

Annual Report and Plan of Work  
for the  
Nebraska State Water Planning and Review Process

Submitted to the Governor  
and Legislature by the  
Director of Natural Resources

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## I. INTRODUCTION

The Nebraska State Water Planning and Review Process was initiated in 1978 to redirect and accelerate Nebraska's water planning efforts. This eighteenth Annual Report and Plan of Work summarizes work completed as part of that process in FY 96 and presents a work program and budget for future fiscal years. This is a report of the Director of Natural Resources and is submitted in compliance with Nebraska Revised Statutes Sec. 2-15106.

In recent years the major focus of the state water planning process has been on natural resources information management. Work of the Natural Resources Commission's Planning Section is now closely coordinated with the work of the Commission's Data Bank to produce a variety of maps and other information useful in addressing the state's natural resources problems. Geographic information systems and computer assisted data manipulation and modeling continue to be an integral part of the long range planning and management of the state's soil and water resources. The work items in this report reflect that emphasis.

The State Water Planning and Review Process work items related to information management are found primarily in Section "D. Basic Planning Activity". Many of the information management products and activities found in this report are in fact co-products of the Commission's Data Bank and its Planning Section. Note, this is a report of planning activities and includes no budgetary material or programmatic information about Data Bank initiatives. However, the Data Bank does have a major role in almost all of the information management activities listed.

## II. STATUS REPORT ON COMPLETED AND ONGOING WORK

### A. POLICY ISSUE ANALYSIS

The Policy Issue Analysis Activity is intended to provide the Governor, the Legislature, and other decision makers with policy alternatives on Nebraska water problems and issues. By 1986 ten studies comprising a total of 18 volumes had been completed as part of this activity. Since that time no policy issue studies have been initiated and none are planned at this time.

### B. PROBLEM ANALYSIS AND AREA PLANNING

The Problem Analysis and Area Planning Activity is designed to allow study of specific Nebraska water problems in a flexible format tailored to the particular problem or problem area. Various agencies may be involved in these studies. In some cases this activity involves state participation in studies led by the federal government.

#### 1) Southeast Nebraska Streambed Degradation Study

##### a) General

Various portions of this study are intended to examine the causes and extent of accelerated streambed degradation in southeast Nebraska as well as possible physical solutions. Also to be

examined are policy issues, coordination, and alternatives for assembling programs to address the problem. Reports are being produced by a variety of agencies as part of this study. The U.S. Army Corps of Engineers, with the assistance of the U.S. Geological Survey, the Natural Resources Commission and others has produced a report on the problem as well as a manual relevant to physical solutions. The Nebraska Natural Resources Commission is scheduled to produce a report on policy issues, coordination and alternatives.

State interest in accelerated stream degradation arose from a request by the State of Iowa through the Natural Resources Conservation Service, to cooperate in a four-state effort. Iowa was interested in coordinating activities to fund research and construction of measures to control severe erosion along Missouri River tributaries. The Commission took the initiative to determine if there was sufficient interest among the counties and natural resources districts in the eastern part of the state to justify coordinated planning and project development. Commission planning staff members compiled information on bridges with problems caused by degradation, collected data on overfalls and head-cutting from local agencies, and organized meetings with counties and NRDs in FY 94.

Major flooding in 1993 in southeast Nebraska, which led to a federal disaster declaration, caused major damage to infrastructure in six counties in that area. Much of that damage was aggravated by the degradation that has taken place over the last 80 years, so the Director of Natural Resources agreed to begin a two and a half year study of the six county area.

To secure the assistance of agencies with expertise and experience in flood and erosion protection, the Commission led state agencies and counties in negotiating a contract with the U.S. Army Corps of Engineers for a study under their Technical Assistance to States (Section 22) Program. The Corps subcontracted with the U.S. Geological Survey for the services of a leading researcher on degradation in loess soils. The U.S. Geological Survey has also contracted with the Nebraska Department of Roads and the Natural Resources Commission for an expanded study of a 23 county area in eastern Nebraska.

#### b) Work Completed in FY 96

The Corps of Engineers Section 22 Report was completed in October 1995 and the Corps Manual containing physical solutions and examples was completed in March 1996. The Natural Resources Commission reviewed and commented on the draft report and manual and distributed copies of the contracted manual to state, federal and local agencies on the study advisory committee. The Commission resurveyed some of the cross sections of Four Mile Creek in Cass County at the same location they had been surveyed in 1980. The Corps used that data in conjunction with the information they had collected for their Emergency Streambank Protection (Section 14) project to provide examples in their manual. The Commission also provided data that helped the Corps to model the stream reaches and watershed. In FY 96 this study accounted for about 9.4% of the total planning process budget.

#### c) Work Scheduled for Future Fiscal Years

The Natural Resources Commission originally intended to take 18 months after completion of the Corps' work to expand on the Corp's results. However, a nine month delay in receipt of the Corps manual required modification of that study plan. Currently, the intent is to complete the Commission's study by the end of FY 97. The Commission study is intended to: define the extent

of the problem, define the extent of the jurisdiction of federal agencies, examine alternative legislative and administrative policies, and examine opportunities for coordination programs and projects.

## 2) 23 County Streambed Degradation Study

The U.S. Geological Survey is scheduled to produce a report on streambed degradation in an expanded 23 county area in a cooperative effort partially funded by the Commission and other units of government. The study is entitled "The Effects of Channel Instabilities on Bridge Structures and Flood-Plain Resources in the Loess Area of Eastern Nebraska". The objective of the study is to evaluate and quantify past, present and future channel instabilities in the 23 county loess area of eastern Nebraska. Other cooperators include the Nebraska Department of Roads, the Papio-Missouri River Natural Resources District, the Lower Platte South Natural Resources District, the U.S. Army Corps of Engineers, the University of Nebraska-Lincoln, and the Agricultural Research Service. Under an agreement signed in April 1996 the Natural Resources Commission is committed to providing funding of \$25,000 per year over a four year period.

## 3) Platte River Area Planning Studies

A variety of studies generally intended to improve understanding of the Platte River system have been initiated by various agencies. In most cases in recent years this has involved state level participation in federally led studies. Inclusion of work in this category is a matter of classification since there is no "Platte River Area Planning Study" per se. In FY 96 about 4.3% of the Planning Process budget was included for Natural Resources Commission staff time contribution to these studies. Studies included in this classification and lead agencies for those studies include:

- a) Studies for Federal Energy Regulatory Commission Relicensing of Platte River Facilities and Memorandum of Agreement Negotiations
- b) Evaluation of the Operations of Existing Projects on the Platte River for the Potential to Affect Threatened or Endangered Species - U.S. Bureau of Reclamation
- c) Platte River Management Joint Study - U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation
- d) Lower Platte River and Tributaries Reconnaissance Study -U.S. Army Corps of Engineers
- e) Middle Platte Eco-Risk Assessment

### a) Studies for Federal Energy Regulatory Commission Relicensing of Platte River Facilities and Memorandum of Agreement Negotiations

In early 1992 the Federal Energy Regulatory Commission (FERC) issued a draft environmental impact statement on a plan for relicensing of Platte River facilities. The Governor's Office suggested that a compromise acceptable to all parties be developed and the Commission's legal staff has played a major role in that work. In the past Commission planning staff contributed

to the FERC relicensing process by developing a flow model used in the negotiation process and reviewing the models of other parties as well as providing engineering, hydrologic and technical support. The Commission legal staff and selected comprehensive planning staff members are expected to continue to plan a major role in the process.

There has also been closely related work underway on a memorandum of agreement between the Department of Interior, the states, and possibly other parties on water use in the Platte River Basin. In FY 96 a planning staff member worked extensively on modifying the Central Platte Model for use in the memorandum of agreement process. The Commission legal staff provided extensive support and leadership in the process. Work on the memorandum of agreement is expected to continue.

b) U.S. Bureau of Reclamation Evaluation of Existing Projects on the Platte River for the Potential to Affect Threatened or Endangered Species

A Natural Resources Commission member has served as an official member of the hydrology task force for the Bureau of Reclamation's study of existing projects on the Platte River and other planning staff have assisted. Late in FY 95 a draft North Platte River Water Use Model was completed and Commission staff reviewed it in early FY 96. Since that time work has been suspended pending the outcome of work on the memorandum of agreement.

c) Platte River Management Joint Study

The Platte River Management Joint Study is a cooperative effort by federal, state and local agencies in the Platte River Basin to identify alternatives for managing the river and associated wildlife and habitat. Federal agencies have suspended work on this study while the negotiation process is underway for a Memorandum of Agreement between the Department of the Interior, the states and other parties of interest on water use in the Platte River Basin. There was no work on this study in FYs 95 and 96 and it is unknown when work on the study will resume. Information on this study will not be included in future annual reports unless work on the study resumes.

d) Lower Platte River and Tributaries Reconnaissance Study

The purpose of this study is to determine the cause and extent of flood damages in the lower Platte River Basin and to identify alternatives for managing the river and associated wildlife and habitat. Following flooding in the spring of 1993 the Governor expressed interest in addressing the problem. The Corps of Engineers received \$160,000 to begin a reconnaissance level study and began work in the summer of 1995. The Natural Resources Commission participated in the study and conducted extensive review. The local natural resources districts and other agencies have also participated.

In summer 1995 the Commission's photogrammetry and survey section compiled elevation data for cross sections and entered them into the needed format for study models. The Corps held status report/working meetings in all but one month from August 1995 through February 1996. On April 1, 1996 the Commission received copies of the first draft of the Corps report. The Commission provided comments. There were also several meetings with the local natural resources districts. The Commission subsequently wrote a letter stating that there was sufficient

interest in potential projects for NRC to enter into negotiations for scoping a feasibility study of the same area.

In 1997 the Corps will negotiate the scope of work for a feasibility study and the cost sharing involved. The Commission is likely to provide in-kind services such as floodplain surveying, hydraulics and hydrology. Commission staff may also help do planning for floodplain mitigation assistance. The feasibility study is likely to take two to three years.

e) Lower Platte River Corridor Alliance

The Lower Platte River Corridor Alliance is a group formed to coordinate activities of state and local agencies involved in management of the Lower Platte River and hire a coordinator to act as a liaison between agencies and coordinate promotion of local natural resources planning and management for the corridor. The Alliance includes the Lower Platte North, Lower Platte South and Papio-Missouri River natural resources districts and five state agencies. The Commission is committed to up to \$5,000 per year funding plus in-kind service with the Alliance through the close of the state's fiscal year 1997.

f) Middle Platte Eco-Risk Assessment

The Middle Platte Eco-Risk Assessment is intended to provide decision-makers with information on the ecological risks associated with potential land and water management options in the basin. The effort is being directed by the U.S. Environmental Protection Agency and a variety of federal, state and local agencies are contributing. In FY 96 the Commission role was limited to reviews and a similar role is expected in the next fiscal year.

4) Lower Loup Area Groundwater Resource Assessment

The Natural Resources Conservation Service's (NRCS) "Lower Loup Area 28 Groundwater Resources Assessment - A Cooperative River Basin Study" was requested by the Lower Loup Natural Resources District and is to develop a strategy to address current and potential water quality concerns in the area. In addition to NRCS and the NRD the Natural Resources Commission and the Department of Environmental Quality are formal cooperators on the study. In FY 96 the Commission helped manipulate data in a geographic information system to contribute to the report. The study was to be completed by March of 1996, but has received a lower priority by the NRCS and has not yet been completed. It should be completed during FY 97.

5) U.S. Bureau of Reclamation Assessment of Nebraska's Rural Domestic and Small Community Water Supply Problems, Needs and Alternatives

The Bureau of Reclamation's "Assessment of Nebraska's Rural Domestic and Small Communities Water Supply Problems, Needs, and Alternatives" is a three year study intended to provide an analysis of the extent of possible water supply and quality problems within Nebraska due to groundwater contamination with nitrate, pesticides, and other constituents. The period of study extends from October 1995 through September 1998. In May 1996 the Natural Resources Commission and the Bureau of Reclamation signed a memorandum of understanding on the study which will require considerable Commission in-kind staff participation. Fifty percent in-kind match of State staff time will be needed for the study. The Bureau has budgeted \$75,000 in staff

time for the period ending in October 1996. The Bureau is expected to expend a total of about \$275,000 in federal staff time on the study.

Compilation of the report will be assisted by a Study Team, a State Technical Advisory Group and a Public Involvement Working Group. Study steps will include detailed study area selection, evaluation of detailed study area conditions, detailed study area alternatives, statewide extrapolation of evaluation results, and reports. Commission staff are expected to play a significant role in each of these steps.

#### 6) Republican River Basin Cooperative Studies

The Natural Resources Commission has been assigned by the Governor to cooperate with the Corps of Engineers on its Harlan County Lake Study of Future Operations. However, the Corps study has been suspended while the Bureau of Reclamation works on hydrology and other information needed by the Corps. The Bureau of Reclamation decided to revise the hydrology section of the study they provided the Corps because they must negotiate new water service contracts with the districts in the Republican Basin and they needed more detailed analyses. They have initiated a Republican River Basin Resource Management Assessment (RMA) to provide the data and analyses needed for contract negotiations and preparation of an Environmental Impact Assessment.

In FY 96 the Commission participated in interagency meetings, reviewed the revisions in the hydrologic studies by the Bureau, and reviewed and commented on the draft scenarios for environmental impact statement scenarios.

In a separate Republican River Basin activity one Commission staff member helped organize data for the annual update of the critical townships of the groundwater control area delineated and managed by the Upper Republican Natural Resources District.

A further activity being considered is whether to assist the Middle Republican Natural Resources District in revising their groundwater model as part of the update of their groundwater management plan. If a decision is made to lend this assistance it is likely to consist of Commission staff and computer services. The Twin Platte Natural Resources District has also expressed interest in joining this activity since the original model for the area included part of their NRD.

In addition Nebraska and Kansas are negotiating to determine if they can agree on modifications to the Republican River Compact or on new administrative regulations for the existing compact. Those negotiations began in October 1995 and are expected to continue into at least early FY 97. Although Commission planning staff are not involved in those negotiations the Commission Legal Section has been involved.

### C. PROJECT AND PROGRAM REVIEW ACTIVITY

This activity includes both individual reviews and service on a wide variety of review and program planning committees. In FY 96 time devoted to this budget category accounted for about 13.3% of the total planning process budget. It includes both smaller individual onetime reviews

of some projects and programs as well as larger longer-term types of review activity. Some of the major longer-term work activities in this category are:

- 1) Nebraska Resources Development Fund Reviews
- 2) Review of NRD Groundwater Management Plans
- 3) Non-Point Source Pollution Grants Review Committees
- 4) Waste Reduction and Recycling Grants Review Board
- 5) Environmental Trust Advisory Committees
- 6) Geographic Information System Steering Committee and Subcommittees
- 7) Forestry Stewardship Committee
- 8) FIFRA Advisory Responsibilities
- 9) Niobrara Scenic River Advisory Commission
- 10) Nebraska Water Council
- 11) Review of 404 Permit Applications to U.S. Army Corps of Engineers
- 12) Water Quality Mandates Process
- 13) UNL Agronomy Board

1) Nebraska Resources Development Fund Reviews

In FY 96 planning staff support of Nebraska Resources Development Fund activities included: 1) review of the application and feasibility report for the Gering Canal Project, 2) review of the application and feasibility report for the Pender Flood Control Project, 3) review of the Enders Dam project proposal, 4) review of the Powder Creek project proposal, and 5) initial work on revision of the Natural Resources Development Fund Guidelines. Staff activity levels in Fys 97 and 98 are expected to remain commensurate with those experienced in FY 96.

2) Review of Natural Resource District Groundwater Management Plans

In FY 96 the Natural Resources Commission continued its work as one of six state agencies reviewing the groundwater management plan amendments required by LB 51 (1991). Eleven plans received Department of Water Resources approval in FY 96. By the end of December 1995 all twenty-two districts required to have an approved plan had received approval. In a number of cases Commission staff met with other reviewing agencies and individual natural resources districts in order to expedite the process. Some continuing review activity is expected as Districts implement or revise their plans.

3) Non-Point Source Pollution Grants Review Committees

In FY 96 Commission staff members continued to serve on the Department of Environmental Quality's Section 319 Non-Point Source Grants Review Committees. Meetings and activities of those committees and the amount of Commission service were both very limited. Participation is expected to continue in future fiscal years.

4) Waste Reduction and Recycling Grants Review Board

One Commission staff member is one of four members serving on the Department of Environmental Quality's Waste Reduction and Recycling Grants Review Board. The Board's Review is used to assist the Director of the Department of Environmental Quality in making grant

funding decisions. In April 1996 the Board reviewed fifty-three separate grant applications. Applications are given points in different funding categories according to a program priority system. Prior to FY 96 scrap tire applications were included in the Board's responsibilities but those duties have now been transferred to a special Scrap Tire Review Committee. Since 1992 the funds have made 165 grants totaling over \$11.3 million.

#### 5) Environmental Trust Advisory Committees

The Environmental Trust Board, of which the Director of Natural Resources and two Natural Resources Commissioners are members, has formed technical advisory committees to help review grant applications. Several Commission staff assist those committees, and others assist these members in project reviews. Less activity occurred in FY 96 than in the previous fiscal year.

#### 6) Geographic Information System Steering Committee and Subcommittees

The Geographic Information System Steering Committee has adopted a number of priority initiatives for GIS applications in the State of Nebraska. The development of digital orthophoto quadrangles (DOQs), vectorized soils databases and a hydrologic units database were identified as the top areas of interest. The NRC has embarked on the development of DOQs to the U.S. Geological Survey national standards and a statewide vectorized soils database meeting the Soil Survey Geographic Data Base (SSURGO) national standards of the USDA Natural Resources Conservation Service. Refinement of the NRC's hydrologic units/statewide basemap continue in cooperation with the Department of Environmental Control and the NRCS. In a related matter, the NRC staff participated extensively with DAS in a facilitated review of information technology issues, intergovernmental data sharing options and the overall operations of DAS pertaining to computers, communications, computer related training and purchasing issues.

#### 7) Forestry Stewardship Committee

A Commission staff member serves on the Forestry Stewardship Committee. That committee advises the State Forester on policy and directions relevant to the Forestry Stewardship Incentive Program. The Program distributes about \$80,000 annually to landowners for tree planting. Funds are distributed on the basis of priorities that include: field windbreaks, riparian areas, natural forests and conservation plantings. The Walnut Council, the Woodland Owners Association and the Tree Farm Association are complimentary activities. In a related matter the Commission provided minor financial support for a riparian vegetation research project.

#### 8) FIFRA Advisory Responsibilities

The Nebraska Department of Agriculture is responsible for administering the Federal Insecticide, Fungicide and Rodenticide Act in Nebraska under the provisions of the Nebraska Pesticide Act. The Commission has limited statutory and other advisory responsibilities related to the Act. In FY 96 these involved program review and update activities. In addition, the Commission acts as the repository for the pesticides and groundwater database.

9) Niobrara Scenic River Advisory Commission

The Director of Natural Resources represents the Governor of Nebraska on the Niobrara Scenic River Advisory Commission. The Commission met twice during the fiscal year and in its second meeting it selected management and boundary alternatives to recommend to the regional director of the National Park Service. As of the end of the fiscal year the regional director had not yet made his decision. Commission work will continue in future fiscal years.

10) Nebraska Water Council

The Nebraska Water Council was created by Governor Nelson in 1993 and was charged with examining and making recommendations on conjunctive use issues in Nebraska. A member of the Commission staff served on that Council, although that staff member is not a part of the Commission's planning staff. The Council's major recommendations were adopted with the passage of LB 108 in the 1996 session of the Unicameral. That likely completes the work of the Council.

11) Review of 404 Permits to U.S. Army Corps of Engineers

Landowners planning development in wetland areas must generally apply to the U.S. Army Corps of Engineers for a Section 404 permit for their project. The NRC is one of the state agencies that reviews those applications and provides advice to the Corps. Those activities continued in FY 96.

12) Water Quality Mandates Process

The Nebraska Mandates Management Initiative is a partnership process to help Nebraska municipalities more effectively manage federal and state mandates. The focus area for the initiative is water quality and environmental issues. It has involved eight Nebraska state agencies and a variety of other agencies and associations. The process has provided technical and planning assistance to selected communities that wish to participate. Several Commission staff members, including a planning staff member served in various roles in FY 96. Participation is expected to continue in FY 97.

13) UNL Agronomy Board

A Commission planning staff member attends semi-annual meetings of the UNL Agronomy Board to provide advice to the UNL Agronomy Department about its program of instruction, research, and extension.

D. BASIC PLANNING ACTIVITY

Basic Planning Activities provide the data base and management information necessary to plan natural resource related activities. In recent years this activity has been the focus of much of the Natural Resources Commission's water planning effort. It is closely coordinated with the work of the Commission's Data Bank. In addition to providing information to other agencies and interests, work in this activity is also used to support general planning activities and develop and

update the Nebraska Soil and Water Conservation Strategy. The information developed as part of this activity is also used to administer the planning process, review projects and plans, and conduct other activities of the process.

## 1) Planning Information Base

### a) General

The planning information base has been the primary focus of Natural Resources Planning efforts for a number of years. In FY 96, staff time and other expenditures on the planning information base accounted for about 44% of the planning process budget, excluding the water use data study. The long term goal of the information base is to develop the capability to analyze the relationships of a wide variety of information in a geographic information system (GIS) environment. This includes data on soil characteristics, land use, surface and groundwater data, geologic characteristics, climate, socio-economic characteristics, forestry characteristics, hydrology and water use. The development of statewide databases for use by state, federal, NRD and local units of government will continue to have a high priority.

Natural resources needs can be better met by increased efficiency and effective use of natural resources data. Better techniques of information acquisition, processing, storage and use are required to accomplish that task. To that end GIS processing offers a tool for decision makers that combines multiple layers of information with the interactive capability of a relational database.

The products that will be and in some cases are being produced are as varied as the agencies that will use them. These include land use maps, soils maps, aerial photography with interpretations, satellite imagery with enhanced color, floodplain management information, water rights, well registrations, hydrologic information, and resources planning and environmental protection data. Applications of this information base will enhance state, federal and natural resources district management as well as city and county services and tax assessment. In the larger context the most important product is the better use of human expertise and experience to solve problems and coordinate complementary efforts between various levels of government.

ARC/INFO and GRASS softwares are the leading GIS applications softwares used by state and federal agencies for GIS processing, information exchange, modeling, and decision making. The system architecture developed by the NRC will readily fit with federal counterparts, including the Corps of Engineers, EPA, Fish and Wildlife Service, U.S. Forest Service, Consolidated Farm Services Agency, Natural Resources Conservation Service, National Park Service, U.S. Geological Survey, Bureau of Land Management and Bureau of Reclamation.

The NRC's GIS network is on the leading edge of GIS applications, interagency coordination and interagency data acquisition and sharing. These efforts will continue and support the priorities of the GIS Steering Committee. Additional initiatives will include global positioning system (GPS) satellite locational information and operations to better develop flood plain information, and statewide Digital Ortho-Quarter Quadrangle (DOQQ) maps. The production of digital orthophoto quadrangles (DOQs) and digital elevation models (DEMs) on a statewide basis is a major agency priority. Among other uses these DOQs and DEMs are being used by NRC staff to help digitize soil survey maps recompiled by the Natural Resources Conservation Service and bring them up to SSURGO (Soil Survey Geographic Data Base) national standards. In addition the NRC

addressed and solved problems related to the year 2000 date change and agency computers. The date change has continued to cause considerable problems and expense to other agencies.

The Commission is currently using state of the art global positioning system (GPS) equipment to enhance the accuracy and efficiency of its survey work. However, most of that work is conducted primarily as part of the Commission's Operations Division and in secondary support of the planning process. A global positioning system is a satellite-based positioning system that provides horizontal and vertical location information as well as velocity and time information to GPS receivers. By knowing the exact location of the satellites at a specific time and measuring the travel time of radio messages from the satellite to the GPS receiver on earth, it is possible to calculate the position of that GPS receiver very accurately. GPS surveys allow work to be completed in a fraction of the time with accuracies not achievable by traditional methods.

The Commission has four global positioning receivers. GPS technology has been used to support Commission activities such as Digital Orthophoto Quadrangle (DOQ) production and the Southeast Nebraska Streambed Degradation study. NRC staff has also worked with staff from the Game and Parks Commission, the Department of Aeronautics, the Nebraska Department of Health and the Central Platte Natural Resources District on projects that have incorporated GPS.

The acquisition, processing and sharing of statewide databases has a multifold purpose. First, a multi-user database cuts costs by avoiding duplication and enhances coordination as the basic data set is the same for all uses. Secondly, a statewide database provides a consistent departure point for future enhancements. Satellite imagery, digitized aerial photography with rectification as well as actual ground surveying using global positioning technology can produce maps and map products with varying degrees of high resolution, accuracy and coverage. The NRC actively supports the development and use of statewide databases freely available for the use of a host of government agencies. To that end, the NRC has aggressively populated its world wide web server accessible through the Internet with easily available up-to-date information in both graphic and tabular forms. For those not having Internet connections a modem connection using SLIP/PPP technology can provide the same access to the information. The NRC's homepage address is <http://www.nrc.state.ne.us>.

### General Base Development

#### b) Work Completed and Planned

The NRC, under a workshare agreement with the U.S. Geological Survey is in the process of producing complete Digital Orthophoto Quadrangle (DOQ) and Digital Elevation Model (DEM) coverage for the state. This will be the largest single planning process work item in the next fiscal year and in combination with digitization of soil survey information will be the major work item over the next three (and for soils four) fiscal years. The DOQs are being produced to support many of the Commission's and other Nebraska agencies applications including the development of statewide natural and cultural resources coverages. The Nebraska GIS Steering Committee has determined that statewide coverage of 5 layers consisting of DOQ, soils, transportation, hydrography, and land parcels, is essential for Nebraska. The DOQs are important as a base map and will support the development of the other 4 layers. This includes use as a base map to bring soil mapping up to SSURGO national standards.

The workshare agreement provides for development of the DOQs at a faster pace by utilizing the Commission's resources in partnership with USGS. By systematically producing the DOQs for the state, certain efficiencies can be realized in the collection of ground control, and the administration of the project. The workshare agreement was based on a successful pilot project during which NRC developed 25 DEMs and 64 DOQs for Lancaster County in Nebraska.

In FY 96, the NRC made substantial progress in its efforts to complete statewide coverage of DOQs and DEMs for Nebraska. The Lancaster County coverage was achieved early in the fiscal year and by June 30, 1996 DOQs were completed for about 3% of the state and DEMs were completed for about 24% of the state. The DOQ/DEM project has a timeline of about 3 years.

The DEMs and DOQs being produced by the NRC are in turn being used in another Commission activity, the digitization of soil survey information. As the DOQs and DEMs are completed, Natural Resources Conservation Service staff will recompile soil survey information on the DOQ base map. Natural Resources Commission staff will then digitize the information to bring it up to national SSURGO standards and allow electronic use.

Work on digitizing floodplain delineation maps continued in FY 96 and will be an agency priority in future fiscal years. That information can have a variety of applications, including use on individual disaster or flood event case studies. However, that activity is being primarily being carried out through the NRC's Operations Division rather than as part of the planning and review process.

Refinements to the hydrologic base will allow hydrologic data to be mapped and compared with the array of other data being gathered for GIS processing. The primary work and files for the hydrologic unit data base were completed in FY 93 and conversion of the information to a ARC/INFO based geographic information system was completed in FY 94. A draft report on the hydrologic unit data base was completed in late FY 95. In FY 96 that report was used to compile metadata which was placed on-line with the hydrologic information.

In FY 96, the Natural Resources Commission staff redesigned the agency world wide web homepage. This was a joint effort between the Comprehensive Planning Section and the Data Bank staff. The Commission redesigned the homepage to create user friendly access to the information and services it is providing to users. This includes graphic and tabular data as well as program information. This is an ongoing process that has seen recent improvements and additions to searchable databases and increasing availability of information on the programs and program funds administered by the Commission.

Commission staff are also continuing work on the long term development of a GIS based analytical modeling system to estimate water availability, evaluate the hydrologic impact of project and program proposals, and enhance traditional soil and water conservation, forestry and land use planning.

A need currently exists for better and more consistent land use data. In that regard the LANDSAT TM terrain corrected database for landuse/landcover will be a priority for acquisition in future years. The UNL Conservation and Survey Division acquired LANDSAT TM data for 1990, 1991 and 1992 on a 1:100,000 scale with statewide coverage but there were problems in making it available. The Commission has since become a direct cooperater with the EROS data

center and will purchase the coverages directly. The NRC intends to port the information, review the amalgamation and make it available on the Internet World-Wide-Web server at 30 meter resolution statewide.

The NRC no longer provides financial support for Larry Zink, coordinator of the GIS Steering Committee. Zink is now part of the Information Technology Group under the aegis of Steve Schafer and in the Department of Administrative Services (DAS). The Natural Resources Commission however, supports the DAS information technology and data sharing initiatives and has offered full service GIS connectivity. The DAS information technology questionnaire completed by the Natural Resources Commission is a source of further information on Commission data base activities.

### Water Use Data Study

In 1992 the Commission entered into an agreement with the U.S. Geological Survey to cooperate in the USGS's nationwide program of data collection and estimation of water use. Data is gathered for every fifth year. In Fy 96 the Commission staff worked on data collection and computer systems for the report on 1995 water use. They developed a Geographic Information System data base for hydrologic units, aquifers, and public water suppliers. Commission staff surveyed community water suppliers for pumpage and use data. They also developed a computer data base for industrial and commercial data and are now developing a data base for irrigation. The U.S. Geological Survey will be developing a data base for mining, power and minor uses in cooperation with the Natural Resources Commission. In FY 96 this study accounted for about 15.7% of the planning process budget.

In FY 97, the Commission staff will assemble and process data on water use and assist USGS in preparing the information for submittal to the national data base and report. They will also begin initial drafting of a state report.

### Computer Operations/Support Staff

Commission Planning Division staff in conjunction with Data Bank staff also provided support to a number of other agencies. Although Data Bank staff also worked heavily on this activity, their work is not part of the statutory charge for this report and is not included in this report's budgetary material.

In FY 96 Commission planning staff members in coordination with Data Bank staff helped with computer related installations and technical support in a variety of state, local and federal agencies. As a result a variety of agencies, not all of them directly natural resources related, are in a better position to utilize data and products from the Commission's geographic information systems efforts. Services provided by the Commission included promotion, installation and maintenance of Internet access for other agencies. Work with natural resources districts has included installation of hardware and software to let the districts run the ARC-INFO software package on the Commission's GIS network from their locations. Agencies assisted in some manner by NRC staff in FY 96 included those on the following list. That assistance varied from cooperative work to minor trouble shooting or advice to major installation efforts.

- North Platte Natural Resources District
- Central Platte Natural Resources District
- Lower Platte North Natural Resources District
- Lower Platte South Natural Resources District
- Papio-Missouri River Natural Resources District
- Nebraska Game and Parks Commission
- Nebraska Environmental Trust
- Nebraska Forest Service
- Nebraska Department of Water Resources
- Nebraska Civil Defense Agency
- Nebraska Department of Agriculture
- Nebraska Department of Economic Development
- Nebraska Department of Health
- Nebraska Department of Education
- Nebraska Crime Commission
- Nebraska Library Commission
- Nebraska Ethanol Board
- Nebraska Department of Administrative Services  
(Division of Communications and Central Data Processing)
- Federal Emergency Management Agency
- Natural Resources Conservation Service, USDA
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- U.S. Department of the Interior
- Nebraska Wheat Board
- Lancaster County Red Cross Chapter
- Pioneer Park Nature Center, Lincoln
- Nebraska Real Estate Appraiser Board

## 2) Soil and Water Conservation Strategy

The Nebraska Soil and Water Conservation Strategy is a method of guiding conservation efforts in Nebraska through providing a series of standards and expectations. The strategy is a body of ideas, facts, agreement and recommendations for guiding the course of future conservation activities.

Work on this activity in FY 96 was minimal. Very limited monitoring of the strategy action plan occurred. Plans are now to review the strategy in light of the 1995 federal farm bill. The state soil and water conservation strategy needs to be better integrated with local NRD plans as well as with the plans and operations of state water agencies and federal counterparts.

## 3) State Water Management Strategy/Nebraska Wetlands Conservation Plan

When first proposed, the purpose of the State Water Management Strategy was to present different methods for achieving the state's water use goals and ideal use concepts. It was decided not to go forward with that strategy. However, Natural Resources Commission work to support a Nebraska Wetlands Conservation Plan is included in this category.

The Nebraska Wetlands Conservation Plan was an effort to produce and implement a plan to conserve and enhance wetlands in Nebraska. It was led by the Nebraska Department of Environmental Quality. The Nebraska Game and Parks Commission and the Nebraska Natural Resources Commission were the other participating agencies. In early FY 96, after very considerable work on the Plan by all three agencies, the Department of Environmental Quality suspended all work on the project. At this time it is uncertain whether that work will be resumed.

#### E. STATE PROJECT PLANNING AND DESIGN

This activity was included in the process in order to allow for planning of water projects, including feasibility investigations and development of designs for construction. Very little work has occurred on this activity to date and none is planned in future fiscal years.

#### F. COORDINATION, ADMINISTRATION AND MANAGEMENT

Coordination, Administration and Management work is necessary for conduct of other activities of the State Water Planning and Review Process. Work in this category includes: limited staff involvement in environmental education activities, compilation of this annual report, routine planning staff administrative time, response to Department of Administrative Services information requests, and printing and mailing expenses.

Limited staff environmental education activities included continued distribution of "Stop Look and Learn About Our Natural World, A Nebraska Natural Resources Elementary Education Guide". After distribution of nearly 4000 three volume sets the supply is almost depleted. The volumes were first printed in 1988 and are beginning to become dated. No reprintings are planned and FY 97 may be the final year of distribution. In FY 96 Commission staff also participated in the Nebraska Youth Environmental Summit, the Planning of the National Envirothon held at Mahoney Park, a Water Jamboree in Webster County, and the Children's Groundwater Festival. The Commission also provided the Envirothon with \$1,000 in financial support. A Commission staff member also chaired the Committee that planned the 1995 Fall Symposium of the Groundwater Foundation. Almost three hundred people attended the Symposium entitled "Making the Connection From Aquifer to Tap". Continued staff involvement in environmental education activities is expected.

In addition a considerable amount of time was dedicated to responding to the prototype information technology questionnaire of the Department of Administrative Services. Supplying information about budget and program focus and required forecasts of computer hardware, software, communications systems, training, information applications, and assorted peripheral equipment kept four staff members busy the better part of two weeks. Further iterations and refinements are likely to be required as part of the budget process.

Printing and mailing expenses were minimal in FY 96. There continued to be some expense for mailing copies of "Stop, Look and Learn About Our Natural World". Staff administrative and time keeping duties were also included in this category. In FY 96 staff time and other expenditures for all Coordination, Administration and Management activities accounted for nearly 12.5% of the planning process budget.

### III. BUDGETARY TABLES

NOTE: Budgetary amounts per work item or study are estimates only. They are derived from assigning staff and staff support costs based upon approximate time spent on each work item. Contracts, purchases or other costs directly attributable to each work item or study are also part of the overall total for that item.

Table 1

SUMMARY OF FY 96 EXPENDITURES AND FYs 97-98-99 BUDGET (All Sources in Thousands)  
BY MAJOR STUDY OR WORK ITEM

	FY 96 Estimated Expenditures	FY 97	FY 98	FY 99	Total
General Base Development	\$244,860	\$350,000	\$402,000	\$457,500	\$1,454,360
Computer System Hardware/Software	74,858	64,495	77,500	79,000	295,853
Computer Support Staff	14,867	87,000	92,500	98,000	292,367
Computer System Training Processing/ Maintenance/Supplies	15,233	18,500	10,500	11,000	55,233
Streambed Degradation Studies (2 Studies)	73,694	82,370	28,000	40,000	224,064
General Project & Program Reviews	51,015	27,000	44,000	48,000	170,015
Resources Development Fund Reviews	53,195	37,000	32,000	33,000	155,195
Support to Other Divisions	32,558	---	---	---	32,558
Administration, Printing and Mailing	27,309	28,000	28,500	32,000	115,809
Water Use Data Study	123,193	50,000	20,000	15,000	208,193
Platte River Area Planning Studies	33,410	4,000	32,500	10,000	79,910
State Water Management Planning/ Nebraska Wetland Conservation Plan	7,600	3,000	4,000	4,000	18,600
Environmental Education	15,247	5,000	7,000	7,000	34,247
Soil & Water Conservation Planning	1,380	3,000	3,000	29,000	36,380
Republican River Basin Cooperative Studies	4,340	2,000	5,000	5,000	16,340
Platte River Alliance	---	7,000	5,000	5,000	17,000
Rural Water Supply Study	13,325	75,000	75,000	15,000	178,325
TOTAL	\$786,084	\$843,365	\$866,500	\$888,500	\$3,384,449

Table 2

FY 96 - EXPENDITURES PROJECTED IN LAST YEAR'S ANNUAL REPORT AND ACTUAL EXPENDITURES

Budget Program	Policy Issue Analysis		Problem Analysis and Area Planning		Project and Program Review		Basic Planning Activities		State Project Planning and Design		Coordination Administration and Management		Total	
	Budgeted	Expended	Budgeted	Expended	Budgeted	Expended	Budgeted	Expended	Budgeted	Expended	Budgeted	Expended	Budgeted	Expended
310	\$ ---	\$ 0	\$ 37,000	\$ 39,324	\$16,000	\$27,000	\$139,829	\$117,372	\$ ---	\$ 0	\$ 31,000	\$ 35,368	\$223,829	\$219,064
334	---	0	219,000	85,445	56,000	77,210	267,000	364,619	---	0	35,000	39,746	577,000	567,020
<b>TOTAL</b>	---	0	256,000	124,769	72,000	104,210	406,829	481,991	---	0	66,000	75,114	800,829	786,084

Table 3

State Water Planning & Review Process  
Percentage of Expenditure by Work Area

FY 96 Planned and Actual and FY 97 Budgeted

	FY 96 Planned%	FY 96 Expended%	FY 97% Budgeted
General Base Development	16.3	31.1	41.5
Computer System Hardware/Software/Licensing	10.3	9.5	7.6
Computer Support Staff	10.5	1.9	10.3
Computer System Training/Processing/Maintenance/Supplies	2.1	1.9	2.2
Nebraska Streambed Degradation Studies (2 Studies)	20.0	9.4	9.8
General Project and Program Reviews	5.6	6.5	3.2
Resources Development Fund Reviews	3.4	6.8	4.4
Support to Other Divisions	3.0	4.1	---
Administration, Printing and Mailing	3.6	3.5	3.3
Water Use Data Study	6.2	15.7	5.9
Platte River Area Planning Studies	2.5	4.3	0.5
State Water Management Planning/Nebraska Wetlands Conservation Plan	2.5	1.0	.4
Environmental Education	1.6	1.9	.6
Soil & Water Conservation Planning	2.9	.2	.4
Republican River Basin Cooperative Studies	.1	.6	.3
Rural Water Supply Study	9.4	1.7	8.9
Platte River Alliance	0.0	0.0	.8
TOTAL	100.0%	100.0%	100.0%
Actual Amount	\$800,829	\$786,084	\$833,875

Table 4

ESTIMATED EXPENDITURES TO DATE AND SCHEDULED THROUGH FY 2001 EXPENDITURES BY STUDY (\$1,000)  
NEBRASKA STATE WATER PLANNING AND REVIEW PROCESS  
ALL STATE AGENCIES FY 1978-2001\*

Study	Expenditures to Date			Total Expenditures Made and/or Scheduled		
	310 Budget Account	Other	Total	310 Budget Account	Other	Total
<b><u>POLICY ISSUE ANALYSIS</u></b>						
Instream Flow	133	133	266	133	133	266
Water Quality	4	17	21	4	17	21
Groundwater Reservoir Management	133	56	189	133	56	189
Selected Water Rights	119	100	219	119	100	219
Supplemental Water Supplies	96	45	141	96	45	141
Water Use Efficiency	107	55	162	107	55	162
Municipal Water Supplies	48	38	86	48	38	86
Water-Energy	44	100	144	44	100	144
Integrated Management of Surface Water & Groundwater	99	52	151	99	52	151
Summary and Review	15	12	27	15	12	27
Tentative New Studies	3	0	3	3	0	3
<b><u>PROBLEM ANALYSIS AND AREA PLANNING</u></b>						
Design of Activity	4	0	4	4	0	4
MRB Hydrology Study	6	42	48	6	42	48
South Central Area Groundwater Plng Study	11	472	483	11	472	483
Sandhills Area Study	669	1,458	2,127	669	1,458	2,127
High-Plains-Ogallala Aquifer Study	0	402	402	0	402	402
Platte River Area Planning Studies	170	471	641	177	580	757
SE Nebraska Streambank Erosion & Streambed Degradation Study (6 County)	21	215	236	26	265	291
23 County Streambank Erosion and Streambed Degradation Study	30	15	45	105	35	140
Republican Basin Cooperative Studies	1	103	104	1	125	126
Rural Domestic & Small Town Water Supply Studies	7	6	13	37	135	172
Natural Resources Enhancement Fund Study	5	0	5	5	0	5
Blue Basin Studies	14	426	440	14	426	440
Economic Benefits of Water Projects	50	4	54	50	4	54
O'Neill Unit	0	5	5	0	5	5
Prairie Bend Unit Supplemental Plng Report	1	34	35	1	34	35
Missouri River Studies	7	0	7	7	0	7
Loup/Sandhills Activity	0	7	7	0	12	12
Platte River Alliance	0	0	0	27	0	27
<b><u>BASE ACTIVITIES**</u></b>						
General Planning Info Base (Early) System Development	152	226	378	152	225	377
Computer System Acquisition/Software	94	49	143	94	49	143
Computer Supplies/Maintenance/ Training/Processing	695	209	904	1,110	215	1,325
Computer Support Staff	65	4	69	127	4	131
General Base Development	15	307	322	26	781	807
Upper Republican Study	374	1,181	1,555	625	3,066	3,691
Water Use Data Reports	3	100	103	3	100	103
State Water Mgmt Plng/Wetlands Plng	11	338	349	11	453	464
Soil and Water Conservation Planning	61	138	199	75	143	218
	383	531	914	418	619	1,037
<b><u>PROJECT AND PROGRAM REVIEW</u></b>						
	162	742	904	233	1,066	1,299
<b><u>COORDINATION, ADMINISTRATION &amp; MANAGEMENT</u></b>						
Environmental Education	49	0	49	88	0	88
Take Pride in America	41	5	46	41	5	46
Administration, Legal Section Work & Misc.	664	207	871	775	250	1,025
Water Transfer Study	40	204	244	40	204	244
Water Management Board	36	65	101	36	64	100
Support to Flood Plain Section	0	83	83	0	83	83
Support to Other NRC Sections/Divisions	0	42	42	0	42	42
<b><u>STATE PROJECT PLANNING AND DESIGN</u></b>						
	9	2	11	9	2	11
<b>TOTAL</b>	<b>4,651</b>	<b>8,701</b>	<b>13,352</b>	<b>5,804</b>	<b>11,974</b>	<b>17,778</b>

\*NOTE: In its early years the state water planning and review process budget included planning and review process work/contributions by other state agencies in addition to the Nebraska Natural Resources Commission. Therefore, the budget totals provided in this table are not just for the Natural Resources Commission.

\*\* All Base Activities prior to FY 84 are included under the heading of General Planning Information Base.

Table 5

CONTRACT EXPENDITURES FY 96  
BY CONTRACTING AGENCY

Program 310	Amount
Problem Analysis and Area Planning - Streambed Degradation Study	\$24,630
Basic Planning Activity - Computer Hardware	58,249
Basic Planning Activity - Computer Software/Licensing	16,095
Basic Planning Activity - Computer Training, Supplies, Maintenance and Processing	15,233
Basic Planning Activity - Soil and Water Conservation Strategy - Riparian Planting Research	200
Coordination, Administration and Management - Publication, Printing, and Mailing	6,895
TOTAL - 310 ACCOUNT	\$121,302

Table 6  
CONTRACTING BUDGET FY 97

Program 310	Amount
Problem Analysis and Area Planning - 23 County Streambank Erosion and Streambed Degradation Study	\$25,370
Problem Analysis and Area Planning - Platte River Alliance	7,000
Basic Planning Activity - Computer Hardware	48,375
Basic Planning Activity - Computer Software and Licensing	16,120
Basic Planning Activity - Computer Training, Supplies, Maintenance, and Processing	18,500
Coordination, Administration & Management - Printing and Mailing	9,500
<b>TOTAL</b>	<b>\$124,865</b>

Table 7  
CONTRACTING BUDGET FY 98

	Amount
Problem Analysis and Area Planning - 23 County Streambank Erosion and Streambed Degradation Study	\$25,000
Problem Analysis and Area Planning - Platte River Alliance	5,000
Basic Planning Activity - Computer Hardware	62,500
Basic Planning Activity - Computer Software and Licensing	15,000
Basic Planning Activity - Computer Training, Supplies, Maintenance and Processing	10,500
Coordination, Administration & Management - Printing and Mailing	9,500
<b>TOTAL</b>	<b>\$117,500</b>

Table 8  
CONTRACTING BUDGET FY 99

	Amount
Problem Analysis and Area Planning - 23 County Streambank Erosion and Streambed Degradation Study	\$ 25,000
Problem Analysis and Area Planning - Platte River Alliance	5,000
Basic Planning Activity - Computer Hardware	63,500
Basic Planning Activity - Computer Software and Licensing	15,500
Basic Planning Activity - Computer Training, Supplies, Maintenance, and Processing	11,000
Coordination, Administration & Management - Printing and Mailing	9,500
<b>TOTAL</b>	<b>\$119,500</b>

Table 9

PLANNING AND REVIEW PROCESS EXPENDITURES FY 96  
AND BUDGET FYS 1997-2001

	FY 1996				FY 1997				FY 1998				FY 1999				FY 2000				FY 2001			
	310 Staff & Support	310 Contract	334 Staff & Support	Total	310 Staff & Support	310 Contract	334 Staff & Support	Total	310 Staff & Support	310 Contract	334 Staff & Support	Total	310 Staff & Support	310 Contract	334 Staff & Support	Total	310 Staff & Support	310 Contract	334 Staff & Support	Total	310 Staff & Support	310 Contract	334 Staff & Support	Total
<b>Problem Analysis and Area Planning</b>	(14,694)	(24,630)	(85,445)	(124,769)	(20,000)	(32,000)	(118,000)	(170,370)	(15,500)	(30,000)	(100,000)	(145,500)	(6,500)	(30,000)	(38,500)	(75,000)	(—)	(5,000)	(40,000)	(45,000)	(—)	(5,000)	(40,000)	(45,000)
1. Platte River Area Planning Studies	—	—	33,410	33,410	2,000	—	2,000	4,000	2,500	—	30,000	32,500	2,500	—	7,500	10,000	—	—	35,000	35,000	—	—	35,000	35,000
2. SE Nebraska Streambed Degradation on Study	6,684	—	41,535	48,219	5,000	—	50,000	55,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3. 23 County Streambed Degradation Study	505	24,630	340	25,475	—	25,370	2,000	27,370	—	25,000	3,000	28,000	—	25,000	15,000	40,000	—	—	—	—	—	—	—	—
4. Platte River Alliance	—	—	—	—	—	7,000	—	7,000	—	5,000	5,000	5,000	—	5,000	—	5,000	—	5,000	—	5,000	—	5,000	—	5,000
5. Republican Basin Cooperative Studies	50	—	4,290	4,340	—	—	2,000	2,000	—	—	—	5,000	—	—	—	5,000	—	—	5,000	—	—	—	5,000	5,000
6. Rural Domestic and Small Town Water Supply Study	7,455	—	5,870	13,325	13,000	—	62,000	75,000	13,000	—	—	75,000	4,000	—	11,000	15,000	—	—	—	—	—	—	—	—
<b>Basic Planning Activity</b>	(27,595)	(89,777)	(364,619)	(481,991)	(56,000)	(82,995)	(437,000)	(575,995)	(59,000)	(88,000)	(462,500)	(609,500)	(65,000)	(90,000)	(538,500)	(693,500)	(64,000)	(107,500)	(553,500)	(725,000)	(67,000)	(109,500)	(574,500)	(750,500)
1. Planning Information Base	(19,495)	(89,577)	(363,939)	(473,011)	(53,000)	(82,995)	(434,000)	(569,995)	(54,000)	(88,000)	(460,500)	(602,500)	(56,000)	(90,000)	(514,500)	(660,500)	(53,000)	(107,500)	(521,500)	(682,000)	(46,000)	(109,500)	(542,000)	(697,500)
A. Computer System Operations	(2,057)	(89,577)	(13,324)	(104,958)	(1,000)	(82,995)	(86,000)	(169,995)	(1,000)	(88,000)	(91,500)	(180,500)	(3,000)	(90,000)	(95,000)	(188,000)	(3,000)	(107,500)	(99,000)	(209,500)	(3,000)	(109,500)	(103,000)	(215,500)
a) Computer Hardware	—	58,249	346	58,595	—	48,375	—	48,375	—	62,500	—	62,500	—	63,500	—	63,500	—	79,000	—	79,000	—	81,000	—	81,000
b) Computer Software - Licensing	—	16,095	168	16,263	—	16,120	—	16,120	—	15,000	—	15,000	—	15,500	—	15,500	—	17,000	—	17,000	—	17,000	—	17,000
c) Computer Training	—	—	—	—	—	3,000	—	3,000	—	3,000	—	3,000	—	2,000	—	2,000	—	3,000	—	3,000	—	3,000	—	3,000
d) Computer Processing	—	2,123	—	2,123	—	2,500	—	2,500	—	2,500	—	2,500	—	3,000	—	3,000	—	2,500	—	2,500	—	2,000	—	2,000
e) Supplemental Computer Supplies & Maint.	—	13,110	—	13,110	—	13,000	—	13,000	—	5,000	—	5,000	—	6,000	—	6,000	—	6,000	—	6,000	—	6,500	—	6,500
f) Computer Support Staff	2,057	—	12,810	14,867	1,000	—	86,000	87,000	1,000	—	91,500	92,500	3,000	—	95,000	98,000	3,000	—	99,000	102,000	3,000	—	103,000	106,000
B. Base Development	(17,438)	—	(350,615)	(368,053)	(52,000)	(—)	(348,000)	(400,000)	(53,000)	(—)	(369,000)	(422,000)	(53,000)	(—)	(419,500)	(472,500)	(50,000)	(—)	(422,500)	(472,500)	(43,000)	(—)	(439,000)	(482,000)
- General Base Development	15,860	—	229,000	244,860	52,000	—	298,000	350,000	53,000	—	349,000	402,000	53,000	—	404,500	457,500	50,000	—	407,500	457,500	43,000	—	424,000	467,000
- USGS Water Use Data	1,578	—	121,615	123,193	—	—	50,000	50,000	—	—	20,000	20,000	—	—	15,000	15,000	—	—	15,000	15,000	—	—	15,000	15,000
2. Soil and Water Conservation Planning	500	200	680	1,380	1,000	—	2,000	3,000	2,000	—	1,000	3,000	6,000	—	23,000	29,000	8,000	—	31,000	39,000	18,000	—	31,000	49,000
3. State Water Management Planning/ Wetlands Conservation Planning	7,600	—	—	7,600	2,000	—	1,000	3,000	3,000	—	1,000	4,000	3,000	—	1,000	4,000	3,000	—	1,000	4,000	3,000	—	1,000	4,000
<b>Project and Program Review</b>	(27,000)	—	(77,210)	(104,210)	(8,000)	(—)	(56,000)	(64,000)	(9,000)	(—)	(67,000)	(76,000)	(14,000)	(—)	(67,000)	(81,000)	(20,000)	(—)	(67,500)	(87,500)	(20,000)	(—)	(68,000)	(88,000)
1. Resources Development Fund Reviews	2,000	—	51,195	53,195	1,000	—	36,000	37,000	1,000	—	31,000	32,000	2,000	—	31,000	33,000	2,000	—	31,500	33,500	2,000	—	31,500	32,500
2. Other Project and Program Reviews	25,000	—	26,015	51,015	7,000	—	20,000	27,000	8,000	—	36,000	44,000	12,000	—	36,000	48,000	18,000	—	36,000	54,000	18,000	—	36,500	54,500
<b>Policy Issue Analysis</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>State Project Planning</b>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Coordination, Administration and Management</b>	(28,473)	(6,895)	(39,746)	(75,114)	(17,000)	(9,500)	(6,500)	(33,000)	(19,500)	(9,500)	(6,500)	(35,500)	(19,500)	(9,500)	(10,000)	(39,000)	(23,000)	(9,500)	(10,000)	(42,500)	(23,000)	(10,000)	(10,000)	(43,000)
1. Process Administration	12,998	—	5,248	18,246	12,000	—	5,000	17,000	12,500	—	5,000	17,500	12,500	—	8,500	21,000	13,000	—	8,500	21,500	13,000	—	8,500	21,500
2. Publication/General Printing & Mailing	—	6,895	2,168	9,063	—	9,500	1,500	11,000	—	9,500	1,500	11,000	—	9,500	1,500	11,000	—	9,500	1,500	11,000	—	10,000	1,500	11,500
3. Environmental Education	15,247	—	—	15,247	5,000	—	—	5,000	7,000	—	—	7,000	7,000	—	—	7,000	10,000	—	—	10,000	10,000	—	—	10,000
4. Support to Other NRC Divisions	228	—	32,330	32,558	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Total</b>	97,762	121,302	567,020	786,084	101,000	124,865	617,500	843,365	103,000	127,500	636,000	866,500	105,000	129,500	654,000	888,500	107,000	122,000	673,000	902,000	110,000	124,500	692,000	926,500