

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

September 15, 1999

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I. HIGHLIGHTS – ANNUAL REPORT AND PLAN OF WORK FOR THE NEBRASKA STATE WATER PLANNING AND REVIEW PROCESS – 1999

- In FY 1999 the Commission completed a three year effort to compile digital orthophoto quadrangles and digital elevation models statewide. Both the Comprehensive Planning Section staff and the Data Bank staff were involved in that joint effort. The completed electronic mapping products are being used immediately by Commission staff to help digitize soils maps and help map floodprone areas. They will also help serve as base maps for a wide variety of geographic information system (GIS) activity and other mapping.
- In FY 1999 the Commission continued its cooperative work on digital county soil surveys. When completed in 2003 to national standards these will allow vastly expanded usage of the soil surveys by a greater number of users. It will allow soil surveys to be electronically transferred, layered and used in conjunction with or as part of many other maps. The Comprehensive Planning Section's work on the soil surveys is part of a cooperative effort with the Commission's Data Bank, the Natural Resources Conservation Service and the University of Nebraska-Lincoln, Conservation and Survey Division.
- In FY 1999 the Commission Floodplain Management Division and the Comprehensive Planning Section conducted a joint effort to develop a process for automating the mapping of floodprone areas. About half of the state's floodprone areas remain unmapped and the process should result in more rapid completion of those areas while saving staff time and money. The completed maps should help local units of government in flood mitigation planning activities and serve as a basis for floodplain programs and regulation. Commission effort on this activity is expected to continue in future fiscal years.
- In FY 99 the Commission's Comprehensive Planning Section continued administration of Nebraska's Flood Mitigation Assistance (FMA) program. The program assists communities and counties with flood mitigation planning and projects. Efforts also began on drafting a state flood mitigation plan. Program funds were used to help the City of Superior fund and complete a flood mitigation plan. A number of communities and counties in the Lower Platte River and Tributaries Feasibility Study area indicated an interest in completing a plan. Flood mitigation planning activity is expected to continue in future fiscal years.
- The joint Bureau of Reclamation – Nebraska Natural Resources Commission report – *Nitrate and Nebraska's Small Community and Rural Domestic Water Supplies: An Assessment of Problems, Needs, and Alternatives* was completed and was being prepared for publication at the close of FY 1999. The Commission's Comprehensive Planning Section was scheduled to contribute half of the effort for that study.
- The Commission was responsible for compiling the report: *An Analysis of Natural Resources District: Program Effectiveness, Cost Effectiveness, Duplication of Responsibility and Other Options for Facilitating Property Tax Relief*. The report was the second report prepared in accordance with LB 1085 (1996). The Commission Comprehensive Planning Committee prepared most of the report material under direction of a special committee established by the Commission. The report was issued in September 1998.
- In FY 1999 the Commission continued to supply extensive mapping assistance, in-kind planning assistance and funding to the Lower Platte River and Tributaries Feasibility Study. The study is a major multi-agency effort initiated in 1998 to investigate flood damage reduction and water

resources problems and solutions in the Lower Platte River Basin. The Commission is providing office space and supervisory assistance for a position designed to develop thematic maps and a web page for the study. The Commission provides \$125,000 in annual pass-through funds for the study. In FY 1999 the Commission worked on integrating its floodplain planning activities into the study and a number of communities in the corridor have expressed an interest in the Commission's Flood Mitigation Assistance Program. The Commission's Floodplain Management Division completed cross section work westward almost to the Colfax County line and also provided detailed topographic mapping for the Fremont Lakes area. That work is scheduled to be completed to Columbus in the next year. The study is scheduled for completion in June of 2001.

- In FY 1999 the Commission's Comprehensive Planning Section also continued to provide office space and supervisory assistance for a geographic information system and data base position for the Platte River Cooperative Hydrology Study. That study is an effort to understand the hydrological and geological conditions of the Platte Basin in Nebraska upstream of Columbus. The Commission planning staff are also providing other assistance to the study, which is intended to continue through June of 2001. The study is intended to help Nebraska meet its obligations under the Platte River Cooperative Agreement and assisting area natural resources districts (NRDs) as well as other users.
- In FY 1999 the Commission databank and planning staffs continued to make a wide variety of information available on the world wide web. Extensive web page assistance was provided to other agencies and natural resources districts. Similar efforts are expected to continue in future fiscal years.

II. PLANNING AND REVIEW PROCESS ACTIVITIES

POLICY ISSUE ANALYSIS

PROBLEM ANALYSIS AND AREA PLANNING

- USGS Streambed Degradation Study
- Platte River Cooperative Agreement Studies
- Platte River Cooperative Hydrology Study
- The Lower Platte River and Tributaries Feasibility Study
- The Middle Platte Eco-Risk Assessment
- Nebraska vs. Wyoming Hydrologic Assistance
- Platte River Corridor Alliance Activities
- Republican River Basin Cooperative Activities
- Floodplain Planning Activity
- Nitrate and Nebraska's Small Community and Rural Domestic Water Supplies Study

PROJECT AND PROGRAM REVIEW ACTIVITY

- Nebraska Resources Development Fund Reviews
- LB 1085 Reports on Natural Resource District Operation and Organization
- Waste Reduction and Recycling Grants Review Board
- Environmental Trust Advisory Committees
- Geographic Information System Steering Committee and Subcommittees
- Western Governor's Geographic Information System Council
- Forestry Stewardship Committee
- State Pesticide Management Plan Advisory Committee
- Niobrara Scenic River Advisory Commission
- Review of 404 Permits to U.S. Army Corps of Engineers
- Climate Assessment and Response Committee
- Other Reviews

BASIC PLANNING ACTIVITY

- Digital Elevation Modeling / Digital Orthophoto Quads
- Soil Survey Digitization to SSURGO National Standards
- Tagged Vector Coverage
- Tagged Vector Cleanup
- Flood Prone Area Mapping
- Digitizing of Floodplain Delineation Maps
- Watershed Boundary Delineation
- Groundwater Level Website
- Section Corners, Polygons, Township Corners
- Web Page Revision / Maintenance
- Support of Other Government Agency Computer/Web Operations
- Map Production / Study Support / In-Agency Support
- Water Use Data Study
- Soil and Water Conservation Strategy

COORDINATION, ADMINISTRATION AND MANAGEMENT

III. INTRODUCTION

The Nebraska State Water Planning and Review Process was initiated in 1978 to redirect and accelerate Nebraska's water planning efforts. This Annual Report and Plan of Work summarizes work completed as part of that process in FY 99 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 and Review Process has been on natural resources information management. Work of the Natural Resources Commission's (NRC) Comprehensive 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.

In FY 99 there was a staff-wide review of the Comprehensive Planning Section's planning process activity and direction. The review took the form of formal staff discussion sessions on potential future planning activity. The major Commission planning emphasis in recent years has been on development of geographic information system base layers and expertise as well as providing assistance to planning efforts needing those capabilities. Commission led planning efforts have received a lower priority during that development. Potential incorporation of those capabilities into Commission led planning studies and the future emphasis of that planning were being discussed as the fiscal year drew to a close.

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 the Comprehensive Planning Section. 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. In the past year the planning section has also undertaken extensive cooperative activities with the Commission's Floodplain Management Division. That activity includes administration of the Flood Mitigation Assistance Program, work on a state flood mitigation plan and assistance to local community flood mitigation planning efforts.

IV. 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 most cases this involves Commission participation in cooperative studies.

1) USGS Streambed Degradation Studies

The Natural Resources Commission is one of the cooperators in a 23-county \$1.2 million dollar study titled "The Effects of Channel Instabilities on Bridge Structures and Floodplain Resources in Eastern Nebraska." The study is being conducted by the U.S. Geological Survey and is to evaluate and quantify past, present, and future installations in the 23 county loess area of eastern Nebraska. The Natural Resources Commission committed \$25,000 per year to the study over a four-year period. FY 99 was the final year of that funding. Agreements to initiate the study were effective in October 1995 and its scheduled completion date is September 2000. Other cooperating agencies include: the Nebraska Department of Roads, the Lower Platte South Natural Resources District, the Papio-Missouri River Natural Resources District, the National Sedimentation Laboratory, and the U.S. Army Corps of Engineers. The USGS is also conducting a smaller scale study of degradation trends for western Nebraska counties not covered in the other study.

Study objectives include:

1. Evaluate selected bridge sites for potential scour-critical conditions and rank sites using a numerical index (23-county area);
2. Identify and map the existing stages of channel evolution and related future channel instabilities (17-county area);
3. Test for gradation trends (17-county area and Missouri River); and develop relations for predicting the size, shape, and dominant adjustment processes in channels over the next 50-100 years (23-county area);
4. Evaluate differences in the frequency/duration of excess erosive power on stable, adjusting, and restabilized channels (23-county area);
5. Evaluate the ability of alternative types and placements of mitigation measures to enhance channel stability (Little Salt and Papillion Creek basins); and
6. Evaluate the effects of urbanization on channel stability (Papillion Creek basin).

2) Platte River Area Planning Studies

A variety of studies, generally intended to improve understanding of the Platte River System, have been initiated by a number of agencies. Commission staff have participated in many of those studies. Work under a Platte River Cooperative Agreement and work on the Lower Platte Feasibility Study were both initiated in FY 98. They are expected to take increasing amounts of planning staff time in the next few fiscal years. Commission Planning staff participated in the following Platte River oriented efforts over the last year:

- a) Platte River Cooperative Agreement Studies
- b) The Platte River Cooperative Hydrology Study
- c) The Lower Platte River and Tributaries Feasibility Study
- d) The Middle Platte Eco-Risk Assessment
- e) Nebraska vs. Wyoming Hydrologic Assistance

f) Platte River Corridor Alliance Activities

a) **Platte River Cooperative Agreement Studies**

On July 1, 1997 the governors of Nebraska, Colorado and Wyoming and the U.S. Secretary of Interior signed a cooperative agreement outlining a proposed basinwide recovery program for endangered species in the Central Platte Basin. The Nebraska Director of Natural Resources serves as Nebraska state representative on the governing body for the Agreement. The program proposes to reduce shortages to target flows for endangered species at Grand Island by: (1) operating Kingsley Dam and related facilities in Nebraska to store a portion of the inflows to Lake McConaughy as well as environmental water made available from upstream projects in an environmental account that would be managed by the USFWS, (2) modify Pathfinder Reservoir in Wyoming to store water in another environmental account to be similarly managed, and (3) construct and operate the Tamarack Project in Colorado. However, these changes will only supply a portion of the needed water. The remainder would need to be obtained through water conservation and water supply projects. The primary Commission work on the cooperative agreement has been handled through the Director of Natural Resources and the Commission's Legal Division. However, planning staff occasionally worked with committees trying to determine the nature and feasibility of potential water conservation and water supply options.

In FY 1999 Comprehensive Planning Staff effort included work for the Cooperative Agreement Subcommittees in water and land.

An additional responsibility under the agreement is for each state to mitigate, offset or prevent any new depletions to the rivers target flows as part of the proposed program. This will require development of a mitigation plan.

In future fiscal years Commission staff are expected to contribute to development of the state mitigation plan, contribute to the water conservation plan, assist in land use delineation, help with land use and mapping, and perhaps help with preparation and development of an Environmental Impact Statement being prepared by federal agencies in a separate process. Land use analysis and planning for mitigation of future water uses could conceivably become a major activity for Commission staff, depending upon future direction from the agreement governing body and Nebraska state officials. It remains to be seen what portion of that Commission activity will be carried out by the planning staff. In early FY 2000 the Commission initiated the process of hiring a public information specialist position to assist with the process. That position will be headquartered in Kearney, Nebraska and will provide liaison with interested parties as well as public information dissemination and communication. It will be supervised through the Legal Division.

The Commission is also serving as the agency through which the state's financial obligations for the term of the Cooperative Agreement are met. Those cash obligations totaling \$700,000 over a three-year period ending with FY 2000 have all been appropriated as part of the Commission's operating budget and are now being expended to meet Nebraska's share of the Cooperative Agreement activities.

b) The Platte River Cooperative Hydrology Study

The Platte River Cooperative Hydrology study is a three-year cooperative effort to develop an understanding of the hydrological and geological conditions in the Platte Basin in Nebraska upstream of Columbus, Nebraska. A group of Nebraska interests have joined together to develop necessary data, analyses, modeling, and other information which when completed will:

1. Help Nebraska to meet its obligations under the Cooperative Agreement,
2. Enable natural resources districts (NRD's) and other entities along the Platte River to provide appropriate regulation and management,
3. Provide Nebraskans with a basis to develop policy and procedures related to ground water and surface water,
4. Enable Nebraskans to analyze proposed activities of the Cooperative Agreement and/or programs in Nebraska.

Study objectives include:

1. Collecting existing data and placing into a credible/appropriate database and fill in with new data as necessary.
2. Developing preliminary models to identify data gaps.
3. Collecting and adding supplemental data as necessary to provide a credible database.
4. Developing linked, sub-regional models to cover the Platte basin in Nebraska.
5. Establishing credible models.
6. Using models.

The Natural Resources Commission is one of the 11 project sponsors of the study. The others are the Central Platte, Twin Platte, Tri-Basin, North Platte, and South Platte and Upper Big Blue natural resources districts, Game and Parks Commission, Department of Water Resources, Nebraska Public Power District, and Central Nebraska Public Power & Irrigation District. The study is expected to cost a total of \$1.6 million. A planning staff member is the Commission's official representative and a member of the technical staff coordinator's committee. That Committee is drafting the work plan and advising the sponsors on technical matters. Total scheduled Commission effort on the study is expected to have a value of \$304,337, although \$245,800 of that amount is for past and future work by the Commission's Survey and Photogrammetry Section on baseline groundwater elevations and thus is technically outside the planning process. That work involves surveying locations and elevations of groundwater monitoring wells to help establish the current water table. The Commission has received payment for \$97,900 of that work, while the remainder is to be in-kind effort. Remaining Commission work is expected to involve planning staff in river stage and profile analysis, analysis of soils, runoff, recharge and consumptive use, database development and supervision, computer program development, and data collection. The Commission is housing and supervising contract staff involved in the modeling portions of the study. If the survey crew has available time, a contract may be initiated for additional survey work.

In FY 99 Commission planning staff continued to meet with other sponsors to help review and direct progress. In-kind Natural Resources Commission services for the last two years of the study are to be about \$8,800 per year. The Commission reached an agreement with the Hydrology Sponsors to provide office space, supplies, guidance and supervisory assistance for a geographic information system/database management specialist for the study beginning in late summer 1998. That component of the study will take about 2½ years total and is to include use of a geographic information system display and use hydrogeologic, hydraulic, and water use information in the basin. A graphical user interface will be used to make the information available to any party. The database and Arc/Info coverages developed as part of the

study will be housed on NRC hardware and the NRC web server will be used to deliver information to the public. Also in FY 99 the Commission's Survey and Photogrammetry Section completed the remaining horizontal and vertical control work for surveying elevations and elevation controls for about 1,356 monitoring wells.

c) Lower Platte River and Tributaries Feasibility Study

In January 1998, agreements were signed initiating work on the Lower Platte River and Tributaries Feasibility Study. The \$2.7 million study to investigate flood damage reduction and water resources problems and solutions in the Lower Platte Basin is being led by U.S. Army Corps of Engineers. In addition to the Commission, cooperators include: the Lower Platte South NRD, the Papio-Missouri River NRD, the Lower Platte North NRD and the Lower Platte River Corridor Alliance. The Commission is expected to provide \$125,000 per year in pass through funding over a four year period and a total of over \$200,000 in in-kind services. The study is scheduled for completion by September 30, 2001. The feasibility study area includes the Platte River from Columbus to its mouth.

The study is a follow-up to an earlier reconnaissance level study and is to provide a variety of structural and non-structural options and recommendations. In addition to examining five specific structural options it will solicit public suggestions on natural resources management issues for the area and address water quality, land use and public policy concerns in the watershed. Commission work includes extensive cross-sections, surveys and mapping to be provided by the Commission's Floodplain Management Division. Commission Comprehensive Planning Section assistance will include supervisory assistance for creating geographic information system products for the area, website assistance, assistance to the Corps in compiling community flood mitigation plans, assistance in evaluation of buildings in the floodway fringe for buyouts, report writing assistance, and assistance in environmental evaluation. Along with the Corps and the Lower Platte South NRD the Commission acts as a co-sponsor and serves on the executive committee for the project. The Lower Platte South NRD acts as primary administrator of funds. Half of project costs are a Corps responsibility with the state and local sponsors providing 25% funding and 25% in-kind match.

Work Completed in FY 1999

Commission Floodplain Management Division staff provided survey and mapping work in FY 1999 and will continue to do so in FY 2000. Cross section work was completed from southeast of Fremont almost to the Colfax County line during the fiscal year. Detailed topographic mapping of the Fremont Lakes area was also completed. In-kind planning section assistance on the geographic information system portion of the study also continued. This again took the form of providing office space and supervision for a position hired under contract for the feasibility study by the Lower Platte South NRD. Work assigned to that position was focused on use of a GIS project to produce and display a selection of resource related maps that can be used to illustrate the assets, problems, and potentials of the Lower Platte River Corridor. Commission staff also continued to provide assistance on the environmental portion of the study throughout the period. Commission Planning Division assistance on compiling community flood mitigation plans began midway through FY 1999 and is likely to continue through the remainder of the study. Commission staff made presentations on flood mitigation planning and other study aspects at a number of public meetings. Commission Planning Division general in-kind work also continued as did Commission work on study administration, co-sponsorship and coordination.

Work Scheduled in FYs 2000 – 2001

By the end of FY 2000 the Commission's Floodplain Management Division is scheduled to complete the final portion of its cross section and field survey bridge information work between the Colfax County line and Columbus. Some work on delineation of flood boundaries is scheduled to continue into FY 2001. In both FY 2000 and 2001 Commission planning staff are expected to assist Lower Platte River corridor communities in undertaking and financing community flood mitigation planning processes. This work will occur both as part of the Lower Platte River and Tributaries Feasibility Study and the Commission administered Flood Mitigation Assistance Program. During FY 2000 the Commission will continue to house and provide assistance and advice to a geographic information system – data base position hired under contract by the Lower Platte South NRD for the feasibility study. Commission assistance on environmental restoration, geographic information system and study coordination / administration / sponsorship duties are expected to continue.

d) Lower Platte River Corridor Alliance

The Lower Platte River Corridor Alliance is an umbrella organization of state and local agencies working to foster the development and implementation of locally drawn strategies, actions, and practices to protect and restore the vitality of the river's resources. The major project supported by the Alliance to date has been the Lower Platte River and Tributaries Feasibility Study. However, the organization has a separate purpose from the feasibility study and has been meeting on a quarterly basis. The Commission has provided the Alliance with assistance on their web page.

e) Middle Platte Eco-Risk Assessment

The Middle Platte Eco-Risk Assessment was intended to provide a variety of information on ecological risks, land and water management options and economic impacts associated with the Middle Platte Watershed. The effort was directed by the U.S. Environmental Protection Agency. The effort was effectively completed in FY 1999 and will not be mentioned in future annual reports. Although the final assessment documents contained some information and recommendations that could conceivably result in limited Commission follow-up, no plans have been made for additional activity.

f) Assistance in North Platte River Legal Disputes Between Wyoming and Nebraska

In FY 1999 Commission Comprehensive Planning Section staff provided some technical assistance related to the legal dispute between Nebraska and Wyoming. That included:

- 1) Critical review of the Wyoming consultant's modeling results
- 2) Preparation of a questions list for Nebraska's consultant and attorneys
- 3) Attending Nebraska vs. Wyoming informal discovery and deposition meetings
- 4) Providing the latest Platte River modeling development update to the Department of Water Resource's attorney.

In FY 2000 some additional assistance is expected.

3) Republican River Basin Cooperative Activities

Commission planning staff have participated in a variety of activities/studies dealing with the Republican Basin in FY 1999. These included: 1) preparing an aquifer saturated thickness map and percent of lost saturated thickness map of the Upper Republican NRD for processing their critical township data, and 2) Analyzing data provided by the Upper Republican NRD and calculating which townships meet

the critical township criteria for them. It is anticipated that planning staff will continue to assist the Upper Republican NRD with saturated thickness mapping and critical township calculations in future fiscal years. Beginning in FY 2000 Commission planning staff will also help assist the Governor's Republican River Basin Council.

4) Floodplain Planning Activity

In February 1998, the Commission's Comprehensive Planning Section assumed management of Nebraska's Flood Mitigation Assistance (FMA) program. Activity in the Flood Mitigation Assistance (FMA) program has continued to grow throughout FY 1999 and promises to keep doing so in FY 2000. The goal of the FMA program is to reduce claims on the National Flood Insurance Program (NFIP) through the development of flood mitigation plans for communities which have experienced flood damage or which are generally interested in reducing their flood vulnerabilities. Starting in fiscal year 1999, the Federal Emergency Management Agency (FEMA, the agency which funds the FMA program to the states) initiated a policy to reduce "repetitive loss structures" which have filed at least two flood claims in excess of \$1,000 in any 10-year period since 1978. Although these structures account for only 2% of all NFIP policies, they result in 40% of all NFIP damage payments. In Nebraska, there are 308 structures listed in the repetitive loss database supplied by FEMA.

The Commission's work on the FMA program is being closely coordinated with and may supplement its work on the U.S. Army Corps of Engineers' Lower Platte Feasibility Study. That study seeks to reduce flood damages in the stretch from Columbus to the mouth. As part of the nonstructural portion of the Study, funding has been set aside for flood mitigation planning for interested communities. In response to a letter of interest sent out to all communities and counties in the Study area, five communities and two counties expressed interest.

In addition to the Lower Platte Feasibility Study, the NNRC is receiving other federal funds through FEMA's Hazard Mitigation Grant Program as a result of the ice storm disaster of October 1997. These funds require a 25% non-federal match which is being provided through the Community Development Block Grant (CDBG) program, as administered by the Nebraska Department of Economic Development. These funds will be used to complete a mitigation plan for the Village of DeWitt, which is entirely located within the floodplains of the Big Blue River and Turkey Creek. The FEMA money can be used to supplement the flood mitigation planning activities of communities and counties in the Lower Platte Feasibility Study or in other communities outside of the Study area.

The NNRC also continues to receive annual FMA program allotments for planning and project grants. In FY 1997 the planning and project funds were used in the City of Beatrice to acquire flood-prone properties in the Big Blue floodplain. Beatrice formerly had 12 repetitive loss properties, but due to FMA and HMGP acquisitions, only two remain. FY 1998 planning and project funds were used in the City of Superior, which sought solutions to flooding on Lost Creek. The planning grant resulted in a new floodplain boundary map, which will prove beneficial to the City as it expands. The City is currently seeking matching funds for FMA project money which will be used for bank stabilization along Lost Creek. Much of the FY 1999 project funds are being used to acquire additional residences in the Big Blue floodplain in Beatrice. The planning grant funds have not been obligated yet, but may be used in communities such as the villages of Crete or Rulo, or to supplement the flood mitigation planning efforts in the Lower Platte Feasibility Study.

Finally, the NNRC has additional unused CDBG funds which are to be used for flood mitigation planning. Although currently very much in the planning phase, these funds may be used to supply the necessary 50% match for Corps of Engineers Section 22 planning funds. These funds may be used

anywhere in the State, but may again fit best within the framework of the current work already started in the Lower Platte Feasibility Study.

Based on the growth of interest and available funds, flood mitigation planning continues to gain popularity. Since many of the flood problems in Nebraska exist because of poor planning in the past, flood mitigation planning is an idea whose time has come. The Commission is also in the process of compiling a state flood mitigation plan.

5) Nitrate and Nebraska's Small Community and Rural Domestic Water Supplies: An Assessment of Problems, Needs and Alternatives

At the close of FY 1999 work was very nearly completed on the three-year study "*Nitrate and Nebraska's Small Community and Rural Domestic Water Supplies: An Assessment of Problems, Needs and Alternatives*". The study is intended to provide an analysis of the state's drinking water supply problems related to nitrate and assess costs to small communities and rural domestic users. It identifies nitrate related infrastructure expenditures, examines community nitrate monitoring information, examines nitrate related costs in the context of other supply problems, and identifies possible alternatives for meeting current and future water needs. According to a cooperative agreement the Natural Resources Commission was to use staff time to provide 50% matching effort on the Bureau of Reclamation study. On July 1, 1999 the Commission sent the Bureau its comments and suggested revisions to the final report. It is expected that the Bureau's final report will be published by late September 1999.

In FY 1999 the Commission completed work in all aspects of the study including infrastructure cost analysis, nitrate data analysis, providing maps and figures, report drafting and providing extensive editorial changes. Late in the study effort it was decided to gather additional nitrate data from paper files of the Health and Human Service System files. Commission staff gathered the needed data and made resulting report revisions immediately prior to report completion.

6) Nebraska Interagency Stream Management Strategy

The Nebraska Interagency Stream Management Strategy was a multi-agency effort to coordinate stream management efforts. The effort was led by the Nebraska Game and Parks Commission and the Nebraska Department of Environmental Quality.

The Commission's major contribution to the effort was compilation of a 37-page directory entitled "Selected Nebraska Stream Management and Riparian Zone Related Databases" in FY 1997. That was the only major Commission work scheduled for the effort. The lead agencies discontinued effort on the strategy in FY 1998 and in FY 1999 decided not to finish the effort. It will not be mentioned in future versions of this annual report.

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 past years time devoted to this category accounted for about 10% to 15% of the planning process budget. It includes both smaller one time 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) LB 1085 Reports on Natural Resource District Operation and Organization
- 3) Waste Reduction and Recycling Grants Review Board
- 4) Environmental Trust Advisory Committees
- 5) Geographic Information System Steering Committee and Subcommittees
- 6) Western Governor's Association Geographic Information System Council
- 7) Nebraska Forestry Stewardship Committee
- 8) State Pesticide Management Plan Advisory Committee
- 9) Niobrara Scenic River Advisory Commission
- 10) Review of 404 Permit Applications to the U.S. Army Corps of Engineers
- 11) Climate Assessment and Response Committee
- 12) Other Reviews

1) Nebraska Resources Development Fund Reviews

In FY 1998, planning staff support of Natural Resources Development Fund activities included: a) review and final action on the Gering Canal project application, b) review of the Weeping Water Site 7G project application, c) review of the Steven's Creek Watershed project application, d) review of the Papio-Missouri River floodway-buyout proposal, e) inspection of the Elkhorn River Bank Stabilization Project, and f) revision of Natural Resources Development Fund Guideline attachments. The projects examined in FY 1999 required more extended review than has generally been the case for past Natural Resources Development Fund projects.

2) LB 1085 Reports on Natural Resources District Operation and Organization

In September, 1998 the Commission submitted its second and final report of a study of Nebraska's natural resources districts required by LB 1985 (1996). The report was entitled "*An Analysis of Natural Resources District: Program Effectiveness, Cost Effectiveness, Duplication of Responsibility, and Other Options for Facilitating Property Tax Relief*". It included results from separate surveys of natural resources district managers, municipalities, county boards of supervisors, and commissioners about cooperative efforts with NRDs, potential ways to improve NRD assistance, and related matters. The results were instrumental in developing a set of alternatives. The Natural Resources Commission members provided recommendations for the report and appointed a committee that provided guidance on content. Commission planning staff drafted much of the text in the main body of the report.

3) Waste Reduction and Recycling Grants Review Board

One Commission staff member serves 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.

4) 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. Commission staff, including planning staff members, assist in project application reviews. Activity levels are expected to remain limited in upcoming fiscal years.

5) Geographic Information System Steering Committee and Subcommittees

The Geographic Information System Steering Committee has adopted a number of priority initiatives for GIS application in the State of Nebraska. The development of digital orthophoto quadrangles (DOQs), vectorized soils databases and a hydrographic units database were identified as top areas of interest for Nebraska. The NRC has developed DOQs to the U.S. Geological Survey standards and is developing a digital soils database to USDA NRCS Soil Survey Geographic database (SSURGO) standards. Refinement of the NRC's hydrologic units/statewide basemap continue in cooperation with the Department of Environmental Quality and the NRCS. NRC staff continue to attend and contribute to steering committee meetings.

6) Western Governor's Association Geographic Information System Council

A Commission Comprehensive Planning Section staff member serves as the Nebraska representative on the Western Governor's Association Geographic Information System Council. The Council was formed in the spring of 1999 to advise the governors on regional geographic information system issues and needs. The staff member coordinates closely with the Nebraska Geographic Information System Steering Committee.

7) Nebraska Forestry Stewardship Committee

A Commission planning 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 state forest stewardship plan was also reviewed during the year. These activities required only very limited time.

8) State Pesticide Management Plan Advisory Committee

A planning section staff member has been assigned to assist the State Pesticide Management Plan Advisory Committee starting in FY 2000. The Commission's primary responsibility will be to provide technical assistance in the areas of database and geographic information system development and website distribution.

9) Niobrara Scenic River Advisory Commission

The Director of Natural Resources represents the Governor on the Niobrara Scenic River Commission. The duties of that group have diminished since the completion of a management plan for the river and the formation of a Niobrara Scenic River Council. The Commission did not meet at all in FY 1998, but did have a joint meeting with the Council in July 1998. The Council was charged with implementing the management plan and has been meeting on a monthly basis composed of a county commissioner and landowner from each county as well as representatives from the Nebraska Game and Parks Commission, the U.S. Fish and Wildlife Service, recreation interests and the timber industry. The Council continues to operate. However, a recent legal ruling halted the use of the Council for federal management purposes. Commission efforts are expected to be minimal in future years.

10) 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 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 1998.

11) **Climate Assessment and Response Committee**

The Director of Natural Resources is a member of this committee that meets periodically throughout the year and reports to the Governor. Reports are made as warranted by climatic conditions; including but not limited to problems caused by the lack of moisture; drought conditions; or problems caused by excess moisture or flooding conditions.

One Commission staff member also serves on a subcommittee of this group; the Moisture Availability and Outlook Committee that meets throughout the summer to assess conditions across the state and provide a summary of this information to the Chairman of the Climate Assessment and Response Committee.

The Climate Assessment and Response Committee has also been working on a Nebraska Drought Plan. Commission planning staff members are working with two drought plan subcommittees; the Agricultural, Natural Resources and Wildlife Subcommittee and the Municipal Subcommittee. The subcommittees each produced a document that included impacts, planned actions and target agencies. The current expectation is that the plan will be completed during FY 2000.

12) **Review of Natural Resources District Plans**

Commission planning staff occasionally provide limited review of NRD groundwater management plan revisions, NRD long-range implementation plans or NRD Master Plans.

13) **Other Reviews**

Commission planning staff reviewed a number of other programs or projects during the course of FY 1999. Several of the more significant examples included: 1) review of the U.S. Army Corps of Engineers draft EIS on the Platte West Water Production Facilities, 2) scoping review of environmental issues for Corps work on an *Environmental Restoration and Flood Control Study in the Sand Creek Watershed*, 3) review of the Central Nebraska Water Conservation Task Force's supplement to their water conservation plan, and 4) work on the Department of Environmental Quality's Section 319 grant review committee which deals with nonpoint sources of pollution.

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, administer the planning process and review projects and plans.

a) **General**

The planning information base has been the primary focus of Natural Resources Planning efforts for a number of years. 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 can enhance state, federal and natural resources district management as well as city and county services and tax assessment.

ARC/INFO and ERDAS/Imagine softwares are 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. The production of digital orthophoto quadrangles (DOQs) and digital elevation models (DEMs) on a statewide basis was a major agency priority completed in FY 1999. 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 six global positioning receivers. GPS technology is the basis for the Commission's survey and photogrammetry operations. Additionally, it 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 Health and Human Services System, the Cooperative Hydrology Study, 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 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 direct 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

1) **Digital Elevation Modeling – Digital Orthophoto Quadrangles**

In FY 1999 the Commission completed on schedule the three year process of compiling digital elevation model (DEM) and digital orthophoto quadrangle (DOQ) coverages for the state. The DOQs will support a wide variety of applications, including the development of statewide natural and cultural resources coverages. The Nebraska GIS Steering Committee has indicated that statewide coverage of 5 layers consisting of DOQs, soils, transportation, hydrography and land parcels is needed for Nebraska. The DOQs are important as a base map that will support the development of the other four layers. This includes use as a base map to bring soil mapping up to SSURGO national standards. The DEMs are also being used in the Commission's flood prone area mapping process. The DEM-DOQ process was completed cooperatively with the work of both the Comprehensive Planning Section and the Commission's Data Bank.

2) **Digitizing of Soil Surveys to SSURGO National Standards**

In April 1997 the Nebraska Natural Resources Commission, the Natural Resources Conservation Service, and the University of Nebraska Conservation and Survey Division entered into an agreement to digitize Nebraska's published Soil Surveys. The overall goal of the project is to develop a digital soils base of all 93 Nebraska counties and incorporate updated surveys as they become available. Once digitized, the file can be adjusted in scale, making it easier to integrate the soils data with other geographic data. A time frame for the project was set at five years and it is to be completed by September 30, 2002. The process utilizes the DEMs and DOQs produced by the Commission. Both the Commission's Comprehensive Planning Section and Data Bank participate in the process. Personnel from both the Natural Resources Conservation Service and the University of Nebraska Conservation and Survey Division are stationed at the Commission offices to work on the project. Progress accelerated in FY 1999 and by the end of the fiscal year 35 counties had been completed and 18 certified.

3) **Tagged Vector Coverage**

The Tagged Vector Coverage is a by-product of the DEM-DOQ development process. The files that were used for that process have been converted into ArcInfo coverage to be able to show USGS 7 ½ minute quadrangle contour lines. These can be used to make finer custom grids than what is currently available. This is an ongoing project that should be completed in FY 2000.

4) Tagged Vector Cleanup

Much of the Tagged Vector Coverage has been completed. However, that is just Phase I of a two-phase process. The emphasis on Phase I was just to make a useful product available to the public while Phase II involves improving the product by removing “dangles” and improving the “edge-matching.” Dangles are lines that are not connected at least on one end. This typically happens when the contour interval label is removed leaving two lines that are not connected. During this phase these lines will be cleaned up. This phase will also involve additional “edge-match” improvement. Each map was created mostly independent of the maps around it. When the two maps are brought into the same coverage, the lines must match at the boundaries. Most of this is accomplished through an “automatic” process but it must be manually checked for final quality assurance.

5) Flood Prone Area Mapping

There are only limited amounts of funding available for detailed floodplain mapping and about half of the counties in the state have no form of floodplain mapping. Therefore the Commission has examined alternative approaches which utilize new technologies and innovative methods to rapidly delineate floodprone areas across the state. In FY 1999 staff developed a relatively automated process to delineate floodprone areas using recently completed digital elevation models and digital orthophoto quadrangles. This work was closely coordinated with the Floodplain Management Division. Nuckolls County was used as the test county. Plans are to begin accelerated production of maps in FYs 2000 and 2001.

6) Digitized Floodplain Delineation Maps

This project was completed in FY 1999 and involved digitizing the streams (or using TIGER streams when available) that have floodplain delineations developed for them. Attributes representing the source of the data and the type of delineation were attached, which allowed additional information to be related in a database. Maps of the output were produced for the Department of Roads to provide a quick visual of areas that need to be concerned about floodplain delineation issues during roadway design.

7) Watershed Boundary Delineations

This is both a completed and ongoing project. It is completed in that the entire state is done and the coverage is available on the web. It is ongoing because the Natural Resources Conservation Service needs to have additional watersheds delineated. The Commission may contract with them to assist in this effort. Additionally, as more detailed maps become available, boundaries may be adjusted using this information.

8) Groundwater Level Website

The Natural Resources Commission and U.S. Geological Survey have an annual agreement by which USGS produces an annual groundwater levels report and the Commission provides limited financial support and places the material on the world wide web in an easily searchable format. Most of the Commission work on the project has been provided through the Data Bank. However, financial support has been provided through planning funds.

9) Section Corners, Polygons, Township Corners

This project was completed in FY 1999 and involved digitizing the section corners from USGS 7½ minute quadrangles. As the corners were digitized, location attributes were attached, and the information was later imported into ArcInfo. Polygons were created with the section corners to create an additional coverage. An additional coverage was created by just selecting the SE corner of section 36 to develop the township coverage.

10) Web Page Revision / Maintenance

Commission planning staff have worked with the Data Bank in the updating of the Commission's website. That work is expected to continue on a regular basis in upcoming years.

11) Support of Other Government Agency Computer / Web Operations

Commission planning section staff, in conjunction with Data Bank staff have provided computer and web support to a number of agencies. Services provided by the Commission have ranged from promotion, installation and maintenance of Internet access for other agencies to minor troubleshooting. Agencies assisted by the planning staff in varying degrees have included:

- Central Platte Natural Resources District
- Lower Platte North Natural Resources District
- Lower Platte South Natural Resources District
- North Platte Natural Resources District
- Twin Platte Natural Resources District
- Upper Niobrara-White Natural Resources District
- Upper Republican Natural Resources District
- Lower Platte River Corridor Alliance
- Central Nebraska Public Power and Irrigation District
- Nebraska Game and Parks Commission
- Nebraska Environmental Trust
- Nebraska Department of Agriculture
- Nebraska Department of Water Resources
- Nebraska Department of Economic Development
- Nebraska Department of Education
- Nebraska Corn Board
- Nebraska Real Estate Appraiser Board
- Nebraska Grain Sorghum Board
- National Association of State Conservation Agencies
- Natural Resources Conservation Service
- Rainwater Basin Joint Venture
- U.S. Geological Survey
- U.S. Army Corps of Engineers

12) Map Production / Study Support / In Agency Support

Because of Agency GIS capabilities the Commission's Data Bank and Planning Sections receive mapping requests from other agencies on an irregular basis. That mapping capability is also used to support a variety of studies in which the Commission participates. Planning staff also provide some

computer and database support to other Commission divisions. All of these activities are expected to continue on an as needed basis.

13) Water Use Data Study

In 1992 the Commission entered into an agreement with the U.S. Geological Survey to cooperate with USGS's nationwide program of data collection and estimation of water use. A Commission report on 1995 water use was issued in June 1998. In the summer of 1999 the Commission and USGS held the first meeting to discuss the compilation of the water use data report for 2000. Some preparatory and initial work on that effort is expected in FYs 2000 and 2001.

14) Soil and Water Conservation Strategy

The Nebraska Soil and Water Conservation Strategy is a body of facts, ideas, agreements and recommendations on soil and water conservation in the state. No work has been completed on the study since the end of 1991. The strategy and a possible water conservation strategy have been mentioned in brainstorming sessions as possible areas of future planning activity. However, if no immediate plans are made for resumption of this activity, it will not be included in next year's Annual Report and Plan of Work.

15) Other Activity

Other planning section work in basic planning activity has included maintenance of Landsat TM terrain corrected data for landuse / land cover acquired from the EROS Data Center. The Commission has complete statewide coverage that includes Landsat TM scenes from 1991 – 1993. The Commission has examples of this information posted on its web page and has made the information available to other state and local agencies.

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. No work is planned for this activity.

F. COORDINATION, ADMINISTRATION AND MANAGEMENT

Coordination, Administration and Management activity helps in assisting or directing the conduct of other activities of the State Water Planning and Review Process. Work in this category includes: 1) Recent brainstorming on planning process direction, 2) evaluation of potential effects of agency consolidation, 3) agency environmental education activities, and 4) printing and mailing costs.

1) Brainstorming on Planning Process Direction

In November and December of 1998 two separate meetings were held to brainstorm on potential future planning process activity. An initial meeting with selected staff members on November 20 and a follow-up meeting on December 14 each identified potential new planning section work and included votes on which items would be most useful and appropriate. Items were then ranked by total votes. This did not yield a clear direction. However, follow-up meetings may occur. The completion of the DEM/DOQ process in 1999 has provided some additional flexibility in being able to address new issues.

2) Evaluation of Potential Effects of Agency Consolidation

In late FY 99 the Nebraska Natural Resources Commission and the Nebraska Department of Water Resources initiated an effort to evaluate the potential effects of a consolidation between the two agencies. One of the Commission's planning staff is a member of the evaluation team. The evaluation is to be completed by September 30, 1999.

3) Environmental Education Activities

Agency environmental education activities include: 1) continued limited distribution of Stop, Look and Learn About Our Natural World: A Nebraska Natural Resources Elementary Education Guide. (Only a few copies of the material remain - Nearly 4,000 three volume sets have been distributed since the material was first published in 1988) , 2) participation in planning and staging the Nebraska Envirothon, 3) participation in the Children's Groundwater Festival, held annually in Grand Island by the Groundwater Foundation, and 4) participation in the Nebraska Organizations for Environmental Education meetings.

All of the above activities are expected to continue in future fiscal years.

4) Printing and Mailing Costs

Printing and mailing costs were minimal in FY 1999 and are expected to remain so in future fiscal years.

V. BUDGETARY TABLES

Table 1
 PLANNING AND REVIEW PROCESS EXPENDITURES - FY 99

	310	334	Total
Problem Analysis and Area Planning - 23 County Streambank Erosion and Streambed Degradation Study	\$25,000	----	\$25,000
Problem Analysis and Area Planning - Lower Platte Feasibility Study and Related Section 503 Studies	----	125,000	125,000
Problem Analysis and Area Planning - Platte River Alliance	----	3,571	3,571
Basic Planning Activity - Computer Hardware	43,777	6,023	49,800
Basic Planning Activity - Computer Software	8,137	112	8,249
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	9,913	4,248	14,161
Coordination, Administration & Management - Printing and Mailing	7,535	5,486	13,021
USGS Groundwater Levels	5,800	----	5,800
Basic Planning Activity - Intergovernmental Contract with NRCS	55,679	----	55,679
Staff and Other Support Including Travel	96,920	563,782	660,702
Platte River Cooperative Agreement	----	160,807	160,807
TOTAL	\$252,760	\$869,030	\$1,121,790

Table 2
 PLANNING AND REVIEW PROCESS BUDGET - FY 2000

	310	334	Total
Problem Analysis and Area Planning - Lower Platte Feasibility Study and Related Section 503 Studies	----	125,000	125,000
Problem Analysis and Area Planning - Platte River Alliance	3,800	----	3,800
Basic Planning Activity - Computer Hardware	47,000	----	47,000
Basic Planning Activity - Computer Software	9,000	----	9,000
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	11,000	----	11,000
Coordination, Administration & Management - Printing and Mailing	6,000	6,000	12,000
Basic Planning Activity - Intergovernmental Contract with NRCS	36,000	----	36,000
USGS Groundwater Levels	6,200	----	6,200
Staff and Other Support Including Travel	114,724	520,700	635,424
Platte River Cooperative Agreement	----	539,193	539,143
TOTAL	\$233,724	\$1,190,893	\$1,424,617

Table 3
 PLANNING AND REVIEW PROCESS BUDGET - FY 2001

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	3,800	----	3,800
Problem Analysis and Area Planning - Lower Platte Feasibility Study and Related Section 503 Studies	----	125,000	125,000
Basic Planning Activity - Computer Hardware	47,000	----	47,000
Basic Planning Activity - Computer Software	9,000	----	9,000
Basic Planning Activity - Computer Licensing, Access Fees, Maintenance Contracts, and Data Processing	11,000	----	11,000
Coordination, Administration & Management - Printing and Mailing	6,000	6,000	12,000
Basic Planning Activity - Intergovernmental Contract with NRCS	36,000	----	36,000
USGS Groundwater Levels	6,200	----	6,200
Staff and Other Support Including Travel	119,133	559,900	679,033
TOTAL	\$238,133	\$690,900	\$929,033

Table 4
 PLANNING AND REVIEW PROCESS BUDGET - FY 2002

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	4,000	----	4,000
Basic Planning Activity - Computer Hardware	48,000	----	48,000
Basic Planning Activity - Computer Software	10,000	----	10,000
Basic Planning Activity - Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	11,500	----	11,500
Coordination, Administration & Management - Printing and Mailing	6,000	6,000	12,000
Basic Planning Activity - Intergovernmental Contract with NRCS	37,500	----	37,500
USGS Groundwater Levels	6,400	----	6,400
Staff and Other Support Including Travel	121,880	577,000	698,880
TOTAL	\$245,280	\$583,000	\$828,280

Table 5
 PLANNING AND REVIEW PROCESS BUDGET - FY 2003

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	4,120	----	4,120
Basic Planning Activity - Computer Hardware	50,000	----	50,000
Basic Planning Activity - Computer Software	10,000	----	10,000
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts, and Data Processing	11,500	----	11,500
Coordination, Administration & Management – Printing and Mailing	6,000	6,000	12,000
Basic Planning Activity - Intergovernmental Contract with NRCS	39,000	----	39,000
USGS Groundwater Levels	6,500	----	6,500
Staff and Other Support Including Travel	125,575	594,500	720,015
TOTAL	\$252,635	\$600,500	\$853,135

Table 6
 PLANNING AND REVIEW PROCESS BUDGET - FY 2004

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	4,200	----	4,200
Basic Planning Activity - Computer Hardware	50,000	----	50,000
Basic Planning Activity - Computer Software	10,500	----	10,500
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	12,000	----	12,000
Coordination, Administration & Management - Printing and Mailing	6,000	6,000	12,000
Basic Planning Activity - Intergovernmental Contract with NRCS	40,000	----	40,000
USGS Groundwater Levels	6,500	----	6,500
Staff and Other Support Including Travel	131,015	612,000	743,015
TOTAL	\$260,215	\$618,000	\$878,215

Table 7

PLANNING & REVIEW PROCESS EXPENDITURES FY 99 AND BUDGET FYs 2000-2004

	FY 99 Expenditures			FY 00 Budget			FY 01 Budget			FY 2002 Budget			FY 2003 Budget			FY 2004 Budget		
	Staff & Support	Contracts & Computer	Total	Staff & Support	Contracts & Computer	Total	Staff & Support	Contracts & Computer	Total	Staff & Support	Contracts & Computer	Total	Staff & Support	Contracts & Computer	Total	Staff & Support	Contracts & Computer	Total
Program 310	104,007	148,753	252,760	120,724	113,000	233,724	125,133	113,000	238,133	127,880	117,400	245,280	131,515	121,120	252,635	137,015	123,200	260,215
Program 334	569,268	299,762	869,030	526,700	664,193	1,190,893	565,900	125,000	690,900	583,000	-0-	583,000	600,500	-0-	600,500	618,000	-0-	618,000
TOTAL	668,275	448,515	1,121,790	647,424	777,193	1,424,617	691,033	238,000	929,033	710,880	117,400	828,280	732,015	121,120	853,135	755,015	123,200	878,215