



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 the Nebraska Department of Natural Resources

September 2015

I. INTRODUCTION

Authority

The Nebraska State Water Planning and Review Process was initiated in 1978 to redirect and accelerate Nebraska's water planning efforts. This is a report of the Director of the Department of Natural Resources and is submitted in compliance with *Neb. Rev. Stat.* §§ 2-1599 and 2-15,106.

Nebraska Revised Statute § 2-1599 provides that:

In order to provide for the effective conservation and management of Nebraska's water resources, the legislature hereby endorses the concept of a state water planning and review process. The purpose of this planning process shall be to coordinate and direct the planning efforts of the state agencies and university divisions with the responsibilities and interest in the water resources field. This interagency planning process shall be designed to: (1) Provide the Legislature and citizens of Nebraska with information and alternative methods of addressing important water policy issues and area-wide or statewide water resources problems; (2) provide coordinated interagency reviews of proposed local, state, and federal water resources programs and projects; (3) develop and maintain the data, information, and analysis capabilities necessary to provide state agencies and other water interests with a support base for water planning and management activities; (4) provide the state with the capacity to plan and design water resources projects; and (5) conduct any other planning activities necessary to protect and promote the interests of the state and its citizens in the water resources of Nebraska.

The Department of Natural Resources (Department) utilizes several of its program areas to implement *Neb. Rev. Stat.* § 2-1599. Implementation focuses on the following objectives:

1. Maintain data, information, and analysis capabilities for water planning, including specific programs for collecting, maintaining, and distributing information on streamflows, as well as analyzing water uses and water supplies across the state;
2. Provide staff and resources to support planning and implementation of water resources projects;
3. Support locally developed water management plans for managing hydrologically connected water supplies;
4. Provide resources to map and identifying areas vulnerable to flood damage; and
5. Provide coordination of federal agencies, state agencies, local natural resources districts (NRDs), and other water interests for the development of water resources programs and projects.

Purpose

The purpose of the Department's Annual Report and Plan of Work document is to fulfill the Department's obligations under *Neb. Rev. Stat.* §§ 2-1599 and 2-15,106. This document provides information on several key areas of Department water planning activities, including current and future activities regarding information, data, and analysis capabilities, as well as water resources planning and management. The *summary of previous work completed* component of this report details Department activities that aided in achieving those goals over the previous year. The *future activities* component of this report details how various Department programs work towards achieving the Department's goals of implementing its authorities and related statutes; acquiring, summarizing, and disseminating water related data; increasing interagency collaboration; and utilizing planning to recognize water management opportunities.

This document contains only activities pertaining to the Department's authorities and does not include independent activities or authorities of other local, state, or federal agencies. The Department's authorities do not include water quality, groundwater management, or management of public drinking water supplies; these authorities lie with other local or state agencies. The Department does coordinate with agencies when a nexus of authorities occurs, such as in integrated management planning and floodplain planning.

To accomplish its water planning objectives, the Department primarily utilizes staff from the Integrated Water Management and Engineering Programs and Services Divisions, with support from five field offices located across the state. Department divisions contribute to and support water planning activities in a collaborative effort in order to achieve planning objectives.

Report Outline

The general report format utilizes the river basin framework to provide an update on Department water planning activities for the previous fiscal year, and near-term future activities in regard to its information, data, and analysis capabilities, as well as its water planning and management activities. The document provides a description of statewide activities as well as specific activities occurring in the various basins throughout the state. The basins in this document include: 1) the Big Blue-Little Blue River Basins; 2) the Lower Platte River Basin, 3) the Missouri River Tributary Basins; 4) the Niobrara-White-Hat River Basins; 5) the Republican River Basin; and 6) the Upper Platte River Basin, as shown in Figure 1 below:

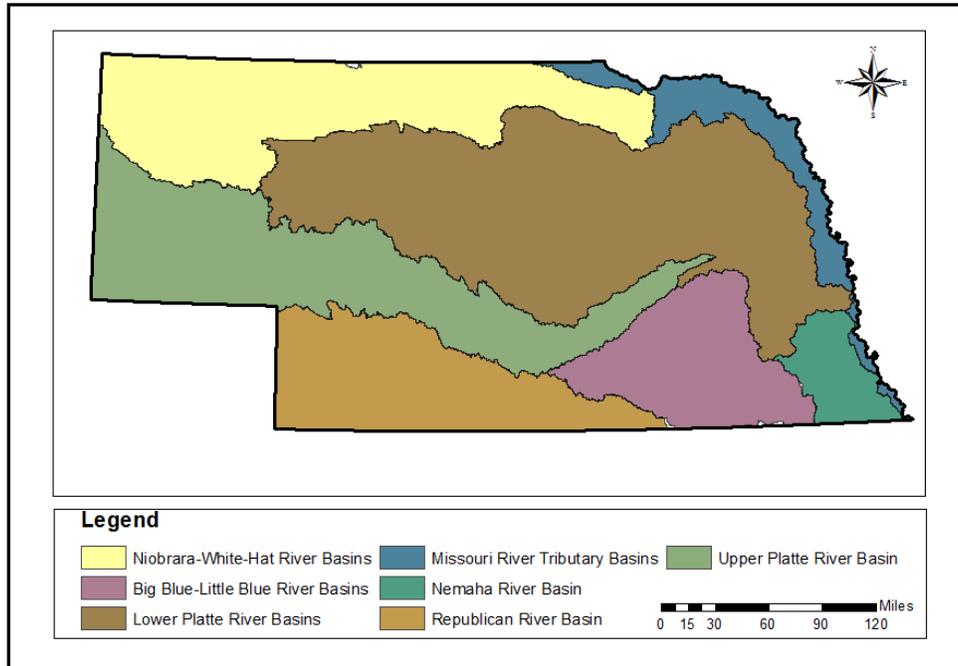


Figure 1: Nebraska River Basins

The Statewide section and each basin section are divided into two subsections: *Synopsis of 2014 Activities* and *4-Year Work Projection*. These sections provide a summary and analysis of previous fiscal year events that aided in the achievement of Department objectives, as well as planned work for the succeeding four years. These sections contain information pertaining to the Department’s data and analyses capabilities, planning activities, and management activities.

Additionally, the Statewide section contains an update on the Department’s objectives related to interagency coordination, as well as management alternatives and project development. These two sections are discussed in the Statewide section as the Department strives to develop and implement consistent protocols and metrics for interagency coordination across the state, as well as assist in the development of management alternatives and projects.

II. STATEWIDE

Synopsis of 2014 Activities

Interagency Coordination

The Department has contracted with the Public Policy Center of the University of Nebraska for assistance in considering its internal operations with regard to water planning, and to begin assessing potential methods of iteratively building a strategic planning process that can be used to gather input, produce needed information, and provide a framework for addressing future state-level water planning needs.

The Department continues to collaborate with the Public Policy Center of the University of Nebraska to improve its water planning, stakeholder engagement, and public participation processes. The Public Policy Center will assist the Department in evaluating its internal operations in regard to water planning and begin to assess potential methods of iteratively building a strategic, state-level planning process. This collaboration is also important to the Department's efforts to effectively disseminate water-related information pertinent to water management entities and the public.

The services provided by the Public Policy Center allow the Department to evaluate how it interacts with the public through a variety of tools including the NASIS survey, focus groups, and other directed surveys. Groups surveyed include the general public, water managers, and other state agency personnel. This type of information will allow the Department to assess its effectiveness in how it provides information to the public and other entities, how useful others find this information, and how to engage a larger sector of the public. After evaluation of the surveys and focus groups, the Public Policy Center will work with the Department to formulate options to effectively increase public outreach and participation through the planning process.

The Department initiated increased efforts to engage with stakeholders in statewide planning. This included the development of a summary brochure aimed at clarifying the roles of various water management agencies within the state. Additionally, the Department committed to support increased communication with these agencies by establishing a communications director. One key role of this position is to coordinate with the variety of water agencies and key stakeholders in order to foster better communication on water related issues.

The Department continues to dedicate resources toward the development of water management projects and management alternatives. These efforts largely fall under the authorities of the integrated management responsibilities of the Department. The Department has played various roles in the development, design, and implementation of management alternatives. The Water Resources Cash Fund is used to support water management efforts in fully appropriated or overappropriated basins. These funds can be utilized to aid management actions taken to reduce consumptive uses of water, or to enhance streamflows or groundwater recharge. Through the use of funds made available by the Water Resources Cash Fund, the following are examples of projects that the Department has partnered on with local NRDs since 2009:

- The J-2 Regulating Reservoir
- Development of conjunctive management projects on the Cozad Canal, Orchard-Alfalfa Canal, and Thirty-Mile Canal
- Temporary surface water and groundwater leases
- Obtaining permanent conservation easements
- Recharge projects
- Augmentation projects such as North Dry Creek and N-CORPE

The Department’s statewide water planning activities have centered on acquiring relevant water data, summarizing and analyzing the information, using the information for planning and management activities, and providing that data and information in an easily accessible format to the public. Water-related information, such as stream gage measurements, water use diversions, land cover, stream locations, etc., are important components to hydrologic analysis, and these types of information are currently scattered throughout a myriad of databases, departments, or other entities. Through its planning and management efforts, the Department has either acquired these types of information, worked with other entities to obtain their data, or has plans to develop and/or acquire such data in the future with the intention of providing this information to water managers and the public in order to aid in water management decisions.

Data Acquisition

The Department maintains various programs to acquire or update databases relevant to water planning activities. Specific statewide programs or activities that aid in water planning are listed below:

- National Hydrography Dataset (NHD)/Watershed Boundary Delineation (WBD)
 - Department staff coordinate stewardship of the NHD and the WBD, which provide a common reference digital hydrographic dataset of surface water features and watershed/basin boundaries
- Water rights delineation and conversion into digital formats
- Nebraska Rainfall Assessment and Information Network (NeRAIN)- A web portal used for the dissemination of statewide precipitation data that is reported by volunteers across the state
- Voluntary surface water use reporting program
- Section corner database to improve digital representations of the Public Land Survey System
- Provide representation for the Nebraska Geographic Information System (GIS) Council and its Sub-Committees
- Statewide Streamflow Gaging Program
- INSIGHT (an Integrated Network of Scientific Information and GeoHydrologic Tools), which is a web portal that provides summarized information on water use and water supply, as well as current and projected future water balances for Nebraska’s basins and subbasins.

Funds to Aid Local Government

The Department administers several funds that support water related management activities, programs, or projects within the state. These include:

- Nebraska Resources Development Fund
- Interrelated Water Management Plan Program Fund
- Water Sustainability Fund

Details regarding the administration of these funds can be found on the Department's website (<http://dnr.nebraska.gov/natural-resources-commission>) and below.

Nebraska Resources Development Fund

The Nebraska Resources Development Act of 1974 created the Nebraska Resources Development Fund (NRDF) to assist with the development and wise use of Nebraska's water and land resources. The NRDF can be used to provide grants or loans to political subdivisions of the state, or an agency of the state, for development projects. The Department is responsible for administering the program, while the statutory authority for approving projects and funding levels rests with the Nebraska Natural Resources Commission (Commission).

Legislation during the 2015 session included changes to this funding program. LB657 appropriated \$3.143 million in General Funds for both the 2016 and 2017 fiscal years and stated the intent that this be continued through the subsequent biennium. The statute also increased Cash Fund authority by \$3 million for both the 2016 and 2017 fiscal years. LB661 included a transfer of cash funds to NRDF from the Water Sustainability Fund of \$3 million in both the 2016 and 2017 fiscal years. The funds continue to be limited to projects approved as of March 30, 2014. These existing projects are: Buck & Duck Creek, Lower Turkey Creek, Pigeon/Jones Creek, Sand Creek Environmental Restoration, Upper Prairie/Silver/Moores Creek, and Western Sarpy/Clear Creek.

Interrelated Water Management Plan Program Fund

The Interrelated Water Management Plan Program Fund (IWMPPF) was created in 2006 with the passage of LB1226, Section 20. This grant program was intended to facilitate the duties delegated to the NRDs by the Nebraska Ground Water Management and Protection Act, and to help offset costs incurred in the performance of those duties. The Department is responsible for administering the program, while the statutory authority for approving projects and funding levels rests with the Commission.

Guidelines for the IWMPPF were originally adopted by the Commission on July 13, 2006, and subsequently revised in November 2006, July 2007, November 2007, January 2009, and November 2009. These guidelines state that previously funded multi-year projects shall have priority in the allocation of each year's available funds. Due to limited available funds in the 2011 fiscal year, the Commission acted to ensure the successful completion of previously approved projects by suspending the consideration of new applications.

The appropriations bill for the 2013-2015 biennium (LB195) stated the Legislature's intent that no new projects were to be approved for funding and that existing projects had to be completed by June 30, 2015. Therefore, the Commission committed a final distribution for fiscal year 2015 of \$353,290.76 (including \$3,290.76 carry forward

funding) to this fund. Approximately \$180,000 will be returned to the state's general fund upon close-out of this fund on June 30, 2015.

Water Sustainability Fund

The Legislature created the new Water Sustainability Fund in LB906 (2014) and defined governance and appropriation in LB1098 and LB1098A. In July 2014, \$21 million was transferred to the fund. In 2015, LB657 re-appropriated the unexpended cash balance of about \$21 million and appropriated \$8 million for both the 2016 and 2017 fiscal years. LB661 provided and stated the intent that \$11 million be transferred to the fund for a minimum of 10 years. The goals of the Water Sustainability Fund are to:

- a) *Provide financial assistance to programs, projects, or activities that increase aquifer recharge, reduce aquifer depletion, and increase streamflow;*
- b) *Remediate or mitigate threats to drinking water;*
- c) *Promote the goals and objectives of approved integrated management plans or ground water management plans;*
- d) *Contribute to multiple water supply management goals including flood control, reducing threats to property damage, agricultural uses, municipal and industrial uses, recreational benefits, wildlife habitat, conservation, and preservation of water resources;*
- e) *Assist municipalities with the cost of constructing, upgrading, developing, and replacing sewer infrastructure facilities as part of a combined sewer overflow project;*
- f) *Provide increased water productivity and enhance water quality;*
- g) *Use the most cost effective solutions available; and*
- h) *Comply with interstate compacts, decrees, other state contracts and agreements and federal law.*

The Legislature found that these goals can be met by equally considering programs, projects, or activities in the following categories:

- a) *Research, data, and modeling;*
- b) *Rehabilitation or restoration of water supply infrastructure, new water supply infrastructure, or water supply infrastructure maintenance or flood prevention for protection of critical infrastructure;*
- c) *Conjunctive management, storage, and integrated management of ground water and surface water; and*
- d) *Compliance with interstate compacts or agreements or other formal state contracts or agreements or federal law.*

It was further stated that the Legislature intended the fund to be equitably distributed statewide to the greatest extent possible for the long-term and to give priority funding status to projects that are the result of federal mandates.

The Department is responsible for administering the program, while the statutory authority for approving projects and funding levels rests with the Commission. Before any applications for funding can be accepted, the Commission and the Department must

define and establish policies and rules for the applications and processes of review and evaluation within the statutory requirements set out in LB1098. Draft rules are presently in the process of public review and comment. It is currently projected that initial applications for project, program, and activity funding will be accepted in early 2016.

Participation in Outside Organizations

The Department participates in various organizations and committees that either directly involve water planning or provide input from the Department's perspective on water quantity related topics. Two of these organizations, the Western States Water Council and the Interstate Council on Water Policy, allow the Department to interact with and share information with other state agencies that administer similar responsibilities. The Department is involved to varying degrees with other organizations, including: the Climate Assessment and Response Committee, Nebraska Carbon Sequestration Advisory Committee, Missouri River Recovery Implementation Committee, and the Lower Platte River Corridor Alliance.

Stream Gaging Program

Stream and canal gaging activities are considered part of the State Water Planning and Review Process. *Neb. Rev. Stat.* §§ 46-227, 46-252, 46-258, 46-261(3), 61-208, 61-209, 61-211, 61-215, and 61-216 authorize and require the Department to measure the quantity of water in the state's streams and canals. Due to the size of the stream gaging network and the importance of accurate, timely streamflow information, significant funding is budgeted for ongoing stream gaging activities.

The Data Collection Program of the Engineering Programs and Services Division oversees data collection procedures, reviews stream gaging records, and ensures that quality control standards are met. The Data Collection Program works in close conjunction with the five Department field offices. The field offices are responsible for making stream gaging measurements, operating and maintaining stream gaging stations and equipment, and for general water administration. Data collected through the stream gaging network is used by the Department to make informed decisions when administering water rights, issuing permits, studying surface water/groundwater interactions, responding to flood emergencies, modeling floodplains, quantifying water supplies and uses, calibrating groundwater models, complying with interstate compacts, and planning for future water demands.

In the previous fiscal year, the stream gaging program implemented an upgrade to its hydrologic data management software. This software upgrade allowed the stream gaging program to implement a continuous record working process that in turn facilitated the release of the Department's new stream gaging website. The implementation of the continuous record working process was necessary to ensure that the current streamflow data was of the highest quality possible.

Floodplain Management

The Department is responsible for handling floodplain management matters for the State of Nebraska. The floodplain section of the Engineering Programs and Services Division coordinates an overall program aimed at addressing the wise use of land that is subject to

flooding. This program includes multiple elements related to hazard mitigation and floodplain management planning.

Technical Assistance

The Department provides technical assistance to communities, state agencies, federal agencies, and the general public on a daily basis. One unique form of technical assistance that the State of Nebraska provides to local floodplain administrators is Base Flood Elevations (BFEs) Determinations. These BFEs allow administrators to make informed floodplain management decisions related to proposed development. During fiscal year 2015, the Department provided 278 BFE Determinations.

The Department also provides technical assistance through outreach and training for local officials. During the last fiscal year, the Department presented on floodplain issues at the Nebraska Floodplain and Stormwater Managers Association (NeFSMA) Annual Conference, Silver Jackets Nonstructural Workshop, NeFSMA Membership Meeting, NeFSMA spring Meeting, the Nebraska Planning and Zoning Annual Conference, and the Association of State Floodplain Managers National Conference. Information booths on floodplain management were exhibited at the Lower Platte River Corridor Alliance Water Quality Open, Husker Harvest Days, and the American Planning Association/Nebraska Planning and Zoning Association Conference. Demonstration booths with the floodplain model were exhibited at the Nebraska City Apple Jack Festival. The section also publishes the NDNR Floodplain Newsletter for local floodplain administrators and other interested parties.

Mapping

The Department identifies and delineates floodplain and floodways using both Federal and State dollars. As of June 30, 2015, the State of Nebraska had completed digital Flood Insurance Rate Maps (FIRMs) for 55 counties and digital Work Maps for six counties. The maps were provided by either or both the floodplain management section and the Federal Emergency Management Agency (FEMA). In fiscal year 2015, flood maps for Waterloo in Douglas County and Big Slough in Howard County became effective. The Little Bazile Creek Watershed in the City of Bloomfield and Knox County flood maps were also in preliminary state this year and will become effective October 2015. This mapping information is utilized by communities to support hazard mitigation and floodplain management planning activities.

National Flood Insurance Program

The Department serves as the National Flood Insurance Program (NFIP) Coordinator for the State of Nebraska. The NFIP Coordinator serves as a liaison between FEMA, Nebraska Community Floodplain Administrators, and the general public. Numerous Community Assistance Visits, Community Assistance Contacts, and Ordinance Review Assistance efforts have been completed around the State. This typically involves floodplain management or flood insurance related technical assistance that may be used to support community floodplain management decision making. Due to ongoing changes in the NFIP, the Department has also sent staff to training sessions to learn more about the Community Rating System (CRS) in order to provide accurate technical assistance. Department staff are now providing additional technical assistance to help communities interested in joining the CRS program. CRS allows communities to implement floodplain

management activities above the NFIP minimum and get credits in the form of flood insurance premium reductions. The Department helps the communities in the state save approximately \$625,000 per year in flood insurance premium costs. There are currently six communities in Nebraska participating in CRS and there are seven new communities working on their applications. NFIP coordination activities and CRS assistance activities provide resources to communities that support floodplain management planning and the management of floodplain development.

Mitigation

The Department provides technical assistance to any entity implementing flood mitigation planning and related projects. The Department provides Natural Resources Districts (NRDs), counties, and communities with planning assistance for the purpose of updating local Hazard Mitigation Plans (HMPs). According to the Nebraska Emergency Management Agency (NEMA), most of the state's population is now covered by an all Hazards Mitigation Plan, or will be covered by a plan in the future. HMPs include flood mitigation components.

The Department currently administers the Flood Mitigation Assistance grant on behalf of the FEMA. In addition to this program, the Department assists the NEMA with two other FEMA programs: the Hazard Mitigation Grant Program (HMGP) and the Pre-Disaster Mitigation grant program (PDM).

Due to recent and anticipated disaster declarations, the state has received funding for hazard mitigation projects through FEMA's HMGP, administered by NEMA. Grant applications received may include flood risk mitigation projects. The Department assists with review of these applications and may provide technical assistance for project implementation as appropriate, per existing authorities.

Integrated Water Management

The Department is tasked annually to complete and publish an evaluation of the expected long-term availability of hydrologically connected water supplies. In December 2014, the Department completed its 10th annual evaluation entitled "2015 Annual Evaluation of Availability of Hydrologically Connected Water Supplies", also known as the Fully Appropriated Basin (FAB) report. Statute requires that the report be completed by January 1 of each year. A variety of hydrologic, water use, water rights and other related data were utilized in compiling this report.

Recognizing that the current methodology for determining fully appropriated status did not adequately transition to planning and management frameworks, the Department has worked with stakeholders to develop a new methodology. Changes to the methodology require simultaneous changes to Department rules. The Department has solicited stakeholder feedback on proposed changes to the rules and a hearing was held on July 7, 2015.

The new approach to determining basin status would transition more readily to planning activities by providing an assessment of the location and timing of the basin's water supplies and uses. This initial assessment provides water managers with both a short and long-term view of whether water supplies and demands are in balance. This information

can be further refined to identify periods of water surpluses and water shortages. The Department has made this information available through its INSIGHT web portal.

The INSIGHT project provides an easily accessible, transparent web portal for information regarding Department data and analyses on water supplies and water uses used in the FAB analysis. INSIGHT provides a broad overview of information intended for the general public, more technical information for water managers, and includes access to data and model files intended for engineers, modelers, or other highly technical individuals and agencies.

INSIGHT provides the best available scientific data, information, and technology related to streamflow and water quantity management. Various Department programs, including Integrated Water Management, Stream Gaging, and Surface Water Administration, will contribute data and information to the INSIGHT project, along with source data from local NRDs, surface water irrigation districts, and other water users.

In addition to the INSIGHT project, the Department has been developing new hydrologic tools and models, and intends to have them in place for every region of the state. These tools are in different stages of development: some models are complete, other models are in the development phase, and one model is in the design phase. Details on development for specific models are included in subsequent basins sections.

Voluntary Water Use Reporting

In conjunction with a number of NRD's initiating voluntary integrated management plans, the Department requested voluntary online water use reporting from permit holders in the Loup, Niobrara, and Lower Platte river basins. This online survey tool will help us better assess current water use, project future water needs and enhance management, and oversight of surface water throughout our state.

Four-Year Work Projection

The Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning efforts based on needs across the state. The Data Collection Program and the field offices will continue to work together to develop improved workflows, implement automated quality checks, and increase data accessibility. The Data Collection Program will continue to work with the Information Technology Section to develop and refine mobile applications that will be utilized by the field offices to administer surface water, complete inspections, and collect data in the field.

Further improvements are expected to sustain and upgrade the stream gaging network to meet the Department's current and long-term stream information needs. This will include adding satellite telemetry to more Department gaging stations, and further identifying and developing systematic approaches to evaluate the adequacy of the existing stream gaging network, as well as determining the need for additional gages.

The Department will continue to provide technical assistance to communities for floodplain management administration activities and deliver related training to local

officials. The Department will also continue to offer technical assistance to any entity implementing flood mitigation planning and related projects. This includes assisting NEMA as requested. The Department also provides NRDs, counties, and communities with planning assistance for the purpose of updating local Hazard Mitigation Plans (HMPs). According to NEMA, most of the state's population is now covered by an all Hazards Mitigation Plan, or will be covered by a plan in the future. HMPs include flood mitigation components.

During spring 2014, the Flood Mitigation Plan was incorporated into the State Hazard Mitigation Plan, as part of the 3-year update completed by NEMA. Over the next three years, the Department will coordinate with NEMA to complete periodic reviews of the flood mitigation planning components of the State Hazard Mitigation Plan and will assist with preparations for the next State Hazard Mitigation Plan Update.

The Department will continue to work with all NRDs (either through FAB determinations or voluntary approaches) that have IMPs, are developing IMPs, or are participating in basin-wide planning activities. IMPs are continually evolving documents and may be modified as the needs or goals within a particular basin change through time. Each adopted IMP is evaluated on a regular basis to determine if modifications or updates to the plan, tools, or data are necessary.

The Department will continue to update existing models and tools, as well as develop new tools. Some of these future tool updates will be collaborative efforts with NRDs in regard to the planning process and evaluation of overall plan goals. Other efforts will be geared toward developing new tools or updating existing models to support the FAB analyses.

III. Blue (Big & Little) River Basins

Synopsis of 2014 Activities

Stream Gaging Activities

The Department operates six stream gages in the Blue River Basin.

Floodplain

Floodplain management staff initiated hydrologic and hydraulic studies, as well as floodplain mapping for watersheds in Adams and Clay counties, as part of a FEMA Risk MAP project. Jefferson County flood maps were in preliminary status in 2014 and will become effective in August, 2015. This mapping information is utilized by communities to support hazard mitigation and floodplain management planning activities.

Blue River Basin Model

The Department completed development of a groundwater model of the Big and Little Blue River basins in 2013 and utilized this model for the 2015 FAB report. The Department will continue to collect data and information to update the model as necessary. The Department will also work with various NRDs to evaluate whether the model can be used as part of cooperative activities.

Fully Appropriated Basins Report

For the most recent FAB report, the Department reached a preliminary conclusion that the Big and Little Blue basins are not fully appropriated.

Voluntary IMPs

In 2014, there were no NRDs in the Big or Little Blue basins that had initiated a voluntary IMP process with the Department. The four year projection includes new developments that occurred in early 2015.

Blue River Basin Compact

The Blue River Basin Compact Administration meets annually in May. During the annual meeting, regular business includes reports from Nebraska and Kansas on water administration activities in the basin and standing committee reports on water levels, streamgage readings, legal activities, and budget items. Department staff supply support for compact administration and standing committees. Intra-state coordination on the Blue River Basin Compact mainly occurs between the Department of Environmental Quality and the local NRDs.

Four-Year Work Projection

Based on needs across the state, the Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning efforts. These efforts will continue in the area of stream gaging, floodplain mapping, and integrated water management. Certain details regarding the four-year projection of work are contained in the Statewide section of this report. Additional basin-specific efforts are identified in subsequent sections.

Over the next several years the Department will be working with FEMA to complete Risk MAP projects in the Upper Big Blue Watershed, the West Fork Big Blue River Watershed, and the Upper Little Blue Watersheds. These projects will include new detailed hydrologic and hydraulic studies, and will incorporate the 2009 NDNR Work Maps into new Flood Insurance Rate Maps (FIRMs). The Work Maps are floodplain maps developed by NDNR that have not approved by FEMA for flood insurance rating. They cannot be used for floodplain regulations unless they are adopted by a community. The Risk MAP process will include outreach and planning events to promote resilient communities and risk reduction. The desire is to have new FIRMs for Adams, Clay, Hamilton, York, and Seward counties by the time the Risk MAP projects are completed.

The Department completed and utilized the Blue River Basin Model for inclusion in the INSIGHT methodology, web portal, and general basin information. This model will provide some of the data and information necessary for the Department to evaluate both the Big and Little Blue River basins in the FAB report. The Department will continue to evaluate both the Big and Little Blue River basins.

The Department will continue to fulfill its obligations under the Blue River Basin Compact and does not expect an increased level of commitment under this obligation.

The Department will continue to coordinate with other state and local water management agencies in order to refine the hydrologic data to better understand hydrologically connected water resources. These efforts will likely focus on expanding upon the network of water use information, evaluating existing models and input datasets (for example, local aquifer properties and recharge characteristics) for data quality and/or gaps, and refining and building upon existing modeling tools.

In 2015, the Little Blue NRD contacted the Department to state its intent to jointly develop a voluntary IMP. The Department will work with the NRD to develop and implement this voluntary IMP. The development of the plan will include working through a stakeholder process to identify issues and goals, as well as collaboration between the NRD and the Department to identify actions and monitoring that will help achieve these goals. Upon adoption of the voluntary IMP, the Department will work with the NRD to implement the actions and monitoring identified in the plan. Implementation will include regularly scheduled joint Department and NRD reviews of the plan to ensure that progress is made toward achieving the goals of the voluntary IMP.

IV. Lower Platte River Basin

Synopsis of 2014 Activities

Note: this section includes the Elkhorn, Loup, and Lower Platte River basins.

Stream Gaging Activities

The Department does not operate Platte River stream gages in the lower portion of the Basin, but instead utilizes five gages operated by the U.S. Geological Survey. The Department operates 11 stream gages, one canal gage, and cooperates with the U.S. Geological Survey on one stream gage for the Elkhorn River and its tributaries. The Department operates 11 stream gages and 24 canal gages for the Loup River and its tributaries.

Floodplain

New FIRM panels went preliminary for the streams within the City of Wahoo, Saunders County in December 2014. This mapping information is utilized by communities to support hazard mitigation and floodplain management planning activities.

CENEB—Central Nebraska Model

The Central Nebraska Model (CENEB) is a regional model that encompasses portions of the Loup and Elkhorn River Basins, which are tributaries to the Lower Platte River Basin. Model construction was completed by the Department and consultants in July, 2013. The Department's new INSIGHT methodology utilized this model to evaluate portions of the Niobrara and Elkhorn River basins, as well as the entire Loup River Basin. The CENEB model is available to NRDs to evaluate management actions as a part of IMP implementation. .

Lower Platte and Missouri Tributaries Basins Model

The Department has initiated work on a regional numerical model for the Lower Platte and Missouri River Tributaries basins. This model will be used for the Department's FAB analysis and is also available for use by NRDs. The northern portion of the model is scheduled to be completed in December, 2015, while development of the southern portion of the model will be initiated in August, 2015.

Fully Appropriated Basins Report

The Department made a preliminary determination in 2008 that the Lower Platte River Basin was fully appropriated and in 2009 made a final determination that the Basin was not fully appropriated. At the Director's discretion, the Lower Platte River Basin was not evaluated in 2014 pursuant to *Neb. Rev. Stat.* § 46-713(1)(a). Currently, no portion of the Lower Platte River Basin is fully appropriated.

Voluntary IMPs

Several NRDs (Lower Elkhorn, Lower Platte North, Lower Platte South, and Papio-Missouri) were in some phase of development or implementation of a voluntary IMP in 2014. The Lower Platte South and Papio-Missouri NRDs jointly adopted voluntary IMPs with the Department in the spring/summer of 2014 and moved into the implementation phase, which includes a monitoring plan. In 2014, the Lower Elkhorn NRD and Lower

Platte North NRD continued to work through the stakeholder process with the Department to identify issues and goals of each respective voluntary IMP, and regularly met with the Department to identify action items that would help meet these goals. It is anticipated that the IMPs will be completed by the close of 2015.

Lower Platte River Basin-Wide Plan Development

The Department and several Lower Platte River Basin NRDs (Upper Loup, Lower Loup, Upper Elkhorn, Lower Elkhorn, Lower Platte North, Lower Platte South, and Papio-Missouri) have entered into an inter-local cooperative agreement to develop a basin-wide plan for the Lower Platte River Basin. A technical committee and a management committee have been formed as a part of plan development. In 2014, the cooperative group hired consultants to evaluate methods to develop a water banking system that could potentially be implemented in the Basin. The water banking system could work as an umbrella system for any local NRD water banking system that may be developed as a part of voluntary IMP actions. Over the next several months and subsequent years, this group will continue to develop broad goals and objectives for water quantity management in this portion of the Basin.

Four-Year Work Projection

Based on needs across the state, the Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning efforts. These efforts will continue in the area of stream gaging, floodplain mapping, and integrated management. Certain details regarding the four-year projection of work are contained in the Statewide section of this report. Additional basin-specific efforts are identified in subsequent sections.

FIRM panels will most likely become effective for the City of Wahoo and Saunders County in the next year or two.

The Department and consultants will continue to develop tools to assess portions of the Platte River Basin and Missouri Tributaries, which will include the development of both the Lower Platte Missouri Tributaries groundwater model and a new groundwater model for the Nemaha Basin. These tools will continue to be updated and utilized in the Department's annual FAB report. Additionally, the Department will continue to collect data to update the CENEB model in order to assess portions of the Niobrara, Loup, and Elkhorn River basins. This tool will continue to be updated as needed and utilized in the Department's annual FAB report. The Lower Platte River Basin will be evaluated in the 2015 FAB analysis.

In 2015, the Upper Elkhorn NRD contacted the Department to state its intent to jointly develop a voluntary IMP. As such the Department will work with this NRD to develop and implement a voluntary IMP over the next one to two years.. The Department will continue its current work with the Lower Platte South and Papio-Missouri NRDs to implement their respective voluntary IMPs and regularly assess progress being made toward the goals of these plans. The Department will also work with the Lower Elkhorn and Lower Platte North NRDs to continue development of these voluntary IMPs with the goal of having both plans adopted by December 2015. Upon adoption, the Department

will work with each NRD to implement actions and regularly assess progress made toward meeting the goals identified in each plan. The efforts of all local voluntary IMPs will be supported through the Lower Platte River basin-wide planning efforts. The Department will continue to work with the NRDs in developing a basin-wide plan for the Lower Platte River Basin.

V. Missouri River Tributaries

Synopsis of 2014 Activities

Stream Gaging Activities

The Department does not currently operate any stream gages in the Missouri River Tributaries Basin.

Floodplain

A new hydrology and hydraulic study was performed in summer, 2014, and preliminary FIRMS were released in February for the Little Bazile Creek Watershed for the City of Bloomfield and Knox County. The Department continues to work on Work Maps for Nemaha and Richardson Counties, as time allows. For more information, see the Statewide section for reference to general statewide floodplain activities related to the Missouri River Tributary Basins.

Lower Platte and Missouri Tributaries Modeling Tools

In July, 2014 the Department and consultants initiated development of a numerical groundwater modeling tool for the Lower Platte and Missouri Tributaries Basins. The tool will be used to improve and extend the FAB and INSIGHT analyses, and is intended to eventually be used as tool for studies or projects that result from voluntary IMP efforts in this region.

Fully Appropriated Basins Report

For the areas with sufficient data to do an analysis, in the most recent FAB report the Department reached a preliminary conclusion that the basins are not fully appropriated.

Voluntary IMP

The Department began development of a joint voluntary IMP with the Lewis & Clark NRD in 2014. A stakeholder group was identified and a stakeholder process was planned as a part of this initial development in the IMP process.

Four-Year Work Projection

The Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning efforts. These efforts will continue in the area of stream gaging, floodplain mapping, and integrated management. Details regarding the four-year projection of work are contained in subsequent sections.

The Department and consultants will continue development of the Lower Platte and Missouri Tributaries groundwater model, and will begin development on an additional groundwater model for the Nemaha Basin. Once developed, the tools will updated as needed and will be used in the Department's INISIGHT analysis and annual FAB report. The Department will also continue to support efforts of the Eastern Nebraska Water Resources Assessment (ENWRA) organization to evaluate the effectiveness of geophysical techniques to assess hydrologic connection of aquifers and streams.

The Department and the Lewis and Clark NRD will continue joint work in developing a voluntary IMP for this region. At present, a stakeholder process is underway to identify issues and goals. The plan is expected to be adopted by late 2015 or early 2016. Upon adoption, the Department and NRD will jointly implement actions identified in the IMP, and will regularly assess progress being made towards accomplishing the goals of the plan.

VI. Niobrara River, White River & Hat Creek Basins

Synopsis of 2014 Activities

Stream Gaging Activities

The Department operates 14 stream gages, 20 canal gages, and uses information from an additional two gages operated by the U.S. Geological Survey in the Niobrara management area.

Floodplain

The Statewide section contains reference to general statewide floodplain activities related to the Niobrara, White, and Hat River basins.

Upper Niobrara White NRD Conjunctive Use Model

The Department and the Upper Niobrara White NRD completed development of an integrated surface and groundwater model in 2013. The model can be used to evaluate the effects of potential alternative management strategies on water use and supply. This model includes the upper portions of the Niobrara River Basin, and small regions of the White River and Hat Creek basins. Typical of Department modeling efforts, this model incorporates a watershed model (CROPSIM), a surface water operations model (Stella), and a groundwater model (MODFLOW). Since its completion, the model has been used as part of the WaterSMART Program to perform climate change variability studies for the Niobrara River Basin, focusing on the Mirage Flats Irrigation District.

CENEB—Central Nebraska Model

The Department and consultants completed development of the Central Nebraska Model (CENEB), which is a large model that encompasses portions of the Niobrara, Elkhorn, and Loup River basins. This model was used as a tool in the 2014 INSIGHT analysis for the Middle and Lower Niobrara River Basins, the entire Loup River Basin and portions of the Elkhorn River basin. The CENEB model can provide information and analyses capabilities for projects/studies that may result from voluntary IMP efforts.

Fully Appropriated Basins Report

In 2014, the Department reached a preliminary conclusion that the Lower Niobrara River Basin (area downstream of Spencer Hydropower) was not fully appropriated as specified in the 2015 FAB report. The Niobrara River Basin downstream of the Mirage Flats Diversion Dam and upstream of Spencer Hydropower was not evaluated in the Department's in this report due to a reversal of a fully appropriated designation in 2011 and a statutorily defined four year waiting period that follows a reversal.

Completed/New IMPs

In 2014, two NRDs in the Niobrara Basin had jointly adopted IMPs with the Department. The Upper Niobrara White NRD jointly adopted an IMP with the Department in 2011 for the portion of the NRD that is upstream of the Mirage Flats Irrigation District. Since then, the Department and the NRD have meeting annually to review the IMP and progress

made towards achieving the goals and objectives of the IMP. In spring, 2014, The Department and the Lower Niobrara NRD completed development and jointly adopted a voluntary IMP for the entire NRD.

Niobrara Basin-wide Planning

The Department and the Niobrara River Basin Alliance (NRBA) initiated a voluntary basin-wide planning process in 2014. The NRBA includes the Upper Niobrara-White, Middle Niobrara, Lower Niobrara, Upper Loup, and Upper Elkhorn NRDs.

LB483 Implementation

Due to the 2011 reversal of the fully appropriated designation, the areas downstream of Mirage Flats Irrigation Diversion Dam and upstream of the Spencer Hydropower facility were subject to *Neb. Rev. Stat. § 46-714(12)* (introduced to the legislature in 2009 as a part of LB483). This placed restrictions on development of new surface and groundwater irrigation acres. New surface water acres were limited to 834 acres for each NRD. The affected NRDs (Upper Niobrara White, Middle Niobrara, Lower Niobrara, Upper Loup, and Upper Elkhorn) developed rules and regulations to restrict irrigated acre development for the required four-year timeframe. Upon sunset of the LB483 acre restrictions in June, 2015, the affected NRDs have the option to continue limitations on groundwater irrigation development.

Niobrara River Compact

The Upper Niobrara River Compact (Compact) was ratified by the states of Wyoming and Nebraska in 1962. The Compact provides for an equitable division of the available surface water supply of the basin. It provides for acquisition of information regarding groundwater and underground water flow necessary for apportioning said flow, in addition to calling on the states to address issues that may lead to disagreements. The Department and the Wyoming State Engineer's Office meet to discuss the Compact at a regularly occurring meeting in the fall. At the 2014 meeting, the States discussed stream gaging efforts, surface water administration, progress made towards the Niobrara River Basin WaterSMART study, and other related hydrologic activities. An additional technical subcommittee meeting was held in the spring to discuss the results of the joint U.S. Bureau of Reclamation and Department Niobrara River Basin study.

Four-Year Work Projection

The Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning efforts, based on needs across the state. These efforts will continue in the area of stream gaging, floodplain mapping, and integrated management. Certain details regarding the four-year projection of work are contained in the Statewide section of this report. Additional basin-specific efforts are identified in subsequent sections.

The Department will continue to work with the Upper Niobrara White NRD to collect the information needed to update and refine the integrated groundwater and operations model discussed in previous sections. The Department will also work with the NRD to use the integrated model to evaluate various management actions and how these may affect water supply and use. The Department will continue to collect data to update the CENEB

model to assess the central and lower portions of the Niobrara River Basin. This tool will continue to be updated as needed and will be utilized in upcoming FAB reports.

The Niobrara River Basin downstream of the Mirage Flats Diversion Dam and upstream of the Spencer Hydropower plant will commence being evaluated again in 2015; the results of this evaluation will be included in the 2016 report.

The Upper Niobrara White NRD and the Lower Niobrara NRD, in cooperation with the Department, will continue to annually review current IMPs to evaluate progress being made towards goals of each plan, and as needed, will jointly make decisions regarding modifications to the plan, monitoring, or hydrologic tools. The Middle Niobrara NRD initiated development of a voluntary IMP during the first half of 2015 and this will be developed in 2015-2016, with implementation to follow. The recently initiated voluntary basin-wide planning will continue for the Niobrara Basin through a collaborative process over the next several years. Several coordination and public meetings were held in 2015 to begin to identify the goals and objectives of the basin-wide plan.

The states of Wyoming and Nebraska will continue to meet at least once annually to discuss the Compact. Additional technical committee meetings may be held with regard to the Niobrara River Basin Study.

VII. Republican River Basin

Synopsis of 2014 Activities

Stream Gaging Activities

The Department operates 20 stream gages, four canal gages, and cooperates with the U.S. Geological Survey on three stream gages in the Republican River Basin.

Floodplain

The Statewide section contains reference to general statewide floodplain activities related to the Republican River Basin.

Integrated Management Plans

The Department and the Republican River Basin NRDs continually assess the implementation of IMPs in the basin. This year's accounting forecast indicated the potential for non-compliance with the Republican River Compact (Compact), unless certain management actions were put into place. Those actions are specified in the IMPs, and are proactively being implemented by both the NRDs and the Department to help ensure Compact compliance for Nebraska.

Republican River Basin-wide Plan

The passage of LB1098 in the 2014 Legislative session mandated the creation of a basin-wide plan for the hydrologically connected portion of the Republican River Basin. Subsequently, the Department and the basin NRDs hired a local consultant to facilitate the stakeholder and planning process. In 2014, the Department, NRDs, and the consultant developed a stakeholder involvement strategy that will be used in development of the plan.

Republican River Compact

The States of Colorado, Kansas, and Nebraska initiated new discussions in June, 2014 to improve engagement in resolving a variety of issues. These discussions have led to multiple new agreements that have created positive outcomes for all States. The States will continue to pursue long term agreements that will benefit water users.

In spring, 2011, the United States Supreme Court accepted the case regarding issues that were previously arbitrated between Nebraska and Kansas. That litigation focused on Nebraska's non-compliance in 2005-2006, Kansas' proposed remedies for future compliance, and technical issues related to methods used in Compact accounting. The United States Supreme Court issued its final ruling in early 2015.

Republican River Basin Conjunctive Management Project and WaterSMART Study

The Republican River Conjunctive Management Study (WaterSMART) was developed to proceed in two phases. Phase I, the conceptualization of various scenarios and the development of hydrologic tools, is nearly complete. Phase II of the study focuses on the analysis of conjunctive management scenarios, evaluating those scenarios to assess hydrologic and economic implications, and developing a plan for implementation. The

Department and Republican River Management Districts Association initially collaborated on this effort with the study expected to be completed fall, 2015.

Four-Year Work Projection

Based on needs across the state, the Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning efforts. These efforts will continue in the area of stream gaging, floodplain mapping, and integrated management. Certain details regarding the four-year projection of work are contained in the Statewide section of this report. Additional basin-specific efforts are identified in subsequent sections.

Republican River Basin Conjunctive Management Project and WaterSMART Study

The Department will continue to work with the Republican River Basin NRDs to develop the Republican River Basin Conjunctive Management Project. The project outputs will include several modeling tools that will be used to analyze the effects of various management options. The Department will continue to evaluate the tools and data to determine if updates or additional data are necessary.

The Department and Republican River Basin NRDs will continue to meet annually to review the IMPs and progress made towards achieving the goals of each plan. These reviews focus on the assessment of two key compliance standards: limitations on groundwater depletions and limitations on groundwater pumping. The Department and NRDs will assess the compliance standards and make necessary adjustments as needed. Because the recent Supreme Court decision impacts the compliance standards in the IMPs, modifications to the IMPs will be developed in the next year to ensure the plans are consistent with the court decision.

The Department will continue to work to implement the Compact and ensure compliance through integrated management planning activities.

The Department and the Republican Basin NRDs will continue to develop the basin-wide plan over the next several years. The first stakeholder meeting was held in March 2015, and subsequent stakeholder meetings were scheduled every other month thereafter through the end of the year, but it is expected that the stakeholder process will continue well into 2016. The plan will be developed through this collaborative process with the stakeholders, with the goal of sustaining a balance between water uses and supplies.

III. Upper Platte River Basin

Synopsis of 2014 Activities

Stream Gaging Activities

The Department operates 48 stream gages, 58 canal gages, and cooperates on one additional gage operated by the U.S. Geological Survey in the Upper Platte River Basin.

Floodplain

The Statewide section contains reference to general statewide floodplain activities related to the Upper Platte River Basin.

Integrated Management Modeling Efforts

Two regional modeling efforts are underway in the Upper Platte River Basin: the Cooperative Hydrology Study (COHYST) and the Western Water Use Model (WWUM). Typical of Department modeling efforts, these models incorporate a watershed model (CROPSIM), a surface water operations model (Stella), and a groundwater model (MODFLOW). The model components work together to create tools capable of analyzing varied management scenarios such as the effects of conjunctive management projects, well pumping, alternative surface water operations, etc. The tools are being developed to meet the goals and objectives of the IMPs.

The current work plans anticipate that a tool capable of completing an evaluation of the overappropriated area IMPs for the first planning increment (2009-2019) will be available within the next year, with the evaluation analyses to follow. The Department integrated water management staff have expended significant resources over the past year in support of the development of these models in partnership with the local NRDs and irrigation districts.

Integrated Management Plans

There are currently six IMPs in place within the Upper Platte River Basin. Modifications are made to the IMPs as needed to ensure progress is being made towards the goals of the plan, as well as to accommodate changes in statute as needed.

Basin-Wide Plans

There is one basin-wide plan in place in the Upper Platte River Basin. This plan is for the overappropriated area of the Platte River and was developed for the years 2009 through 2019 (first planning increment). The Department and five Upper Platte River Basin NRDs meet regularly to discuss implementation of the basin-wide plan, as well as implementation of the IMPs for the overappropriated area. Each year, one regular meeting occurring in June or July is directed toward dissemination of information to basin stakeholders and the general public.

A voluntary basin-wide plan is in the early development phases for the Lower Platte River Basin. While this plan focuses on the Lower Platte River, upstream entities, particularly NRDs, will be encouraged to stay informed as this plan is developed.

North Platte Decree, Platte River Recovery Implementation Program, and South Platte Compact

Three interstate agreements involve the Upper Platte River Basin: the North Platte Decree, the Platte River Recovery Implementation Program, and the South Platte Compact. Each interstate agreement is being fully implemented by the Department. This implementation includes the administration of water rights, various reporting elements, and support of various subcommittees and annual meetings. The Department is on schedule with implementation of tasks in support of these interstate agreements.

Four-Year Work Projection

The Department continually prioritizes and evaluates its data collection and analysis capabilities to support state and local planning effort based on needs across the state. These efforts will continue in the area of stream gaging, floodplain mapping, and integrated management. Certain details regarding the four-year projection of work are contained in the Statewide section of this report. Additional basin-specific efforts are identified in subsequent sections.

The Department will continue to use the WWUM and COHYST models and pertinent datasets for IMP analyses, which will include implementation of scenarios to increase understanding of conjunctive management of ground and surface water. The Department and others will review the data, tools, and plans to prepare for the second increment of the IMPs in the overappropriated region of the Upper Platte River Basin.

Five of the IMPs are for the overappropriated area of the Platte River Basin. These plans, in accordance with state statute, are written with a first increment to last no more than ten years. The plans are now beginning year seven of implementation. State statute requires that these IMPs be evaluated for progress in meeting the plan objectives, and based upon this evaluation as well as other factors, the plans for a new increment of integrated management planning will be built. Planning for a second increment was initiated in 2015. This process may incorporate an evaluation and revision of the basin-wide plan as well. For the implementation of IMPs, most coordination occurs with the NRDs. For specific projects, coordination also occurs with irrigation districts, canal companies, and other state agencies such as the Department of Environmental Quality, the Department of Roads, the Department of Health and Human Services, and the Nebraska Game and Parks Commission.

As the existing basin-wide plan and subsequent IMPs continue to be implemented over the next several years, Department staff will continue to supply technical and administrative support to develop, implement, and maintain planning efforts. Ongoing monitoring of the projects and their impacts on streamflows and groundwater levels make-up a significant section of each IMP. The Department supports monitoring activities by disseminating information, data, and the technical capabilities to analyze and use the existing hydrologic tools.

Ongoing activities of implementation related to the interstate agreements are expected to continue as scheduled. Regular monitoring for compliance with the agreements will also continue. For the North Platte Decree, regular coordination is carried out with the Bureau

of Reclamation, the state of Colorado, and the State of Wyoming. Within Nebraska, the local irrigation districts and the North Platte NRD are contacted to coordinate on Decree meetings and any issues which impact their interests. As part of the interstate agreements, the Department supplies technical and administrative support for the development of projects according to the agreement schedules. The North Platte Decree Committees will continue an ongoing project to inventory and study irrigation practices and consumptive use along the North Platte River in Wyoming.

For the Platte River Recovery Implementation Program (PRRIP), the Department works with the states of Colorado and Wyoming, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, water users across the Platte River Basin, and environmental groups. The Department also holds regular meetings with the Nebraska Department of Environmental Quality, the Nebraska Department of Roads, the Nebraska Games and Parks Commission, and a downstream water users group which is composed of the five overappropriated area NRDs, the Central Nebraska Public Power and Irrigation District, and the Nebraska Public Power District. The J-2 Regulating Reservoir Project is a large-scale water project being developed through PRRIP. This project is a collaborative effort of all PRRIP parties and will utilize the existing Central Nebraska Public Power and Irrigation District infrastructure and newly constructed reservoir areas to temporarily hold excess streamflow and release it back to the Platte River at times when it is needed in an effort to meet state protected flows and target flows.

The Department and the NRDs in the overappropriated area of the Upper Platte River Basin have been very active in implementing various management alternatives and projects to meet the goals and objectives of the IMPs. In many cases, the projects being implemented also meet the terms of PRRIP. Several conjunctive management projects are being developed and implemented in the Upper Platte River Basin. Conjunctive management projects involve the use of both surface water and groundwater resources to maximize water use and minimize negative impacts on streamflows and groundwater levels. In this way, availability and reliability of the regional water supply is increased. In other words, conjunctive management projects optimize use of the whole water supply. The NRDs have entered into agreements with canal companies to utilize the existing infrastructure of the canal systems so that streamflows in excess of system demands, as well as other transferred surface water rights, can be used to recharge the groundwater aquifers and increase baseflow to the stream. As partners in the IMPs, the Department cooperates on these projects by providing technical, administrative, and monetary support.

IX. Financial Summary Table

	<u>FY 2013</u> <u>Actual</u>	<u>FY 2014</u> <u>Actual</u>	<u>FY 2015</u> <u>Actual</u>	<u>FY 2016</u> <u>Budget</u>	<u>FY 2017</u> <u>Budget</u>	<u>FY 2018</u> <u>Budget</u>
Personal Services	\$1,627,523	\$1,746,285	\$1,694,368	\$1,590,303	\$1,590,303	\$1,590,303
Travel Expenses	\$47,436	\$49,734	\$57,658	\$65,700	\$65,700	\$65,700
Operating Expense – SOS Temporary Personnel	\$129,575	\$81,138	\$89,550	\$338,124	\$338,124	\$338,124
Operating Expense- Mgmt Consultant, Contractual Services and Engineering & Architectural Services	\$1,622,274	\$2,104,041	\$1,782,382	\$644,077	\$644,077	\$644,077
Equipment, Computer and Software	\$72,978	\$68,370	\$152,533	\$90,400	\$90,400	\$90,400
Operating Expense - Other	\$115,414	\$337,300	\$391,082	\$378,174	\$378,174	\$378,174
Capital Outlay/Fixed Assets Except Computer	\$93,148	\$67,011	\$30,664	\$195,000	\$195,000	\$195,000
Interstate Water Litigation	\$302,464	\$591,808	\$649,055	\$300,000	\$300,000	\$300,000
TOTAL	\$4,010,812	\$5,045,687	\$4,847,292	\$3,601,778	\$3,601,778	\$3,601,778