing and Urban Development; Old West Regional Commission; Nebraska Water Resources Center and Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Inventory center-pivot installations revealed by Landsat Satellite imagery.

Approach: By using a 200-m transfer scope and Landsat Satellite transparencies, all center-pivot installations are located and counted. Locations are recorded to the nearest quarter section in the Federal System of Rectangular Surveys.

Types of water data collected: Locations and number of center-pivot systems in each county. Estimated amounts of water applied to cropland by center-pivot systems.

Data storage location: Data stored on computer-readable disks under control of Industrial and Management Systems Engineering, University of Nebraska-Lincoln. Maps of center-pivot locations are published annually by the Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: Ongoing since 1973.

CONSERVATION AND SURVEY DIVISION - UNL

Middle Platte Nitrate Study--Natural Isotope Variations

(Water Quality)

Project leader: James R. Gormly

Project location: Merrick County, Nebraska.

Supporting agency: Central Platte Natural Resources District; Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Determine summer-season variations in nitrate concentration and $\delta^{15}\text{N}$ of water samples from selected wells.

Approach: Sample wells several times during irrigation season to determine changes in $\text{NO}_3\text{-N}$ concentration and $\delta^{15}\text{N}$.

Types of water data collected: Analytical results--concentrations of $\text{NO}_3\text{-N}$ and $^{15}\text{N}/^{14}\text{N}$ content of $\text{NO}_3\text{-N}$.

Data storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln. Also in reports to be published.

Project duration: June 1977 to September 1978.

CONSERVATION AND SURVEY DIVISION - UNL

Monitoring of Lakes in Sand Hills of Nebraska

(Remote Sensing)

Project leaders: Paul M. Seevers and Gerald R. Svoboda

Field location: Holt and Sheridan Counties, Nebraska

Supporting agency: National Aeronautics and Space Administration;
Conservation and Survey Division, Institute of Agriculture and
Natural Resources, University of Nebraska-Lincoln.

Objective: Determine the usefulness of satellite imagery for monitoring
changes in the surface area of specific lakes.

Approach: Satellite images of the lakes at intervals beginning in 1972
and continuing to the present will be enlarged photographically;
Lake areas will be measured by using dot grids.

Types of water data collected: Lake-depth changes as read from ground
observation of stadia rods installed in the lakes; results of
chemical analyses of lake and ground-water samples collected
periodically.

Data storage location: Files of Conservation and Survey Division,
Institute of Agriculture and Natural Resources, University of
Nebraska-Lincoln.

Project duration: 1976 to present.

CONSERVATION AND SURVEY DIVISION - UNL

National Uranium Resource Evaluation (NURE)

(Water Quality)

Project leaders: Gerald R. Svoboda, Frank A. Smith, Roy F. Spalding.

Project area: Nebraska - statewide.

Supporting agency: Union Carbide Corporation; Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Collect water samples for uranium analysis.

Approach: Sites to be sampled are preselected on base maps. Surface geologic units and water-producing units are determined. During field collection of water samples, measurements are made for conductivity, dissolved oxygen, temperature, pH, and alkalinity. One split of each sample is sent to Union Carbide Corporation for chemical analysis and other split is analyzed for orthophosphate and nitrate-nitrogen in the laboratory of the Nebraska Department of Environmental Control.

Type of water data collected: Partial analyses of ground water from many locations and different aquifers in Nebraska.

Data storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln and files of Nebraska Department of Environmental Control. Also files of Nuclear Division, Union Carbide Corporation, Oak Ridge, Tenn.

Project duration: Began Mar. 1, 1978, and will continue at least until Dec. 31, 1979; termination probably will be extended to later date.

CONSERVATION AND SURVEY DIVISION - UNL

NO₃-N Leaching from Irrigation Reuse Pits in Nebraska

(Water Quality)

Project leader: Roy F. Spalding

Project location: Merrick County, Nebraska

Support: Central Platte Natural Resource District, Nebraska; Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objective: Trace movement of water from irrigation reuse pit into underlying and adjacent ground water.

Approach: Introduce bromide into reuse pit. Collect periodic samples of ground water from wells close to pit and analyze for concentration of bromide. Also analyze samples of pit water and ground water for concentration of NO₃-N.

Types of water data collected: Concentration of NO₃-N in water from irrigation reuse pit and in ground water near pit.

Data-storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: 1978

CONSERVATION AND SURVEY DIVISION - UNL

Special Hydrogeologic Studies

(Hydrogeologic studies)

Project leaders: Staff of the Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project location: Nebraska--statewide. Some current locations are the Cook area in Johnson County, the Dwight area in Butler County, the Madison area in Madison County, and the Little Blue Natural Resources District in the southeastern part of the State.

Supporting agencies: Primarily Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln; some help from cities, Natural Resources Districts, and other State agencies in collection of field data and in coordination of activities.

Project objective: Help to insure that precedent-setting decisions, primarily legal, are based on valid interpretations of hydrologic conditions. Recent areas of concern have been requirements for maintenance of artesian head, conflicts between water users, and proposals to transfer water from one drainage basin to another.

Approach: Conduct small-scale field surveys, make aquifer tests, compile available data pertinent to hydrologic problem under consideration; evaluate impact of proposed solutions to problems.

Types of water data collected: Descriptive and electric logs of test holes and wells, test-hole samples, historical water-use information.

Data-storage location: Files of Conservation and Survey Division, Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project duration: Ongoing.

CONSERVATION AND SURVEY DIVISION - UNL

Water Supply Service to Citizens of Nebraska

(Hydrogeologic Studies)

Project leaders: Frank A. Smith, Carl A. P. Fricke, Marilyn H. Ginsberg,
Dennis R. Lawton, James W. Goeke, and Vernon L. Souders.

Project area: Nebraska--statewide

Supporting agency: Conservation and Survey Division, Institute of
Agriculture and Natural Resources, University of Nebraska-Lincoln.

Project objectives: Provide assistance in locating suitable ground-
water supplies for domestic, livestock, and irrigation uses; maintain
files of hydrogeologic data helpful for rendering that service.

Approach: Hydrogeologists in Lincoln, Norfolk, North Platte, and
Scottsbluff offices of Conservation and Survey Division evaluate
pertinent file data for individuals requesting assistance. They
also evaluate information supplied by those individuals. Samples
of drill cuttings from water-bearing materials are rated for water-
yield capacity; water samples are tested for concentrations of total
dissolved solids, iron, and chloride, and for hardness and pH.

Types of water data collected: Visual descriptive and electric logs of
wells and test holes, samples of materials penetrated by drilling,
depth-to-water measurements, estimates of aquifer transmissivities,
well-yield measurements.

DEPARTMENT OF ENVIRONMENTAL CONTROL
Ambient Surface Water Quality Stations

Project Leader: Mike Swiggart

Field Location: Statewide

Cooperating Agency: Environmental Protection Agency

Problem: Surface-water quality information is needed for surveillance, planning, management, and enforcement for pollution abatement.

Objective: To collect surface-water data sufficient to satisfy current needs, such as (1) identification of trends in stream- and lake-water quality and (2) detection of incidents of noncompliance with State water-quality standards.

Approach: Methods of data collection described in "Standard Methods for Examination of Water and Wastewater" will be used. In addition, specific collection techniques that have been recommended and taught by USEPA will be used.

Reports: Nebraska Water Quality Report, and reports required for planning sections of the Clean Water Act. (Data is available through the USEPA STORET computerized water-quality file.)

Plans for 1978: Publish Nebraska Water-Quality Report and reports for areawide waste-treatment planning activities. See Appendix H for lists of current stations and parameters measured.

DEPARTMENT OF ENVIRONMENTAL CONTROL

Intensive Water-Quality Surveys

Project Leader: Mike Swiggart

Field Location: Statewide

Cooperating Agency: Environmental Protection Agency

Problem: Surface-water quality information is needed for (1) improving interpretation of data from existing ambient stations, (2) explaining spatial significance of ambient station sites, (3) establishing the relative effects of point- and nonpoint-source pollution, (4) assessing the distribution and accumulation of toxic substances, (5) establishing effluent permit limits, and (6) assessing the possibility of attaining the 1983 "fishable/swimmable" water-quality goal.

Objective: To collect surface-water data sufficient to carry out the many-faceted pollution-abatement programs of the State Water Pollution Control Agency.

Approach: Critical water-quality areas are and will be identified for pollution abatement or for protection. These areas will be sampled on a rotating basis during a 5-year time span. Methods of data collection described in "Standard Methods for Examination of Water and Wastewater" will be used.

Reports: Specific reports/publications of interest to the public and water-quality agencies.

Plans for 1978: Publish interim or final reports on intensive surveys.

DEPARTMENT OF ENVIRONMENTAL CONTROL

National Pollutant Discharge Elimination System (NPDES) Data

Project Leader: Jay Ringenberg

Field Location: Statewide

Cooperating Agency: Environmental Protection Agency

Problem: Data on the quantity and quality of effluents are needed to evaluate wastewater-treatment systems to carry out the NPDES Permit Program and support the Construction Grant and the All Nebraska Community programs.

Objective: To collect data on the effluents of all NPDES permittees to insure compliance with their permits.

Approach: All permittees are required to self-monitor their effluents and report the data to the Department of Environmental Control quarterly. The Department will sample all major effluents and a percentage of the minor effluents annually.

Reports: Quarterly noncompliance report to U.S. Environmental Protection Agency and Section 305B, Nebraska Water Quality Report. Data can be made available through the STORET or PCS (Permit Compliance System) computer programs.

Plans for 1978: Enter data into computer systems.

GAME AND PARKS COMMISSION

Evaluation of Instream Flow Methodologies and Determination
of Water Quantity Needs for Streams of Nebraska
(Stream Evaluation Project - Phase II)

Project leader: James E. Johnson, Fish Management Supervisor,
Nebraska Game and Parks Commission.

Field location: Statewide

Support: U.S. Fish and Wildlife Service, Cooperative Instream Flow
Group, Fort Collins, Colo.

Problem: There are increasingly heavy demands being made for water throughout Nebraska because of continual development of agricultural and energy resources together with attendant municipal and industrial growth. Therefore, already stressed fisheries will be further jeopardized by withdrawals, altered flow regimes and water quality. Instream flow requirements for maintenance of existing stream fishery values have not been determined.

Objectives: (1) Quantify stream flows required to maintain the values that caused a stream reach to be designated as "critical" during Phase I. (2) Evaluate existing instream flow determination methodologies on streams of various flow, gradient, channel and biological characteristics.

Approach: Select list of streams for study from those designated as "critical" during Phase I. From cross-sectional measurements of depth, velocity, elevation and substrate and existing probability of use data for key species, monthly instream flow recommendations for fish populations of the pilot-study streams will be made.

Plans for 1978: Select methodologies to be tested, complete selection of pilot-study streams. Data collection and compilation will be the major concerns during 1978. Programs for modeling stream flows and associated fishery production may be tested.

GAME AND PARKS COMMISSION

Modeling the Influence of Eutrophication on Trout Habitat
in Lake McConaughy, a "Two-Story" Reservoir

Project leader: Melvin W. Taylor, Research Biologist, Nebraska
Game and Parks Commission.

Field location: Lake McConaughy

Support: Office of Water Research and Technology

Problem: The coldwater fishery of Lake McConaughy is a valuable natural resource of the State of Nebraska. Through degradation of water quality, eutrophication is threatening to destroy this resource. A management plan is needed to delay eutrophication as long as possible.

Objective: The objectives of this project are to develop and verify a mathematical model that will aid in forecasting the impact of continued eutrophication on Lake McConaughy and its coldwater fishery habitat.

Approach: Limnological data from past studies and additional data collected from 1976 through 1978 will be used to construct and verify a model of the eutrophication process in Lake McConaughy. Available models and portions thereof will be used to predict future water-quality values for Lake McConaughy if present eutrophication trends continue and to establish management practices that will retard the eutrophication process.

Plans for 1978: Field data will be collected through August. The model should be operational by September with the final version by late 1978.

GAME AND PARKS COMMISSION

Nine Mile Creek

Project leader: Edward J. Peters

Field location: Nine Mile Creek, Scottsbluff County

Cooperation: Nebraska Water Resources Center, Nebraska Natural Resources Commission, University of Nebraska Institute of Agriculture and Natural Resources.

Problem: Silt and fine sediments have been implicated many times as having a detrimental effect on trout reproduction. Nine Mile Creek, an important spawning ground for Lake McConaughy rainbow trout, is regularly used as a drain for silt-laden waters from irrigated fields and the Tri-State Canal. Is this silt-laden water which enters the creek during the summer having a significant impact on the condition of the spawning riffles when the adult trout build their redds during the fall and spring spawning runs?

Objectives: (1) To determine suspended solids loads above and below the Tri-State Canal. (2) Determine changes in riffle substrate composition above and below the Tri-State Canal. (3) Determine changes in benthic invertebrate faunal composition in the same riffles above and below the Tri-State Canal.

Approach: Eight areas along the Creek were selected as study sites. Five of these were downstream from the Tri-State Canal and three were upstream from the Canal. Discharge, suspended solids load, substrate composition and macroinvertebrate densities were measured monthly at each site. Attempts will be made to correlate faunal composition with spawning quality of riffles.

Progress: A year's data have been collected and are being analyzed at present. Three progress reports have been filed and a final report is in preparation.

Plans for 1978: Funding for the coming year is being supplied by the IANR Agricultural Experiment Station under a project entitled "The effects of silt and sedimentation on fish growth and reproduction," The study will be expanded to include fish as well as macroinvertebrates.

GAME AND PARKS COMMISSION

Stream Fishery Evaluation
Phase I

Project leader: James E. Johnson, Fish Management Supervisor,
Nebraska Game and Parks Commission

Field location: Statewide

Support: U.S. Fish and Wildlife Service, Cooperative Instream Flow
Group, Fort Collins, Colo.

Problem: There are increasingly heavy demands being made for water throughout Nebraska because of continual development of agricultural and energy resources together with attendant municipal and industrial growth. Therefore, already stressed fisheries will be further jeopardized by withdrawals, altered flow regimes and water quality. Instream flow requirements for maintenance of existing stream fishery values have not been determined.

Objectives: (1) To establish a stream fishery evaluation system and publish maps depicting the relative value of stream fisheries and distribute them to Federal, State, and local governmental agencies, industrial concerns and interest groups involved in water development in order that they may serve these groups as input to water development decisions. (2) To establish priorities by which streams will be selected for study of instream flow requirements.

Approach: Using existing stream fishery inventory data, streams will be classified as I - critical; II - high priority; III - substantial; IV - limited value; V - no fishery value, on the basis of status of State or Federal threatened and endangered species and the importance of species of high interest to the State (game fish, species of educational value, etc.).

Plans for 1978: Complete map distribution by May 30, 1978. Incorporate findings of inventory in the Phase II Quantification of Instream Flow Requirements) study.

NATURAL RESOURCES COMMISSION

Natural Resources Data Bank

Project leader: Mahendra Bansal

Field location: Statewide

Support: Climatological data - National Weather Records Center, U.S. Department of Commerce, Ashville, N.C.
Surface water data - USGS, National Center, Reston, Va.
Well registration, surface water rights, canal diversions, reservoir storage, dams, miscellaneous discharge data - Nebraska Department of Water Resources
Ground-water levels, well logs, land use, and geologic data - Conservation and Survey Division, UNL
Water-quality data - STORET, U.S. Environmental Protection Agency
Agricultural crop - Crop and Livestock Reporting Service, Nebraska Department of Agriculture
Soil surveys - Soil Conservation Service, USDA
Public Water Supplies - Nebraska Department of Health
Demographic data - Bureau of Business Research, UNL

Problem: Computerized data are a necessity in project planning and evaluation, mathematical modeling, and resources development and management of soil and water. The data should be readily accessible and processed according to the user's demands.

Objective: To store, process, retrieve, and manage basic soil and water resources data of the State for use by the State, Federal, and local agencies, and the public.

Approach: Reorganize information into separate data files accompanied by index files. Maintain index-sequential data access method. Perform hydrologic and statistical analyses of data. List, copy, and plot basic data, and other information associated with it.

Plans for 1978: Reformat, process, and update data quarterly or annually. Publish Data Bank Users Manual. Investigate other kinds of soil and water-resources data for inclusion in the Data Bank.

WATER RESOURCES CENTER - UNL

Collection of Field Data and Preparation of
Computer Program for Flood Damage Assessment

Project leader: Gary L. Lewis

Field location: Upper Big Blue River Basin, Nebraska

Cooperating agencies: Nebraska Natural Resources Commission; U.S. Corps of Engineers, Kansas City District; Upper Big Blue Natural Resources District.

Problem: Urban flood plain information is needed for estimation of potential flood plain damages and for use in planning, design and management of various flood control measures. To provide this information, field data collection procedures, an appropriate data base, and workable hydrologic and economic computer programs are necessary for use by consultants and the planning agencies.

Objective: The overall objective is to aid the Corps of Engineers in providing planning assistance to the State of Nebraska. Specific objectives are to modify the Corps' flood damage computer programs for use on the State IBM computer system, to develop the capability and detailed procedures for urban flood plain data collection, to test the procedures by collecting data on potential flood damages within the corporate limits of five urban areas within the Blue River Basin, to test the modified computer programs using tests data provided by the Corps of Engineers, and to use the computer programs to process the data collected in the field investigation.

Approach: Methods of data collection were as developed by the Kansas City District of the U.S. Army Corps of Engineers. Computer program modifications consisted of converting the language for CDC computer applications to a form compatible with IBM systems and checking this conversion by use of test data from previous flood plain studies.

Reports: "Study of Urban Flood Damage Potential in Seward, York, Crete, Wilbur, and Barneston, Nebraska," DRAFT report to Kansas City District, Corps of Engineers and to the Nebraska Natural Resources Commission, March 1978.

Plans for 1978: To complete the computer analysis of the field data and to write the completion report.

WATER RESOURCES CENTER - UNL

Nitrogen Losses from Sprinkler-Applied Nitrogen Fertilizer

Project leader: Gary W. Hergert

Field location: University of Nebraska Sandhills Agricultural Laboratory
(UN-SAL), Tryon, Nebr.

Cooperating agencies: Nebraska Agricultural Experiment Station; Nebraska
Cooperative Extension Service.

Problem: Improper management of nitrogen fertilizer and irrigation water on sandy soils causes lower crop yields, excess fertilizer and water usage, and nitrate leaching. Proper management of nitrogen fertilizer and irrigation water applications on sandy soils are needed to insure economic crop production and limited leaching losses of nitrate-nitrogen.

Objective: (1) Quantify leaching and volatilization losses of nitrogen from sprinkler-applied nitrogen fertilizer on sandy soils. (2) Investigate nitrogen-use efficiency of sprinkler-applied nitrogen at different irrigation amounts.

Approach: Field plots at UN-SAL will be used. Each plot has a trough and porous ceramic candle extraction devices to collect soil water which percolates below the crop root zone. Leaching losses of water and nitrogen will be quantified as will corn (Zea mays L.) grain yields.

Reports: Annual Report 1977 for project A-045NEB.

Plans for 1978: Publish final report for the project.

WATER RESOURCES CENTER - UNL

Suitability of Region-wide Irrigation Scheduling by Local
Evapotranspiration Measurement

Project leader: Walter L. Trimmer, District Extension Irrigation
Engineer, University of Nebraska, Panhandle Station, Scottsbluff, Nebr.

Cooperating Agencies: Nebraska Agricultural Experiment Station; Nebraska
Cooperative Extension Services.

Problem: Measurement of water use by crops is required for irrigation
scheduling. It would be ideal to measure evapotranspiration and the
associated crop water use at each site being scheduled, but the level
of technology required for the measurements is both too complex and
too expensive to deploy a large number of sites. Having a few
centralized sites leaves the question of how many are necessary and
how should they be spaced.

Objective: To monitor evapotranspiration (ET) measurements at four care-
fully regulated and calibrated sites at various spacings to determine
if their ET records differ significantly and if so, how much. Gather
ET data from other Federal, State, and local agencies at different
locations and see how the network ties together based on the results
of the four project locations.

Approach: Solar radiation, wind, temperature, and humidity data will be
collected from the four locations and ET calculated for the regular
growing season. The information will be statistically compared to
determine if the records are equivalent. Modeling will be used to
determine if the differences, if any, are significant.

Plans for 1978 Continue ET measurements and determine sensitivities of the
various parameters.

WATER RESOURCES CENTER - UNL

The Production of Mucilage by Diatoms in
McConaughy, Pawnee, and Yankee Hill Reservoirs
and the Role of this Material in the Aquatic Environment

Project leader: James R. Rosowski

Field location: McConaughy Reservoir (Keith County), Pawnee and Yankee Hill Reservoirs (Lancaster County).

Cooperating agencies: Nebraska Game and Parks Commission and University of Nebraska-Lincoln.

Problem: Planning effective water usage or determining changes in water quality requires a core of physical, chemical, and biological data collected over a significant period of time. Such knowledge is essential to any program that would attempt to attenuate or control the eutrophication process, to maintain or alter the desirable fish species, or to improve water quality for increased recreational use. The major hypothesis of our research is that diatoms influence the nutrient recycling of lakes through the extracellular products they produce.

Objectives: A. The seasonal occurrence and identification of the planktonic and periphytic diatoms in McConaughy, Pawnee, and Yankee Hill Reservoirs over the three-year period. B. Some basic water chemistry and physical data to be determined from samples collected at the time of the algal samples. C. The morphological origin of the mucilage of pennate and centric diatoms. D. The physical association of the mucilage of diatoms with other organisms (e.g., bacteria) and substrates (e.g., lake sediments). E. The development of the mucilaginous surfaces produced by the periphytic diatoms.

Approach: To obtain baseline hydrological data, a total of 3 physical parameters and 14 chemical parameters have been monitored at 3 stations each in Pawnee and Yankee Hill Reservoirs, and 5 stations in McConaughy Reservoir at biweekly to monthly intervals from July 1975 to July 1977. In addition, several types of biological collections were made including: quantitative and qualitative plankton samples from 0.5 m at each station, quantitative samples of attached

algae every 4 weeks from 2 stations in each reservoir, and qualitative samples of attached algae for more extensive analysis with the aid of the scanning electron microscope. For further details of specific analytical methods and sampling schedules see OWRT Annual Reports for 1976 and 1977 prepared for this project.

Plans for 1978: The work for 1978 will be to complete and submit for publication certain aspects of the objectives already underway, and to integrate all five objectives into a comprehensive final report.

WATER RESOURCES CENTER - UNL

Water Quality Study of Runoff from Agricultural Lands

Project leader: To be named

Field location: Dee Creek Watershed, 17 miles east of Lincoln, Nebr.

Cooperating agencies: Nebraska Natural Resources Commission, Department of Environmental Control, Old West Regional Commission, U.S. Environmental Protection Agency, Science and Education Administration (formerly ARS), U.S. Soil Conservation Service, Lower Platte South Natural Resources District, U.S. Army, Corps of Engineers.

Problem: To measure and analyze the runoff from a medium-sized agricultural watershed for the purpose of developing and testing quantitative tools for water quality planning in Nebraska.

Objectives: A. To collect and analyze water quality and quantity data for the Dee Creek watershed. B. To further investigate the potentials of watershed computer models as tools in water quality planning in Nebraska. C. To develop non-modeling techniques as an approach to evaluating runoff for the watershed.

Approach: Data has been collected on the watershed since July 1, 1974. Precipitation data are collected from eight recording rain gages located within the watershed. Other meteorological data are collected from nearby stations. Instrumentation for collecting water quality and quantity data has also been operational since mid-1974. Plans are to begin collecting soil moisture data with the 1978 season.

Reports: Water Quality Study of Runoff from Agricultural Lands, Dewey R. Anderson (Project Completion Report), Nebraska Water Resources Center.

Plans for 1978: Continuation of data collection with further attempts to evaluate the potentials for watershed computer models as tools in water quality planning.

SOURCES OF INFORMATION

Information is available in published reports, as machine-readable data from computer storage, on computer tapes, and as computer print-outs. Reports are published by the U.S. Geological Survey and the Conservation and Survey Division of the University of Nebraska-Lincoln.

Current releases of the U.S. Geological Survey are described in a monthly pamphlet, "New Publications of the Geological Survey" which may be obtained from:

U.S. Geological Survey
Mailing List Unit
329 National Center
12201 Sunrise Valley Drive
Reston, VA 22090

NAWDEX, the National Water Data Exchange, was established to assist users of water data to identify, locate, and acquire needed data. It provides a nationwide service for indexing and describing the characteristics of data available from the entire spectrum of data-collection activities throughout the Federal and non-Federal water-data community.

NAWDEX maintains two data bases: (1) A Water-Data Sources Directory and (2) A Master Water-Data Index which identifies and describes water data available.

The Nebraska District Office has been designated a Local Assistance Center and will provide assistance on searching for and accessing water data held by NAWDEX members.

Table 1 lists the sources of information for many types of data. There may be a charge to cover printing or for computer time for tabulated data.

Table 1.--Sources of Information
(See address list at end of table)

Information	Source
Aerial photographs-----	Cartographic Center
Aquifer information-----	Conservation and Survey Division and Nebraska District
Benchmark data-----	Cartographic Center
Canal flow-----	Nebraska Dept. of Water Resources
Geologic information-----	Conservation and Survey Division and Nebraska District
Logs of test holes-----	Conservation and Survey Division
Maps:	
Flood-prone areas-----	Nebraska Dist. and Cons. and Survey Div'
Information-----	Cartographic Center
Nebraska and national base maps---)	Branch of Distribution
Topographic maps-----)	
Miscellaneous information on water data and programs-----	Public Inquiries
NAWDEX-----	Nebraska District
Publications:	
Conservation and Survey Division	
All reports-----	Conservation and Survey Division
Nebraska Dept. of Water Resources	
All reports-----	Nebraska Dept. of Water Resources
U.S. Geological Survey:	
Bulletins-----	Branch of Distribution
Circulars, pamphlets, leaflets (free in limited quantities)--	Branch of Distribution
Earthquake Information Bulletin	
Single copies-----	Branch of Distribution
Subscription-----	Superintendent of Documents
Hydrologic Atlases-----	Branch of Distribution and Conservation and Survey Division
Journal of Research of the U.S. Geological Survey:	
Single copies-----	Branch of Distribution
Subscription-----	Superintendent of Documents

Table 1.--Sources of Information--Continued

Open-file reports-----	Nebraska District
Professional Papers-----	Branch of Distribution and Conservation and Survey Division
Techniques of Water-Resources Investigations-----	Branch of Distribution
WRI (Water-Resources Investi- gations)-----	NTIS
Water Data Reports-----	NTIS Limited quantities from Nebraska District
Water-Supply Papers-----	Branch of Distribution and Conservation and Survey Division
Research, water related-----	Nebraska Water Resources Center
Satellite and Space Photography-----	EROS
Unpublished data-----	Nebraska District
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Cartographic Center	U.S. Geological Survey National Cartographic Information Center 507 National Center 12201 Sunrise Valley Drive Reston, VA 22092
Conservation and Survey Division	Conservation and Survey Division Institute of Agriculture and Natural Resources University of Nebraska Room 113, Nebraska Hall Lincoln, NE 68588 Phone: (402) 472-3471
Branch of Distribution (For maps of areas <u>east</u> of the Mississippi R. and for all books and requests for free material)	U.S. Geological Survey Branch of Distribution 1200 South Eads Street Arlington, VA 22202
(For maps of areas <u>west</u> of the Mississippi R. and free material)	U.S. Geological Survey Branch of Distribution Federal Center, Mail Stop 306 Box 25286 Denver, CO 80225

EROS Data Center

U.S. Geological Survey
EROS Data Center
Sioux Falls, SD 57198

Library

(The Geological Survey National Center maintains a library with an extensive earth-science collection. Local libraries may obtain books, periodicals, and maps through inter-library loan.)

U.S. Geological Survey Library
13301 Sunrise Valley Drive
Reston, VA 22092

Nebraska Department of Water Resources

Department of Water Resources
301 Centennial Mall, South
P.O. Box 94676
Lincoln, NE 68509
Phone: (402) 471-2363

Bridgeport Division Office
605 "O" Street
Bridgeport, NE 69336
Phone: (308) 262-0856

Ord Division Office
P. O. Box 251
Ord, NE 68862
Phone: (308) 728-3325

Cambridge Division Office
P. O. Box 1
Cambridge, NE 69022
Phone: (308) 697-3730

Lincoln Division Office
P. O. Box 94676
Lincoln, NE 68509
Phone: (402) 471-2363

Nebraska District

District Chief
U.S. Geological Survey
Room 406, Federal Building
100 Centennial Mall, North
Lincoln, NE 68508
Phone: (402) 471-5082
FTS: 867-5082

NTIS

National Technical Information Center
5825 Port Royal Road
Springfield, VA 22161

Public Inquiries

U.S. Geological Survey
Public Inquiries Office
12201 Sunrise Valley Drive
Reston, VA 22092

Superintendent of Documents

Superintendent of Documents
Government Printing Office
Washington, D. C. 22042

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- _____, 1968, Availability of ground water in Adams County, Nebr.: U.S. Geological Survey Hydrologic Investigations Atlas HA-287.
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NEBRASKA WATER DATA PROGRAMS FOR 1978

APPENDICES TO REPORT

WATER DATA STATIONS IN OPERATION OCTOBER 1, 1977
DEPARTMENT OF INTERIOR
U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
NEBRASKA DISTRICT

THE APPENDICES ON WHICH WATER DATA STATIONS ARE LISTED ARE FROM A REPORT ENTITLED "NEBRASKA WATER DATA PROGRAMS FOR 1978" PREPARED JOINTLY BY THE NEBRASKA DISTRICT OF THE U.S. GEOLOGICAL SURVEY AND THE NEBRASKA WATER DATA COORDINATION COMMITTEE. FOR INFORMATION REGARDING STATION OPERATION OR RECORDS FROM THESE STATIONS WRITE OR CALL:

DISTRICT CHIEF, U.S. GEOLOGICAL SURVEY
ROOM 406, FEDERAL BLDG. AND U.S. COURTHOUSE
100 CENTENNIAL MALL NORTH
LINCOLN, NEBRASKA 68508

APPENDIX A. CONTINUOUS RECORD SURFACE WATER GAGING STATIONS
IN OPERATION OCT. 1, 1977 UNDER FEDERAL OR COOPERATIVE
PROGRAMS OF THE U.S. GEOLOGICAL SURVEY, WATER RESOURCES
DIVISION, NEBRASKA DISTRICT.

(IDENT. NO.: DOWNSTREAM IDENTIFICATION NUMBER.

F.O.: FIELD OFFICE THAT OPERATES STATION--

B, BRIDGEPORT; C, CAMBRIDGE; L, LINCOLN; O, ORD.

TYPE OF GAGE: TYPE OF EQUIPMENT AT GAGE--

B, BUBBLE GAGE; D, DIGITAL RECORDER; R, A-35 RECORDER;

T, TELEMARK; W, WIRE WEIGHT; MM, MERCURY MANOMETER;

ET, ELECTRIC TAPE, * THERMOGRAPH.

COOPERATOR: COOPERATING AGENCY OR FEDERAL SUPPORTING PROGRAM.--

DEPT WR.....NEBRASKA DEPARTMENT OF WATER RESOURCES

OM CE.....OMAHA DISTRICT, CORPS OF ENGINEERS

MRB.....MISSOURI RIVER BASIN PROGRAM, FEDERAL

CNPPID.....CENTRAL NEBRASKA PUBLIC POWER AND IRRIGATION DISTRICT

CBR.....COLLECTION-OF-BASIC-RECORDS PROGRAM, FEDERAL

BM.....BENCHMARK PROGRAM, FEDERAL

LRPPD.....LOUP RIVER PUBLIC POWER DISTRICT

AER.....ARMY ENGINEERS REPLACEMENT PROGRAM, FEDERAL

KC CE.....KANSAS CITY DISTRICT, CORPS OF ENGINEERS

COMP.....REPUBLICAN COMPACT COMMISSION, FEDERAL

USBR.....U.S. BUREAU OF RECLAMATION, REGION 7

BBRCA.....BIG BLUE RIVER COMPACT ADMINISTRATION)

APPENDIX A (CONTINUED)

IDENT. NO. 06-	STATION	LOCATION				TYPE OF GAGE	COOP- ERATOR	REMARKS
		F. 0.	SEC.	T.	R.			
WHITE RIVER BASIN								
444000	WHITE R AT CRAWFORD.....	B	3	31	52W	RD	DEPT WR	
445590	BIG BORDEAUX CR NR CHADRON.....	B	26	32	48W	R	DEPT WR	
PONCA CREEK BASIN								
453500	PONCA CR AT ANOKA.....	0	9	34	13W	RW	OM CE	
453600	PONCA CR AT VERDEL.....	0	30	33	7W	BRWD	DEPT WR	
NIOBRARA RIVER BASIN								
454000	NIOBRARA R AT WYO-NEBR STATE LINE	B	15	31	60W	D	DEPT WR	
454100	NIOBRARA R AT AGATE.....	B	6	28	55W	D	DEPT WR	
454500	NIOBRARA R ABV BOX BUTTE RES.....	B	27	29	50W	RD	DEPT WR	
455000	BOX BUTTE RES NR HEMINGFORD.....	B	28	29	49W	ET	MRB	
455500	NIOBRARA R BLW BOX BUTTE RES.....	B	28	29	49W	RD	DEPT WR	
457500	NIOBRARA R NR GORDON.....	B	26	31	42W	D	DEPT WR	
459200	SNAKE R ABV MERRITT RES.....	0	11	30	32W	RD*	MRB	
459300	MERRITT RES NR BURGE.....	0	29	31	30W	MM	MRB	
459500	SNAKE R NR BURGE.....	0	20	31	30W	D	DEPT WR	
461000	MINNECHADUZA CR AT VALENTINE.....	0	30	34	27W	RD	DEPT WR	
461500	NIOBRARA R NR SPARKS.....	0	22	34	26W	RD	MRB	
462000	NIOBRARA R NR NORDEN.....	0	33	33	23W	BRDW	MRB	
462500	PLUM CR NR MEADVILLE.....	0	14	32	22W	BRD	MRB	
463500	LONG PINE CR NR RIVERVIEW.....	0	5	31	20W	RDW	MRB	
464900	KEYA PAHA R NR NAPER.....	0	17	34	15W	BRDW	DEPT WR	
465000	NIOBRARA R NR SPENCER.....	0	30	33	11W	BRW	MRB	
465500	NIOBRARA R NR VERDEL.....	0	23	32	8W	BRD*	OM CE	
BAZILE CREEK BASIN								
466500	BAZILE CR NR NIOBRARA.....	0	18	32	5W	RW	OM CE	
OMAHA CREEK BASIN								
601000	OMAHA CR AT HOMER.....	L	11	27	8E	BRDW	OM CE AER	(75) (25)
TEKAMAH CREEK BASIN								
608000	TEKAMAH CR AT TEKAMAH.....	L	19	21	11E	DWBR	OM CE AER	(75) (25)
PLATTE RIVER (NORTH PLATTE) BASIN								
677500	HORSE CR NR LYMAN.....	B	25	23	58W	RD	DEPT WR	

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APPENDIX A (CONTINUED)

IDENT. NO.	STATION	F. Q.	LOCATION			TYPE OF GAGE	COOP-ERATOR	REMARKS
			SEC.	T.	R.			
678000	SHEEP CR NR MORRILL.....	B	16	23	57W	R	DEPT WR	
679000	DRY SPOTTEDTAIL CR AT MITCHELL..	B	20	23	56W	RD	DEPT WR	
679500	N PLATTE R AT MITCHELL.....	B	27	23	56W	RD	DEPT WR	
680000	TUB SPRINGS NR SCOTTSBLUFF.....	B	32	23	55W	RD	DEPT WR	
681000	WINTER CR NR SCOTTSBLUFF.....	B	30	22	54W	RD	DEPT WR	
681500	GERING DR NR GERING.....	B	6	21	54W	R	DEPT WR	
682000	N PLATTE R NR MINTARE.....	B	13	21	54W	RD	DEPT WR	
682500	NINEMILE DR NR MCGREW.....	B	23	21	53W	RD	DEPT WR	
683000	BAYARD SUGAR FACTORY DR NR BAYARD.	B	5	20	52W	RD	DEPT WR	
684000	RED WILLOW CR NR BAYARD.....	B	13	20	52W	RD	DEPT WR	
684500	N PLATTE R AT BRIDGEPORT.....	B	28	20	50W	R	DEPT WR	
685000	PUMPKIN CR NR BRIDGEPORT.....	B	12	19	50W	RD	DEPT WR	
686000	N PLATTE R AT LISCO.....	B	33	18	46W	R	DEPT WR	
687000	BLUE CR NR LEWELLEN.....	B	30	16	42W	RD	DEPT WR	
687500	N PLATTE R AT LEWELLEN.....	B	34	16	42W	R	DEPT WR	
690000	LAKE MCCONAUGHY NR KEYSTONE.....	B	3	14	38W	ET	MRB CNPPID	
690500	N PLATTE R NR KEYSTONE.....	B	1	14	38W	RD	DEPT WR	
691000	N PLATTE R NR SUTHERLAND.....	B	4	14	33W	RD	DEPT WR	
692000	BIRDWOOD CR NR HERSHEY.....	B	2	14	33W	RD	DEPT WR	
692500	LINCOLN CO DR NO. 1 NR NORTH PLATTE.	B	30	14	30W	RD	DEPT WR	
693000	N PLATTE R AT NORTH PLATTE.....	B	28	14	30W	RD	DEPT WR	
PLATTE RIVER (SOUTH PLATTE) BASIN								
762500	LODGEPOLE CR AT BUSHNELL.....	B	33	15	57W	D	DEPT WR	
763500	LODGEPOLE CR AT RALTON.....	B	12	12	45W	D	DEPT WR	
765500	S PLATTE R AT NORTH PLATTE.....	B	9	13	30W	R	DEPT WR	
PLATTE RIVER BASIN								
766000	PLATTE R AT BRADY.....	B	11	12	27W	R	DEPT WR	
766500	PLATTE R NR COZAD.....	B	18	10	23W	R	DEPT WR	
768000	PLATTE R NR OVERTON.....	B	12	8	20W	BRD*	DEPT WR	
770000	PLATTE R NR ODESSA.....	B	16	8	17W	R	DEPT WR	
770500	PLATTE R NR GRAND ISLAND.....	O	31	11	8W	RDW	DEPT WR	
772000	WOOD R NR ALDA.....	O	7	10	10W	R	DEPT WR	

APPENDIX A (CONTINUED)

IDENT. NO.	STATION	LOCATION				TYPE OF GAGE	COOP-ERATION	REMARKS
		F. O.	SEC.	T.	R.			
774000	PLATTE R NR DUNCAN.....	L	12	16	2W	RDW	MRB	
775500	MIDDLE LOUP R AT DUNNING.....	O	33	22	24W	RD*	DEPT WR	
775900	DISMAL R NR THEDFORD.....	O	23	21	28W	BRDW	BM	
776500	DISMAL R AT DUNNING.....	O	4	21	24W	BRDW	DEPT WR	
779000	MIDDLE LOUP R AT ARCADIA.....	O	26	17	16W	BRD	DEPT WR	
783500	MUD CR NR SWEETWATER.....	O	3	12	15W	RDW	DEPT WR	
784000	S LOUP R AT ST MICHAEL.....	O	11	12	13W	BRDW	DEPT WR	
784200	SHERMAN RES NR LOUP CITY.....	O	1	15	14W	MM	MRB	
785000	MIDDLE LOUP R AT ST PAUL.....	O	10	14	10W	RD	MRB OM CE	(75) (25)
786000	N LOUP R AT TAYLOR.....	O	22	21	18W	BRDW	MRB	
787000	CALAMUS R NR HARROP.....	O	22	23	18W	BRDW	MRB	
787500	CALAMUS R NR BURWELL.....	O	9	21	16W	D	CBR	
788500	N LOUP R AT ORD.....	O	22	19	14W	RD	DEPT WR	
790500	N LOUP R NR ST PAUL.....	O	22	15	10W	RD	MRB OM CE	(75) (25)
791500	CEDAR R NR SPALDING.....	O	15	20	10W	BRD	DEPT WR	
792000	CEDAR R NR FULLERTON.....	L	33	17	6W	DW	MRB	
792500	LOUP R POWER CANAL NR GENOA.....	L	32	17	4W	RD	DEPT WR LRPPD	
793000	LOUP R NR GENOA.....	L	25	17	4W	BRDW	MRB	
794000	BEAVER CR AT GENOA.....	L	14	17	4W	DW	DEPT WR	
794500	LOUP R AT COLUMBUS.....	L	30	17	1E	BRD	CBR	
795500	SHELL CR NR COLUMBUS.....	L	23	18	1E	BRDW	DEPT WR	
796000	PLATTE R AT NORTH BEND.....	L	7	17	6E	RDW	DEPT WR OM CE	(70) (30)
797500	ELKHORN R AT EWING.....	O	35	27	9W	RD	MRB	
798000	S FK ELKHORN R NR EWING.....	O	2	26	9W	BRDW	DEPT WR	
798300	CLEARWATER CR NE CLEARWATER.....	O	13	25	8W	BRDW	DEPT WR	
798500	ELKHORN R AT NELIGH.....	O	20	25	6W	BRDW	MRB	
799000	ELKHORN R NR NORFOLK.....	L	31	24	1W	RD	MRB OM CE	(75) (25)
799080	WILLOW CR NR FOSTER.....	L	4	25	3W	BRDW	DEPT WR	
799100	N FK ELKHORN R NR PIERCE.....	L	31	26	1W	DW	OM CE	
799350	ELKHORN R AT WEST POINT.....	L	34	22	6E	BRDT	OM CE	
799450	LOGAN CR AT PENDER.....	L	26	25	6E	BRDW	DEPT WR	

APPENDIX A (CONTINUED)

IDENT. NO.	STATION	F. O.	LOCATION			TYPE OF GAGE	COOP-EBATOR	REMARKS
			SEC.	T.	R.			
799500	LOGAN CR NR UEHLING.....	L	9	20	8E	BRDW	DEPT WR	
800000	MAPLE CR NR NICKERSON.....	L	10	18	8E	BRW	CBR	
800500	ELKHORN R AT WATERLOO.....	L	3	15	10E	BRWT	MRB OM CE	(75) (25)
803000	SALT CREEK AT ROCA.....	L	17	8	7E	DW	OM CE DEPT WR	(60) (40)
803500	SALT CREEK AT LINCOLN.....	L	7	10	7E	RW	OM CE	
803510	LITTLE SALT CR NR LINCOLN.....	L	30	11	7E	BRW	DEPT WR	
803520	STEVENS CR NR LINCOLN.....	L	11	10	7E	DW	DEPT WR	
803530	ROCK CR NR CERESCO.....	L	17	12	8E	BRDW	DEPT WR	
803555	SALT CR AT GREENWOOD.....	L	31	12	9E	RWD	OM CE	
804000	WAHOO CR AT ITHACA.....	L	32	14	8E	BRDW	OM CE AER	(80) (20)
805500	PLATTE R AT LOUISVILLE.....	L	9	12	10E	BRDT	OM CE CBR	(60) (40)
WEEPING WATER CREEK BASIN								
806500	WEEPING WATER CR AT UNION.....	L	36	10	13E	WD	OM CE AER	(80) (20)
LITTLE NEMAHA RIVER BASIN								
811500	LITTLE NEMAHA R AT AUBURN.....	L	23	5	14E	BRDW	OM CE	
BIG NEMAHA RIVER BASIN								
814500	N FK BIG NEMAHA R AT HUMBOLDT....	L	10	2	13E	BRDW	KC CE DEPT WR	(70) (30)
815000	BIG NEMAHA R AT FALLS CITY.....	L	22	11	6E	RW	KC CE DEPT WR	(50) (50)
KANSAS (REPUBLICAN) RIVER BASIN								
821500	ARIKAREE R AT HAIGLER.....	C	28	1	41W	BRD	COMP	
823000	N FK REPUBLICAN R AT COLO-NEBR STATE LINE.	C	10	1	42W	D	COMP	
823500	BUFFALO CR NR HAIGLER.....	C	20	1	40W	RD	COMP	
824000	ROCK CR AT PARKS.....	C	21	1	39W	D	COMP	
824500	REPUBLICAN R AT BENKLEMAN.....	C	19	1	37W	BRD	DEPT WR	
827500	S FK REPUBLICAN R NR BENKELMAN..	C	31	1	37W	BRD	COMP	
828490	MUDDY CR AT STRATTON.....	C	14	2	35W	BRDW	DEPT WR	
828500	REPUBLICAN R AT STRATTON.....	C	13	2	35W	BRD	DEPT WR KC CE	(60) (40)

APPENDIX A (CONTINUED)

IDENT. NO. 06-	STATION	F. Q.	LOCATION			TYPE OF GAGE	COOP-ERATOR	REMARKS
			SEC.	T.	R.			
829000	SWANSON LAKE NR TRENTON.....	C	5	2	33W	R	DEPT WR	
829500	REPUBLICAN R AT TRENTON.....	C	4	2	33W	RD	DEPT WR	
831500	FRENCHMAN CR NR IMPERIAL.....	C	3	5	38W	RD	DEPT WR	
832000	ENDERS RES NR ENDERS.....	C	9	5	37W	MMR	DEPT WR	(50)
832500	FRENCHMAN CR NR ENDERS.....	C	10	5	37W	RD	USBR	(50)
834000	FRENCHMAN CR AT PALISADE.....	C	36	5	34W	BRDT	DEPT WR	
835000	STINKING WATER CR NR PALISADE...	C	30	5	33W	RD	DEPT WR	
835500	FRENCHMAN CR AT CULBERTSON.....	C	12	3	32W	D	COMP	
836000	BLACKWOOD CR NR CULBERTSON.....	C	10	3	31W	BRD	COMP	
836500	DRIFTWOOD CR NR MCCOOK.....	C	12	2	30W	BD	COMP	
837000	REPUBLICAN R AT MCCOOK.....	C	32	3	29W	RDT*	KC CE	
837300	RED WILLOW CR ABV HUGH BUTLER LAKE	C	13	5	31W	BRD	DEPT WR	
837390	HUGH BUTLER LAKE NR MCCOOK.....	C	36	5	30W	MMR	DEPT WR	
837500	RED WILLOW CR NR MCCOOK.....	C	6	4	29W	BRD	DEPT WR	
838000	RED WILLOW CR NR RED WILLOW.....	C	17	3	28W	RD	COMP	
840000	FOX CR AT CURTIS.....	C	21	8	28W	ERDW	DEPT WR	
841000	MEDICINE CR ABV HARRY STRUNK LAKE	C	7	6	26W	RD	DEPT WR	
842000	HARRY STRUNK LAKE NR CAMBRIDGE..	C	25	5	26W	MMR	DEPT WR	(50)
842500	MEDICINE CR BLW HARRY STRUNK LAKE	C	25	5	26W	D	USBR	(50)
843500	REPUBLICAN R AT CAMBRIDGE.....	C	28	4	25W	RD	DEPT WR	
844000	MUDDY CR AT ARAPAHOE.....	C	15	4	23W	BRDW	DEPT WR	
844210	TURKEY CR AT EDISON.....	C	31	4	21W	BRDW	DEPT WR	
844500	REPUBLICAN R NR ORLEANS.....	C	19	2	19W	RD	KC CE	
847000	BEAVER CR NR BEAVER CITY.....	C	23	2	23W	RD	DEPT WR	
847500	SAPPA CR NR STAMFORD.....	C	23	2	20W	RD	COMP	
849000	HARLAN CO LAKE NR REPUBLICAN CITY	C	11	1	17W	R	DEPT WR	
849500	REPUBLICAN R BLW HARLAN CO DAM..	C	6	1	16W	BRD	KC CE	
851000	CENTER CR AT FRANKLIN.....	C	35	2	15W	BRDW	DEPT WR	
851500	THOMPSON CR AT RIVERTON.....	C	2	1	13W	BRDW	DEPT WR	
852000	ELM CR AT AMBOY.....	C	3	1	10W	BRDW	DEPT WR	

APPENDIX A (CONTINUED)

IDENT. NO. 06-	STATION	LOCATION				TYPE OF GAGE	COOP- ERATOR	REMARKS
		F. 0.	SEC.	T.	R.			
852500	COURTLAND CANAL AT NEBR-KANS STATE LINE	C	32	1	7W	R	COMP	
853000	REPUBLICAN R NR GUIDE ROCK.....	C	7	1	9W	BRD	DEPT WR	
KANSAS RIVER BASIN								
879900	BIG BLUE R AT SURPRISE.....	L	15	13	1E	BRDW	DEPT WR	
880000	LINCOLN CR NR SEWARD.....	L	24	11	2E	RDW	DEPT WR	
880500	BIG BLUE R AT SEWARD.....	L	20	11	3E	BRDT	DEPT WR	
880800	W FK BIG BLUE R NR DORCHESTER...	L	23	9	2E	BRDW	KC CE	
881000	BIG BLUE R NR CRETE.....	L	3	7	4E	RDW*	KC CE DEPT WR	(50) (50)
881200	TURKEY CR NR WILBER.....	L	19	6	4E	BRDW	DEPT WR	
881500	BIG BLUE R AT BEATRICE.....	L	3	3	6E	BRDW	DEPT WR	
882000	BIG BLUE R AT BARNESTON.....	L	13	1	7E	RDT	BBRCA	
883000	LITTLE BLUE R NR DEWEESE.....	C	11	4	7W	D	MRB	
883570	LITTLE BLUE R NR ALEXANDRIA.....	L	34	3	1W	BRD	BBRCA	
884000	LITTLE BLUE R NR FAIRBURY.....	L	26	2	2E	BRDW	KC CE	
884025	LITTLE BLUE R AT HOLLENBERG.....	L	8	1S	4E	BRDWT	BBRCA	

APPENDIX B. CREST-STAGE PARTIAL-RECORD SURFACE WATER GAGING STATIONS
IN OPERATION OCT. 1, 1977 UNDER FEDERAL OR COOPERATIVE PROGRAMS
OF THE U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION,
NEBRASKA DISTRICT.

(IDENT. NO.: DOWNSTREAM IDENTIFICATION NUMBER.

F.O.: FIELD OFFICE THAT OPERATES STATION--

B, BRIDGEPORT; C, CAMBRIDGE; L, LINCOLN; O, ORD.

COOPERATOR: DEPT RD, NEBRASKA DEPARTMENT OF ROADS;

KC CE, KANSAS CITY DISTRICT, CORPS OF ENGINEERS.

REMARKS: A, EQUIPPED WITH SR RECORDER; B, ALSO A LOW-FLOW

PARTIAL-RECORD STATION; C, RATING FORECAST STATION.

(50), FIGURE INDICATES PERCENTAGE OF SUPPORT BY AGENCY.)

APPENDIX B (CONTINUED)

IDENT. NO. 06-	STATION	DRAINAGE BASIN	F. O.	LOCATION			COOP- ERATOR	REMARKS
				SEC.	T.	R.		
396490	WARBONNETT CR NR HARRISON.....	CHEYENNE R	B	10	33	56W	DEPT RD	
443300	DEEP CR NR GLEN.....	WHITE R	B	32	31	53W	DEPT RD	
443700	SOLDIERS CR NR CRAWFORD.....	WHITE R	B	3	31	53W	DEPT RD	
445530	CHADRON CR TRIB AT CHADRON STATE PARK NR CHADRON	WHITE R	B	31	32	48W	DEPT RD	
445560	CHADRON CR AT CHADRON STATE PARK NR CHADRON	WHITE R	B	36	32	49W	DEPT RD	
454400	NIOBRARA R TRIB NR BELMONT.....	NIOBRARA R	B	25	30	52W	DEPT RD	
456200	PEBBLE CR NR ESTER.....	NIOBRARA R	B	10	30	49W	DEPT RD	
456400	COTTONWOOD CR NR DUNLAP.....	NIOBRARA R	B	16	29	48W	DEPT RD	
457100	POINT OF ROCKS CR NR MARSLAND...	NIOBRARA R	B	30	27	51W	DEPT RD	
457200	BEREA CR NR ALLIANCE.....	NIOBRARA R	B	18	25	47W	DEPT RD	
457800	ANTELOPE CR TRIB NR GORDON.....	NIOBRARA R	B	18	33	41W	DEPT RD	
461300	BIG BEAVER CR NR VALENTINE.....	NIOBRARA R	O	12	34	27W	DEPT RD	
465300	CAMP CR NR O'NEILL.....	NIOBRARA R	O	19	31	11W	DEPT RD	(A)
465850	BINGHAM CR NR NIOBRARA.....	NIOBRARA R	O	32	32	6W	DEPT RD	
466950	WEIGAND CR NR CROFTON.....	WEIGAND CR	L	26	32	3W	DEPT RD	
478520	WEST BOW CR NR FORDYCE.....	BOW CR	L	3	31	1W	DEPT RD	
600800	S OMAHA CR TRIB NO. 2 NR WALTHILL.	OMAHA CR	L	13	25	8E	DEPT RD	
600900	S OMAHA CR AT WALTHILL.....	OMAHA CR	L	11	25	8E	DEPT RD	
607800	S BR TEKAMAH CR TRIB NR TEKAMAH.	TEKAMAH CR	L	34	21	10E	DEPT RD	(A)
608700	NEW YORK CR TRIB NR SPIKER.....	NEW YORK CR	L	9	19	10E	DEPT RD	(A)
608900	NEW YORK CR E OF SPIKER.....	NEW YORK CR	L	15	19	10E	DEPT RD	
610700	BIG PAPIILLION CR NR DRUM.....	BIG PAP CR	L	7	18	11E	DEPT RD	
678750	DRY SPOTTEDTAIL CR TRIB NR MITCHELL.	N PLATTE R	B	26	25	56W	DEPT RD	
684900	HACKBERRY CR NR REDINGTON.....	N PLATTE R	B	34	19	53W	DEPT RD	
687600	ASH HOLLOW NR OSHKOSH.....	N PLATTE R	B	22	15	44W	DEPT RD	
762650	LODGEPOLE CR TRIB NR KIMBALL.....	S PLATTE R	B	30	16	55W	DEPT RD	
763200	LODGEPOLE CR TRIB NR SUNOL.....	S PLATTE R	B	20	14	47W	DEPT RD	
767200	N FK PLUM CR TRIB NR FARNAM.....	PLATTE R	C	36	9	26W	DEPT RD	
767410	PLUM CR NR FARNAM.....	PLATTE R	C	10	8	25W	DEPT RD	
767500	PLUM CR NR SMITHFIELD.....	PLATTE R	C	15	8	21W	DEPT WR	
768050	BUFFALO CR TRIB NO. 1 NR BUFFALO.	PLATTE R	O	15	12	22W	DEPT RD	(A)

APPENDIX B (CONTINUED)

IDENT. NO.	STATION	DRAINAGE BASIN	F. Q.	LOCATION			COOP-ERATOR	REMARKS
				SEC.	T.	R.		
768100	E BUFFALO CR NR BUFFALO.....	PLATTE R	0	16	12	22W	DEPT RD	
768400	W BUFFALO CR NR BUFFALO.....	PLATTE R	0	30	12	22W	DEPT RD	
769100	ELM CR TRIB NR OVERTON.....	PLATTE R	0	26	11	20W	DEPT RD	
769200	ELM CR NR SUMNER.....	PLATTE R	0	7	10	19W	DEPT RD	
769300	ELM CR TRIB NO. 2 NR OVERTON....	PLATTE R	0	7	10	19W	DEPT RD	(A)
770600	WOOD R TRIB NR LODI.....	WOOD R	0	9	14	22W	DEPT RD	(A)
770700	WOOD R NR LODI.....	WOOD R	0	23	14	22W	DEPT RD	
770800	WOOD R NR OCONTO.....	WOOD R	0	24	14	22W	DEPT RD	
770900	WOOD R AT OCONTO.....	WOOD R	0	32	14	21W	DEPT RD	
770910	WOOD R NR LOMAX.....	WOOD R	0	25	13	21W	DEPT RD	
771000	WOOD R NR RIVERDALE.....	PLATTE R	0	35	31	10W	DEPT RD	
775700	N FK DISMAL R NR MULLEN.....	M LOUP R	0	29	22	32W	DEPT RD	
777600	LILLIAN CR TRIB NR BROKEN BOW...	M LOUP R	0	30	18	20W	DEPT RD	
777700	LILLIAN CR NR BROKEN BOW.....	M LOUP R	0	30	18	20W	DEPT RD	
777800	LILLIAN CR TRIB NO 2 NR WALWORTH.	M LOUP R	0	12	19	20W	DEPT RD	
782600	S BR MUD CR TRIB NR BROKEN BOW..	S LOUP R	0	23	17	21W	DEPT RD	
782700	S BR MUD CR AT BROKEN BOW.....	S LOUP R	0	32	17	20W	DEPT RD	
782900	MUD CR TRIB NR BROKEN BOW.....	S LOUP R	0	8	16	20W	DEPT RD	
784700	TURKEY CR NR FARWELL.....	M LOUP R	0	3	14	12W	DEPT RD	
789400	DAVIS CR SW OF NORTH LOUP.....	N LOUP R	0	33	17	13W	DEPT RD	
790600	E BR SPRING CR TRIB NR WOLBACH..	LOUP R	0	11	17	10W	DEPT RD	
790700	W BR SPRING CR AT BRAYTON.....	LOUP R	0	9	17	10W	DEPT RD	
791100	SPRING CR NR CUSHING.....	LOUP R	0	8	15	9W	DEPT RD	
793995	SKEEDEE CR TRIB NR GENOA.....	LCUP R	L	34	18	5W	DEPT RD	
794710	BONE CR NR DAVID CITY.....	PLATTE R	L	11	15	3E	DEPT RD	
799190	S FK UNION CR TRIB NR CORNLEA...	ELKHORN R	L	17	20	2W	DEPT RD	
799423	N LOGAN CR NR LAUREL.....	ELKHORN R	L	26	29	3E	DEPT RD	
799850	POND CR NR SCHUYLER.....	ELKHORN R	L	22	18	3E	DEPT RD	
800350	ELKHORN R TRIB NR NICKERSON.....	ELKHORN R	L	29	18	8E	DEPT RD	
803200	ANTELOPE CR AT 48TH ST, LINCOLN.	SALT CR	L	32	10	7E	DEPT RD	
803300	ANTELOPE CR AT 27TH ST, LINCOLN.	SALT CR	L	25	10	6E	DEPT RD	
803400	ANTELOPE CR AT 17TH ST, LINCOLN.	SALT CR	L	24	10	6E	DEPT RD	
803540	DEE CR NR ALVO.....	SALT CR	L	17	11	9E	DEPT RD	(A)
803570	DUNLAP CR TRIB NR WESTON.....	WAHOO CR	L	2	14	5E	DEPT RD	

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APPENDIX B (CONTINUED)

IDENT. NO. 06-	STATION	DRAINAGE BASIN	F. C.	LOCATION			COOP- ERATOR	REMARKS
				SEC.	T.	R.		
803600	N FK WAHOO CR NR PRAGUE.....	WAHOO CR	L	24	15	5E	DEPT RD	
803900	N FK WAHOO CR AT WESTON.....	WAHOO CR	L	10	14	6E	DEPT RD	
804100	SILVER CR NR CEDAR BLUFFS.....	WAHOO CR	L	11	16	7E	DEPT RD	
804200	SILVER CR NR COLON.....	WAHOO CR	L	6	15	8E	DEPT RD	
804300	SILVER CR TRIB NR COLON.....	WAHOO CR	L	20	16	7E	DEPT RD	(A)
804400	SILVER CR TRIB AT COLON.....	WAHOO CR	L	2	15	7E	DEPT RD	
804500	SILVER CR AT ITHACA.....	WAHOO CR	L	28	14	8E	DEPT RD	
805510	BUFFALO CR NR GRETNA.....	PLATTE R	L	18	13	11E	DEPT RD	
806440	STOVE CR AT ELMWOOD.....	WEEP WTR CR	L	15	10	10E	DEPT RD	(A)
806460	WEeping WATER CR AT WEeping WATER.	WEEP WTR CR	L	7	10	12E	DEPT RD	
806470	WEeping WATER CR TRIB NR WEeping WATER.	WEEP WTR CR	L	6	10	12E	DEPT RD	(A)
810060	HONEY CR NR PERU.....	HONEY CR	L	32	6	15E	DEPT RD	
810100	HOOPER CR TRIB NR PALMYRA.....	L NEMAHA R	L	9	9	9E	DEPT RD	(A)
810400	LITTLE NEMAHA R TRIB NR SYRACUSE.	L NEMAHA R	L	8	8	11E	DEPT RD	(A)
815510	TEMPLE CR NR FALLS CITY.....	NEMAHA R	L	15	2	16E	DEPT RD	
828100	N BR INDIAN CR NR MAX.....	REPUBLICAN	C	4	2	36W	DEPT RD	
829700	THOMPSON CANYON NR TRENTON.....	REPUBLICAN	C	5	2	32W	DEPT RD	
834100	SPRING CR TRIB NR GRANT.....	FRENCHMAN C	C	18	10	39W	DEPT RD	
835100	BOBTAIL CR NR PALISADE.....	FRENCHMAN C	C	13	4	34W	DEPT RD	
837100	ASH CR NR RED WILLOW.....	REPUBLICAN	C	28	3	26W	DEPT RD	
838200	COON CR AT INDIANOLA.....	REPUBLICAN	C	13	3	28W	KC CE	
838550	DRY CR AT BARTLEY.....	REPUBLICAN	C	1	3	27W	KC CE	
839000	MEDICINE CR AT MAYWOOD.....	MEDICINE CR	C	21	8	29W	DEPT RD	
839200	ELKHORN CANYON NR MAYWOOD.....	MEDICINE CR	C	2	7	30W	DEPT RD	
839500	BRUSHY CR NR MAYWOOD.....	MEDICINE CR	C	28	8	29W	DEPT RD	
839700	FRAZIER CR TRIB NR MAYWOOD.....	MEDICINE CR	C	8	7	29W	DEPT RD	
839900	FOX CR ABV CUT CANYON NR CURTIS.	MEDICINE CR	C	17	9	28W	DEPT RD	
839950	CUT CANYON NR CURTIS.....	MEDICINE CR	C	29	9	28W	DEPT RD	
849600	TURKEY CR NR HOLDREGE.....	REPUBLICAN	C	9	4	18W	DEPT RD	
850000	TURKEY CR AT NAPONEE.....	REPUBLICAN	C	4	1	16W	DEPT RD	(50B) (50)
850200	COTTONWOOD CR NR BLOOMINGTON.....	REPUBLICAN	C	1	1	16W	DEPT RD	

APPENDIX B (CONTINUED)

IDENT. NO. 26-	STATION	DRAINAGE BASIN	F. O.	LOCATION			COOP- ERATOR	REMARKS
				SEC.	T.	R.		
850500	REPUBLICAN R NR BLOOMINGTON.....	REPUBLICAN	C	8	1	15W	KC CE	(C)
851090	REPUELCAN R AT RIVERTON.....	REPUBLICAN	C	3	1	13W	KC CE	(C)
851300	W BR THOMPSON CR TRIB NR HILDRETH	REPUBLICAN	C	15	4	15W	DEPT RD	
851400	W THOMPSON CR NR UPLAND.....	REPUBLICAN	C	30	4	14W	DEPT RD	
853100	BEAVER CR NR ROSEMONT.....	REPUBLICAN	C	6	3	9W	DEPT RD	
853400	REPUELCAN R AT SUPERIOR.....	REPUBLICAN	C	28	1	7W	KC CE	(C)
879850	BIG BLUE R TRIB NR HORDVILLE.....	BIG BLUE R	L	31	13	5W	DEPT RD	
880508	PLUM CR NR SEWARD.....	BIG BLUE R	L	15	11	3E	DEPT RD	
880590	N BR W FK BIG BLUE R TRIB AT GILTNER	BIG BLUE R	L	6	9	7W	DEPT RD	
880720	SCHOOL CR NR HARVARD.....	BIG BLUE R	L	7	7	6W	DEPT RD	
880730	SCHOOL CR TRIB NO. 2 NR HARVARD..	BIG BLUE R	L	31	8	6W	DEPT RD	
880775	BEAVER CR TRIB NR HENDERSON.....	BIG BLUE R	L	30	10	4W	DEPT RD	
881250	S FK SWAN CR TRIB NR WESTERN.....	BIG BLUE R	L	22	4	2E	DEPT RD	
881450	INDIAN CR AT BEATRICE.....	BIG BLUE R	L	28	4	6E	DEPT RD KC CE	(50) (50)
881530	BIG BLUE R TRIB NR BEATRICE.....	BIG BLUE R	L	32	4	7E	DEPT RD	
883540	SPRING CR TRIB NR RUSKIN.....	L BLUE R	L	25	2	5W	DEPT RD	
883700	S FK BIG SANDY CR NR DAVENPORT..	L BLUE R	L	15	4	5W	DEPT RD	
883955	LITTLE SANDY CR NR OHIOWA.....	L BLUE R	L	16	5	1W	DEPT RD	
884005	DRY BR TRIE NR FAIRBURY.....	L BLUE R	L	14	1	2E	DEPT RD	

APPENDIX C. LOW-FLOW PARTIAL-RECORD SURFACE WATER GAGING STATIONS
IN OPERATION OCT. 1, 1977 UNDER FEDERAL OR COOPERATIVE PROGRAMS
OF THE U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION,
NEBRASKA DISTRICT.

(IDENT. NO.: DOWNSTREAM IDENTIFICATION NUMBER.

F.O.: FIELD OFFICE THAT OPERATES STATION--
B, BRIDGEPORT; C, CAMBRIDGE; L, LINCOLN; O, ORD.

COOPERATOR: DEPT WR, NEBRASKA DEPT. WATER RESOURCES;
KC CE, KANSAS CITY DISTRICT, CORPS OF ENGINEERS;
BRAGWCD, BLUE RIVER ASSOCIATION OF GROUND WATER
CONSERVATION DISTRICTS.

REMARKS: D, ALSO A CREST-STAGE PARTIAL-RECORD STATION.
(50). FIGURE INDICATES PERCENTAGE OF SUPPORT BY AGENCY.)

APPENDIX C (CONTINUED)

IDENT. NO.	STATION	DRAINAGE BASIN	F. O.	LOCATION			COOP-ERATOR	REMARKS
				SEC.	T. I.	R.		
824200	HORSE CR NR PARKS.....	REPUBLICAN	C	23	1	39W	DEPT WR	(50D) (50)
828200	INDIAN CR NR MAX.....	REPUBLICAN	C	22	2	36W	DEPT WR	
850000	TURKEY CR AT NAPONEE.....	REPUBLICAN	C	4	1	16W	DEPT WR	
879855	BIG BLUE R NR ARBORVILLE.....	KANSAS R	L	7	12	4W	KC CE	BRAGWCD
879980	LINCOLN CR NR HAMPTON.....	BIG BLUE R	L	19	11	4W	BRAGWCD	
879995	LINCOLN CR NR UTICA.....	BIG BLUE R	L	36	12	1W	BRAGWCD	BRAGWCD
880559	W FK BIG BLUE R NR ELDORADO.....	BIG BLUE R	L	6	8	6W	BRAGWCD	
880610	W FK BIG BLUE R NR STOCKHAM.....	BIG BLUE R	L	19	9	4W	BRAGWCD	
880745	SCHOOL CR NR SUTTON.....	W FK B BLUE	L	25	8	5W	BRAGWCD	
880760	W FK BIG BLUE R NR BEAVER CROSSING	BIG BLUE R	L	36	10	1W	BRAGWCD	
880770	BEAVER CR NR HAMPTON.....	W FK B BLUE	L	6	10	4W	BRAGWCD	
880785	BEAVER CR NR BEAVER CROSSING.....	W FK B BLUE	L	25	10	1W	BRAGWCD	BRAGWCD
880788	INDIAN CR NR CORDOVA.....	W FK B BLUE	L	25	9	1W	BRAGWCD	
881110	TURKEY CR NR MILLIGAN.....	BIG BLUE R	L	19	7	1E	BRAGWCD	BRAGWCD
883583	BIG SANDY CR NR ONG.....	L BLUE R	L	34	5	5W	BRAGWCD	
883590	L SANDY CR NR ONG.....	B SANDY CR	L	24	5	5W	BRAGWCD	BRAGWCD
883925	DRY SANDY CR NR BRUNING.....	B SANDY CR	L	13	5	2W	BRAGWCD	

APPENDIX D. CHEMICAL QUALITY SURFACE WATER STATIONS IN OPERATION
OCT. 1, 1977 UNDER FEDERAL OR COOPERATIVE PROGRAMS OF THE
U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION, NEBRASKA
DISTRICT.

(IDENT. NO.: DOWNSTREAM IDENTIFICATION NUMBER.

F.O.: FIELD OFFICE THAT OPERATES STATION--

B, BRIDGEPORT; C, CAMBRIDGE; L, LINCOLN; O, ORD.

COOPERATOR: COOPERATIVE AGENCY OR FEDERAL SUPPORTING PROGRAM--

NNRC---NEBRASKA NATURAL RESOURCES COMMISSION

MRB---MISSOURI RIVER BASIN PROGRAM, FEDERAL

OM CE---OMAHA DISTRICT, CORPS OF ENGINEERS

CBR---COLLECTION OF BASIC RECORDS PROGRAM, FEDERAL

G---OPERATED BY WYOMING DISTRICT

DEPT WR---NEBRASKA DEPARTMENT OF WATER RESOURCES

EPA---U.S. ENVIRONMENTAL PROTECTION AGENCY, KANSAS CITY

BM---BENCHMARK PROGRAM, FEDERAL

FREQUENCY OF MEASUREMENT: IN FIELD, MEASUREMENTS INCLUDE THREE

OR MORE OF THE FOLLOWING-- TEMPERATURE, PH, SPECIFIC
CONDUCTANCE, DISSOLVED OXYGEN, COLIFORM BACTERIA.

IN LAB: C, CONTINUOUS THERMOGRAPH RECORDER; D, DAILY;

W, WEEKLY; M, MONTHLY; AW, ALTERNATE WEEKS;

WM, WEEKLY JUNE TO DECEMBER AND MONTHLY JANUARY TO JUNE;

Q, QUARTERLY; 6/Y, SIX PER YEAR; SA, SEMIANNUAL;

A, ANNUAL; P, PERIODIC ABOVE A SPECIFIED DISCHARGE;

P(3), THREE TIMES PER YEAR AT SPECIFIED FLOWS.)

APPENDIX D (CONTINUED)

IDENT. NO. 06-	STATION	F. O.	LOCATION			FREQUENCY OF MEASUREMENT		COOP-ERATOR	REMARKS
			SEC.	T.	R.	IN FIELD	IN LAB		
PONCA CREEK BASIN									
453600	PONCA CR AT VERDEL.....	0	30	33	7W	M	M	NNRC	
NIOBRARA RIVER BASIN									
454500	NIOBRARA R ABV BOX BUTTE RES.....	B	27	29	50W	M	M	NNRC	
459200	SNAKE R ABV MERRITT RES.....	0	11	30	32W	C	--	MRB	
462000	NIOBRARA R NEAR NORDEN.....	0	33	33	23W	M	D	MRB	
462500	PLUM CR NR MEADVILLE.....	0	14	32	22W	M	M	MRB	
463500	LONG PINE CR NR RIVERVIEW.....	0	5	31	20W	M	M	MRB	
465050	EAGLE CR NR MIDWAY.....	0	30	31	12W	SA	SA	MRB	
465100	E BR EAGLE CR NR MIDWAY.....	0	30	31	12W	SA	SA	MRB	
465398	REDBIRD CR NR MEEK.....	0	14	31	11W	SA	SA	MRB	
465420	BLACKBIRD CR NR MEEK.....	0	14	31	11W	SA	SA	MRB	
465500	NIOBRARA R NR VERDEL.....	0	23	32	8W	C	--	OM CE, NNRC,CBR	
PLATTE RIVER (NORTH PLATTE) BASIN									
674500	N PLATTE R AT WYO-NEBR STATE LINE	B	3	23	60W	M	D	(G)	
682505	N PLATTE R AT MCGREW.....	B	25	21	53W	M	M	NNRC	
684500	N PLATTE R AT BRIDGEPORT.....	B	28	20	50W	M	--	DEPT WR	
686000	N PLATTE R AT LISCO.....	B	33	18	46W	M	D	NNRC,CBR	
690500	N PLATTE R NR KEYSTONE.....	B	1	14	38W	Q	Q	DEPT WR	
PLATTE RIVER (SOUTH PLATTE) BASIN									
762550	LODGEPOLE CR AT KIMBALL.....	B	28	15	55W	M	M	NNRC	
764880	S PLATTE R AT ROSCOE.....	B	4	13	37W	M	M	NNRC	
PLATTE RIVER BASIN									
768000	PLATTE R NR OVERTON.....	B	12	8	20W	MC	D	MRB	
768015	SPRING CR BL LEXINGTON.....	C	13	9	21W	M	M	NNRC	
770205	N CHAN PLATTE R NR KEARNEY.....	C	10	8	15W	M	M	NNRC	
770500	PLATTE R NR GRAND ISLAND.....	0	31	11	8W	M	D	MRB,NNRC	
772000	WOOD R NR ALDA.....	0	7	10	10W	M	M	EPA	
772200	WOOD R NR GRAND ISLAND.....	0	7	11	8W	M	M	NNRC,EPA	
772500	WOOD R NR CHAPMAN.....	0	34	12	8W	M	M	NNRC	
774000	PLATTE R NR DUNCAN.....	L	12	16	2W	M	M	MRB	
775500	MIDDLE LOUP R AT DUNNING.....	0	33	22	24W	C	--	DEPT WR	

APPENDIX D (CONTINUED)

IDENT. NO. 06-	STATION	F. O.	LOCATION			FREQUENCY OF MEASUREMENT		COOP-ERATOR	REMARKS
			SEC.	T.	R.	IN FIELD	IN LAB		
775900	DISMAL R NR THEDFORD.....	0	23	21	28W	6/Y	6/Y	BM	
777000	M LOUP R NR MILBURN.....	0	3	21	23W	WM	SA	MRB	
778500	M LOUP R NR COMSTOCK.....	0	1	17	17W	WM	SA	MRB	
783000	MUD CR NR BROKEN BOW.....	0	11	16	20W	M	M	NNRC	
784000	S LOUP R AT ST. MICHAEL.....	0	11	12	13W	WM	SA	MRB	
785000	M LOUP R AT ST PAUL.....	0	10	14	10W	WM	SA	MRB	
786000	N LOUP R AT TAYLOR.....	0	22	21	18W	M	D	MRB	
787500	CALAMUS R NR BURWELL.....	0	9	21	16W	M	D	MRB	
788495	DANE CR AT ORD.....	0	21	19	14W	SA	SA	MRB	
788950	MIRA CR AT NORTH LOUP.....	0	26	18	13W	SA	SA	MRB	
790500	N LOUP R NR ST. PAUL.....	0	22	15	10W	M	D	MRB	
792000	CEDAR R NR FULLERTON.....	L	4	16	6W	M	D	MRB	
792499	LOUP R CANAL AT DIV NR GENCA.....	L	6	16	4W	M	D	CBR	
793600	BEAVER CR NR ALBION.....	0	26	20	6W	M	M	NNRC	
796000	PLATTE R AT NORTH BEND.....	L	7	17	6E	M	D	CBR, NNRC	
799450	LOGAN CR AT PENDER.....	L	26	25	6E	M	M	NNRC	
800500	ELKHORN R AT WATERLOO.....	L	3	15	10E	M	M	MRB, NNRC	
801330	SALT CR NR ROCA.....	L	15	8	7E	Q	Q	NNRC	
803080	SALT CR ABV BEAL SL AT LINCOLN.....	L	2	9	6E	M	M	EPA, NNRC	
803190	SALT CR AT 14TH ST, LINCOLN.....	L	14	10	6E	Q	Q	NNRC	
803493	OAK CR AT 14TH ST, LINCOLN.....	L	14	10	6E	Q	Q	NNRC	
803500	SALT CR AT LINCOLN.....	L	7	10	7E	M	D	NNRC	
803523	STEVENS CR AT HWY 6, LINCOLN.....	L	35	11	7E	Q	Q	NNRC	
803525	SALT CR BLW STEVENS CR NR WAVERLY	L	24	11	7E	M	M	EPA, NNRC	
803530	ROCK CR NR CERESCO.....	L	17	12	8E	Q	Q	NNRC	
803565	SALT CR ABV ASHLAND.....	L	10	12	9E	M	M	NNRC	
804495	SILVER CR NR WAHOO.....	L	8	14	8E	M	M	NNRC	
805499	MILL CR AT LOUISVILLE.....	L	15	12	11E	P(3)	P(3)	DEPT WR	
805500	PLATTE R AT LOUISVILLE.....	L	14	12	11E	M	D	CBR	
805525	CEDAR CR NR LOUISVILLE.....	L	13	12	11E	P(3)	P(3)	DEPT WR	
805565	FOURMILE CR NR PLATTSMOUTH.....	L	9	12	13E	P(3)	P(3)	DEPT WR	
WEEPING WATER CREEK BASIN									
806460	WEEPING WATER CR AT W. WATER.....	L	7	10	12E	P(3)	P(3)	DEPT WR	
806495	S BR. W. WATER CR NR UNION.....	L	22	10	13E	P(3)	P(3)	DEPT WR	

APPENDIX D (CONTINUED)

IDENT. NO. 06-	STATION	F. O.	LOCATION			FREQUENCY OF MEASUREMENT		COOP-ERATOR	REMARKS
			SEC.	T.	R.	IN FIELD	IN LAB		
806501	WEeping WATER CR NR UNION.....	L	36	10	13E	P(3)	P(3)	DEPT WR	
LITTLE NEMAHA RIVER BASIN									
811500	LITTLE NEMAHA R AT AUBURN.....	L	23	5	14E	M	M	NNRC	
BIG NEMAHA RIVER BASIN									
815000	BIG NEMAHA R AT FALLS CITY.....	L	23	1	16E	M	M	NNRC	
KANSAS (REPUBLICAN) RIVER BASIN									
829500	REPUBLICAN R AT TRENTON.....	C	4	2	33W	6/Y	SA	MRB	
835500	FRENCHMAN CR AT CULBERTSON.....	C	12	3	32W	M	SA	MRB	
837000	REPUBLICAN R AT MCCOOK.....	C	32	3	29W	C	--	KC CE	
844500	REPUBLICAN R NR ORLEANS.....	C	19	2	19W	WM	M	MRB, NNRC	
853000	REPUBLICAN R NR GUIDE ROCK.....	C	7	1	9W	M	M	NNRC	
KANSAS RIVER BASIN									
880000	LINCOLN CR NR SEWARD.....	L	24	11	2E	M	M	NNRC	
880520	BIG BLUE R BL SEWARD.....	L	3	10	3E	M	M	NNRC	
880556	W F BIG BLUE R BL HASTINGS.....	C	3	7	9W	M	M	NNRC	
880800	W F BIG BLUE R NR DORCHESTER.....	L	23	9	2E	M	M	NNRC	
881000	BIG BLUE R NR CRETE.....	L	3	7	4E	C	--	KC CE	
						M	M	NNRC	
881200	TURKEY CR NR WILBER.....	L	19	6	4E	M	M	NNRC	
881502	BIG BLUE R BL BEATRICE.....	L	2	3	6E	M	M	NNRC	
884025	LITTLE BLUE R AT HOLLENBERG, KANS.	L	8	15	4E	M	M	NNRC	

SAMPLES FOR SPECIFIC CONDUCTANCE ONLY TAKEN MONTHLY AT THE FOLLOWING GAGING STATIONS (ALL NUMBERS PREFIXED BY 06): 459200; 461500; 465000; 797500; 798500; 799000; 799500; 883000.

NOTE.--ONCE-DAILY TEMPERATURE MEASUREMENTS MADE AT DAILY CHEMICAL-QUALITY SAMPLING STATIONS.

APPENDIX E. FLUVIAL SEDIMENT STATIONS IN OPERATION OCT. 1, 1977
UNDER FEDERAL OR COOPERATIVE PROGRAMS OF THE U.S. GEOLOGICAL
SURVEY, WATER RESOURCES DIVISION, NEBRASKA DISTRICT.

(IDENT. NO.: DOWNSTREAM IDENTIFICATION NUMBER.
F.O.: FIELD OFFICE THAT OPERATES STATION--
B, BRIDGEPORT; C, CAMBRIDGE; L, LINCOLN; O, ORD.
FREQUENCY OF MEASUREMENT: D, DAILY; M, MONTHLY; P, PERIODIC
ABOVE SPECIFIED DISCHARGE WITH NUMBER OF SAMPLINGS
INDICATED BY SUBSCRIPT
COOPERATOR: COOPERATING AGENCY OR FEDERAL SUPPORTING PROGRAM--
OM CE---OMAHA DISTRICT, CORPS OF ENGINEERS
CBR---COLLECTION OF BASIC RECORDS PROGRAM, FEDERAL
NNRC---NEBRASKA NATURAL RESOURCES COMMISSION
DEPT WR---NEBRASKA DEPARTMENT OF WATER RESOURCES)

APPENDIX E (CONTINUED)

IDENT. NO.	STATION	LOCATION				FREQUENCY OF MEASUREMENT	COOP-ERATOR	REMARKS
06-		F.	SEC.	T.	R.			
NIOBRARA RIVER BASIN								
465500	NIOBRARA R NR VERDEL.....	0	23	32	8W	D	OM CE	
PLATTE RIVER (NORTH PLATTE) BASIN								
686000	N PLATTE R AT LISCO.....	B	33	18	46W	M	CBR	
PLATTE RIVER BASIN								
793000	LOUP R NR GENOA.....	L	25	17	4W	M	CBR	
796000	PLATTE R AT N BEND.....	L	7	17	6E	M	NNRC	CBR
799000	ELKHORN R NR NORFOLK.....	L	31	24	1W	P	NNRC	
799450	LOGAN CR AT PENDER.....	L	26	25	6E	P	NNRC	
800500	ELKHORN R AT WATERLOO.....	L	3	16	10E	P(3)	NNRC	
803530	ROCK CR NR CERESCO.....	L	17	12	8E	P(6)	DEPT WR	
803555	SALT CR AT GREENWOOD.....	L	31	12	9E	M	NNRC	
805499	MILL CR AT LOUISVILLE.....	L	15	12	11E	P(2)	DEPT WR	
805500	PLATTE R AT LOUISVILLE.....	L	14	12	11E	D	OM CE	
805525	CEDAR CR NR LOUISVILLE.....	L	13	12	11E	P(2)	DEPT WR	
805565	FOURMILE C NR PLATTSMOUTH.....	L	9	12	13E	P(2)	DEPT WR	
WEeping WATER CREEK BASIN								
806460	WEeping WATER CR AT W WATER.....	L	7	10	12E	P(2)	DEPT WR	
806495	S BR W WATER CR NR UNION.....	L	22	10	13E	P(2)	DEPT WR	
806501	WEeping WATER CR NR UNION.....	L	36	10	13E	P(2)	DEPT WR	
KANSAS (REPUBLICAN) RIVER BASIN								
834000	FRENCHMAN CR AT PALISADE.....	C	36	5	34W	M	USBR	
KANSAS RIVER BASIN								
881000	BIG BLUE R NR CRETE.....	L	3	7	4E	P(3)	NNRC	
884025	LITTLE BLUE R AT HOLLENBERG, KANS.	L	8	15	4E	P(3)	NNRC	

APPENDIX F. CONTINUOUS RECORDS OF GROUNDWATER LEVELS FOR WELLS
IN OPERATION OCT. 1, 1977 UNDER FEDERAL OR COOPERATIVE
PROGRAMS OF THE U.S. GEOLOGICAL SURVEY, WATER RESOURCES
DIVISION, NEBRASKA DISTRICT.

(F.O.: OFFICE THAT OPERATES STATIONS-- CS, CONSERVATION AND
SURVEY DIVISION, UNIVERSITY OF NEBRASKA; O, ORD;
B, BRIDGEPORT; C, CAMBRIDGE; L, LINCOLN.

WELL NUMBERS:

WELL NUMBERS IN THIS LISTING INDICATE THE LOCATIONS OF THE
WELLS WITHIN THE LAND SUBDIVISIONS OF THE U.S. BUREAU OF LAND
MANAGEMENT. AN EXAMPLE OF A TYPICAL WELL NUMBER IS 21N13W14DCA.
THE FIRST TWO DIGITS INDICATE THE TOWNSHIP, WHICH IN NEBRASKA
ARE ALL NORTH OF THE 40TH PARALLEL BASELINE. THE SECOND TWO
DIGITS INDICATE THE RANGE EAST OR WEST OF THE 6TH PRINCIPAL
MERIDIAN. THE LAST TWO DIGITS INDICATE THE SECTION IN WHICH
THE WELL IS LOCATED. THE FIRST LETTER AFTER THESE DIGITS
DENOTES THE QUARTER SECTION, OR 160-ACRE TRACT; THE SECOND
DENOTES THE QUARTER-QUARTER SECTION, OR 40-ACRE TRACT; AND THE
THIRD DENOTES THE QUARTER-QUARTER-QUARTER SECTION, OR 10-ACRE
TRACT. THE QUARTER SECTIONS, QUARTER-QUARTER SECTIONS, ETC.,
ARE DESIGNATED A, B, C, D IN A COUNTERCLOCKWISE DIRECTION,
BEGINNING WITH A IN THE NORTHEAST QUADRANT. IF TWO OR MORE
WELLS ARE LOCATED WITHIN THE SMALLEST SUBDIVISION INDICATED,
THE WELLS ARE NUMBERED SERIALLY.

COOPERATOR: COOPERATIVE AGENCY OR FEDERAL SUPPORTING PROGRAM--
CS---CONSERVATION AND SURVEY DIVISION, UNIVERSITY OF NEBRASKA
MRB---MISSOURI RIVER BASIN PROGRAM, FEDERAL
CBR---COLLECTION OF BASIC RECORDS PROGRAM, FEDERAL)

APPENDIX F (CONTINUED)

COUNTY	F.O.	WELL NUMBER	COOPERATOR	COUNTY	F.O.	WELL NUMBER	COOPERATOR
ADAMS	CS	6N-11W-17CB	CS	HALL	O	11N-11W-25CC2	CS
	CS	7N-10W-23AB	CS	HAMILTON	CS	10N- 6W-26BC	CS
ANTELOPE	O	23N- 6W-28DC	MRB		CS	12N- 5W-23CCC	CS
	O	27N- 5W-17AAA	CS	HARLAN	C	2N-18W- 9BCC	CS
BOX BUTTE	B	25N-48W-12CC	CS		C	4N-18W-15AD	CS
	B	26N-49W- 6CC	CS	HOLT	O	26N-12W-26AAA	MRB
BROWN	O	30N-21W-19CC	CS		O	30N-10W-32DAA	MRB
BUFFALO	C	8N-14W-12BAA	MRB		O	31N-14W-27DDD	MRB
	C	9N-14W- 1DC	CS	HOWARD	O	14N-11W-22DD	CS
	C	10N-16W- 5DC	CS				
BUTLER	CS	13N- 4E-19BCBR	CS	JEFFERSON	CS	4N- 1E-31AA	CS
	CS	15N- 1E-27DD2	CS		CS	4N- 3E-13DA	CS
CHASE	C	6N-41W-21CCC	CS	KEARNEY	C	6N-15W-34DC	CS
	C	7N-38W-29CBB	CS	KEYA PAHA	O	33N-20W-19DCDD	MRB
	C	7N-41W-11DAA	CS	KIMBALL	B	15N-55W- 7ABR	CS
CHEYENNE	B	16N-49W-19BBR	CS	LANCASTER	CS	10N- 6E-36BC	CS
CLAY	CS	6N- 8W-21DD	CS	MERRICK	O	12N- 8W-36RC	CS
	CS	8N- 7W-23BR	CS	PERKINS	C	9N-35W-14BBB	CS
					C	9N-39W- 2DDDD	CS
COLFAX	L	17N- 3E-29AA2	CS	PHELPS	C	12N-38W-31CCCC	CS
CUSTER	O	18N-22W-24CCC	CS		C	7N-18W-31AA	CS
DAWSON	B	10N-21W-18DDD	CS		C	7N-20W-31CD	CS
DUNDY	C	1N-40W-29BB2	CBR,	PIERCE	L	28N- 3W-33BA	CS
				POLK	CS	14N- 2W-21DB	CS
	C	2N-38W-11DD	CS	SALINE	CS	8N- 3E-19ADA	CS
	C	4N-38W-30BCC	CS	SAUNDERS	L	13N- 10E-30AD	CS
FILLMORE	CS	5N- 4W-12HC	CS		CS	14N- 8E-24ACD2	CS
	CS	7N- 1W-19AA2	CS	SCOTTS BLUFF	B	22N-55W-11DDC	CS
	CS	8N- 2W-26AD	CS	SEWARD	CS	11N- 2E-21DD	CS
FRANKLIN	C	4N-14W-23CC	CS	SHERIDAN	B	29N-46W-10AA	MRB
FRONTIER	C	6N-25W- 4DDC	CS				
GAGE	CS	2N- 5E- 8AD	CS	THAYER	CS	3N- 4W- 2AA	CS
HALL	CS	9N- 9W-14AAR	CS	VALLEY	O	18N-15W-13ACD	MRB
	O	9N-10W- 6BBBB	MRB	YORK	CS	9N- 4W- 6DD	CS
					CS	11N- 2W-31BA3	CS

APPENDIX G. AREAS SAMPLED AT INTERVALS OF SEVERAL YEARS FOR
 CHEMICAL QUALITY OF GROUNDWATER UNDER FEDERAL OR COOPERATIVE
 PROGRAMS OF THE U.S. GEOLOGICAL SURVEY, WATER RESOURCES DIVISION,
 NEBRASKA DISTRICT.

(WELLS IN BLUE DIVISION, O'NEILL UNIT, AND ABOUT A THIRD OF THE
 STATEWIDE RECORDER WELL SCHEDULED FOR SAMPLING IN 1978 FISCAL
 YEAR)

AREA	APPROXIMATE NUMBER OF WELLS	COUNTIES INVOLVED
BLUE DIVISION	20	ADAMS, CLAY, FILLMORE, POLK, SALINE, SEWARD
ELKHORN UNIT	25	BURT, COLFAX, CUMING, DODGE, PLATTE, SAUNDERS, STANTON, THURSTON, WAYNE
NORTH LOUP DIVISION.	20	GREELEY, HOWARD, MERRICK, NANCE, VALLEY
STATE-WIDE	20 68	HOLT, KEYA PAHA, KNOX RECORDER WELLS IN 47 COUNTIES

Appendix H.--Ambient Surface-Water Quality Stations

NEBRASKA DEPARTMENT OF ENVIRONMENTAL CONTROL

All stations have the following parameters collected on a monthly basis:

Collection date (yr/mo/day)	Magnesium
Collection time (24 hr, clock)	Sodium, dissolved as Na
Streamflow, cfs	Phosphate, Ort. as PO ₄
Water temperature, °C	Nitrate, Tot. as N
D.O., mg/l	BOD, 5 day
pH, su	COD, Hi level
Conductivity, u mho/cm	Nitrogen, ammonia, tot.
Calcium	Fecal coliform, 100 ml.
Chloride, as Cl	Solids, total suspended

The National Ambient Water-Quality Monitoring sites also include the following:

Total phosphorus
Tot. kjeldahl nitrogen
Nitrate and nitrite

Plus fish flesh analysis annually.

Appendix H.--Ambient Surface-Water Quality Stations--Continued

Missouri River Basin

No.	Station	Sec.	$\frac{1}{4}$	T.	R.	Lat.	Long.
Big Blue River Basin							
301130	Big Blue River at Surprise	15	BB	13N	1E	41 06 11	97 18 30
301127	Big Blue River at Milford	32	AB	9N	4E	40 42 40	96 59 38
301115	Big Blue River at Hoag	13	BB	4N	5E	40 19 09	96 49 09
300905	Big Blue River at Barneston ^{a/}	24	BA	1N	7E	40 02 37	96 35 17
301121	W.Fk.Big Blue R. at Dorchester	23	CC	9N	2E	40 43 46	97 10 29
301178	Turkey Creek at DeWitt	29	CC	5N	5E	40 21 59	96 53 30
Elkhorn River Basin							
301021	Elkhorn River at Neligh	20	CC	25N	6W	42 07 15	98 02 40
301016	Elkhorn River at Stanton	29	AD	23N	2E	41 56 25	97 13 00
301014	Elkhorn River at West Point	34	BC	22N	6E	41 50 15	96 43 35
301005	Elkhorn River at Nickerson	7	CD	18N	9E	41 32 26	96 27 22
300915	Elkhorn River at Gretna ^{a/}	4	DC	14N	10E	41 12 25	96 17 55
301008	Logan Creek at Winslow	10	AD	19N	8E	41 38 07	96 30 15
Little Blue River Basin							
300934	Little Blue R. NE of Ayr	25	CB	6N	10W	40 27 27	98 23 52
301107	Little Blue R. at Gilead	24	CC	3N	1W	40 12 25	97 23 07
300906	Little Blue R.at Steele City ^{a/}	30	BA	1N	4E	40 01 44	97 01 19
301106	Big Sandy Cr. at Alexandria	12	CC	3N	1W	40 14 10	97 23 07
301242	Rose Creek at Fairbury	11	CA	1N	2E	40 03 56	97 10 21
Loup River Basin							
300983	N.Loup River N. of Taylor	22	DA	21N	18W	41 46 29	99 22 49
300920	N. Loup R. at St. Paul	22	AB	15N	10W	41 15 44	98 26 44
300990	Middle Loup R. N. of Dunning	33	DB	22N	24W	41 49 51	100 05 56
300989	Middle Loup R. at Sargent	14	BB	19N	18W	41 37 22	99 21 47
300921	Middle Loup R. nr. Boelus	29	DA	13N	12W	41 04 01	98 42 30
300997	S. Loup R. NE of Oconto	10	DC	14N	21W	41 11 35	99 42 28
300922	S. Loup R. at St. Michael	11	AA	12N	13W	41 01 50	98 44 35
300987	Middle Loup R. at St. Paul	10	AB	14N	10W	41 12 15	98 26 44

^{a/} Also part of National Network.

Appendix H.--Ambient Surface-Water Quality Stations--Continued

Missouri River Basin

No.	Station	Sec.	$\frac{1}{4}$	T.	R.	Lat.	Long.
Loup River Basin--Continued							
301238	Loup River at Fullerton ^{a/}	23	BD	16N	6W	41 20 45	97 58 31
300993	Dismal River at Dunning	4	BD	21N	24W	41 49 12	100 06 14
300986	Calamus River at Burwell	9	BB	21N	16W	41 48 40	99 11 03
300935	Cedar River at Fullerton	4	AA	16N	6W	41 23 34	98 00 15
300980	Beaver Creek at Genoa	14	CA	17N	4W	41 26 39	97 44 46
300999	Mud Creek at Sweetwater	3	DA	12N	15W	41 02 15	98 59 26
Lower Platte River Basin							
300919	Platte River at Schuyler	26	CB	17N	3E	41 24 51	97 03 25
301029	Platte River at Valley	33	AA	16N	9E	41 19 09	96 24 31
301171	Platte R. at Plattsmouth ^{a/}	35	BB	13N	13E	41 03 29	95 55 30
300930	Salt Creek at Ashland	1	CB	12N	9E	41 02 12	96 21 57
Middle Platte River Basin							
300918	Platte R. at Lexington ^{a/}	5	DC	9N	22W	40 46 26	99 51 04
301224	Platte River at Alda	6	CC	9N	10W	40 46 22	98 29 24
301031	Platte River at Duncan	12	CD	16N	2W	41 22 04	97 29 43
301032	Wood River at Chapman	20	CB	12N	7W	40 59 38	98 09 04
Missouri River Tributaries							
301152	Big Papillion Cr. at Bennington	15	AA	16N	11E	41 21 44	96 09 35
301151	Big Papillion Cr. at Ralston	1	CB	14N	12E	41 12 37	96 01 16
301147	Big Papillion Cr. at Bellevue	28	CC	14N	12E	41 09 08	95 57 47
301146	Big Papillion Cr. at Bellevue	14	AB	13N	13E	41 06 19	95 54 55
	OAFB						
301154	Little Papillion Cr. at Irvington	34	DA	16N	12E	41 18 28	96 05 51
301153	Little Papillion Cr. at Ralston	1	DB	14N	12E	41 12 36	96 00 42
301150	W. Br. Big Papillion Creek at Boys Town	22	BB	15N	11E	41 15 40	96 10 28
301148	W. Br. Big Papillion Creek at Bellevue	33	BB	14N	12E	41 08 42	95 57 47

^{a/} Also part of National Network.

Appendix H.--Ambient Surface-Water Quality Stations--Continued

Missouri River Basin

No.	Station	Sec.	$\frac{1}{4}$	T.	R.	Lat.	Long.
Nemaha River Basin							
300904	Big Nemaha R. at Preston ^{a/}	16	CC	1N	17E	40 02 44	95 31 09
301137	N. Fk. Nemaha R. at Humboldt	10	AB	2N	13E	40 09 32	95 56 31
300903	Little Nemaha R. at Nemaha	12	DA	4N	15E	40 19 33	95 40 25
301143	Weeping Water Cr. at Union	36	AB	10N	13E	40 47 49	95 53 56
Niobrara River Basin							
300950	Niobrara R. at Harrison ^{a/}	18	DD	31N	57W	42 39 11	104 02 46
300952	Niobrara R. at Marsland	5	CB	28N	51W	42 25 42	103 18 02
300957	Niobrara R. at Merriman	28	BB	33N	37W	42 48 40	101 41 26
300959	Niobrara R. at Valentine SW	25	AD	33N	29W	42 48 22	100 40 19
300961	Niobrara River at Sparks	22	DB	34N	26W	42 54 09	100 21 25
300963	Niobrara R. so. of Riverview	30	AB	32N	19W	42 43 21	99 35 14
300901	Niobrara R. at Niobrara ^{a/}	18	DA	32N	6W	42 44 52	98 02 41
300967	Snake River nr. Valentine	8	DA	31N	30W	42 40 26	100 51 18
300916	Keya Paha River at Naper	16	CC	43N	15W	42 54 49	99 05 37
North Platte River Basin							
301066	North Platte R. at Henry ^{a/}	3	CC	23N	58W	41 59 16	104 02 50
301302	No. Platte R. at Scottsbluff	20	AC	22N	55W	41 51 58	103 43 23
301054	No. Platte R. at Bridgeport	28	CB	20N	50W	41 40 31	103 05 54
301050	No. Platte R. at Lewellen ^{a/}	33	BD	16N	42W	41 18 59	102 08 30
301049	No. Platte R. at Keystone	5	CB	14N	37W	41 12 42	101 35 35
300910	No. Platte R. at North Platte	28	AC	14N	30W	41 09 29	100 45 21
301065	Horse Creek at Lyman NE	25	AD	23N	58W	41 56 15	103 59 32
301057	Ninemile Creek at McGrew	23	DD	21N	53W	41 46 20	103 25 26
301061	Tub Springs Cr. at Scottsbluff	33	CC	23N	55W	41 55 00	103 42 48
301055	Red Willow Creek at Bayard	13	AA	20N	52W	41 42 47	103 15 17
301059	Gering Drain at Gering	6	DC	21N	54W	41 48 55	103 37 21
301063	Dry Spotted Tail Cr. at Mitchell	29	AA	23N	56W	41 56 31	103 50 16
301060	Winter Creek at Scottsbluff	30	AC	22N	54W	41 51 05	103 37 21
301064	Sheep Creek at Morrill	17	AD	23N	57W	41 58 00	103 57 26

^{a/} Also part of National Network.

Appendix H.--Ambient Surface-Water Quality Stations--Continued

Missouri River Basin

No.	Station	Sec.	$\frac{1}{4}$	T.	R.	Lat.	Long.
Republican River Basin							
300925	Republican R. at Benkelman ^{a/}	17	DA	1N	37W	40 03 05	101 30 52
301088	Republican R. at Culbertson	17	DD	3N	31W	40 13 15	100 50 07
301080	Republican R. at Cambridge	32	AC	4N	25W	40 16 21	100 09 45
301072	Republican R. at Orleans S. ^{a/}	34	AB	2N	19W	40 06 06	99 26 59
301070	Republican R. at Naponee	16	BB	1N	16W	40 03 30	99 08 19
190175	Republican River at Hardy ^{a/}	6	AA	1S	5W	40 00 01	97 54 55
301102	N.Fk. Republican R. at Sanborn	10	CA	1N	42W	40 04 00	102 03 19
301098	S.Fk. Republican R. at Benkelman	31	CA	1N	37W	40 00 29	101 32 34
301101	Arikaree River at Haigler	29	AA	1N	41W	40 01 35	101 57 04
301071	Prairie Dog Cr. at Alma S.	33	BB	1N	18W	40 00 54	99 21 50
301089	Frenchman R. at Culbertson	13	AB	3N	32W	40 13 54	100 52 43
301084	Red Willow Cr. at Indianola	17	AA	3N	28W	40 13 55	100 29 59
301472	Medicine Cr. at Cambridge	29	DA	4N	25W	40 16 22	100 09 44
301073	Sappa Creek at Stamford	23	BB	2N	20W	40 07 51	99 33 09
300900	So.Platte R. at Big Springs ^{a/}	14	AC	12N	43W	41 00 43	102 11 24
300902	So.Platte R. at North Platte	9	AB	13N	30W	41 07 07	100 45 21
White/Hat River Basin							
300947	Hat Creek at Harrison	10	BB	32N	55W	42 45 57	103 46 10
300948	Hat Cr. at Ardmore, S.Dak. (Fall River County)					43 01 15	103 40 00
300936	White River at Andrews	25	CB	31N	55W	42 37 41	103 43 49
300937	White River at Crawford - NE	35	BC	32N	52W	42 42 21	103 23 59
300938	White R. at Fort Robinson	26	CC	31N	53W	42 37 34	103 30 58
300939	White River at Whitney	1	BD	32N	51W	42 46 43	103 15 28
300940	White R. at Chadron - NW	35	BB	34N	49W	42 52 58	103 03 37
300941	White R. at Chadron - N.	6	CA	34N	47W	42 56 52	102 54 02
300943	Bordeaux Creek at Chadron	34	DD	34N	48W	42 52 21	102 57 52
301473	Bordeaux Creek at Chadron - S.	23	AD	33N	48W	42 49 29	102 55 47
300926	Chadron Creek at Chadron - W.	15	CD	33N	49W	42 49 45	103 04 31
301474	White Clay Creek at White Clay - S.	36	AB	35N	45W	42 58 30	102 33 35

^{a/} Also part of National Network.

APPENDIX I--INDEX TO STREAMFLOW RECORDS (U.S. GEOLOGICAL SURVEY FEDERAL AND COOPERATIVE PROGRAM)

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
MISSOURI RIVER BASIN					
CHEYENNE RIVER BASIN					
Hat Creek:					
Warbonnet Creek near Harrison, Nebr.....	06396490	24.5		1969-	
WHITE RIVER BASIN					
White River:					
White River tributary near Glen, Nebr.....	06443200	7.97		1953-70	
Deep Creek near Glen, Nebr.....	06443300	10.9		1953-	
White River near (at) Crawford, Nebr.....	06443500	163	1897.		
Soldiers Creek near Crawford, Nebr.....	06443700	52.6		1955-	
White River tributary No. 2 near Crawford, Nebr...	06443900	5.45		1955-70	
White River at Crawford, Nebr.....	06444000	313	1931-43 1947-		
White River below Crawford, Nebr.....	06444500	a350	1931.		
White River bl Big Cottonwood C nr Whitney, Nebr....	06445000	676	1948-61.		
White River near Chadron, Nebr.....	06445500	a750	1931-43.		
Chadron Creek:					
Chadron Creek tributary at Chadron State Park, near Chadron, Nebr.....	06445530	3.35		1953-	
Chadron Creek at Chadron State Park, near Chadron (near Chadron), Nebr.....	06445560	14.9		1953-	
Bordeaux Creek:					
Big Bordeaux Creek near Chadron, Nebr.....	06445590	9.42	1968-		
Bowen Farm Pond north of Chadron, Nebr.....	06445650				
PONCA CREEK BASIN					
Ponca Creek near Naper, Nebr. (at South Dakota- Nebraska State line).....	06453400	373	1960-74		1958-60.
Ponca Creek at Anoka, Nebr.....	06453500	505	1949-		
Ponca Creek at Lynch, Nebr.....	06453550	-	1960-64.		
Miconek Farm Pond near Lynch, Nebr.....	06453570				
Ponca Creek at Verdel, Nebr.....	06453600	812	1957-		
NIORRARA RIVER BASIN					
Niobrara River at Wyoming-Nebraska State line.....	06454000	a450	1955-		
Niobrara River at Agate, Nebr.....	06454100	a840	1957-		
Niobrara River tributary near Belmont, Nebr.....	06454400	2.59		1971-	
Niobrara River above Box Butte Reservoir (near Marshall), Nebr.....	06454500	a1,400	1946-		
Box Butte Reservoir near Hemingford, Nebr.....	06455000	a1,460	1945-		
Niobrara River below Box Butte Reservoir, Nebr.....	06455500	a1,460	1946-		
Niobrara River near (at) Dunlap, Nebr.....	06455900	a1,580	1930-42 1961-71		1971-73
Cottonwood Creek:					
Pebble Creek near Esther, Nebr.....	06456200	3.07		1953-	
Pebble Creek near Dunlap, Nebr.....	06456300	23.5		1953-70	
Cottonwood Creek near Dunlap, Nebr.....	06456400	82.2		1951-	
Niobrara River near Hay Springs, Nebr.....	06456500	a1,790	1950-64.		
Niobrara River near Colclesser, Nebr.....	06457000	-	1947-48		1963-64. 1971-73

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Snake Creek: Paint of Rocks Creek near Marshland, Nebr.....	06457100	7.10	1970-		
Dry Creek: Beres Creek near Alliance, Nebr.....	06457200	32.3		1953-	
Niobrara River near Gordon, Nebr.....	06457500	a4,290	1928-32 1945-		
Antelope Creek at Gordon, Nebr.....	06457700	61.1		1953-70	
Antelope Creek tributary near Gordon, Nebr.....	06457800	26.6		1953-	
Antelope Creek near Gordon, Nebr.....	06458000	a160	1948.		
Bear Creek near Ell, Nebr.....	06458500	n360	1948-53.		
Niobrara River near Cody, Nebr.....	06459000	-	1947-57.		
Snake River above Merritt Reservoir, Nebr.....	06459200	a430	1962-		1961-62.
Merritt Reservoir near Burge, Nebr.....	06459300	a640	1964-		
Snake River near Burge, Nebr.....	06459500	a660	1947-		
Gordon Creek near Simeon, Nebr.....	06460000	-	1948.		
Niobrara River near (at) Valentine (at Fort Niobrara), Nebr.....	06460500	a6,160	(1897 1899)* 1901-6 1928-32.		
Minnechaduzza Creek near South Dakota-Nebraska State line.....	06460800	-			1958-75
Minnechaduzza Creek near Kilgore, Nebr.....	06460900	a85	1958-74		
Bull Creek at South Dakota-Nebraska State line..	06460950				1958-59.
Minnechaduzza Creek at Valentine, Nebr.....	06461000	n390	1947-		
Big Beaver Creek near Valentine, Nebr.....	06461300	24.9		1970-	
Niobrara River near Sparks, Nebr.....	06461500	a8,090	1945-		
Niobrara River near Norden, Nebr.....	06462000	a,8390	1952-		
Plum Creek at Johnstown, Nebr.....	06462450	-			1969-75
Plum Creek near Johnstown, Nebr.....	06462470	-			1969-75
Plum Creek at (near) Meadville, Nebr.....	06462500	n600	1947-75		
Niobrara River near Meadville, Nebr.....	06463000	-	1950-52.		
Long Pine Creek at Long Pine, Nebr.....	06463050				1974-75
Bone Creek at Ainsworth, Nebr.....	06463090	-			1969-75
Bone Creek trib near Ainsworth, Nebr.....	06463100	.39		1956-68.	
Bone Cr trib No. 2 near Ainsworth, Nebr.....	06463200	2.18		1958-68.	
Sand Draw: Sand Draw tributary near Ainsworth, Nebr....	06463300	1.07		1956-74	
Bone Creek near Long Pine, Nebr.....	06463350	-			1969-75
Long Pine Creek near Riverview, Nebr.....	06463500	a390	1948-		
Keya Paha River at South Dakota-Nebraska State line.....	06464550	a1,250			1958-61.
Keya Paha River near Naper, Nebr.....	06464900	a1,630	1957-		
Niobrara River near Spencer (Lynch), Nebr.....	06465000	a12,100	1908* 1913-14 1915* 1927-36 1940-		

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			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Eagle Creek near Midway, Nebr.....	06465050	-			1969-75
East Branch Eagle Creek near Midway, Nebr.....	06465100	-			1969-75
Honey Creek near O'Neill, Nebr.....	06465200	2.54		1958-68.	
Honey Creek near Midway, Nebr.....	06465202	-			1969-75
Camp Creek near O'Neill, Nebr.....	06465300	1.65		1958-	
Camp Creek at Meek, Nebr.....	06465305	-			1969-75
Redbird Creek near Meek, Nebr.....	06465398	-			1969-75
Blackbird Creek:					
Blackbird Creek tributary near O'Neill, Nebr..	06465400	.60		1958-68.	
Blackbird Creek near Meek, Nebr.....	06465420	-			1969-74
Niobrara River near Verdel, Nebr.....	06465500	a10,900	1938-40 1958-		
S B Verdigre Creek near Royal, Nebr.....	06465650				
Bingham Creek near Niobrara, Nebr.....	06465850	6.5		1968-	
Niobrara River at Niobrara, Nebr.....	06466000	-	(1902 1910-13)* 1954-58.		1902, 1974, 1976.
BAZILE CREEK BASIN					
Bazile Creek near Creighton, Nebr.....	06466200				
Bazile Creek near Niobrara, Nebr.....	06466500	a440	1952-		
WEIGAN CREEK BASIN					
Weigan Creek near Crofton, Nebr.....	06466950	3.5		1968-	
Lewis and Clark Lake (Gavins Point Reservoir) near Yankton, S. Dak.....	06467000	-	1955-		
Missouri River at Yankton, S. Dak.....	06467500	-	1930-		
BOW CREEK BASIN					
Bow Creek:					
West Bow Creek near Fordyce, Nebr.....	06478520	52.8		1964-65 1968-	
OMAHA CREEK BASIN					
Omaha Creek:					
South Omaha Creek:					
South Omaha Creek tributary (No. 1) near Walthill, Nebr.....	06600600	2.64		1950-67.	
South Omaha Creek near Walthill, Nebr.....	06600700	15.1		1950-67.	
South Omaha Cr trib No. 2 nr Walthill, Nebr.....	06600800	1.51		1950-	
South Omaha Creek at Walthill, Nebr.....	06600900	51.0		1951-	
Omaha Creek at Homer, Nebr.....	06601000	a170	1945-		
Missouri River at Decatur, Nebr.....	06601200				
TEKAMAH CREEK BASIN					
Tekamah Creek:					
Tekamah Creek tributary near Tekamah, Nebr.....	06607600	.55		1950-60.	
South Branch Tekamah Creek near Craig, Nebr.....	06607700	2.54		1950-67.	
South Branch Tekamah Creek tributary near Tekamah, Nebr.....	06607800	4.08		1950-	
South Branch Tekamah Creek near Tekamah, Nebr.....	06607900	9.73		1950-67.	

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Tekamah Creek at Tekamah, Nebr.....	06608000	23.0	1949-		
NEW YORK CREEK BASIN					
New York Creek near Spiker, Nebr.....	06608600	1.75		1952-67.	
New York Creek tributary near Spiker, Nebr.....	06608700	1.55		1951-	
New York Creek north of Spiker, Nebr.....	06608800	6.50		1951-75	
New York Creek east of Spiker, Nebr.....	06608900	13.0		1950-	
New York Creek at Herman, Nebr.....	06609000	25.4	1946-69.		
Missouri River at Omaha, Nebr.....	06610000	322,800	1872-99* 1875* 1928-		
PAPILLION CREEK BASIN					
Papillion Creek:					
Big Papillion Creek near Drum, Nebr.....	06610700	8.52		1968-	
PLATTE RIVER BASIN					
North Platte River:					
Katzer drain near Henry, Nebr.....	06673500	945.9	1928-		
Mitchell Canal at Wyoming-Nebraska State line.....	06674000	-	1938-41.		
North Platte River at Wyoming-Nebraska State line...	06674500	926,177	1929-		
North Platte River at Henry, Nebr.....	06675000	-	1912-18.		
Horse Creek at Wyoming-Nebraska State line.....	06677100	-	1969-71		
Owl Creek:					
Kiowa Creek near Gering, Nebr.....	06677208				
Kiowa Creek ab Ft. Laramie Ca nr Lyman, Nebr..	06677210				
Kiowa Cr ab Horse Creek lat nr Lyman, Nebr....	06677220				
Unnamed tributary to Kiowa C nr Lyman, Nebr.	06677221				
Owl Creek above Ft. Laramie Ca, nr Lyman, Nebr..	06677234				
Owl Creek below Ft. Laramie Ca, nr Lyman, Nebr..	06677235				
Owl Creek near Lyman, Nebr.....	06677240				
Unnamed eastern trib to Kiowa C nr Lyman, Nebr.....	06677245				
Kiowa Creek ab Dry Cr drain nr Lyman, Nebr.....	06677250				
Dry Creek dr bl Ft. Laramie Ca, nr Lyman, Nebr....	06677251				
West trib to Dry C dr ab Horse Creek lat, nr Lyman, Nebr.....	06677270				
Dry Creek dr bl Horse Creek lat, nr Lyman, Nebr...	06677274				
West tributary to Dry Creek dr nr Lyman, Nebr....	06677280				
Dry Creek drain near Lyman, Nebr.....	06677290				
Kiowa Creek near Lyman, Nebr.....	06677300				1961-65.
Horse Creek near Lyman, Nebr.....	06677500	1,570	1931-		
Sheep Creek near Morrill, Nebr.....	06678000	9362	1931-		
North Platte River at Morrill, Nebr.....	06678500	-	1917-23.		
Morrill drain near Morrill, Nebr.....	06678580				
Akers draw near Morrill, Nebr.....	06678610				
Brown Canyon drain near Mitchell, Nebr.....	06678700	-			1961-65.
Dry Spottedtail Creek:					
Dry Spottedtail Cr trib nr Mitchell, Nebr.....	06678750	15.0		1971-	

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Dutch Flats drain near Mitchell, Nebr.....	06678800	-			1961-65.
Dry Spottedtail Creek at Mitchell, Nebr.....	06679000	77.2	1948-		
Bald drain near Mitchell, Nebr.....	06679400				
North Platte River at Mitchell, Nebr.....	06679500	n28,300	1901-11 1912-13* 1916-18 1920-		
Wet Spottedtail Creek near Mitchell, Nebr.....	06679950				
Tub Springs near Scottsbluff, Nebr.....	06680000	-	1948-		
N Platte R (at Hwy 29) nr Scottsbluff, Nebr.....	06680100				
Gering Ca at Siphon under Gering dr near Gering, Nebr.....	06680450				
North Platte River at Scottsbluff (Gering), Nebr....	06680500	-	1897-1900 1912 1917-18. 1961-65.		
Winter Cr at Tri-State Ca, nr Scottsbluff, Nebr....	06680700	-			
Hale drain near Scottsbluff, Nebr.....	06680800	-			1961-65.
Scottsbluff drain #1 near Scottsbluff, Nebr.....	06680950				
Winter Creek near Scottsbluff, Nebr.....	06681000	-	1931-		
Gering drain trib near Gering, Nebr.....	06681290				
Gering drain at Mitchell-Gering Ca, nr Gering, Nebr.....	06681300	-			1961-65.
Gering drain near Gering, Nebr.....	06681500	-	1931-45 1948-		
Scottsbluff drain #2 near Minatare, Nebr.....	06681950				
North Platte R nr Minatare, Nebr. (Nine Mile Ch)....	06681998				
North Platte River nr Minatare, Nebr. (Main Ch)....	06681999				
North Platte River near Minatare, Nebr.....	06682000	a28,700	1916-19 1922-		
Fairfield Seep near Minatare, Nebr.....	06682010				
Alliance drain near Minatare, Nebr.....	06682200	-	1961-65.		
Ninemile Drain ab Tri-State Ca nr Minatare, Nebr..	06682280				
East Ninemile drain near Minatare, Nebr.....	06682290				
Ninemile drain near Minatare, Nebr.....	06682300	-	1961-65.		
Ninemile drain near McGrew, Nebr.....	06682500	-	1932-		
North Platte River at McGrew, Nebr.....	06682505	-			1973-
Bayard Sugar Factory drain near Bayard, Nebr.....	06683000	-	1931-		
Cleveland drain near McGrew, Nebr.....	06683050				
North Platte R at Belmont Div Dam nr Bayard, Nebr....	06683100				
Red Willow Creek:					
(West) Wildhorse drain near Bayard, Nebr.....	06683200	-			1961-62.
Wildhorse (drain) Canyon near Bayard, Nebr....	06683300	-			1961-62.
Red Willow Creek near Bridgeport, Nebr.....	06683500	a83	1931.		
Red Willow Creek near Bayard, Nebr.....	06684000	-	1931-		
DeGraw drain near Bridgeport, Nebr.....	06684250				
Indian Creek near Bridgeport, Nebr.....	06684350				
Upper Duquout Creek near Bridgeport, Nebr.....	06684450				

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Browns Creek Channel at Bridgeport, Nebr.....	06684499				
North Platte R at Bridgeport (nr Camp Clark), Nebr..	06684500	a29,300	1896-1900 1902-6 1915-		
Pumpkin Creek:					
Hackberry Creek near Redington, Nebr.....	06684900	16.6		1970-	
Pumpkin (Pumpkinseed) Creek near Bridgeport, Nebr.	06685000	a1,020	1931-		
North Platte River at Broadwater, Nebr.....	06685500	-	1917-23.		
Cedar Creek near Broadwater, Nebr.....	06685650				
North Platte River at Lisco, Nebr.....	06686000	a30,700	1916-17 1931-		
North Platte River at Oshkosh, Nebr.....	06686500	a27,500	1916-17 1928-60.		
Blue Creek near Lewellen, Nebr.....	06687000	n1,120	1930-		
North Platte River at Lewellen, Nebr.....	06687500	a32,600	1931 1940-		
Ash Hollow near Oshkosh, Nebr.....	06687600	54.9		1968 1970-	
North Platte River at Belmar, Nebr.....	06688000	-	1917-25.		
Otter Creek near Lemoyne, Nebr.....	06688500	g13.9	1931 1932-37.		
North Platte River at Lemoyne, Nebr.....	06689000	-	1925-27.		
North Platte River at Martin, Nebr.....	06689500	-	1933-38.		
Lake McConaughy (Kingsley Re) near Keystone, Nebr...	06690000	a33,300	1941-		
Sum-Suth, Supply Ca plus N Platte at Keystone, Nebr.....	06690010				
Sutherland Ca bl diver from North Platte River near Keystone, Nebr.....	06690300				
North Platte River near Keystone, Nebr.....	06690500	a33,300	1917 1939-		
North Platte River near Sutherland, Nebr.....	06691000	a33,800	1917 1931-33 1935-		
Birdwood Creek near Sutherland, Nebr.....	06691500	a250	1913-15.		
Birdwood Creek near Hershey, Nebr.....	06692000	n1,000	1931-		
Lincoln County drain No. 1 near (Lincoln County drain at) North Platte, Nebr.....	06692500	-	1931-32 1955-		
North Platte River at North Platte, Nebr.....	06693000	a34,900	1895-		
South Platte River:					
Lodgepole Creek at Bushnell, Nebr. (upper station).....	06762000	a1,090	1931-32.		
Lodgepole Creek at (near) Bushnell (above Oliver Reservoir), Nebr.....	06762500	1,361	1931-		
Lodgepole Creek at Kimball, Nebr.....	06762550	-			1973-
Lodgepole Creek tributary near Kimball, Nebr..	06762650	8.68		1970-	
Lodgepole Creek at Sidney, Nebr.....	06763000	a2,190	1931-32.		

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Lodgepole Creek tributary near Sunol, Nebr....	06763200	15.6		1968-	
Lodgepole Creek at Relton, Nebr.....	06763500	3,307	1931 1951-		
South Platte R at Julesburg, Colo (ch 1).....	06763970				
South Platte R at Julesburg, Colo (ch 4).....	06763980				
South Platte R at Julesburg, Colo (ch 2).....	06763990				
South Platte R at (nr) Julesburg (Ovid), Colorado.	06764000	23,138	1902-		
South Platte River near Julesburg, Colorado.....	06764200				
South Platte River at Roscoe, Nebr.....	06764880				1975-
Sum of S Platte River at Paxton + Diversion from South Platte, Nebr.....	06764890				
Sutherland Canal below diversion from South Platte near Paxton, Nebr.....	06764900				
Sutherland Power Return to S Platte R, Nebr....	06764990				
South Platte River at Big Springs, Nebr.....	06764500	a23,200	1902* 1903. 1923 1931-33 1937-70.		
South Platte River at Paxton (Ogallala), Nebr.....	06765000	a24,000			
Applegate drain near Hershey (Sutherland), Nebr...	06765150				
South Platte River at North Platte, Nebr.....	06765500	a24,300	1897 1914-15 1917-		
Supply Ca (Tri-County Div) nr Maxwell, Nebr.....	06765700				
Fremont Slough near North Platte, Nebr.....	06765710				
Flock drain near North Platte, Nebr.....	06765720				
Stenger Ditch near Maxwell, Nebr.....	06765730				
Platte River at Brady, Nebr. (channel 3).....	06765960				
Platte River at Brady, Nebr. (channel 2).....	06765970				
Platte River at Brady, Nebr. (channel 1).....	06765980				
Platte River at Brady, Nebr. (channel 4).....	06765990				
Platte River at Brady, Nebr.....	06766000	a60,200	1937-		
Sheldon drain near Maxwell, Nebr.....	06766050				
Platte River at Gothenburg, Nebr.....	06766250				
Platte River near Cozad, Nebr.....	06766500	a60,500	1932 1937-		
Rowe Ditch near Willow Island, Nebr.....	06766550				
Nisley-Lauby Ditch near Lexington, Nebr.....	06766850				
Platte River near Lexington, Nebr.....	06767000	a58,000	1902-6 1916-24.		
Johnson Re bl Power Plant #2 near Lexington, Nebr. Plum Creek:	06767040				
South Fork Plum Creek:					
S Fork Plum Creek tributary near Farnam, Nebr.	06767100	9.81		1951-70	
North Fork Plum Creek:					
N Fork Plum Creek tributary near Farnam, Nebr.	06767200	1.83		1952-	
Plum Creek tributary at Farnam, Nebr.....	06767300	19.8		1947-48 1951-70	

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North Plum Creek near Farnam, Nebr.....	06767400	38.3		1947	
Plum Creek near Farnam, Nebr.....	06767410	79.8		1951-1947	
Plum Creek near Smithfield, Nebr.....	06767500	229	1946-53 1969-75	1951-1954-68, 1975-	
Platte River trib near Overton, Nebr.....	06767995	-			1968-72
Larson drain south of Overton, Nebr.....	06767996	-			1968-72
Platte River near Overton, Nebr. (North Channel)....	06767998				
Platte River near Overton, Nebr. (South Channel)....	06767999				
Platte River near Overton (Elm Creek), Nebr.....	06768000	861,000	1914-		
Strever Creek near Lexington, Nebr.....	06768005				
Sprink Creek near Lexington, Nebr.....	06768015				1975-
Platte River tributary near Westmark, Nebr.....	06768030	-			1968-72
Buffalo Creek:					
Buffalo Creek tributary No. 1 nr Buffalo, Nebr..	06768050	2.08		1965-	
East (Branch) Buffalo Creek (tributary) near Buffalo, Nebr.....	06768100	5.21		1951-	
(E Branch) Buffalo Creek at (near) Buffalo, Nebr..	06768200	33.5		1951-67.	
(East Branch) Buffalo Creek tributary No. 2 near Buffalo, Nebr.....	06768300	1.93		1951-65.	
West (Branch) Buffalo Creek near Buffalo, Nebr..	06768400	17.1		1951-	
Buffalo Creek near Darr, Nebr.....	06768500	863	1946-69.		
Buffalo Creek near Overton, Nebr.....	06769000	175	1949-58.		
Elm Creek:					
Elm Creek tributary near Overton, Nebr.....	06769100	.58		1951-	
Elm Creek near Sumner, Nebr.....	06769200	14.9		1951-	
Elm Creek tributary No. 2 near Overton, Nebr....	06769300	5.62		1951-	
Elm Creek near Overton, Nebr.....	06769500	831	1946-58.		
Elm Creek at Elm Creek, Nebr.....	06769530				
Platte River:					
South Channel:					
South Channel trib No. 1 nr Westmark, Nebr.....	06769940	-			1968-72
South Channel near Elm Creek, Nebr.....	06769950	-			1968-72
S Channel trib No. 2 near Elm Creek, Nebr.....	06769958	-			1968-72
S Channel trib No. 4 near Holdrege, Nebr.....	06769994	-			1968-72
S Channel trib No. 4 near Elm Creek, Nebr.....	06769996	-			1968-72
S Channel trib No. 4 near Odessa, Nebr.....	06769998	-			1968-72
Platte River near Odessa, Nebr.....	06770000	862,100	1937-		
Platte River tributary near Odessa, Nebr.....	06770001	-			1968-72
Platte River tributary No. 2 near Odessa, Nebr....	06770002	-			1968-72
North Dry Creek near Kearney, Nebr.....	06770190	-	1968-71		
North Dry Creek south of Kearney, Nebr.....	06770195	-			1968-72
Whiskey Slough near Kearney, Nebr.....	06770198	-			1968-72
Platte River near Kearney, Nebr.....	06770200				
North Channel Platte River near Kearney, Nebr.....	06770205				1973-
Crooked Creek drain at Newark, Nebr.....	06770250	-			1968-72

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Platte R south of Gibbon, Nebr. (Left Channel).....	06770260				
Platte R south of Gibbon, Nebr. (Right Channel).....	06770261				
Dry Creek near Axtell, Nebr.....	06770330	-			1968-72
Dry Creek near Minden, Nebr.....	06770335	-			1968-72
Lost Creek near Axtell, Nebr.....	06770340	-			1968-72
Lost Creek near Minden, Nebr.....	06770345	-			1968-72
Dry Creek near Denman, Nebr.....	06770360				
Platte River south of Alda, Nebr. (Left Channel)....	06770470				
Platte River south of Alda, Nebr. (Right Channel)...	06770471				
Platte River S of Grand Island, Nebr. (Ch 4).....	06770486				
Platte River S of Grand Island, Nebr. (Ch 3).....	06770487				
Platte River S of Grand Island, Nebr. (Ch 2).....	06770488				
Platte River S of Grand Island, Nebr. (Ch 1).....	06770489				
Platte River south of Grand Island, Nebr.....	06770490				
Platte River near Grand Island, Nebr.....	06770500	862,800	1933-		
Wood River:					
Wood River tributary near Lodi, Nebr.....	06770600	2.02		1952-	
Wood River near Lodi, Nebr.....	06770700	12.9		1952-	
Wood River near Oconto, Nebr.....	06770800	26.4		1950	
				1952-	
Wood River at Oconto, Nebr.....	06770900	44.8		1950	
				1952-	
Wood River near Lomax, Nebr.....	06770910	79.6		1952-	
Wood River near Riverdale, Nebr.....	06771000	379	1946-73	1973-	
Wood River near Gibbon, Nebr.....	06771500	572	1949-		
Wood River near Alda, Nebr.....	06772000	628	1953-		
Wood River near Grand Island, Nebr.....	06772200				1973-
Wood River near Chapman, Nebr.....	06772500	-			1957-76
Warm Slough near Chapman, Nebr.....	06772750				
Silver Creek near Silver Creek, Nebr.....	06772900				
Prairie Creek near Cairo, Nebr.....	06772950				
Dry Creek at Cairo, Nebr.....	06773000	22.2	1949-53.		
Silver Creek at Ovina, Nebr.....	06773150				
Prairie Creek near Central City, Nebr.....	06773400				
Prairie Creek near Fullerton, Nebr.....	06773410				
Prairie Creek near Silver Creek, Nebr.....	06773500	406	1949-53.		
Platte River near Duncan (Columbus), Nebr.....	06774000	864,900	1895-1909		
			1910-11*		
			1912-15		
			1928-		
Middle Loup River near Mullen, Nebr.....	06774500	81,120	1946-48.		
Middle Loup River near Seneca, Nebr.....	06775000	81,140	1948-53.		
Middle Loup River at Dunning, Nebr.....	06775500	81,760	1945-		
Dismal River:					
North Fork Dismal River near Mullen, Nebr.....	06775700	670		1971-	
Dismal River near Thedford, Nebr.....	06775900	8960	1966-		
Dismal R (at Dunning Dam site) near Gem, Nebr....	06776000	81,360	1946-53.		

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			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Dismal River at Dunning, Nebr.....	06776500	n2,040	1932 1945-		
Middle Loup R + Dismal R at Dunning, Nebr.....	06776501				
Middle Loup River near Milburn, Nebr.....	06777000	n3,690	1951-56 1957-58 1960-64.		1970-
Sargent Canal near Milburn, Nebr.....	06777250				
Sargent Ca Spill at Mile 4.7 nr Milburn, Nebr...	06777260				
Middle Loup River at Walworth, Nebr.....	06777500	n4,340	1940-60.		
Lillian Creek:					
Lillian Creek tributary near Broken Bow, Nebr.	06777600	2.02		1952-	
Lillian Creek near Broken Bow, Nebr.....	06777700	4.77		1947	
Lillian C tributary No. 2 nr Walworth, Nebr...	06777800	2.04		1951-	
Sargent Ca Spill at Mile 20.6 nr Sargent, Nebr...	06777990			1951-	
Middle Loup River at Sargent, Nebr.....	06778000	n4,480	1936-38 1952-70.		
MLPPID Canal #1 near Sargent, Nebr.....	06778010				
MLPPID Canal #2 near Sargent, Nebr.....	06778030				
Sargent Ca Spill at Mile 26.0 nr Sargent, Nebr..	06778050				
Detention Structure near Sargent, Nebr.....	06778100				
Sargent Ca Spill at Mile 40.1 nr Comstock, Nebr.	06778450				
Middle Loup River near Comstock, Nebr.....	06778500	n4,650	1937.		1969-
MLPPID Canal #2 Spill near Comstock, Nebr.....	06778550				
MLPPID Canal #1 Spill near Comstock, Nebr.....	06778650				
Farwell Canal near Arcadia, Nebr.....	06778800				
MLPPID Canal #3 near Arcadia, Nebr.....	06778820				
MLPPID Canal #4 near Arcadia, Nebr.....	06778840				
Farwell Ca at Highway 58 ab Sherman Res, Nebr...	06778860				
Middle Loup River at Arcadia, Nebr.....	06779000	n4,730	1937-		
Middle Loup River at Loup City, Nebr.....	06779500	-	1936-38 1949-56.		
MLPPID Canal #3 Spill near Loup City, Nebr.....	06779650				
Middle Loup River at Rockville, Nebr.....	06780000	n5,000	1955-64 1967-75		
Boelus power canal near Boelus, Nebr.....	06780500	-	1933-42x 1952-63.		
Middle Loup River at Boelus, Nebr.....	06781000	-	1952-55y.		
Middle Loup River at Boelus, Nebr. (combined flow)	06781500	-	1936-38y.		
Deer Creek near Boelus, Nebr.....	06781530				1977-
South Loup River at Callaway, Nebr.....	06781700				
South Loup River near Cumro, Nebr.....	06782000	n1,340	1946-53.		
South Loup River at Ravenna, Nebr.....	06782500	n1,660	1940-58 1967-75		

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			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Mud Creek:					
South Branch Mud Creek:					
South Branch Mud Creek tributary near Broken Bow, Nebr.....	06782600	.43		1951-	
South Branch Mud Creek near Broken Bow, Nebr..	06782620	79.4		1976-	
South Branch Mud Creek at Broken Bow, Nebr..	06782700	400		1945	
North Branch Mud Creek at Broken Bow, Nebr..	06782800	15.5		1951-	
Mud Creek tributary near Broken Bow, Nebr...	06782900	5.98		1951-67.	
Mud Creek near Broken Bow, Nebr.....	06783000	-	1949-53.		1973-
Mud Creek near Litchfield, Nebr.....	06783300				
Clear C (tr to Mud C) nr Litchfield, Nebr...	06783400				
Mud Creek near Sweetwater, Nebr.....	06783500	q1,020	1946-		
South Loup River at St. Michael, Nebr.....	06784000	n2,560	1943-		
Sherman Reservoir near Loup City, Nebr.....	06784200	-	1962-		
Oak Creek near Loup City, Nebr.....	06784300	41.9	1952-60		
Oak Creek near Farwell, Nebr.....	06784400		1961-64.		
Oak Creek near Dannebrog, Nebr.....	06784500	122	1949-57.		1977-
Dry Creek near Dannebrog, Nebr.....	06784505				1977-
Oak Creek at Dannebrog, Nebr.....	06784510				
Turkey Creek near Farwell, Nebr.....	06784700	27.2		1950	
Turkey Creek near Nysted, Nebr.....	06784750			1953-	
Turkey Creek near Dannebrog, Nebr.....	06784800	66.2	1966-70.		1977-
Turkey Creek northeast of Dannebrog, Nebr.....	06784810				1977-
Turkey Creek Tributary near St. Paul, Nebr.....	06784820				1977-
Middle Loup River at St. Paul, Nebr.....	06785000	n7,720	1894-1915		
Unnamed Creek at St. Paul, Nebr.....	06785020		1928-		
North Loup River at Brewster, Nebr.....	06785500	n1,890	1945-51.		1977-
Taylor-Ord Canal near Taylor, Nebr.....	06785950				
North Loup River at Taylor, Nebr.....	06786000	n2,210	1936-		
North Loup River at Kent diversion, near Burwell, Nebr.....	06786200	-			1955-57.
North Loup River at Burwell, Nebr.....	06786500	n2,510	1952-60.		
Calamus River near Harrop, Nebr.....	06787000	q983	1932		1931
Calamus River near Burwell, Nebr.....	06787500	n1,260	1940-		1933-39
Sum of N Loup plus Calamus near Burwell, Nebr...	06787501				1955-64.
Burwell-Sumter Canal near Burwell, Nebr.....	06787550				
North Loup River near Burwell, Nebr.....	06788000	-	1936-38.		
Turtle Creek near Elyria, Nebr.....	06788100	103			1954-57.
Taylor-Ord Canal Spill near Ord, Nebr.....	06788450				
North Loup River at (near) Ord, Nebr.....	06788500	n3,960	1936-38		
			1952-		

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Ord-North Loup Canal near Ord, Nebr.....	06788550				
Burwell-Sumter Canal Spill nr Sumter, Nebr....	06788650				
Ord-North Loup Canal Spill nr Scotia, Nebr....	06788950				
Mira Creek at North Loup, Nebr.....	06788990				
North Loup River at Scotia, Nebr.....	06789000	n4,100	1936-70.		
Davis Creek:					
Davis Creek tributary near North Loup, Nebr.	06789100	2.29		1951-67.	
Davis C tributary No. 2 nr North Loup, Nebr.	06789200	6.79		1951-70	
Davis Creek near North Loup, Nebr.....	06789300	21.1		1951-67.	
Davis Creek southwest of North Loup, Nebr.....	06789400	31.2		1951-	
Davis Creek tributary at damsite, near Scotia, Nebr.....	06789410	6.35		1957-60.	
Davis Creek near Cotesfield, Nebr.....	06789500	-	1947-48* 1949-58.		
Davis Creek at mouth, near Cotesfield, Nebr...	06789600	94.4		1956-60.	
North Loup River near Cotesfield, Nebr.....	06790000	-	1950-56.		
Auger Creek at Elba, Nebr.....	06790245				1977-
Unnamed Creek South of Elba, Nebr.....	06790255				1977-
North Loup River near St. Paul, Nebr.....	06790500	n4,460	1894-1915 1928-		
Loup River:					
Spring Creek:					
East Branch Spring Creek tributary near Wolbach, Nebr.....	06790600	1.52		1952-	
West Branch Spring Creek at Brayton, Nebr.....	06790700	19.5		1945 1952-	
West Branch Spring Creek near Wolbach, Nebr...	06790800	36.9		1951-67.	
Marys Creek at Wolbach, Nebr.....	06790900	7.63		1952-67.	
Spring Creek at Cushing, Nebr.....	06791000	164	1947-48* 1949-53.		
Spring Creek near Cushing, Nebr.....	06791100	184	1949-53	1948 1953-	
Cedar River near Spalding, Nebr.....	06791500	n805	1944-53 1957-		
Spalding power canal at Spalding, Nebr.....	06791700	-	1959-64.		
Cedar River at Primrose, Nebr.....	06791750	n870	1960-64	1966.	
Cedar River at Belgrade, Nebr.....	06791800	n1,060	1959-65	1966.	
Timber Creek near Belgrade, Nebr.....	06791900				
Cedar River near Fullerton, Nebr.....	06792000	n1,220	1931-32 1940-		
Fullerton power canal at Fullerton, Nebr.....	06792100	-	1959-64.		
Loup River power canal near Genoa, Nebr.....	06792500	-	1936-		
Loup River Canal at Diversion near Genoa, Nebr....	06792499				
Loup River near Genoa, Nebr.....	06793000	n14,400	1928-32 1943-		
Beaver Creek at Loretto, Nebr.....	06793500	q311	1944-53.		
Beaver Creek at Albion, Nebr.....	06793600				1973-

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Skeedee Creek:					
Skeedee Creek tributary near Genoa, Nebr....	06793995	59		1968-	
Beaver Creek at Genoa, Nebr.....	06794000	a627	1940-		
Loup River at (near) Columbus, Nebr.....	06794500	n15,200	1894-1915 1931 1933-		
Platte River near Schuyler, Nebr.....					
Bone Creek near David City, Nebr.....	06794710	8.75		1968-	
Lost Creek SW of Richland, Nebr.....	06794800				
Lost Creek SE of Richland, Nebr.....	06794805				
Lost Creek near Schuyler, Nebr.....	06794810				
Barnholdt Ditch west of Richland, Nebr.....	06794820				
Barnholdt Ditch near Richland, Nebr.....	06794824				
Barnholdt Ditch near Schuyler, Nebr.....	06794828				
Shonka Ditch near Richland, Nebr.....	06794830				
Shonka Ditch near Schuyler, Nebr.....	06794835				
Shell Creek at Newman Grove, Nebr.....	06795000	122	1949-67	1969.	
Shell C at UP Bridge S of Platte Center, Nebr.....	06795400				
Shell Creek near Columbus, Nebr.....	06795500	a270	1947-75 1978		
Platte River at North Bend, Nebr.....	06796000	a81,100	1949-		
Platte River near Fremont (Leshara), Nebr.....	06796500	-	1911-15.		
Scott Ditch near North Bend, Nebr.....	06796100				
Elkhorn River near Stuart, Nebr.....	06796950	-		1968-69.	
North Branch Elkhorn River near Stuart, Nebr....	06796960	-		1968-69.	
Elkhorn River at Atkinson, Nebr.....	06796970	-		1968-69.	
Holt Creek near Emmet, Nebr.....	06796980	-		1968-69.	
Elkhorn River at O'Neill, Nebr.....	06797000	651	1931-32	1969.	
Dry Creek near O'Neill, Nebr.....	06797200	-		1968-69.	
Elkhorn River near Inman, Nebr.....	06797400	-		1965-70.	
Elkhorn River at Ewing, Nebr.....	06797500	n1,400	1947-		
South Fork Elkhorn River at Ewing, Nebr.....	06798000	n320	1947-53 1960-72 1978-		
Cache Creek near Ewing, Nebr.....	06798150	-		1967-69.	
Clearwater Creek near Clearwater, Nebr.....	06798300	n210	1961-64. 1978-		
Clearwater Creek at Clearwater, Nebr.....	06798302	-		1968-69.	
Antelope Creek near Neligh, Nebr.....	06798450	-		1967-69.	
Elkhorn River at Neligh, Nebr.....	06798500	n2,200	1930-58 1960-		
Cedar Creek at Oakdale, Nebr.....	06798550	-		1967-69.	
Elkhorn River at Meadow Grove, Nebr.....	06798800	n2,500	1960-65	1968-69.	
Elkhorn River near Battle Creek, Nebr.....	06798900	-		1968-69.	
Battle Creek at Battle Creek, Nebr.....	06798920	-		1968-69.	
(South Fork) Elkhorn River near (at) Norfolk, Nebr	06799000	n2,790	1896-1903 1941-*f 1945-		

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North Fork Elkhorn River above Pierce, Nebr.....	06799020	-			1968-69.
Dry Creek near Pierce Nebr.....	06799030	-			1968-69.
North Fork Elkhorn River below Dry Creek, Nebr..	06799031	-			
Yankton Slough near Pierce, Nebr.....	06799040	-			1968-69.
Willow Creek near Foster, Nebr.....	06799080	-	1975-		
Willow Creek near Pierce, Nebr.....	06799095	-			1961-63 1968-69.
North Fork Elkhorn River near Pierce, Nebr.....	06799100	a520	1960-		
North Fork Elkhorn River at Hadar, Nebr.....	06799110	-			1968-69.
North Fork Elkhorn River at Norfolk, Nebr.....	06799130	-	1940-*f 1960-72b		1960 1965-69.
Elkhorn River at West Point, Nebr.....	06799350	a5100	1972-		
Union Creek:					
South Fork Union Creek:					
South Fork Union Creek tributary near Cornlea, Nebr.....	06799190	6.54		1967-	
Union Creek near Stanton, Nebr.....	06799290	-			1962-64 1968-69.
Elkhorn River at Stanton, Nebr.....	06799300	-			1968-69.
Humbog Creek near Pilger, Nebr.....	06799310	-			1968-69.
Rock Creek near Beemer, Nebr.....	06799325	-			1968-69.
Plum Creek near Beemer, Nebr.....	06799345	-			1968-69.
Elkhorn River at West Point, Nebr.....	06799350	5,100	1972-		1968-69.
Cuming Creek at Scribner, Nebr.....	06799365	-			1968-69.
Pebble Creek near Scribner, Nebr.....	06799385	-			1968-69.
Elkhorn River near Hooper, Nebr.....	06799400	-			1968-69.
Middle Logan Creek at Laurel, Nebr.....	06799410	-			1968-69.
North Logan Creek near Laurel, Nebr.....	06799423	a25.3		1965 1967 1970-	
Logan Creek at Wakefield, Nebr.....	06799445				
Logan Creek at Pender, Nebr.....	06799450	a731	1965-		1964-65.
Logan Creek near Uehling, Nebr.....	06799500	a1,030	1941-		
West (Middle) Fork Maple C near Schuyler, Nebr..	06799800	-			1968-69.
Dry Creek:					
Pond Creek near Schuyler, Nebr.....	06799850	.54		1968-	
Middle Fork Maple Creek near Schuyler, Nebr.....	06799900				
Maple Creek near Nickerson, Nebr.....	06800000	a450	1951-		
Rawhide Creek:					
Rawhide Creek tributary near Nickerson, Nebr..	06800350	6.53		1968-	
Bell creek at Arlington, Nebr.....	06800400				
Elkhorn River at Waterloo (Arlington), Nebr.....	06800500	a6,900	1899-1903 1911-15 1928-		
Platte River near Ashland, Nebr.....	06801000	a83,800	1928-53.		

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East Inlet to Olive Creek Lake nr Kramer, Nebr..	06801148				
Olive Creek Lake near Kramer, Nebr.....	06801150				
Olive Branch (head of Salt C) ab Sprague, Nebr....	06801200	a43		1956-60.	
West tributary to Bluestem Lake nr Sprague, Nebr	06801264				
Bluestem Lake near Sprague, Nebr.....	06801266				
Salt Creek subwatershed No.3 near Sprague, Nebr.	06801300	4.20	1954-59.		
Salt Creek (Olive Branch) below Sprague, Nebr.....	06801320	a81		1956-61.	
Hickman Branch above Hickman, Nebr.....	06801340	a18		1956-61.	
Tributary to Wagon Train Lake near Hickman, Nebr..	06801345				
Wagon Train Lake near Hickman, Nebr.....	06801346				
Hickman Branch at Hickman, Nebr.....	06801360	a32		1956-61.	
West Tr to Stagecoach Lk nr Hickman, Nebr.....	06801364				
South Inlet to Stagecoach Lake near Hickman, Nebr.	06801365				
Stagecoach Lake near Hickman, Nebr.....	06801366				
Salt Creek subwatershed No. 1 near Roca, Nebr.	06801400	1.46	1954-61.		
Salt Creek subwatershed No. 12 near Roca, Nebr	06801500	1.12	1954-61.		
Salt Creek subwatershed No. 34 near Roca, Nebr	06802500	174	1951-		
Salt Creek at Roca, Nebr.....	06803000				
Salt Creek at Saltillo, Nebr.....	06803010				
Cardwell branch near Denton, Nebr.....	06803068				
S Tributary to Yankee Hill Re near Denton, Nebr.	06803069				
Yankee Hill Reservoir at dam near Denton, Nebr..	06803070				
Salt Creek above Beal Slough at Lincoln, Nebr.....	06803080	221			1971-
Beal Slough near mouth at Lincoln, Nebr.....	06803085				
Haines Branch:					
Holmes Creek near Denton, Nebr.....	06803093				
Conestoga Lake near Denton, Nebr.....	06803095				
Haines Branch at Lincoln, Nebr.....	06803098				
Salt Creek at South Street at Lincoln, Nebr.....	06803100				
Middle Creek near Malcolm, Nebr.....	06803128				
Pawnee Lake near Emerald, Nebr.....	06803130				
West Tr to Twin Lakes Reservoir near Pleasantdale, Nebr.....	06803153				
North Tr to Twin Lakes Reservoir near Pleasantdale, Nebr.....	06803154				
Twin Lakes Reservoir near Pleasantdale, Nebr..	06803155				
Salt Creek at 14th Street at Lincoln, Nebr.....	06803190	411			1971-
Antelope Creek ab Antelope Lake at Lincoln, Nebr	06803196				
Antelope Lake at Lincoln, Nebr.....	06803198				
Antelope Creek at 48th Street, Lincoln, Nebr....	06803200	6.82		1951 1958-	
Antelope Creek at 27th Street, Lincoln, Nebr....	06803300	10.4		1957-	
Antelope Creek at 17th Street, at Lincoln (at Lincoln), Nebr.....	06803400	12.5	1958-62	1963-	
Antelope Creek at Court Street at Lincoln, Nebr.	06803405	12.4			1971-
Oak Creek near Agnew, Nebr.....	06803442				
Middle Oak Creek near Garland, Nebr.....	06803445				

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Branched Oak Reservoir near Raymond, Nebr.....	06803448				
Oak Creek near Raymond, Nebr.....	06803450	88.7	1963-67.		
North Oak Creek near Valparaiso, Nebr.....	06803470				
Elk Creek near Lincoln, Nebr.....	06803485				
Oak Creek at First Street at Lincoln, Nebr.....	06803490				
Oak Creek at 14th Street at Lincoln, Nebr.....	06803493	250			1971-75
Salt Creek above Sewage Disposal Outfall at Lincoln, Nebr.....	06803495				
Sewage Effluent from Treatment Plant, at Lincoln, Nebr.....	09803496				
Salt Creek at Lincoln, Nebr.....	06803500	a710	1949-		
Little Salt Creek near Lincoln, Nebr.....	06803510	-	1969-		
Salt C at Hwy 77 Building N of Lincoln, Nebr.....	06803512				
Stevens Creek near Walton, Nebr.....	06803515				
Stevens Creek near Lincoln, Nebr.....	06803520	48.8	1968-		
Stevens Creek at Highway 6 near Lincoln, Nebr...	06803523				
Salt Creek b1 Stevens Creek near Waverly, Nebr....	06803525	875			1971-
Rock Creek 2 miles west of Ceresco, Nebr.....	06803528				
Rock Creek near Ceresco, Nebr.....	06803530	119	1970-		
Rock Creek near Greenwood, Nebr.....	06803534				
Camp Creek near Greenwood, Nebr.....	06803537				
Dee Creek near Alvo, Nebr.....	06803540	8.06		1961-	
Dee Creek at Greenwood, Nebr.....	06803550	14.3	1960	1961-63.	
Salt Creek at Greenwood, Nebr.....	06803555	1,060	1951-		
Greenwood Creek near Greenwood, Nebr.....	06803558				
Callahan Creek near Greenwood, Nebr.....	06803563				
Salt Creek above Ashland, Nebr.....	06803565	1,118			1971-
Salt Creek at Ashland, Nebr.....	06803567				
Wahoo Creek:					
Dunlap Creek tributary near Weston, Nebr.....	06803570	.43		1950-	
North Fork Wahoo Creek near Prague, Nebr.....	06803600	15.2		1951-	
North Fork Wahoo Creek tributary near Weston, Nebr.....	06803700	8.90		1950-67.	
North Fork Wahoo Creek at Weston, Nebr.....	06803900	43.7		1951-	
Wahoo Creek at Ithaca, Nebr.....	06804000	272	1949-		
Silver Creek near Cedar Bluffs, Nebr.....	06804100	7.01		1950-	
Silver Creek near Colon, Nebr.....	06804200	19.9		1950-	
Silver Creek tributary near Colon, Nebr.....	06804300	10.4		1951-	
Silver Creek tributary at Colon, Nebr.....	06804400	13.5		1951-	
Silver Creek near Wahoo, Nebr.....	06804495				1974-
Silver Creek at Ithaca, Nebr.....	06804500	65.5	1949-58	1959-	
Salt Creek near Ashland, Nebr.....	06805000	a1,640	1947-67.		
Salt Creek at Mouth near Ashland, Nebr.....	06805005				
Mill Creek at Louisville, Nebr.....	06805499				1973-
Platte River near South Bend (at Louisville), Nebr..	06805500	a88,800	1953-		
Buffalo Creek near Gretna, Nebr.....	06805510	4.29		1968	
Cedar Creek near Manley, Nebr.....	06805520				

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Cedar Creek near Louisville, Nebr.....	06805525				1973-
Platte River near Plattsmouth, Nebr.....	06805550				
Fourmile Creek near Plattsmouth, Nebr.....	06805565				1975-
Platte River at LaPlatte, Nebr.....	06805570				
Missouri River at Plattsmouth, Nebr.....	06805600				
WEeping WATER CREEK BASIN					
Weeping Water Creek at Elmwood, Nebr.....	06806400	20.8		1950-67.	
Stove Creek near Elmwood, Nebr.....	06806420	5.23		1950-67.	
Stove Creek at Elmwood, Nebr.....	06806440	10.3		1950-	
Weeping Water Creek at Weeping Water, Nebr.....	06806460	80.1		1947	1947,
				1950-	1950-
Weeping Water C tributary nr Weeping Water, Nebr..	06806470	.73		1950-	
South Branch Weeping Water Creek nr Union, Nebr...	06806495				1973-
Weeping Water Creek at Union, Nebr.....	06806500	241		1949*	
				1950-	
Weeping Water Creek near Union, Nebr.....	06806501				
Missouri River at Nebraska City, Nebr.....	06807000	414,400		1878-99*p	
				1929-	
HONEY CREEK BASIN					
Honey Creek near Peru, Nebr.....	06810060	3.40			1968-
LITTLE NEMAHA RIVER BASIN					
Little Nemaha River:					
Hooper Creek:					
Hooper Creek tributary near Palmyra, Nebr.....	06810100	8.00		1950-	
Hooper Creek near Palmyra, Nebr.....	06810200	59.6		1950-67.	
Wolf (Owl) Creek near Syracuse, Nebr.....	06810300	25.5		1950-67.	
Little Nemaha River tributary near Syracuse, Nebr.	06810400	.71		1950-	
Little Nemaha River near Syracuse, Nebr.....	06810500	212		1951-69.	
Brownell Creek:					
Brownell C subwatershed No. 1A nr Syracuse, Nebr.....	06810900	.19		1955-69.	
Brownell C subwatershed No. 1 nr Syracuse, Nebr.	06811000	.77		1954-69.	
East Fork Creek near Syracuse, Nebr.....	06811040				
Little Nemaha River at Auburn, Nebr.....	06811500	801		1949-	
Missouri River at Rulo, Nebr.....	06813500	418,900		1886-99*p	
				1929-50*z	
				1949-	
BIG NEMAHA RIVER BASIN					
North Fork Nemaha River at Tecumseh, Nebr.....	06814460				
North Fork Nemaha River near Table Rock, Nebr.....	06814480				
North Fork Big Nemaha (North Fork Nemaha) River at Humboldt, Nebr.....	06814500	531		1952-	
Big Nemaha (Nemaha) River at Falls City, Nebr.....	06815000	81,340		1944-	
Muddy Creek at Verdon, Nebr.....	06815500	188		1952-72	
Goolsby Branch:					
Temple Creek near Falls City, Nebr.....	06815510	3.02			1968-

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KANSAS RIVER BASIN					
Arikaree River at Haigler, Nebr.....	06821500	n1,460	1930-		
North Fork Republican River:					
Pioneer Canal at Colorado-Nebraska State line...	06822500	-	1950-51.		
North Fork Republican (North Fork Arikaree) River at Colorado-Nebraska State line.....	06823000	-	1930-		
Republican River (cont. of Arikaree River):					
Buffalo Creek near Haigler, Nebr.....	06823500	n180	1940-		
Rock Creek at (near) Parks, Nebr.....	06824000	n180	1940-		
Horse Creek near Parks, Nebr.....	06824200	-			1949-
(North Fork) Republican River at Benkelman, Nebr....	06824500	n4,770	1894-95 1902-6 1946-		
South Fork Republican River near Hale, Colorado...	06826500				
Beaver Creek near Burlington, Colorado.....	06826700				
Sand Creek near Hale, Colorado.....	06826900				
South Fork Republican River near Colorado-Kansas State Line.....	06827000				
South Fork Republican (Republican) River near (at) Benkelman, Nebr.....	06827500	n2,580	1894-95 1902-6 1930-32 1937-		
Republican River at (near) Max, Nebr.....	06828000	n7,580	1928-45.		
Indian Creek:					
North Branch Indian Creek near Max, Nebr.....	06828100	a4.76		1962 1970-	
Indian Creek near Max, Nebr.....	06828200	-			1949-
Muddy Cr at Stratton, Nebr.....	06828490	157	1978-		
Republican River at Stratton, Nebr.....	06828500	n7,940	1950-		
Swanson Lake near Trenton, Nebr.....	06829000	n8,100	1953-		
Republican River at Trenton, Nebr.....	06829500	n8,100	1946-		
Thompson Canyon near Trenton, Nebr.....	06829700	9.06		1966-	
Republican River at (near) Culbertson, Nebr.....	06830000	n8,200	1913-15* 1930-50. 1932-40.		
Frenchman Creek near (above) Champion, Nebr.....	06830500	-	1934-56.		
Frenchman Creek below (near) Champion, Nebr.....	06831000	n519	1940-		
Frenchman Creek near Imperial, Nebr.....	06831500	n1,220	1950-		
Enders Reservoir near Enders, Nebr.....	06832000	n1,300	1946-		
Frenchman Creek near Enders, Nebr.....	06832500	n1,300			
Frenchman River 1.7 miles east of Enders Dam, Nebr.....	06832600				
Frenchman River 2.6 miles east of Enders Dam, Nebr.....	06832700				
Frenchman River 4.3 miles east of Enders Dam, Nebr.....	06832800				
Frenchman River 5.6 miles east of Enders Dam, Nebr.....	06832900				

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Frenchman River 6.2 miles east of Enders Dam, Nebr.....	06833000				
Frenchman River at Wauneta, Nebr.....	06833100				
Frenchman R above Sand Canyon near Hamlet, Nebr...	06833300				
Frenchman Creek near Hamlet, Nebr.....	06833500	n1,480	1928-56.		
Frenchman Creek (River) at Palisade, Nebr.....	06834000	n1,500	1894-96 1950-		
Stinking Water Creek:					
Spring Creek:					
Spring Creek tributary near Grant, Nebr.....	06834100	17.9		1970-	
Spring Creek tributary nr Amherst, Colorado.	06834200				
Stinking Water Creek near Wauneta, Nebr.....	06834500	n1,260	1940-50.		
Stinking Water Creek near Palisade, Nebr.....	06835000	n1,390	1949-		
Bobtail Creek near Palisade, Nebr.....	06835100	a30.2		1966-	
Frenchman Creek at Culbertson, Nebr.....	06835500	n3,080	1913-15* 1930-		
Blackwood Creek near Culbertson, Nebr.....	06836000	a290	1946-		
Driftwood Creek:					
South Fork Driftwood Creek near Ludell, Kansas..	06836460				
Driftwood Creek near Culbertson, Kansas.....	06836480				
Driftwood Creek near McCook, Nebr.....	06836500	a360	1946-		
Republican River at McCook, Nebr.....	06837000	n12,560	1930-32 1954-		
Ash Creek near Red Willow, Nebr.....	06837100	18.3		1966-	
Red Willow Creek above Hugh Butler Lake, Nebr.....	06837300	-	1960-		
Hugh Butler Lake near McCook, Nebr.....	06837390	n600	1961-		
Red Willow Creek at damsite, near McCook, Nebr....	06837400	a600		1958-60.	
Red Willow Creek near McCook, Nebr.....	06837500	n600	1940-47 1960-	1958-60.	
Red Willow Creek northeast of McCook, Nebr.....	06837900	a700		1958-61.	
Red Willow Creek near Red Willow, Nebr.....	06838000	n710	1939-		
Coon Creek at Indianola, Nebr.....	06838200	a64		1961-	
Dry Creek near Bartley, Nebr.....	06838500	5.24	1955-57		
Dry Creek at Bartley, Nebr.....	06838550	a44		1961-	
Republican R above Medicine C at Cambridge, Nebr....	06838700				
Medicine Creek at Maywood, Nebr.....	06839000	n207	1951-58	1960-	
North Brushy Creek (head of Brushy Creek):					
South Brushy Creeks:					
Elkhorn Canyon near Maywood, Nebr.....	06839200	6.74		1952-	
Elkhorn Canyon southwest of Maywood, Nebr...	06839400	13.2		1952-70	
Brushy Creek near Maywood, Nebr.....	06839500	130	1951-58	1947 1960-	
Frazier Creek near Maywood, Nebr.....	06839600	11.3		1952-70	
Frazier Creek tributary near Maywood, Nebr..	06839700	.72		1952-	
Fox Creek:					
Fox Creek tributary (Fox C) near Curtis, Nebr.	06839800	6.97		1956-60.	
Fox Creek north of Curtis, Nebr.....	06839850	13.8		1952-70	

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Fox Creek above Cut Canyon, near Curtis, Nebr...	06839900	31.8		1951-	
Cut Canyon near Curtis, Nebr.....	06839950	25.6		1951-	
Fox Creek at Curtis, Nebr.....	06840000	73.2	1951-58	1947	
			1978-	1960-70	
Dry Creek near Curtis, Nebr.....	06840500	a20	1951-58	1947	
				1960-70	
Medicine Creek above Harry Strunk Lake (above Medicine Creek Reservoir), Nebr.....	06841000	n930	1950-		
Mitchell Creek above Harry Strunk Lake Medicine Creek Reservoir), Nebr.....	06841500	a53	1950-74		
Harry Strunk Lake near Cambridge, Nebr.....	06842000	n1,060	1949-		
Medicine Creek below Harry Strunk Lake (Medicine Creek Dam), Nebr.....	06842500	n1,060	1950-		
Medicine Creek at (near) Cambridge, Nebr.....	06843000	n1,070	1936-57.		
Republican River at Cambridge, Nebr.....	06843500	n14,300	1945-		
Muddy Creek at Arapahoe, Nebr.....	06844000	243	1950-72		
			1978-		
Turkey Creek:					
East Branch Turkey Creek near Smithfield, Nebr..	06844150	-			1968-73
East Branch Turkey Creek tributary near Smithfield, Nebr.....	06844160	-			1968-73
East Branch Turkey Creek near Bertrand, Nebr....	06844170	-			1968-73
West Branch Turkey Creek near Bertrand, Nebr....	06844180	-			1968-73
Turkey Creek near Edison, Nebr.....	06844200	-			1968-73
Turkey Cr at Edison, Nebr.....	06844210		1978-		
Republican River near Orleans, Nebr.....	06844500	n15,400	1947-		
Beaver Creek near Beaver City, Nebr.....	06847000	a2,060	1936-		
Sappa Creek near Stamford, Nebr.....	06847500	a3,840	1945-		
Flaq Creek near Orleans, Nebr.....	06847550	-			1949
					1951-74
					1976-
Rope Creek near Orleans, Nebr.....	06847560	-			1949
					1951-74
					1976
Harlan County Reservoir near Republican City, Nebr..	06849000	n20,750	1952-		
Eureka Creek near Naponee, Nebr.....	06849400	-			1949
					1951-74
Republican River below Harlan County Dam, Nebr.....	06849500	n20,760	1952-		
Turkey Creek near Holdrege, Nebr.....	06849600	27.8		1947	
				1960	
				1967-	
Turkey Creek at Naponee, Nebr.....	06850000	138	1948-53		1954-
Cottonwood Creek near Bloomington, Nebr.....	06850200	15.6	1948-56		1957-
Little Cottonwood Creek near Bloomington, Nebr....	06850400	-			1949
					1951-74
Republican River near Bloomington, Nebr.....	06850500	n21,100	1929-57.	1960-67	
				1970-	

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Center Creek at Franklin, Nebr.....	06851000	n146	1948-56 1968-75 1978-	1962-68	1960-68.
Walnut Creek near Franklin, Nebr.....	06851020	-			1949 1951-74
Republican River at Riverton, Nebr.....	06851090	n21,300		1960-67 1970-	
West Branch Thompson Creek at Hildreth, Nebr.....	06851100	27.4		1953-70	
West Branch Thompson Creek near Hildreth, Nebr....	06851200	56.6		1953-70	
West Branch Thompson Creek tributary near Hildreth, Nebr.....	06851300	13.9		1953-	
West Branch Thompson Creek near Upland, Nebr.....	06851400	90.8		1953-	
Thompson Creek at Riverton, Nebr.....	06851500	223	1948-56 1968-75 1978-	1962-68	1960-68.
Farmers Creek near Inavale, Nebr.....	06851600	-			1949 1951-74
Indian Creek near Red Cloud, Nebr.....	06851700	-			1949 1951-74
Crooked Creek near Red Cloud, Nebr.....	06851800	-			1949 1951-74
Elm Creek at Amboy, Nebr.....	06852000	39.2	1948-53 1978-	1962-	1954-
Willow Creek near Guide Rock, Nebr.....	06852200	-			1949 1951-74
Courtland Canal at Nebraska-Kansas State line.....	06852500	-	1954-		
Republican River near Guide Rock, Nebr.....	06853000	n22,060	1950-		
Beaver Creek near Rosemont, Nebr.....	06853100	.75	1968-70	1970-	
Republican River at Superior, Nebr.....	06853400	22,300			1961-65 1967 1971-
Republican River near Hardy (at Bostwick), Nebr.....	06853500	g22,401	1904-15 1931-		
Kansas River (continuation of Republican):					
Big Blue River:					
Big Blue River tributary near Hordville, Nebr...	06879850	4.07		1968-	
Big Blue River near Arborville, Nebr.....	06879855	-			1970-
Big blue River near Polk, Nebr.....	06879860	-			1969-70
Prairie Creek near Stromsburg, Nebr.....	06879885	-			1968-69.
Big Blue River at Surprise, Nebr.....	06879900	345	1964-		
North Branch Big Blue River:					
Kezan Creek near Garrison, Nebr.....	06879945	-			1968-69.
Lincoln Creek near Hampton, Nebr.....	06879980	-			1969-
Coon Branch near Benedict, Nebr.....	06879985	4.5			1975
Lincoln Creek near Utica, Nebr.....	06879995	-			1968-
Lincoln Creek near Seward, Nebr.....	06880000	446	1953-		
Big Blue River at Seward, Nebr.....	06880500	1,099	1953-		

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Plum Creek near Seward, Nebr.....	06880508	85.5		1968-	
Plum Creek at Seward, Nebr.....	06880510	-			1968-69.
Big Blue River near Seward, Nebr.....	06880520				1973-
Big Blue River at Milford, Nebr.....	06880530				
Big Blue River near Milford, Nebr.....	06880550	-			1968-69.
West Fork Big Blue River near Hastings, Nebr....	06880555	-			1968-69.
West Fork Big Blue River SE of Hastings, Nebr....	06880556	-			1973-
West Fork Big Blue River (at county line) near Eldorado, Nebr.....	06880559	-			1976-
West Fork Big Blue River near Eldorado, Nebr....	06880560	-			1969
Flessner Creek:					
Flessner Creek tributary at Giltner, Nebr....	06880590	7.52		1968-	
Flessner Creek near Stockham, Nebr.....	06880600	-			1968-69.
West Fork Big Blue River near Stockham, Nebr....	06880610	-			1969-
School Creek:					
School Creek tributary near Harvard, Nebr....	06880710	13.1		1952-70	
School Creek near Harvard, Nebr.....	06880720	55.1		1953-	
School C tributary No. 2 near Harvard, Nebr.	06880730	14.0		1953-	
School Creek near Saronville, Nebr.....	06880740	89.4		1952-70	
School Creek near Sutton, Nebr.....	06880745	-			1974-
School Creek near Grafton, Nebr.....	06880750	-			1968-69.
W Fork Big Blue River nr McCool Junction, Nebr..	06880755	-			1970
W Fork Big Blue River nr Beaver Crossing, Nebr..	06880760	-			1969-70,
					1974-
Beaver Creek near Hampton, Nebr.....	06880770	-			1969-70
					1972-
Beaver Creek tributary nr Henderson, Nebr....	06880775	1.16		1968-	
Beaver Creek near Beaver Crossing, Nebr.....	06880785	-			1968-70,
					1974-
Indian Creek near Exeter, Nebr.....	06880787	-			1969-70
Indian Creek near Cordova, Nebr.....	06880788	-			1969-70,
					1974-
W Fork Big Blue River at Beaver Crossing, Nebr..	06880790	1,153	1965-68		
W Fork Big Blue River near Dorchester, Nebr.....	06880800	1,206	1958-		
Johnson Creek near Dorchester, Nebr.....	06880850	-			1964-69
Big Blue River at Crete Nebr.....	06880950				
Big Blue River near Crete, Nebr.....	06881000	2,716	1945-		
Squaw Creek near Crete, Nebr.....	06881010	-			1968-69.
Big Blue River at Wilber, Nebr.....	06881050				
Big Blue River near Wilber, Nebr.....	06881052				
Big Blue River at DeWitt, Nebr.....	06881100				
Big Blue River .5 mile east of DeWitt, Nebr.....	06881102				
Clatonia Creek near DeWitt, Nebr.....	06881105	-			1968-69,
Turkey Creek near Milligan, Nebr.....	06881110	-			1968-69.
					1976-
Turkey Creek above Brush Creek nr Wilber, Nebr..	06881150				
Turkey Creek near Wilber, Nebr.....	06881200	460	1959-		

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Turkey Creek 2 miles southwest of Wilber, Nebr..	06881210				
Turkey Creek above Swan Creek near DeWitt, Nebr.	06881220				
South Fork Swan Creek:					
South Fork Swan Creek tributary near Western, Nebr.....	06881250	1.00		1968-	
North Fork Swan Creek near Swanton, Nebr.....	06881353				
Swan Creek at Swanton, Nebr.....	06881356				
Swan Creek near DeWitt, Nebr.....	06881357	-			1968-69.
Turkey Creek near DeWitt, Nebr.....	06881358				
Big Blue River near DeWitt, Nebr.....	06881420	-			1968-69.
Cub Creek near Beatrice, Nebr.....	06881430	-			1968-69.
Indian Creek at Beatrice, Nebr.....	06881450	a74		1960-	1968-69.
Big Blue River at Beatrice, Nebr.....	06881500	3,900	1905-9*f 1910-15c 1916-74*f 1974-	1969	1954 1960-69 1971-74
Big Blue River below Beatrice, Nebr.....	06881502	-			1972-
Bear Creek near Adams, Nebr.....	06881510	2.85		1968	
Bear Creek near Beatrice, Nebr.....	06881520	-			1968-69.
Big Blue River tributary near Beatrice, Nebr....	06881530	1.86		1971-	
Cedar Creek near Holmesville, Nebr.....	06881550	-			1968-69.
Big Blue River at Holmesville, Nebr.....	06881600				
Mud Creek near Holmesville, Nebr.....	06881650	-			1968-69.
Big Blue River at Blue Springs, Nebr.....	06881700				
Big Indian Creek at Wymore, Nebr.....	06881750	-			1968-69.
Wildcat Creek near Barneston, Nebr.....	06881950				
Big Blue River at Barneston, Nebr.....	06882000	4,444	1932-		
Plum Creek at Barneston, Nebr.....	06882050	-			1968-69.
Little Blue River:					
Sand Creek near Holstein, Nebr.....	06882550	-			1968-69.
Cottonwood Creek near Roseland, Nebr.....	06882650	-			1968-69.
Little Blue River near Ayr, Nebr.....	06882880				
Little Blue River below Pawnee Creek, near Pauline, Nebr.....	06882900	881	1962-68	1969.	
Pawnee Creek at Spring Ranch, Nebr.....	06882950	-			1968-69.
Little Blue R nr DeWeese (at Pine Bluff), Nebr..	06883000	979	1953-72 1974-		
Little Blue River near Angus, Nebr.....	06883100	1,038		1958-68	
Little Blue R above Oxbow Creek, nr Angus, Nebr.	06883300	-			1963 1966-69
Little Blue River at Angus (Blue Bluff), Nebr...	06883500	-	1912* 1950-53.		
Elk Creek near Oak, Nebr.....	06883510	-			1968-69.
Spring Creek:					
Spring Creek tributary near Ruskin, Nebr....	06883540	2.11		1967-	
Spring Creek at Hebron, Nebr.....	06883553	-			1968-69.
Little Blue River near Hebron, Nebr.....	06883560				

STATION NAME	STATION NUMBER	DRAINAGE AREA (SQ MI)	PERIODS OF RECORD		
			DAILY OR MONTHLY FIGURES (CALENDAR YEARS)	ANNUAL PEAKS (WATER YEARS)	DISCHARGE MEASUREMENTS ONLY (WATER YEARS)
Dry Creek near Hebron, Nebr.....	06883563	-			1968-69.
Little Blue River near Alexandria (Gilead), Nebr.....	06883570	1,557	1959-72 1974-		
Little Blue River near Alexandria, Nebr.....	06883575				
Big Sandy Creek near Onq, Nebr.....	06883583	-			1970, 1974-
Big Sandy Creek near Davenport, Nebr.....	06883585	-			1968-69.
Little Sandy Creek near Onq, Nebr.....	06883590	-			1970, 1974-
South Fork Big Sandy Creek near Edgar, Nebr.	06883600	10.3		1953-70	
South Fork Big Sandy C near Davenport, Nebr.	06883700	28.1		1950 1952-	1950 1968-69
South Fork Big Sandy C near Carleton, Nebr.	06883800	50.4		1952-70	
South Fork Big Sandy Creek near Hebron, Nebr.	06883900	90.3		1952-70	
Dry Sandy Creek near Bruning, Nebr.....	06883925	-			1976
Big Sandy Creek near Powell, Nebr.....	06883950	-			1968-69.
Little Sandy Creek near Ohiowa, Nebr.....	06883955	11.6		1968-	
Little Sandy Creek near Powell, Nebr.....	06883960	-			1968-69.
Little Blue River at Fairbury, Nebr.....	06883995	-			1968-69.
Little Blue River near Fairbury (Endicott), Nebr.....	06884000	2,350	1908-15 1928-		
Rose Creek:					
Dry Branch:					
Dry Branch tributary near Fairbury, Nebr..	06884005	4.51		1968-	
Rose Creek near Endicott, Nebr.....	06884010	-			1968-69.
Little Blue River at Steele City, Nebr.....	06884020	-			1968-69.
Little Blue River at Hollenbura, Kans.....	06884025	2,752	1973-		

Q Quality-of-water site.

* Gage heights, or gage heights and discharge measurements only.

a Approximately.

b In files of Omaha Office of Corps of Engineers, U.S. Army.

c Monthly discharge only for some periods, published in WSP 1310.

d Discharge measurements only.

f In reports of U.S. Weather Bureau.

g Part of drainage area is noncontributing or does not contribute directly to surface runoff.

n Approximately, part of drainage area is noncontributing or does not contribute directly to surface runoff.

p In reports of Missouri River Commission.

x In reports of Nebraska State engineer.

y Records for these stations not equivalent due to flow of Boelus power canal.

z In files of Kansas City Office of Corps of Engineers, U.S. Army.

APPENDIX J.--FLOOD-PRONE AREA MAPS IN NEBRASKA

Free, except as indicated, on application to the
U.S. Geological Survey, Lincoln, Nebraska

<u>County</u>	<u>7½-Minute Quadrangle</u>	<u>County</u>	<u>7½-Minute Quadrangle</u>
Adams:	Ayr Pauline	Clay:	Deweese Edgar Edgar NW Fairfield NW Fairfield SE Sutton
Antelope:	Clearwater Ewing Neligh Neligh SE Oakdale Tilden	Colfax:	Rogers Schuyler
Boone:	Albion East Albion West Cedar Rapids St. Edward	Cuming:	Altona Altona SE Bancroft Beemer Pender West Point West Point NE West Point NW West Point SE Wisner
Buffalo:	Elm Creek East Elm Creek West Gibbon North Gibbon South Kearney Ravenna	Custer:	Broken Bow Sargent East Sargent West
Burt:	Lyons Oakland	Dakota:	**Homer **Emerson **Jackson **Jefferson (SD-NE) **Salix (IA-NE) Sioux City South
Butler:	Rogers Schuyler Ulysses	Dawson:	Cozad Elm Creek West Gothenburg Gothenburg SE Lexington East Lexington West Overton Willow Island
Cass:	Ashland East Ashland West Avoca Manley Nehawka Plattsmouth **Springfield (Rev.) Weeping Water		

APPENDIX J.--Flood-Prone Area Maps--Continued

<u>County</u>	<u>7½-Minute Quadrangle</u>	<u>County</u>	<u>7½-Minute Quadrangle</u>
Deuel:	Barton Big Springs	Hall:	* <u>a/</u> Abbott * <u>a/</u> Grand Island Wood River
Dixon:	**Emerson Wakefield Wakefield SW	Hamilton:	Aurora East Aurora West Murphy Phillips
Dodge:	Fremont East Fremont West Hooper Nickerson Scribner Uehling	Hitchcock:	Culbertson
Douglas:	**Elkhorn **Fort Calhoun Fremont East **Gretna **Irvington **Kennard Omaha North Omaha South Ralston Valley	Holt:	Ewing O'Neill
Fillmore:	Sutton	Howard:	St. Paul Wolbach SW
Frontier:	Cambridge Curtis	Jefferson:	Fairbury Fairbury SW Gladstone
Furnas:	Cambridge	Johnson:	Cook
Gage:	Barneston Beatrice East Beatrice West Blue Springs Odell Wilber Wymore	Kearney:	Gibbon South
Garden:	Coumbe Bluff Lisco Oshkosh Lewellen	Keith:	Big Springs Brule Brule SE Nevins Paxton North Paxton South Paxton SW
		Knox:	Verdigre
		Lancaster:	Ashland West Bennet Davey Denton Emerald Lincoln Palmyra Pleasant Dale Raymond Roca Walton Waverly

APPENDIX J.—Flood-Prone Area Maps--Continued

<u>County</u>	<u>7½-Minute Quadrangle</u>	<u>County</u>	<u>7½-Minute Quadrangle</u>
Lincoln:	Curtis Gothenburg Maxwell Maxwell SW North Platte East Paxton North Paxton South	Nuckolls:	Edgar Fairfield SE Oak Ruskin
Madison:	Enola Madison Madison NE Meadow Grove Norfolk Pierce SE Tilden	Otoe:	Cook Dunbar Nehawka Palmyra Paul Syracuse Talmage Unadilla
Merrick:	Central City East Central City West Phillips	Perkins:	Paxton South Paxton SW
Morrill:	Bridgeport Bridgeport NW Broadwater Broadwater NW Broadwater SW South Bayard	Phelps:	Elm Creek East Elm Creek West
Nance:	Belgrade *b/Fullerton *b/Fullerton NE *b/Genoa *b/Merchiston St. Edward	Pierce:	Norfolk Pierce Pierce SE Wee Town
Nemaha:	Auburn Brock Howe Nemaha Paul Peru	Platte:	Columbus Duncan *b/Genoa Monroe St. Edward
		Polk:	Osceola Stromsburg
		Red Willow:	Cambridge McCook East McCook West
		Richardson:	Falls City Humboldt Verdon

APPENDIX J.--Flood-Prone Area Maps--Continued

<u>County</u>	<u>7½-Minute Quadrangle</u>	<u>County</u>	<u>7½-Minute Quadrangle</u>
Saline:	* <u>c/</u> Crete South * <u>c/</u> Crete North Dorchester Dorchester NW Wilber	Seward (Cont.)	Staplehurst Ulysses Utica
Sarpy:	Ashland East **Cedar Creek **Gretna Omaha South Plattsmouth Ralston **Springfield (Rev.)	Sheridan:	Gordon
Saunders:	Ashland East Ashland West Fremont East Fremont West Valley Wahoo East Wahoo West	Sherman:	Loup City Ravenna
Scotts Bluff:	Bayard SW Lyman McGrew Minatare Mitchell Morrill Scottsbluff North Scottsbluff South	Stanton:	Madison NE Pilger Stanton Stanton NE
Seward:	Crete North Dorchester Dorchester NW Garland Milford Pleasant Dale * <u>d/</u> Seward	Thayer:	Alexandria Deshler Hebron Ruskin
		Thurston:	Altona NE Altona SE **Emerson Pender **Salix (IA-NE) Thurston (Rev.)
		Valley:	Ord
		Washington:	Arlington Blair **Fort Calhoun Fremont East **Kennard **Loveland (NE-IA) Nickerson
		Wayne:	Altona NE Altona SE
		York:	Stromsburg

*When available, Hydrologic Investigations Atlases may be obtained from the Conservation and Survey Division, University of Nebraska, Room 113, Nebraska Hall, 901 No. 17th Street, Lincoln, Nebr., 68588.

**Prepared by Soil Conservation Service and distributed by Geological Survey.

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c/Atlas HA-503 (Price \$1.00).

b/Atlas HA-188 (Price \$1.25).

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