

State of Nebraska CTP Business Plan



FY2018 Update
May 2018

NEBRASKA
DEPT. OF NATURAL RESOURCES
Floodplain Management Section

This plan was prepared with financial support provided to the Nebraska Department of Natural Resources by the Federal Emergency Management Agency under cooperative agreement EMW-2017-CA-00003. The content does not necessary reflect the views and policies of Federal Emergency Management Agency.



Table of Contents

Overview of NeDNR Vision	1
Risk MAP Goals & NeDNR Plan	1
Deliver High-Quality Risk Data	1
Increased Awareness of Flood Risk	2
Promote Community Mitigation Action	4
COMS Program	5
Goals and Objectives	5
Ongoing Projects	6
State Hazard Mitigation Plan Alignment	8
NeDNR Capabilities	9
Project Prioritization.....	9

Section 1. Project Sequencing Figures:

Proposed FY2018 Projects	1
Proposed FY2019 Projects	2
Proposed FY2020 Projects	3
Proposed FY2021 Projects	4
Proposed FY2022 Projects	5
Proposed FY2023 Projects	6
Engaged Watersheds FY2026	7
Regulatory FY2026 Products.....	8

Section 2. Watershed Summaries:

Upper Elkhorn, North Fork Elkhorn, Lower Elkhorn, Logan.....	1
Middle North Platte – Scotts Bluff, Lower North Platte, Lower South Platte	10
Lewis and Clark Lake	16
Upper Big Blue, Middle Big Blue, West Fork Big Blue, Turkey, Upper Little Blue.....	19
Little Nemaha, South Fork Big Nemaha, Big Nemaha	26
Keg-Weeping Water	27
Salt	32
County PIRs: Box Butte, Sheridan	37
Middle Platte - Buffalo, Wood, Middle Platte - Prairie.....	40
Upper Republican, Frenchman, Stinking Water, Red Willow, Medicine	48
Lower Platte - Shell, Lower Platte.....	51

Section 3. Key Decision Point Summary:

NeDNR Key Decision Point Summary Table	1
--	---

Overview of NeDNR Vision

The Nebraska Department of Natural Resources coordinates floodplain management for the entire state. With authority designated by the Nebraska Legislature, NeDNR provides high quality, science-based data and information to communities, individuals, and state agencies to reduce risk from flooding. NeDNR's vision includes:

- Identifying flood risk for every community in the state.
- Offering technical assistance to every community, state agency, and stakeholder with an interest in reducing risk from flooding by improving floodplain management programs.
- Encouraging National Flood Insurance Program (NFIP) participation.

To further this vision, NeDNR actively seeks projects that directly reduce flood risk to human lives and property as well as outreach opportunities that engage communities on flood risk topics.

Risk MAP Goals & NeDNR Plan

NeDNR's plans in the upcoming fiscal years closely align with the Risk MAP goals. The following Risk MAP goals compliment the Department's desire to provide the best possible flood hazard data and technical assistance to promote strong floodplain management programs that increase public awareness of local flood risks. The ultimate goal is to see communities take action to reduce flood risk to life and property.

Deliver High-Quality Risk Data

Flood maps are essential to the local floodplain administrator's job. Maps allow them to identify flood risk and to communicate flood risk to their communities. Having high-quality data gives both FEMA and the administrators more creditability in identifying flood risk and communicating risk to the public.

Nebraska has a low population density, so basic studies make up the majority of the state. To make these studies high-quality, it is important to use LiDAR data for the topography. NeDNR has made the acquisition of high quality elevation data a priority and has acquired LiDAR for the entire state as of March of 2018. In the Fall of 2018, Nebraska will start to re-fly the oldest LiDAR in the State.

Nebraska streams and rivers rarely follow political boundaries and land use decisions in floodplains routinely affect neighbors upstream and downstream. Studying flood hazards at a watershed level prepares communities and property owners to collaborate to make better risk-informed decisions. Watersheds in Nebraska provide challenges often due to their immense size which causes them to span over multiple natural resources districts (NRDs), counties, and city boundaries. NeDNR aims to integrate the watershed study

approach into our Risk MAP projects to account for the challenges as well as the opportunities for partnerships and synergies.

NeDNR continues to do much of the mapping and engineering in-house, which is an advantage because of the established relationship with local administrators. NeDNR plans to utilize experienced engineers on staff to complete the Risk MAP projects by using established hydrology and hydraulics standards in conjunction with proven floodplain mapping techniques. In addition, NeDNR also provides technical assistance related to flood hazard data to local, state and federal agencies for floodplain management and permitting purposes. Communities use this flood data when creating regulations; banks and insurance agents use it to properly rate flood insurance policies; and individuals use it to make better decisions about mitigating their own flood risk.

In addition to leveraging LiDAR, NeDNR also utilizes Nebraska's Flood Assessment Calculation Tool (NFACT) for Risk MAP projects with basic studies. The tool is also used for providing base flood elevations (BFEs) to local, state and federal agencies. NFACT recently went through a significant update to allow it to be used in ESRI's ArcGIS 10.3. The update started in 2015 and was completed in 2016. The tool is now available to anyone downloading ESRI's ArcHydro tools, and is updated with each new version of ArcHydro tools.

Increased Awareness of Flood Risk

During all Risk MAP phases, NeDNR will engage with stakeholders in deployed watersheds in efforts to reduce flood risk to life and property. To accomplish this, NeDNR will host meetings with local communities with the goal of engaging stakeholders in the areas where projects are being implemented, strive to provide information to community members about the progress of a floodplain project throughout its life cycle, supply information about how new flood risk data could affect specific communities, and act as a knowledge base and resource for floodplain information for stakeholders statewide.

NeDNR will pursue successful community meetings to ensure that the flood hazard information accurately reflects on the ground conditions, and that the community members understand the flood risk information being presented to them. NeDNR's objective at these meetings is to effectively communicate the new flood risk data that has been developed during Risk MAP to local community leaders, including floodplain administrators, elected community representatives, NRD staff, and other community officials. Participants will then be in a position to communicate to the members of their respective communities both the expected changes that will accompany new flood hazard data and where to find resources and information moving forward during the flood risk project.

Discovery meetings will seek input on local flood conditions, needs of communities, and gaps in data. This will help to ensure that NeDNR data matches a communities most currently available conditions. The Kick Off meeting will define the Risk MAP project, explain the modeling methods to be used, and give communities time to voice any concerns in regard to the modeling methods. The Flood Risk Review meeting will present

the new engineering data, giving communities a chance to comment and review draft floodplain boundary data before the preliminary maps are created. The Flood Risk Review meeting will provide communities with the Flood Risk Products, and teach them how to use the products to identify ways to reduce loss of life and property from floods. Consultation Coordination Officers (CCO) meetings will help community officials understand the mapping process and identify areas of concern. The resilience meeting will help the watershed stakeholders use their new risk information for flood risk reduction and prioritizing projects within their watersheds.

Additional non-CTP action is vital to providing local officials with the information and background needed to properly implement the regulations and requirements of the NFIP. NeDNR will be involved with and coordinate with other local and state agencies in efforts to provide learning opportunities to help explain topics varying from the basics of floodplain development and permitting to reviewing and explaining technical bulletins. These outreach opportunities are outlined in the attached Outreach Plan.

Flood risk products provide communities with expanded datasets of information that can help a homeowner, business owner, developer, or homebuilder make better decisions about a building or property. NeDNR will actively seek ways to improve flood risk products and encourage community use of the products. NeDNR will also work one-on-one with a community to find the best applications for flood risk products in their jurisdiction. The Department has found useful opportunities for the products in the past and aims to get communities to add them to their repertoire. Flood risk products are used in NeDNR's public open houses to help property owners understand flood risk, flood insurance, and the Risk MAP process.

NeDNR will continue to help communities understand the data displayed in Risk MAP products and enhance local knowledge of using the data to make better land use decisions. Continual engagement on flood risk reduction will help local officials like building inspectors, public works directors, planners, and emergency managers have the tools for the best possible floodplain management program. NeDNR provides technical assistance to every community in the state on a wide array of floodplain management topics. NeDNR also participates in local hazard mitigation plans, which presents an opportunity for conversation with local officials in utilizing Risk MAP products to enhance mitigation projects and identify new ones.

During the upcoming Risk MAP projects, NeDNR will introduce a new engagement tool in larger floodprone communities. Local Floodplain Champions will be established in interested areas and will serve as a local implementing committee. The Champions could consist of community officials, interested business leaders, residents impacted by flood risk, or any other member the community. NeDNR will utilize the Local Floodplain Champions to be the liaisons to the whole community and will be the primary drivers of helping communities take ownership of the Risk MAP project. This enhanced engagement activity will spur more action to reduce flood risk.

Existing partnerships like Silver Jackets and working relationships with the Nebraska Emergency Management Agency (NEMA) and the Nebraska Floodplain and Stormwater Managers Association (NeFSMA) help facilitate flood risk communication. NeDNR will continue to be an active partner with these entities and organizations to promote mitigation actions. Working relationships with other federal, state, and local level entities will also be crucial to NeDNR's goal of reducing flood risk statewide. Utilizing the knowledge of a local experts and bolstering flood risk information or flood risk projects with expert knowledge through open and two-way communication will serve to further NeDNR's goals and objectives as set out in this plan.

NeDNR will also tie in activities funded by the Community Outreach and Mitigation Strategies (COMS) program into Risk MAP projects. While our COMS program focuses on the entire state, we aim to leverage the data collected and the focus provided on deployed watersheds to move mitigation projects forward. Increased attention on flood risk will help community officials gain support from political leadership to implement projects.

Promote Community Mitigation Action

Throughout our Risk MAP projects, NeDNR will work with communities to identify mitigation actions that can be taken using the new flood hazard data. New flood hazard data offers communities a view of the most up-to-date and accurate flood risk information that is available to them. NeDNR will use best available flood risk products to assist communities in gaining a truly holistic understanding of their flood risk. Through a complete look at available datasets, a community could combine information like flood depth and percent flood chance over a period of time along with the regulatory boundary and other relevant information to make informed decisions for not only existing structures, but for planned community growth.

NeDNR will actively support projects that contribute a measurable risk reduction to properties in the state. Where Risk MAP data can influence a local hazard mitigation plan, NeDNR will work with the plan sponsor, consultant, and NEMA to incorporate new data into plans. Working with communities to maintain and update their hazard mitigation plan ensures that it includes the best available flood risk data. Thus allowing communities to potentially identify new mitigation opportunities.

NeDNR will also continue to provide technical assistance on a wide range of topics including floodplain management, mitigation projects, higher regulatory standards, and map data interpretation. NeDNR will also provide technical assistance in the form of technical engineering reviews for projects like no-rise floodway applications, or LOMR applications at the request of community members. This provides members of Nebraska communities the assurance that the projects done in the state will adhere to regulatory standards.

An important aspect of flood mitigation planning starts with participation in the NFIP. NeDNR will continue to encourage non-participating communities to consider entry into the NFIP during the Risk MAP process, Hazard Mitigation Planning process, and any other

public interactions. NFIP participation provides “built-in” mitigation elements for communities that participate. If a community was to join CRS as well, there are even more mitigation elements with insurance benefits for the whole community.

Working with mitigation planning will help us accomplish our COMS goals and objectives of helping communities understand the entire life-cycle of risk reduction. This includes the benefits of the risk reduction projects to the actual implementation. Planning efforts offer prime opportunities to engage communities individually on their projects.

COMS Program

Goals and Objectives

NeDNR’s goal is to provide the best possible flood hazard data and help advance risk reduction projects in Nebraska communities. NeDNR aims to support this goal through our COMS program. We plan to help communities understand and implement risk reduction projects in the state by focusing on the following objectives:

- Why flood risk is real and why a community should focus on reducing that risk.
- What kind of risk reduction projects achieve a community’s goals?
- Where best to implement identified projects.
- How will these projects be implemented?

We address the first objective by providing information and data on flood risk in a variety of formats. We plan to conduct resilience meetings in deployed watersheds to help communities and individuals better understand flood risk. We also help provide risk information through newsletters, project updates, presentations at workshops/conferences, and other community engagement opportunities. NeDNR plans on utilizing FEMA’s CERC contractor to help create, review, and disseminate the materials for risk workshops, Risk MAP meetings, and other communication products.

We plan to help communities understand the various risk reduction methods available by communicating best practices, examples from other communities, and higher regulatory standards that may reduce future risk in new development. Hazard mitigation plan processes and participation in CRS provide ideal opportunities to discuss these items. We also will work individually with communities to strategize about the best risk reduction solutions for their economic, political, and environmental situations.

NeDNR also plans to provide data to communities on where to best implement projects that they’ve identified. Every community and their flood risk is different and local solutions offer the best chance for success. We will help communities develop data on where risk reduction projects are most needed, such as vulnerable population areas, low-income areas, redevelopment locations, and new growth areas.

Lastly, NeDNR plans to help communities who are ready to implement projects understand how best to do that. We will work with any community on project development from benefit-cost analysis, funding opportunities, data collection, community capability development, project evaluations, and any other item that will help implement risk reduction projects.

Ongoing/Past Projects

Based on prior COMS projects, NeDNR has identified new areas of engagement with regard to flood risk. A previous project examined comprehensive plans and land use decision making throughout the state. These studies found that communities need technical assistance to ensure flood risk is part of their long-term land use decisions. There is a need to enhance comprehensive plans with better flood risk information, improved goals to reduce future flood risk, and appropriate actions and policies that a community can implement to encourage flood-aware decision making. NeDNR will add this technical assistance element to its on-going community engagement efforts and will ensure that the planning community is well-versed in floodplain management.

Another previous COMS project focused on creating a demographic profile of populations of Nebraskans who live in flood hazard areas. The project used Census data, digital flood data, and Risk MAP project data to identify any trends among those who live in floodplains versus those who don't. Two major trends emerged: housing units in floodplains are disproportionately rental units and a much higher percentage of people in floodplains identify as Hispanic or Latino. This conclusion leads NeDNR to look at better assisting communities in their outreach to residents and businesses. Many communities will need Spanish-language resources and some will need to engage the renter populations in understanding flood risk and flood insurance. We hope to engage the COMS provider in developing additional community resources.

As we discuss mitigation with communities across the state, we often point to the City of Beatrice as a leader in reducing risk in their community. Over the past 40 years, the city has continually acquired floodprone land using both city and federal funds. In 2015, the city saw significant flooding and, because of their prior mitigation efforts, experienced very few flood losses. In FY2017, NeDNR, FEMA, and the City of Beatrice worked with the CERC provider in completing a loss avoidance study for the buyout projects that occurred in Beatrice. The end result was a story map that can be share with the public. Having this information, particularly in an easily accessible format, will help other communities see the benefit of mitigation and incentivize them to take action. The story map can be found here:

<http://arcg.is/1LXin5>

NeDNR is working on implementing story maps to help local stakeholders engage with flood hazard projects in a more meaningful way. Story maps provide a visual and interactive platform which can be used to disseminate information in a way that is fun and informative. Different phases of a project, access to a community comment site, community flood history, historical flood photos, important dates, flood risk product

information, and a host of other information could be hosted on a story map, which can be active for the life of a project. Story maps will be another resource that NeDNR can use to engage with stakeholders in an approachable and informative way.

NeDNR Partnerships

NeDNR and NEMA share the Lead State Agency role in Silver Jackets. Through the Silver Jackets program, Nebraska has worked on a wide array of projects. Below is a summary of a few of these projects:

North Platte River Studies: These projects were funded in 2012 and in 2015 to provide updated flood risk data along the North Platte River, including the Cities of Scottsbluff and North Platte, Nebraska. The effort identified existing at-risk properties to help the communities develop a nonstructural mitigation strategy in their next Hazard Mitigation Plan update. The project partners were: USACE, NeDNR, National Weather Service, U.S. Geological Survey, Platte River Recovery Implementation Program, City of Scottsbluff, City of North Platte, Lincoln County, North Platte NRD and Twin Platte NRD.

Nonstructural Flood Risk Mitigation Assessment for the communities of Cedar Creek and Louisville, Nebraska: This project was funded in 2013. The results of the study showed that there are numerous structures in both communities with notable flood risk and nonstructural measures were both feasible and cost effective. It showed that a nonstructural approach incorporating 48+ structures could be proposed with a benefit cost ratio greater than 1.00. The analysis identified individual structures with a cost benefit ratios as high as 7.21. The project partners were: USACE, NeDNR, Lower Platte South NRD, NEMA, and FEMA.

Nonstructural Approach to Repetitive Loss Properties in Nebraska: This project was funded in 2014. As part of the project there was a Statewide evaluation of the current repetitive loss properties and nonstructural assessment through the Repetitive Loss Area Analysis (RLAA) at Fremont, Nebraska. The project partners were: NeDNR, NEMA, USACE, and FEMA.

Nonstructural Flood Risk Resiliency Assessments for DeWitt and Hebron, Nebraska: This project was funded in 2017. The results of this study showed that there are numerous structures in the two communities at notable flood risk and some nonstructural measures were both feasible and cost effective. This data can be used to assist in developing a community's nonstructural flood risk reduction plan, communicate risk, evaluate individual nonstructural implementation, or assist in making other flood risk decisions. The project partners were: Village of DeWitt, City of Hebron, Saline County, Thayer County, Lower Big Blue NRD, Little Blue NRD, NeDNR, NEMA, USACE, and FEMA.

Lower Platte River Pre-Development Risk Identification: This is an ongoing project that was funded in 2017. The project goal is to provide new hydrology data for the Lower Platte River from Columbus to the confluence with the Missouri River. The

existing study, dated 1997, uses hydrology that was developed in 1975. The project partners are: NeDNR, NEMA, USACE, USGS, Lower Platte River Corridor Alliance and FEMA.

Nebraska Silver Jackets Sandpits Risk Assessment and Risk Management Evaluation: This is an ongoing project that was funded in 2017. The project involves conducting a state-wide assessment estimating the risk associated with sandpit developments and attempting to provide recommendations on how to manage this risk. As part of the project, the team intends to create a tri-fold flyer to be used for educational purposes and to incorporate it into the State Hazard Mitigation Plan Update. The project partners are: NeDNR, NEMA, USACE, and FEMA.

Other Silver Jacket Projects:

- Workshops in Association with NeFSMA
 - 2013 Levee Safety
 - 2014 Nonstructural
 - 2015 Climate Adaption
 - 2016 Dam Safety
- 2014 Highwater Mark Project
- 2015 Dam Safety Outreach Campaign

NeDNR has been a partner with NeFSMA since it was founded in 2005. NeDNR continues serve on the committees and provide assistance when needed. NeDNR and NeFSMA team up on many different events, namely our regional workshops, local EMI classes, and other trainings throughout the state.

State Hazard Mitigation Plan Alignment

The Nebraska State Hazard Mitigation Plan (SHMP) contains the following flood mitigation goals:

1. Reduce or eliminate long term flood risk to human life
2. Reduce or eliminate long term flood risk to property and/or the environment
3. Promote public awareness of flooding hazards and post-flooding response
4. Provide technical assistance to communities, state agencies, and federal agencies to assist with identification of flood hazards, and mitigation opportunities

This business plan adequately addresses and remains in line with the overall State of Nebraska flood mitigation goals. We aim, through flood hazard mapping and community

engagement, to help the state meet these goals and objectives. NeDNR maintains a strong relationship with NEMA on the SHMP and will utilize any new data on flood hazards for the update of the plan starting in FY17. NeDNR will actively integrate the previous COMS project data, Risk MAP information, and other available data as part of the plan update.

Additionally, the SHMP considers flood risk reduction projects identified in local Hazard Mitigation Plans (HMPs). This business plan aligns well with those community-identified needs. For example, most counties included a mitigation strategy for protecting critical facilities. Additionally, most counties included language such as “maintain compliance with NFIP,” with which NeDNR helps by providing technical assistance. Other local HMP mitigation actions that NeDNR plans to assist in include enhancing emergency management, acquiring high risk infrastructure, acquiring new floodplain data, enhancing floodplain regulations, encouraging participation in CRS, dam projects, and other flood control projects.

NeDNR Capabilities

NeDNR has statutory authority for coordinating all floodplain management matters including floodplain mapping, flood mitigation programs, and technical assistance. NeDNR is responsible for identifying and delineating floodplains and floodways in the state. NeDNR provides state coordination for the NFIP and for the Flood Mitigation Assistance grant program. And, NeDNR is responsible for floodplain management technical assistance to local, state, and federal agencies.

NeDNR’s Floodplain Management section comprises 14 professional positions that span experience in engineering, planning, outreach, GIS, and hazard mitigation. Twelve positions work with flood hazard data development, engineering, and mapping, and two primarily help communities understand, manage, and reduce their flood risk.

Project Prioritization

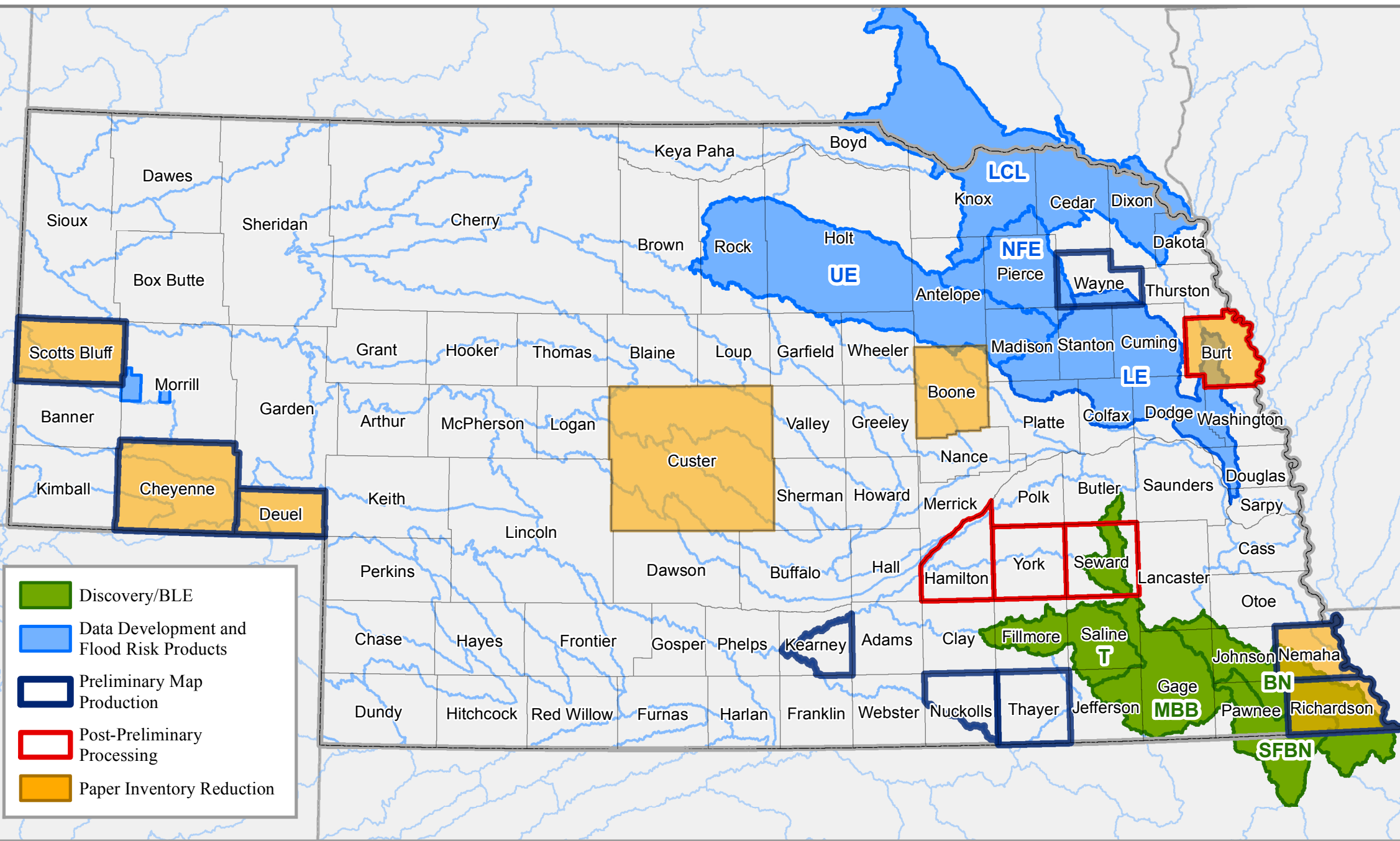
NeDNR understands the limited resources available for Risk MAP projects across the country and will actively seek to prioritize Nebraska projects based on three main qualities. First, we will assess the leverage data available for a watershed to see where we can extend limited FEMA resources. Second, we will work with communities to understand their own flood risk reduction and floodplain management needs to evaluate the best possible implementation of Risk MAP projects. Third, we will ensure our projects can be done with the staff capacity at NeDNR. If funds were available, however, we would secure contracts with consulting firms for some Risk MAP projects in order to provide the best possible data to Nebraska’s communities.

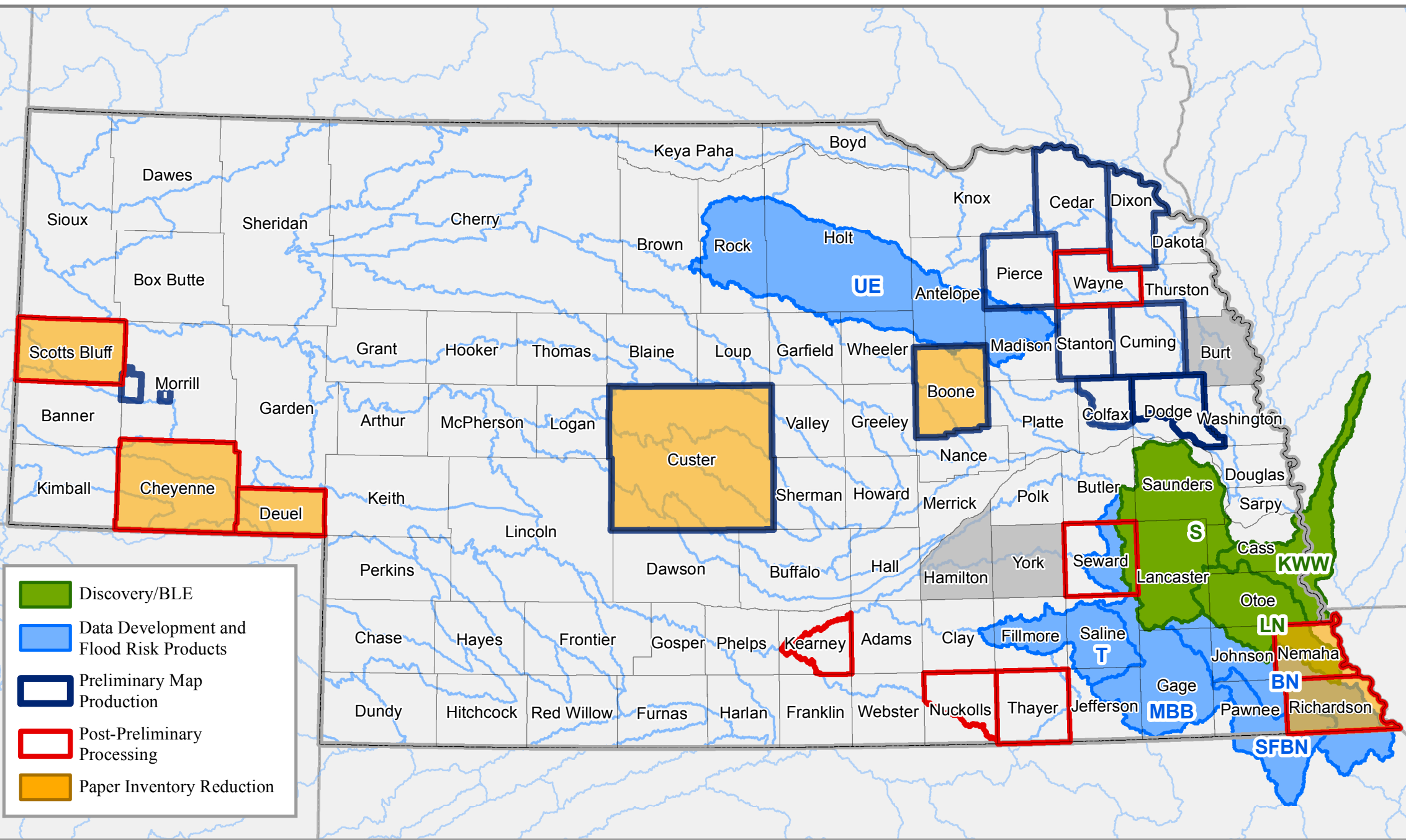
The following sections provide a road map for NeDNR’s proposed projects from Fiscal Year 2018 through Fiscal Year 2023 with the Regulatory Process in these watersheds being completed by 2027. The first section provides a series of figures showing the proposed projects. The second section provides project fact sheets, tables breaking down each watershed project with the key decision points outlined, and a table with the

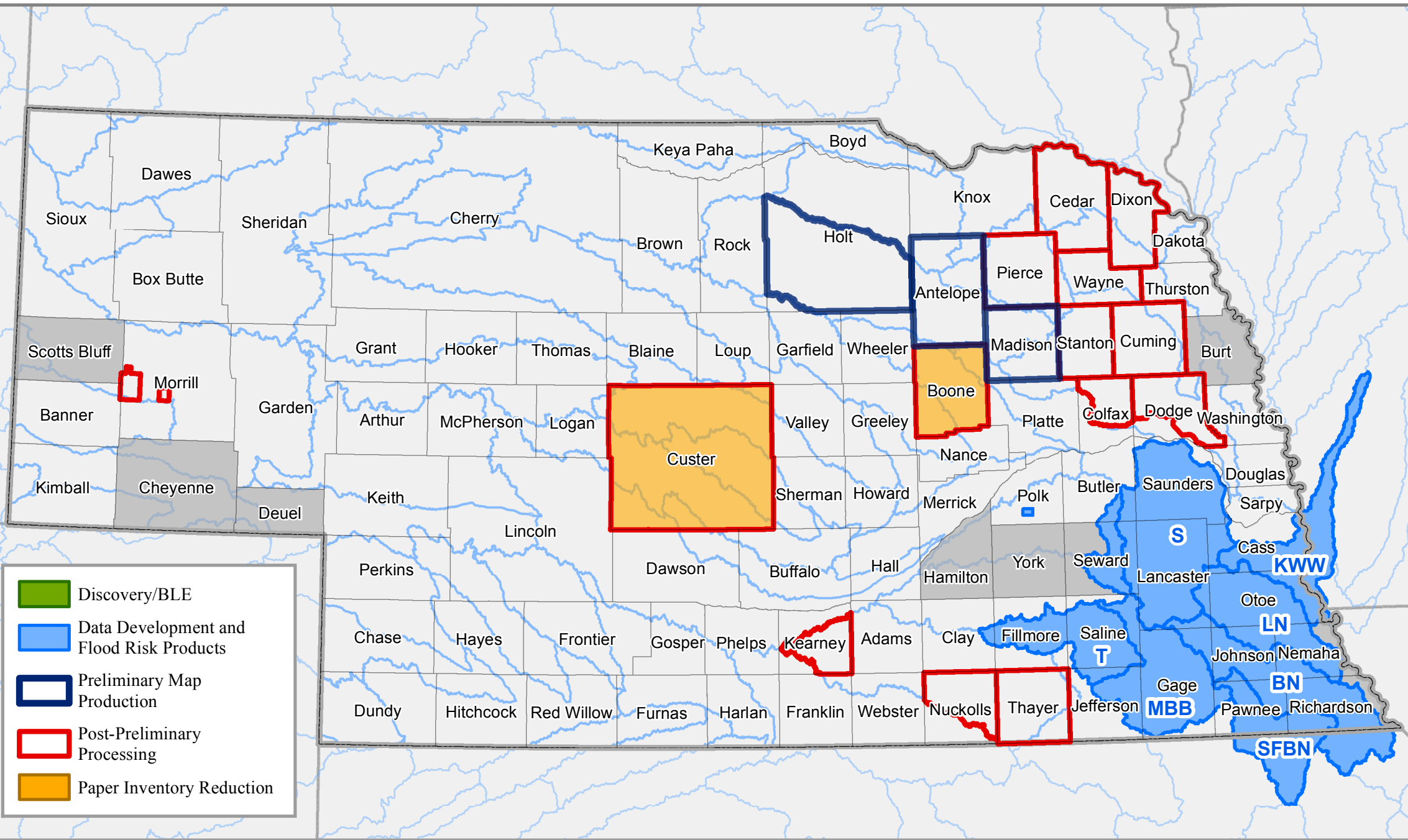
watershed facts including leverage and NVUE. The third and last section provides a table with a breakdown of KDP, Fiscal Year, and project.

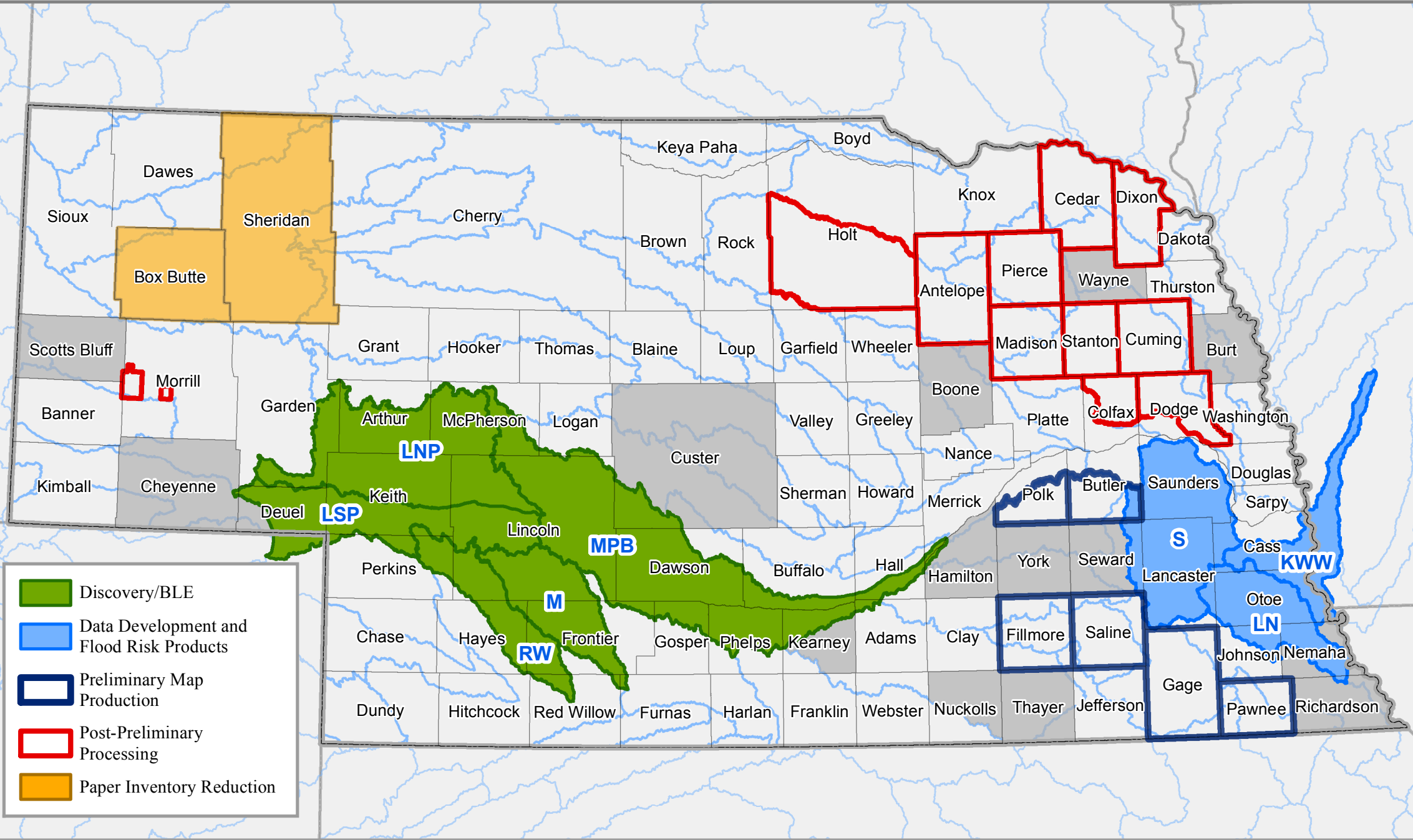
Section 1. Proposed Project Figures

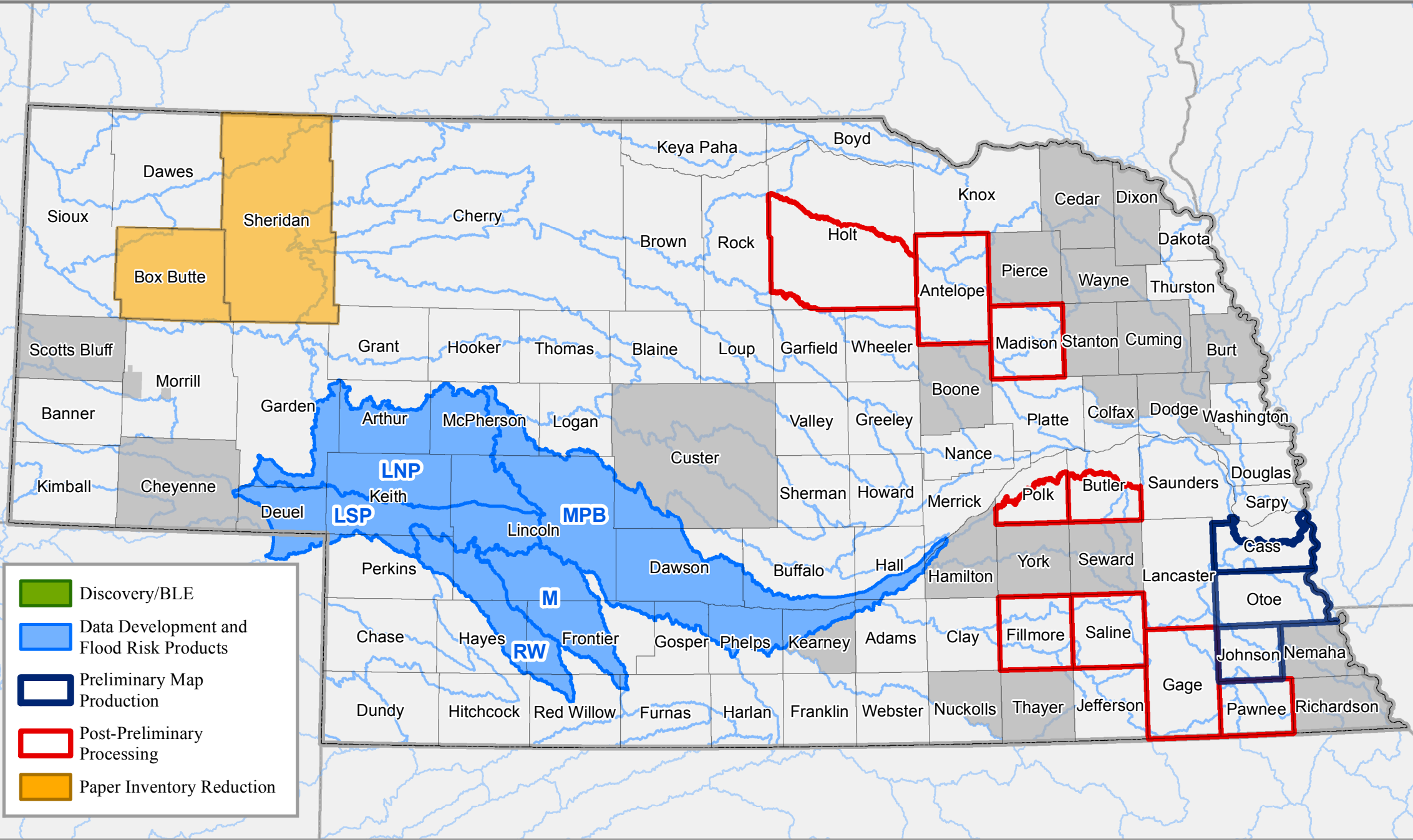
FY2018 – FY2023

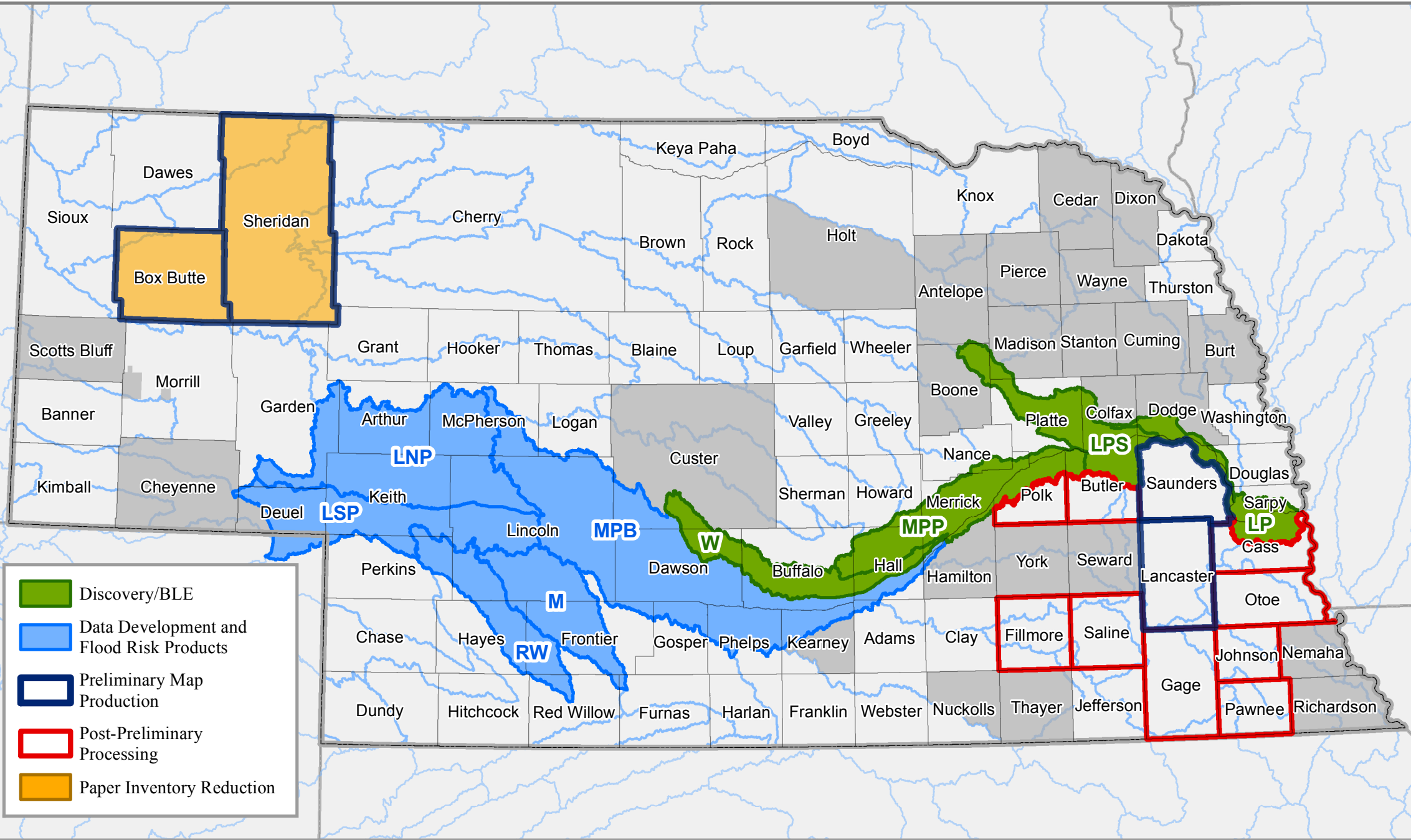




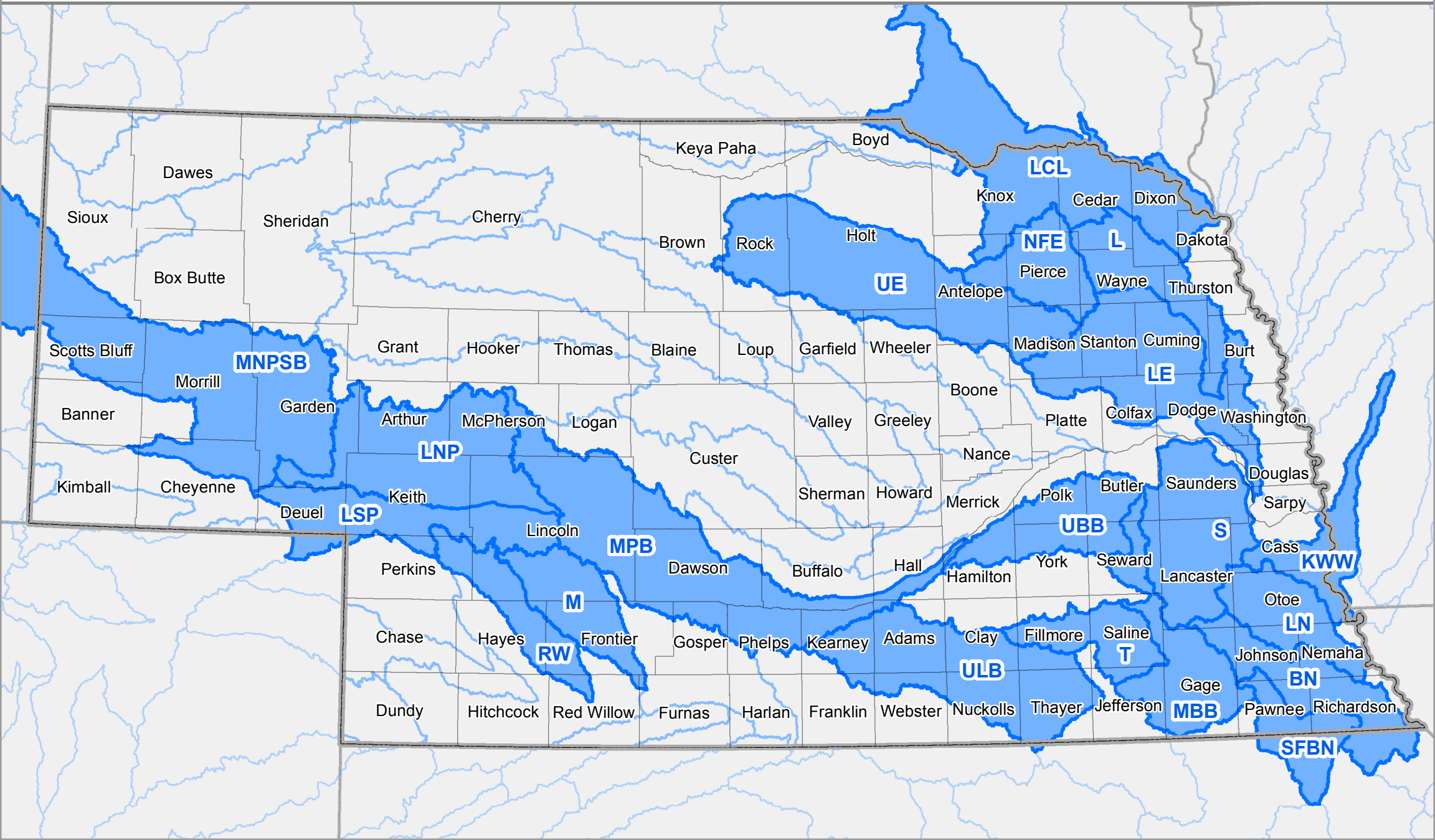


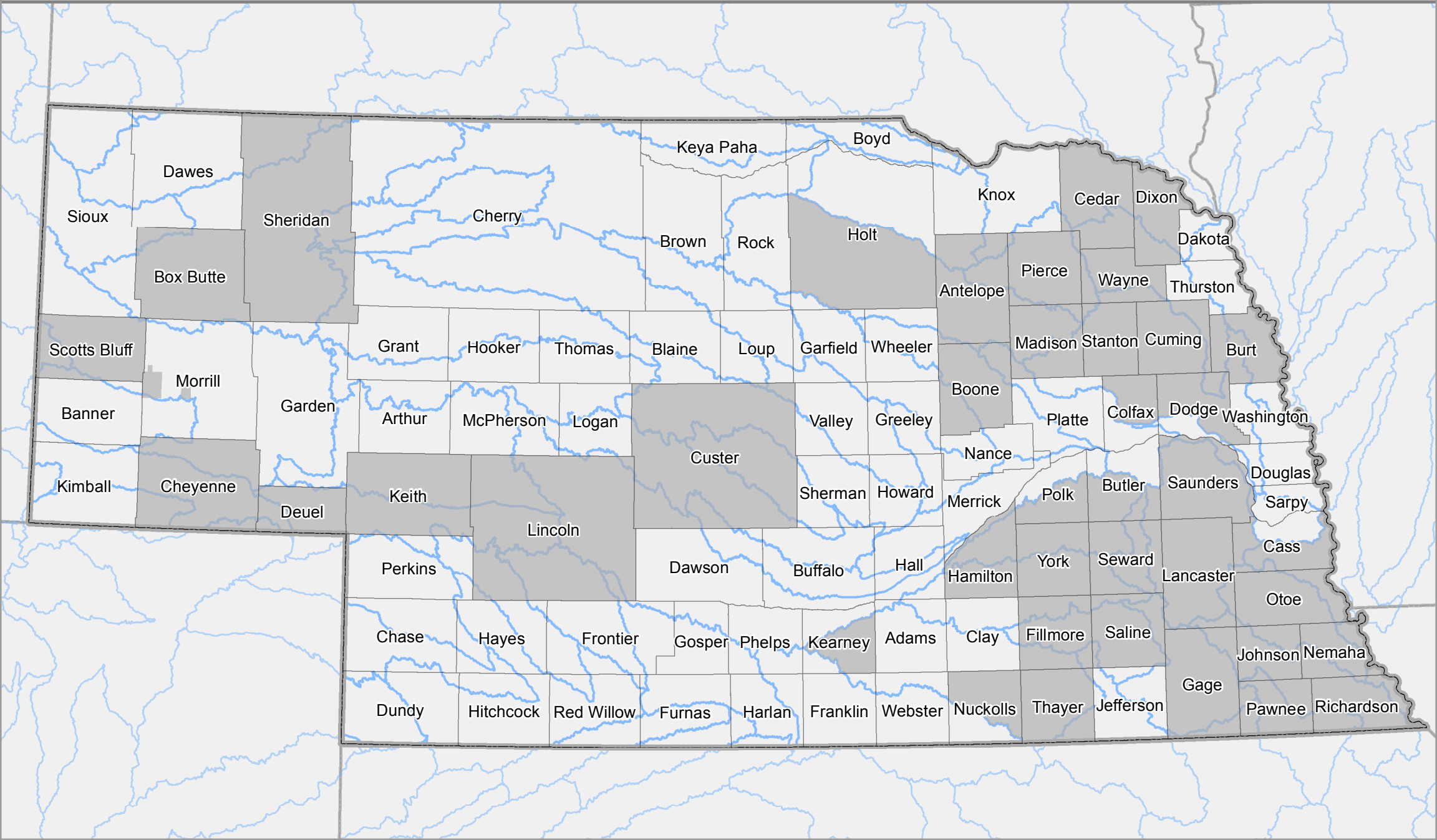






FY2018 CTP Business Plan Engaged Watersheds



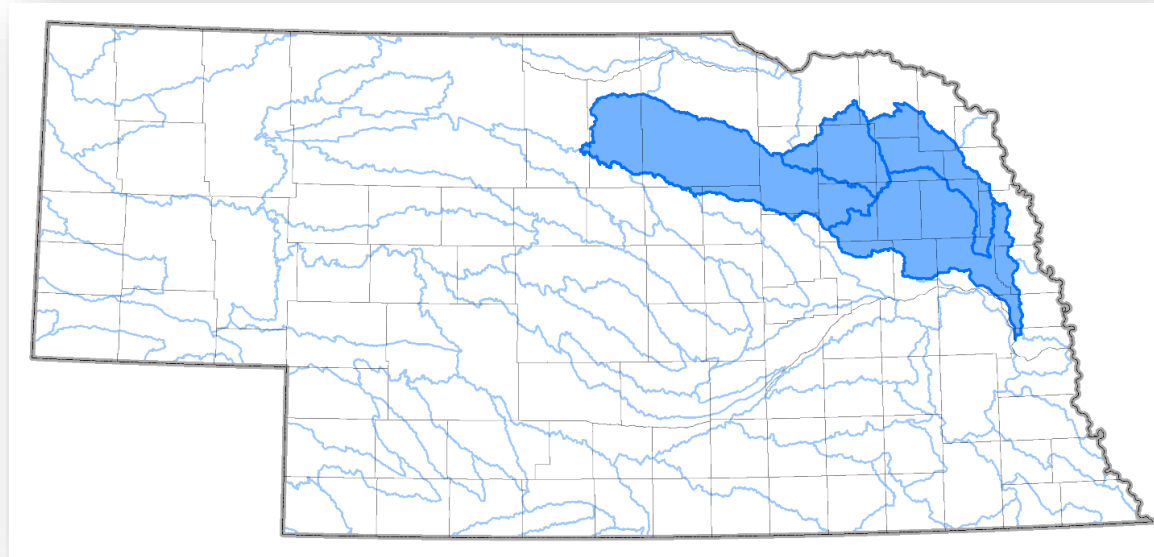


Section 2. Watershed Fact Sheets

Watersheds: Upper Elkhorn, North Fork Elkhorn, Lower Elkhorn, Logan

HUC: 10220001, 10220002, 10220003, 10220004

Population: 141,537



The Elkhorn watersheds are located in Northeastern Nebraska. In the spring of 2010, the Elkhorn River experienced a significant flood event that drastically altered the channel configuration, rendering all the studies along the Elkhorn River and many on its tributaries unverified. With such significant changes occurring to the floodplain, the watersheds are in desperate need of being restudied.

By 2018, LiDAR coverage will be acquired for the remaining areas of North Fork Elkhorn and Upper Elkhorn watersheds in addition to the current coverage for Logan and Lower Elkhorn watersheds.



While the Elkhorn River resides entirely in Nebraska, it is shared by two CTPs: NeDNR and the Papio-Missouri River Natural Resources District. Although NeDNR plans to lead the Risk MAP project for this watershed, it will work closely with the Papio-Missouri River NRD. Additional leverage data will be provided by the USACE Omaha District, who will provide updated hydrology for the entirety of the Elkhorn River, and complete the

Hydraulic study for the Elkhorn River from its confluence to Stuart. NeDNR completed Discovery in the Lower Elkhorn watershed in 2011.

Proposed Schedule of Work

Upper Elkhorn:

FY2016 (Oct 2016 - Sept 2017)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2017 (Oct 2017 - Sept 2018)		Discovery Phase
Discovery Activity		Base Level Engineering for Upper Elkhorn Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2020)		Data Development Phase
Data Development Activity		Basic studies in Upper Elkhorn Watershed Enhanced Study in: <ul style="list-style-type: none"> - Upper Elkhorn Elkhorn River from the Stanton/Madison County line to the headwaters - Norfolk North Fork Elkhorn* Elkhorn River Elkhorn River Norfolk Bypass Elkhorn River Countyline Bypass - O'Neill O'Neill Tributary - Madison Union Creek* Taylor Creek
Flood Risk Products Activity		Flood Risk Product Development for Upper Elkhorn Watershed
Outreach Activities		Flood Risk Review Meeting for Upper Elkhorn Watershed Levee Meetings in Norfolk and Madison <i>KDP #2 Develop Preliminary FIRM?</i>
FY2020 (Oct 2020 - Sept 2023)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Part of Holt, Antelope, and Madison Counties <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Upper Elkhorn Watershed
Outreach Activity		CCO Meeting for Part of Holt, Antelope, and Madison Counties <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Part of Holt, Antelope, and Madison Counties <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Part of Holt, Antelope, and Madison Counties</i>

Fact Sheet

Upper Elkhorn:

Risk MAP Program Measures	
Population	31,372
NE % Population	1.70%
NVUE #'s (Miles)	NeDNR: Detailed = 45.47 and Approximate = 2,591, Total = 2,636
Leverage Data	Complete LiDAR coverage. USACE plans to complete the Hydrology for the entire Elkhorn Basin (Logan, North Elkhorn River, Upper Elkhorn and Lower Elkhorn Watersheds) in FY2016, and the Hydraulics from the mouth to the Madison-Stanton County line. Then in FY2017 the USACE planned on completing the rest of the Hydraulics from the Madison-Stanton County line to the headwaters. It will be an enhanced study for the entire length of the stream. USACE is using FPMS funds to complete the project. NeDNR will completely take the project over after hydraulics.
List of Communities	Antelope County, City of Atkinson, City of Bassett, City of Battle Creek, Boone County, Brown County, Village of Chambers, Village of Clearwater, City of Elgin, Village of Emmet, Village of Ewing, Garfield County, Holt County, Village of Inman, Madison County, Village of Meadow Grove, City of Neligh, Village of Newport, City of Norfolk, Village of Oakdale, City of O'Neill, Village of Page, Pierce County, Rock County, Stanton County, Village of Stuart, City of Tilden, Wheeler County
Number of Communities in watershed	28
Additional Notes:	None

Proposed Schedule of Work

North Fork Elkhorn:

FY2016 (Oct 2016 - Sept 2017)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2017 (Oct 2017 - Sept 2018)		Discovery Phase
Discovery Activity		Discovery Meeting for North Fork Elkhorn Watershed and Willow Creek <i>KDP #1 Continue Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2019)		Data Development Phase
Data Development Activity		Basic studies in North Fork Elkhorn Watershed Enhanced Study in: - Pierce North Fork Elkhorn River Willow Creek
Flood Risk Products Activity		Flood Risk Product Development for North Fork Elkhorn Watershed
Outreach Activity		Flood Risk Review Meeting for North Fork Elkhorn Watershed Levee Meetings for Pierce <i>KDP #2 Develop Preliminary FIRM?</i>
FY2019 (Oct 2019 - Sept 2022)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Pierce County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for North Fork Elkhorn Watershed
Outreach Activity		CCO Meeting for Pierce County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Pierce County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Pierce County</i>

Fact Sheet
North Fork Elkhorn:

Risk MAP Program Measures	
Population	29,859
NE % Population	1.60%
NVUE #'s	NeDNR: Detailed = 23.6 and Approximate = 720, Total = 743.6
Leverage Data	Complete LiDAR coverage. USACE planned to complete the Hydrology for the entire Elkhorn Basin (Logan, North Elkhorn River, Upper Elkhorn and Lower Elkhorn Watersheds) in FY2016. USACE is using FPMS funds to complete the project. NeDNR will completely take the project over after hydrology.
List of Communities	Antelope County, Cedar County, Village of Foster, Village of Hadar, Village of Hoskins, Knox County, Madison County, Village of Magnet, Village of McLean, City of Norfolk, City of Osmond, City of Pierce, Pierce County, City of Plainview, Stanton County, Village of Wausa, Wayne County
# of Communities	17
Additional Notes:	None

Proposed Schedule of Work

Lower Elkhorn:

FY2015 (Oct 2015 - Sept 2016)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2016 (Oct 2016 - Sept 2017)		Discovery Phase
Discovery Activity		Base Level Engineering for Lower Elkhorn Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2017 (Oct 2017 - Sept 2019)		Data Development Phase
Data Development Activity		Basic studies in Lower Elkhorn Watershed Enhanced Study in: <ul style="list-style-type: none"> - Elkhorn Elkhorn River from the mouth to the Stanton/Madison County line - West Point Unnamed Creek South of West Point - Dodge Middle Pebble Creek - Snyder Middle Pebble Creek - Scribner Pebble Creek
Flood Risk Products Activity		Flood Risk Product Development for Lower Elkhorn Watershed
Outreach Activity		Flood Risk Review Meeting for Lower Elkhorn Watershed Levee Meetings for West Point, Scribner, and Hooper <i>KDP #2 Develop Preliminary FIRM?</i>
FY2018 (Oct 2018 - Sept 2019)		Data Development Phase
Data Development Activity		Enhanced studies in: <ul style="list-style-type: none"> - Clarkson West Fork Maple Creek - Howells East Fork Maple Creek
Outreach Activity		Flood Risk Review Meeting for Clarkson and Howells, Levee Meetings for Clarkson and Howells
FY2019 (Oct 2019 - Sept 2022)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Cuming, Stanton, part of Colfax, and part of Dodge Counties <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Lower Elkhorn Watershed
Outreach Activity		CCO Meeting for Cuming, Stanton, part of Colfax, and part of Dodge Counties <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Cuming, Stanton, part of Colfax, and part of Dodge Counties <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Cuming, Stanton, part of Colfax, and part of Dodge Counties</i>

Fact Sheet
Lower Elkhorn:

Risk MAP Program Measures	
Population (2010)	62,857
NE % Population	3.40%
NVUE #'s	NeDNR Detailed = 21, and Approximate = 1,747, Total = 1,768
Leverage Data	Complete LiDAR coverage. USACE plans to complete the Hydrology for the entire Elkhorn Basin (Logan, North Elkhorn River, Upper Elkhorn and Lower Elkhorn Watersheds) in FY2016, and the Hydraulics from the mouth to the Madison-Stanton County line. Then in FY2017 the USACE planned on completing the rest of the Hydraulics from the Madison-Stanton County line to the headwaters. It will be an enhanced study for the entire length of the stream. USACE is using FPMS funds to complete the project. NeDNR will completely take the project over after hydraulics.
List of Communities	Village of Arlington, Village of Beemer, Burt County, City of Clarkson, Colfax County, Village of Cornlea, Village of Craig, Village of Creston, Cuming County, Dodge County, Village of Dodge, Douglas County, City of Fremont, City of Gretna, City of Hooper, Village of Howells, City of Humphrey, Village of Leigh, Village of Lindsay, City of Lyons, City of Madison, Madison County, Village of Nickerson, City of Norfolk, City of Omaha, Village of Pilger, Platte County, Sarpy County, City of Scribner, Village of Snyder, Stanton County, City of Stanton, Thurston County, City of Valley, Washington County, Village of Waterloo, Wayne County, City of West Point, Village of Winslow, City of Wisner
Number of Communities	40
Additional Notes	None

Proposed Schedule of Work

Logan:

FY2015 (Oct 2015 - Sept 2016)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2016 (Oct 2016 - Sept 2017)		Discovery Phase
Outreach Activity		Discovery Meeting for Logan Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2017 (Oct 2017 - Sept 2018)		Data Development Phase
Data Development Activity		Basic studies in Logan Watershed Enhanced Study in: <ul style="list-style-type: none"> - Randolph Middle Logan Creek, North Branch Middle Logan Creek, North Branch Middle Logan Creek Diversion, East Tributary North Branch Middle Logan Creek, South Branch Middle Logan Creek, and West Tributary South Branch Middle Logan Creek - Wakefield Logan Creek Dredge and South Logan Creek - Wayne Deer Creek, Dog Creek and South Logan Creek
Flood Risk Products Activity		Flood Risk Product Development for Logan Watershed
Outreach Activity		Flood Risk Review Meeting for Logan Watershed Levee Meetings for Wakefield <i>KDP #2 Develop Preliminary FIRM?</i>
FY2018 (Oct 2018 - Sept 2021)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Wayne County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Logan Watershed
Outreach Activity		CCO Meeting for Wayne County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Wayne County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Wayne County</i>

Fact Sheet

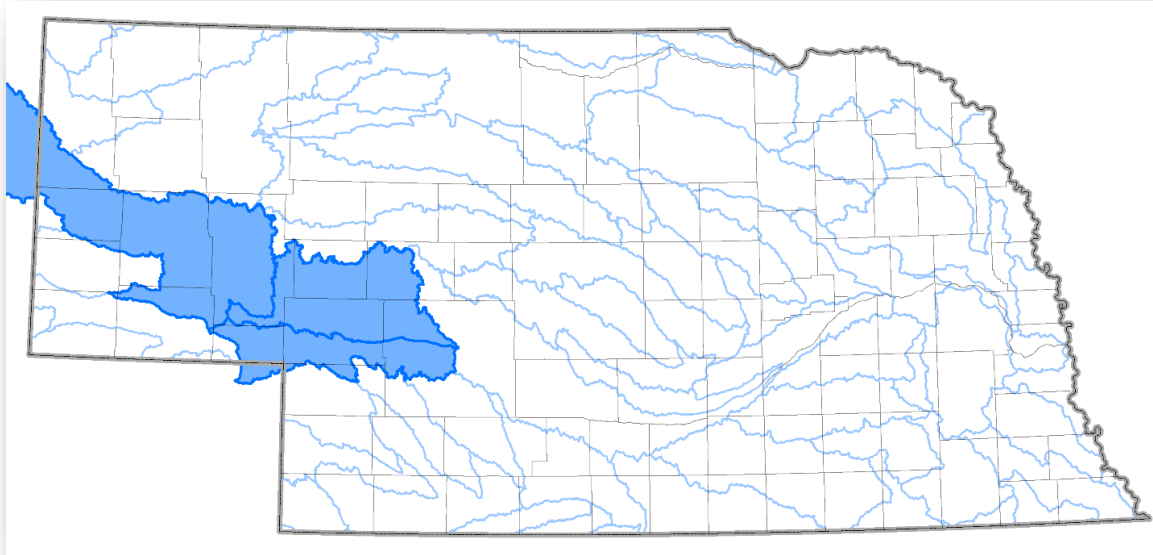
Logan:

Risk MAP Program Measures	
Population	21,606
NE % Population	1.18%
NVUE #'s	NeDNR: Approximate = 790 and Detailed = 25, Total = 815
Leverage Data	Complete LiDAR coverage. USACE plans to complete the Hydrology for the entire Elkhorn Basin (Logan, North Elkhorn River, Upper Elkhorn and Lower Elkhorn Watersheds) in FY2016. USACE is using FPMS funds to complete the project. NeDNR will completely take the project over after hydraulics.
List of Communities	Village of Bancroft, Village of Belden, Burt County, Village of Carroll, Cedar County, Village of Coleridge, Village of Concord, Cuming County, Dakota County, Dixon County, Village of Dixon, Dodge County, Village of Emerson, City of Laurel, City of Lyons, City of Oakland, Village of Pender, Pierce County, City of Randolph, Village of Rosalie, Village of Sholes, Village of Thurston, Thurston County, Village of Uehling, City of Wakefield, City of Wayne, Wayne County, Village of Winside, and Village of Winslow
Number of Communities	29
Additional Notes	None

Watersheds: Middle North Platte – Scotts Bluff, Lower North Platte, Lower South Platte

HUC: 10180009, 10180014, 10190018

Population: 86,858 (Nebraska)



The Middle North Platte-Scotts Bluff, Lower North Platte, and Lower South Platte watersheds are located in Eastern Wyoming and Western Nebraska. As one of the two main tributaries to the Platte River, the North Platte River is often a controlling factor on downstream Platte River flooding. As demonstrated during spring flooding in 2010 and 2011, the lack of accurate and up-to-date information was a hindrance in assessing risk and implementing mitigation activities downstream. Better mapping would aid in these activities and help keep the public informed. Due to the importance of the North Platte River, several projects have already occurred through Silver Jackets. The USACE and the

NWS developed hydrology data as well as real-time flood inundation mapping for the North Platte River.



In addition, LiDAR data was collected in this area in 2009, 2011, 2012, and 2016. Availability of current elevation information, past flood history, and the established alliances with other agencies make this area a strong candidate for a Risk MAP project.

Proposed Schedule of Work
Middle North Platte - Scotts Bluff:

FY2015 (Oct 2015 - Sept 2016)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2016 (Oct 2016 - Sept 2017)		Base Level Engineering
Mapping Activity		Base Level Engineering for Middle North Platte-Scotts Bluff Watershed
FY2017 (Oct 2017 - Sept 2018)		Discovery Phase
Outreach Activity		Discovery Meeting for Middle North Platte-Scotts Bluff Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2019)		Data Development Phase
Data Development Activity		Basic studies in Bayard and Bridgeport. Enhanced Study in: - Bayard Wildhorse Drain
Flood Risk Products Activity		Flood Risk Product Development for Middle North Platte - Scotts Bluff Watershed
Outreach Activity		Flood Risk Review Meeting for Middle North Platte - Scotts Bluff Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2019 (Oct 2019 - Sept 2022)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Bridgeport and Bayard <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Middle North Platte - Scotts Bluff Watershed
Outreach Activity		CCO Meetings for Bridgeport and Bayard <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Bridgeport and Bayard <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Bridgeport and Bayard</i>

Fact Sheet
Middle North Platte-Scotts Bluff:

Risk MAP Program Measures	
Population	44,839
NE % Population	2.50%
NVUE #'s	NeDNR: Detailed = 3 and Approximate = 3,238, Total = 3,241
Leverage Data	Acquisition of USGS 2016 LiDAR data in spring of 2017, along with 2011 and 2012 NRCS LiDAR datasets, provide accurate elevation data for the study area. As part of the FY2012 and FY2015 Silver Jackets projects, the Hydrology for the North Platte River was completed, and as part of a FY2016 Silver Jackets project the North Platte River and Winter's Creek Hydraulic studies in the City of Scottsbluff were completed. These studies will be utilized for the projects in this watershed.
List of Communities	Banner County, City of Bayard, Box Butte County, City of Bridgeport, Village of Broadwater, Cheyenne County, Village of Dalton, Deuel County, Garden County, City of Gering, Village of Gurley, Village of Henry, Kimball County, Village of Lewellen, Village of McGrew, Village of Melbeta, City of Minatare, City of Mitchell, Village of Morrill, Morrill County, City of Oshkosh, Scotts Bluff County, City of Scottsbluff, Sioux County, City of Terrytown
Number of Communities	25
Additional Notes	None

Proposed Schedule of Work

Lower North Platte:

FY2020 (Oct 2020 - Sept 2021)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2021 (Oct 2021 - Sept 2022)		Discovery Phase
Outreach Activity		Discovery Meeting for Lower North Platte Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2022 (Oct 2022 - Sept 2024)		Data Development Phase
Data Development Activity		Basic studies in Lower North Platte Watershed Enhanced Study in: - North Platte North Platte River South Platte River Fremont Slough Whitehorse Creek Scout Creek
Flood Risk Products Activity		Flood Risk Product Development for Lower North Platte Watershed
Outreach Activity		Flood Risk Review Meeting for Lower North Platte Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2024 (Oct 2024 - Sept 2027)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Lincoln County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Lower North Platte Watershed
Outreach Activity		CCO Meeting for Lincoln County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Lincoln County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Lincoln County</i>

Fact Sheet
Lower North Platte:

Risk MAP Program Measures	
Population	28,319
NE % Population	1.60%
NVUE #'s	NeDNR: Detailed = 9.15 and Approximate = 1,882, Total = 1,891.15
Leverage Data	Acquisition of USGS 2016 LiDAR data in spring of 2017, along with 2011 and 2012 NRCS LiDAR datasets, provide accurate elevation data for the study area. As part of the FY2012 and FY2015 Silver Jackets projects, the Hydrology for the North Platte River was completed.
List of Communities	Village of Arthur, Arthur County, Deuel County, Garden County, Village of Hershey, Keith County, Village of Lewellen, Lincoln County, McPherson County, City of North Platte, City of Ogallala, Village of Sutherland
# Communities	12
Additional Notes:	None

Proposed Schedule of Work
Lower South Platte:

FY2020 (Oct 2020 - Sept 2021) Project Planning Phase	
Initial Activity	<i>KDP #0 Initiate Flood Risk Project?</i>
FY2021 (Oct 2021 - Sept 2022) Discovery Phase	
Outreach Activity	Discovery Meeting for Lower South Platte Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2022 (Oct 2022 - Sept 2024) Data Development Phase	
Data Development Activity	Basic studies in Lower South Platte Watershed Enhanced Study in: - Ogallala South Platte River
Flood Risk Products Activity	Flood Risk Product Development for Lower South Platte Watershed
Outreach Activity	Flood Risk Review Meeting for Lower South Platte Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2024 (Oct 2024 - Sept 2027) Regulatory Phase: Preliminary to Effective	
Mapping Activity	Preliminary FIRM Development for Keith County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity	Resilience Meeting for Lower South Platte Watershed
Outreach Activity	CCO Meeting for Keith County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity	Appeals Period for Keith County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity	Issue LFD <i>Regulatory Products for Keith County</i>

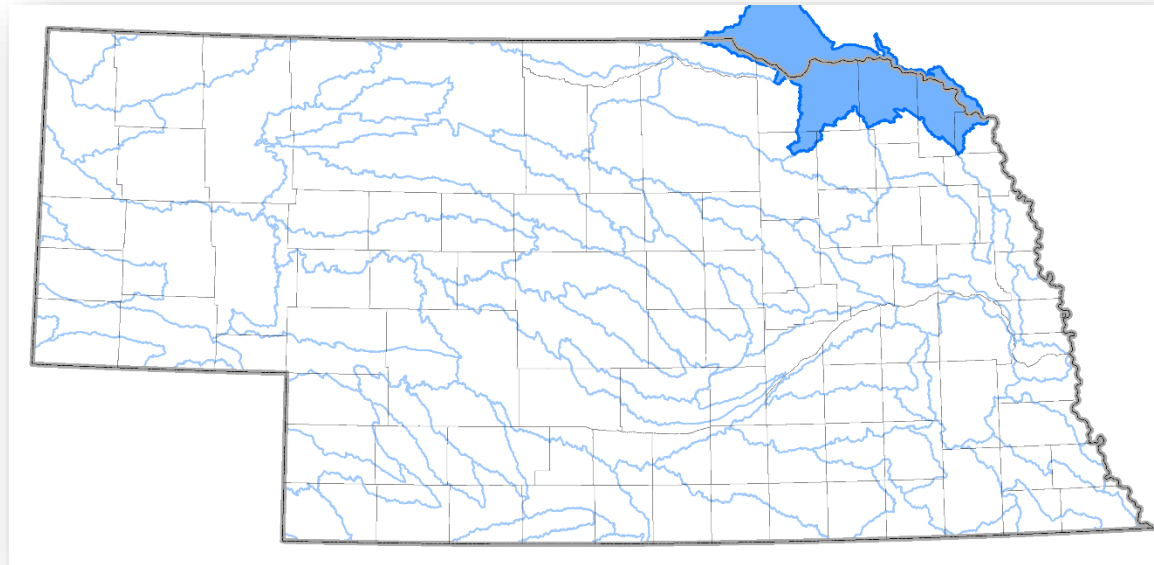
Fact Sheet
Lower South Platte:

Risk MAP Program Measures	
Population	16,669
NE % Population	0.90%
NVUE #'s	NeDNR: Detailed = 25.62 and Approximate = 1,312, Total = 1,337
Leverage Data	Acquisition of USGS 2016 LiDAR data in spring of 2017, along with 2011 and 2012 NRCS LiDAR datasets, provide accurate elevation data for the study area.
List of Communities	Village of Big Springs, Village of Brule, Cheyenne County, Deuel County, Garden County, Village of Hershey, Keith County, Lincoln County, City of North Platte, City of Ogallala, Village of Paxton, Perkins County, Village of Sutherland
# of Communities	13
Additional Notes:	None

Watershed: Lewis and Clark Lake

HUC: 10170101

Population: 17,597 (Nebraska)



The Lewis and Clark Lake watershed is located in Southeastern South Dakota and Northeastern Nebraska. NeDNR has identified this watershed based on the availability of leverage data and potential mitigation concerns arising from the 2011 Missouri River Flooding. Many homes and cabins were lost and infrastructure (e.g., roads, bridges, waste-water treatment plants, power plants, etc.) were damaged due to the historic high flows that occurred along the Missouri River. NeDNR completed the Discovery phase of Risk MAP for this watershed in 2011.



LiDAR for the majority of the watershed was completed in 2011 with the addition of the NRCS 2011 and USACE Missouri River 2011 LiDAR datasets. The remaining portions of the watershed were completed with the NRCS 2016 dataset covering the northwestern and northern regions of the state, including Boyd and Antelope counties.

Proposed Schedule of Work

Lewis and Clark Lake:

FY2016 (Oct 2016 - Sept 2017)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2017 (Oct 2017 - Sept 2018)		Discovery Phase
Mapping Activity		Base Level Engineering for Lewis and Clark Lake Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2019)		Data Development Phase
Data Development Activity		Basic studies in Lewis and Clark Lake Watershed
Flood Risk Products Activity		Flood Risk Product Development for Lewis and Clark Lake Watershed
Outreach Activity		Flood Risk Review Meeting for Lewis and Clark Lake Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2019 (Oct 2019 - Sept 2022)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Cedar and Dixon Counties <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Lewis and Clark Lake Watershed
Outreach Activity		CCO Meeting for Cedar and Dixon Counties <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Cedar and Dixon Counties <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Cedar and Dixon Counties</i>

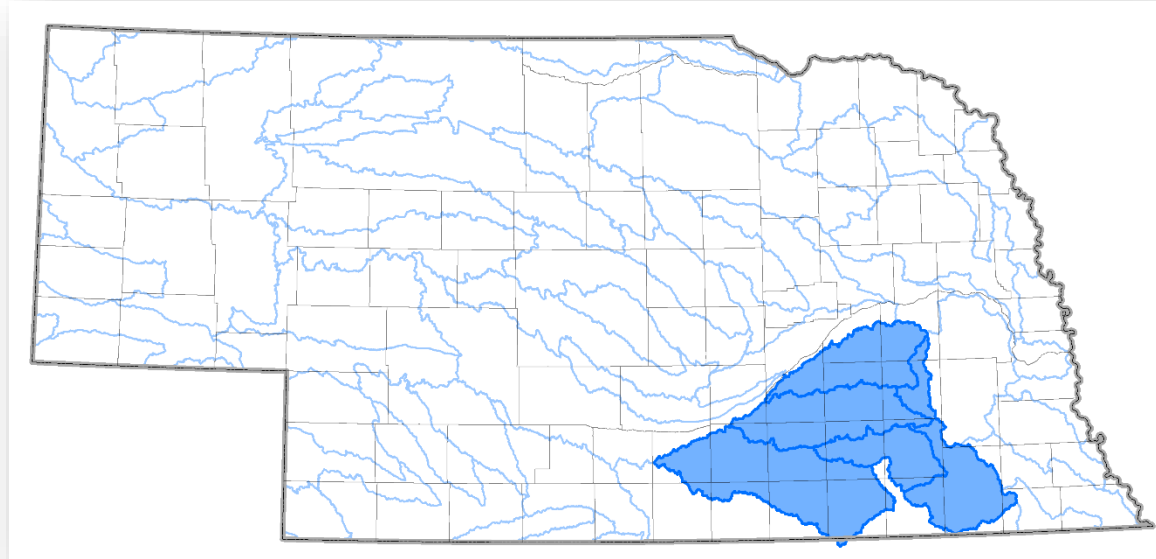
Fact Sheet
Lewis and Clark Lake:

Risk MAP Program Measures	
Population	17,597
NE % Population	1.00%
NVUE #'s	NeDNR: Approximate = 1,360
Leverage Data	LiDAR for the majority of the watershed was completed in 2011 with the addition of the NRCS 2011 and USACE Missouri River 2011 LiDAR datasets. The remaining portions of the watershed were completed with the NRCS 2016 dataset covering the northwestern and northern regions of the state, including Boyd and Antelope counties.
List of Communities	Village of Allen, Antelope County, Village of Bazile Mills, City of Bloomfield, Boyd County, Village of Brunswick, Cedar County, Village of Center, Village of Coleridge, City of Creighton, City of Crofton, Dakota County, Dixon County, Village of Emerson, Village of Fordyce, City of Hartington, Village of Jackson, Knox County, Village of Martinsburg, Village of Maskell, Village of Newcastle, Village of Niobrara, Village of Obert, Pierce County, City of Ponca, Village of Santee, South Sioux City, Village of St. Helena, Thurston County, Village of Waterbury, Village of Winnetoon, Village of Wynot
Number of Communities	32
Additional Notes	None

Watersheds: Upper Big Blue, Middle Big Blue, West Fork Big Blue, Turkey, Upper Little Blue

HUC: 10270201, 10270202, 10270203, 10270204, 10270206

Population: 143,585 (Nebraska)



The Middle Big Blue, Turkey and Upper Little Blue watersheds, located in southeastern Nebraska, are a high priority for NeDNR, where projects in West Fork Big Blue and Upper Big Blue are currently underway. A number of communities in the watersheds have a long history of flood damages as well as mitigation activities. The village of DeWitt lies entirely within the floodplain and has suffered devastating floods in 2015, 2013, 1993, 1986, and 1984, in addition to flood events in the distant past. The city of Beatrice has suffered



many floods as well, with nearly 36 major flooding events in 130 years. Both communities have been proactive about mitigating risk: Beatrice has acquired hundreds of properties to remove families from flood risk and DeWitt has installed flap gates to prevent more recurrent flooding from impacting the village.

LiDAR data is important leverage data that will be provided for these

Watersheds. Gage, Fillmore, Nuckolls, Saline and Thayer Counties were mapped prior to receiving LiDAR data, which has since been acquired with the addition of the NRCS 2009

South Central Nebraska LiDAR dataset. The precision of 2m LiDAR elevation data in this region will significantly increase the accuracy of the flood zones for these counties.

Hydrology for the Upper Little Blue Watershed has been completed for reaches upstream of Clay County as part of the currently ongoing Risk MAP study for Clay County. Preliminary Maps were created for Adams and Clay counties in FY2015, and maps will become final in Clay County on July 5, 2018.

Proposed Schedule of Work

Upper Big Blue:

FY2016 (Oct 2016 - Sept 2017)		Project Planning Phase
Initial Activity	<i>KDP #0 Initiate Flood Risk Project?</i> <i>KDP #1 Continue Flood Risk Project?</i>	
FY2016 (Oct 2017 - Sept 2018)		Data Development Phase
Mapping Activity	Data Development Basic studies in Upper Big Blue Watershed	
Flood Risk Products Activity	Flood Risk Product Development for Upper Big Blue Watershed	
Outreach Activity	Flood Risk Review Meeting for Upper Big Blue Watershed <i>KDP #2 Develop Preliminary FIRM?</i>	
FY2017 (Oct 2017 - Sept 2020)		Regulatory Phase: Preliminary to Effective
Mapping Activity	Preliminary FIRM Development for Seward County <i>KDP #3 Issue Preliminary Products?</i>	
Outreach Activity	Resilience Meeting for Upper Big Blue Watershed	
Outreach Activity	CCO Meeting for Seward County <i>KDP #4 Initiate Appeals Period?</i>	
Regulatory Activity	Appeals Period for Seward County <i>KDP#5 Issue Letter of Final Determination?</i>	
Regulatory Activity	Issue LFD <i>Regulatory Products for Seward County</i>	
FY2020 (Oct 2020 - Sept 2021)		Data Development Phase
Data Development Activity	Enhanced Study: - Stromsburg Big Blue River	
Flood Risk Products Activity	Flood Risk Product Development for Upper Big Blue Watershed	
Outreach Activity	Flood Risk Review Meeting for Upper Big Blue Watershed	
FY2021 (Oct 2021 - Sept 2024)		Regulatory Phase: Preliminary to Effective
Mapping Activity	Preliminary FIRM Development for part of Polk and part of Butler Counties <i>KDP #3 Issue Preliminary Products?</i>	
Outreach Activity	CCO Meeting for part of Polk and part of Butler Counties <i>KDP #4 Initiate Appeals Period?</i>	
Regulatory Activity	Appeals Period for part of Polk and part of Butler Counties <i>KDP#5 Issue Letter of Final Determination?</i>	
Regulatory Activity	Issue LFD <i>Regulatory Products for part of Polk and part of Butler Counties</i>	

Fact Sheet
Upper Big Blue:

Risk MAP Program Measures	
Population	24,240
NE % Population	1.30%
NVUE #'s	NeDNR: Approximate = 460
Leverage Data	2009 NRCS South Central Nebraska LiDAR dataset.
List of Communities	City of Aurora, Village of Benedict, Village of Bradshaw, Village of Brainard, Butler County, City of David City, Village of Garrison, Village of Gresham, Hall County, Hamilton County, Village of Hampton, Village of Hordville, Village of Marquette, City of Osceola, Village of Phillips, Village of Polk, Polk County, Village of Rising City, City of Seward, Seward County, Village of Shelby, Village of Staplehurst, City of Stromsburg, Village of Surprise, Village of Thayer, Village of Ulysses, Village of Utica, Village of Waco, City of York, York County
Number of Communities	30
Additional Notes	None

Proposed Schedule of Work:

Middle Big Blue

FY2017 (Oct 2017 - Sept 2018)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2019)		Discovery Phase
Outreach Activity		Discovery Meeting for Middle Big Blue Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2019 (Oct 2019 - Sept 2020)		Data Development Phase
Data Development Activity		Basic studies in Middle Big Blue Watershed. Enhanced Study in: <ul style="list-style-type: none"> - Crete Walnut Creek - Wilber North Unnamed Tributary of Big Blue River Middle Unnamed Tributary of Big Blue River - DeWitt Big Blue River Overflow Turkey Creek - Beatrice Big Blue River Indian Creek Big Blue River Trib 44 - Barneston Big Blue River - Blue Springs Big Blue River
Flood Risk Products Activity		Flood Risk Product Development for Middle Big Blue Watershed
Outreach Activity		Flood Risk Review Meeting for Middle Big Blue Watershed Levee Meetings for Beatrice <i>KDP #2 Develop Preliminary FIRM?</i>
FY2021 (Oct 2021 - Sept 2024)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Gage County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Middle Big Blue Watershed
Outreach Activity		CCO Meeting Gage County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period Gage County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Gage County</i>

Fact Sheet
Middle Big Blue:

Risk MAP Program Measures	
Population	42,699
NE % Population	2.30%
NVUE #'s	NeDNR: Detailed = 66 and Approximate = 931, Total = 997
Leverage Data	2009 NRCS South Central Nebraska LiDAR dataset.
List of Communities	City of Beatrice, Village of Bee, City of Blue Springs, Village of Brainard, Butler County, Village of Clatonia, Village of Cortland, City of Crete, Village of DeWitt, Village of Diller, Village of Dorchester, Village of Dwight, Village of Filley, Gage County, Village of Garland, Village of Goehner, Village of Hallam, Village of Harbine, Village of Jansen, Jefferson County, Lancaster County, Village of Lewiston, City of Milford, Village of Odell, Pawnee County, Village of Pickrell, Village of Plymouth, Saline County, City of Seward, Seward County, Village of Virginia, City of Wilber, City of Wymore
# of Communities	33
Additional Notes:	None

Proposed Schedule of Work

Turkey:

FY2017 (Oct 2017 - Sept 2018)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2019)		Discovery Phase
Outreach Activity		Discovery Meeting for Turkey Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2019 (Oct 2019 - Sept 2020)		Data Development Phase
Data Development Activity		Basic studies in Turkey Watershed.
Flood Risk Products Phase		Flood Risk Product Development for Turkey Watershed
Outreach Activity		Flood Risk Review Meeting for Turkey Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2021 (Oct 2021 - Sept 2024)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Saline and Fillmore Counties <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Turkey Watershed
Outreach Activity		CCO Meeting Saline and Fillmore Counties <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period Saline and Fillmore Counties <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Saline and Fillmore Counties</i>

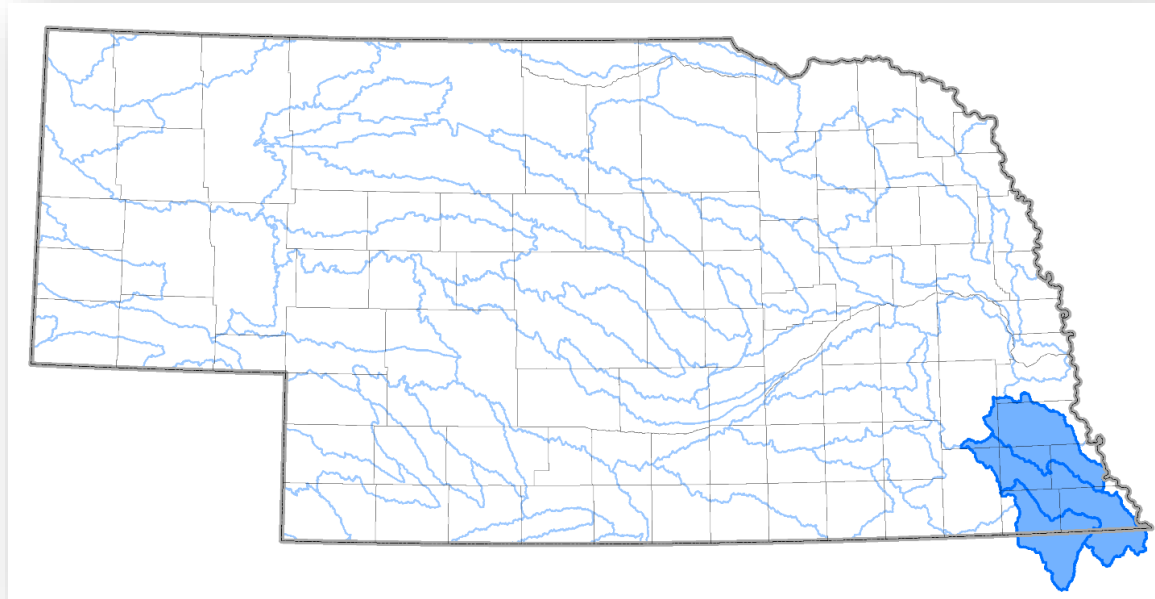
Fact Sheet
Turkey Creek:

Risk MAP Program Measures	
Population	7,306
NE % Population	0.40%
NVUE #'s	NeDNR: Detailed = 7 and Approximate = 755, Total = 762
Leverage Data	2009 NRCS South Central Nebraska LiDAR dataset.
List of Communities	Clay County, Village of Daykin, Village of DeWitt, Village of Exeter, Fillmore County, City of Friend, Gage County, City of Geneva, Village of Grafton, Jefferson County, Village of Milligan, Saline County, Village of Swanton, Village of Tobias, Village of Western, City of Wilber
# of Communities	16
Additional Notes:	None

Watershed: Little Nemaha, South Fork Big Nemaha, Big Nemaha

HUC: 10240006, 10240007, 10240008

Population: 36,572 (Nebraska)



The Little Nemaha, Big Nemaha, and South Fork Big Nemaha watersheds are in the very southeastern-most part of Nebraska. Many communities in these watersheds have existed since before Nebraska became a state and have lived with the effects of flooding.

Throughout the early 1900s, the major streams were heavily channelized and straightened, in an effort to reclaim farm ground from natural floodplains. These actions left deeply eroded

channels and drastically changed the dynamic of the stream system. Communities like Rulo, Falls City, and Preston have suffered from major floods, such as in 1949, where many residents went to sleep with rain in the forecast and woke up surrounded by water. Intense rainfall in 1993 also brought flooding to the rivers in these watersheds.

Johnson, Nemaha, Otoe, Pawnee, and Richardson counties were mapped prior to the acquisition of LiDAR coverage for this region. The addition of the 2011 NRCS and 2010

NRCS Eastern Nebraska LiDAR datasets will provide accurate elevation data in these counties.

Hydrology, Hydraulic, and Floodplain Mapping tasks will already be complete for Nemaha and Richardson counties, which were prioritized as Paper Inventory Reduction Projects beginning in FY2016.

Proposed Schedule of Work

Little Nemaha:

FY2018 (Oct 2018 - Sept 2019)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2019 (Oct 2019 - Sept 2020)		Discovery Phase
Outreach Activity		Discovery Meeting for Little Nemaha Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2020 (Oct 2020 - Sept 2022)		Data Development Phase
Data Development Activity		Basic studies in Little Nemaha Watershed. Enhanced Study in: - Bennet Little Nemaha River Unnamed Tributary to Little Nemaha River - Talmage Little Nemaha River
Flood Risk Products Activity		Flood Risk Product Development for Little Nemaha Watershed
Outreach Activity		Flood Risk Review Meeting for Little Nemaha Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2022 (Oct 2022 - Sept 2025)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Otoe County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Little Nemaha Watershed
Outreach Activity		CCO Meeting Otoe County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period Otoe County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Otoe County</i>

Fact Sheet
Little Nemaha:

Risk MAP Program Measures	
Population	17,854
NE % Population	1.00%
NVUE #'s	NeDNR: Approximate = 513
Leverage Data	2010 and 2011 NRCS LiDAR datasets.
List of Communities	City of Auburn, Village of Bennet, Village of Brock, Village of Burr, Cass County, Village of Cook, Village of Douglas, Village of Dunbar, Village of Eagle, Village of Elmwood, Village of Johnson, Johnson County, Village of Julian, Lancaster County, City of Lincoln, Village of Lorton, Village of Nemaha, Nemaha County, Village of Otoe, Otoe County, Village of Palmyra, Village of Panama, Richardson County, Village of Shubert, City of Syracuse, Village of Talmage, City of Tecumseh, Village of Unadilla
# of Communities	28
Additional Notes:	None

Proposed Schedule of Work
South Fork Big Nemaha:

FY2017 (Oct 2017 - Sept 2018)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2018 (Oct 2018 - Sept 2019)		Discovery Phase
Outreach Activity		Discovery Meeting for South Fork Big Nemaha Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2019 (Oct 2019 - Sept 2021)		Data Development Phase
Mapping Activity		Data Development Basic studies in South Fork Big Nemaha Watershed
Flood Risk Products Activity		Flood Risk Product Development for South Fork Big Nemaha Watershed
Outreach Activity		Flood Risk Review Meeting for South Fork Big Nemaha Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2021 (Oct 2021 - Sept 2024)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Pawnee County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for South Fork Big Nemaha Watershed
Outreach Activity		CCO Meeting Pawnee County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period Pawnee County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Pawnee County</i>

Fact Sheet
South Fork Big Nemaha:

Risk MAP Program Measures	
Population	2,343
NE % Population	0.10%
NVUE #'s	NeDNR Approximate = 198
Leverage Data	2010 and 2011 NRCS LiDAR datasets.
List of Communities	Village of DuBois, Gage County, Johnson County, Village of Lewiston, Pawnee County, City of Pawnee City, Richardson County, Village of Salem, Village of Steinauer
# of Communities	9
Additional Notes:	None

Proposed Schedule of Work

Big Nemaha:

FY2017 (Oct 2017 - Sept 2018)		Project Planning Phase
Initial Activity	<i>KDP #0 Initiate Flood Risk Project?</i>	
FY2018 (Oct 2018 - Sept 2019)		Discovery Phase
CERC Activity	Discovery Meeting for Big Nemaha Watershed <i>KDP #1 Continue Flood Risk Project?</i>	
FY2019 (Oct 2019 - Sept 2020)		Data Development Phase
Data Development Activity	Basic studies in Big Nemaha Watershed. Enhanced Study in: <ul style="list-style-type: none"> - Firth Middle Branch Big Nemaha River - Tecumseh North Fork Big Nemaha River <li style="text-align: right;">Town Branch 	
Flood Risk Products Activity	Flood Risk Product Development for Big Nemaha Watershed	
CERC Activity	Flood Risk Review Meeting for Big Nemaha Watershed <i>KDP #2 Develop Preliminary FIRM?</i>	
FY2022 (Oct 2022 - Sept 2025)		Regulatory Phase: Preliminary to Effective
Mapping Activity	Preliminary FIRM Development for Johnson County <i>KDP #3 Issue Preliminary Products?</i>	
CERC Activity	Resilience Meeting for Big Nemaha Watershed	
CERC Activity	CCO Meeting Johnson County <i>KDP #4 Initiate Appeals Period?</i>	
Regulatory Activity	Appeals Period Johnson County <i>KDP#5 Issue Letter of Final Determination?</i>	
Regulatory Activity	Issue LFD <i>Regulatory Products for Johnson County</i>	

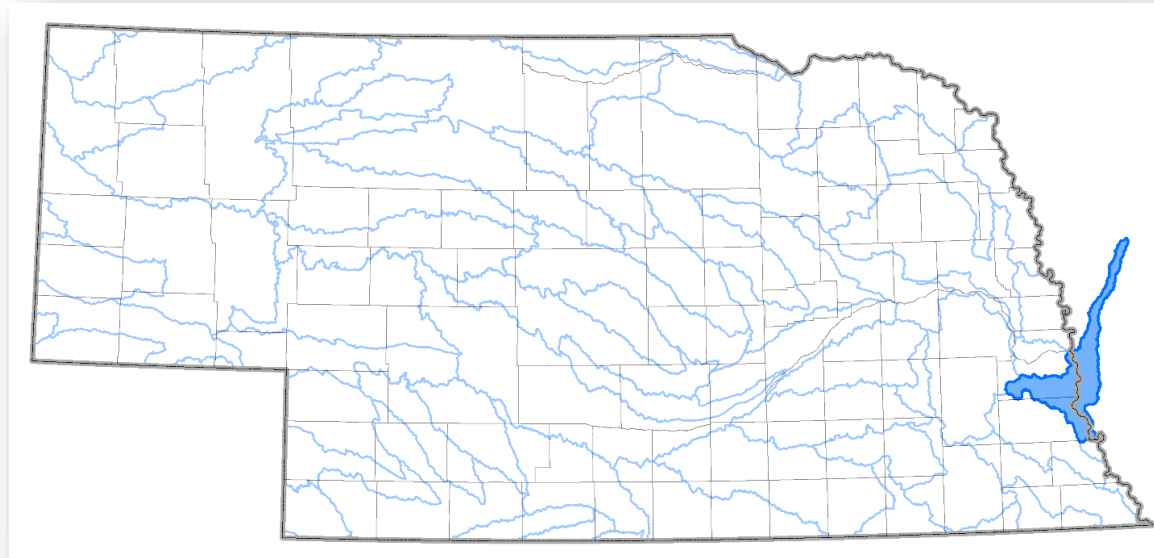
Fact Sheet
Big Nemaha:

Risk MAP Program Measures	
Population	17,475
NE % Population	1.00%
NVUE #'s	NeDNR: Detailed = 11 and Approximate = 376
Leverage Data	2010 and 2011 NRCS LiDAR datasets.
List of Communities	Village of Adams, Village of Barada, Village of Cortland, Village of Crab Orchard, Village of Dawson, Village of Elk Creek, City of Falls City, Village of Firth, Gage County, City of Humboldt, Village of Johnson, Johnson County, Lancaster County, Nemaha County, Otoe County, Village of Panama, Pawnee County, City of Pawnee City, Village of Preston, Richardson County, Village of Rulo, Village of Salem, Village of Shubert, Village of Stella, Village of Sterling, Village of Table Rock, City of Tecumseh, Village of Verdon
# of Communities	28
Additional Notes:	None

Watershed: Keg-Weeping Water

HUC: 10240001

Population: 24,735 (Nebraska)



The Keg-Weeping Water watershed lies in both Nebraska and Iowa and is largely within Cass and Otoe Counties in Nebraska. Weeping Water Creek is responsible for significant flash flooding events and has caused flood problems for many communities along its banks. From Elmwood to Weeping Water to Union, many communities have suffered flood damage in the past and many have reserved portions of their floodplains for green space through the construction of parks and recreation areas.

In 1950, many streams in southeastern Nebraska overflowed their banks. At Union, Weeping Water Creek sent over 60,000 cfs rushing through town, destroying many bridges and railroads. The highest recorded crest at the Union streamgauge occurred in 1993, and flooding caused major damage in Weeping Water, Union, and Nehawka. In June of 2010, heavy rains caught many unaware, including a family in Weeping



Water whose children were sleeping in the basement when water broke through the windows and started rushing in. Communities continue to grow and development continues to occur in the watershed, meaning these communities will be faced with floodplain management decisions in the future. The 2010 NRCS Eastern Nebraska LiDAR dataset will provide accurate elevation data to produce floodplain boundaries and flood risk information to help communities mitigate the risk from flooding.

Proposed Schedule of Work

Keg- Weeping Water:

FY2018 (Oct 2018 - Sept 2019)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2019 (Oct 2019 - Sept 2020)		Discovery Phase
Outreach Activity		Discovery Meeting for Keg- Weeping Water Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2020 (Oct 2020 - Sept 2022)		Data Development Phase
Data Development Activity		Basic studies in Keg- Weeping Water Watershed Enhanced Study in: <ul style="list-style-type: none"> - Cass County Missouri River - Otoe County Missouri River - Avoca South Branch Weeping Water Creek Tributary to South Branch Weeping Water Creek - Nebraska City North Table Creek South Table Creek Tributary to South Table Creek East Tributary to South Table Creek West Tributary to South Table Creek Three Mile Creek Walnut Creek - Nehawka Weeping Water Creek - Union Weeping Water Creek - Weeping Water Weeping Water Creek
Flood Risk Products Activity		Flood Risk Product Development for Keg- Weeping Water Watershed
Outreach Activity		Flood Risk Review Meeting for Keg- Weeping Water Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2022 (Oct 2022 - Sept 2025)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for part of Cass County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Keg- Weeping Water Watershed
Outreach Activity		CCO Meeting for part of Cass County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for part of Cass County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for part of Cass County</i>

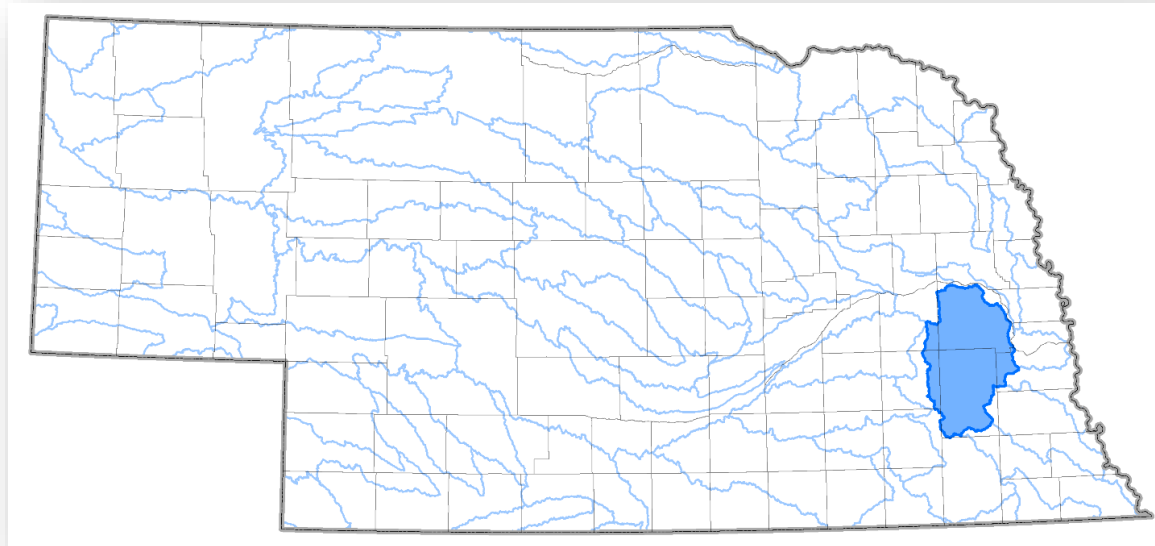
Fact Sheet
Keg- Weeping Water:

Risk MAP Program Measures	
Population	24,735
NE % Population	1.30%
NVUE #'s	NeDNR: Approximate = 340
Leverage Data	2010 NRCS Eastern Nebraska LiDAR dataset. Will utilize the Upper Mississippi River System Flow Frequency Study (UMRSFFS), for the Missouri River.
List of Communities	Village of Alvo, Village of Avoca, Cass County, Village of Elmwood, Village of Manley, Village of Murdock, Village of Murray, City of Nebraska City, Village of Nehawka, Nemaha County, Otoe County, City of Plattsmouth, Sarpy County, Village of Union, City of Weeping Water
# of Communities	15 communities in the Keg- Weeping Water Watershed
Additional Notes:	None

Watershed: Salt

HUC: 10200203

Population: 305,934



The Salt watershed encompasses a significant portion of Lancaster and Saunders Counties. Communities in the watershed continue to grow, with subdivisions planned and lake developments thriving. Salt watershed is in continual need for updated flood hazard data to adapt to the changing flood risk. Citizens and communities have experienced a long history of devastating floods from the 1908 flood

in Lancaster County to the 1963 flooding in Saunders County. Significant flooding also occurred in May of 2015, leaving large portions of Lancaster County under water, as shown in the photograph above.

Producing flood risk products for this watershed could engage thousands of people in a discussion about mitigating flood risk. Communities in this region are very proactive, have strong floodplain management programs, and engage their citizens in flood risk discussions.

Proposed Schedule of Work

Salt:

FY2018 (Oct 2018 - Sept 2019)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2019 (Oct 2019 - Sept 2020)		Discovery Phase
Outreach Activity		Discovery Meeting for Salt Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2020 (Oct 2020 - Sept 2022)		Data Development Phase
Data Development Activity		Basic studies in Salt Watershed. Enhanced Study in: <ul style="list-style-type: none"> - Lancaster Co Haines Branch North Oak Creek - Saunders Co Clear Creek Johnson Creek - Ashland Salt Creek Wahoo Creek - Prague Cottonwood Creek Tributary to Cottonwood Creek - Yutan Clear Creek Upper Clear Creek - Hickman Hickman Branch Hickman Branch Tributary - Raymond Oak Creek - Waverly Ash Hollow Ditch End Run Unnamed Tributary 2
Flood Risk Products Activity		Flood Risk Product Development for Salt Watershed
Outreach Activity		Flood Risk Review Meeting for Salt Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2023 (Oct 2023 - Sept 2026)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Lancaster County and Part of Saunders County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Salt Watershed
Outreach Activity		CCO Meeting for Lancaster County and Part of Saunders County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Lancaster County and Part of Saunders County <i>KDP #5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for part of Lancaster County and Part of Saunders</i>

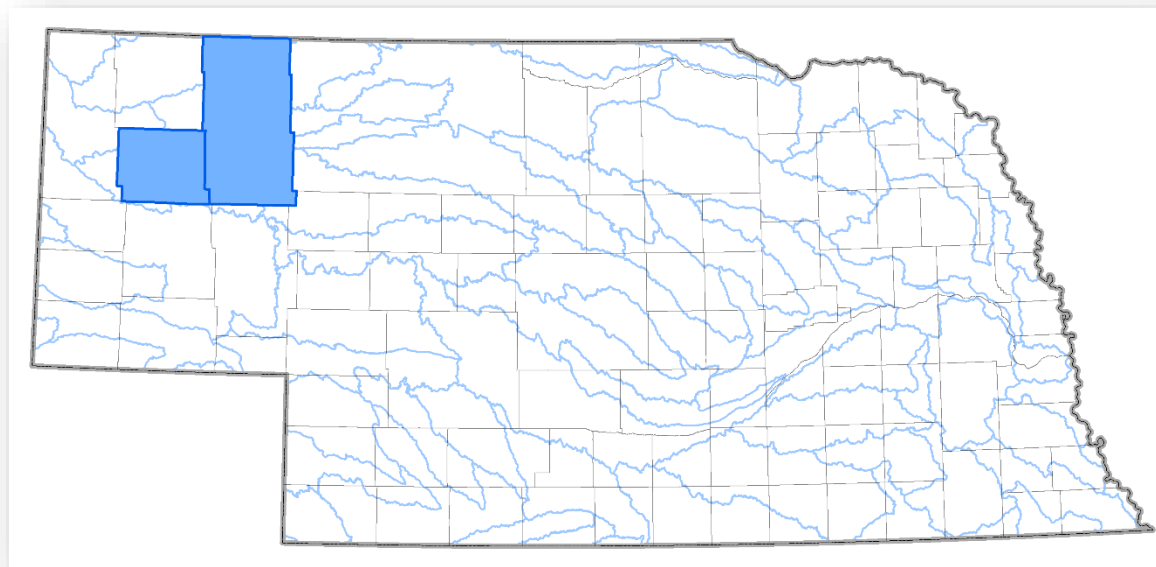
Fact Sheet

Salt:

Risk MAP Program Measures	
Population	305,934
NE % Population	16.80%
NVUE #'s	NeDNR: Detailed = 50 and Approximate = 1,286, Total = 1,336
Leverage Data	2010 NIROC LiDAR dataset, and the future 2017 NIROC LiDAR dataset.
List of Communities	Village of Alvo, City of Ashland, Village of Bee, Village of Brainard, Butler County, Cass County, Village of Cedar Bluffs, Village of Ceresco, Village of Colon, City of Crete, Village of Davey, Village of Denton, Village of Dwight, Village of Eagle, Gage County, Village of Garland, Village of Greenwood, Village of Hallam, City of Hickman, Village of Ithaca, Lancaster County, City of Lincoln, Village of Malcolm, Village of Malmo, Village of Mead, Village of Memphis, Village of Morse Bluff, Village of Murdock, Village of Panama, Village of Pleasant Dale, Village of Prague, Village of Raymond, Village of Roca, Saline County, Saunders County, Seward County, Village of Sprague, Village of Valparaiso, City of Wahoo, City of Waverly, Village of Weston, City of Yutan
# of Communities	42 communities in Salt Watershed
Additional Notes:	None

Watersheds - County Paper Inventory Reduction Projects (PIRs): Box Butte, Sheridan

Population: 17,161



Located in the northwestern portion of Nebraska, Box Butte and Sheridan counties contain some of the oldest paper FIRMs in the state. Countywide mapping projects were completed in the 1970s, with Box Butte becoming effective in 1977 and Sheridan being converted by letter in 2008.

Despite the counties being sparsely populated, the city of Alliance, with a population of 8,519, contains several streams draining an area larger than one square mile. LiDAR data in this region will be acquired by 2018, which will provide accurate elevation data for these counties. PIRs for Box Butte and Sheridan will complete Nebraska's objective of converting all counties with regulatory products to digital format.

Proposed Schedule of Work

Box Butte:

FY2020 (Oct 2020 - Sept 2021)		Project Planning Phase	
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i> <i>KDP #1 Continue Flood Risk Project?</i>	
FY2021 (Oct 2021- Sept 2022)		Data Development Phase	
Data Development Activity		Basic studies in Box Butte County	
Flood Risk Products Activity		Non-Regulatory Product Development for Box Butte County	
Outreach Activity		Flood Risk Review Meeting for Box Butte County <i>KDP #2 Develop Preliminary FIRM?</i>	
Regulatory Phase: Preliminary to Effective			
Mapping Activity		Preliminary FIRM Development for Box Butte County <i>KDP #3 Issue Preliminary Products?</i>	
Outreach Activity		Resilience Meeting for Box Butte County	
Outreach Activity		CCO Meeting Box Butte County <i>KDP #4 Initiate Appeals Period?</i>	
Regulatory Activity		Appeals Period Box Butte County <i>KDP#5 Issue Letter of Final Determination?</i>	
Regulatory Activity		Issue LFD <i>Regulatory Products for Box Butte County</i>	

Fact Sheet

Box Butte:

Risk MAP Program Measures	
Population	11,481
NE % Population	0.60%
NVUE #'s	NeDNR: Approximate = 1040
Leverage Data	LiDAR.
List of Communities	City of Alliance, Box Butte County, Village of Hemingford
# of Communities	3 communities in Box Butte County
Additional Notes:	None

Proposed Schedule of Work

Sheridan:

FY2019 (Oct 2020 - Sept 2021)		Project Planning Phase	
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i> <i>KDP #1 Continue Flood Risk Project?</i>	
FY2021 (Oct 2021- Sept 2024)		Data Development Phase	
Mapping Activity		Data Development Basic studies in Sheridan County	
Flood Risk Products Activity		Flood Risk Product Development for Sheridan County	
Outreach Activity		Flood Risk Review Meeting for Sheridan County <i>KDP #2 Develop Preliminary FIRM?</i>	
Regulatory Phase: Preliminary to Effective			
Mapping Activity		Preliminary FIRM Development for Sheridan County <i>KDP #3 Issue Preliminary Products?</i>	
Outreach Activity		Resilience Meeting for Sheridan County	
Outreach Activity		CCO Meeting Sheridan County <i>KDP #4 Initiate Appeals Period?</i>	
Regulatory Activity		Appeals Period Sheridan County <i>KDP#5 Issue Letter of Final Determination?</i>	
Regulatory Activity		Issue LFD <i>Regulatory Products for Sheridan County</i>	

Fact Sheet

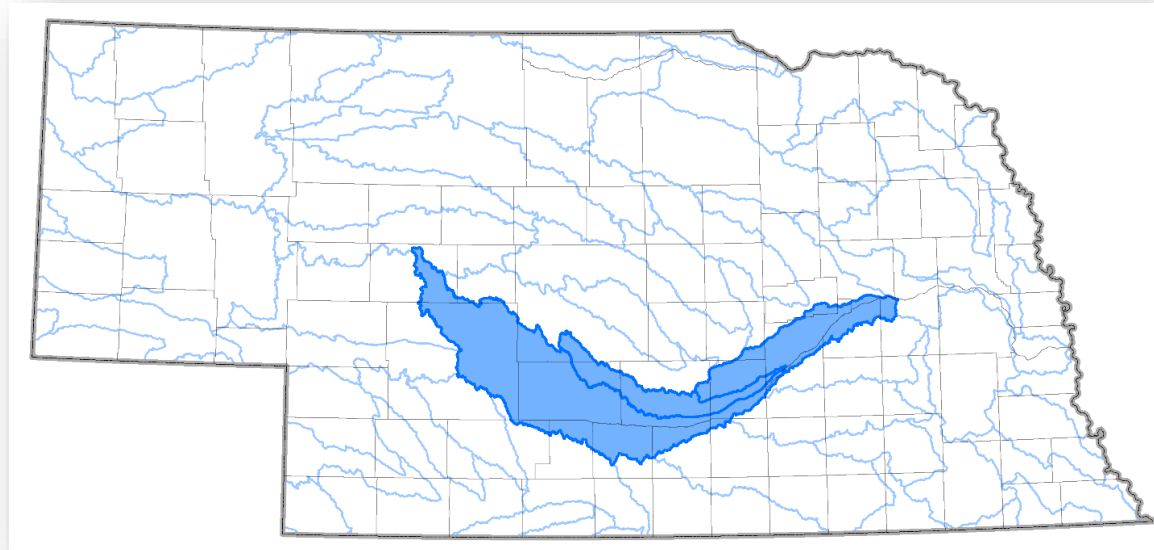
Sheridan:

Risk MAP Program Measures	
Population	6,041
NE % Population	0.30%
NVUE #'s	NeDNR: Approximate = 2,067
Leverage Data	LiDAR coverage by 2018.
List of Communities	Village of Clinton, City of Gordon, City of Hay Springs, City of Rushville, Sheridan County
# of Communities	5
Additional Notes:	None

Watersheds: Middle Platte - Buffalo, Wood, Middle Platte - Prairie

HUC: 10200101, 10200102, 10200103

Population: 147,161



The Middle Platte - Buffalo, Wood, and Middle Platte - Prairie watersheds are located in central Nebraska and encompass the middle portion of the Platte River. NeDNR proposes that these watersheds be mapped concurrently due to their location along the Platte River and the fact that prominent communities with enhanced studies lie between multiple watersheds, such as Grand Island and Kearney.

The major risk for these three watersheds lies along the Platte River. Aside from the fact that this portion of the Platte River is the only portion of the river that is not continuously modeled, none of the existing detailed studies take ice jam effects into consideration. Due to its size and complexity, NeDNR proposes working with the USACE to develop a continuous model on this stretch of the Platte River similar to the study conducted on the Lower Platte River in 2003.



This region would benefit from using the available 2009 South Central and 2011 NRCS LiDAR coverage. Due to the flat topography, changes in elevation would be much more accurately represented using LiDAR rather than previous methods, such as contour maps. Accounting for 25% of all LOMCs in Nebraska, a significant reduction in the number of LOMCs would be expected if available LiDAR was utilized in these watersheds.

These watersheds may also be prime candidates for developing non-regulatory Risk MAP products. Hall County has a significant amount of GIS data, including building footprints, which may provide a more accurate inventory for Flood Risk reporting.

Proposed Schedule of Work

Middle Platte - Buffalo:

FY2020 (Oct 2020 - Sept 2021)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2021 (Oct 2021 - Sept 2022)		Discovery Phase
Outreach Activity		Discovery Meeting for Middle Platte - Buffalo Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2022 (Oct 2022 - Sept 2024)		Data Development Phase
Data Development Activity		Basic studies in Middle Platte - Buffalo Watershed Enhanced Study in: <ul style="list-style-type: none"> - Hall County Middle Channel Platte River South Channel Platte River - Lexington Platte River Spring Creek - Gothenburg Platte River North Channel Platte River - Kearney Kearney Canal North Dry Creek Ditch
Flood Risk Products Activity		Flood Risk Product Development for Middle Platte - Buffalo Watershed
Outreach Activity		Flood Risk Review Meeting for Middle Platte - Buffalo Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2026 (Oct 2026 - Sept 2029)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Dawson County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Middle Platte - Buffalo Watershed
Outreach Activity		CCO Meeting for Dawson County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Dawson County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Dawson County</i>
FY2028 (Oct 2028 - Sept 2031)		
Mapping Activity		Preliminary FIRM Development for Part of Kearney County and Phelps County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Middle Platte - Buffalo Watershed
Outreach Activity		CCO Meeting for Part of Kearney County and Phelps County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Part of Kearney County and Phelps County

	<i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity	Issue LFD <i>Regulatory Products for Kearney and Phelps Counties</i>

Fact Sheet

Middle Platte - Buffalo:

Risk MAP Program Measures	
Population	63,119
NE % Population	3.50%
NVUE #'s	NeDNR: Detailed = 324 and Approximate = 3,077, Total = 3,401
Leverage Data	2009 South Central Nebraska and 2011 NRCS LiDAR coverage.
List of Communities	Adams County, Village of Axtell, Village of Bertrand, Village of Brady, Buffalo County, City of Cozad, Custer County, Dawson County, Village of Doniphan, Village of Elm Creek, Village of Elwood, Village of Eustis, Village of Farnam, Frontier County, Village of Funk, Gosper County, City of Gothenburg, City of Grand Island, Hall County, Hamilton County, City of Holdrege, City of Kearney, Kearney County, City of Lexington, Lincoln County, Logan County, Village of Loomis, Village of Maxwell, McPherson County, Merrick County, City of North Platte, Village of Overton, Phelps County, Village of Phillips, Village of Prosser, Village of Smithfield
# Communities	36 Communities in the Middle Platte - Buffalo Watershed
Additional Notes:	None

Proposed Schedule of Work

Wood:

FY2020 (Oct 2022 - Sept 2023)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2023 (Oct 2023 - Sept 2024)		Discovery Phase
Outreach Activity		Discovery Meeting for Wood Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2024 (Oct 2024 - Sept 2026)		Data Development Phase
Data Development Activity		Basic studies in Wood Watershed Enhanced Study in: <ul style="list-style-type: none"> - Grand Island Wood River Wood River Diversion Channel - Kearney Airport Draw Glenwood Park Draw Wood River - Wood River Wood River
Flood Risk Product Activity		Flood Risk Product Development for Wood Watershed
Outreach Activity		Flood Risk Review Meeting for Wood Watershed Levee Meetings in Grand Island <i>KDP #2 Develop Preliminary FIRM?</i>
FY2026 (Oct 2026 - Sept 2028)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for part of Buffalo County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Wood Watershed
Outreach Activity		CCO Meeting for part of Buffalo County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for part of Buffalo County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for part of Buffalo County</i>

Fact Sheet

Wood:

Risk MAP Program Measures	
Population	52,002
NE % Population	2.80%
NVUE #'s	NeDNR: Detailed = 56.5 and Approximate = 796, Total = 822.5
Leverage Data	2009 South Central Nebraska and 2011 NRCS LiDAR coverage.
List of Communities	Village of Alda, Village of Amherst, Buffalo County, Custer County, Dawson County, Village of Eddyville, City of Gibbon, City of Grand Island, Hall County, City of Kearney, Merrick County, Village of Miller, Village of Oconto, Village of Riverdale, Village of Shelton, Village of Sumner, City of Wood River
# Communities	17
Additional Notes:	None

Proposed Schedule of Work

Middle Platte - Prairie:

FY2020 (Oct 2020 - Sept 2021)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2023 (Oct 2023 - Sept 2024)		Discovery Phase
Outreach Activity		Discovery Meeting for Middle Platte - Prairie Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2024 (Oct 2024 - Sept 2026)		Data Development Phase
Data Development Activity		Basic studies in Middle Platte - Prairie Watershed Enhanced Study in: <ul style="list-style-type: none"> - Grand Island Silver Creek <ul style="list-style-type: none"> Prairie Creek Moores Creek - Central City Warm Slough <ul style="list-style-type: none"> Trouble Creek Platte River - Stromsburg Big Blue River
Flood Risk Products Activity		Flood Risk Product Development for Middle Platte - Prairie Watershed
Outreach Activity		Flood Risk Review Meeting for Middle Platte - Prairie Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2026 (Oct 2026 - Sept 2029)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Hall, Merrick, and part of Polk Counties <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Middle Platte - Prairie Watershed
Outreach Activity		CCO Meeting for Hall, Merrick, and part of Polk Counties <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Hall, Merrick, and part of Polk Counties <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Hall, Merrick, and part of Polk Counties</i>

Fact Sheet
Middle Platte - Prairie:

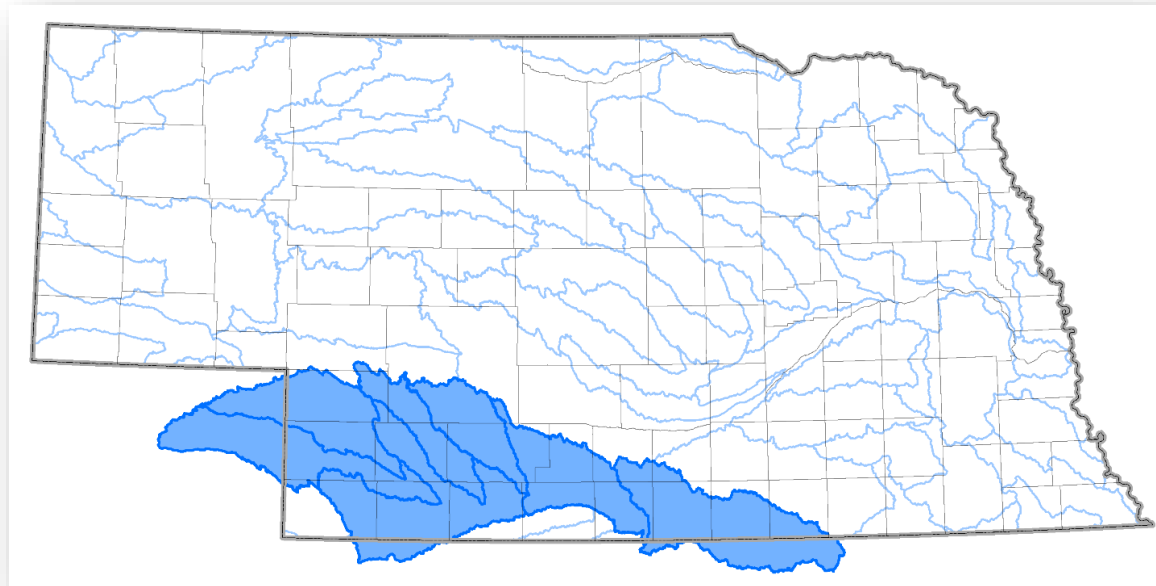
Risk MAP Program Measures	
Population	37,869
NE % Population	2.10%
NVUE #'s	NeDNR: Approximate = 1,310
Leverage Data	2009 South Central Nebraska and 2011 NRCS LiDAR coverage.
List of Communities	Village of Alda, Village of Bellwood, Buffalo County, Butler County, Village of Cairo, City of Central City, Village of Chapman, Village of Clarks, Colfax County, City of Columbus, Village of Duncan, City of Grand Island, Hall County, Hamilton County, Village of Hordville, Howard County, Village of Marquette, Merrick County, Nance County, Platte County, Polk County, Village of Silver Creek, City of Wood River
# Communities	23
Additional Notes:	None

Watershed: Upper Republican, Frenchman, Stinking Water, Red Willow, Medicine, Harlan County Reservoir*, Middle Republican*

HUC: 10250004, 10250005, 10250006, 10250007, 10250008, 10250009, 10250016

Population: 49,748 (Nebraska)

*Sequenced for FY2024; supporting data is not included



All seven watersheds in this area are part of the Republican River basin. Many of the counties in this area were mapped during the Map Modernization program. Communities in this area often recall the major 1935 flood event where several days of continuous rain caused the Republican River and many of its tributaries to expand eightfold.

The floodwaters took the lives of 113 people, destroyed 341 miles of highway, washed out 307 bridges, and caused nearly \$500 million of damage (2017 dollars). The flood event also was among the first deployments of large scale federal response, which set the stage for federal involvement in future disasters.

The counties in the Republican River basin were mapped with effective dates prior to or as of 2009, before LiDAR coverage was completed for the area. The addition of the NRCS 2009 South Central Nebraska and 2011 NRCS LiDAR datasets will provide more accurate elevation data for this portion of the state.

Proposed Schedule of Work

Red Willow:

FY2020 (Oct 2020 - Sept 2021)		Project Planning Phase
Initial Activity	<i>KDP #0 Initiate Flood Risk Project?</i>	
FY2021 (Oct 2021 - Sept 2022)		Discovery Phase
Outreach Activity	Discovery Meeting for Red Willow Watershed <i>KDP #1 Continue Flood Risk Project?</i>	
FY2022 (Oct 2022 - Sept 2024)		Data Development Phase
Data Development Activity	Basic studies in Red Willow Watershed	
Flood Risk Products Activity	Flood Risk Product Development for Red Willow Watershed	
Outreach Activity	Flood Risk Review Meeting for Red Willow Watershed <i>KDP #2 Develop Preliminary FIRM?</i>	

Fact Sheet

Red Willow:

Risk MAP Program Measures	
Population	1,618
NE % Population	0.10%
NVUE #'s	NeDNR: Approximate = 663
Leverage Data	2009 South Central Nebraska and 2011 NRCS LiDAR coverage.
List of Communities	Village of Elsie, Frontier County, Hayes County, Keith County, Lincoln County, Perkins County, Red Willow County, Village of Wallace
# Communities	8
Additional Notes:	None

Proposed Schedule of Work

Medicine:

FY2020 (Oct 2020 - Sept 2021)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2021 (Oct 2021 - Sept 2022)		Discovery Phase
Outreach Activity		Discovery Meeting for Medicine Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2022 (Oct 2022 - Sept 2024)		Data Development Phase
Data Development Activity		Basic studies in Medicine Watershed
Flood Risk Products Activity		Flood Risk Product Development for Medicine Watershed
Outreach Activity		Flood Risk Review Meeting for Medicine Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2028 (Oct 2028 - Sept 2031)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for Frontier County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Medicine Watershed
Outreach Activity		CCO Meeting for Frontier County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for Frontier County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for Frontier County</i>

Fact Sheet

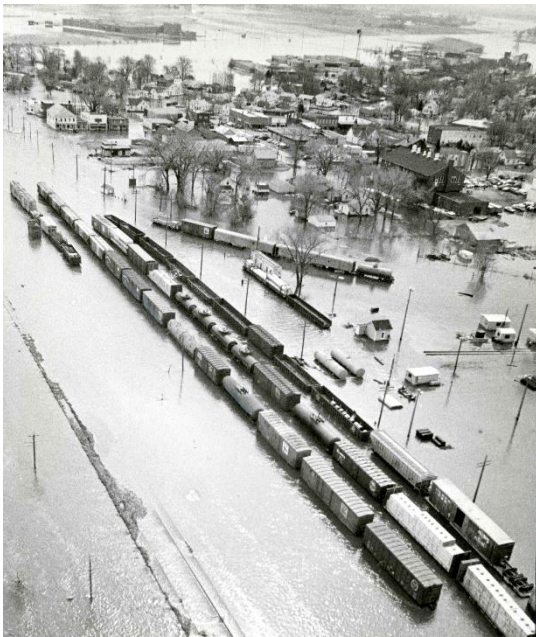
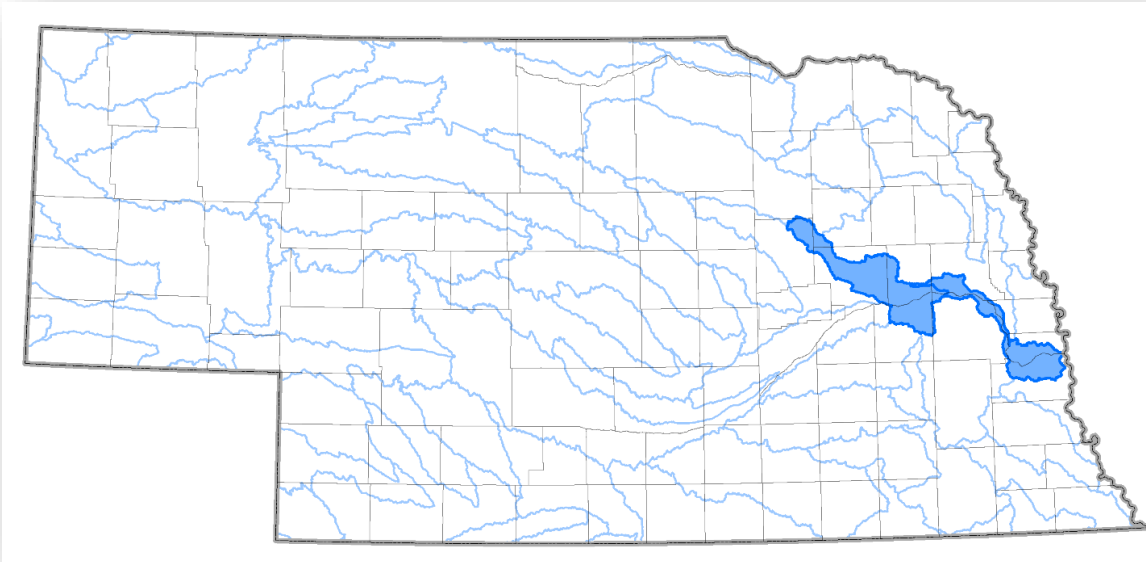
Medicine:

Risk MAP Program Measures	
Population	3231
NE % Population	0.20%
NVUE #'s	NeDNR: Approximate = 777
Leverage Data	2009 South Central Nebraska and 2011 NRCS LiDAR coverage.
List of Communities	City of Cambridge, City of Curtis, Frontier County, Furnas County, Hayes County, Lincoln County, Village of Maywood, Village of Moorefield, Red Willow County, Village of Stockville, Village of Wellfleet
# Communities	11
Additional Notes:	None

Watershed: Lower Platte - Shell, Lower Platte

HUC: 10200201, 10200202

Population: 61,165



The Lower Platte – Shell and Lower Platte watersheds encompass a significant portion of the Platte River and include many large communities that have an extensive history of flooding, including flood damage from ice jams. Major flood events have been recorded since the 1800s including 1883, 1908, 1912, 1935, 1944, 1947, 1978, 1960, 1962, 1967, 1978, 1984, 1993, 2001, 2013, and 2016, some of which have involved significant ice jams.

In 1978, major ice jams flooded the entire town of Valley, most of North Bend, and a significant portion of Fremont. Valley was entirely evacuated and nearly 1,600 homes were damaged or destroyed. Over \$250 million of

damage (2017 dollars) occurred during this event.

These watersheds face a number of floodplain development challenges. Communities are growing rapidly and new business is expanding into these areas. Large industrial facilities in Fremont are located in the floodplain, and along the Lower Platte River, a

history of aggregate mining has created lakes that are being turned into residential developments. Most of these “sandpit lake” developments are located immediately adjacent to the river and pose significant flood risk issues for floodplain managers.

These watersheds contain LiDAR coverage from the 2010, 2011, and 2012 NRCS datasets and the 2010 NIROC dataset. LiDAR will provide valuable elevation data resulting in increased knowledge of the flood risk in this area.

Proposed Schedule of Work

Lower Platte - Shell:

FY2022 (Oct 2022 - Sept 2024)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2023 (Oct 2023 - Sept 2024)		Discovery Phase
Outreach Activity		Discovery Meeting for Lower Platte - Shell Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2024 (Oct 2024 - Sept 2026)		Data Development Phase
Data Development Activity		Basic studies in Lower Platte - Shell Watershed Enhanced Study in: <ul style="list-style-type: none"> - Platte and Shell Creek Colfax Counties - Butler County Platte River - Platte Center Elm Creek - Schuyler Shell Creek Right Overbank - Columbus Lost Creek Loup River
Flood Risk Products Activity		Flood Risk Product Development for Lower Platte - Shell Watershed
Outreach Activity		Flood Risk Review Meeting for Lower Platte - Shell Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2026 (Oct 2026 - Sept 2029)		Regulatory Phase: Preliminary to Effective
Mapping Activity		Preliminary FIRM Development for part of Colfax, Platte, and Butler Counties <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Lower Platte - Shell Watershed
Outreach Activity		CCO Meeting for part of Colfax, Platte, and Butler Counties <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for part of Colfax, Platte, and Butler Counties <i>KDP #5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for part of Colfax, part of Platte, and part of Butler Counties</i>

Fact Sheet
Lower Platte - Shell:

Risk MAP Program Measures	
Population	28,934
NE % Population	1.60%
NVUE #'s	NeDNR: Approximate = 801
Leverage Data	LiDAR coverage from the 2010, 2011, and 2012 NRCS datasets and the 2010 NIROC dataset.
List of Communities	Village of Abie, Antelope County, Village of Bellwood, Boone County, Village of Bruno, Butler County, Colfax County, City of Columbus, City of David City, Dodge County, Village of Lindsay, Village of Linwood, Madison County, City of Newman Grove, City of North Bend, Village of Octavia, Platte County, Village of Platte Center, Village of Richland, Village of Rogers, Saunders County, City of Schuyler, Village of Tarnov
# Communities	23
Additional Notes:	None

Proposed Schedule of Work
Lower Platte:

FY2022 (Oct 2022 - Sept 2023)		Project Planning Phase
Initial Activity		<i>KDP #0 Initiate Flood Risk Project?</i>
FY2023 (Oct 2023 - Sept 2024)		Discovery Phase
Outreach Activity		Discovery Meeting for Lower Platte Watershed <i>KDP #1 Continue Flood Risk Project?</i>
FY2024 (Oct 2024 - Sept 2026)		
Data Development Activity		Basic studies in Lower Platte Watershed Enhanced Study in: - Watershed Platte River
Flood Risk Products Activity		Flood Risk Product Development for Lower Platte Watershed
Outreach Activity		Flood Risk Review Meeting for Lower Platte Watershed Levee Meetings for Lower Platte Watershed <i>KDP #2 Develop Preliminary FIRM?</i>
FY2026 (Oct 2026 - Sept 2029)		
Mapping Activity		Preliminary FIRM Development for part of Dodge County <i>KDP #3 Issue Preliminary Products?</i>
Outreach Activity		Resilience Meeting for Lower Platte Watershed
Outreach Activity		CCO Meeting for part of Dodge County <i>KDP #4 Initiate Appeals Period?</i>
Regulatory Activity		Appeals Period for part of Dodge County <i>KDP#5 Issue Letter of Final Determination?</i>
Regulatory Activity		Issue LFD <i>Regulatory Products for part of Dodge County</i>

Fact Sheet
Lower Platte:

Risk MAP Program Measures	
Population	32,439
NE % Population	1.80%
NVUE #'s	NeDNR: Detailed = 72.3 and Approximate = 399, Total = 471.3
Leverage Data	LiDAR coverage from the 2010, 2011, and 2012 NRCS datasets and the 2010 NIROC dataset.
List of Communities	City of Bellevue, Cass County, Village of Cedar Creek, Colfax County, Dodge County, Douglas County, City of Fremont, City of Gretna, Village of Inglewood, Village of Leshara, City of Louisville, Village of Morse Bluff, Village of Murdock, Village of Murray, City of North Bend, City of Papillion, City of Plattsmouth, Sarpy County, Saunders County, City of Schuyler, Village of South Bend, City of Springfield, City of Valley, City of Yutan
# Communities	24
Additional Notes:	None

Section 3 – Key Decision Point

NeDNR Key Decision Point Summary (FY2019 through FY2023)					
Key Decision Point (KDP)	FY2019	FY2020	FY2021	FY2022	FY2023
KDP 0 (Start Discovery?)		Lower North Platte (LNP) Lower South Platte (LSP) Middle Platte Buffalo (MPB) Medicine (M) Red Willow (RW)		Lower Platte (LP) Lower Platte - Shell (LPS) Middle Platte - Prairie (MPP) Wood (W)	
KDP 1 (Develop Data?)	Keg - Weeping Water (KWW) Little Nemaha (LN) Salt (S)		Lower North Platte (LNP) Lower South Platte (LSP) Middle Platte Buffalo (MPB) Medicine (M) Red Willow (RW)		Lower Platte (LP) Lower Platte - Shell (LPS) Middle Platte - Prairie (MPP) Wood (W)
KDP 2 (Develop Preliminary FIRM)	Upper Elkhorn (UE)	Upper Big Blue (UBB) - Polk and Butler Middle Big Blue (MBB) Turkey (T) South Fork Big Nemaha (SFBN) Big Nemaha (BN)	Keg - Weeping Water (KWW) Little Nemaha (LN) Salt (S) Sheridan - PIR* Box Butte - PIR*		Lower North Platte (LNP) Lower South Platte (LSP) Middle Platte Buffalo (MPB) Medicine (M) Red Willow (RW)
KDP 3 (Issue Preliminary FIRMs?)	Middle North Platte - Scotts Bluff (MNP-SB) - Bridgeport, Bayard Lower Elkhorn (LE) - Cuming, Stanton, part of Colfax, and part of Dodge Lewis & Clark Lake (LCL) - Dixon, Cedar North Fork Elkhorn (NFE) - Pierce Custer - PIR* Boone - PIR*	UE - Part of Holt, Antelope, Madison	UBB - Polk and Butler MBB - Gage T - Fillmore, Saline SFBN - Pawnee	BN - Johnson KWW - Part of Cass LN - Otoe	S - Lancaster, part of Saunders Sheridan - PIR* Box Butte - PIR*
KDP 4 (Initiate Appeal Period?)	Logan Creek (LC) - Wayne Upper Little Blue (ULB) - Thayer, part of Nuckolls, and part of Kearney	MNP-SB - Bridgeport, Bayard LE - Cuming, Stanton, part of Colfax, and part of Dodge LCL - Dixon, Cedar NFE - Pierce Custer - PIR* Boone - PIR*	UE - Part of Holt, Antelope, Madison	UBB - Polk and Butler MBB - Gage T - Fillmore, Saline SFBN - Pawnee	BN - Johnson KWW - Part of Cass LN - Otoe
KDP 5 (Issue Letter of Final Determination?)	LC - Wayne ULB - Thayer, part of Nuckolls, and part of Kearney	MNP-SB - Bridgeport, Bayard LE - Cuming, Stanton, part of Colfax, and part of Dodge LCL - Dixon, Cedar NFE - Pierce Custer - PIR* Boone - PIR*	UE - Part of Holt, Antelope, Madison	UBB - Polk and Butler MBB - Gage T - Fillmore, Saline SFBN - Pawnee	BN - Johnson KWW - Part of Cass LN - Otoe