

**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, 2000

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**I. HIGHLIGHTS – ANNUAL REPORT AND PLAN OF WORK FOR THE
NEBRASKA STATE WATER PLANNING AND REVIEW PROCESS – 2000**

- A major highlight of FY 2000 was preparatory work for merger of the Nebraska Department of Water Resources and the Nebraska Natural Resources Commission into the Nebraska Department of Natural Resources (NDNR). That merger took place effective July 1, 2000 and included some changes in water resources planning organization. The new Department has a Planning and Assistance Division which will be responsible for state level planning, technical assistance to Natural Resources Districts (NRDs) and other local entities, a variety of GIS activities, water rights mapping and stream gaging. NRDs and other entities were asked for ideas on potential changes in planning emphasis and it is anticipated that future work will be more closely coordinated with local efforts.
- In FY 2000, the Commission continued its cooperative work on digital county soil surveys. They are scheduled to be completed to national standards by September, 2002, and will allow vastly expanded usage of the soil surveys by a greater number of users. The digital soil surveys can be electronically transferred, layered and used in conjunction with or as part of many other maps. The new Planning and Assistance Division's work on the soil surveys is part of a cooperative effort with the NDNR's Data Bank Section, the Natural Resources Conservation Service and the University of Nebraska-Lincoln, Conservation and Survey Division.
- In FY 2000, agency floodplain and planning staff continued an innovative 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. The completed maps should help local units of government in flood mitigation planning activities and serve as a basis for floodplain programs and regulation. In FY 2000, initial test maps were completed for Nuckolls and Thayer counties and development of procedures for future work was initiated. Future Nebraska Department of Natural Resources efforts are expected to result in the completion of about four to five counties per year. Future work is expected to be a joint effort between the NDNR's Floodplain Management and Dam Safety Division and the Planning and Assistance Division. The Federal Emergency Management Agency has used this Nebraska developed effort as an example for other states and is also expected to supply partial funding for future efforts.
- In FY 2000, the Commission continued administration of Nebraska's Flood Mitigation Assistance (FMA) program. The program assists communities and counties with flood mitigation planning and projects. Flood mitigation planning activity is expected to continue under the supervision of the Department of Natural Resources Floodplain Management and Dam Safety Division 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 published in December 1999.

- In FY 1999, the Commission continued to supply mapping assistance, in-kind planning assistance and funding to the Lower Platte River and Tributaries Feasibility Study. Planning and financial assistance to the effort are expected to continue under the Department of Natural Resources. 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. Through December 1999, the Commission provided office space and supervisory assistance for a position designed to develop thematic maps and a web page for the study. In FY 2001, the Department of Natural Resources will provide \$125,000 in annual pass-through funds for the study. The study is scheduled for completion in June of 2001.
- In FY 1999, the Commission 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 DNR planning staff are also continuing to provide other assistance and considerable staff time 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 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 NRDs. As part of the merger effort a new web page has been developed for the Nebraska Department of Natural Resources.

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
- Lower Platte River Corridor Alliance Activities
- Assistance in North Platte River Legal Interaction between Nebraska and Wyoming
- Environmental Assessment Assistance Related to Glendo Reservoir Irrigation Contracts
- Republican River Basin Cooperative Activities
- Floodplain Planning Activity
- Nitrate and Nebraska's Small Community and Rural Domestic Water Supplies Study
- Assistance to NRCS on Buck and Duck Basins Watershed Planning Process

PROJECT AND PROGRAM REVIEW ACTIVITY

- Nebraska Resources Development Fund Reviews
- 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
- 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

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 2000 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.

On July 1, 2000, Nebraska made a major change in its water planning and management agency structure when the Nebraska Department of Water Resources and the Nebraska Natural Resources Commission were merged to form the Nebraska Department of Natural Resources. It is anticipated that the merger will encourage better customer service through better cooperation, increased public awareness, greater access to a diversified work force, and increased efficiency.

The new Department has a Planning and Assistance Division which will be responsible for state level planning, technical assistance to NRDs and other local entities, and water rights mapping and stream gaging. As a part of the merger, planning activities are likely to be more closely tied to assistance to local units of government. Advice on agency direction and specifically on state level water resources planning has been solicited from NRD managers and irrigation districts via a survey and meetings. Responses showed a consistently high priority for planning activities, although a lack of agreement over what those planning activities should be. Part of this likely arises from the difficulty of finding a proper role for state level planning in a state where local planning and management of natural resources has played an ever larger role.

During FY 2001, emphasis will be placed upon initiation of an alternate state water plan concept that can better incorporate current local NRD planning efforts and provide general coordination and guidance on topics of state interest.

In past years the Annual Report and Plan of Work has primarily included the work budgeted specifically through budget program 310, a planning process budgetary account, and the portion of budget program 334 that was specifically allotted to the Comprehensive Planning Section of the Nebraska Natural Resources Commission. This was awkward because a few Commission planning related activities, such as the Platte River Memorandum of Agreement, were conducted by non-planning staff funded through other budget programs. Other planning activities involved Comprehensive Planning Section cooperative work with other sections and divisions. With the merger into the Nebraska Department of Natural Resources, these lines have been blurred even further. Stream gaging, water rights mapping and interstate stream engineering are now part of the new Planning and Assistance Division duties. For this year's Annual Report and Plan of Work primarily the old duties funded primarily through programs 310 or 334 have been included. The major exceptions are the Platte River Cooperative Agreement studies and community flood mitigation planning efforts, which are also included due to their importance. The new duties are generally not yet discussed.

In recent years the major focus of the State Water Planning and Review Process has been on natural resources information management. Work has been closely coordinated with the work of the

Data Bank Section to produce a variety of maps and other information useful in addressing the state's natural resources problems. Geographic information systems (GIS) 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. Although alternate approaches are being studied, the work items in this report continue to reflect that emphasis.

The State Water Planning and Review Process work items related to information management are found primarily in Section "D. Basic Planning Activity". Many of the information management products and activities found in this report are in fact co-products of the Department's Data Bank Section and the Planning and Assistance Division. This is a report of planning activities and includes no budgetary material or programmatic information about Data Bank Section initiatives. However, the Data Bank Section does have a major role in almost all of the information management activities listed. The Planning and Assistance Division also cooperates with the Floodplain Management and Dam Safety Division to provide assistance to local community flood mitigation planning efforts. It is also expected that the Planning and Assistance Division's work on water rights mapping will be of direct assistance to the Department's Water Rights Administration Division.

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 was 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 participation in cooperative studies.

1) USGS Streambed Degradation Studies

The Natural Resources Commission was 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 that ended in FY 1999. Agreements to initiate the study went into effect in October 1995 and its scheduled completion date is the end of this month, 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 gradation trends for western Nebraska counties not covered in the other study.

Study products are to include: (1) a GIS data base of potential scour-critical index sites, (2) basin maps of the stage of channel evolution for 17 counties, (3) basin reports on gradation trends and predictive relations on future channel geometry, and (4) separate papers/reports on erosive power, channel response modeling and urbanization study. Because the study final report is to be submitted at the end of this month, this activity will not be included in future annual reports.

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. Staff have participated in many of those studies. Work under the Platte River Cooperative Agreement and work on the Lower Platte Feasibility Study were both initiated in FY 98. 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) Nebraska vs. Wyoming Hydrologic Assistance
- e) 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. Dayle Williamson, now a special assistant to the current Director of Natural Resources, serves as the Nebraska state representative on the governing body for the Agreement and Roger Patterson, the director, serves as his alternate. The program proposes to reduce shortages to target flows for endangered species in the Lexington to Chapman reach of the river 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 is managed by the USFWS (this portion of the program is already in operation because of licensing requirements of the Federal Energy Regulatory Commission and releases were made from that account during much of the summer of 2000), (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; that project will utilize excess flows when available for groundwater recharge which will return to the river at times when flow shortages are more likely. However, these three projects will only supply a portion of the needed water. The remainder would need to be obtained through water conservation and water supply projects. A Water Action Plan that identifies potential projects in all three states to achieve the remaining water objective has been prepared. No projects will be implemented until

additional assessments of their feasibility and impact have been completed. Those assessments will occur during the course of the program if it is fact initiated.

The primary agency work on the Cooperative Agreement has been handled through the Director of Natural Resources, the special assistant, the deputy director of the department, and the agency Legal Counsel. However, planning staff has occasionally worked with committees trying to determine the nature and feasibility of potential water conservation and water supply options.

An additional responsibility under the agreement is for each state to mitigate, offset or prevent any new depletions to the river's target flows as part of the proposed program. This will require development of a mitigation plan that will allow new uses of both surface water and hydrologically connected groundwater to begin as long as the impacts to the target flows are offset. In FY 2000, an outline of a proposed plan was completed and submitted to the Bureau of Reclamation so it could be analyzed as part of the Environmental Impact Statement for the proposed program. That analysis has not yet been completed. Further work on the details of the mitigation plan will continue in FY 2001 and is closely related to work on the Cooperative Hydrology Study discussed elsewhere in this document.

In future fiscal years, Department staff are expected to contribute to continued development of the state mitigation plan, contribute to advancement of the water conservation and supply plan, assist in land use delineation, help with land use and mapping, and review and comment on the 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 Department staff, depending upon future direction from the agreement governing body and Nebraska state officials. It remains to be seen what portion of that Department activity will be carried out by the planning staff. In FY 2000, the Department hired a public information specialist to assist with the process. That position is headquartered in Kearney, Nebraska and provides liaison with interested parties as well as public information dissemination and communication. It is supervised through the Legal Counsel.

The Department is also serving as the agency through which the state's financial obligations for the terms of the Cooperative Agreement are met. The appropriations to the Commission for FYS 1998, 1999, and 2000 for that purpose totaled \$700,000. Of the three year total, \$275,000 is obligated for Nebraska's share of the Water Conservation and Supply Study conducted by Boyle Engineering, Inc. of Denver. That amount also includes Nebraska's share of the costs of other assistance to the states provided by Boyle in the preparation and assessment of the Water Action Plan. The contract for those services terminates at the end of calendar year 2000. Each of the other two states has also entered into a contract with Boyle for the same amount.

The remainder of the \$700,000 appropriated by the Legislature is being used for other expenses approved by the Governance Committee. Among those expenses are the costs of the services provided by the Executive Director, Dale Strickland, a consultant from Cheyenne, Wyoming. So that the negotiated "fair shares" for the costs of the Cooperative Agreement would be provided by each party, revisions have been made in the percentages paid by each for Mr. Strickland's services. Those are now funded 65.79% by the federal government (Department of

Interior), 15.79% by Colorado, 10.53% by Nebraska (down from the original 20% share), and 7.89% by Wyoming. Nebraska's share of those and related expenses the last two fiscal years has been slightly less than \$37,000 in FY 1999 and just over \$48,000 in FY 2000.

The original deadline for the Cooperative Agreement (July 1, 2000) has already been extended until the end of the year. Shortly before this report was prepared, the federal agencies informed the states that they were not going to be able to complete the draft EIS on schedule so a further extension will occur. The length of that extension is not presently known, but could be as long as 2 years. Whatever the length, there will be ongoing expenses to be shared by the states and the federal government. However, at this time it appears sufficient funds remain from the original appropriation of \$700,000, if the unexpended balance is reappropriated, to pay the Nebraska portion of those expenses in FY 2001, 2002 and 2003. The agency is however requesting funds for other related activities within Nebraska that would help the state and its citizens assess and prepare for a program if one is later initiated.

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 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 NE.
5. Establishing credible models.
6. Using models.

The Department of Natural Resources is one of the 10 project sponsors of the study. The others are the Central Platte, Twin Platte, Tri-Basin, North Platte, and South Platte and Upper Big Blue NRDs, Game and Parks Commission, 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 DNR's official representative and a member of the technical staff coordinator's committee. That Committee drafted the work plan and advises the sponsors on

technical matters. Total scheduled NDNR effort on the study is expected to have a value of \$304,337, although \$245,800 of that amount is for past work by the Natural Resources Commission's Survey and Photogrammetry Section on baseline groundwater elevations and thus is technically outside the planning process. That work involved surveying locations and elevations of groundwater monitoring wells to help establish the current water table. The Commission received payment for \$97,900 of that work, while the remainder was in-kind effort. Other Department work involved 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 Department is housing and supervising contract staff involved in the database development portions of the study.

In FY 2000, Commission planning staff continued to meet with other sponsors to help review and direct progress. The Commission reached an agreement with the Hydrology Sponsors to provide office space, supplies, guidance and supervisory assistance for a GIS/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 GIS 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 NDNR hardware and the NDNR web server will be used to deliver information to the public.

In FY 2000, the agency provided extensive programming support to help develop the geologic layers for the ground water model. Programming support was also provided in developing the grid to be used to distribute the land use information developed by CALMIT for the study. Additional support was provided through participation on the Technical Committee to continue to organize and direct work efforts of the various contracts for the study. The planning staff member was also on the Contract Committee to review contract details and on the Hiring Committee to review the applicants for the modeler's positions that were hired for the study.

Outputs of these efforts included developing contracts with USGS to provide the services of a senior modeler and hiring four other modelers that were stationed in Grand Island, Holdrege, North Platte and Scottsbluff. The land use inventory developed by CALMIT is nearly complete as is the recharge model in progress by Dr. Darrel Martin. Programming support will be provided in FY 2001 to integrate these two sets of information into the pumpage and recharge components of the models.

Also in FY 2001, a routine to estimate the historical distribution of land uses will be developed by NDNR staff and the committee assignments will also continue.

A new three-year grant application (being referred to as COHYST II) has been submitted to the Nebraska Environmental Trust to enhance and improve the usefulness of the models developed with the first COHYST grant. If funded the project combines multiple projects by individual agencies and governmental units into one uniformly coordinated basin-wide project.

The project application is in excess of \$4 Million of which over half will be paid for by in-kind services of the project sponsors and in some cases the contracting agencies. NDNR

would contribute at a level consistent with the previous grant. The roles of NDNR staff would be similar to efforts in the first Nebraska Environmental Trust grant for COHYST. Projects will be designed and coordinated through participation in the Technical Committee. One new modeler would need to be hired for the project so some effort in the Hiring Committee will continue. Contracts for the new projects will need to be developed and agreed upon through work on the Contract Committee. Overseeing the databases, GIS coverages, and website development would continue at the same level also by the Planning and Assistance staff member assigned to this project. Depending on the level of the grant and the accepted projects, the Survey and Photogrammetry Section of NDNR might do additional GPS work on a 50-50 cost share basis for the project also.

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 Department, cooperators include: the Lower Platte South NRD, the Pappio-Missouri River NRD, the Lower Platte North NRD and the Lower Platte River Corridor Alliance. The Department 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 has solicited public suggestions on natural resources management issues for the area and is addressing water quality, land use and public policy concerns in the watershed. Department work has included extensive cross-sections, surveys and mapping that were provided by what is now the Department's Floodplain/Dam Safety/Surveys Division. Past Planning assistance has included supervisory assistance for creating GIS products for the area, website assistance, assistance to the Corps in compiling community flood mitigation plans, and assistance in environmental evaluation. Along with the Corps and the Lower Platte South NRD, the Department 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 2000

The final scheduled agency survey, mapping, cross section, and field survey bridge information work was completed in FY 2000. Cross section work was completed from near the Dodge-Colfax County line to the Columbus area during the fiscal year. Most in-kind planning assistance on the GIS portion of the study was also completed. Through December 1999 the Natural Resources Commission provided office space and assistance for a position hired under contract for the feasibility study by the Lower Platte South NRD. A variety of resource related maps that can be used to illustrate the assets, problems, and potentials of the Lower Platte River Corridor were produced. That work was completed in December 1999. Agency staff also continued to provide

assistance on the environmental portion of the study throughout the period. Assistance on compiling community flood mitigation plans began midway through FY 1999 and is likely to continue through the remainder of the study. Staff made presentations on flood mitigation planning and other study aspects at a number of public meetings. Commission in-kind work also continued as did work on study administration, co-sponsorship and coordination.

Much of the Corps work on the Lower Platte River and Tributaries Feasibility Study was centered on potential projects for the Sand Creek Watershed and for the Western Sarpy Clear Creek reach of the Lower Platte. In May 2000 the Corps released a Draft Feasibility Report/EIS for the Sand Creek Watershed Environmental Restoration project. In late August, 2000 the Corps was also released a draft interim feasibility report/EIS for the Western Sarpy County – Clear Creek project. That project is intended to address complex flooding concerns along that reach of the river. Corps timing was in part directed by local sponsor needs in meeting deadlines for potential inclusion in the Water Resources Development Act.

Examination of several potential environmental restoration projects also continued. Potential projects at Schilling Chute / Plattsmouth, and Vencil's/Glasshoff Island were considered as well as the larger Sand Creek watershed environmental restoration project. The Vencil's/Glasshoff Island project was eventually dropped from further consideration by the Papio-Missouri River NRD Board. However, that NRD has recently begun working with the Corps on examination of another potential environmental restoration project at a sand and gravel pit site in the Western Sarpy County-Clear Creek reach of river.

Two major contract studies were completed in FY 2000. These included "*A Public Policy Study for the Lower Platte Corridor Region*" completed in April 2000, and "*Water Quality Investigation, Lower Platte River Feasibility Study*" completed in 1999.

Work Scheduled in FYs 2001 – 2002

Some work on delineation of flood boundaries is scheduled to continue into FY 2001. In both FY 2000 and 2001 Department Flood Plain/Dam Safety/Surveys Division 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 Department administered Flood Mitigation Assistance Program. Department assistance on environmental restoration, some GIS items and study coordination / administration / sponsorship duties are expected to continue through study completion

Completion of work on the Western Sarpy – Clear Creek and Sand Creek portions of the feasibility study during FY 2001 should free up Corps resources to begin work on remaining feasibility study components. These are likely to include the remaining structural elements at Union Dike and South Fremont as well as previously mentioned non-structural elements.

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 between Columbus and Plattsmouth. 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 Department has provided the Alliance with assistance on their web page. There is also very limited financial support of the Alliance by the Department and other state agencies.

Alliance activities in FY 2001 are to include formation of a local government committee which will review the recently completed *Public Policy Study* for potential policy changes local governments may wish to consider.

e) Assistance in North Platte River Legal Interaction Between Wyoming and Nebraska

In FY 2000, Nebraska reached an out of court settlement of the Nebraska vs. Wyoming lawsuit. The exact final details of that settlement still need to be worked out and additional Nebraska Department of Natural Resources staff may be needed for that process. In FY 2000, the former Commission Comprehensive Planning Section staff provided some Platte River modeling work for the former DWR's consultants. The Department of Natural Resources Planning and Assistance Division staff may play some future role in developing information needed for implementing the settlement.

f) Environmental Assessment Assistance Related to Glendo Reservoir Irrigation Contracts

Local irrigation districts involved in assembling environmental assessments for use in contract renewals for Glendo Reservoir irrigation water are scheduled to receive some NDNR assistance in FY 2001. Those assessments are likely to be closely related to environmental impact analysis work being done for the Platte River Cooperative Agreement.

3) Republican River Basin Cooperative Activities

Natural Resources Commission planning staff participated in a variety of activities/studies dealing with the Republican Basin in FY 2000. 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. This had been an ongoing annual assistance program for the Upper Republican NRD since 1992 and it is anticipated that planning staff will continue with saturated thickness mapping and critical township calculations in future fiscal years also.

In a separate activity the new Department of Natural Resources, including Planning and Assistance Division staff will be working with the Governor's Republican River Council to help local citizens address concerns in that basin.

4) Floodplain Planning Activity

The Flood Mitigation Assistance (FMA) program provides planning grants in order to assist communities through the process of how to plan for reducing flood problems and vulnerabilities. Once the planning process is complete, there are project funds available through the FMA program to help pay for certain types of projects identified in the community's plan. There are two main benefits: 1) reducing future disaster assistance payments and flood insurance claims through planning and mitigating problems now, and 2) instilling a sense of community planning which will be in the back of the minds of local decision-makers as future developments are proposed. Although the FMA program is administered through the Department of Natural Resources Floodplain/Dam Safety/Surveys Division, it is discussed in this report because of the major planning implications it has for Nebraska communities.

The last twelve months have been busy ones for administering the FMA program and starting flood mitigation plans. Last August, Burt, Washington, and Douglas County were declared Presidential disaster areas due to an intense storm which dumped up to ten inches of rain in about twenty-four hours. As a result of this storm, the communities of Tekamah, Fort Calhoun, and Omaha became interested in developing a flood mitigation plan. The plan to be started in Omaha is for the Cole Creek watershed, which is where the only flood-related death occurred last August. The City of Omaha is supplying in-kind contributions from their engineering or public works departments for their plan. A Fort Calhoun residence that was substantially damaged (more than 50% of market value) is in the process of being acquired and, once completed, the land will be turned over to the City to be maintained as open space.

As exciting as these new plans are, even more exciting are the amount of the money the NDNR has received for planning and the number of partnerships we have developed with other state and federal agencies. Through the Nebraska Emergency Management Agency, the Department of Natural Resources has received approximately \$450,000 of Hazard Mitigation Grant Program funds from the Federal Emergency Management Agency for completing flood mitigation plans. With these funds, plans have already been started in Fort Calhoun, Tekamah, Ponca, Milford, and contracts are being negotiated with Arlington and North Platte. Arlington was also impacted by the flooding from last year, and North Platte has 25% of Nebraska's flood insurance policies, the most of any single community in the state.

Community Development Block Grant (CDBG) funds from the Nebraska Department of Economic Development are being used to complete the flood mitigation plan for the Village of DeWitt. This plan has been more complex than usual because more engineering analysis has been needed to assess the extent of changes in the floodplain caused by the construction of dams in the Swan Creek watershed.

The working relationship between the NDNR and Corps of Engineers has also strengthened through the use of CDBG funds channeled through the NDNR in order to match the

Corps' Section 22 Planning Program funds. With this partnership, we have started a flood mitigation plan for the Sarpy County side of the Platte River from the mouth to the Hawaiian Village development. This plan also addresses Sarpy County's desire for some flood planning in order to reduce the cost of flood insurance premiums for floodplain residences.

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

Work on the three-year study "*Nitrate and Nebraska's Small Community and Rural Domestic Water Supplies: An Assessment of Problems, Needs and Alternatives*" was completed in early FY 2000 and the study was published in December 1999. The study provides 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

6) Assistance to NRCS on Buck and Duck Basins Watershed Project Planning

In December 1999 an agreement was reached with the Natural Resources Conservation Service and the Nemaha NRD for NRC to provide assistance on the economic analysis portion of a study of the Buck and Duck watershed in southeast Nebraska. A Plan of Work has been drafted describing the scope and intensity of the study. Portions of the data collection and computer modeling activities have been completed. Progress has been slow due mostly to scheduling conflicts. Most if not all of the work should be completed in the next 12 to 15 months.

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:

- Nebraska Resources Development Fund Reviews
- Waste Reduction and Recycling Grants Review Board
- Environmental Trust Advisory Committees
- Geographic Information System Steering Committee and Subcommittees
- Western Governor's Association Geographic Information System Council
- Nebraska Forestry Stewardship Committee
- State Pesticide Management Plan Advisory Committee
- Climate Assessment and Response Committee
- Other Reviews
- Future Activity

1) Nebraska Resources Development Fund Reviews

In FY 2000 the Natural Resources Commission took final action on two project applications by the Lower Platte South NRD. In October 1999 they approved the Stevens Creek Watershed project for 60% funding and in December 1999 they approved the Weeping Water Creek Site 7 G Project for 50% funding. The Weeping Water Creek Site 7G project funding was contingent upon the NRD reaching an agreement with the Cass County Board of Commissioners concerning county road closure. An agreement was not reached and the NRD has subsequently suspended activity on the project.

Although there were no new project applications during the fiscal year, staff did give consideration to five initial project proposals. Those included: 1) Lake Ericson rehabilitation and recreation development, 2) Little Sandy Creek Watershed Project, 3) Rushville village flood control, 4) Stage Creek Dam, and 5) Upper Prairie, Silver and Moore's Creek flood control.

2) Waste Reduction and Recycling Grants Review Board

One NDNR staff member serves on the Department of Environmental Quality's Waste Reduction and Recycling Review Board. The Board's review is used to assist the Director of the Department of Environmental Quality in making grant funding decisions.

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

4) 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 developed DOQs to the U.S. Geological Survey standards and the NDNR is developing a digital soils database to USDA/NRCS Soil Survey Geographic database (SSURGO) standards. Department staff continue to attend and contribute to steering committee meetings.

5) Western Governor's Association Geographic Information System Council

A NDNR Planning and Assistance Division Staff member serves as the Nebraska representative to the Western Governor's Association GIS Council. The Council was formed in the spring of 1999 to advise the governors on regional GIS issues and needs. In FY2000, the Council drafted resolutions in support of Global Positioning System Modernization (PR00-004), the Public Land Survey System and Ownership Database (PR00-005), and NASA State and

Local Government Remote Sensing Data & Technology Initiatives (PR00-006), all of which were adopted on June 13, 2000. The council also sponsored a Cadastral Data and Policy Forum for the Western Region, drafted an MOU with NASA designed to improve the use of remote sensing/satellite imagery in the states, and worked with USGS to expand testing of a Hazard Support System throughout the states.

In FY2001, the council will continue to work on cadastral issues, the NASA partnership, and the hazard Support system. In addition, the council will promote the development of a Western Region GIS Information Clearinghouse.

6) Nebraska Forestry Stewardship Committee

A Department 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. These activities required only very limited time.

7) State Pesticide Management Plan Advisory Committee

A planning staff member was assigned to assist the State Pesticide Management Plan Advisory Committee starting in FY 2000. The Commission's primary responsibility in FY 2000 was to provide technical assistance in the areas of database and GIS development and website distribution. In future years a DNR planning staff member will continue to serve on the committee, although likely in a more general advisory capacity.

8) Climate Assessment and Response Committee

The Climate Assessment and Response Committee (CARC) was particularly active in FY 2000 due to the drought conditions that prevailed throughout much of the state. The Director of Natural Resources is a member of the committee which meets periodically 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 NDNR staff member also serves as a Co-Chair of a subcommittee of CARC; the Agricultural, Natural Resources, and Wildlife Subcommittee. This subcommittee has been meeting on a regular basis and has provided input to the Nebraska Drought Plan currently under review. Another staff member has worked with the Municipal Water Supply, Health, and Energy Subcommittee.

One NDNR staff member also serves on another subcommittee of CARC; the Moisture Availability and Outlook Committee. That subcommittee 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.

9) Other Reviews

In late FY 2000 and early FY 2001 planning staff reviewed either draft feasibility reports/EIS documents or preliminary draft reports for a number of federal studies. These included the preliminary draft Western Sarpy Clear Creek feasibility study and the draft interim feasibility report / EIS for the Sand Creek Watershed Environmental Restoration. Planning staff also occasionally provide limited review of NRD groundwater management plan revisions, NRD long range implementation plans or NRD Master Plans.

10) Future Activity

The new Planning and Assistance Division has staff that work on additional committee/review assignments not included in previous reports such as interstate organizations and compacts. These may be included in future annual reports.

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 was the focus of much of the Natural Resources Commission's water planning effort. In addition to providing information to other agencies and interests, work in this activity was also used to support general planning activities, administer the planning process and review projects and plans. Although future fiscal years may see an increasing emphasis on other types of planning activity, data base management and mapping activities are expected to remain a vital part of the Department's planning program.

Planning Information Base - General

General

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 GIS environment. This includes data on soil characteristics, land use, surface and ground water 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 NRD management as well as city and county services and tax assessment.

ARC/INFO, ARC VIEW 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 agency 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 NDNR'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 99 and a second updated version of those DEMs is now anticipated. Among other uses, these DOQs and DEMs are being used by Department 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. Future work on updating DEMs-DOQs should help to expand future use and assist in future floodprone area mapping.

The Department 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 Flood Plain/Dam Safety/Surveys 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. GPS technology is the basis for NDNR's survey and photogrammetry operations.

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 NDNR actively supports the development and use of statewide databases freely available for the use of a host of government agencies. To that end, the NDNR has aggressively populated its world wide web server accessible through the Internet with easily available up-to-date information in both graphic and tabular forms. For those not having Internet connections a modem connection using SLIP/PPP technology can provide the same access to the information.

Planning in Formation Base – Work Completed and Planned

1) Digital Elevation Modeling – Digital Orthophoto Quadrangles

In FY 1999 the Natural Resources 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 NDNR'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 Section.

In FY 2001 the DNR will initiate an update of DEMs and DOQs that will use newer photography and provide a more up to date base for future uses. The newer imagery is actually required for some uses, such as Federal Emergency Management Agency floodplain mapping standards.

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 Department. Both the NDNR Planning and Assistance Division and its 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 NDNR offices to work on the project. At the end of August 2000, about 47 counties had been completed and certified, another three counties had been digitized, and five counties had been updated.

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 project was completed in FY 2000. The results have been used for a variety of additional projects ranging from calculating depth to water (and locating wetlands) in a joint project between NRC and the Rainwater Basin Joint Venture to helping NRDs developing farm terraces. Other known uses have been to help in the delineation of the watershed boundaries.

4) Tagged Vector Cleanup

The Tagged Vector Coverage has been completed. However, there are a number of errors in the data that should be corrected. They are very small (usually around quad boundaries) and did not affect the DOQ production so were disregarded earlier. With this ARCINFO coverage, the errors are more noticeable now and so are being corrected. This is an ongoing project that is worked on when time is available. Output uses are the same as the Tagged Vector Coverages except these coverages have improved accuracy and are subsequently more valuable and reliable. An additional use of this product is the Flood Prone Area Mapping initiative.

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 NDNR 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 Flood Plain/Dam Safety Division.

In FY 2000 Nuckolls and Thayer counties were used as test cases and completed with the new process. In FY 2001 a contract with the Federal Emergency Management Agency is being finalized and procedures are being formalized. Milestones and deliverables have been identified. Under the new schedule additional counties are to be completed by the end of FY 2001 and four counties per fiscal year should be completed in future fiscal years.

5) 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 to meet national standards. The NDNR may contract with them to assist in this effort. Additionally, as more detailed maps become available, boundaries may be changed to improve this information.

This product has been used in the Flood Prone Area Mapping initiative as well as being a valuable layer for base maps. Most surface water maps developed by the Data Bank Section staff will probably use this layer to show boundaries and flow directions by watershed. This layer can also be used to display NDNR basic units or division boundaries, DEQ water quality stream reaches, NRCS and USGS hydrologic units, G&P stream fishery resource classifications and drainage areas of streamflow gage information.

6) Groundwater Level Website

The Department and U.S. Geological Survey have an annual agreement by which USGS produces an annual groundwater levels report and the NDNR provides limited financial support

and places the material on the world wide web in an easily searchable format. Most of the agency work on the project has been provided through the Data Bank Section. However, financial support has been provided through planning funds.

7) 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 create the township coverage.

8) Web Page Revision / Maintenance

The NDNR planning staff has worked with the Data Bank Section to create a new NDNR web site that reflects the combined information from the Commission's and the DWR's web sites. This is an ongoing process and updating and continued maintenance will continue on a regular basis.

9) Support of Other Government Agency Computer / Web Operations

In the past Commission planning section staff, in conjunction with Data Bank Section staff 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. There are likely to be future discussions about the proper assistance role in the new NDNR. Agencies assisted by the planning staff in varying degrees in past years 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 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
UNL Water Center
U.S. Geological Survey
U.S. Army Corps of Engineers

10) Map Production / Study Support / In Agency Support

Because of agency GIS capabilities the Department's Data Bank Section and Planning and Assistance Division 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 Department participates. Planning staff also provide some computer and database support to other Department divisions. All of these activities are expected to continue on an as needed basis.

11) 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. NDNR staff have met with USGS personnel to discuss the compilation of the water use data report for 2000. Some preparatory and initial work on that effort is expected in FY 2001.

12) Other Activity

Other planning section work in basic planning activity has included the acquisition, cataloging, and maintenance of Landsat TM terrain corrected data for landuse/landcover planning activities. This data is acquired from the EROS Data Center. The NDNR has Landsat data that includes complete statewide coverage for 1991-1993 and partial coverage of the state for 1997. The DNR has examples of this information available on it's web site and has made this data available to other federal, 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) evaluation of potential effects of agency consolidation, 2) agency environmental education activities, and 3) printing and mailing costs.

1) Consolidation of the Nebraska Department of Water Resources and the Nebraska Natural Resources Commission

On July 1, 2000 the Nebraska Department of Water Resources and the Nebraska Natural Resources Commission merged to form one agency. This was the culmination of a process which began in response to a May 18, 1999 letter in which Governor Mike Johanns asked Dayle Williamson, Director of Natural Resources and Roger Patterson, Director of the Nebraska Department of Water Resources to *“carry out an evaluation of the potential consolidation of your agencies.”* Governor Johanns specified that: *“the purpose of this effort is to provide the best possible service to our constituents. We need to get the most of the resources available to us by eliminating overlap, focusing on priorities, and finding the most efficient way possible to provide customer service.”*

In response, the directors compiled a November 1999 report entitled *“An Evaluation of the Potential for Consolidation of the Nebraska Department of Water Resources and the Nebraska Natural Resources Commission”*. That report found that consolidation would generally have a positive effect in the subject areas mentioned by the governor, especially in terms of providing more efficient service to constituents. Subsequently passage of LB 900 in the 2000 session of the Unicameral resulted in official merger of the agencies on July 1, 2000.

The merger did result in both organizational and physical changes. The Natural Resources Commission’s Comprehensive Planning Section was merged with the water rights mapping, stream gaging and interstate stream analysis functions of the Department of Water Resources to form a Planning and Assistance Division in the new agency. In early FY 2001 some initial contacts were made with constituents to determine how the planning and assistance functions of the new agency might better serve constituents.

2) 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 - About 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.

3) Printing and Mailing Costs

Printing and mailing costs were minimal in FY 2000 and are expected to remain so in future fiscal years.

V. BUDGETARY TABLES

NOTE: The following tables include only the Budget for the staff positions and budgetary categories included within the Nebraska State Water Planning and Review Process in past years. The merger between the Natural Resources Commission and Department of Water Resources on July 1, 2000 has resulted in a "Planning and Assistance Division" which contains additional planning oriented staff and budget not included in previous reports. Those budget categories are not included in this year's report, but may be in future years.

Table 1
 PLANNING AND REVIEW PROCESS EXPENDITURES - FY 2000

	310	334	Total
Problem Analysis and Area Planning - 23 County Streambank Erosion and Streambed Degradation Study	\$5,000	----	\$5,000
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	16,402	16,816	33,218
Basic Planning Activity - Computer Software	----	112	----
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	1,319	7,858	9,177
Coordination, Administration & Management - Printing and Mailing	5,331	5,933	11,264
USGS Groundwater Levels	6,074	----	6,074
Basic Planning Activity - Intergovernmental Contract with NRCS	31,495	----	31,495
Staff and Other Support Including Travel	103,007	539,784	642,791
Platte River Cooperative Agreement	----	167,958	167,958
TOTAL	\$168,629	\$867,032	\$1,035,661

Table 2
 PLANNING AND REVIEW PROCESS BUDGET - FY 2001

	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	----	5,416	5,416
Basic Planning Activity - Computer Hardware	68,625	5,765	74,390
Basic Planning Activity - Computer Software	4,000	----	4,000
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	3,000	8,000	11,000
Coordination, Administration & Management - Printing and Mailing	5,700	6,050	11,750
Basic Planning Activity - Intergovernmental Contract with NRCS	33,075	----	33,075
USGS Groundwater Levels	8,400	----	8,400
Staff and Other Support Including Travel	115,333	575,534	690,867
Platte River Cooperative Agreement	----	365,820	365,820
Relocation Expense – Computer Related	36,076	----	36,076
Relocation Expense – General	45,000	----	45,000
TOTAL	\$319,209	\$1,091,585	\$1,410,794

Table 3
 PLANNING AND REVIEW PROCESS BUDGET - FY 2002

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	----	5,578	5,578
Basic Planning Activity - Computer Hardware	70,684	5,938	76,622
Basic Planning Activity - Computer Software	4,120	----	4,120
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts, and Data Processing	3,090	8,240	11,330
Coordination, Administration & Management - Printing and Mailing	5,871	6,232	12,103
Basic Planning Activity - Intergovernmental Contract with NRCS	34,067	----	34,067
USGS Groundwater Levels	8,652	----	8,652
Staff and Other Support Including Travel	116,476	579,861	696,337
Platte River Cooperative Agreement	----	170,000	170,000
TOTAL	\$242,960	\$775,849	\$1,018,809

Table 4
 PLANNING AND REVIEW PROCESS BUDGET - FY 2003

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	----	5,745	5,745
Basic Planning Activity - Computer Hardware	72,805	6,116	78,921
Basic Planning Activity - Computer Software	4,244	----	4,244
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	3,183	8,487	11,670
Coordination, Administration & Management - Printing and Mailing	6,047	6,419	12,466
Basic Planning Activity - Intergovernmental Contract with NRCS	35,089	----	35,089
USGS Groundwater Levels	8,911	----	8,911
Staff and Other Support Including Travel	117,653	584,337	701,890
Platte River Cooperative Agreement	----	160,000	160,000
TOTAL	\$247,932	\$771,104	\$1,019,036

Table 5
 PLANNING AND REVIEW PROCESS BUDGET - FY 2004

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	----	5,917	5,917
Basic Planning Activity - Computer Hardware	74,989	6,300	81,289
Basic Planning Activity - Computer Software	4,371	----	4,371
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts, and Data Processing	3,278	8,742	12,020
Coordination, Administration & Management – Printing and Mailing	6,228	6,612	12,840
Basic Planning Activity - Intergovernmental Contract with NRCS	36,142	----	36,142
USGS Groundwater Levels	9,178	----	9,178
Staff and Other Support Including Travel	118,866	588,939	707,805
Platte River Cooperative Agreement	----	160,000	160,000
TOTAL	\$253,053	\$776,510	\$1,029,563

Table 6
 PLANNING AND REVIEW PROCESS BUDGET - FY 2005

	310	334	Total
Problem Analysis and Area Planning - Platte River Alliance	----	6,095	6,095
Basic Planning Activity - Computer Hardware	77,239	6,489	83,728
Basic Planning Activity - Computer Software	4,502	----	4,502
Basic Planning Activity – Computer Licensing, Access Fees, Maintenance Contracts and Data Processing	3,376	9,004	12,380
Coordination, Administration & Management - Printing and Mailing	6,415	6,810	13,225
Basic Planning Activity - Intergovernmental Contract with NRCS	37,226	----	37,226
USGS Groundwater Levels	9,453	----	9,453
Staff and Other Support Including Travel	120,115	593,677	713,792
Platte River Cooperative Agreement	----	160,000	160,000
TOTAL	\$258,328	\$782,075	\$1,040,403

Table 7

PLANNING & REVIEW PROCESS EXPENDITURES FY 00 AND BUDGET FYs 2001-2005

	FY 00 Expenditures			FY 01 Budget			FY 02 Budget			FY 2003 Budget			FY 2004 Budget			FY 2005 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	103,007	65,622	168,629	115,333	203,876	319,209	116,476	126,484	242,960	117,653	130,279	247,932	118,866	134,187	253,053	120,115	138,213	258,328
Program 334	539,784	327,248	867,032	575,534	516,051	1,091,585	579,861	195,988	775,849	584,337	186,767	771,104	588,939	187,571	776,510	593,677	188,398	782,075
TOTAL	642,791	392,870	1,035,661	690,867	719,927	1,410,794	696,337	322,472	1,018,809	701,990	317,046	1,019,036	707,805	321,758	1,029,563	713,792	326,611	1,040,403