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 fifteenth Annual Report and Plan of Work summarizes work completed as part of that process in FY 95 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 state water planning efforts reflected in this report have moved away from the more traditional problem analysis and area planning studies and policy issue studies and into 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 are becoming 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 trend.

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 mentioned in this report are in fact co-products of the Commission's Data Bank and the remainder of its Planning Division. This is a report of planning activities and includes no budgetary material or general information for Data Bank activities. However, the Data Bank does have a major role in almost all information management activities mentioned.

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

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. They were 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. Eventually, this initiative expanded to include 23 counties in eastern Nebraska.

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 past 80 years, so the Director agreed to undertake a two and a half year study of the six-county area. Most of the results of that study should be applicable to rest of eastern Nebraska.

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 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 Section 22 study was scheduled for completion in August 1995. The Commission's study will extend one and a half years beyond the completion of the Corps' report to take advantage of, and expand on, their work.

Commission staff assisted the Corps and U.S. Geological Survey while working on the state study. Staff members participated in inspections of streams to help categorize stages of degradation. Commission staff also collected historical cross section data from bridge plans and surveys made in the 1960's and 1970's for the Natural Resources Conservation Service. Staff also accessed and processed computer files on bridge data from the Department of Roads and data on streams and roads from the Census Bureau TIGER files and gave GIS coverages to the Corps. The Commission took the lead in organizing Corps meetings with county boards and two work sessions with county boards and other public officials to secure their input on project needs. For the Commission study, the survey and bridge data were used to plot historical profiles of selected streams in the six counties. Road and bridge data were also prepared for analysis of counties' flood, erosion, and transportation needs. Natural resources districts' boards and staffs, and county highway superintendents were consulted. They were asked to provide assistance in identifying problems, and to provide data on their plans for disaster recovery.

In future fiscal years Commission staff will use information, manuals and project evaluations developed by the Corps to do more detailed work and identify potential projects. The final report is due by December 1996. It will contain background information and alternative programs and policies as well as potential projects.

In addition, the Nebraska Department of Roads is contracting with the USGS for a detailed study of streambed degradation in 23 Nebraska Counties. The Department of Roads can provide 50/50 matching money beginning in FY 97. However in order to start earlier the Natural Resources Commission will provide $20,000 in contracting money in FY 96 in order to begin the 23 county study. That effort will be a major multi-year multi-agency effort that could prove to require as much as $400,000 worth of total combined effort from the involved agencies.

In FY 95 staff time expended in the two streambank erosion and streambed degradation studies in which the Commission is involved accounted for about ¼ of the planning process budget.

2) 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 95 almost 2½% of the Planning Process budget was included for Natural Resources Commission staff time contribution to these studies. Studies currently included in this classification and the lead agencies for those studies include:

a) Studies for Federal Energy Regulatory Commission Relicensing of Platte River Facilities

b) Platte River Instream Flow Studies - Nebraska Game and Parks Commission.

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

d) Platte River Management Joint Study - U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation

e) Lower Platte River and Tributaries Reconnaissance Study - U.S. Army Corps of Engineers

f) South Platte and Central Platte Water Quality Assessments - U.S. Geological Survey

g) Middle Platte Eco-Risk Assessment - U.S. Environmental Protection Agency

a) Studies for Federal Energy Regulatory Commission Relicensing of Platte River Facilities

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. There has also been 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 past Commission planning staff contributed to the FERC relicensing process by reviewing the flow model used in the negotiation process and providing engineering, hydrologic and technical support for both the process. That work continued in FY 95, but only at a minimal level. The Commission legal staff is expected to continue to play a major role in the process.

b) Platte River Instream Flow Studies

The Nebraska Game and Parks Commission has submitted an application for instream flow rights on the Platte River to the Nebraska Department of Water Resources. Commission planning staff contributions to the application effort were completed in FY 94. However in FY 95 the Commission legal staff did help facilitate negotiations between the Game and Parks Commission and objectors to the application.

c) 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 staff member serves as an official member of the hydrology task force for the Bureau of Reclamation's study of existing projects on the Platte River, and two others have assisted in the study. During FY 95, staff members reviewed two drafts of the North Platte River Water Utilization Model and its documentation. One member analyzed the documentation and provided comments, adapted the computer model to the Commission's computer system, and checked the results to verify its operation. He also participated in one meeting in Wyoming to discuss the numerous comments agencies had provided on the model. The Bureau has now distributed its final draft of the North Platte River Water Utilization Model, and will soon start on the South Platte River.

d) 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 Interior, the states and possibly others on water use in the Platte River Basin. Thus there was no Commission activity on this study in FY 95 and it is unknown when work on the study will resume.

e) 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 evaluate alternative solutions to the problem. The study received a $500,000 federal spending authorization and was partially funded in federal FY 95. The Corps of Engineers began the study in anticipation that funding would also become available in the next fiscal year. In FY 95 half of the aerial photos were completed and the Corps began hydrologic studies. The Natural Resources Commission contributed surveying, map data collection and data processing for the flood studies. The Commission and natural resources districts also participated in gathering data, preparing a decision matrix and selecting sites for detailed evaluation. General planning for the entire study area and detailed evaluation of three or four selected sites is to be completed by the Corps in the coming fiscal year.

f) South Platte and Central Platte Water Quality Assessments

The South Platte and Central Platte National Water Quality Assessments are U.S. Geological Survey led efforts to describe the status and trends of the quality of surface water and ground water

resources in the regions and to provide a sound, scientific understanding of the primary natural and human factors affecting the quality of these resources. Although the Commission has liaison committee membership on the assessment, participation in FY 95 involved only minimal review.

g) 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 July 1994 the Commission staff participated in regular teleconference meetings to discuss the general description of the middle Platte Basin as well as the potential for including any social or economic aspects in the assessment. Currently the project is slated to center on ecological aspects only. The future Commission role will be limited to reviews.

3) Lower Loup Area Groundwater Resource Assessment

Natural Resources Commission staff have been cooperating on the Natural Resources Conservation Service's "Lower Loup Area 28 Groundwater Resource Assessment - A Cooperative River Basin Study". The 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. The Commission, the Lower Loup Natural Resources District and the Nebraska Department of Environmental Quality are all formal cooperators on the study. In FY 95 Commission staff developed base maps for the study and summarized and tabulated survey data on agricultural practices from operator questionnaires. Data was entered on computer and the ARC-View system was used to provide geographic information system coverage. This should help in targeting water quality assistance. The study is to be completed by March of 1996.

4) U.S. Bureau of Reclamation Assessment of Nebraska's Rural Domestic and Small Communities 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 proposed three year study intended to provide an analysis of the extent of possible water supply problems within Nebraska due to groundwater contamination with nitrate and pesticides. A final decision on whether to initiate the study has not yet been made. However, if it is initiated the Natural Resources Commission will provide substantial in-kind contribution. Participation from other state agencies will also be sought.

5) Contribution to Report on "Planning for Use and Distribution of Natural Resources Enhancement Fund"

The Natural Resources Commission made a financial contribution to a report entitled "Planning for Use and Distribution of the Natural Resources Enhancement Fund." The report was compiled by HDR Engineering under direction of a committee including representation of NRD managers, the Commission and the Nebraska Association of Resources Districts. It presents information and recommendations on suggested use of fertilizer fee revenues generated by LB 961

which established the Natural Resources Enhancement Fund. The draft report was issued in December 1994. The Fund will begin to receive fertilizer fee revenues in January 1997.

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. In past fiscal years, the Commission has provided some planning assistance to the Corps and Bureau of Reclamation, and secured the services of local people for the Governor's Citizens Advisory Committee. The Corps has temporarily suspended work on their study while the Bureau of Reclamation revises some of the information it is to provide, but the advisory committee is being retained and informed of its status so they will be able to help with completion of the study.

The Bureau of Reclamation decided to revise the hydrology section of the study they provided to 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. The Commission has participated in several inter-agency and public meetings to contribute to the RMA and entered into a Memorandum of Agreement with the Bureau to participate in the assessment process.

In previous fiscal years the Harlan County Lake Study was included as part of the Coordination, Administration and Management activity. Harlan County Lake activity is now included in this Republican River Basin Cooperative Studies category.

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 95 time devoted to this budget category accounted for about 11½% 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 Natural Resource District 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 Steering Committee and Subcommittees
7) Forestry Stewardship Committees/Forestry Conference Planning
8) Harlan County Lake Study Advisory Group
9) Review of Corps of Engineers Missouri River Master Manual
10) FIFRA Advisory Responsibilities
11) Niobrara Scenic River Advisory Commission/State Protected Rivers Contact
12) Nebraska Water Council
13) Nebraska Water Conference and Water Tour Planning Committees

14) Groundwater Symposium Conference Planning
15) Review of 404 Permit Applications to U.S. Army Corps of Engineers

More detail on these activities is provided below. Except where noted activity in these categories occurred in FY 95 and is expected to continue in some form in FYs 96 and 97. However, in most cases the programs or projects being reviewed will change.

1) Nebraska Resources Development Fund Reviews

In FY 95 planning staff support of Nebraska Resources Development Fund activities included: 1) Review of the Howells Levee Flood Protection Project application and feasibility report, 2) Review of the Lower Wood River/Upper Warm Slough Project application and feasibility report, 3) Review of the project proposal for the Gering Canal Project, 4) Participation on an ad hoc committee on cost increases in Development Fund projects and additional monies needed as a result, and 5) Review of the current economic feasibility status of selected projects. Staff activity in FY 96 and 97 is expected to remain commensurate with levels in FY 95.

2) Review of Natural Resource District Groundwater Management Plans

In FY 95 the Natural Resources Commission was one of six state agencies reviewing the LB 51 (1991) required water quality amendments to the Natural Resources District groundwater management plans. In most cases the NRDs revised their entire plans, so more than just the water quality section of the plans was reviewed. In the Commission that effort was led through the planning staff.

The reviews were a continuation of an effort carried on throughout FY 94. Most of the FY 95 reviews were of resubmittals of plans that the Department of Water Resources had previously disapproved. The process was often a frustrating one for both the involved agencies and the NRDs. Differences in interpretation of statutory requirements, the number of commenting agencies, and the need to keep common standards for disparate plans continued to be a challenge in the second year of reviews. Including revisions, some plans required several separate reviews. By the end of FY 95 a total of eleven NRDs had received approval of their plans. The statutory deadline for completing water quality amendments to the plans is January 1, 1996. Therefore this activity should be completed during FY 96.

3) Non-Point Source Pollution Grants Review Committees

In Fy 94 Commission staff members continued to serve on the Department of Environmental Quality's Section 319 Non-Point Source Pollution Grants Review Committees. Meetings and activities of those Committees were limited. One staff member serves on the Non-Point Source Information and Education Committee which is responsible for a information-education mini-grant program. Another staff member serves on the non-point source governmental and policy committees. Those committees make recommendations for the overall Non-Point Source Pollution Grant Program. Participation on non-point source committees is expected to continue in future fiscal years.

4) Waste Reduction and Recycling Grants Review Board

One 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. The Board ranked applications twice in FY 95. In October 1994 the Board reviewed sixty-eight applications and in March 1995 the Board reviewed sixty-three grant applications. Applications are ranked for three separate funds: the Waste Reduction and Recycling Incentive Fund, the Integrated Solid Waste Management Fund and the Scrap Tire Reduction and Recycling Incentive Fund. Since 1992 the Funds have made over 100 grants totaling over $8.5 million. Activity is expected to continue in future years at a somewhat reduced level. Scrap tire duties will be transferred to a different review body. In future years the Waste Reduction and Recycling Grants Review Board will meet on an annual instead of semi-annual basis.

5) Environmental Trust Advisory Committees

The Environmental Trust Board, of which the Director of Natural Resources is a member, has formed technical advisory committees to help review grant applications. Several Commission staff are members of those committees, and others assist these members in project reviews. In FY 95, the Trust went through most of two grant cycles, because it was formed only in the preceding year. It received hundreds of applications in the two grant periods, and Commission staff participated in the review of the economics, technical capability, and environmental acceptability of many of them. This activity is likely to continue in future fiscal years, but at a reduced level.

6) Geographic Information System Steering Committee and Subcommittees

The Geographic Information System Steering Committee adopted a number of priority initiatives for GIS development in the State of Nebraska. The development of digital orthophoto quarter-quads (DOQQs) and Soil Survey Geographic Data Base (SSURGO) standard vectorized soils databases along with a hydrologic unit database were reviewed in the top areas of interest. The NRC has embarked on the development of DOQQs to 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.

7) Forestry Stewardship Committee/Forestry Conference Planning

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 Natural Resources Commission and the Nebraska Forest Service continue as co-hosts for the Governor's Forestry Conference. The 1995 event is tentatively scheduled for October, 1995 in Lincoln and will address both urban and rural forestry.

8) Harlan County Lake Study Advisory Committees

In 1991 the U.S. Army Corps of Engineers began an interim study of operational alternatives for Harlan County Lake in the event of continuing drought in 1992. This led to the development of a long-term Study of Future Operations. The states of Kansas and Nebraska were asked to provide advice on both studies. The Natural Resources Commission was designated the lead state agency in the long term study, and asked to help provide the state response for the 1992 and 1993 operating plans. The Citizens Advisory Committee formed for the long-term study was convened several times to provide assistance in formulating the Governor's response to proposed interim operating plans. The floods of 1993 made further action on interim plans unnecessary, and the Corps suspended work on the long-term study in FY 1994. Some further Commission work in this region is described as part of the Republican River Basin Cooperative studies on page 6.

9) Review of Corps of Engineers Missouri River Master Manual

The draft Environmental Impact Statement for the Missouri River Master Manual was released in July of 1994. That completed Commission planning contributions to this effort.

10) 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. By statute the Director of Natural Resources serves on a Rules and Regulations Committee for the Nebraska Pesticide Act. The Natural Resources Commission also participates on an advisory committee on development of a state management plan for pesticides. The Department of Agriculture did prepare a draft state management plan during fiscal year 1995 and it was reviewed by the advisory committee.

11) Niobrara Scenic River Advisory Commission/State Protected Rivers Contact

The Director of Natural Resources represents the Governor of Nebraska on the Niobrara Scenic River Advisory Commission. The Commission has met four to five times per year since it was appointed in August of 1992. A draft Niobrara Scenic River Management Plan has been developed and has been reviewed. A recommended alternative should soon be forwarded to the Park Service. Natural Resource Commission staff participation on this activity has not involved planning staff. However planning staff have generally served as state contact for river protection organizations such as the National Association of State and Local River Conservation Programs.

12) Nebraska Water Council

The Nebraska Water Council was created by Governor Nelson in 1993 and is charged with examining and making recommendations on conjunctive use issues in Nebraska. A member of the Commission staff serves on that Council, although that staff member is not a part of the Commission's planning staff. Most work of that Council was completed with introduction of LB 108 in the 1995 session of the Unicameral. However, that Bill is being carried over between sessions of the Unicameral and the Council will have some role in the future consideration and review of the bill.

13) Nebraska Water Conference and Water Tour Planning Committees

Commission planning staff played a significant role in the 1995 Annual Water Conference. NRC staff organized an electronic information fair at the conference and also moderated a session in the conference. The Director of Natural Resources also serves as chair of the planning committee for the summer Water Resources Tour.

14) Groundwater Symposium Planning

A Commission staff member has chaired the committee which helps develop the Fall Symposium of the Groundwater Foundation. In October 1994 that symposium dealt with drinking water and was attended by about 300 people. Commission staff participation, partially on a volunteer basis, is expected to continue in future fiscal years.

15) Review of 404 Permit Applications 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 404 permit for their project. The NRC is one of the state agencies charged with reviewing those applications and providing advice to the Corps. Those activities continued in FY 95.

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 become the major focus of much of the Natural Resources Commission's planning effort. This work is now closely coordinated with 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 become the primary focus of Natural Resources Commission planning efforts in the last several years. In FY 95 staff time and other expenditures on the Planning Information Base accounted for almost 45% of the planning process budget. 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 various 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. To meet the challenge of natural resources management there is an acute need for 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 already 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, and hydrologic, 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. The ARC/INFO and GRASS software packages are the leading GIS applications softwares used by state and federal agencies for information exchange, modeling and decision making. The system architecture developed by the NRC will readily fit with federal counterparts in 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 applications, interagency coordination and inter-agency data acquisition. These efforts will continue and support the priorities and directions of the GIS Steering Committee. Additional initiatives will include global positioning satellite (GPS) locational information and operations to develop better flood plain information and statewide Digital Ortho-Quarter Quads (DOQQs).

Global positioning satellite (GPS) technology, a high-tech means of determining position on the ground using telemetry from multiple space satellites in various orbital paths, will be actively used. The degree of positional control is a function of length of time at a given site in relation to the satellites and fixed or mobile base stations. In this manner, sub-meter accuracy can be achieved to survey standards of "A" level control. Individual receivers capable of receiving signals from eight or nine satellites simultaneously without base station references can achieve ten meter accuracy for such applications as natural resources management, grasshopper control, wetland delineation, wellhead locations and forest inventory.

Using presently available technology a GPS network in Nebraska would best consist of fixed base stations across the state at fifty kilometer intervals so that surveyors could achieve "A" order control for assessment and plotting activities. Such a system would also benefit floodplain managers, environmental protection programs, urban planners, wildlife managers, and infrastructure development, operations and maintenance.

The data collected from such a system could then be used to make the county multi-use cadastre more accurate, provide enhanced accuracy to all GIS activities, reduce time for resurvey and improve natural resources management in general. Such data would also be a major resource for Internet wide area network users.

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 our world wide web server on 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.

b) Work Completed and Planned

General Base Development

Refinements to the hydrologic unit data base will allow hydrologic data to be mapped and compared with the array of other data being gathered for the GIS. 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. Staff have now started revising the basic units to conform with the Department of Environmental Quality's expanded watershed delineations for water quality. A draft report on the hydrologic unit data base was being reviewed at the close of FY 95. Staff continue to work with the Bureau of Reclamation to gather data on location of their facilities and on diversions, deliveries and return flows.

In FY 95 NRC staff developed an electronic homepage that provides access to in depth information on NRC and its products through Internet and the World Wide Web. In conjunction with Data Bank staff substantial effort was expended on the website. The Comprehensive Planning Section provided information and programming for portions dealing with Floodplain, the Resources Development Fund, the Small Watershed Fund, the Soil and Water Conservation Fund and Comprehensive Planning.

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.

The NRC's staff are also in the process of digitizing recompiled soil survey data gathered by the USDA Natural Resources Conservation Service and placing it in a format that both meets Soil Survey Geographic Data Base (SSURGO) national standards and can be used as part of the GIS coverage and thus be mapped, compared, manipulated and utilized in conjunction with the array of other data being gathered for the GIS data bases. This involves digitizing soil section maps and continuing work on converting the raster data base to vector format. The vector format uses the actual lines first drawn when a soil survey is first made and thus is more accurate. Programs have been developed to help automate this process. The completed maps will be published and distributed to users in both hard copy and by electronic medium. The recompilation of soil surveys occurred throughout FY 95 and is expected to continue in future fiscal years.

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 recently announced its intention to

make LANDSAT TM data available for 1990, 1991 and 1992 on a 1:100,000 scale with statewide coverage. 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.

Work on digitizing floodplain delineation maps continued in FY 95 and will be an agency priority in future fiscal years. Some planning division staff time has been diverted to support this process. Orthophotos and global positioning satellite equipment will be used to help obtain accurate positions and elevations. The information will have a variety of applications, including use on individual disaster or flood event case studies. A SUN workstation will be shared by Data Bank and the Commission's Comprehensive Planning Section and used for cooperative production of digital elevation models and Digital Ortho-Quarter-Quads (DOQQs).

The NRC also provided financial support for the salary of Larry Zink as the coordinator of the GIS Steering Committee. Zink is part of the Information Technology Group activities under the aegis of Rod Armstrong and is under the Department of Administrative Services. The modest amount provided by NRC, although far less than the originally requested contribution was an expression of NRC's recognition of the need for administrative support of the GIS initiative.

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 which occurs every fifth year. The Commission assisted with the work on Nebraska, and in December 1994, published a report entitled "Estimated Water Use in Nebraska -1990" in cooperation with the USGS. The 58-page report contains text, maps and tables that provide detailed information about 1990 water use in the state. Since the completion of that report and the supporting documentation, Commission staff have been cooperating in the development of methods for using the Arc/Info GIS in future water use studies. The USGS and NRC will be cooperating on a future report on 1995 water use.

Computer System Operations/Support Staff

Commission Planning Division staff also provided support to a number of other agencies. Please note that the budgetary tables for computer staff support are primarily for only one planning staff member working on this activity. Data Bank staff also work heavily on this activity but their work is not part of the statutory charge for this report. Other planning staff members also contribute to this effort.

In an effort to bring about computer compatibility between the Commission and other natural resources agencies planning staff members in coordination with Data Bank staff members helped with computer related installations and technical support in a variety of state, local and federal agencies. As in previous years, assistance was even provided to a few agencies not directly dealing with natural resources. As a result, a variety of agencies are in a better position to utilize data and products from the Commission's geographic information system efforts. They are also in a better position to make efficient use of computer technology in their overall operations. Services provided by the Commission included promotion, installation and maintenance of Internet for other natural resources agencies. Commission staff worked on installation or maintenance

of geographic information system pilot projects they had installed at natural resources districts. Work with the 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 95 included those on the following list. That assistance varied from 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
- Governor's Office
- Lieutenant Governor's Office
- 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

(2) Soil and Water Conservation Strategy

The Nebraska Soil and Water Conservation Strategy is a method of guiding conservation efforts in Nebraska with reasonable standards and expectations. It involves a continuing process of monitoring the condition of natural resources and the progress made in conserving those natural resources and their quality. The strategy is a body of ideas, facts, agreements, and recommendations for guiding the course of future conservation activities.

Work on this activity in FY 95 was minimal. The UNL Department of Agricultural Meteorology completed a contract with the NRC to develop a precipitation-based index to assess climatic conditions in Nebraska. That information will be useful in future drought planning. Some monitoring of the strategy action plan occurred and a conference on water conservation activities of plains states was attended to gather ideas for a potential future water conservation oriented update of the strategy.

Plans are now to update the strategy following passage of the 1995 federal farm bill. The State Soil and Water Conservation Strategy probably needs to be coordinated with a regional strategy being developed by the Natural Resources Conservation Service. Commission staff have also helped with efforts to develop a strategy for modifying the Federal Conservation Reserve Program.

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. No decision has been made 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 is an effort by the Nebraska Department of Environmental Quality, the Nebraska Game and Parks Commission and the Nebraska Natural Resources Commission to produce and implement a plan to conserve and enhance wetlands in Nebraska. The effort is led by the Nebraska Department of Environmental Quality. In FY 95 NRC staff devoted considerable time to the process. Commission Planning staff completed an extensive bibliography of Nebraska related wetlands references. Other Commission staff work included completion of a document that presented wetlands related issues, problems and opportunities, and options as identified in public workshops and subsequent staff discussions. The Nebraska Wetlands Conservation Plan is scheduled for completion in 1996.

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 on this activity has occurred 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. It includes all work not assigned to any specific activity of the process. Work in this category includes: Natural Resources Commission environmental education activities, compilation of this annual report, some routine planning staff administrative time and printing and mailing expenses. In previous years this activity also included work of planning section computer support staff as well as supplemental computer supplies and maintenance. Beginning with this year's Annual Report those activities are included as part of Basic Planning Activities which is where most, though not all, computer support is provided. Work on the Corps of Engineers Harlan County Dam Study was also previously included in the activity. Beginning with this year work on that study will be included as part of the Republican River Basin Cooperative Studies as part of the Problem Analysis and Area Planning Activity.

Natural Resources Commission planning section activities in environmental education efforts are included as part of the Coordination, Administration and Management Activity. Distribution of "Stop, Look and Learn About Our Natural World, A Nebraska Natural Resources Elementary Education Guide" continued throughout the fiscal year. A total of about 3,800 three volume sets have been distributed since the first printing of the volumes in November 1988. The Commission still has about 200 three volume sets available, and this activity should continue through FY 96. Commission staff also participated in the Children's Groundwater Festival in Grand Island, Nebraska Youth Environmental Summit Planning, the Nebraska Envirothon and Nebraska Environment Education Association Activities. Commission participation in these activities is expected to continue in future years.

Some other Planning Division activities that are not directly related to planning activities are included as part of Coordination, Administration and Management for budgetary purposes. One of those items is work of a Planning Division staff member who has worked part-time in support of the NRC Operations Division's Flood Plain Management Section.

Printing and mailing expenses were minimal in FY 95. There were printing costs for the report "Estimated Water Use in Nebraska - 1990". There also continued to be some expense for mailing copies of "Stop, Look and Learn About Our Natural World". In FY 95 staff time and other expenditures for all Coordination, Administration and Management activities accounted for nearly 12½% of the planning process budget.

IV. 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 95 EXPENDITURES AND FYs 96-97-98 BUDGET (All Sources in Thousands)
BY MAJOR STUDY OR WORK ITEM

	FY 95 Estimated Expenditures	FY 96	FY 97	FY 98	Total
General Base Development	$130,415	$130,000	$163,500	$273,500	$ 697,415
Computer System Hardware/Software	116,928	82,829	81,212	102,500	383,469
Computer Support Staff	82,572	84,000	87,000	94,500	348,072
Computer System Training Processing/ Maintenance/Supplies	16,959	17,000	17,000	17,000	67,959
SE Nebraska Streambed Degradation Studies (2 Studies)	206,424	160,000	104,000	---	470,424
General Project & Program Reviews	69,681	45,000	42,000	41,000	197,681
Resources Development Fund Reviews	26,067	27,000	27,500	28,000	108,567
Support to Floodplain Section and Other Divisions	56,999	24,000	25,000	52,000	157,999
Administration, Printing and Mailing	27,996	29,000	29,000	29,500	115,496
Water Use Data Study	23,653	50,000	50,000	15,000	138,653
Platte River Area Planning Studies	19,773	20,000	20,000	20,000	79,773
State Water Management Planning/ Nebraska Wetland Conservation Plan	17,533	20,000	11,000	6,000	54,533
Environmental Education	17,700	13,000	13,000	14,000	57,700
Natural Resources Enhancement Fund Studies	5,375	---	---	---	5,375
Soil & Water Conservation Planning	4,802	23,000	44,000	49,000	120,802
Republican River Basin Cooperative Studies	4,370	1,000	5,000	---	10,370
Sandhills Area/Loups	633	---	---	---	633
Rural Water Supply Study	---	75,000	100,000	100,000	275,000
TOTAL	$827,880	$800,829	$819,212	$842,000	$3,289,921

Table 2

FY 95 - 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	$ ---	$ ---	$ ---	$ 24,135	$16,000	$20,046	$146,673	$148,511	$ ---	$ ---	$ 68,000	$ 37,981	$230,673	$230,673
334	---	---	61,000	212,440	57,000	75,702	308,000	244,351	---	---	144,000	64,714	570,000	597,207
TOTAL	---	---	61,000	236,575	73,000	95,748	454,673	392,862	---	---	212,000	102,695	800,673	827,880

Table 3

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

FY 95 Planned and Actual and FY 96 Budgeted

	FY 95 Planned%	FY 95 Expended%	FY 96%
General Base Development	35.1	15.8	16.3
Computer System Hardware/Software/Licensing	11.6	14.1	10.3
Computer Support Staff	11.6	10.0	10.5
Computer System Training/Processing/Maintenance/Supplies	3.6	2.0	2.1
Nebraska Streambed Degradation Studies (2 Studies)	---	25.0	20.0
General Project and Program Reviews	5.9	8.4	5.6
Resources Development Fund Reviews	3.1	3.1	3.4
Support to Floodplain Section and Other Divisions	5.0	6.9	3.0
Administration, Printing and Mailing	3.6	3.4	3.6
Water Use Data Study	3.1	2.9	6.2
Platte River Area Planning Studies	6.9	2.4	2.5
State Water Management Planning/Nebraska Wetlands Conservation Plan	3.2	2.1	2.5
Environmental Education	2.0	2.1	1.6
Natural Resources Enhancement Fund Studies	---	.6	---
Soil & Water Conservation Planning	3.4	.6	2.9
Republican River Basin Cooperative Studies	1.0	.5	.1
Sandhills Area/Loups	.7	.1	0.0
Rural Water Supply Study	---	---	9.4
TOTAL	100.0%	100.0%	100.0%
Actual Amount	$800,673	$830,207	$800,829

Table 4

ESTIMATED EXPENDITURES TO DATE AND SCHEDULED THROUGH FY 99 EXPENDITURES BY STUDY ($1,000)
NEBRASKA STATE WATER PLANNING AND REVIEW PROCESS
ALL STATE AGENCIES FY 78-99*

Study	Expenditures to Date			Total Expenditures Made and/or Scheduled		
	310 Budget Account	Other	Total	310 Budget Account	Other	Total
POLICY ISSUE ANALYSIS						
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
PROBLEM ANALYSIS AND AREA PLANNING						
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	438	608	170	568	738
SE Nebraska Streambank Erosion & Streambed Degradation Study (6 County)	15	173	188	40	343	383
23 County Streambank Erosion and Streambed Degradation Study	4	15	19	44	43	87
Republican Basin Cooperative Studies	1	99	100	1	105	106
Rural Domestic & Small Town Water Supply Studies	0	0	0	0	300	300
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
BASE ACTIVITIES**						
General Planning Information Base	152	226	378	152	225	377
System Development	94	49	143	94	49	143
Computer System Acquisition/Software	621	209	830	1,097	215	1,312
Computer Supplies/Maintenance/ Training/Processing	50	4	50	136	4	140
Computer Support Staff	13	294	307	28	748	776
General Base Development	358	952	1,310	528	2,102	2,609
Upper Republican Study	3	100	103	3	100	103
Water Use Data Reports	10	216	226	10	361	371
State Water Mgmt Plng/Wetlands Plng	54	138	192	98	143	241
Soil and Water Conservation Planning	383	530	913	487	640	1,127
PROJECT AND PROGRAM REVIEW	135	665	800	193	959	1,152
COORDINATION, ADMINISTRATION & MANAGEMENT						
Environmental Education	34	0	34	102	0	102
Take Pride in America	41	5	46	41	5	46
Administration, Legal Section Work & Misc.	644	200	844	736	255	991
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	240	240
Support to Other NRC Sections/Divisions	0	10	10	0	60	60
STATE PROJECT PLANNING AND DESIGN	9	2	11	9	2	11
TOTAL	4,435	8,135	12,570	5,588	11,198	16,786

*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 95
BY CONTRACTING AGENCY

Program 310	Amount
Problem Analysis and Area Planning - Natural Resources Enhancement Fund Study	$5,375
Basic Planning Activity - Computer Hardware	95,396
Basic Planning Activity - Computer Software	4,785
Basic Planning Activity - Computer Training, Supplies, Maintenance and Processing	12,951
Basic Planning Activity - Base Development NRC Monetary Contribution to Salary of Larry Zink, Information Technology Group, Department of Administrative Services	2,500
Basic Planning Activity - Soil and Water Conservation Strategy - Developing a Precipitation Based Index for Climatic Conditions in Nebraska	2,626
Coordination, Administration and Management - Publication, Printing, and Mailing	9,191
TOTAL - 310 ACCOUNT	$132,824

Table 6

CONTRACTING BUDGET FY 96

Program 310	Amount
Problem Analysis and Area Planning - Southeast Nebraska Streambank Erosion and Streambed Degradation Study	$20,000
Basic Planning Activity - Computer Hardware	67,829
Basic Planning Activity - Computer Software and Licensing	13,000
Basic Planning Activity - Computer Training, Supplies, Maintenance, and Processing	17,000
Coordination, Administration & Management - Printing and Mailing	7,000
TOTAL	$124,829

Table 7

CONTRACTING BUDGET FY 97

	Amount
Problem Analysis and Area Planning - Southeast Nebraska Streambank Erosion and Streambed Degradation Study	$20,000
Basic Planning Activity - Computer Hardware	66,212
Basic Planning Activity - Computer Software and Licensing	15,000
Basic Planning Activity - Computer Training, Supplies, Maintenance and Processing	17,000
Coordination, Administration & Management - Printing and Mailing	7,000
TOTAL	$125,212

Table 8

CONTRACTING BUDGET FY 98

	Amount
Basic Planning Activity - Computer Hardware	$ 87,500
Basic Planning Activity - Computer Software and Licensing	15,000
Basic Planning Activity - Computer Training, Supplies, Maintenance, and Processing	17,000
Coordination, Administration & Management - Printing and Mailing	7,500
TOTAL	$127,000

Table 9

PLANNING AND REVIEW PROCESS EXPENDITURES FY 95
AND BUDGET FYS 1996-2000

	FY 1995				FY 1996				FY 1997				FY 1998				FY 1999				FY 2000			
	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
Problem Analysis and Area Planning	(18,760)	(5,375)	(212,440)	(236,575)	(17,000)	(20,000)	(219,000)	(256,000)	(8,000)	(20,000)	(196,000)	(224,000)	(—)	(—)	(120,000)	(120,000)	(—)	(—)	(60,000)	(60,000)	(—)	—	(35,000)	(35,000)
1 Sandhills Area/Loups	—	—	633	633	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2 Platte River Area Planning Studies	—	—	19,773	19,773	—	—	20,000	20,000	—	—	20,000	20,000	—	—	20,000	20,000	—	—	35,000	35,000	—	—	35,000	35,000
3 SE Nebraska Streambed Degradation on Study	14,860	—	172,317	187,177	17,000	—	109,000	126,000	8,000	—	62,000	70,000	—	—	—	—	—	—	—	—	—	—	—	—
4 23 County Streambed Degradation Study	3,900	—	15,347	19,247	—	20,000	14,000	34,000	—	20,000	14,000	34,000	—	—	—	—	—	—	—	—	—	—	—	—
5 Natural Resources Enhancement Fund Study	—	5,375	—	5,375	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6 Republican Basin Cooperative Studies	—	—	4,370	4,370	—	—	1,000	1,000	—	—	5,000	5,000	—	—	—	—	—	—	—	—	—	—	—	—
7 Rural Domestic and Small Town Water Supply Study	—	—	—	—	—	—	75,000	75,000	—	—	100,000	100,000	—	—	100,000	100,000	—	—	25,000	25,000	—	—	—	—
Basic Planning Activity	(30,253)	(118,258)	(244,351)	(392,862)	(42,000)	(97,829)	(267,000)	(406,829)	(57,000)	(98,212)	(283,500)	(453,712)	(68,000)	(119,500)	(370,000)	(557,500)	(70,000)	(122,500)	(446,000)	(638,500)	(71,000)	(124,000)	(487,500)	(682,500)
1 Planning Information Base	(12,320)	(115,632)	(242,575)	(370,527)	(17,000)	(97,829)	(249,000)	(363,829)	(27,000)	(98,212)	(258,500)	(398,712)	(37,000)	(119,500)	(346,000)	(502,500)	(39,000)	(122,500)	(422,000)	(583,500)	(40,000)	(124,000)	(463,500)	(627,500)
A Computer System Operations	(620)	(115,632)	(100,207)	(216,459)	(1,000)	(97,829)	(85,000)	(183,829)	(1,000)	(98,212)	(86,000)	(185,212)	(3,000)	(119,500)	(91,500)	(214,000)	(3,000)	(122,500)	(95,000)	(220,500)	(3,000)	(124,000)	(99,000)	(226,000)
a) Computer Hardware	—	95,396	14,840	110,236	—	67,829	—	67,829	—	66,212	—	66,212	—	87,500	—	87,500	—	90,000	—	90,000	—	91,500	—	91,500
b) Computer Software - Licensing	—	4,785	1,907	6,692	—	13,000	2,000	15,000	—	15,000	—	15,000	—	15,000	—	15,000	—	15,000	—	15,000	—	15,000	—	15,000
c) Computer Training	—	8,200	0	8,200	—	8,500	—	8,500	—	8,500	—	8,500	—	8,500	—	8,500	—	8,500	—	8,500	—	8,500	—	8,500
d) Computer Processing	—	3,587	531	4,118	—	3,500	—	3,500	—	3,500	—	3,500	—	3,500	—	3,500	—	3,500	—	3,500	—	3,500	—	3,500
e) Supplemental Computer Supplies & Maint.	—	1,164	3,477	4,641	—	5,000	—	5,000	—	5,000	—	5,000	—	5,000	—	5,000	—	5,500	—	5,500	—	5,500	—	5,500
f) Computer Support Staff	620	2,500	79,452	82,572	1,000	—	83,000	84,000	1,000	—	86,000	87,000	3,000	—	91,500	94,500	3,000	—	95,000	98,000	3,000	—	99,000	102,000
B Base Development	(11,700)	(—)	(142,368)	(154,068)	(16,000)	(—)	(164,000)	(180,000)	(26,000)	(—)	(187,500)	(213,500)	(34,000)	—	(254,500)	(288,500)	(36,000)	—	(327,000)	(363,000)	(37,000)	—	(364,500)	(411,500)
- General Base Development	11,660	—	118,755	130,415	16,000	—	114,000	130,000	26,000	—	137,500	163,500	34,000	—	239,500	273,500	36,000	—	312,000	347,000	37,000	—	349,500	386,500
- USGS Water Use Data	40	—	23,613	23,653	—	—	50,000	50,000	—	—	50,000	50,000	—	—	15,000	15,000	—	—	15,000	15,000	—	—	15,000	15,000
2 Soil and Water Conservation Planning	400	2,626	1,776	4,802	6,000	—	17,000	23,000	20,000	—	24,000	44,000	26,000	—	23,000	49,000	26,000	—	23,000	49,000	26,000	—	23,000	49,000
3 State Water Management Planning/ Wetlands Conservation Planning	17,533	—	—	17,533	19,000	—	1,000	20,000	10,000	—	1,000	11,000	5,000	—	1,000	6,000	5,000	—	1,000	6,000	5,000	—	1,000	6,000
Project and Program Review	(20,046)	—	(75,702)	(95,748)	(16,000)	—	(56,000)	(72,000)	(12,000)	—	(57,500)	(69,500)	(10,000)	—	(59,000)	(69,000)	(10,000)	—	(60,000)	(70,000)	(10,500)	—	(61,500)	(72,000)
1 Resources Development Fund Reviews	546	—	25,521	26,067	2,000	—	25,000	27,000	2,000	—	25,500	27,500	2,000	—	26,000	28,000	2,000	—	26,000	28,000	2,500	—	26,500	29,000
2 Other Project and Program Reviews	19,500	—	50,181	69,681	14,000	—	31,000	45,000	10,000	—	32,000	42,000	18,000	—	33,000	41,000	8,000	—	34,000	42,000	8,000	—	35,000	43,000
Policy Issue Analysis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
State Project Planning	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Coordination, Administration and Management	(28,790)	(9,191)	(64,714)	(102,695)	(24,000)	(7,000)	(35,000)	(66,000)	(24,000)	(7,000)	(36,000)	(67,000)	(25,000)	(7,500)	(63,000)	(95,500)	(25,000)	(7,500)	(64,000)	(96,500)	(25,500)	(8,000)	(64,000)	(97,500)
1 Process Administration	10,890	—	6,266	17,156	11,000	—	8,000	19,000	11,000	—	8,000	19,000	11,000	—	8,000	19,000	11,000	—	8,000	19,000	11,000	—	8,000	19,000
2 Publication/General Printing & Mailing	—	9,191	1,649	10,840	—	7,000	3,000	10,000	—	7,000	3,000	10,000	—	7,500	3,000	10,500	—	7,500	3,000	10,500	—	8,000	3,000	11,000
3 Environmental Education	17,700	—	—	17,700	13,000	—	—	13,000	13,000	—	—	13,000	14,000	—	—	14,000	14,000	—	—	14,000	14,500	—	—	14,500
4 Support to Flood Plain Section	—	—	46,584	46,584	—	—	14,000	14,000	—	—	15,000	15,000	—	—	42,000	42,000	—	—	43,000	43,000	—	—	43,000	43,000
5 Support to Other NRC Divisions	200	—	10,215	10,415	—	—	10,000	10,000	—	—	10,000	10,000	—	—	10,000	10,000	—	—	10,000	10,000	—	—	10,000	10,000
Total	97,849	132,824	597,207	827,880	99,000	124,829	577,000	800,829	101,000	125,212	593,000	819,212	103,000	127,000	612,000	842,000	105,000	130,000	630,000	865,000	107,000	132,000	648,000	887,000