

NEBRASKA NATURAL RESOURCES COMMISSION

Water Sustainability Fund

Application for Funding

Section A.

ADMINISTRATIVE

PROJECT NAME: **Lower Platte River Drought Contingency Plan**

PRIMARY CONTACT INFORMATION

Entity Name: **Lower Platte South Natural Resources District**

Contact Name: **Paul Zillig**

Address: **3125 Portia Street, Lincoln, NE, 68501-3581**

Phone: **402-476-2729**

Email: **pzillig@lpsnrd.org**

Partners / Co-sponsors, if any: Pappio-Missouri River Natural Resources District, Lower Platte North Natural Resources District, Metropolitan Utilities District, Lincoln Water System, and Nebraska Department of Natural Resources

1. Dollar amounts requested: (Grant, Loan, or Combination)

Grant amount requested. \$ **195,000**

Loan amount requested. \$ **N/A**

If Loan, how many years repayment period? **N/A**

If Loan, supply a complete year-by-year repayment schedule.
N/A

2. Permits Needed - Attach copy for each obtained (N/A = not applicable)

Nebraska Game & Parks Commission
(G&P) consultation on Threatened and

Endangered Species and their Habitat	N/A <input checked="" type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input type="checkbox"/>
Surface Water Right	N/A <input checked="" type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input type="checkbox"/>
USACE (e.g., 404 Permit)	N/A <input checked="" type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input type="checkbox"/>
Cultural Resources Evaluation	N/A <input checked="" type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input type="checkbox"/>
Other (provide explanation below)	N/A <input checked="" type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input type="checkbox"/>

3. Are you applying for funding for a combined sewer over-flow project?

YES NO

If yes, do you have a Long Term Control Plan that is currently approved by the Nebraska Department of Environmental Quality?

YES NO

If yes attach a copy to your application. **N/A**

If yes what is the population served by your project? **N/A**

If yes provide a demonstration of need. **N/A**

If yes and you were approved for funding in the most recent funding cycle, then resubmit the above information updated annually but you need not complete the remainder of the application.

4. If you are or are representing an NRD, do you have an Integrated Management Plan in place, or have you initiated one?

N/A YES NO

5. Has this application previously been submitted for funding assistance from the Water Sustainability Fund and not been funded?

YES NO

If yes, have any changes been made to the application in comparison to the previously submitted application? **N/A**

If yes, describe the changes that have been made since the last application.
N/A

No, I certify the application is a true and exact copy of the previously submitted and scored application. (Signature required) _____

6. Complete the following if your project has or will commence prior to next July 1st.

As of the date of submittal of this application, what is the Total Net Local Share of Expenses incurred for which you are asking cost share assistance from this fund? \$ **0**

Attach all substantiating documentation such as invoices, cancelled checks etc. along with an itemized statement for these expenses. **N/A**

Estimate the Total Net Local Share of Expenses and a description of each you will incur between the date of submittal of this application and next July 1st for which you are asking cost share assistance from this fund.

The costs outlined in Attachment A – Project Budget and below are estimates of the expected work to be completed subsequent to submittal of this application but prior to award decisions being made by the NRC. The expenses incurred prior to an award decision by the NRC will be completed in support of work to review data sources, review system vulnerabilities, develop forecasting and conveyance tools, and establish data collection sites. These expenditures will be limited such that the local match prior to an NRC award does not exceed 15% of the total local match and/or 6% of the total project costs.

Expected Expenditures (Based on December 2016 Award)

	Bureau of Reclamation	Department of Natural Resources (non-WSF)	LPSNRD (Consortium)	WSF
Aug. 1st - Dec. 15 2016	\$45,500	\$26,000	\$19,500	\$0
Jan. 1st - June 30 2017	\$80,000	\$0	\$65,500	\$127,500
July 1 - Dec. 31st 2017	\$74,500	\$0	\$45,000	\$67,500
Project Totals	\$200,000	\$26,000	\$130,000	\$195,000

Expected Expenditures (Based on June 2017 Award)

	Bureau of Reclamation	Department of Natural Resources (non-WSF)	LPSNRD (Consortium)	WSF
Aug. 1st - June 30 2017	\$45,500	\$26,000	\$19,500	\$0
July 1 - Dec. 31st 2017	\$80,000	\$0	\$65,500	\$127,500
Jan. 1st - June 30 2018	\$74,500	\$0	\$45,000	\$67,500
Project Totals	\$200,000	\$26,000	\$130,000	\$195,000

Section B.

DNR DIRECTOR'S FINDINGS

Does your project include physical construction (defined as moving dirt, directing water, physically constructing something, or installing equipment)?

YES NO

1(a). If yes (structural), submit a feasibility report (to comply with Title 261, CH 2) including engineering and technical data and the following information:

A discussion of the plan of development (004.01 A);
N/A

A description of all field investigations made to substantiate the feasibility report (004.01 B); **N/A**

Maps, drawings, charts, tables, etc., used as a basis for the feasibility report (004.01 C); **N/A**

A description of any necessary water and land rights and pertinent water supply and water quality information, if appropriate (004.01 D);
N/A

A discussion of each component of the final plan including, when applicable (004.01 E); **N/A**

Required geologic investigation (004.01 E 1); **N/A**

Required hydrologic data (004.01 E 2); **N/A**

Design criteria for final design including, but not limited to, soil mechanics, hydraulic, hydrologic, structural, embankments and foundation criteria (004.01 E 3). **N/A**

1(b). If no (non-structural), submit data necessary to establish technical feasibility including, but not limited to the following (004.02):

A discussion of the plan of development (004.02 A);

The Lower Platte South Natural Resources District (LPSNRD), Papio-Missouri River Natural Resources District (P-MRNRD), Lower Platte North Natural Resources District (LPNNRD), Metropolitan Utilities District (MUD), Lincoln Water System (LWS), and Nebraska Department of Natural Resources (NDNR), collectively referred to as the Consortium, is embarking

on an effort to develop a drought contingency plan for the Lower Platte River Basin in Nebraska (Figure 1).

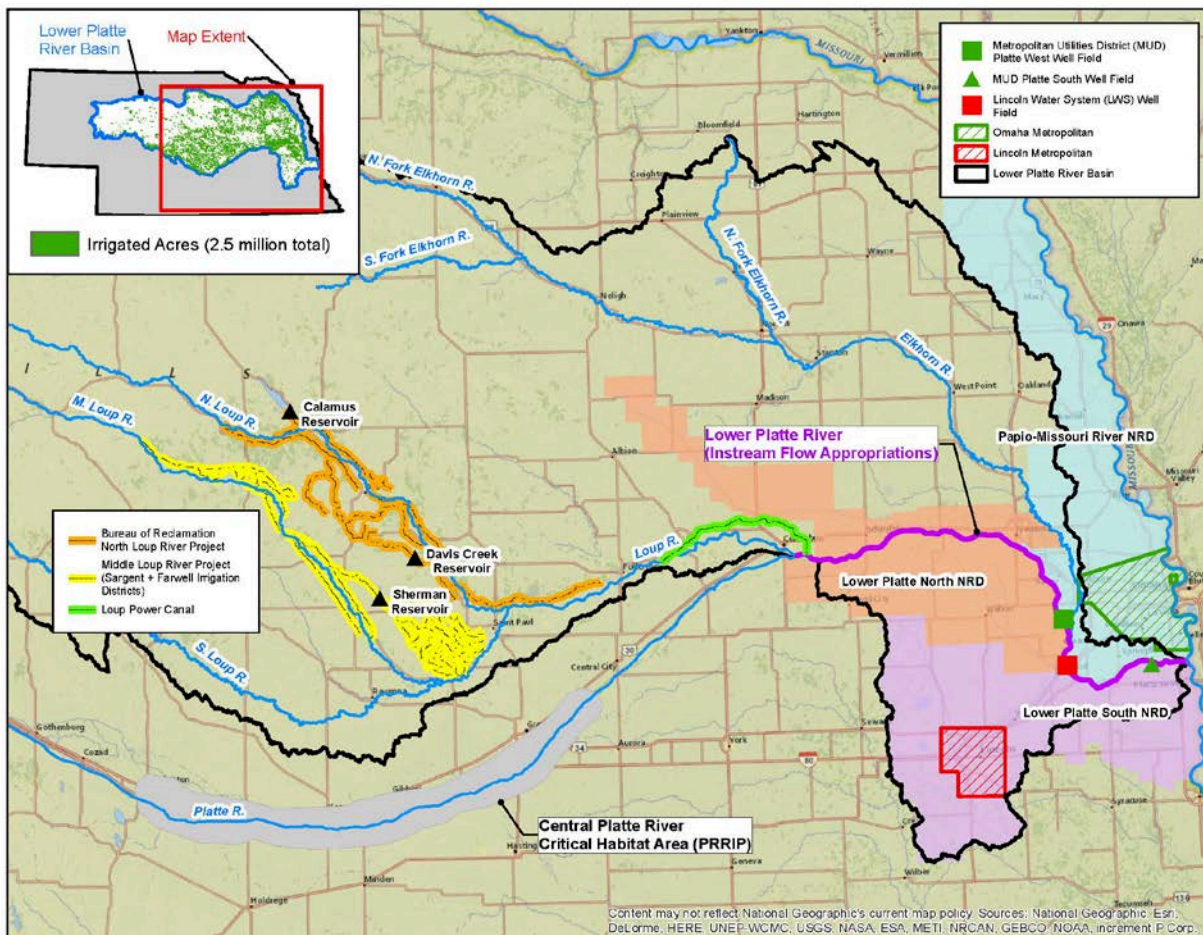


Figure 1. Map of Lower Platte River Drought Contingency Planning Area

The six water management agencies that comprise the Consortium will work together to develop regional solutions to improve the water supply reliability and drought resiliency of the Lower Platte River. The primary focus of the Lower Platte River Plan will be to further refine the Consortium's collective understanding of drought vulnerabilities, while developing more robust monitoring and forecasting tools coupled with timely triggers, new mitigation strategies and responsive actions to create a sound operational framework and improve critical water supply needs of the area through drought periods. By working cooperatively, the Consortium will be able to leverage water resources needs and avoid costly and potentially undesirable regulatory outcomes.

The Consortium's proactive drought planning efforts will be guided by the process that has been outlined by the National Drought Mitigation Center and the United States Bureau of Reclamation's (BOR) Drought Contingency

Planning criteria as the most effective means of preparing a region for extended drought. The plan will incorporate the following key aspects:

- 1. Survey Existing Drought Information**
 - a. Review and synthesize existing plans**
 - b. Identify tools and resources that will support the plan**
- 2. Develop a Drought Monitoring Process**
 - a. Develop regional drought forecasting and water conveyance tools targeted at vulnerable operations**
 - b. Establish data collection sites and protocols for monitoring water conveyance through reaches of the Lower Platte River.**
- 3. Conduct a Vulnerability Assessment**
 - a. Identify drought frequencies, magnitude, and severity**
 - b. Identify vulnerable water use sectors and key factors that cause them to be vulnerable**
 - c. Assess potential future resource needs and the increased vulnerability they may present**
- 4. Develop Drought Mitigation Measures**
 - a. Assess the existing ability and current capacity to reduce risk to critical resources**
 - b. Identify mitigation goals and priorities**
 - c. Identify a strategy for prioritizing mitigation measures**
- 5. Develop Responsive Actions**
 - a. Assess action alternatives**
 - b. Develop drought stage specific implementation schedule**
- 6. Identify the Administrative Framework**
 - a. Identify responsibilities of parties in implementation of the plan**
 - b. Identify triggers, actions, and communications that will be undertaken with plan implementation**
- 7. Develop a Plan Update Process**
 - a. Create a schedule for monitoring and evaluation to determine when plan updates will be required**

A description of field or research investigations utilized to substantiate the project conception ([004.02 B](#));

The National Drought Mitigation Center (NDMC) has conducted extensive research that highlights the importance of proactive drought planning. The NDMC research will directly inform the approach to develop a regional drought contingency plan for the basin. Each member of the Consortium has developed and/or participated in water planning efforts, but this

process will be unique in that the collective resources of the Consortium will be used to develop a plan specifically targeted at drought management.

Additionally, members of the Consortium have invested in several data sources to support this project. The sources of available data that will be utilized to develop the plan are listed in Table 1 below.

TABLE 1. LIKELY DATA SOURCES AND MODELS		
Description of Data	Source	Data Type/Use
Groundwater elevation data (seasonal, monthly, daily, sub-daily)	MUD, USGS, NRDs, USACE (Mead site)	Assess connectivity of surface water and alluvial aquifer by comparing surface and groundwater hydrograph responses to pulse flows
Surface water discharge and stage data for Loup, Elkhorn, and Platte Rivers; and tributaries	USGS, NDNR, MUD pre-design study (HDR, 1993)	Evaluate and characterize reach gain/losses; assess stage correlation
Stream bed K and conductance for Loup, Elkhorn, and Platte Rivers; and tributaries	MUD, UNL, USACE (Mead site), journal articles (e.g., Cheng et al., 2011)	Assess connectivity of surface water and alluvial aquifer
Hydrogeology and characterization of surface/groundwater interaction	ELM, CENEB, LPNDR, MUD, COHYST and Lower Platte River groundwater models; AEM depth slices; saturated thickness estimates; CSD cross-sections	Assess connectivity of surface water and alluvial aquifer; correlate to spatial variations in aquifer; estimates of conveyance losses from calibrated groundwater models
DNR water administration records for the previous 20 years	DNR Fully Appropriated Basin Report, water administration records	Evaluate historic administration of surface water on the Platte, Loup, and Elkhorn Rivers
Information on influent and effluent from the Mead site to Wahoo or Clear Creeks and pumping from extraction/containment wells.	USACE	Evaluate as potential source of water for augmenting flows in the Lower Platte River
Daily, annual, and seasonal reach gain/loss estimates	DNR excess flow evaluation (HDR, 2013)	Estimates of reach gain/loss for developing routing tool to be used in analyses
Geomorphic, hydraulic, and stage change trends of the Lower Platte River	PRRIP (HDR, 2009), Loup Power District relicensing (HDR, ongoing)	Extensive information on current hydraulic and geomorphic conditions as well as trends in the Lower Platte for evaluating potential projects and sensitivity to future trends

TABLE 1. LIKELY DATA SOURCES AND MODELS

Hydrologic trends in the Lower Platte River	LWS (HDR, 2013); Loup Power District relicensing (HDR, ongoing)	Extensive information on current hydrologic conditions as well as trends in Lower Platte flows for evaluating potential projects and sensitivity to future trends
Spatial and temporal estimates of available excess flows	DNR excess flow evaluation (HDR, 2013); Lower Platte Basin Study (HDR, 2016)	Estimates of timing and quantities of excess flows along the Lower Platte, Loup, and Elkhorn Rivers that could be utilized by potential projects
Potential Conjunctive Management project sites (Skull Creek, Sherman Reservoir storage re-allocation, Sargent Irrigation District, Battle Creek Dam, groundwater augmentation wells)	Lower Platte Basin study (HDR, 2016)	Baseline evaluations of potential projects and benefits for augmenting flows in the Lower Platte River
CropSIM State-Wide Watershed Model data	DNR (TFG, ongoing)	Estimates of runoff from tributary watersheds for potential projects.
Well field operations	HDR modeling analyses for MUD (ongoing) and LWS (HDR, 2013)	Evaluate operational elements of the wellfield (estimates of recharge, drawdowns, and operational thresholds).

These data sources will be supplemented by additional data collection efforts aimed at enhancing tools to forecast water supplies and further assess the conveyance of water supplies from various sources throughout the basin to municipal well fields in the Lower Platte River Basin. The preliminary recommendation is for instrumentation (piezometers, transducers, time-lapse photography, and surveys) at a minimum of six sites throughout the Lower Platte River Basin to acquire additional synoptic data related to stage/conveyance relationships with targeted data acquisition during periods when streamflows are below the historic daily mean flow rate and total streamflows as measured at Louisville are below 2,500 cfs.

The forecasting tools and conveyance tools will be developed to identify the necessary lead times associated with various drought response actions so that those actions can be prioritized and sequenced in a manner that allows for effectively addressing key water supply triggers identified through the planning effort. The forecasting tools consist of reviewing the key upstream tributary sources of water (the Central Platte River, Loup River, and Elkhorn River) to integrate the real-time conditions in each of

these three tributary basins into triggers that will allow for increasing the lead time for responsive actions as drought conditions develop.

A description of the necessary water and/or land rights, if applicable ([004.02 C](#));

The project will consider new water supplies to improve drought management reliability in the Lower Platte Basin so that existing permits established by municipalities located in the Lower Platte River Basin remain fully operational through drought conditions and avoid future water administration disputes. These potential supplies include both ground and surface water, from various locations upstream of the MUD and LWS well fields. Since part of the objective of the project is to determine, define, and evaluate those potential sources, a more precise description of those water supplies is not possible at this preliminary point in time.

A discussion of the anticipated effects, if any, of the project upon the development and/or operation of existing or envisioned structural measures including a brief description of any such measure ([004.02 D](#)).

This project does not include the actual development of any new structures. Outcomes from the planning effort will be targeted at improving the reliability of water supplies through the lower reaches of the Platte River so that streamflows can remain above critical thresholds and existing municipal wellfield structures can remain fully operational through drought periods. Efforts to maintain minimum flows through these drought periods are aimed at minimizing and/or eliminating the need for regulatory actions such as surface water administration and well curtailments, which may otherwise adversely impact existing users and infrastructure. It is possible that planning recommendations could include suggested changes to the operation of certain structural components in the basin, but they would be limited with respect to meeting the specific drought management objectives listed above.

2. Provide evidence that there are no known means of accomplishing the same purpose or purposes more economically, by describing the next best alternative.

The next best alternative would be to utilize each individual agency's regulatory actions and drought mitigation measures during the onset of drought periods. This outcome will not allow the Consortium members to deploy their resources in a coordinated fashion, and may create untimely and unnecessary actions with adverse regulatory outcomes, and higher economic costs, for existing upstream water users. While each member of the Consortium has developed or participated in various elements of drought planning, the combined impact from these individual planning efforts is inferior to what is possible through the coordinated resources of the Consortium. Without this cooperative approach, the individual

members simply lack the comprehensive operational framework, and the associated economic advantages, that the Consortium would offer during drought conditions. Working together, the Consortium will be able to leverage their resources and avoid unnecessary resource competition and duplication, avoiding future disputes.

In the absence of a Consortium, the individual members currently directly and/or indirectly support efforts aimed at ensuring reliable water supplies for approximately sixty percent of Nebraska's population, thousands of businesses and industries, and environmental and recreational opportunities that rely on water supplies from the Lower Platte River Basin. These activities would be maintained, and likely strengthened, with the establishment of a Consortium, but with the added economic benefit resulting from collective management actions. The benefits of this type of coordinated planning are well documented, and FEMA has suggested that mitigation actions, taking steps ahead of time to prevent or lessen known impacts from a natural disaster such as drought, can save \$4 for every \$1 invested.

3. Document all sources and report all costs and benefit data using current data, (commodity prices, recreation benefit prices, and wildlife prices as prescribed by the Director) using both dollar values and other units of measurement when appropriate (environmental, social, cultural, data improvement, etc.). The period of analysis for economic feasibility studies shall be fifty (50) years or with prior approval of the Director, up to one hundred (100) years [[T261 CH 2 \(005\)](#)].
 - Describe any relevant cost information including, but not limited to the engineering and inspection costs, capital construction costs, annual operation and maintenance costs, and replacement costs. Cost information shall also include the estimated construction period as well as the estimated project life ([005.01](#)).

The total estimated project cost is \$551,000. The costs cover project work which will be completed between FY 17 and FY 18. These costs are for payments to water resources experts to complete the scope of work and for installation of data collection sites for monitoring streamflow conveyance through the Lower Platte River. The costs for the project cover the collection of streamflow data and aquifer response data to various stream stage conditions, development of a conveyance and forecasting tool, development and initial screening of water supply alternatives, detailed evaluations of screened water supply alternatives, and documentation of findings.

- Only primary tangible benefits may be counted in providing the monetary benefit information and shall be displayed by year for the project life. In a multi-purpose project, estimate benefits for each purpose, by year, for the

life of the project. Describe any intangible or secondary benefits separately. In a case where there is no generally accepted method for calculation of primary tangible benefits describe how the project will increase water sustainability, such that the economic feasibility of the project can be approved by the Director and the Commission (005.02).

The identification of water supply alternatives will help with long term sustainability goals of the Platte River Basin. The primary benefits associated with the project are organized into five categories in Table 2 below.

TABLE 2.PROJECT BENEFITS		
Benefit Category	Benefit	Benefit Description
Water Quality	Recreation, Wildlife and T&E Species	Will increase the quality of water in the Lower Platte Basin leading to greater amenity value users receive from their recreational experience. Improved water quality will create direct and secondary benefits to the natural environment.
Agriculture	Security of Agricultural Water Supply	Identification of water supply alternatives will protect existing and future uses of agricultural water through potential aquifer recharge, depletion offset, avoidance of regulation/allocation, and potential future agricultural development
Environmental	Wildlife and Threatened & Endangered (T&E) Species	Increased flows in the Lower Platte River will enhance wildlife and improve water quality during drought conditions for habitat preservation.
Avoided Capital and O&M Costs	Lincoln Water System Alternative Water Supply costs	The City of Lincoln Water Facilities Master Plan has identified a range of projects beginning in 2016 to meet its long term water supply needs. The development of water supply alternatives may help offset some of the necessary short- and mid-term projects necessary to meet the City of Lincoln's needs.
	Water Treatment Costs	Identification of additional water supply alternatives may reduce future treatment costs during drought periods when Platte River flows are reduced.
Achievement of State/Regional Objectives	Platte River Recovery Implementation Program (PRRIP)	PRRIP has goals for monitoring upstream impacts of various management actions to assess potential impacts on pallid sturgeon. Outcomes from this study would work to improve low-flow conditions in the Lower Platte River and flows that have been determined to support pallid sturgeon habitat.

The primary tangible benefits from the project would be an increase in both the quantity and quality of recreation along the Lower Platte River; financial savings to the municipalities that rely on Lower Platte River flows for water supply from avoided capital improvements for their master plan; and water supply benefits for agricultural, municipal, and industrial users. These benefits are not easily quantified at this stage in the planning process. The results of this study will help to provide insight into those benefits.

- All benefit and cost data shall be presented in a table form to indicate the annual cash flow for the life of the proposal, not to exceed 100 years (005.03).

The primary tangible benefits have not yet been fully quantified for the project. However, the planning efforts under this study would result in projects which are expected to deliver future tangible benefits in the region including: improved water supply reliability for municipal and agricultural water users, reduced treatment costs for municipal water supplies, increased flexibility in management tools for responding to drought situations, and increases in recreational quantity and quality.

- In the case of projects for which there is no generally accepted method for calculation of primary tangible benefits and if the project will increase water sustainability, the economic feasibility of such proposal shall be demonstrated by such method as the Director and the Commission deem appropriate (005.04).

4. Provide evidence that sufficient funds are available to complete the proposal.

See attached documents that present the LPSNRD budget for FY17 and FY 18 and attached support letters documenting that the LPSNRD and Consortium members intend to budget adequate funds in FY 17 and FY 18 (see Attachment B – Draft LPSNRD Budget, and Attachment C – Letters of Support and Draft Interlocal Cooperative Agreement).

5. Provide evidence that sufficient annual revenue is available to repay the reimbursable costs and to cover OM&R (operate, maintain, and replace).

N/A

6. If a loan is involved, provide sufficient documentation to prove that the loan can be repaid during the repayment life of the proposal.

N/A

7. Describe how the plan of development minimizes impacts on the natural environment.

Due to the nature of the project, the plan of development is likely to provide significant positive benefits to the natural environment. The project is in an area where multiple federally threatened and endangered species (piping plover, interior least tern, and pallid sturgeon) have been identified. This project is targeted at improving the reliability of water supplies during drought periods in the Lower Platte River so that the municipal wellfields in the area can remain fully operational. The operation of these municipal wellfields relies on flowing surface water within the Lower Platte River, supplying aquifer recharge for wells adjacent to the river. As a result, any efforts under this project to increase streamflows in low-flow conditions to benefit wellfield operations will likely create improvements to the environmental and ecological conditions for the respective threatened and endangered species.

8. Explain how you are qualified, responsible and legally capable of carrying out the project for which you are seeking funds.

The LPSNRD, LPNDRD, and P-MRNRD have a wide range of statutory responsibilities and authorities, including but not limited to, Nebraska Revised Statutes §2-3,201 through 2-3,243 and the Ground Water Management and Protection Act (Nebraska Rev. Statutes §46-701 through 46-756). Specifically, Nebraska Rev. Statutes §46-707(f) confer to the NRDs the power to “conduct investigations and cooperate or contract with ... public or private corporations, or any association or individual on any matter relevant to the administration of the [Ground Water Management and Protection] act.”

The NDNR has a wide range of statutory authorities and responsibilities related to water planning. Nebraska Rev. Statutes §2-15,99 through 2-15,106 outlines NDNR’s responsibilities related to state-wide water planning and various sections of the Ground Water Management and Protection Act outline NDNR’s responsibilities related to integrated management planning. These efforts require NDNR to, in part, “provide...alternative methods of addressing important water policy issues and areawide or statewide resources problems” and “conduct any other planning activities necessary to protect and promote the interests of the state and its citizens in the water resources of Nebraska”.

MUD and LWS each have additional qualifications and responsibilities that make them legally capable of participating as a member of the Consortium in this project. MUD and LWS have each developed long-term water plans that concern water resources management in their areas, and are the key governing entities in charge of municipal water supplies for a large percentage of the State’s population.

9. Explain how your project considers plans and programs of the state and resources development plans of the political subdivisions of the state.

This project is being implemented to fulfill various requirements of goals and objectives outlined in the Integrated Management Plans (IMPs) of the LPSNRD, P-MRNRD, and LPNNRD. Each of these IMPs has been developed in partnership with the NDNR and contains key goals related to water supply management and sustainability. These IMPs also work in conjunction with principal goals that are outlined in the Lower Platte River Basin-Wide Plan that is currently being finalized. Examples of these IMP goals include:

- 1. Encourage all water users to minimize water use while optimizing benefits.**
- 2. Ensure a sustainable water supply is available in the amounts and locations of the demands through management actions to meet the District's short and long term needs.**
- 3. Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.**

Table 3 shows a summary of the goals and objectives for the LPSNRD, LPNNRD, P-MRNRD in comparison to the draft Lower Platte River Basin-Wide Plan goals and objectives as well as lists action items by NRD in support of these identified goals and objectives.

TABLE 3. Relevant Basin Plan and IMP Goals and Objectives that Benefit from the Lower Platte River Drought Contingency Plan

LPRBC Draft Basin Plan Goal http://dnr.nebraska.gov/LPRBC	LPSNRD IMP Goals and Objectives http://www.lpsnrd.org/Programs/gwIntMgtPlan.pdf	P-MRNRD IMP Goals and Objectives http://dnr.ne.gov/media/iwm/pdf/missouritribs/PMRNRD_IMP_20140801.pdf	LPNNRD IMP Goals and Objectives (Draft June 1, 2016) <i>Not Yet Published</i>
Goal 1: Develop and maintain a water supply and use inventory based on the best available data and analysis		Goal 2: Develop and maintain a water supply and use inventory based on the best available data and analysis.	
Goal 1, Objective 1: Develop and maintain a comprehensive inventory of the location and source of the Basin's current and future water supplies, water uses and outflows	Goal 1: Ensure the District has sufficient data to enable the achievement of a water supply that is in balance with current and future water demands in the District.	Goal 2, Objective 2.1: Develop and implement a data gathering and monitoring plan that provides relevant scientific information to support NDNR's annual evaluation.	<p>Goal 1, Objective 1.1.1: Develop a database of current groundwater and surface water supplies.</p> <p>Goal 1, Objective 1.1.2: Use the best available science, such as remote sensing technologies, etc., and data to identify District-wide aquifer distribution, including the distribution of bedrock and perched and pocket aquifers.</p> <p>Goal 1, Objective 1.1.3: Develop a database of current water quality problem areas, which can influence a clean and useable water supply.</p> <p>Goal 2, Objective 2.1.1: Develop standard protocols to ensure municipal water supply reports and forecasts are integrated into a District-wide database.</p> <p>Goal 2, Objective 2.1.2: Evaluate how population growth and how potential water reuse could influence per capita water use, to estimate future water demand.</p> <p>Goal 2, Objective 2.1.3: Continue certification of irrigated acres, well metering, and reporting requirements to track current water demands.</p> <p>Goal 2, Objective 2.1.4: Evaluate historical and future land use/cover changes, such as agricultural to urban or adoption of conservation practices, and the effects on water demand.</p> <p>Goal 2, Objective 2.2.1: Estimate effects on demands due to environmental mitigation activities that utilize large quantities of water (for example, industrial clean-up operations and Former Ordnance Plant cleanup).</p> <p>Goal 2, Objective 2.2.2: Estimate effects on demands in scenarios where municipal wells are moved to hydrologically connected areas to improve quality.</p>
Goal 1, Objective 1.1: Develop a better understanding of basin-wide inflows/outflows to enable development of a more comprehensive water inventory.	<p>Monitoring & Studies, II (e) (ii): Cooperate with other state and federal agencies to monitor the impacts of changes in the Lower Platte River Basin on water supplies and consumptions, changes due to climate cycles, changes in stream flows, and changes due to other factors.</p> <p>Monitoring & Studies, II (e) (ii): Studies will or may include refinements</p>	<p>Goal 2, Objective 2.2: Track variability in water use and supply by regularly evaluating data from existing surface water, groundwater, and weather monitoring networks</p> <p>Goal 2, Objective 2.2: Develop or maintain a comprehensive spatial/tabular water inventory database that includes measurements or estimates of components of the water budget.</p>	<p>Goal 1, Objective 1.2.1: Continue surface water and groundwater monitoring across the District.</p> <p>Goal 1, Objective 1.2.2: Use surface water and groundwater measurements and models to estimate District inflows and outflows.</p>

TABLE 3. Relevant Basin Plan and IMP Goals and Objectives that Benefit from the Lower Platte River Drought Contingency Plan

LPRBC Draft Basin Plan Goal http://dnr.nebraska.gov/LPRBC	LPSNRD IMP Goals and Objectives http://www.lpsnrd.org/Programs/gwIntMgtPlan.pdf	P-MRNRD IMP Goals and Objectives http://dnr.ne.gov/media/iwm/pdf/missouritribs/PMRNRD_IMP_20140801.pdf	LPNNRD IMP Goals and Objectives (Draft June 1, 2016) <i>Not Yet Published</i>
	of the hydrologically connected ground water and surface water areas, aquifer characteristics, effectiveness of various conservation best management practices, the impacts of climate cycles, the effectiveness and efficiency of water conveyance via streams from upstream sources, development of protocols for refining estimates of consumptive water use and understanding instream flow needs.		<u>Goal 1, Objective 1.2.3:</u> Identify data gaps in monitoring (for example, precipitation, stream flow, and groundwater level networks, etc.).
<u>Goal 1, Objective 1.4:</u> Refine the extent of hydrologically connected ground and surface waters in the Lower Platte Basin.	<u>Monitoring & Studies, II (f) (ii):</u> Studies will or may include refinements of the hydrologically connected ground water and surface water areas, aquifer characteristics, effectiveness of various conservation best management practices, the impacts of climate cycles, the effectiveness and efficiency of water conveyance via streams from upstream sources, development of protocols for refining estimates of consumptive water use and understanding instream flow needs.		<u>Goal 1, Objective 1.1.4:</u> Use the best available data and methods to refine delineations of hydrologically connected surface and groundwater. <u>Goal 5, Objective 5.3.2:</u> Evaluate whether ENWRA data can improve modeling of hydrologically connected areas on a large scale.
<u>Goal 2:</u> Implement a water <i>management</i> plan for the Lower Platte Basin that maintains a balance between current and future water supplies and demands	<u>Goal 2:</u> Ensure a sustainable water supply is available in the amounts and location of the demand through management actions to meet the District's short and long term needs.		<u>Goal 3, Objective 3.1.1:</u> Where feasible, promote practices focused on reuse of rain, storm, waste, industrial, or irrigation water.

TABLE 3. Relevant Basin Plan and IMP Goals and Objectives that Benefit from the Lower Platte River Drought Contingency Plan

LPRBC Draft Basin Plan Goal http://dnr.nebraska.gov/LPRBC	LPSNRD IMP Goals and Objectives http://www.lpsnrd.org/Programs/gwIntMgtPlan.pdf	P-MRNRD IMP Goals and Objectives http://dnr.ne.gov/media/iwm/pdf/missouritribs/PMRNRD_IMP_20140801.pdf	LPNNRD IMP Goals and Objectives (Draft June 1, 2016) <i>Not Yet Published</i>
	<u>Goal 3:</u> Encourage all water users to minimize water use while optimizing benefits.		<u>Goal 3, Objective 3.2.1:</u> As needed, implement cost-share programs for irrigation conservation, such as flow metering and sub-surface drip irrigation systems. <u>Goal 3, Objective 3.2.2:</u> Use new and existing studies and data to establish specific guidelines for sustainable development of major and minor, and pocket aquifers. <u>Goal 3, Objective 3.2.3:</u> Collaborate with municipalities and industrial users on development or refinement of water conservation plans, such as water reuse.
<u>Goal 2, Objective 1:</u> Collaborate with state and local governments to identify opportunities to augment water supplies within the Lower Platte Basin and, if necessary, identify opportunities to supplement with imported water from outside the Lower Platte Basin.	<u>Goal 2, Objective 2.3:</u> Evaluate the potential benefits of regional supply and distribution systems and, where warranted, facilitate discussions with impacted entities.	<u>Goal 1, Objective 1.3:</u> Evaluate the potential for conjunctive management programs or project opportunities to protect existing users or mitigate new uses such as water rights leases, interference agreements, augmentation projects, conjunctive use management, or use retirement	<u>Goal 3, Objective 3.1.3:</u> Cooperate with other entities to identify, evaluate and prioritize locations and types of feasible conjunctive water management water use projects. <u>Goal 5, Objective 5.2.2:</u> Evaluate benefits and limitations of potential conjunctive management projects such as water rights leases, interference agreements, augmentation projects, conjunctive use management, or water use retirement.
<u>Goal 2, Objective 2:</u> Monitor instream flow needs in the Lower Platte Basin to foster an understanding of the existing appropriation priorities and locations, and provide a basis for evaluating impacts of existing and future uses.	<u>Goal 3, Objective 3.7:</u> As necessary, work with other agencies to evaluate the instream flow needs in the District.	<u>Goal 4, Objective 4.5:</u> Work with the appropriate agencies to identify streamflow necessary to protect and maintain public water supply, fish and wildlife, and public recreation.	<u>Goal 2, Objective 2.1.6:</u> Evaluate current water demands and project future water demands for environmental concerns and instream flow needs both within the District and for downstream requirements. <u>Goal 5, Objective 5.4.2:</u> Coordinate to review and assess benefits and limitations of protecting Lower Platte River flows through existing instream flow permits.
<u>Goal 2, Objective 3:</u> Evaluate options for Basin wide water banking methodologies.		<u>Goal 4, Objective 4.4:</u> Coordinate with other entities to identify and study opportunities for the development of transfers, variances, water banking, and other actions of water management to potentially be used across the entire Platte River Basin.	<u>Goal 3, Objective 3.1.2:</u> Develop a District-wide water banking program to minimize water conflicts between different water users and sources.
<u>Goal 3: Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.</u>	<u>Goal 2, Objective 2.1:</u> Ensure to the extent possible, that wells are located and designed to reflect the ground water geology and water supplies in accordance with aquifer characteristics.	<u>Goal 1:</u> Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.	<u>Goal 3, Objective 3.1:</u> Update policies, practices, and/or programs to maintain and improve water supply and water quality as it affects supply.
<u>Goal 3, Objective 1:</u> Identify available water storage opportunities throughout the Lower Platte Basin.	<u>Goal 2, Objective 2.2:</u> Research and implement, as needed, additional storage opportunities throughout the District.	<u>Goal 4, Action Item 4.2.1:</u> Review and analyze existing studies of water storage opportunities in the Lower Platte River Basin and conduct additional multi-agency studies as appropriate.	<u>Goal 5, Objective 5.2.1:</u> Review and analyze existing studies of water storage opportunities in the Lower Platte River Basin and conduct multi-agency studies as appropriate.

Additionally, MUD and LWS have each developed plans that consider short-term and long-term facility improvements and raw water supply alternatives to meet projected water demands due to both population growth and drought scenarios.

Finally, all three NRDs have groundwater management plans (GMP) that have been approved by NDNR pursuant to the Ground Water Management and Protection Act. This project will assist each member of the Consortium in carrying out key duties and meeting goals outlined in each of these plans, as shown in Table 4.

TABLE 4. NRD GROUNDWATER MANAGEMENT PLANS
LPNNRD Groundwater Master Plan <i>(parent document to 1994 updated Groundwater Management Plan)</i> <i>(Contact NRD for copy of Plan – Not available online)</i>
Goal: Assure adequate quantity and quality of stream flow, groundwater, and surface reservoirs within the District for beneficial uses as prescribed by law.
<i>Objective 1: Insure that all chemigation users are properly trained and comply with state rules and regulations so as to reduce the occurrence of groundwater contamination through the application of pesticides and fertilizers.</i>
<i>Objective 2: Actively pursue the proper use of chemigation criteria and assure that all who chemigate have permits to do so.</i>
<i>Objective 3: Develop and maintain rural landowner and community reporting stations for well monitoring, water usage, and rainfall statistics.</i>
<i>Objective 4: Insure proper local management of ground and surface water resources through cooperation with local community governments, agencies and private firms, which may involve development of Special Protection Areas and groundwater management and control areas.</i>
<i>Objective 5: Comply with the District's Groundwater Management Plan as well as state standards and regulations in order to meet proper conservation requirements.</i>
<i>Objective 6: Assist federal and state agencies in the protection of ground and surface waters from non-point and point sources of pollutants.</i>
<i>Objective 7: Maintain groundwater quality and quantity monitoring programs</i>
<i>Objective 8: Encourage and develop programs to assist users in reducing irrigation water needs through best management practices.</i>
<i>Objective 9: Develop instream flow requirements that will assist in providing a stable development climate within the District.</i>
<i>Objective 10: Develop best management alternatives for chemical use in areas where susceptibility to groundwater pollution is high.</i>
<i>Objective 11: Cooperate with state and federal agencies to provide adequate methods of testing groundwater for pollutants.</i>
<i>Objective 12: Assist in the development for rural water districts with other applicable entities as required.</i>
<i>Objective 13: Develop criteria and data for wellhead protection standards to allow District urban areas to participate in this program.</i>

<p>LPNNRD Groundwater Management Plan (1994) (Contact NRD for copy of Plan – Not available online)</p>
<p>Goal #1: Groundwater Reservoir Life</p>
<p><i>Objective: Designate the entire LPNNRD as a Groundwater Management Area, consistent with State Statutes 46-673.01 - 46-673.06</i></p>
<p>Goal #2: Provide a System of groundwater management to support the groundwater reservoir life goal, based upon an adequate technical foundation and public awareness of groundwater issues.</p>
<p><i>Objective: Provide technically accurate and updated water quantity data upon which to base management decisions.</i></p>
<p><i>Objective: Provide the most technically accurate and updated water quality data upon which to base management decisions.</i></p>
<p><i>Objective: Further develop and enhance the NRD's computer database management system to provide continual support for program advancements.</i></p>
<p><i>Objective: To develop a coordinated NRD program to assist in implementation of the State of Nebraska's wellhead protection program. The NRD program will be targeted toward assisting the District's communities and supportive of the District's efforts in managing ground and surface water.</i></p>
<p><i>Objective: To support and conduct special studies, research, and data gathering activities that will assist the District in its understanding and management of groundwater.</i></p>
<p><i>Objective: To adequately support the Groundwater Management Plan through proper application of District resources.</i></p>
<p>LPSNRD Groundwater Management Plan (1995) http://www.lpsnrd.org/Programs/qwmpsummary.pdf (Contact NRD for copy of full document.)</p>
<p>Goal: Maintain the quantity and quality of groundwater for any beneficial use in conformance with state standards.</p>
<p><i>Objective 1: Protect groundwater from point and non-point sources of pollutants, with effluent discharges meeting standards set by State or other agencies.</i></p>
<p><i>Objective 2: Manage groundwater quantity and quality levels through monitoring programs in compliance with Nebraska Ground Water Protection Standards and with provisions of Ground Water Management and Protection Act.</i></p>
<p><i>Objective 3: Manage groundwater for effective long-term conservation and utilization.</i></p>
<p><i>Objective 4: Encourage proper development and conservation of groundwater.</i></p>
<p><i>Objective 5: Implement the policies in the District's Ground Water Management Plan and update as needed.</i></p>
<p><i>Objective 6: Reduce potential for contamination by pesticides and fertilizers from chemigation through irrigation systems.</i></p>
<p><i>Objective 7: Work collectively with other agencies to evaluate groundwater quantity and quality data.</i></p>
<p>P-MRNRD Groundwater Management Plan (1994) http://www.papionrd.org/wp-content/uploads/Groundwater-Management-Plan-1994.pdf</p>
<p>Goal: Maintain the existing conditions of its groundwater reservoir quantity and quality-forever. This "in-perpetuity" quality and quantity life goal applies to the entire P-MRNRD.</p>
<p><i>Objective 1: Maintain the District's static water level monitoring program.</i></p>
<p><i>Objective 2: Establish a District-wide groundwater quality monitoring program.</i></p>
<p><i>Objective 3: Administer the Nebraska Chemigation Act in the District.</i></p>
<p><i>Objective 4: Encourage, through information and education activities, conservation of water quantity and quality.</i></p>
<p><i>Objective 5: Establish management, control, or special protection areas in the District to address specific problems of groundwater quality, should the data collected indicate that the groundwater reservoir life goal cannot be met.</i></p>

<i>Objective 6: Establish management or control areas in the District to address problems of groundwater quantity, should the data collected indicate that the groundwater reservoir life goal cannot be met.</i>
<i>Objective 7: Continue to evaluate requests (petitions) from rural landowners for a more adequate and dependable water supply.</i>
<i>Objective 8: Cooperate with other NRDs in the management of contiguous portions of the groundwater reservoir.</i>
<i>Objective 9: Establish a well abandonment cost sharing program in the District.</i>
<i>Objective 10: Encourage development of regional water supplies in the District.</i>

10. Are land rights necessary to complete your project?

YES NO

If yes, provide a complete listing of all lands involved in the project.

N/A

If yes, attach proof of ownership for each easements, rights-of-way and fee title currently held.

N/A

If yes, provide assurance that you can hold or can acquire title to all lands not currently held.

N/A

11. Identify how you possess all necessary authority to undertake or participate in the project.

The LPSNRD has a wide range of statutory responsibilities and authorities, including but not limited to Nebraska Revised Statutes §2-3,201 through 2-3,243 and the Ground Water Management and Protection Act (Nebraska Rev. Statutes §46-701 through 46-756). Specifically, Nebraska Rev. Statutes §46-707(f) confer to the NRDs the power to “conduct investigations and cooperate or contract with ... public or private corporations, or any association or individual on any matter relevant to the administration of the [Ground Water Management and Protection] act.” The LPSNRD has also established within its draft budget for FY 17 and FY 18 the funds necessary to fulfill the local match requirement for this project. Additionally, the LPSNRD expects to enter into an inter-local cooperative agreement (ILCA) that outlines the roles, responsibilities, and budget responsibilities of the other five entities involved in carrying out this project. A copy of the draft ILCA and letters of support from each Consortium member are include in Attachment C – Letters of Support and Draft Inter-local Cooperative Agreement.

12. Identify the probable environmental and ecological consequences that may result as the result of the project.

Only positive environmental and ecological impacts are expected to result from this project. This project is targeted at improving the reliability of water supplies during drought periods in the Lower Platte River so that the municipal wellfields in the area can remain fully operational. The operation of these municipal wellfields relies on flowing surface water within the Lower Platte River, supplying aquifer recharge for adjacent wells. As a result, any efforts under this project to increase minimum streamflows in low-flow conditions to benefit well field operations will likely create improvements to the environmental and ecological conditions for the respective endangered species.

Section C.

NRC SCORING

In the NRC's scoring process, points will be given to each project in ranking the projects, with the total number of points determining the final project ranking list.

The following 15 criteria constitute the items for which points will be assigned. Point assignments will be 0, 2, 4, or 6 for items 1 through 8; and 0, 1, 2, or 3 for items 9 through 15. Two additional points will be awarded to projects which address issues determined by the NRC to be the result of a federal mandate.

Notes:

- The responses to one criterion *will not* be considered in the scoring of other criteria. Repeat references as needed to support documentation in each criterion as appropriate. The 15 categories are specified by statute and will be used to create scoring matrixes which will ultimately determine which projects receive funding.
- There is a total of 69 possible points, plus two bonus points. The potential number of points awarded for each criteria are noted in parenthesis. Once points are assigned, they will be added to determine a final score. The scores will determine ranking.
- The Commission recommends providing the requested information and the requests are not intended to limit the information an applicant may provide. An applicant should include additional information that is believed will assist the Commission in understanding a proposal so that it can be awarded the points to which it is entitled.

Complete any of the following (15) criteria which apply to your project. Your response will be reviewed and scored by the NRC. Place an N/A (not applicable) in any that do not apply, an N/A will automatically be placed in any response fields left blank.

1. Remediates or mitigates threats to drinking water;
 - Describe the specific threats to drinking water the project will address.
 - Identify whose drinking water, how many people are affected, how will project remediate or mitigate.
 - Provide a history of issues and tried solutions.
 - Provide detail regarding long range impacts if issues are not resolved.

The specific threats to drinking water addressed by this project include both potential shortages of municipal water supplies and water quality problems caused by low-flow conditions. This project will consider how changes in

water management can impact regional water supplies during drought periods. Recent experience indicates that drought conditions can result in significant declines in ground water elevations and streamflows, while also presenting the potential to impact water quality. Specifically, iron, manganese, chloride and arsenic levels in municipal water supplies can all be affected by low-flow conditions. These water quality impacts can result in the need for additional, and expensive, treatment of the water prior to using it for drinking water purposes.

The drinking water supplies are used by populations within the service areas of the LWS and the MUD, as well as numerous municipalities such as Louisville, Ashland, Plattsmouth, Papillion, and Fremont. As of 2015, these entities provide water to 272,996¹ and 600,000² people, respectively. In total, the municipal water supply systems in the Lower Platte River Basin serve approximately sixty percent of Nebraska’s population, along with thousands of businesses and industries. This project will look at proactive mitigation and responsive actions that can be deployed during the onset of drought to create minimal disruption to supplies and preserve the highest quality of water possible.

Municipal water suppliers, in conjunction with NRD partners, have historically worked diligently to develop and protect drinking water supplies for the population of eastern Nebraska. This has included acquiring existing permits to sustain population growth into the future. While these efforts have successfully established those protections for the majority of operational conditions experienced in the Lower Platte River, the extreme variability and potential for extreme and rapidly developing droughts will be addressed by this project.

If these issues are not resolved, the long range impacts could include water shortages to significant populations both within and outside of the LWS and MUD service areas, along with challenging water quality impacts that could require new and expensive water treatment responsibilities for water providers and a stunting of potential economic growth and stability of a large portion of the state.

2. Meets the goals and objectives of an approved integrated management plan or ground water management plan;
 - Identify the specific plan that is being referenced including date, who issued it and whether it is an IMP or GW management plan.
 - Provide the history of work completed to achieve the goals of this plan.

¹ Source: <https://www.lincoln.ne.gov/city/pworks/water/pdf/water-quality-report.pdf?2015>

² Source: <http://www.mudomaha.com/about-us>

- List which goals and objectives of the management plan the project provides benefits for and how the project provides those benefits.

This project will assist the LPSNRD, PMRNRD, and LPNNRD in meeting the goals and objectives of each NRD’s Integrated Management Plan (IMP) and Groundwater Management Plan (GMP). Table 5 below identifies the specific plans that will be referenced.

TABLE 5. NRD GMP AND IMP SUMMARY			
NRD	GMP Adopted	IMP Adopted	Website Link
LPNNRD	1997	Exp. Fall 2016	Not published on website – Contact NRD for copy
LPSNRD	1996	April, 2014	http://www.lpsnrd.org/Programs/gwmpsummary.pdf Contact NRD for copy of full document.
PMRNRD	1994	August, 2014	http://www.papionrd.org/wp-content/uploads/Groundwater-Management-Plan-1994.pdf

With respect to the history of work completed to achieve the goals of these plans, some of the most current efforts include recently developed IMPs written by the three NRDs involved in this project, in cooperation with NDNR. Each plan is unique with each district prioritizing their efforts differently, but common goals related to water sustainability, protection of existing water users, and coordination with other NRDs and water management agencies in the Lower Platte River Basin are shared by all three NRDs. These NRDs have been working to establish a common structure for implementing these goals through the implementation of a basin-wide planning framework. Table 6 provides the history of work completed toward GMP and IMP goals.

TABLE 6. Relevant Basin Plan, GMP, and IMP Goals and Objectives (Including Completed Action Items to Date) that Benefit from the Lower Platte River Drought Contingency Plan (LPRDCP)

LPRBWMC Draft Basin Plan Goals and Objectives http://dnr.nebraska.gov/LPRBC	LPSNRD IMP Goals and Objectives http://www.lpsnrd.org/Programs/qwIntMgtPlan.pdf	P-MRNRD IMP Goals and Objective http://dnr.ne.gov/media/iwm/pdf/missouri/tribs/PMRNRD_IMP_20140801.pdf	LPNNRD IMP Goals and Objectives (Draft June 1, 2016) <i>Not Yet Published</i>	Action Items
<p><u>Goal 1:</u> Develop and maintain a water supply and use inventory based on the best available data and analysis.</p> <p><u>LPRDCP Benefit:</u> Supports the quantification of supplies and uses in the lower Platte River particularly during drought conditions and also provides a means to track and forecast supplies.</p>		<p><u>Goal 2:</u> Develop and maintain a water supply and use inventory based on the best available data and analysis.</p>		
<p><u>Goal 1, Objective 1:</u> Develop and maintain a comprehensive inventory of the location and source of the Basin's current and future water supplies, water uses and outflows.</p> <p><u>LPRDCP Benefit:</u> Supports the quantification of supplies and uses in the lower Platte River particularly during drought conditions and also provides a means to track and forecast supplies.</p>	<p><u>Goal 1:</u> Ensure the District has sufficient data to enable the achievement of a water supply that is in balance with current and future water demands in the District.</p>	<p><u>Goal 2, Objective 2.1:</u> Develop and implement a data gathering and monitoring plan that provides relevant scientific information to support NDNR's annual evaluation.</p>	<p><u>Goal 1, Objective 1.1.1:</u> Develop a database of current groundwater and surface water supplies.</p> <p><u>Goal 1, Objective 1.1.2:</u> Use the best available science, such as remote sensing technologies, etc., and data to identify District-wide aquifer distribution, including the distribution of bedrock and perched and pocket aquifers.</p> <p><u>Goal 1, Objective 1.1.3:</u> Develop a database of current water quality problem areas, which can influence a clean and useable water supply.</p> <p><u>Goal 2, Objective 2.1.1:</u> Develop standard protocols to ensure municipal water supply reports and forecasts are integrated into a District-wide database.</p> <p><u>Goal 2, Objective 2.1.2:</u> Evaluate how population growth and how potential water reuse could influence per capita water use, to estimate future water demand.</p> <p><u>Goal 2, Objective 2.1.3:</u> Continue certification of irrigated acres, well metering, and reporting requirements to track current water demands.</p> <p><u>Goal 2, Objective 2.1.4:</u> Evaluate historical and future land use/cover changes, such as agricultural to urban or adoption of conservation practices, and the effects on water demand.</p> <p><u>Goal 2, Objective 2.2.1:</u> Estimate effects on demands due to environmental mitigation activities that utilize large quantities of water (for example, industrial clean-up operations and Former Ordnance Plant cleanup).</p> <p><u>Goal 2, Objective 2.2.2:</u> Estimate effects on demands in scenarios where municipal wells are moved to</p>	<p>In 1978, P-MRNRD initiated a static water level monitoring program in the District.</p> <p>1985 - LPNNRD adopted its first Ground Water Management Plan and instituted a Ground Water Energy Level (GWEL) network in 1986 with 66 wells</p> <p>In 1995, LPNNRD expanded its GWEL network to 118 wells.</p> <p>In 1997, LPNRD started a district wide water well permit program for producers.</p> <p>For all wells post Oct. 1, 2005, LPNNRD requires a flow meter or time totalizer on wells that pump over 50 gallons per minute.</p> <p>In 2006, LPNNRD expanded the GWEL network to 121 wells and installed 18 monitoring wells with continuous recorders placed in sensitive aquifers.</p> <p>In 2008, LPSNRD adopted changes to the District's Ground Water Rules and Regulations involving permitting of wells, installation of water well meters, and ground water quality management.</p> <p>In 2009, LPSNRD began certification of historically ground water irrigated acres in the Hydrologically Connected Area (HCA) along Salt Creek and the Platte River.</p> <p>In 2009, LPNNRD expanded its Ground Water Elevation Level network from 144 to 162.</p>

			hydrologically connected areas to improve quality.	<p>In 2010, LPSNRD began certification of irrigated acres in the remainder of the District, and continued efforts toward having water meters installed on all wells pumping more than 50 gallons per minute.</p> <p>In 2011, LPSNRD completed certification of irrigated acres outside the HCA. Continued cost-share program for installation of meters on wells and developed program for reporting usage.</p> <p>In 2014, P-MRNRD continued to collect groundwater level measurements at 22 locations and began the process of mapping and certifying irrigation acres in the IMP area.</p>
<p><u>Goal 1, Objective 1.1:</u> Develop a better understanding of basin-wide inflows/outflows to enable development of a more comprehensive water inventory.</p> <p><u>LPRDCP Benefit:</u> Study will investigate surface/groundwater interaction to inform spatial variability of reach losses and gains on a reach-by-reach basis. Thereby directly supporting this goal by refining the spatial understanding of inflow/outflows including conveyance losses as well as refining the hydrologically connected area.</p> <p>The study will evaluate temporal trends in RGL (monthly, seasonal, annual, etc.) and potential correlations (wet/dry year, river stage, etc.) to better understand impacts on lower Platte River streamflows.</p>	<p><u>Monitoring & Studies, II (e) (ii):</u> Cooperate with other state and federal agencies to monitor the impacts of changes in the Lower Platte River Basin on water supplies and consumptions, changes due to climate cycles, changes in stream flows, and changes due to other factors.</p> <p><u>Monitoring & Studies, II (e) (ii):</u> Studies will or may include refinements of the hydrologically connected ground water and surface water areas, aquifer characteristics, effectiveness of various conservation best management practices, the impacts of climate cycles, the effectiveness and efficiency of water conveyance via streams from upstream sources, development of protocols for refining estimates of consumptive water use and understanding instream flow needs</p>	<p><u>Goal 2, Objective 2.2:</u> Track variability in water use and supply by regularly evaluating data from existing surface water, groundwater, and weather monitoring networks</p> <p><u>Goal 2, Objective 2.2:</u> Develop or maintain a comprehensive spatial/tabular water inventory database that includes measurements or estimates of components of the water budget.</p>	<p><u>Goal 1, Objective 1.2.1:</u> Continue surface water and groundwater monitoring across the District.</p> <p><u>Goal 1, Objective 1.2.2:</u> Use surface water and groundwater measurements and models to estimate District inflows and outflows.</p> <p><u>Goal 1, Objective 1.2.3:</u> Identify data gaps in monitoring (for example, precipitation, stream flow, and groundwater level networks, etc.).</p>	<p>2013 - The LPRBC was formed in April, 2013 when seven NRDs in the Lower Platte Basin (including Lower Platte South) and NDNR entered into a five-year interlocal cooperative agreement to form the coalition for the purpose of pursuing and discussing water management in the Basin.</p> <p>2014 - In 2014, the NDNR began development of a numerical groundwater model for Lower Platte and Missouri Tributaries (LPMT) basins. When complete, the model for the LPMT Basin will be used as a tool for the fully appropriated basins annual report, as well as for assessing impacts of emerging and historic surface water and groundwater developments in the region - LPSNRD</p> <p>2015 – Completed an amendment to the IMP including investigating processes to collect and record water use data from all municipalities and rural water Districts and from all major non-municipal industrial water users, investigating procedures to track depletions and gains to streamflows resulting from new, retired or other changes to water uses within the District as well as developed an Emergency Response/Drought Mitigation Plan, which included holding a Drought Tournament, participated in by 30 stakeholders. - LPSNRD</p>
<p><u>Goal 1, Objective 1.4:</u> Refine the extent of hydrologically connected ground and surface waters in the Lower Platte Basin.</p> <p><u>LPRCDP Benefit:</u> Study will investigate surface/groundwater interaction to inform spatial variability of reach losses and gains on a reach-by-reach basis. Thereby directly supporting this goal by</p>	<p><u>Monitoring & Studies, II (f) (ii):</u> Studies will or may include refinements of the hydrologically connected ground water and surface water areas, aquifer characteristics, effectiveness of various conservation best management practices, the impacts of climate cycles, the effectiveness and efficiency of water conveyance via streams from upstream</p>		<p><u>Goal 1, Objective 1.1.4:</u> Use the best available data and methods to refine delineations of hydrologically connected surface and groundwater.</p>	<p>2006—LPNNRD, LPSNRD, and P-MRNRD Joined with the Lewis & Clark NRD, Lower Elkhorn NRD, Lower Nemaha NRD, NDNR, USGS, and UNL CSD to initiate the Eastern Nebraska Water Resources Assessment (ENWRA), with the goal of developing a geologic framework and water budget for the glaciated area of eastern Nebraska.</p>

<p>refining the spatial understanding of inflow/outflows including conveyance losses as well as refining the hydrologically connected area.</p>	<p>sources, development of protocols for refining estimates of consumptive water use and understanding instream flow needs.</p>		<p><u>Goal 5, Objective 5.3.2:</u> Evaluate whether ENWRA data can improve modeling of hydrologically connected areas on a large scale.</p>	<p>2007 - In addition to participating in ENWRA, the LPNRD participated in studies including the Elkhorn Loup Model (ELM) and Platte Valley Ground Water Model, and the Subarea Delineation Study. Funding from Integrated Water Management Plan Program Fund (IWMPPF) and the Environmental Trust made these studies possible. Key research agencies were the United States Geological Survey and the Conservation and Survey Division of the University.</p> <p>In 2008, LPNRD revised its rules and regulations to take into account glaciated portions of the District, effects of the recent drought and new information from the Subarea Delineation Study.</p> <p>2010— Completed a modeling project with the University of Nebraska along Lower Salt Creek funded by the Integrated Water Management Plan Program (IWMPP), designed to document ground and surface water interconnection and test various scenarios to evaluate the District's current ground water triggers in the Lower Salt Creek Ground Water Reservoir. – LPSNRD</p> <p>2011 – Completed Ashland area pilot groundwater flow model. – P-MRNRD</p> <p>2014 - NDNR and LPSNRD entered into an interlocal cooperative agreement with ENWRA to support a hydrologic framework study which involves using a helicopter based-geophysical remote sensing tool termed Airborne Electromagnetic Survey (AEM), to determine aquifer locations and thicknesses. LPSNRD additionally participated in data sharing of LPSNRD's earlier data from the 2013 AEM flight over the northwestern portion of the District.</p>
<p><u>Goal 2:</u> Implement a water management plan for the Lower Platte Basin that maintains a balance between current and future water supplies and demands.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements. This directly supports the Lower Platte Basin in its effort to maintain a balance between current and future water supplies by understanding the relationship between streamflows and well field operational constraints and allow the Lower Platte Basin to make management decisions to support this streamflow threshold.</p>	<p><u>Goal 2:</u> Ensure a sustainable water supply is available in the amounts and location of the demand through management actions to meet the District's short and long term needs.</p> <p><u>Goal 3:</u> Encourage all water users to minimize water use while optimizing benefits.</p>		<p><u>Goal 3, Objective 3.1.1:</u> Where feasible, promote practices focused on reuse of rain, storm, waste, industrial, or irrigation water.</p> <p><u>Goal 3, Objective 3.2.1:</u> As needed, implement cost-share programs for irrigation conservation, such as flow metering and sub-surface drip irrigation systems.</p> <p><u>Goal 3, Objective 3.2.2:</u> Use new and existing studies and data to establish specific guidelines for sustainable development of major and minor, and pocket aquifers.</p> <p><u>Goal 3, Objective 3.2.3:</u> Collaborate with municipalities and industrial users on development or</p>	<p>In 1994, P-MRNRD revised their GWMP to include triggers for groundwater quantity and groundwater quality.</p> <p>In 1995, LPNRD adopted rules and regulations to address both ground water quality and quantity.</p> <p>In 2007, LPNRD designates a Level One GWMA and declares temporary stay on irrigated acres or high capacity wells in the Uplands</p> <p>In 2009, P-MRNRD imposed a stay on new irrigation wells and expansion of groundwater</p>

			refinement of water conservation plans, such as water reuse.	irrigated acres. In 2009, LPNNRD contracted with the University of Nebraska to assist producers with installation of Water Mark Sensors to maximize irrigation efficiency.
<p><u>Goal 2, Objective 1:</u> Collaborate with state and local governments to identify opportunities to augment water supplies within the Lower Platte Basin and, if necessary, identify opportunities to supplement with imported water from outside the Lower Platte Basin.</p> <p><u>LPRDCP Benefit:</u> Analyzing predicting streamflows and aquifer storage productivity will inform potential mitigation and response actions in the Lower Platte Basin. Additionally, analyzing the surface/groundwater interaction on a reach-by-reach basis will assist the Lower Platte Basin in refining locations where potential mitigation and response projects would be most beneficial.</p>	<p><u>Goal 2, Objective 2.3:</u> Evaluate the potential benefits of regional supply and distribution systems and, where warranted, facilitate discussions with impacted entities.</p>	<p><u>Goal 1, Objective 1.3:</u> Evaluate the potential for conjunctive management programs or project opportunities to protect existing users or mitigate new uses such as water rights leases, interference agreements, augmentation projects, conjunctive use management, or use retirement</p>	<p><u>Goal 3, Objective 3.1.3:</u> Cooperate with other entities to identify, evaluate and prioritize locations and types of feasible conjunctive water management water use projects.</p> <p><u>Goal 5, Objective 5.2.2:</u> Evaluate benefits and limitations of potential conjunctive management projects such as water rights leases, interference agreements, augmentation projects, conjunctive use management, or water use retirement.</p>	<p>2014 - The LPRBC began the process of identifying a common methodology and accounting system that would provide a guideline for the member NRDs for possible future water banks to support water management activities.</p>
<p><u>Goal 2, Objective 2:</u> Monitor instream flow needs in the Lower Platte Basin to foster an understanding of the existing appropriation priorities and locations, and provide a basis for evaluating impacts of existing and future uses.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements for mitigation and drought response. This directly supports the goal of understanding instream flow needs in the Lower Platte Basin.</p>	<p><u>Goal 3, Objective 3.7:</u> As necessary, work with other agencies to evaluate the instream flow needs in the District.</p>	<p><u>Goal 4, Objective 4.5:</u> Work with the appropriate agencies to identify streamflow necessary to protect and maintain public water supply, fish and wildlife, and public recreation.</p>	<p><u>Goal 2, Objective 2.1.6:</u> Evaluate current water demands and project future water demands for environmental concerns and instream flow needs both within the District and for downstream requirements.</p> <p><u>Goal 5, Objective 5.4.2:</u> Coordinate to review and assess benefits and limitations of protecting Lower Platte River flows through existing instream flow permits.</p>	
<p><u>Goal 2, Objective 3:</u> Evaluate options for Basin wide water banking methodologies.</p> <p><u>LPRDCP Benefit:</u> Analyzing predicting streamflows and aquifer storage productivity will inform potential mitigation and response actions in the Lower Platte Basin. Additionally, analyzing the surface/groundwater interaction on a reach-by-reach basis will assist the Lower Platte Basin in refining locations where potential mitigation and response projects would be most beneficial. Storing water in reservoirs or aquifers is a form of water banking and therefore identifying potential mitigation and response areas directly supports this</p>		<p><u>Goal 4, Objective 4.4:</u> Coordinate with other entities to identify and study opportunities for the development of transfers, variances, water banking, and other actions of water management to potentially be used across the entire Platte River Basin.</p>	<p><u>Goal 3, Objective 3.1.2:</u> Develop a District-wide water banking program to minimize water conflicts between different water users and sources.</p>	<p>It is anticipated that a regional water banking project will be developed by the Lower Platte River Basin Coalition. This will likely include potential for additional surface water storage within the District to bank future water supplies.</p>

goal.				
<p><u>Goal 3:</u> Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements for drought response. This allows the Lower Platte Basin to make management decisions to support this streamflow threshold.</p> <p>By understanding surface/groundwater interaction on a more refined spatial scale allows the Lower Platte Basin to make management decisions as to the quantity and location of additional development.</p>	<p><u>Goal 2, Objective 2.1:</u> Ensure to the extent possible, that wells are located and designed to reflect the ground water geology and water supplies in accordance with aquifer characteristics.</p>	<p><u>Goal 1:</u> Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development</p>	<p><u>Goal 3, Objective 3.1:</u> Update policies, practices, and/or programs to maintain and improve water supply and water quality as it affects supply.</p>	
<p><u>Goal 3, Objective 1:</u> Identify available water storage opportunities throughout the Lower Platte Basin.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements for drought response. This allows the Lower Platte Basin to make management decisions to support this streamflow threshold.</p> <p>By understanding surface/groundwater interaction on a more refined spatial scale allows the Lower Platte Basin to make management decisions as to the quantity and location of additional development.</p>	<p><u>Goal 2, Objective 2.2:</u> Research and implement, as needed, additional storage opportunities throughout the District.</p>	<p><u>Goal 4, Action Item 4.2.1:</u> Review and analyze existing studies of water storage opportunities in the Lower Platte River Basin and conduct additional multi-agency studies as appropriate.</p>	<p><u>Goal 5, Objective 5.2.1:</u> Review and analyze existing studies of water storage opportunities in the Lower Platte River Basin and conduct multi-agency studies as appropriate.</p>	

This plan will provide benefits for these goals through the implementation of additional data collection efforts, the development of forecasting and water conveyance tools, coordination between the Consortium members to identify proactive drought mitigation measures for sustainable water uses during dry periods, and the development of an operational framework to ensure continued protection of existing water users. This synergism allows the Consortium to leverage resources, mesh common goals, and further protect and enhance the sustainability of water resources in the Lower Platte River.

3. Contributes to water sustainability goals by increasing aquifer recharge, reducing aquifer depletion, or increasing streamflow;

List the following information that is applicable:

- The location, area and amount of recharge;
- The location, area and amount that aquifer depletion will be reduced;
- The reach, amount and timing of increased streamflow. Describe how the project will meet these objectives and what the source of the water is;
- Provide a detailed listing of cross basin benefits, if any.

While recharge projects may be considered as a part of this project, the specific location, area, and amount of recharge are factors that would be developed as part of this project. Many locations within the project area could be considered for recharge opportunities, and the area and amount of recharge would likewise be the subject of further investigations under the project. Aquifer recharge along the stream near the municipal well fields will be an important consideration of the project studies.

As with recharge, reductions in aquifer depletions may be considered as part of this project, but the specific location, area, and amount of reduction are factors that would be developed as part of this project.

As this project includes an emphasis on benefiting water supply reliability for municipal drinking water supplies, the reach of the Platte River from the Lincoln wellfield near Ashland to the segment adjacent to the MUD wellfields would be a target area for increased streamflow. The amount and timing of these flow increases would be developed as part of the project, but would include the summer months when high water demands and low river flows are more frequent. Similarly, the ways in which the project would provide for increased flows, along with the potential sources of water, would also be developed as part of the project tasks.

Cross basin benefits would include a reduction in potential conflicts related to competing uses of water. One of the mitigation actions available to Omaha/Lincoln during periods of drought is to exercise a priority call on the Lower Platte River. This would impact hundreds of upstream junior irrigation appropriations, and would likely occur during peak irrigation demand periods. This disruption to irrigation supplies would leave many of those junior irrigation uses vulnerable to crop losses. Streamflows that support threatened and endangered species also can become diminished during these drought periods and many of the mitigation and response actions that may be identified through this planning effort would likely improve drought habitat for these species. The effort proposed by the Consortium further minimizes the potential for conflict.

While the details of specific actions will be developed later, this project includes a clear goal to ensure that mitigation and responsive actions are in place to provide adequate aquifer recharge to municipal well fields in the Lower Platte River Basin to meet operational demands during droughts. The proactive planning will work to identify opportunities for upstream canal recharge, storage, and conjunctive management that can support these goals. Sources of water will include the Lower Platte River and locations upstream that are deemed reliable based on forecasting and assessment of conveyance to the well-fields. This recharge may also enhance water supplies during non-drought periods and support other beneficial uses of water such as irrigation, hydropower, and instream flow.

4. Contributes to multiple water supply goals, including, but not limited to, flood control, agricultural use, municipal and industrial uses, recreational benefits, wildlife habitat, conservation of water resources, and preservation of water resources;
 - [List the goals the project provides benefits.](#)
 - [Describe how the project will provide these benefits](#)
 - [Provide a long range forecast of the expected benefits this project could have versus continuing on current path.](#)

The primary goal of this project is to provide a proactive operational framework that identifies appropriate mitigation and responsive actions to minimize the occurrence of low-flow conditions in the areas of municipal well fields of the Lower Platte River Basin. Outcomes from the planning effort will be targeted at improving the reliability of water supplies through the lower reaches of the Platte River so that streamflows can remain above critical thresholds and existing municipal wellfield structures can remain fully operational through drought periods. Benefits include greater drinking water supply reliability, and potentially reduced water treatment and administrative costs, with likely secondary benefits to recreational and environmental flows.

This project will seek to accomplish this goal, and the associated benefits, through the development of a drought contingency plan that outlines the critical vulnerabilities and risks, creates improved forecasting and water conveyance tools, identifies mitigation and responsive actions to ease drought conditions, and provides an operation framework and process for plan updates that will provide the best means to reduce significant drought risks.

While presenting a long range forecast of the expected benefits is difficult, given the uncertainties of hydrologic conditions, population growth, and other important factors, there are several identifiable benefits of implementing project actions versus following the status quo. Key water supply risks are associated with municipal water supplies for the Omaha/Lincoln wellfields located adjacent to the Lower Platte River. For example, during periods of prolonged low streamflow in the Lower Platte River, the projected water demand for Lincoln could exceed the 60- to 90-day pumping capacity as early as 2018, depending on the magnitude and duration of a drought. In 2018, a supply deficit would be anticipated to occur during extreme drought conditions that correlate to the 50- to 100-year reoccurrence interval event. By 2025, a supply deficit would be anticipated to occur during more frequent drought events, such as the 20-year reoccurrence interval event.

In addition to municipal water supply risks associated with following the status quo, one of the mitigation actions available to Omaha/Lincoln during periods of drought is to exercise a priority call on the Lower Platte River. This would impact hundreds of upstream junior irrigation appropriations and likely would occur during peak irrigation demand periods. This disruption to irrigation supplies would leave many of those junior irrigation uses vulnerable to crop losses. Streamflows that support threatened and endangered species could also become vulnerable during these drought periods. In contrast to continuing along the current path, many of the mitigation and response actions that may be identified through this planning effort would likely improve drought habitat for these species, while also lessening the burden on junior irrigators.

The Consortium will provide critical coordination between state and local water managers while also assisting with public outreach as the plan is developed and implemented. By taking a multi-agency regional approach to drought contingency planning, the Consortium will be able to enhance water supply reliability, leverage existing infrastructure investments, and improve the area's resiliency to future droughts. The focus of the Consortium and this project is to increase the reliability of the water supply to meet current uses, not to develop supplies for expanded uses.

5. Maximizes the beneficial use of Nebraska's water resources for the benefit of the state's residents;

- Describe how the project will maximize the increased beneficial use of Nebraska's water resources.
- Describe the beneficial uses that will be reduced, if any.
- Describe how the project provides a beneficial impact to the state's residents.

This project will in part work to identify the most effective mitigation and responsive actions that align with the goals of the Consortium to stabilize and ensure water supply resiliency through droughts and maximize the water supplies available within this portion of the basin. These drought mitigation efforts will directly benefit water users in the Lower Platte River Basin, and will maximize the beneficial use of water for municipal demands. In addition to municipal water supply risks, one of the mitigation actions available to Omaha/Lincoln during periods of drought is to exercise a priority call on the Lower Platte River. This would impact hundreds of upstream junior irrigation appropriations and likely would occur during peak irrigation demand periods. This disruption to irrigation supplies would leave many of those junior irrigation uses vulnerable to crop losses. Streamflows that support threatened and endangered species also can become vulnerable during these drought periods. In contrast to continuing along the current path, many of the mitigation and response actions that may be identified through this planning effort would likely improve drought habitat for these species, while also lessening the burden on junior irrigators.

No specific reductions in beneficial uses have been identified as part of this project. It is possible that voluntary actions could be used to shift beneficial uses from one form to another, but these actions would only be determined as part of the project tasks, in consultation with stakeholders, in an open and transparent process.

The project would have clear beneficial impacts to the State's residents, due in part to the geographic location included under the project. The Lower Platte River is home to approximately sixty-percent of Nebraska's population, thousands of businesses and industries, recreation, and threatened and endangered species. This diverse group of water needs would likely all benefit from proactive measures taken in advance of future intense and/or prolonged droughts.

6. Is cost-effective;

- List the estimated construction costs, O/M costs, land and water acquisition costs, alternative options, value of benefits gained.
- Compare these costs to other methods of achieving the same benefits.

- List the costs of the project.
- Describe how it is a cost effective project or alternative.

The total estimated project cost is \$551,000. No construction costs or operating and maintenance (O/M) costs are included under the project. Land and water acquisition costs are also not anticipated, as project efforts will focus first on developing a mitigation plan for drought response. The costs of the project will cover the tasks identified in Table 7.

TABLE 7. TASKS AND ACTIONS	
Task	Actions
Documentation of Existing Drought Information	Review and synthesize existing plans Identify tools and resources that will support the plan
Development of a Drought Monitoring Process	Implement and monitor newly established data collection sites and develop regional drought forecasting and water conveyance tools targeted at vulnerable operations
Conduct a Vulnerability Assessment	Identify drought frequencies, magnitude, and severity Identify vulnerable water use sectors key factors that cause them to be vulnerable Assess potential future resource needs and the increased vulnerability they may present
Identify Drought Mitigation Measures	Assess the existing ability and current capacity to reduce risk to critical resources Identify mitigation goals and priorities Identify a strategy for prioritizing mitigation measures
Select Responsive Actions	Assess action alternatives Develop drought stage specific implementation schedule
Refinement of Administrative Framework	Identify responsibilities of parties in implementation of the plan Identify triggers, actions, and communications that will be undertaken with plan implementation

These funds would be used to develop a drought response framework. If the study is not completed, the next available option is for the project partners to undertake their own water supply planning efforts. These programs can be costly on their own, and foregoes the economies of scale which the partners hope to achieve by working together. The City of Lincoln, for example, has identified its water supply deficiencies and is

actively working on addressing their short comings. The plan calls for significant investment in well field development. Partnering together with other members of the Consortium, the City of Lincoln may be able to forgo some of those costs.

The project will develop forecasting and conveyance monitoring tools that support the timely implementation of mitigation and responsive actions which could provide far reaching future benefits for Nebraska including increases in recreation along the Lower Platte River; financial savings to the City of Lincoln; and water supply benefits for agricultural, municipal, and industrial users. Any actions identified as part of this study could help with environmental objectives along the Platte River for threatened and endangered species during times of drought.

To further increase the value of the study and its outcomes, the study makes the best of use of the funds requested in this grant application as well as from the project partners and the United States Bureau of Reclamation. With the use of these funding sources the project will provide significant benefit for a minimal cost as part of water supply planning in the Platte River Basin.

7. Helps the state meet its obligations under interstate compacts, decrees, or other state contracts or agreements or federal law;
 - Identify the interstate compact, decree, state contract or agreement or federal law.
 - Describe how the project will help the state meet its obligations under compacts, decrees, state contracts or agreements or federal law.
 - Describe current deficiencies and document how the project will reduce deficiencies.

The State of Nebraska is not currently party to an interstate agreement for the Lower Platte River; however, the Central Platte River is subject to the Platte River Recovery and Implementation Program (PRRIP).

PRRIP's goals are targeted at the recovery of three endangered species and include monitoring of activities related to their impacts on the Lower Platte River and pallid sturgeon habitat. Additionally, the Nebraska Game and Parks Commission holds state instream flow permits in the Lower Platte River. The goals of this project align with providing improved low-flow conditions that could provide benefits to the endangered species in the Lower Platte River Basin. These benefits may help the State meet certain objectives under the PRRIP Program.

Currently, low flow conditions occur on the Lower Platte River periodically, which may have negative impacts on the threatened and endangered

species in the area, and make it more difficult for the State to meet its objectives. Under the project, the severity and duration of these low flow events could be minimized, which could directly reduce any deficiencies the State might otherwise face in addressing requirements related to endangered species.

8. Reduces threats to property damage or protects critical infrastructure that consists of the physical assets, systems, and networks vital to the state or the United States such that their incapacitation would have a debilitating effect on public security or public health and safety;
 - Identify the property that the project is intended to reduce threats to.
 - Describe and quantify reductions in threats to critical infrastructure provided by the project and how the infrastructure is vital to Nebraska or the United States.
 - Identify the potential value of cost savings resulting from completion of the project.
 - Describe the benefits for public security, public health and safety.

This project is intended to reduce threats to the drinking water supplies, and associated water delivery infrastructure, for the municipalities located in the Lower Platte River Basin, including those serviced by LWS and MUD (including Lincoln and Omaha).

The main threats to critical infrastructure are associated with municipal water supplies for wellfields located adjacent to the Lower Platte River. As an example, Lincoln's water supply comes from wells where the ground water is under the direct influence of surface water. This makes reliable water supplies during drought periods imperative toward ensuring existing permitted operations can continue.

Given that the Lower Platte River is home to approximately sixty-percent of Nebraska's population, thousands of businesses and industries, recreation, and endangered species, the infrastructure associated with the drinking water supplies, and other water uses in the area, are critical to the State of Nebraska. Without proactive drought planning, such as the elements included as part of this project, reliable municipal water supplies could be jeopardized.

In addition to municipal water supply risks, one of the mitigation actions available to Omaha/Lincoln during periods of drought is to exercise a priority call on the Lower Platte River. This would impact hundreds of upstream junior irrigation appropriations and likely would occur during peak irrigation demand periods. This disruption to irrigation supplies would leave many of those junior irrigation uses vulnerable to crop losses. Streamflows that support threatened and endangered species also can

become vulnerable during these drought periods. In contrast to continuing along the current path, many of the mitigation and response actions that may be identified through this planning effort would likely improve drought habitat for these species, while also lessening the burden on junior irrigators.

The benefits of creating a more drought resilient water supply regime in the Lower Platte River provide direct and secondary benefits to a variety of water users, including municipal demands, irrigation demands and instream flows as well as support for enhanced recreational opportunities. Additionally, the mitigation measures and responsive actions identified through this project may extend the viability of the existing infrastructure for municipal well fields.

The Consortium members participate directly and/or indirectly to support efforts aimed at ensuring reliable water supplies for approximately sixty percent of Nebraska's population, thousands of businesses and industries, and environmental and recreational opportunities that rely on water supplies from the Lower Platte River Basin. The Consortium's efforts will be aimed at creating the best collective outcomes for the constituents that they serve. FEMA has suggested that mitigation actions, taking steps ahead of time to prevent or lessen know impacts from a natural disaster such as drought, can save \$4 for every \$1 invested.

9. Improves water quality;

- Describe what quality issue(s) is/are to be improved.
- Describe and quantify how the project improves water quality, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.
- Describe other possible solutions to remedy this issue.
- Describe the history of the water quality issue including previous attempts to remedy the problem and the results obtained.

Water quality concerns have developed through past droughts and in many locations across Nebraska, and the actions taken under this project would directly address several of these concerns. Specific concerns related to low-flow conditions and water quality issues that result within the Lower Platte River have revolved around iron, manganese, chloride and arsenic levels in the water supplies.

This project will improve water quality by identifying mitigation and responsive actions that increase water supplies through the well field area (which serves as the primary target area for this project). This improved water supply during droughts will keep well fields fully operational and minimize the occurrences of conditions that have previously existed

(including the oxidation of aquifer materials and decreased dilution of Salt Creek inflows to the Omaha south well field) when water quality concerns have arisen. Multiple residential, industrial, agricultural, and recreational water users would benefit from these mitigation and responsive actions through reduced need for regulatory measures and improved higher quality water supplies, including the approximately 272,996³ and 600,000⁴ people serviced by LWS and MUD, respectively.

Other possible solution to remedy the issue would likely involve significant infrastructure and/or treatment costs, along with the potential for increased regulatory actions. Specific remedies that have been considered to provide water supplies include a pipeline to Missouri River and secondary treatment.

In terms of the history of the water quality issue, water service providers have been involved in regular upgrades to water treatment processes for drinking water as new regulatory guidelines were promulgated and new technologies made available. While extensive additional treatment has not been required to date, concerns clearly exist related to prolonged drought conditions and the effects they may have on well field water quality and the need for increased secondary treatment options.

Any efforts under this project to increase minimum streamflows in low-flow conditions to benefit well field operations will likely create improvements to the environmental and ecological conditions for the respective endangered species. Increased flows in the Lower Platte River will enhance wildlife, and improve water quality during drought conditions for habitat preservation. In addition, increased water quality in the Lower Platte Basin will lead to a greater recreational value for users of the river.

10. Has utilized all available funding resources of the local jurisdiction to support the program, project, or activity;

- Identify the local jurisdiction that supports the project.
- List current property tax levy, valuations, or other sources of revenue for the sponsoring entity.
- List other funding sources for the project.

The local jurisdiction that supports the project is the Lower Platte South NRD, working in partnership with the Nebraska Department of Natural Resources, United States Bureau of Reclamation (BOR), and the broader Consortium. The LPSNRD has and will continue to support the proposed project through their tax levy authority. The current tax levy for the

³ Source: <https://www.lincoln.ne.gov/city/pworks/water/pdf/water-quality-report.pdf?2015>

⁴ Source: <http://www.mudomaha.com/about-us>

LPSNRD is 3.4472¢ per \$100 valuation. The LPSNRD has established within its draft FY 17 and FY 18 budgets a commitment to support this project.

The cost of the entire project is \$551,000. The BOR will provide \$200,000 through its WaterSMART Drought Contingency Planning Grants. The Department of Natural Resources will provide \$26,000 from funds not included in the Water Sustainability Fund request. The remaining project costs are expected to total \$325,000. The non-DNR Consortium members will provide 40% of this total (\$130,000), with the Water Sustainability Fund providing the other 60% (\$195,000). There are no other sources of funding for the project. A copy of the budget is available in Attachment A – Project Budget.

11. Has a local jurisdiction with plans in place that support sustainable water use;

- List the local jurisdiction and identify specific plans being referenced that are in place to support sustainable water use.
- Provide the history of work completed to achieve the goals of these plans.
- List which goals and objectives this project will provide benefits for and how this project supports or contributes to those plans.
- Describe and quantify how the project supports sustainable water use, what is the target area, what is the population or acreage receiving benefits, what is the usage of the water: residential, industrial, agriculture or recreational.
- List all stakeholders involved in project.
- Identify who benefits from this project.

The LPSNRD and the other Consortium members have local jurisdiction , and individually developed multiple plans aimed at supporting sustainable water use (Table 8).

TABLE 8. PREVIOUS WATER PLANNING AND DROUGHT PLANNING EFFORTS OF CONSORTIUM MEMBERS.			
Name of Plan	Most Recent Review/Update	Frequency of Reviews	Website Link
State of Nebraska Drought Mitigation and Response Plan	2000	Annual Meeting	http://www.carc.nebraska.gov/docs/NebraskaDrought.pdf
Lower Platte South Natural Resources District Integrated Management Plan	2015	Annual Review	http://www.lpsnrd.org/Programs/gwIntMgtPlan.pdf
Lower Platte North Natural Resources District Integrated Management Plan	2016	Annual Review	Not Yet Published

Papio-Missouri River Natural Resources District Integrated Management Plan	2015	Annual Review	http://dnr.ne.gov/media/iwm/pdf/missouritribs/PMRNRD_IMP_20140801.pdf
Lower Platte Basin-Wide Plan	2016	Annual Review	Not Yet Published
Lincoln Water System Facilities Master Plan	2014	Periodic	https://www.lincoln.ne.gov/city/pworks/water/pdf/facilities-master-plan.pdf
Metropolitan Utilities District Omaha Water Conservation and Alert Plan	2002	Periodic	http://www.awwaneb.org/pdfs/water.restriction.plans.pdf
Lower Platte South Natural Resources District Update of Local Hazard Mitigation Plan	2014	Periodic	http://www.lpsnrd.org/Publications/HazardMit/Sections/01IntroAndSections1-6.pdf
Lower Platte South Natural Resources District Water Balance Study	2012	Periodic	http://www.lpsnrd.org/Programs/WaterBalanceStudy.pdf
Lower Platte South Natural Resources District Ground Water Management Plan	1996	Periodic	http://www.lpsnrd.org/Programs/gwmpsummary.pdf
Lower Platte South Natural Resources District Water for the Future: Stakeholder Perspectives	2011	Periodic	http://www.lpsnrd.org/Programs/WaterfortheFuture.pdf
Lower Platte North Natural Resources District Long Range Plan	2016	Annual Review	http://www.lpnrd.org/pdfs/pubs/longrange/longrange_2016.pdf
Lower Platte North Natural Resources District Hazard Mitigation Plan	2010	Periodic	http://www.lpnrd.org/pdfs/pubs/hazardmitigation/hazardmitigation_fullplan.pdf
Lower Platte North Natural Resources District Multi-Jurisdictional Hazard Mitigation Plan	2015	Periodic	Contact NRD for copy of the Plan – Not available online
Papio-Missouri River Natural Resources District Groundwater Management Plan	1994	Periodic	http://www.papionrd.org/wp-content/uploads/Groundwater-Management-Plan-1994.pdf
Papio-Missouri River Natural Resources District Multi-Jurisdictional Hazard Mitigation Plan	2016	Periodic	http://jeo.com/wp-content/uploads/2016/02/1_PapioNRD-2016-HMP-Regional-Plan.pdf
Papio-Missouri River Natural Resources District Master Plan	2010	Annual Review	http://www.papionrd.org/wp-content/uploads/MasterPlan.pdf
Papio-Missouri River Natural Resources District Long Range Implementation Plan	2015	Annual Review	http://www.papionrd.org/wp-content/uploads/LRIP2015.pdf

The Consortium members have completed an extensive amount of work to achieve the goals of these plans, including the development and implementation of rules and regulations concerning groundwater quality and quantity, extensive monitoring of the status of groundwater quality and

quantity, and extensive implementation of information and educational programs, development of data and models, and water supply alternatives.

There are several goals and objectives that are related to the project benefits. Examples of these IMP goals include the following:

- Encourage all water users to minimize water use while optimizing benefits.
- Ensure a sustainable water supply is available in the amounts and location of the demands through management actions to meet the District's short and long term needs.
- Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.

The project will support and contribute to these goals by developing drought mitigation planning procedures that will improve the reliability and sustainability of water supplies in the Lower Platte Basin.

Additionally, MUD and LWS have each developed plans that consider short term and long term facility improvements and raw water supply alternatives to meet projected water demands due to both population growth and drought scenarios.

Table 9 shows a summary of the goals and objectives for the Lower Platte South NRD, Lower Platte North NRD, Pappio-Missouri River NRD in comparison to the draft Lower Platte River Basin-Wide Plan goals and objectives as well as lists action items by NRD in support of these identified goals and objectives.

Table 9. Relevant Basin Plan, GMP, and IMP Goals and Objectives (Including Complete Action Items to Date) that Benefit from the Lower Platte River Drought Contingency Plan				
LPRBC Draft Basin Plan Goal http://dnr.nebraska.gov/LPRBC	LPSNRD IMP Goals and Objectives http://www.lpsnrd.org/Programs/gwIntMgtPlan.pdf	P-MRNRD IMP Goals and Objective http://dnr.ne.gov/media/wm/pdf/missouritribs/PMNRN_RD_IMP_20140801.pdf	LPNNRD IMP Goals and Objectives (Draft June 1, 2016) <i>Not Yet Published</i>	Action Items
<p><u>Goal 1:</u> Develop and maintain a water supply and use inventory based on the best available data and analysis.</p> <p><u>LPRDCP Benefit:</u> Supports the quantification of supplies and uses in the lower Platte River particularly during drought conditions and also provides a means to track and forecast supplies</p>		<p><u>Goal 2:</u> Develop and maintain a water supply and use inventory based on the best available data and analysis.</p>		
<p><u>Goal 1, Objective 1:</u> Develop and maintain a comprehensive inventory of the location and source of the Basin's current and future water supplies, water uses and outflows.</p> <p><u>LPRDCP Benefit:</u> Supports the quantification of supplies and uses in the lower Platte River particularly during drought conditions and also provides a means to track and forecast supplies.</p>	<p><u>Goal 1:</u> Ensure the District has sufficient data to enable the achievement of a water supply that is in balance with current and future water demands in the District.</p>	<p><u>Goal 2, Objective 2.1:</u> Develop and implement a data gathering and monitoring plan that provides relevant scientific information to support NDNR's annual evaluation.</p>	<p><u>Goal 1, Objective 1.1.1:</u> Develop a database of current groundwater and surface water supplies.</p>	In 1978, P-MRNRD initiated a static water level monitoring program in the District.
			<p><u>Goal 1, Objective 1.1.2:</u> Use the best available science, such as remote sensing technologies, etc., and data to identify District-wide aquifer distribution, including the distribution of bedrock and perched and pocket aquifers.</p>	1985 - LPNNRD adopted its first Ground Water Management Plan and instituted a Ground Water Energy Level (GWEL) network in 1986 with 66 wells
			<p><u>Goal 1, Objective 1.1.3:</u> Develop a database of current water quality problem areas, which can influence a clean and useable water supply.</p>	In 1995, LPNNRD expanded its GWEL network to 118 wells.
			<p><u>Goal 2, Objective 2.1.1:</u> Develop standard protocols to ensure municipal water supply reports and forecasts are integrated into a District-wide database.</p>	In 1997, LPNNRD started a district wide water well permit program for producers.
			<p><u>Goal 2, Objective 2.1.2:</u> Evaluate how population growth and how potential water reuse could influence per capita water use, to estimate future water demand.</p>	For all wells post Oct. 1, 2005, LPNNRD requires a flow meter or time totalizer on wells that pump over 50 gallons per minute.
			<p><u>Goal 2, Objective 2.1.3:</u> Continue certification of irrigated acres, well metering, and reporting requirements to track current water demands.</p>	In 2006, LPNNRD expanded the GWEL network to 121 wells and installed 18 monitoring wells with continuous recorders placed in sensitive aquifers.
			<p><u>Goal 2, Objective 2.1.4:</u> Evaluate historical and future land use/cover changes, such as agricultural to urban or adoption of conservation practices, and the effects on water demand.</p>	In 2008, LPSNRD adopted changes to the District's Ground Water Rules and Regulations involving permitting of wells, installation of water well meters, and ground water quality management.
			<p><u>Goal 2, Objective 2.2.1:</u> Estimate effects on demands due to environmental mitigation activities that utilize large quantities of water (for example, industrial clean-up operations and Former Ordnance Plant cleanup).</p>	In 2009, LPSNRD began certification of historically ground water irrigated acres in the Hydrologically Connected Area (HCA) along Salt Creek and the Platte River.

			<u>Goal 2, Objective 2.2.2:</u> Estimate effects on demands in scenarios where municipal wells are moved to hydrologically connected areas to improve quality.	<p>In 2009, LPNNRD expanded its Ground Water Elevation Level network from 144 to 162.</p> <p>In 2010, LPSNRD began certification of irrigated acres in the remainder of the District, and continued efforts toward having water meters installed on all wells pumping more than 50 gallons per minute.</p> <p>In 2011, LPSNRD completed certification of irrigated acres outside the HCA. Continued cost-share program for installation of meters on wells and developed program for reporting usage.</p> <p>In 2014, P-MRNRD continued to collect groundwater level measurements at 22 locations and began the process of mapping and certifying irrigation acres in the IMP area.</p>
<p><u>Goal 1, Objective 1.1:</u> Develop a better understanding of basin-wide inflows/outflows to enable development of a more comprehensive water inventory.</p> <p><u>LPRDCP Benefit:</u> Study will investigate surface/groundwater interaction to inform spatial variability of reach losses and gains on a reach-by-reach basis. Thereby directly supporting this goal by refining the spatial understanding of inflow/outflows including conveyance losses as well as refining the hydrologically connected area.</p> <p>The study will evaluate temporal trends in RGL (monthly, seasonal, annual, etc.) and potential correlations (wet/dry year, river stage, etc.) to better understand impacts on lower Platte River streamflows.</p>	<p><u>Monitoring & Studies, II (e) (ii):</u> Cooperate with other state and federal agencies to monitor the impacts of changes in the Lower Platte River Basin on water supplies and consumptions, changes due to climate cycles, changes in stream flows, and changes due to other factors.</p>	<p><u>Goal 2, Objective 2.2:</u> Track variability in water use and supply by regularly evaluating data from existing surface water, groundwater, and weather monitoring networks</p>	<p><u>Goal 1, Objective 1.2.1:</u> Continue surface water and groundwater monitoring across the District.</p>	<p>2013 - The LPRBC was formed in April, 2013 when seven NRDs in the Lower Platte Basin (including Lower Platte South) and NDNR entered into a five-year interlocal cooperative agreement to form the coalition for the purpose of pursuing and discussing water management in the Basin.</p>
	<p><u>Monitoring & Studies, II (e) (ii):</u> Studies will or may include refinements of the hydrologically connected ground water and surface water areas, aquifer characteristics, effectiveness of various conservation best management practices, the impacts of climate cycles, the effectiveness and efficiency of water conveyance via streams from upstream sources, development of protocols for refining estimates of consumptive water use and understanding instream flow needs</p>	<p><u>Goal 2, Objective 2.2:</u> Develop or maintain a comprehensive spatial/tabular water inventory database that includes measurements or estimates of components of the water budget.</p>	<p><u>Goal 1, Objective 1.2.2:</u> Use surface water and groundwater measurements and models to estimate District inflows and outflows.</p>	<p>2014 - In 2014, the NDNR began development of a numerical groundwater model for Lower Platte and Missouri Tributaries (LPMT) basins. When complete, the model for the LPMT Basin will be used as a tool for the fully appropriated basins annual report, as well as for assessing impacts of emerging and historic surface water and groundwater developments in the region - LPSNRD</p>
			<p><u>Goal 1, Objective 1.2.3:</u> Identify data gaps in monitoring (for example, precipitation, stream flow, and groundwater level networks, etc.).</p>	<p>2015 – Completed an amendment to the IMP including investigating processes to collect and record water use data from all municipalities and rural water Districts and from all major non-municipal industrial water users, investigating procedures to track depletions and gains to streamflows resulting from new, retired or other changes to water uses within the District as well as developed an Emergency Response/Drought Mitigation Plan, which included holding a Drought Tournament, participated in by 30 stakeholders. - LPSNRD</p>

<p><u>Goal 1, Objective 1.4:</u> Refine the extent of hydrologically connected ground and surface waters in the Lower Platte Basin.</p> <p><u>LPRCDP Benefit:</u> Study will investigate surface/groundwater interaction to inform spatial variability of reach losses and gains on a reach-by-reach basis. Thereby directly supporting this goal by refining the spatial understanding of inflow/outflows including conveyance losses as well as refining the hydrologically connected area.</p>	<p><u>Monitoring & Studies, II (f) (ii):</u> Studies will or may include refinements of the hydrologically connected ground water and surface water areas, aquifer characteristics, effectiveness of various conservation best management practices, the impacts of climate cycles, the effectiveness and efficiency of water conveyance via streams from upstream sources, development of protocols for refining estimates of consumptive water use and understanding instream flow needs.</p>		<p><u>Goal 1, Objective 1.1.4:</u> Use the best available data and methods to refine delineations of hydrologically connected surface and groundwater.</p> <p><u>Goal 5, Objective 5.3.2:</u> Evaluate whether ENWRA data can improve modeling of hydrologically connected areas on a large scale.</p>	<p>2006—LPNNRD, LPSNRD, and P-MRNRD Joined with the Lewis & Clark NRD, Lower Elkhorn NRD, Lower Nemaha NRD, NDNR, USGS, and UNL CSD to initiate the Eastern Nebraska Water Resources Assessment (ENWRA), with the goal of developing a geologic framework and water budget for the glaciated area of eastern Nebraska.</p> <p>2007 - In addition to participating in ENWRA, the LPNRD participated in studies including the Elkhorn Loup Model (ELM) and Platte Valley Ground Water Model, and the Subarea Delineation Study. Funding from Integrated Water Management Plan Program Fund (IWMPPF) and the Environmental Trust made these studies possible. Key research agencies were the United States Geological Survey and the Conservation and Survey Division of the University.</p> <p>In 2008, LPNNRD revised its rules and regulations to take into account glaciated portions of the District, effects of the recent drought and new information from the Subarea Delineation Study.</p> <p>2010— Completed a modeling project with the University of Nebraska along Lower Salt Creek funded by the Integrated Water Management Plan Program (IWMPP), designed to document ground and surface water interconnection and test various scenarios to evaluate the District's current ground water triggers in the Lower Salt Creek Ground Water Reservoir. – LPSNRD</p> <p>2011 – Completed Ashland area pilot groundwater flow model. – P-MRNRD</p> <p>2014 - NDNR and LPSNRD entered into an interlocal cooperative agreement with ENWRA to support a hydrologic framework study which involves using a helicopter based-geophysical remote sensing tool termed Airborne Electromagnetic Survey (AEM), to determine aquifer locations and thicknesses. LPSNRD additionally participated in data sharing of LPSNRD's earlier data from the 2013 AEM flight over the northwestern portion of the District.</p>
<p><u>Goal 2:</u> Implement a water management plan for the Lower Platte Basin that maintains a balance between current and future water supplies and demands.</p>	<p><u>Goal 2:</u> Ensure a sustainable water supply is available in the amounts and location of the demand through management actions to meet the District's short and long term needs.</p>		<p><u>Goal 3, Objective 3.1.1:</u> Where feasible, promote practices focused on reuse of rain, storm, waste, industrial, or irrigation water.</p>	<p>In 1994, P-MRNRD revised their GWMP to include triggers for groundwater quantity and groundwater quality.</p>

<p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements. This directly supports the Lower Platte Basin in its effort to maintain a balance between current and future water supplies by understanding the relationship between streamflows and well field operational constraints and allow the Lower Platte Basin to make management decisions to support this streamflow threshold.</p>	<p><u>Goal 3:</u> Encourage all water users to minimize water use while optimizing benefits.</p>		<p><u>Goal 3, Objective 3.2.1:</u> As needed, implement cost-share programs for irrigation conservation, such as flow metering and sub-surface drip irrigation systems.</p>	<p>In 1995, LPNNRD adopted rules and regulations to address both ground water quality and quantity.</p>
<p><u>Goal 2, Objective 1:</u> Collaborate with state and local governments to identify opportunities to augment water supplies within the Lower Platte Basin and, if necessary, identify opportunities to supplement with imported water from outside the Lower Platte Basin.</p> <p><u>LPRDCP Benefit:</u> Analyzing predicting streamflows and aquifer storage productivity will inform potential mitigation and response actions in the Lower Platte Basin. Additionally, analyzing the surface/groundwater interaction on a reach-by-reach basis will assist the Lower Platte Basin in refining locations where potential mitigation and response projects would be most beneficial.</p>	<p><u>Goal 2, Objective 2.3:</u> Evaluate the potential benefits of regional supply and distribution systems and, where warranted, facilitate discussions with impacted entities.</p>	<p><u>Goal 1, Objective 1.3:</u> Evaluate the potential for conjunctive management programs or project opportunities to protect existing users or mitigate new uses such as water rights leases, interference agreements, augmentation projects, conjunctive use management, or use retirement</p>	<p><u>Goal 3, Objective 3.1.3:</u> Cooperate with other entities to identify, evaluate and prioritize locations and types of feasible conjunctive water management water use projects.</p>	<p>In 2007, LPNNRD designates a Level One GWMA and declares temporary stay on irrigated acres or high capacity wells in the Uplands</p> <p>In 2009, P-MRNRD imposed a stay on new irrigation wells and expansion of groundwater irrigated acres.</p> <p>In 2009, LPNNRD contracted with the University of Nebraska to assist producers with installation of Water Mark Sensors to maximize irrigation efficiency.</p> <p>2014 - The LPRBC began the process of identifying a common methodology and accounting system that would provide a guideline for the member NRDs for possible future water banks to support water management activities.</p>
<p><u>Goal 2, Objective 2:</u> Monitor instream flow needs in the Lower Platte Basin to foster an understanding of the existing appropriation priorities and locations, and provide a basis for evaluating impacts of existing and future uses.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements for mitigation and drought response. This directly supports the goal of understanding instream flow needs in the Lower Platte Basin.</p>	<p><u>Goal 3, Objective 3.7:</u> As necessary, work with other agencies to evaluate the instream flow needs in the District.</p>	<p><u>Goal 4, Objective 4.5:</u> Work with the appropriate agencies to identify streamflow necessary to protect and maintain public water supply, fish and wildlife, and public recreation.</p>	<p><u>Goal 2, Objective 2.1.6:</u> Evaluate current water demands and project future water demands for environmental concerns and instream flow needs both within the District and for downstream requirements.</p>	<p><u>Goal 5, Objective 5.4.2:</u> Coordinate to review and assess benefits and limitations of protecting Lower Platte River flows through existing instream flow permits.</p>

<p><u>Goal 2, Objective 3:</u> Evaluate options for Basin wide water banking methodologies.</p> <p><u>LPRDCP Benefit:</u> Analyzing predicting streamflows and aquifer storage productivity will inform potential mitigation and response actions in the Lower Platte Basin. Additionally, analyzing the surface/groundwater interaction on a reach-by-reach basis will assist the Lower Platte Basin in refining locations where potential mitigation and response projects would be most beneficial. Storing water in reservoirs or aquifers is a form of water banking and therefore identifying potential mitigation and response areas directly supports this goal.</p>		<p><u>Goal 4, Objective 4.4:</u> Coordinate with other entities to identify and study opportunities for the development of transfers, variances, water banking, and other actions of water management to potentially be used across the entire Platte River Basin.</p>	<p><u>Goal 3, Objective 3.1.2:</u> Develop a District-wide water banking program to minimize water conflicts between different water users and sources.</p>	<p>It is anticipated that a regional water banking project will be developed by the Lower Platte River Basin Coalition. This will likely include potential for additional surface water storage within the District to bank future water supplies.</p>
<p><u>Goal 3:</u> Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements for drought response. This allows the Lower Platte Basin to make management decisions to support this streamflow threshold.</p> <p>By understanding surface/groundwater interaction on a more refined spatial scale allows the Lower Platte Basin to make management decisions as to the quantity and location of additional development.</p>	<p><u>Goal 2, Objective 2.1:</u> Ensure to the extent possible, that wells are located and designed to reflect the ground water geology and water supplies in accordance with aquifer characteristics.</p>	<p><u>Goal 1:</u> Develop and implement water use policies and practices that contribute to the protection of existing surface and groundwater uses while allowing for future water development</p>	<p><u>Goal 3, Objective 3.1:</u> Update policies, practices, and/or programs to maintain and improve water supply and water quality as it affects supply.</p>	
<p><u>Goal 3, Objective 1:</u> Identify available water storage opportunities throughout the Lower Platte Basin.</p> <p><u>LPRDCP Benefit:</u> As part of the development of the Plan, the Team will consult with municipal water systems to develop minimum threshold streamflows to support well field operations and discuss potential local aquifer storage enhancements for drought response. This allows the Lower Platte Basin to make management decisions to support this streamflow threshold.</p> <p>By understanding surface/groundwater interaction on a more refined spatial scale allows the Lower Platte Basin to make management decisions as to the quantity and location of additional development.</p>	<p><u>Goal 2, Objective 2.2:</u> Research and implement, as needed, additional storage opportunities throughout the District.</p>	<p><u>Goal 4, Action Item 4.2.1:</u> Review and analyze existing studies of water storage opportunities in the Lower Platte River Basin and conduct additional multi-agency studies as appropriate.</p>	<p><u>Goal 5, Objective 5.2.1:</u> Review and analyze existing studies of water storage opportunities in the Lower Platte River Basin and conduct multi-agency studies as appropriate.</p>	

This project may improve water quality by identifying mitigation and responsive actions that increase water supplies through the well field areas (which serves as the primary target area for this project). Improved water supply during droughts will keep well fields fully operational and minimize the occurrences of conditions that have previously existed (including the oxidation of aquifer materials and decreased dilution of Salt Creek inflows to the Omaha south well field) when water quality concerns have arisen. Multiple residential, industrial, agricultural, and recreational water users would benefit from these mitigation and responsive actions through reduced need for regulatory measures and improved higher quality water supplies, including the approximately 272,996⁵ and 600,000⁶ people serviced by LWS and MUD, respectively.

Finally, all four NRDs have GMPs that have been approved by NDNR pursuant to the Ground Water Management and Protection Act. This project will assist each member of the Consortium in carrying out key duties and meeting goals outlined in each of these plans, as shown in Table 10.

TABLE 10. GROUNDWATER MANAGEMENT PLANS GOALS AND OBJECTIVES
LPNNRD Groundwater Master Plan (parent document to 1994 updated Groundwater Management Plan)
Goal: Assure adequate quantity and quality of stream flow, groundwater, and surface reservoirs within the District for beneficial uses as prescribed by law.
<i>Objective 1: Insure that all chemigation users are properly trained and comply with state rules and regulations so as to reduce the occurrence of groundwater contamination through the application of pesticides and fertilizers.</i>
<i>Objective 2: Actively pursue the proper use of chemigation criteria and assure that all who chemigate have permits to do so.</i>
<i>Objective 3: Develop and maintain rural landowner and community reporting stations for well monitoring, water usage, and rainfall statistics.</i>
<i>Objective 4: Insure proper local management of ground and surface water resources through cooperation with local community governments, agencies and private firms, which may involve development of Special Protection Areas and groundwater management and control areas.</i>
<i>Objective 5: Comply with the District's Groundwater Management Plan as well as state standards and regulations in order to meet proper conservation requirements.</i>
<i>Objective 6: Assist federal and state agencies in the protection of ground and surface waters from non-point and point sources of pollutants.</i>
<i>Objective 7: Maintain groundwater quality and quantity monitoring programs</i>
<i>Objective 8: Encourage and develop programs to assist users in reducing irrigation water needs through best management practices.</i>
<i>Objective 9: Develop instream flow requirements that will assist in providing a stable development climate within the District.</i>

⁵ Source: <https://www.lincoln.ne.gov/city/pworks/water/pdf/water-quality-report.pdf?2015>

⁶ Source: <http://www.mudomaha.com/about-us>

<i>Objective 10: Develop best management alternatives for chemical use in areas where susceptibility to groundwater pollution is high.</i>
<i>Objective 11: Cooperate with state and federal agencies to provide adequate methods of testing groundwater for pollutants.</i>
<i>Objective 12: Assist in the development for rural water districts with other applicable entities as required.</i>
<i>Objective 13: Develop criteria and data for wellhead protection standards to allow District urban areas to participate in this program.</i>
LPNNRD Groundwater Management Plan (1994)
Goal #1: Groundwater Reservoir Life
<i>Objective: Designate the entire LPNNRD as a Groundwater Management Area, consistent with State Statutes 46-673.01 - 46-673.06</i>
Goal #2: Provide a System of groundwater management to support the groundwater reservoir life goal, based upon an adequate technical foundation and public awareness of groundwater issues.
<i>Objective: Provide technically accurate and updated water quantity data upon which to base management decisions.</i>
<i>Objective: Provide the most technically accurate and updated water quality data upon which to base management decisions.</i>
<i>Objective: Further develop and enhance the NRD's computer database management system to provide continual support for program advancements.</i>
<i>Objective: To develop a coordinated NRD program to assist in implementation of the State of Nebraska's wellhead protection program. The NRD program will be targeted toward assisting the District's communities and supportive of the District's efforts in managing ground and surface water.</i>
<i>Objective: To support and conduct special studies, research, and data gathering activities that will assist the District in its understanding and management of groundwater.</i>
<i>Objective: To adequately support the Groundwater Management Plan through proper application of District resources.</i>
LPSNRD Groundwater Management Plan (1995)
Goal: Maintain the quantity and quality of groundwater for any beneficial use in conformance with state standards.
<i>Objective 1: Protect groundwater from point and non-point sources of pollutants, with effluent discharges meeting standards set by State or other agencies.</i>
<i>Objective 2: Manage groundwater quantity and quality levels through monitoring programs in compliance with Nebraska Ground Water Protection Standards and with provisions of Ground Water Management and Protection Act.</i>
<i>Objective 3: Manage groundwater for effective long-term conservation and utilization.</i>
<i>Objective 4: Encourage proper development and conservation of groundwater.</i>
<i>Objective 5: Implement the policies in the District's Ground Water Management Plan and update as needed.</i>
<i>Objective 6: Reduce potential for contamination by pesticides and fertilizers from chemigation through irrigation systems.</i>
<i>Objective 7: Work collectively with other agencies to evaluate groundwater quantity and quality data.</i>
P-MRNRD Groundwater Management Plan (1994)
Goal: Maintain the existing conditions of its groundwater reservoir quantity and quality-forever. This "in-perpetuity" quality and quantity life goal applies to the entire P-MRNRD.
<i>Objective 1: Maintain the District's static water level monitoring program.</i>
<i>Objective 2: Establish a District-wide groundwater quality monitoring program.</i>
<i>Objective 3: Administer the Nebraska Chemigation Act in the District.</i>
<i>Objective 4: Encourage, through information and education activities, conservation of water quantity and quality.</i>
<i>Objective 5: Establish management, control, or special protection areas in the District to address specific problems of groundwater quality, should the data collected indicate that the groundwater reservoir life goal cannot be met.</i>

<i>Objective 6: Establish management or control areas in the District to address problems of groundwater quantity, should the data collected indicate that the groundwater reservoir life goal cannot be met.</i>
<i>Objective 7: Continue to evaluate requests (petitions) from rural landowners for a more adequate and dependable water supply.</i>
<i>Objective 8: Cooperate with other NRDs in the management of contiguous portions of the groundwater reservoir.</i>
<i>Objective 9: Establish a well abandonment cost sharing program in the District.</i>
<i>Objective 10: Encourage development of regional water supplies in the District.</i>

This project will support sustainable water use by building on those previous efforts and enhancing data collection, developing forecasting and water conveyance tools, and establishing a robust planning and operations framework required to properly manage the surface water and hydrologically connected groundwater in support of drought preparedness. The area covered by the Lower Platte River Basin (including the well fields, which serve as the primary target area for the project) is home to nearly 60% of Nebraska’s population (including the approximately 272,996⁷ and 600,000⁸ people serviced by LWS and MUD, respectively), over two-million irrigated acres, and is used for many other beneficial purposes, including domestic, livestock, industrial, and instream (habitat and recreation) uses.

The stakeholders involved with the project include the Consortium members, and their respective constituents.

The beneficiaries of the project are intended to be as diverse as the wide-ranging impacts experienced under drought conditions. Potential beneficiaries would include, but not be limited to, municipal drinking water users, irrigators, industrial water users, recreation interests, and environmental interests.

12. Addresses a statewide problem or issue;

- List the issues or problems addressed by the project and why they should be considered statewide.
- Describe how the project will address each issue and/or problem.
- Describe the total number of people and/or total number of acres that would receive benefits.
- Identify the benefit, to the state, this project would provide.

This project aims to identify proactive drought management solutions within the Lower Platte River Basin. The Lower Platte River is home to approximately sixty-percent of Nebraska’s population, thousands of businesses and industries, recreation, and endangered species. The diverse group of water needs found in this region would likely all benefit from proactive measures taken in advance of future intense and/or

⁷ Source: <https://www.lincoln.ne.gov/city/pworks/water/pdf/water-quality-report.pdf?2015>

⁸ Source: <http://www.mudomaha.com/about-us>

prolonged droughts. The success of the statewide economy is inextricably linked to the businesses and industries of the basin.

This project aims to address these drought issues by enhancing the water supplies of the Lower Platte River through these critical dry periods to stave off more significant drought related impacts that may occur without such proactive measures.

The population of the Lower Platte River Basin is approximately 1,103,490 and approximately two-million irrigated acres are located with the study area.

Benefits to the State would include improved water sustainability in the Lower Platte River Basin, which would result in extensive economic benefits through reduced regulatory actions, a reduction in water treatment responsibilities, and improved agricultural output resulting from the higher water supply reliability for irrigation. Additionally the project could provide far reaching future benefits for Nebraska through increases in recreation along the Lower Platte River; financial savings to municipal water suppliers; and water supply benefits for municipal, and industrial users. Many of the actions identified as part of this study could help with environmental objectives along the Platte River for threatened and endangered species during times of drought.

13. Contributes to the state's ability to leverage state dollars with local or federal government partners or other partners to maximize the use of its resources;

- List other funding sources or other partners, and the amount each will contribute, in a funding matrix.
- Describe how each source of funding is made available if the project is funded.
- Provide a copy or evidence of each commitment, for each separate source, of match dollars and funding partners.
- Describe how you will proceed if other funding sources do not come through.

The cost of the entire project is \$551,000. The BOR will provide \$200,000 through its WaterSMART Drought Contingency Planning Grants (see Attachment D – BOR Grant). The NDNR will provide \$26,000 from funds not included in the Water Sustainability Fund request. The remaining project costs are expected to total \$325,000. The non-DNR Consortium members will provide 40% of this total (\$130,000), with the Water Sustainability Fund providing the other 60% (\$195,000). There are no other sources of funding for the project. A copy of the budget is available in Attachment A – Project Budget.

The LPSNRD, in conjunction with other members of the Consortium not inclusive of NDNR, are committing to pay 40% of the project cost. These matching dollars are made available through the budgets of the sponsor NRD, and other Consortium members which are provided through their existing authorities. Attachment C – Letters of Support and Draft Inter-local Cooperative Agreement includes copies of the draft ILCA which establishes each Consortium members financial responsibility, and letters of support showing their commitment to the project. The LPSNRD budgetary commitment authority ensures the project will proceed and be completed.

14. Contributes to watershed health and function;

- Describe how the project will contribute to watershed health and function in detail and list all of the watersheds affected.

This project will strive to enhance watershed health and function through identification of mitigation and responsive actions that can be utilized by the Consortium to assist in reducing drought associated risks. These efforts, while aimed at ensuring adequate recharge for adjacent municipal well-fields, would be expected to enhance low-flow streamflows at a time when the watershed health and function is under the most stress and provide for increased watershed function through maintaining connectivity of waterways while providing support for species and habitat in the Lower Platte River Basin (the affected watershed).

15. Uses objectives described in the annual report and plan of work for the state water planning and review process issued by the department.

- Identify the date of the Annual Report utilized.
- List any and all objectives of the Annual Report intended to be met by the project
- Explain how the project meets each objective.

The Annual Report and Plan of Work for the Nebraska State Water Planning and Review Process⁹ dated September of 2015 (as submitted to the Governor and Legislature by DNR) was used for this effort.

The objectives of the Annual Report that will be met by the project focus on the goals and objectives of the voluntary integrated management plans and the basin-wide plan in the Lower Platte River Basin. Development and implementation of these plans is a significant part of

⁹ <http://dnr.nebraska.gov/2015-annual-report-and-plan-of-work>

the DNR's objectives in the Lower Platte River Basin, as evidenced through the multiple references to the plans in the Annual Report. The Annual Report and Plan of Work also identifies stream gaging and hydrologic data collection activities as continued targets into the future. These data needs will also be supported by the project. The preliminary recommendation for this project is for instrumentation (piezometers, transducers, time-lapse photography, and surveys) at a minimum of six sites located throughout the Lower Platte River Basin to acquire additional synoptic data related to stage/conveyance relationships with targeted data acquisition during periods when streamflows are below the historic daily mean flow rate and total streamflows as measured at Louisville are below 2,500 cfs.

This project, and the data collected in support of this project, will help meet the goals and objectives outlined in three voluntary IMPs (LPSNRD, PMRNRD, and LPNDRD) in addition to the goals outlined in the voluntary Lower Platte River Basin-Wide Plan. The data collected in support of this project (synoptic streamflow measurements, stream stage readings, and water levels) will also be made available publically for a variety of applications to improve streamflow monitoring and the understanding of hydrologically connected water resources.

16. Federal Mandate Bonus. If you believe that your project is designed to meet the requirements of a federal mandate which furthers the goals of the WSF, then:

- Describe the federal mandate.
- Provide documentary evidence of the federal mandate.
- Describe how the project meets the requirements of the federal mandate.
- Describe the relationship between the federal mandate and how the project furthers the goals of water sustainability.

The federal mandates result through is the nexus with three significant Federal Acts. The Endangered Species Act, the Clean Water Act, and the Safe Drinking Water Act mandate that certain activities are performed to conform with each act.

The project meets the requirements of the federal mandate in several ways. The United States Fish and Wildlife Service (USFWS) has previously established additional requirements for water uses within the Lower Platte River to address the needs of certain threatened and endangered species. The project involves improving the water supply reliability in the region, and reducing the magnitude and recurrence of low flows in the Lower Platte River, which based on previous USFWS requirements would be expected to have direct benefits to certain species.

The Clean Water Act and its amendments have as their objective the restoration and maintenance of the chemical, physical, and biological integrity of the Nation's waters. Section 401 requires that Federally permitted activities comply with the Clean Water Act standards, State water quality laws, and any other appropriate State laws. Improving the reliability of water supplies during periods of drought has direct benefits fo the chemical, physical, and biological integrity of the Lower Platte River.

Additionally, the Safe Drinking Water Act requires that certain target contaminants in potable water supplies remain below established action levels. While significant water quality degradation has not occurred during past drought periods, concerns remain that prolonged drought periods could increase the likelihood of water quality degradation and thus establish additional requirements for treatment to remain in compliance with the Safe Drinking Water Act. The reliability of water supplies in the Lower Platte River is critical toward ensuring that the municipal wellfields in the area remain fully operational and in conformance with these federal mandates.

Section D.

PROJECT DESCRIPTION

1. Overview

In 1,000 characters or less, provide a brief description of your project including the nature and purpose of the project and objectives of the project.

The Lower Platte River Consortium (Consortium), comprised of the Nebraska Department of Natural Resources, the Lower Platte South Natural Resources District, the Lower Platte North Natural Resources District, the Pappio-Missouri River Natural Resources District, Lincoln Water System (LWS), and Metropolitan Utilities District (MUD) is embarking on this effort to develop a drought contingency plan for the Lower Platte River in Nebraska (Plan). These six water management entities will work together to develop regional solutions to improve the water supply reliability and drought resiliency of the Lower Platte River area.

The Consortium will provide critical coordination between state and local water managers while also assisting with public outreach as the plan is developed and implemented. By taking a multiagency regional approach to drought contingency planning, the Consortium will be able to enhance water supply reliability, leverage existing infrastructure investments and improve the area's resiliency in responding to future droughts.

2. Project Tasks and Timeline

Identify what activities will be conducted by the project. For multiyear projects please list what activities are to be completed each year.

The development of the Plan is expected to take eighteen months (see Figure 4). It is anticipated that the WSF contract would be executed by March 2017. The consultant has been selected and is available to begin work immediately. Additionally, because funds have been acquired from the Bureau of Reclamation (BOR) and the Nebraska Department of Natural Resources (NDNR) project activities will be initiated in the fall of 2016. The review of data sources, vulnerabilities, and development of forecasting and conveyance tools is expected to commence by the fall of 2016. At the same time, the Consortium will complete preliminary identification and assessment of mitigation and response actions. Two separate workshops will be held after this phase, with the expected timeframe for completion of these two elements by the Fall of 2017.

Plan development and review will be conducted through the second half of 2017 with completion of the draft Plan by the end of 2017. Final review of the Plan will occur with project completion targeted for March 2018. Grant reporting will be ongoing throughout the project duration.

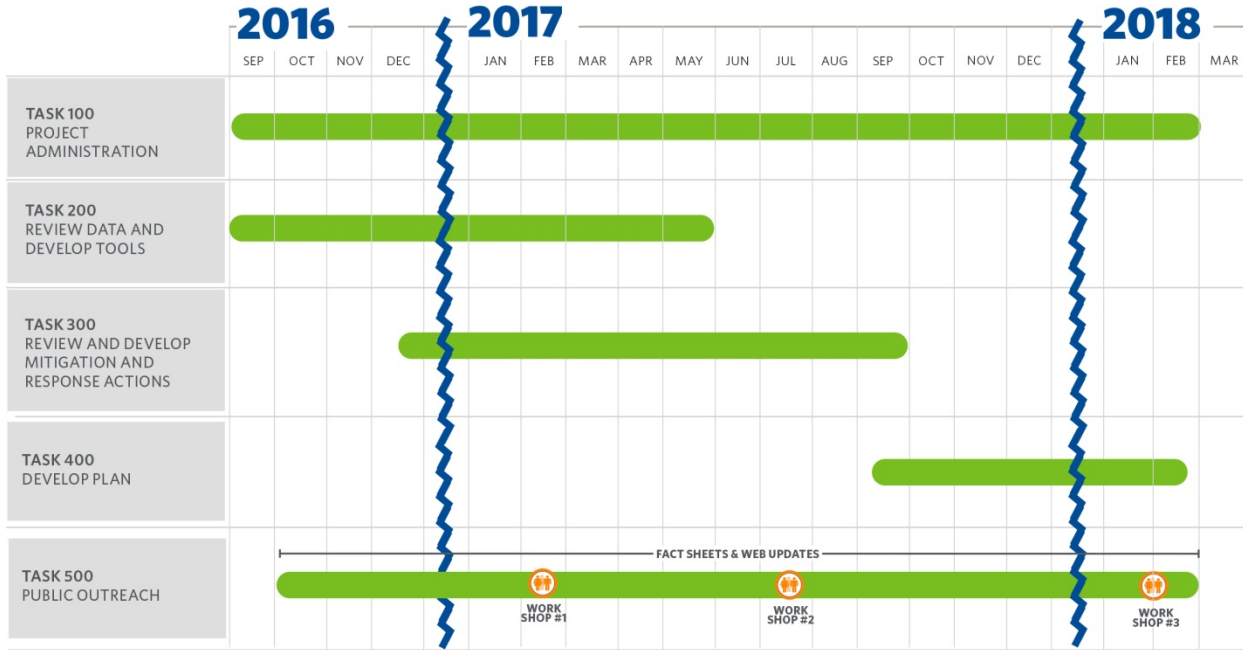


Figure 4. Schedule summary and key milestones.

3. Partnerships

Identify the roles and responsibilities of agencies and groups involved in the proposed project regardless of whether each is an additional funding source. List any other sources of funding that have been approached for project support and that have officially turned you down. Attach the rejection letter.

The Lower Platte South Natural Resources District is the project applicant and will be the responsible agency for all status reporting, contracting, and ensuring that the hired consultant completes the project on time and within budget. Additionally, the other members of the Consortium will be direct participants in the development of the Plan and public outreach associated with its development and implementation. The structure of costs sharing will be consistent with the budget outlined in Attachment A – Project Budget. Each entity has made a commitment to support the project and will be entering into an inter-local cooperative agreement (ILCA) (see draft ILCA, Attachment C).

The NDNR is also a member of the Consortium and will directly participate in the Plan development and provide a financial commitment toward its completion. While this financial commitment is shown in Attachment A, these dollars are not included in meeting the 40% cost-share responsibility of the project.

The BOR will be providing financial support to the Consortium through the WaterSMART Drought Contingency Planning Grants. The Consortium has successfully acquired \$200,000 in funding to support the plan development effort (see Attachment D).

4. Other Sources of Funding

Identify the costs of the entire project, what costs each other source of funding will be applied to, and whether each of these other sources of funding is confirmed. If not, please identify those entities and list the date when confirmation is expected. Explain how you will implement the project if these sources are not obtained.

The cost of the entire project is \$551,000. The BOR will provide \$200,000 through its WaterSMART Drought Contingency Planning Grants. The NDNR will provide \$26,000 from funds not included in the Water Sustainability Fund request. The remaining project costs are expected to total \$325,000. The non-NDNR Consortium members will provide 40% of this total (\$130,000), with the Water Sustainability Fund providing the other 60% (\$195,000). There are no other sources of funding for the project. A copy of the budget is available in Attachment A.

5. Support/Opposition

Discuss both support and opposition to the project, including the group or interest each represents.

There is a high level of support for the project from each of the three NRD boards of directors, the NDNR, LWS, and MUD. These entities represent a diverse set of interest and a significant portion of Nebraska's population and economy. Efforts by this group will work to reduce and/or eliminate additional regulatory measures and reactionary mitigation measures that may otherwise be necessary to accomplish similar results. There is no known opposition to the project.

ATTACHMENT A – PROJECT BUDGET

Project Budget Summary	
Task	Total Cost
Task 100 - Data Collection	\$ 110,000
Task 200 - Conveyance/Forecasting Tool	\$ 125,000
Task 300 - Mitigation and Response Actions	\$ 175,000
Task 400 - Develop Plan Document	\$ 87,000
Task 500 - Public Outreach	\$ 54,000
TOTAL	\$ 551,000

Summary of Funding Breakdown and Anticipated Expenditure Schedule

Expected Expenditures (Based on December 2016 Award)

	Bureau of Reclamation	Department of Natural Resources (non-WSF)	LPSNRD (Consortium)	WSF
Aug. 1st - Dec. 15 2016	\$45,500	\$26,000	\$19,500	\$0
Jan. 1st - June 30 2017	\$80,000	\$0	\$65,500	\$127,500
July 1 - Dec. 31st 2017	\$74,500	\$0	\$45,000	\$67,500
Project Totals	\$200,000	\$26,000	\$130,000	\$195,000

Expected Expenditures (Based on June 2017 Award)

	Bureau of Reclamation	Department of Natural Resources (non-WSF)	LPSNRD (Consortium)	WSF
Aug. 1st - June 30 2017	\$45,500	\$26,000	\$19,500	\$0
July 1 - Dec. 31st 2017	\$80,000	\$0	\$65,500	\$127,500
Jan. 1st - June 30 2018	\$74,500	\$0	\$45,000	\$67,500
Project Totals	\$200,000	\$26,000	\$130,000	\$195,000

ATTACHMENT B – LPSNRD DRAFT BUDGET



FY 2017

BUDGET

Draft #2

Lower Platte South Natural Resources District
July 14, 2016

ANTICIPATED REVENUES		
	FY 2016	FY 2017 DRAFT 2
Cash and Investments (LPSNRD)	7,214,076	7,760,143
Cash and Investments (LPRCA)	885,296	533,627
Cash and Investments (ENWRA)	319,163	335,171
Deadmans Run Sinking Fund	1,507,270	1,659,261
Infrastructure Sinking Fund	665,149	189,359
Mopac East Trail Sinking Fund	100,008	150,068
Building Sinking Fund	0	50,022
County Treasurers' Balance	125,000	125,000
Investment Income	15,000	15,000
Federal Funds	1,991,544	1,845,546
State Funds	935,783	1,606,300
Local Funds	2,322,264	2,653,061
Miscellaneous	0	0
(County Treasurers' Commission)	(90,000)	(90,000)
Total	15,990,553	16,832,558
NRD Property Taxes	9,257,354	9,257,354
	25,247,907	26,089,912
PROPOSED EXPENDITURES		
	FY2016	FY 2017 DRAFT 2
Program / Project Costs	17,872,341	17,331,508
Deadmans Run Sinking Fund	1,656,925	2,024,727
Operating Costs	1,290,365	1,726,796
Personnel Costs	2,563,726	2,829,164
Cash Reserve (General)	961,450	1,000,000
Infrastructure Sinking Fund	100,000	189,359
Mopac East Sinking Fund	150,000	150,068
Building Purchase Sinking Fund	50,000	50,022
Reserve (LPRCA)	395,900	513,377
Reserve (ENWRA)	207,200	274,891
	25,247,907	26,089,912

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	FY 2016 EXPENDITURES THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET	FY STATUS CODE	FY 2017 DRAFT #1 OTHER FUNDS	FY 2017 DRAFT OTHER FUNDS ADJUSTMENTS DRAFT 1 TO 2	FY 2017 DRAFT #2 OTHER FUNDS	SOURCE	DRAFT FY 2017 NET NRD FUNDS
PROGRAM / PROJECT COSTS												
ANTELOPE VALLEY PROJECT												
		30,000	0	20,000	-20,000	0	0	378,000	0	378,000		-378,000
419050	JAVA Administration and Replating	30,000	0	20,000	-20,000	0	A3	0	0	0		0
419055	Floodplain Management Plan	0	0	0	0	0		0	0	0		0
710500	Antelope Valley Project ROW & Relocation	0	0	0	0	0		378,000		378,000	L	-378,000
INFORMATION & EDUCATION												
		408,123	361,818	429,650	-40,000	389,650		0	0	0		389,650
421015	Programs and Projects	31,500	13,340	1,000	?	1,000	C1	0	0	0		1,000
				24,000		24,000	C2	0	0	0		24,000
421021	Environmental Education	187,150	174,709	108,250	-10,000	98,250	C1	0	0	0		98,250
				76,500	-10,000	66,500	C2	0	0	0		66,500
421023	General Awareness	189,473	173,769	66,400	?	66,400	A2	0	0	0		66,400
				145,500	-20,000	125,500	C1	0	0	0		125,500
				8,000		8,000	C2	0	0	0		8,000
LAND BEST MANAGEMENT PRACTICES												
		1,298,550	628,113	2,102,450	-589,450	1,513,000	0	121,000	0	121,000	0	1,392,000
419302	GIS Support	10,000	8,657	10,000		10,000	A2	0	0	0		10,000
419304	GIS Aerial Imagery Project	23,000	18,000	18,000		18,000	A3	0	0	0		18,000
				5,000		5,000	C1	0	0	0		5,000
419306	GIS Mapping ROW	5,000	8,128	20,000	-10,000	10,000	C1	0	0	0		10,000
470010	Surface Water Quality Practices	800,000	365,020	1,000,000	-200,000	800,000	C1	0	0	0		800,000
470011	NSW/CP Land Treatment [*S]	104,000	0	105,000		0	C1	0	0	0		0
470012	Special Practices	50,000	0	50,000	-40,000	10,000	C1	0	0	0		10,000
470014	Buffer Strips	40,550	27,573	39,450	-9,450	30,000		21,000		21,000	S	9,000
470018	Private Sector Layout		0	0		0		0		0		0
470019	Marginal Land Incentive Program (CRP Booster)	20,000	0	200,000	-160,000	20,000	C2	0	0	0		20,000
470020	Non-Point Source Pollution Control Plan	0	0	160,000		160,000	D1	100,000		100,000		60,000
	Targeted Areas Assistance											
470023	Salt Valley Lakes	300,000	175,288	500,000	-100,000	400,000	B1	0	0	0		400,000
470025	Stevens Creek Watershed	50,000	25,447	100,000	-50,000	50,000	B1	0	0	0		50,000
470030	Conestoga Watershed Program	0	0	0		0		0		0		0
PLATTE RIVER												
		2,325,227	1,484,945	1,399,140	-12,000	1,387,140		1,270,392	0	1,270,392		116,748
Lower Platte River Corridor Alliance Programs												
419002	Alliance Coordinator	90,000	95,269	90,000	8,000	98,000	C1	118,002		118,002	SL	-20,002
419004	COE Feasibility Study Costs	0	0	0		0		0		0		0
419005	Programs, Studies & Projects	2,031,679	1,346,999	17,502		17,502	A2	17,502		17,502	SL	0
				140,176		140,176	A4	140,176		140,176	L	0
				301,962		301,962	C1	299,712		299,712	SL	2,250
				115,000		115,000	C2	115,000		115,000	LF	0
				568,000		568,000	E2	568,000		568,000	SLF	18,000
LPRCA Carry over to Reserve												
Lower Platte South NRD Platte River Programs												
419003	Lower Platte River Consultant Services (Weaver)	12,000	12,467	14,000		14,000	C1	0	0	0		14,000
419008	Platte River Ice Jam Agreement	22,000	5,171	22,500	-20,000	2,500	A3	0	0	0		2,500
419009	Endangered Species Studies	5,000	5,000	5,000		5,000	C1	0	0	0		5,000
419016	Invasive species cost-share	40,000	20,050	30,000		30,000	A3	0	0	0		30,000
780100	Western Sappy / Clear Creek Project	124,048	0	65,000		65,000	A3	0	0	0		65,000
TRAILS / CONSERVATION CORRIDORS												
		1,224,161	325,916	1,169,500	-118,000	1,051,500		588,550	-20,000	568,550		482,950
447054	Trail Administration	2,500	435	2,500		2,500	C1	2,500		2,500	L	0
Mo Pac East Trail / Conservation Corridor												
447060	Operation & Maintenance	42,000	41,335	45,000		45,000	C1	0	0	0		45,000
720100	Planning & Development/Flood Damage Restoration	303,000	20,735	413,000	-118,000	295,000	C1	135,000	-20,000	115,000	F	180,000
Salt Creek Trail - Lincoln												
720200	Planning & Development	539,161	50,926	400,500		408,500	E2	322,800		322,800	F	85,700
Oak Creek Trail / Conservation Corridor												
447055	Operation & Maintenance	48,000	21,602	50,500		50,500	C1	0	0	0		50,500
720300	Planning & Development	0	0	158,000		158,000	C1	0	0	0		158,000
Homestead Trail / Conservation Corridor												
447065	Operation & Maintenance	39,500	39,908	40,500		40,500	E2	0	0	0		40,500
720400	Planning & Development/Flood Damage Restoration	250,000	141,971	51,500		51,500	E2	128,250		128,250	F	-76,750
WILDLIFE MANAGEMENT AREAS												
		133,900	78,857	130,000	-1,300	128,700		40,000	0	40,000		88,700
464010	Wildlife Management Areas-Operation & Maintenance	71,500	66,155	20,000		20,000	A4	0	0	0		20,000
			0	0		0		0		0		0
			0	30,000		30,000	C1	0	0	0		30,000
745100	Wildlife Management Areas-Major work	62,400	12,702	50,000	16,700	66,700	A4	40,000		40,000	S	26,700
			0	30,000	-18,000	12,000	C1	0	0	0		12,000
WILDLIFE HABITAT IMPROVEMENTS												
		6,000	0	5,000	0	5,000		0	0	0		5,000
Contracts												
469018	USFW Pollinator Grant	0	0	5,000		5,000	D1	0	0	0		5,000
469026	WILD Nebraska	6,000	0	0		0		0	0	0		0
CONSERVATION EASEMENTS												
		90,000	70,000	170,000	-80,000	90,000		20,000	-20,000	0		90,000
730100	NDOR South 77 Reet Area	0	0	50,000	-50,000	0	E2	20,000	-20,000	0	L	0
730200	Haines Branch Corridor to Spring Creek Prairie	40,000	40,000	40,000		40,000	E2	0	0	0		40,000
419012	Platte / Missouri Corridor Conservation Easements	50,000	30,000	30,000		30,000	A3	0	0	0		30,000
			0	50,000	-30,000	20,000	E2	0	0	0		20,000
WETLANDS												
		1,223,500	439,583	1,176,800	-142,800	1,034,000		549,494	0	549,494		484,506

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	FY 2016 EXPENDITURES THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET	STATUS CODE	FY 2017 DRAFT #1 OTHER FUNDS	FY 2017 DRAFT OTHER FUNDS ADJUSTMENTS DRAFT 1 TO 2	FY 2017 DRAFT #2 OTHER FUNDS	SOURCE	DRAFT FY 2017 NET NRD FUNDS
419225	Saline Wetland Partnership Support	55,000	37,748	55,000		55,000	A3	9,500		9,500	L	45,500
469040	Section 404 Monitoring	7,000	7,000	4,000		4,000	A5	0		0		4,000
469041	Wetland Operation & Maintenance	25,500	7,857	7,000		7,000	A4	7,000		7,000	L	0
				17,000	5,000	22,000	C1	0		0		22,000
				21,800		21,800	E2	2,500		2,500	L	19,300
730300	Saline Wetland Conservation Easements	0	0	75,000	-75,000	0	E2	0		0		0
740100	Lincoln Wetlands Nature Center, Plan Development	3,000	0	0		0		0		0		0
740150	Landmark N. 33rd LLC Wetland	55,000	0	104,000	-95,000	9,000	E2	0		0		9,000
740200	Whitehead Saline Wetlands, Planning & Development	0	0	0		0		0		0		0
740300	Schleich Wetland, Planning & Development	0	0	0		0		0		0		0
740400	Little Salt Springs Saline Wetland, Acq/Planning/Developmnt	202,500	178,784	20,000		20,000	C1	494		494	F	19,506
				28,000	-16,000	10,000	E2	5,000		5,000	S	5,000
740450	Warner Saline Wetlands	0	0	0		0		0		0		0
740500	Marsh Wren Saline Wetland, Acq. & Rest.	833,500	208,194	800,000	40,200	840,200	E2	505,000		505,000	S	335,200
740525	Little Salt Fork Marsh Preserve Wetland acquisition	42,000	0	5,000		5,000	C1	0		0		5,000
				40,000		40,000	E2	20,000		20,000	S	20,000
	TREE PLANTING	97,327	58,104	104,021	-10,000	94,021		41,871	0	41,871		52,150
419001	UNL / NRD Forester Agreement	23,500	22,421	24,500		24,500	C1	0		0		24,500
469080	Rural Forestry Program	39,100	23,623	39,600		39,600	C1	41,871		41,871	L	-2,271
471103	Community Forestry Program	30,000	10,320	35,000	-10,000	25,000	C1	0		0		25,000
471015	Living Snowfence Program	2,000	0	2,000		2,000	C1	0		0		2,000
485001	Sales Tax	2,727	1,735	2,921		2,921	C1	0		0		2,921
	MISSOURI RIVER CORRIDOR	0	0	0	0	0		0	0	0		0
750100	COE Mitigation/ wildlife habitat & recreation	0	0	0		0		0		0		0
469060	WREP contract supplements	0	0	0		0		0		0		0
	URBAN STORMWATER MANAGEMENT	2,784,840	1,251,408	3,862,000	-1,476,700	2,385,300		1,034,750	-470,850	563,900		1,821,400
770229	Stevens Creek Stream Stability	10,800	6,859	0		0		0		0		0
770300	Flood Plain Purchase/Easement/Non structural	100,000	0	100,000	-50,000	50,000	C1	0		0		50,000
775620	Beal Slough S 14th Flood Reduction Project	0	0	0		0		0		0		0
470090	BMP Demonstrations and cost-share	100,000	167,425	400,000	-300,000	100,000	C1	0		0		100,000
470091	Green Street Projects (P Street-11-15th; N Street)	140,000	113,655	0		0		0		0		0
470100	Urban Water Quality BMP C-S	50,000	23,897	60,000	-30,000	30,000		0		0		30,000
471089	Basin Master Planning	50,000	0	0		0		0		0		0
471090	Salt Creek Flood Warning System	60,000	42,288	60,000		60,000	A3	25,000		25,000	L	35,000
471093	Lincoln stormwater management programs	42,500	35,000	35,000		35,000	A3	0		0		35,000
				2,500		2,500	C1	0		0		2,500
471095	Stormwater facilities cost-share	25,000	0	50,000		50,000	C2	0		0		50,000
471150	Administration Erosion/Sediment Program	25,000	26,848	25,000		25,000	A3	0		0		25,000
471160	Conservation Easement Inspections	5,000	0	5,000		5,000	A3	0		0		5,000
471200	General Master Plan Projects			0		0		0		0		0
471201	DMR Flood Reduction Reconnaissance Study	893,077	125,050	200,000	-31,700	168,300	B2	100,000	-15,850	84,150	S	84,150
				0		0		0		0		0
471202	DMR, Trendwood	0	0	0		0		0		0		0
471203	Upper Beal Slough	160,000	20,339	225,000		225,000	B2	75,000		75,000	L	150,000
471204	Antelope Creek Water Quality	300,000	268,965	0		0		0		0		0
471206	Cardwell Branch Master Plan			50,000	-25,000	25,000	B2	0		0		25,000
471209	South Salt Creek Master Plan			1,450,000	-590,000	890,000	B2	590,000	-295,000	295,000	L	595,000
471212	Oak Cr, Lynn Cr, N Salt Cr, Tribs Master Plan			200,000	-100,000	100,000	A3	0		0		100,000
471220	Basin Master Plans (General)			240,000	-240,000	0	B2	160,000	-160,000	0	L	0
471302	Non Basin Master Plans	710,000	345,517	8,000		8,000	A2	4,000		4,000	L	4,000
				560,000	-110,000	450,000	B2	0		0	L	450,000
471502	Hazard Mitigation Plan Update	113,463	55,535	0		161,500	C1	80,750		80,750	L	80,750
				0		0		0		0		0
	LINCOLN STREAM CHANNEL IMPROVEMENTS	253,000	115,868	272,000	-132,900	139,100		0	0	0		139,100
447025	Antelope Creek Conduit Rehabilitation	95,000	91,350	0		0		0		0		0
775621	Beal Slough Channel Improvements	158,000	24,518	9,000	-2,000	7,000	A2	0		0		7,000
				263,000	-130,900	132,100	C1	0		0		132,100
	O&M OF STORMWATER FACILITIES	3,401,150	1,586,339	5,689,050	-2,650,325	3,038,725		908,000	-438,000	470,000		2,568,725
447011	Salt Creek Routine O&M (Lincoln & Ashland)	345,000	241,670	355,000	-75,000	280,000	C1	0		0		280,000
439125	Salt Creek Pipe SWIF & O&M manual update	757,000	619,467	729,200	-234,200	495,000	A2	0		0		495,000
447019	Deadmans Run Routine O&M	25,000	19,115	55,000		55,000	C1	0		0		55,000
447020	Antelope Creek Routine O&M	45,000	21,435	50,000		50,000	C1	0		0		50,000
447024	Antelope Valley Routine O&M	0	0	80,000	-20,000	60,000	C1	0		0		60,000
447030	Stevens Creek	0	0	10,000		10,000	C1	0		0		10,000
447035	Little Salt Creek	0	0	10,000		10,000	C1	0		0		10,000
447070	Oak Creek Routine O&M	38,000	13,580	38,000		38,000	C1	0		0		38,000
447075	Beal Slough Routine O&M	25,000	7,616	25,000		25,000	C1	0		0		25,000
447080	Lynn Creek Routine O&M	10,000	1,500	10,000		10,000	C1	0		0		10,000
447099	Equipment and supplies	40,000	32,942	40,000		40,000	C1	0		0		40,000
447150	Section 404 Monitoring	6,200	0	6,200		6,200	A2	0		0		6,200
775100	Antelope Creek Major C&M	832,000	277,963	93,500		93,500	A1	0		0		93,500
				71,500	-6,500	65,000	A2	0		0		65,000
				1,640,000	-888,500	751,500	C1	858,000	-438,000	420,000	F	331,500
775115	Antelope Valley Major O&M	0	0	321,000		321,000	C1	0		0		321,000
775200	Deadmans Run Major O&M	286,250	142,094	5,000	-5,000	0	A2	0		0		0
				38,650	-13,650	25,000	C1	0		0		25,000
775300	Salt Creek Major O&M, Lincoln	835,200	190,049	17,000	-17,000	0	A1	0		0		0
				2,500	-2,500	0	A2	0		0		0

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	FY 2016 EXPENDITURES THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET	FY STATUS CODE	FY 2017 DRAFT #1 OTHER FUNDS	FY 2017 DRAFT OTHER FUNDS ADJUSTMENTS DRAFT 1 TO 2	FY 2017 DRAFT #2 OTHER FUNDS	SOURCE	DRAFT FY 2017 NET NRD FUNDS
				100,000		100,000	A3	50,000		50,000	L	50,000
775400	Cask Creek Major O&M	73,000	3,064	1,287,000	-980,000	307,000	C1	0	0	0		307,000
				73,000	-975	77,025	A2	0	0	0		77,025
775500	Lynn Creek Routine Major O&M	73,900	15,644	531,000	-407,000	124,000	C1	0	0	0		124,000
				15,000		15,000	A2	0	0	0		15,000
775600	Beal Slough Major O&M	0	0	71,500		71,500	C1	0	0	0		71,500
775700	Ash Hollow Channel Major O&M	9,000	0	0		0		0	0	0		0
				9,000		9,000	C1	0	0	0		9,000
	COMMUNITY ASSISTANCE PROGRAMS	1,710,668	491,834	3,620,088	-477,220	3,142,868		931,000	0	931,000		2,211,868
778100	Flood Plain Acquisition	0	0	50,000	-50,000	0	C1	0	0	0		0
471070	General Projects	1,689,668	477,036	200,047	-110,047	90,000	A1	0	0	0		90,000
				716,000		716,000	A2	35,000	35,000	0	L	681,000
				113,000	-6,037	106,963	A3	0	0	0		106,963
				42,500		42,500	A4	0	0	0		42,500
				11,136	-11,136	0	A6	0	0	0		0
471076	Exit 426 Water Supply Study	21,000	14,798	2,487,405	-300,000	2,187,405	C1	866,000	866,000	0	L	1,291,405
				0		0		0	0	0		0
	FLOOD CONTROL DAMS & ROAD STRUCTURES	1,482,100	529,736	1,692,500	-758,900	932,600		375,100	-230,000	145,100		787,500
780130	Seward Co Havlat Road Structure	415,000	161,131	316,000	-100,000	216,000	A1	95,100	95,100	0	L	120,900
780120	Road Structures		82	0		0		0	0	0		0
447050	Road Structure O&M	30,000	0	30,000		30,000	C1	0	0	0		30,000
780360	Road Structure O&M (I:Major)	20,000	0	15,000		15,000	A3	0	0	0		15,000
				0		0		0	0	0		0
780220	Plening Flood Control Dam	420,000	5,272	41,000	-5,000	36,000	A2	0	0	0		36,000
				340,500	-260,500	80,000	A3	0	0	0		80,000
780230	Flood Control Dams (I:Major)	0	0	10,000		10,000	C1	0	0	0		10,000
447002	Emergency Action Plans	0	0	6,000		6,000	C1	0	0	0		6,000
447045	Flood Control Dams O&M	10,000	102	10,000		10,000	C1	0	0	0		10,000
447040	Watershed Dams O&M	35,000	45,540	20,000		20,000	C1	0	0	0		20,000
780350	Watershed Dams O&M (I:Major)	436,500	257,609	19,400	-13,800	5,600	A1	0	0	0		5,600
				88,000		88,000	A2	0	0	0		88,000
				221,000		221,000	C1	0	0	0		221,000
780345	Watershed Structures Rehab.	60,600	60,000	375,600	-335,600	40,000	A3	0	0	0		40,000
				140,000		140,000	A4	280,000	-230,000	50,000	F	90,000
471060	Clearing & Snagging cost-share	5,000	0	50,000	-40,000	10,000	C1	0	0	0		10,000
				5,000	-5,000	0	C1	0	0	0		0
	STREAM BANK AND CHANNEL EROSION	0	0	45,000	-45,000	0		0	0	0		0
470070	Stream Stabilization above Clean Lakes	0	0	5,000	-5,000	0	C2	0	0	0		0
470075	Lower Salt Creek Stream Stability cost-share	0	0	20,000	-20,000	0	C1	0	0	0		0
470030	Stream Stability Demos with agencies	0	0	20,000	-20,000	0	C2	0	0	0		0
	SURFACE WATER MONITORING	45,715	43,215	46,575	-2,500	44,075		0	0	0		44,075
419007	Cooperative stream gages with USGS	43,215	43,215	44,075		44,075	A4	0	0	0		44,075
419007	Surface Water quality monitoring	2,000	0	2,000	-2,000	0	C1	0	0	0		0
419007	Stream gages on bridges	500	0	500	-500	0	C1	0	0	0		0
	GROUNDWATER MANAGEMENT	743,120	191,567	1,106,749	-108,000	998,749		281,300	0	281,300		717,449
419121	Elmwood Phase III CWSPA	0	0	0		0		0	0	0		0
419121	Lower Salt Creek Phase II Implementation	41,450	0	41,450	-13,500	27,950	C1	0	0	0		27,950
419123	Otoe Co RWD #3/Weeping Water Phase II CWSPA	0	0	0		0		0	0	0		0
419126	CWSPA Phase I, II, & III Implementation	161,050	9,301	161,050	-51,500	109,550	C1	0	0	0		109,550
				10,000	-10,000	0	E2	0	0	0		0
419130	Monitoring Quality & Quantity	178,500	53,377	77,000		77,000	A2	23,000	23,000	0	S	54,000
				16,500		16,500	A6	0	0	0		16,500
				20,000		20,000	C1	0	0	0		20,000
				50,000		50,000	E1	0	0	0		50,000
				25,000		25,000	E2	0	0	0		25,000
419140	Community Water System Protection Areas (CWSPA)	0	0	0		0		0	0	0		0
419150	BMP Cost-share Programs	156,220	34,611	124		124	A5	1,800	1,800	0	L	-1,676
				103,125	-34,000	69,125	C1	6,500	6,500	0	L	62,625
419155	Dwight Valparaiso Brainard Special Management Area	70,000	38,278	10,000	-10,000	0	E2	0	0	0		0
				79,000		79,000	E2	0	0	0		79,000
419160	Data Base Development & Management	39,400	37,000	0		0		0	0	0		0
419175	Geophysical Mapping Project	25,000	19,000	410,000	11,000	421,000	E2	250,000	250,000	0	S	171,000
419200	Certification of irrigated acres	0	0	0		0		0	0	0		0
439155	Groundwater Management Master Plan	0	0	0		0		0	0	0		0
790100	Monitoring Wells	71,500	0	93,500		93,500	E2	0	0	0		93,500
	ENWRA (Eastern NE Water Resources Association)	470,480	121,383	388,580	0	388,580		328,300	0	328,300		60,280
419185	ENWRA Partnership	411,660	79,434	32,800		32,800	A4	32,800	32,800	0	L	0
				830		830	A2	830	830	0	L	0
				10,700		10,700	C1	10,700	10,700	0	L	0
419195	ENWRA Coordinator	58,800	41,949	287,950		287,950	E3	208,750	208,750	0	SL	79,200
				51,300		51,300	A4	51,300	51,300	0	L	0
				5,000		5,000	A3	23,920	23,920	0	L	-18,920
	ENWRA Carry-over to Reserve	0	0	0		0		0	0	0		0

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	FY 2016 EXPENDITURES THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET	STATUS CODE	FY 2017 DRAFT #1 OTHER FUNDS	FY 2017 DRAFT OTHER FUNDS ADJUSTMENTS DRAFT 1 TO 2	FY 2017 DRAFT #2 OTHER FUNDS	SOURCE	DRAFT FY 2017 NET NRD FUNDS
	INTEGRATED MANAGEMENT STUDIES	144,500	46,104	337,500	231,000	568,500		150,000	270,000	420,000		148,500
419400	IMP Planning and Reviews	9,000	26,104	20,000		20,000	A2	0		0		20,000
				0		0		0		0		
419420	IMP-Water Inventory	104,500	0	200,000	260,000	460,000	A2	150,000	270,000	420,000	FSL	40,000
				2,500		2,500	C1	0		0		2,500
				60,000	-29,000	31,000	E2	0		0		31,000
419440	IMP-Water Supply Management	5,000	0	10,000		10,000	E2	0		0		10,000
				0		0		0		0		
419460	IMP-Water Use Management	6,000	0	25,000		25,000	A2	0		0		25,000
439120	Lower Platte River Basin Coalition Planning	20,000	20,000	20,000		20,000	A3	0		0		20,000
	TOTALS	17,872,341	7,824,790	23,766,603	-6,435,095	17,331,508		7,017,757	-908,850	6,108,907		11,222,601

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	FY 2016 EXPENDITURES THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET
OPERATING COSTS						
405001	AUTO AND TRUCK EXPENSE	50,000	53,327	50,000		50,000
407001	DIRECTORS EXPENSE	40,000	42,416	45,000		45,000
409001	DIRECTORS PER DIEM	54,000	55,556	54,000	5,000	59,000
413000	DUES AND MEMBERSHIPS	43,580	44,138	44,872	0	44,872
001	NARD	32,300	32,300	33,592		33,592
005	NACD	1,800	1,800	1,800		1,800
007	NWRA	4,500	4,500	4,500		4,500
010	Lincoln Chamber of Commerce	980	980	980		980
021	Miscellaneous	4,000	4,558	4,000		4,000
417001	PERSONNEL EXPENSES	50,000	52,972	60,000	-5,000	55,000
419005	FEES AND LICENSES	50,000	5,236	80,000	-20,000	60,000
005	Directors Election	50,000	0	80,000	-20,000	60,000
420001	COUNTY COLLECTION FEES	90,000	85,057	90,000		90,000
	1% Retainage	90,000	85,057	90,000		90,000
423000	BONDS	1,340	1,200	1,340		1,340
001	Treasurer, et al	1,200	1,200	1,200		1,200
005	Notary Public	140	0	140		140
425000	INSURANCE	97,315	90,690	97,315	-7,564	89,751
001	Commercial Package	45,000	38,441	45,000	-3,000	42,000
003	Umbrella Liability	50,374	50,374	50,374	-4,564	45,810
005	Directors/Staff Liability	1,941	1,875	1,941		1,941
431001	LEGAL NOTICE	6,000	3,252	6,000	-1,500	4,500
433000	OFFICE SUPPLIES AND EXPENSES	211,025	167,494	212,150	-3,000	209,150
001	Supplies	28,000	19,079	29,000		29,000
002	Hardware/Computers	29,820	22,445	23,000		23,000
003	Office Machine Rentals and Maintenance	45,250	41,136	45,250		45,250
004	Data Storage/Retrieval System (maint.)	4,200	4,489	4,400		4,400
005	Computer Software	22,288	20,233	27,400		27,400
007	Computer Maintenance and Telecom.	69,467	57,656	69,100		69,100
008	Training/certification	8,000	225	8,000	-3,000	5,000
100	Office Furnishings	4,000	2,231	6,000		6,000
437001	POSTAGE	9,000	8,562	7,000		7,000
439000	PROFESSIONAL SERVICES	317,500	225,360	315,000	5,000	320,000
010	Attorney Retainer & Fees	65,000	57,313	65,000		65,000
040	Auditors Assistance	2,500	2,100	2,500		2,500
045	Audit (contract through 2020)	18,500	23,620	40,500		40,500
060	Wage and Salary Consultant (every 4 yrs; next 2020)	12,000	9,755	0		0
070	Director's Planning/Continuing Education	4,000	0	4,000		4,000
070	Public Awareness Survey (next survey 2019)	0	0	0		0
075	Database Management	211,500	131,250	200,000		200,000
080	Consulting Services for GM transition	0	0	0	5,000	5,000
090	Bank Services	4,000	1,322	3,000		3,000
451001	RENTAL EXPENSE	14,400	14,400	14,400		14,400
452001	TELEPHONE	62,700	43,971	50,000		50,000
453001	UTILITIES	17,500	14,658	18,000		18,000
463001	BUILDING MAINTENANCE	45,000	39,557	50,000		50,000
473001	Taxes on NRD Properties	2,305	4,183	4,183		4,183
763010	BUILDINGS	25,000	15,416	430,000	0	430,000

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	FY 2016 EXPENDITURES THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET
	Office and property	25,000	15,416	80,000		80,000
	Building purchase and remodel ?	0	0	350,000		350,000
765010	MACHINERY AND EQUIPMENT	34,500	16,930	34,000	-9,000	25,000
	Tree Planting machine	10,000	0	0		
	Groundwater Equipment	5,000	0	0		
	UTV/Sprayer	14,500	12,072	0		0
	6" Grass Drill	0	0	20,000		20,000
	ATV w sprayer	0	0	9,000	-9,000	0
	Miscellaneous	5,000	4,858	5,000		5,000
767010	AUTO AND TRUCK EXPENSE	43,000	47,358	69,000	-18,000	51,000
	Vehicles	43,000	47,358	51,000		51,000
	Sampling Topper for Water Truck	0	0	18,000	-18,000	0
769010	OFFICE EQUIPMENT	26,200	21,934	48,600	0	48,600
	Hardware/Computers	26,200	21,934	41,600		41,600
	Office Furniture	0	0	7,000		7,000
	TOTAL	1,290,365	1,053,667	1,780,860	-54,064	1,726,796

ACCOUNT NUMBER	DESCRIPTION	FY 2016 BUDGET	EXPENDITURES THROUGH JUNE 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET
PERSONNEL COSTS						
415000	EMPLOYEE BENEFITS	505,443	470,891	559,150	0	559,150
010	Workers Compensation	19,168	18,839	19,168		19,168
020	Unemployment Compensation	0	0	0		0
030	Retirement	106,000	100,556	116,000		116,000
034	Employee Assistance Program (EAP)	1,700	1,625	1,700		1,700
035	Deferred Comp	8,000	7,500	1,334		1,334
037	IRA	12,000	12,000	2,250		2,250
038	AFLAC	0	0	0		0
040	Health and Accident	305,675	287,106	355,698		355,698
042	Flex 125	400	360	500		500
050	Term Life, AD&D, LTD	21,000	17,087	26,000		26,000
060	Dental	24,500	22,720	29,500		29,500
070	Continuing Education Assistance	3,000	0	3,000		3,000
090	Wellness Program	4,000	3,098	4,000		4,000
100	United Way	0	0	0		0
435001	PAYROLL TAXES	150,000	132,102	150,000		150,000
455000	SALARIES-CLERICAL	178,917	180,692	183,014	5,000	188,014
001	Secretary-Cass	40,716	40,716	41,734		41,734
003	Secretary-Lancaster	38,869	38,869	39,841		39,841
004	Secretary-NRD	41,226	41,226	42,256		42,256
005	Receptionist/Program Assistant	43,106	43,106	44,183		44,183
007	Clerks-But., Sa., & Se., Co.	15,000	16,775	15,000	5,000	20,000
050	Overtime & Adjustments	0	0	0		0
457000	SALARIES-ADMINISTRATIVE	309,226	310,060	350,368	0	350,368
001	General Manager (GDJ)	125,706	125,706	44,272		44,272
	General Manager (PDZ)	0	0	123,560		123,560
003	Ass't General Manager	105,436	106,270	102,500		102,500
009	Administrative Assistant	78,084	78,084	80,036		80,036
011	Adjustments	0	0	0		0
459000	SALARIES-TECHNICAL	1,280,140	1,255,701	1,432,632	0	1,432,632
001	Operation and Maintenance Coordinator	71,074	71,074	72,851		72,851
002	Operation and Maintenance Technician	52,595	52,595	56,606		56,606
003	Resources Tech.-Cass NRCS	48,499	48,499	49,711		49,711
005	Resources Tech.-Lancaster NRCS	49,330	49,330	50,563		50,563
006	Stormwater Floodplain Specialist	60,270	60,270	61,777		61,777
008	Cons. Technician-NRCS Offices	15,000	6,301	15,000		15,000
009	Resources Coordinator	90,486	90,486	92,748		92,748
010	Resources Conservationist	57,836	57,836	59,282		59,282
011	Environmental Education Specialist	58,329	58,329	59,787		59,787
012	Public Information Specialist	59,516	59,516	61,004		61,004
013	Water Resources Conservationist	52,625	52,625	53,941		53,941
014	Water Resources Specialist	75,235	74,337	80,972		80,972
015	Projects Coordinator	87,536	87,536	89,724		89,724
016	Interns/EE Aides	25,000	16,144	28,000		28,000
017	Summer Temporaries	30,000	29,406	38,000		38,000
018	IS Administrator	72,218	72,218	74,024		74,024
019	LPRCA Coordinator	65,516	65,516	70,511		70,511
020	GIS Specialist	60,352	60,352	61,861		61,861
021	Water Resources Technician	45,879	45,879	47,026		47,026
022	Operation and Maintenance Technician	49,065	49,065	52,806		52,806
023	Maintenance Technician	34,978	34,978	35,853		35,853
031	Environmental Education Assistant	39,719	39,719	40,712		40,712
034	ENWRA Project Coordinator	0	0	0		0
040	Bookkeeper	31,000	25,608	31,000		31,000
043	Water Resources Compliance Specialist	48,082	48,082	51,748		51,748
044	Engineer or Planner	0	0	87,125		87,125
	Engineer or Planner	0	0	0		0
050	Adjustments	0	0	10,000		10,000
460000	SALARIES-MAINT. & CONSTRUCTION	140,000	121,379	149,000	0	149,000
001	Dept. of Corrections Agreement	128,000	110,723	134,000		134,000
002	Fuel and Supplies	12,000	10,656	15,000		15,000
TOTAL		2,563,726	2,470,825	2,824,164	5,000	2,829,164
GRAND TOTAL		21,726,432	11,349,282	28,371,627	-6,484,159	21,887,468

	REVENUE SOURCES	FY 2016 BUDGET	REVENUE THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET
	STATE SOURCES					
301020	WHIP Contracts	3,000	0	0		0
301050	Buffer Strips Program	21,000	16,771	21,000	-4,000	17,000
301080	NET, Conservation Easements	0	0	0		0
301120	BELF Saline Wetland (Hunt Club)	0	0	25,000		25,000
301234	ENWRA Project Coordinator	0	0	0		0
301250	Water Well Decom. Fund (GW BMPs)	4,625	0	5,000		5,000
301260	Water Sustainability Fund	0	0	250,000		250,000
	Integrated Mgmt Plan (WSF)				110,000	110,000
	Integrated Mgmt Plan (NDNR)				20,000	20,000
301270	ENWRA Project	200,000	0	181,300		181,300
301330	Beal Slough Flood Reduction Improvements	0	0	0		0
301650	NE Water Quality Fund	19,558	30,298	23,000		23,000
301720	Lower Platte River Corridor Alliance (Coordinator)	42,000	31,000	52,000		52,000
301724	Lower Platte River Sandbar	105,600	391,400	378,000		378,000
301725	Lower Platte River Envir. Suitability Assessment (NET)	0	0	0		0
301727	Lower Platte River Conservation Easements	0	0	0		0
301760	Wetland Restorations	500,000	0	505,000		505,000
301785	Saline Wetlands Partnership	0	0	0		0
301790	Western Sarpy/Clear Creek Project (Lincoln)	0	0	0		0
301860	Wildlife Management Areas-Boat Ramps	40,000	12,702	40,000		40,000
	State Subtotal	935,783	482,171	1,480,300	126,000	1,606,300
	LOCAL SOURCES					
302003	Lower Platte River Summit	0	0	6,000		6,000
302004	Lower Platte River Water Quality	17,500	12,408	18,700		18,700
302011	NRDS, Lower Platte River Corridor Alliance (Coordinator)	69,000	41,000	76,002		76,002
302014	NRDS, Lower Platte River Studies	581,677	117,004	229,688		229,688
302016	LPRCA Salary Reimbursement	0	83,781	0		0
302020	Road Structures, Engineering	35,750	7,032	22,600		22,600
302021	Road Structures, Appraisals	0	0	0		0
302022	Road Structures, ROW	0	0	0		0
302024	Road Structures, Construction	91,250	33,250	72,500		72,500
302025	Road Structures	0	0	0		0
302026	Road Structures, Oper. & Maintenance	0	0	0		0
302032	Landowners & Communities, GW BMPs	2,850	3,370	3,300		3,300
302040	Floodplain ROW / Nonstructural	0	0	0		0
302041	Stevens Creek Stream Stability Projects	0	0	0		0
302043	Deadmans Run Master Plan Project	503,077	62,500	100,000	-15,850	84,150
302044	General Projects Master Plan	0	0	0		0
302045	Salt Creek Flood Warning System	25,000	21,144	25,000		25,000
302046	Stormwater Plan (Lynn Creek Detention)	0	0	0		0
302049	Stormwater Master Plan reimbursement	0	0	0		0
302050	Corn Growers Buffer Strips Program	0	0	0		0
302052	21st & N Street property	0	0	0		0
302054	Upper Antelope Creek Improvements	0	0	0		0
302058	Sale of 2101 N Street/AV redevelopment	378,000	0	378,000		378,000
302081	Tree Planting Landowners	41,677	26,437	41,871		41,871
302144	Mopac Trail	0	0	0		0
302145	Trail Users Donations	2,500	3,482	2,500		2,500
302150	Salt Creek Trail	0	0	0		0
302160	Beal Slough Major Channel Repairs	10,000	10,170	75,000		75,000
302164	South Salt Creek Mater Plan	0	0	590,000	-295,000	295,000
302165	Non-Basin Master Plan	0	0	84,750		84,750
302166	Salt Creek Flood Mitigation Study (City)	0	0	80,000	-80,000	0
302167	Salt Creek Flood Mitigation Study (Private)	0	0	80,000	-80,000	0
302171	NDOR South 77 Rest Area	20,000	0	20,000	-20,000	0
302172	Little Salt Fork Marsh	38,000	0	2,500		2,500
302173	Little Salt Springs, Downs property addition	0	131,799	0		0
302185	Wetland O&M Reimbursements	7,000	16,000	7,000		7,000

	REVENUE SOURCES	FY 2016 BUDGET	REVENUE THROUGH June 2016	DRAFT #1 FY 2017 BUDGET	FY 2017 ADJUSTMENTS DRAFT 1 TO 2	DRAFT #2 FY 2017 BUDGET
302189	Dog Club Lease	0	0	0		0
302191	TNC Stewardship Reimbursement	7,500	15,000	7,500		7,500
302195	Saline Wetlands Partnership	2,000	2,000	2,000		2,000
302202	Little Salt Cr Master Plan (City)	0	0	0		0
302203	Little Salt Cr Master Plan (County)	0	0	0		0
302204	Stevens Creek	198,000	2,574	0		0
302205	Wildlife Management Areas	15,000	0	0		0
302450	Deadmans Run	0	0	0		0
302470	Integrated Management Planning	25,000	0	150,000	-60,000	90,000
302500	Community Assistant Program	153,052	66,657	932,000		932,000
302700	ENWRA Project	0	0	0		0
302705	ENWRA Dues	147,000	107,085	147,000		147,000
302725	Vehicle Insurance Payment	0	8,863	0		0
302710	ENWRA Coordinator	0	0	0		0
302925	BNSFRR for Salt Creek levee/road repairs	50,000	0	50,000		50,000
	Local Subtotal	2,420,833	771,556	3,203,911	-550,850	2,653,061
	FEDERAL SOURCES					
303014	Platte River Studies	0	0	0		0
303024	TEA, Salt Creek Levee Trail	347,329	20,491	322,800		322,800
303048	Little Salt Springs Wetland	0	494	494		494
303049	BELF Saline Wetland (Hunt Club)	0	0	0		0
303081	Antelope Valley COE Reimbursement	0	0	0		0
303082	Marsh Wren Expansion (Section 6)	0	0	0		0
303140	LPRCA River Projects	710,002	400,000	510,002		510,002
303220	Watershed Structures Rehabilitation	39,000	350,000	280,000	-230,000	50,000
303222	Section 319 Watershed Protection	0	0	100,000		100,000
303230	Stiefel Conservation Easement	0	0	0		0
303240	Beal Slough Flood Reduction Improvements	0	0	0		0
303250	NRCS TSP Agreement	0	0	0		0
303256	Conestoga Watershed Nonpoint Source	0	0	0		0
303330	FEMA Multihazard Mitigation Plan	104,213	41,651	0		0
303332	FEMA Disaster Relief	0	88,337	1,120,250	-458,000	662,250
303443	Meadowlark	0	0	0		0
303725	Platte River Obstruction Removal Project	0	0	0		0
	Integrated Management Planning			0	200,000	200,000
303801	COE Sec 215 Antelope Valley Reimbursement	0	0	0		0
	Federal Subtotal	1,200,544	900,973	2,333,546	-488,000	1,845,546
	TOTALS	4,557,160	2,154,700	7,017,757	-912,850	6,104,907

SUBCOMMITTEE: Integrated Management Planning
PROGRAM AREA: Integrated Management
VISIONS: A

LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT

FISCAL YEAR 2018

ACTIONS DRAFT	OBJECTIVES	STATUS CODE	DRAFT BUDGET		PRIORITY	FINAL BUDGET		BUDGET CODE	
			EXPENDITURE	OTHER FUNDS		EXPENDITURE	OTHER FUNDS	EXPENDITURE	OTHER FUNDS
Adopt procedure to track depletions and gains to streamflows upon completion by NDNR. Utilize spreadsheet tool in the interim. (Chapter 8.II.d)	A1		\$0	\$0				419400	
Review historic weather trends and cycles, data collection and sharing, and identify and address spatial and temporal gaps.	A4	E2	\$10,000	\$0	5			419400	
With UNL and others develop short and long range projection of climate change impacts on water supplies and uses.	A4	E2	\$20,000	\$0	6			419400	
Implement an emergency response/drought mitigation action plan (Chapter 7.V) (Goals & Objectives 3.5.4)	A4	C3	\$20,000	\$0	4			419400	
Conduct annual interagency meeting, conduct annual review with NDNR, prepare and distribute reports and consider Plan amendments. (Chapter 7.I.c.ii & Chapter 9)	A4		\$0	\$0				419400	
Participate with Lower Platte River Basin Coalition (LPRBC) in studies and implementation of a Basin Water Management Plan (Chapter 7.I.d.i) (Goals & Objectives 1.3.1; 1.5.2; 2.6.1 & 2.6.2)	A4	A3	\$20,000	\$0	2			439120	
WATER INVENTORY Continue collecting and storing data on ground water levels, surface water flows and storage, water use, land use changes, population changes, climate changes, continue research on ground water hydrogeology characteristics; continue upgrade of water inventory database (See Ground Water & ENWRA LRIP Program Areas)	A4		\$0	\$0				419420	

FISCAL YEAR 2018

ACTIONS DRAFT	OBJECTIVES	STATUS CODE	DRAFT BUDGET		PRIORITY	FINAL BUDGET		BUDGET CODE	
			EXPENDITURE	OTHER FUNDS		EXPENDITURE	OTHER FUNDS	EXPENDITURE	OTHER FUNDS
Use best available data and tools to study and better understand the District's aquifer properties, extents and connectivity to surface water. (Goals & Objectives 1.1.1) <ul style="list-style-type: none"> Operate stream gages on North Oak Creek and tributaries in DVB Special Management Area. 	A4	E2	\$60,000	\$0	3			419420	
Coordinate with NDNR INSIGHT on data collection and application. (Goals & Objectives 1.1.2)	A4		\$0	\$0				419420	
Maintain a comprehensive spatial / tabular water inventory database. (Goals & Objectives 1.1.5)	A4		\$0	\$0				419420	
Cooperate in surface and ground water modeling with NDNR, including hydrologically-connected areas. (Goals & Objectives 1.3.2)	A4		\$0	\$0					
Complete Lower Platte River Drought Contingency Study to evaluate the effectiveness and efficiency of water conveyance via streams from upstream sources and associated effects on stream flow. (Goals & Objectives 1.3.3)	A4 A8	A2	\$200,000	\$150,000	1			439120	302470
Coordinate with other entities to better understand urban growth projections and potential impacts on water inventory. (Goals & Objectives 1.4.1)	A4		\$0	\$0					
Cooperate with adjoining NRDs to map and analyze aquifers that span NRD boundaries. (Goals & Objectives 1.2.3) (See Ground Water)	A1		\$0	\$0					
WATER SUPPLY MANAGEMENT Implement recommendations for limited aquifer areas and coordinate with developers, builders and city and county land-use planners and zoning agencies. (Goals & Objectives 2.1.1)	A1 A8	C1	\$20,000	\$0	7			419440	
Conduct discussions with municipalities and rural water districts on coordinating services and regional water systems. (2.5.2)	A8		\$0	\$0					

FISCAL YEAR 2018

ACTIONS DRAFT	OBJECTIVES	STATUS CODE	DRAFT BUDGET		PRIORITY	FINAL BUDGET		BUDGET CODE	
			EXPENDITURE	OTHER FUNDS		EXPENDITURE	OTHER FUNDS	EXPENDITURE	OTHER FUNDS
Remove invasive species to improve conveyance. (Goals & Objectives 2.5.2) (See Platte River)	A6		\$0	\$0					
WATER USE MANAGEMENT Continue agricultural irrigation BMPs and technology. (Goals & Objectives 3.1.2; 3.1.4; 3.1.5; 3.1.9 & 3.2.2) (See Ground Water)	A9		\$0	\$0					
Apply science-based protocols for estimating unmeasured water uses. (Goals & Objectives 1.1.4 & 3.8.4)	A9		\$0	\$0					
Develop conservation programs, fees and incentives for water use management. (Goals & Objectives 3.10.1)	A9	E2	\$10,000	\$0	8			419440	

\$360,000	\$150,000	\$0	\$0		
	439075 Data Development	439120	220,000		
		439075	0		
		419400	50,000		
		419420	60,000		
		419440	30,000		
		419460	0		
			0		
			360,000		
		302470	150,000		

**ATTACHMENT C – LETTERS OF SUPPORT AND DRAFT
INTERLOCAL COOPERATIVE AGREEMENT**



July 25, 2016

Director Gordon W. Fassett, P.E.
Nebraska Department of Natural Resources
301 Centennial Mall South, 4th Floor
P.O. Box 94676
Lincoln, Nebraska 68509-4676

RE: Lower Platte River Drought Contingency Plan Water Sustainability Fund (WSF) Application

Dear Director Fassett and Natural Resources Commission Members,

This letter is to document our support for the development of the Lower Platte River Drought Contingency Plan. Our agency along with the Nebraska Department of Natural Resources and four other Lower Platte River water management agencies, are working to organize the Lower Platte River Consortium and through an Inter-local Cooperative Agreement (ILCA) our agencies would work together to develop regional solutions to improve the water supply reliability and drought resiliency of the Lower Platte River.

The Lower Platte River serves approximately sixty percent of Nebraska's population, thousands of businesses and industries, over two million irrigated acres, and provides streamflows for threatened and endangered species. Advanced planning for drought extremes is critical to avoid a number of water-related risks identified in the Water Sustainability Fund application.

The drought-driven risks in the Lower Platte River are diverse and alternatives for resolving them will be developed through this project. I fully support the application submitted by Lower Platte South Natural Resources District and urge the Natural Resources Commission members to recognize the importance and need for support and funding of this important effort.

Please communicate any questions or comments to Paul Woodward, Groundwater Management Engineer, at 402.315.1772 or pwoodward@papionrd.org.

Highest Regards,



John Winkler
General Manager
Papio-Missouri River Natural Resources District

CC: Marlin Petermann and Paul Woodward, Papio-Missouri River NRD



SCOTT L. KEEP
PRESIDENT
(402) 504-7106
(402) 504-5106 fax
Scott_Keep@mudnebr.com

Natural Resources Commission
301 Centennial Mall South
Lincoln, Nebraska 68509-4676

July 25, 2016

To: Members of the Natural Resources Commission

The Metropolitan Utilities District of Omaha (MUD) supports the Water Sustainability Fund Grant Application to assist in the formulation of a Drought Contingency Plan for the Lower Platte River. MUD – along with the City of Lincoln, the Department of Natural Resources, the Papio-Missouri NRD, Lower Platte North NRD, and Lower Platte South NRD – have been meeting and collectively working together on drought preparedness. It is imperative for Nebraska's rural and urban economic health to assure that the Lower Platte River has an adequate water supply to serve the potable water needs of the majority of our state's population. The Lower Platte River is critical for delivering water to the City of Lincoln, the Omaha metropolitan area, and various other surrounding communities. Water managers must collectively plan for drought conditions and develop necessary contingency plans to address the water needs of our state's citizens.

The drought-driven risks in the Lower Platte River are varied and significant. Grant funding of this project assures that Nebraska's valuable and crucial water supplies will remain sustainable for our current communities and future generations. Thank you for your consideration of the Water Sustainability Fund grant application.

Sincerely,

Scott L. Keep, President
Metropolitan Utilities District



PUBLIC WORKS & UTILITIES DEPARTMENT
555 South 10th Street Suite 208 Lincoln, NE 68508
lincoln.ne.gov

July 26, 2016

Gordon W. Fassett, P.E., Director
Nebraska Department of Natural resources
301 Centennial Mall South
Lincoln, NE 68509-4676

Dear Mr. Fassett:

The City of Lincoln, Nebraska strongly supports the Lower Platte South Natural Resources District's (LPSNRD) Water Sustainability Fund proposal. A component of that proposal is the development of the Lower Platte River Drought Contingency Plan. To develop the plan, the City of Lincoln Water System is in the process of finalizing a partnership with five other agencies that plan, manage and/or supply water resources within the Lower Platte River Basin to form the Lower Platte River Consortium. The purpose of the consortium is to study long-term water supplies available to the lower sub-basin for enhancing stream flows or aquifer storage to support sustainable public water systems. The consortium is also developing an Inter-Local Cooperative Agreement so that partners can work together to develop regional solutions to improve the water supply reliability and drought resiliency of the Lower Platte River. Consortium partners include:

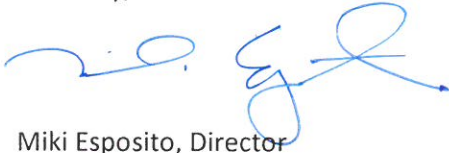
Nebraska Department of Natural Resources
Lower Platte South Natural Resources District
Lower Platte North Natural resources District
Papio-Missouri River Natural Resources District
Metropolitan Utilities District

Additional evidence of the City of Lincoln's support of the Lower Platte River Drought Contingency Plan is our commitment of \$40,000 (required of all consortium partners) toward the consortium. The \$40,000 has been identified within the City's Capital Improvement Program for FY 2016-17 as a component of a larger project. Along with planning activities, the consortium will seek grants to further development of the Drought Contingency Plan.

The lead agency for the consortium will be the LPSNRD. LPSNRD is applying for a Water Sustainability Fund grant to further the consortium's planning activities. Considering that the Lower Platte River serves approximately 60% of Nebraska's population, thousands of businesses and industries, over two million irrigated acres, and provides stream flows for threatened and endangered species, the City of Lincoln strongly supports the advanced planning for drought extremes in order to avoid a number of water-related risks that have been identified in LPSNRD's Water Sustainability Fund application. If funded, the grant will help the consortium develop alternatives addressing diverse drought-driven risks regarding the Lower Platte River.

In closing, the City of Lincoln encourages the Natural Resources Commission to seriously consider funding LPSNRD's Water Sustainability Fund proposal as it will further our efforts in developing the Lower Platte River Drought Contingency Plan.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Miki Esposito', written in a cursive style.

Miki Esposito, Director
Public Works and Utilities

LOWER PLATTE RIVER CONSORTIUM

This Agreement (hereinafter “this Agreement”) is entered into by and between the following members, all of which are political subdivisions of and are situated in the State of Nebraska or an Agency of the State of Nebraska, , and are collectively referred to as “Parties”.

The Parties to this Agreement are identified as follows:

Nebraska Department of Natural Resources
Lower Platte South Natural Resources District
Lower Platte North Natural Resources District
Papio-Missouri River Natural Resources District
City of Lincoln
Metropolitan Utilities District

WHEREAS, the Lower Platte River Basin is geographically large and diverse in its geology, land use, ground and surface water supplies, and water uses. Each of the parties is charged with responsibilities for planning, managing, and/or supplying water resources. These Parties are located and carry out their functions in the lower subbasin of the Lower Platte River Basin, but much of the water supplies that support these functions are derived from the upper subbasins of the Lower Platte River Basin. The Parties desire to work together to evaluate the water supplies available to the Lower Platte River subbasin during times of shortage.

Therefore, in consideration of the mutual covenants expressed herein, good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. AUTHORITY:

This Agreement is made and entered into by the Parties pursuant to the certain authorities conferred upon each under the Interlocal Cooperation Act; Neb. Rev. Stat. S13-801 through S13-827, specifically 13-807 for forming joint contracts.

2. CONSORTIUM:

The Parties hereby create the Lower Platte River Consortium (hereinafter referred to as “Consortium”). The Consortium shall be governed by the terms of this Agreement and pursue the purposes described in Section 3. The Consortium shall not be an entity separate and distinct from the respective Parties hereto, but rather a collaborative working arrangement of the Parties.

3. PURPOSE:

The purpose of this Agreement is for the Parties to form a Consortium to study long-term water supplies available to the lower subbasin for enhancing streamflows or aquifer storage to support sustainable public water systems.

This Agreement shall provide the organizational and administrative structure and enumeration of the powers, privileges and authority of the Consortium and the financial cooperative effort necessary to carry out its purpose. The powers, privileges and authorities of the Consortium shall not be used in a manner that is in violation of any of the Parties' public purposes.

4. POWERS :

The Consortium shall have such powers, privileges and authority as authorized by the Parties as necessary to achieve the purposes of the Consortium as set forth in this Agreement. Such powers, privileges and authority shall include but not be limited to the following authorities:

- i. Schedule and conduct meetings to transact business
- ii. To hold public meetings
- iii. To enter into contracts and agreements with other public agencies and private sector vendors except that a contract or agreement with any subject matter under the Department of Natural Resources (Department) jurisdiction shall be approved or disapproved by the Director of the Department (Director) and if approved shall be concurrently executed by the Director and the Lead Party or the contract or agreement shall be void or voidable.
- iv. To assess, collect and expend funds from the members, from grants, or other financial sources.
- v. To undertake studies, investigations or surveys and do research as may be necessary, , and publish and disseminate the results.
- vi. To retain legal and other professional services

5. CONSORTIUM :

The Consortium shall be responsible for the administrative, technical, and financial affairs of the Consortium. The Consortium shall be composed of one representative from each of the Parties.

- i. Each Party shall designate a representative and an alternate to the Consortium and shall notify the Lead Party in writing of such appointments and of any subsequent changes in appointments.
- ii. Each Party shall be entitled to one vote, cast by either the representative or alternate for the Party.
- iii. All decisions shall be made by unanimous consensus of the Consortium members. A quorum, which shall be the the presence of a representative or alternate representative of each Party shall be required to transact any official discussions or business.
- iv. Meetings shall follow the requirements of the Public Meeting Act.
- v. Meetings of the Consortium shall be held at least quarterly, or at the call of the Consortium Chair.
- vi. The representatives of the Consortium shall select from among the Consortium members a "Consortium Chair" and "Consortium Vice-Chair"
- vii. The Consortium may also retain professional and legal services, if needed.

6. LEAD PARTY:

The Lower Platte South Natural Resources District shall serve as the Lead Party for the Consortium. As Lead, its responsibilities include:

- i. Serving as the administrator, to include collecting and holding the contributions from members and other revenues, making the disbursements for expenses related to the Consortium activities, and as grant applicant and administrator.

- ii. Serving as contracting member along with the Department on behalf of the Consortium.
- iii. Serving as day-do-day administration for the Consortium, including information dissemination to members and the general public, scheduling and organization of meetings, record-keeping, and coordination of study participants including consultants and legal counsel.

7. FINANCES AND BUDGET:

The Consortium shall be applying for grants to assist in the cost of preparing the Lower Platte River Drought Contingency Plan. Successful grant determinations will lower each Party's pro-rata share of contributory funds. Each Party's total contribution under this agreement will not exceed \$40,000, with the exception of the Department of Natural Resources whose share will not exceed \$100,000.

The Consortium shall have the authority to authorize applications for financial grants, to include use of Consortium funds and in-kind services for match. Such applications shall be made by the Lead on behalf of the Consortium.

8. DURATION:

This Agreement shall become effective and binding upon its approval by appropriate action of all of the Parties. The term of this Interlocal Agreement shall be three (3) years from the effective date, unless further extended by the mutual agreement of all Parties.

9. WITHDRAWAL:

Any party to this Agreement may withdraw from this Agreement and from representation on the Consortium upon written notification to the Chair of the Consortium. Such withdrawal shall be effective upon receipt of the written notification. There will be no financial reimbursement of remitted funds unless specifically authorized by the Consortium .

10. NEW MEMBERS:

New members can be added to the Consortium with a vote of the Consortium. Eligible entities would be limited to political subdivisions charged with responsibilities for planning, managing, and/or supplying water resources for public water systems in the Lower Platte River Subbasin.

11. PARTIAL OR COMPLETE TERMINATION :

This Agreement and the Consortium created hereby shall be terminated upon the earlier of the completion of its purposes and objectives described herein or upon the vote of two-thirds of the then constituted Consortium for the complete or partial termination of the Consortium and this Agreement. Upon action to terminate the Consortium, all outstanding debts and obligations of the Consortium shall be paid and all unused funds and appropriations shall be returned to the remaining Parties in such proportions as represented by the pro rata share paid by each Party.

12. AMENDMENT AND MODIFICATION:

For all matters other than membership, this Agreement may be amended or modified upon the approval of written modifications by all then current Parties hereto in writing, signed by and duly adopted and approved by each of the current Parties hereto.

13. DUPLICATE COUNTERPARTS

This Agreement may be executed in any number of counterparts, each of which shall be an original, but all such counterparts shall constitute one and the same instrument. This Agreement is hereby approved and executed by the following Parties on the dates shown below.

NEBRASKA DEPARTMENT OF NATURAL RESOURCES

BY: _____

DATE: _____

CITY OF LINCOLN

BY: _____

DATE: _____

METROPOLITAN UTILITIES DISTRICT

BY: _____

DATE: _____

LOWER PLATTE SOUTH NATURAL RESOURCES DISTRICT

BY: _____

DATE: _____

LOWER PLATTE NORTH NATURAL RESOURCES DISTRICT

BY: _____

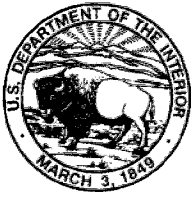
DATE: _____

PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT

BY: _____

DATE: _____

ATTACHMENT D – BUREAU OF RECLAMATION GRANT



United States Department of the Interior

BUREAU OF RECLAMATION
PO Box 25007
Denver, Colorado 80225-0007

IN REPLY REFER TO:

84-27852
1.3.11

June 23, 2016

VIA ELECTRONIC MAIL

Nebraska Department of Natural Resources
Attn: Jennifer Schellpeper
301 Centennial Mall South
Lincoln, Nebraska, 68509-4676

Subject: Funding Opportunity Announcement (FOA) No. R16-FOA-DO-005 – WaterSMART Drought Contingency Planning Grants for Fiscal Year (FY) 2016 – Drought-002-Your Application Titled, “Lower Platte River Drought Contingency Plan.”

Dear Ms. Schellpeper:

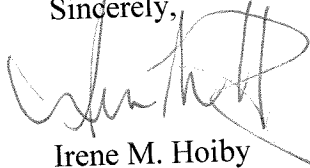
Thank you for submitting a Drought Contingency Planning Grant application. The Bureau of Reclamation is pleased to inform you that your application was among those receiving the highest ratings and is now being considered for award of a financial assistance agreement. Your application included a request for \$200,000 to complete your proposal titled, “Lower Platte River Drought Contingency Plan.” Reclamation anticipates awarding Federal funds in the amount of \$200,000 for your proposed project.

Please note that this letter is not a final commitment of funding. Reclamation must have sufficient evidence prior to award that non-Federal cost share will be available by the start of the project. The final funding amount may be adjusted if necessary.

Also please be advised that as stated in Section IV.B of the FOA, we intend to post copies of successful Drought Contingency Planning applications as examples on Reclamation’s website. While this generally does not raise any issues, we find it prudent to provide successful grant applicants with an opportunity to redact any sensitive information from their proposals prior to posting them on our website. As a rule, we remove the SF-424s; however, if there are any other items you would like redacted, please let me know by Friday, July 1, 2016. Should we not hear from you by this date we will assume that there are no objections to posting the full application.

Thank you for your interest and participation in the WaterSMART program. If you have any questions about the program, please contact Mr. Darion Mayhorn, Drought Response Program Coordinator, at 303-445-3121 or dmayhorn@usbr.gov. The Grants Specialist that will be responsible for awarding and administering your agreement will contact you to finalize your award. If you have questions concerning the next steps in awarding this agreement, please contact me at 303-445-2025.

Sincerely,

A handwritten signature in black ink, appearing to read 'Irene M. Hoiby', written over a horizontal line.

Irene M. Hoiby
Grants Officer

3.0 TECHNICAL PROJECT DESCRIPTION

The Consortium is embarking on this study to develop a drought contingency plan for the Lower Platte River in Nebraska. The six water management agencies that comprise the Consortium will work together to develop regional solutions to improve the water supply reliability and drought resiliency of the Lower Platte River area. The following sections describe how each of the required six elements of a drought contingency plan will be addressed. The primary focus of the Lower Platte River Plan will be to further refine the Consortium's collective understanding of vulnerabilities, develop more robust monitoring and forecasting tools coupled with timely triggers, new mitigation strategies and responsive actions, and create a sound operational framework to improve critical water supply needs of the area.

3.1 Drought Monitoring

Drought monitoring will be based on key hydrologic factors used to establish a baseline for water supply conditions and provide ongoing drought condition information used to trigger response actions. The Consortium will work to develop forecasting tools and key triggers that incorporate this existing hydrologic data as well as review potential improvements that may be needed to improve predictions and the timing of response actions. These predictions will work to build off of tools developed by the National Drought Mitigation Center.

Quantification of the surface water and groundwater resources will be reviewed to develop a thorough understanding of the key hydrologic factors that determine when drought conditions are beginning and the severity of ongoing drought conditions. The Consortium has previously developed a number of key datasets that will be utilized through this planning effort to develop forecasting tools and triggers. This list includes:

- Groundwater and surface water data in support of water management efforts within the Loup River, Elkhorn River, and Platte River Basins.
- Existing numerical models which encompass the basin and provide an understanding of the underlying hydrogeology and its connection to the surface water.
- Hydropower facilities (Loup Power District), canals, their operations, and their impact on the water resources in the basin.
- Specific knowledge and understanding of significant water users and their impact on basin water resources and opportunities for conjunctive management.
- A preliminary assessment of likely data sources and models required/available is provided in **Table 2**.

Data/Information from

Table 2. Data sources and models that will be utilized in development of the Plan

Description of Data	Source	Data Type/Use
Groundwater elevation data (seasonal, monthly, daily, sub-daily)	MUD, USGS, NRDs, USACE (Mead site)	Assess connectivity of surface water and alluvial aquifer by comparing surface and groundwater hydrograph responses to pulse flows
Surface water discharge and stage data for Loup, Elkhorn, and Platte Rivers; and tributaries	USGS, NDNR, MUD pre-design study (HDR, 1993)	Evaluate and characterize reach gain/losses; assess stage correlation
Stream bed K and conductance for Loup, Elkhorn, and Platte Rivers; and tributaries	MUD, UNL, USACE (Mead site), journal articles (e.g., Cheng et al., 2011)	Assess connectivity of surface water and alluvial aquifer
Hydrogeology and characterization of surface/groundwater interaction	ELM, CENEB, LPNNRD, MUD, COHYST and Lower Platte River groundwater models; AEM depth slices; saturated thickness estimates; CSD cross-sections	Assess connectivity of surface water and alluvial aquifer; correlate to spatial variations in aquifer; estimates of conveyance losses from calibrated groundwater models
DNR water administration records for the previous 20 years	DNR Fully Appropriated Basin Report, water administration records	Evaluate historic administration of surface water on the Platte, Loup, and Elkhorn Rivers
Information on influent and effluent from the Mead site to Wahoo or Clear Creeks and pumping from extraction/containment wells.	USACE	Evaluate as potential source of water for augmenting flows in the Lower Platte River
Daily, annual, and seasonal reach gain/loss estimates	DNR excess flow evaluation (HDR, 2013)	Estimates of reach gain/loss for developing routing tool to be used in analyses
Geomorphic, hydraulic, and stage change trends of the Lower Platte River	PRRIP (HDR, 2009), Loup Power District relicensing (HDR, ongoing)	Extensive information on current hydraulic and geomorphic conditions as well as trends in the Lower Platte for evaluating potential projects and sensitivity to future trends
Hydrologic trends in the Lower Platte River	LWS (HDR, 2013); Loup Power District relicensing (HDR, ongoing)	Extensive information on current hydrologic conditions as well as trends in Lower Platte flows for evaluating potential projects and sensitivity to future trends
Spatial and temporal estimates of available excess flows	DNR excess flow evaluation (HDR, 2013); Lower Platte Basin Study (HDR, 2016)	Estimates of timing and quantities of excess flows along the Lower Platte, Loup, and Elkhorn Rivers that could be utilized by potential projects
Potential Conjunctive Management project sites	Lower Platte Basin study (HDR, 2016)	Baseline evaluations of potential projects and benefits for augmenting flows in the Lower Platte River
CropSIM State-Wide Watershed Model data	DNR (TFG, ongoing)	Estimates of runoff from tributary watersheds for potential projects.
Well field operations	HDR modeling analyses for MUD (ongoing) and LWS (HDR, 2013)	Evaluate operational elements of the wellfield (estimates of recharge, drawdowns, and operational thresholds).

Hydrologic data will be utilized to develop an empirical routing tool that will be used to estimate conveyance losses and timeliness of triggers for responsive actions. The routing tool will be developed to simulate losses on a reach by reach basis - defined by existing gage locations – and will incorporate necessary constraints (intervening water users, peak evaporative loss periods, etc.). Surface water gaging data will be the primary driver in initially estimating stream flow gains and losses by reach (RGL). Temporal trends in RGL (monthly, seasonal, annual, etc.) will be determined with the empirical routing tool, and potential correlations (wet/dry year, river stage, etc.) will be investigated to enhance tool performance. Hydrogeologic information and surface/groundwater interaction characterized in the identified data sources will be used to refine the routing tool, specifically to inform spatial variability of reach losses and to characterize the potential errors and qualitative level of uncertainty.

Once constructed, the tool will be verified using data from observed runoff events of comparable magnitude to the anticipated project flows. In addition, the Platte River reaches below the Loup River confluence may be verified using the daily releases from the hydrocycling of the Loup Power District project. In addition to verifying model performance, this effort will inform the Consortium of key data gaps, and the sensitivity of results to those key data elements, thus allowing for targeted future improvements in data collection to support drought monitoring.

3.2 Vulnerability Assessment

A vulnerability assessment will be performed through the development of the Consortium's Plan. An assessment of the risks to critical water resources for the region and the factors contributing to those risks will be evaluated. Many of the Plan participants have previously developed water supply and demand projections for the future under a range of conditions. These projections will also be reviewed with newly available climate change information to further expand the range of vulnerabilities that may exist under future drought conditions. The Plan will assess the water supply reliability needs and vulnerabilities under these various hydrologic conditions and water shortage scenarios as well as key interactions between the Lower Platte River and significant upstream tributary areas.

3.3 Mitigation Actions

The Consortium's Plan will identify, evaluate, and prioritize mitigation actions and activities that work to build long-term resiliency to drought and mitigate the risks posed by future droughts. Mitigation measures that are expected to be reviewed through the planning process include:

- Development of new supplies through repurposed reservoir storage, new reservoir storage, and groundwater augmentation;
- Assessment of conjunctive use opportunities through coordination and agreements with upstream irrigation districts (Figure 4);
- Development of markets, exchanges, and water sharing agreements to reduce demands during drought periods;
- Water conservation and water use reduction.

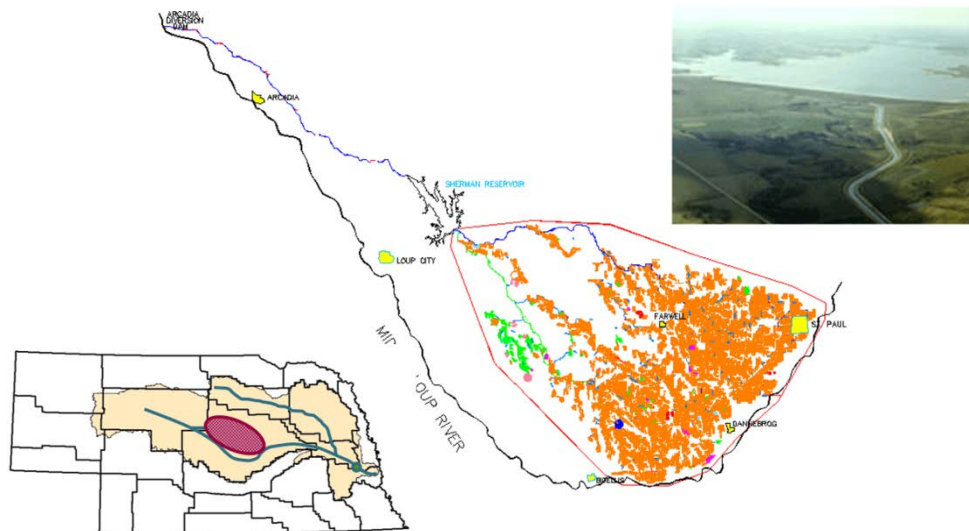


Figure 4. Existing upstream irrigation district infrastructure within the Loup River Basin will be reviewed for its potential to support conjunctive use.

The aim of these mitigation actions will be to decrease future vulnerabilities and reduce the need for critical response actions during drought. Each of these mitigation strategies will be assessed for likely benefits as well as evaluating the associated legal constraints, inclusive of permitting requirements, environmental constraints, third party impacts, and cost of implementation. Additionally, the Plan will include the specific roles and responsibilities of each member of the Consortium in dissemination of public information prior to and during drought conditions to raise awareness of the need for effective mitigation strategies.

3.4 Response Actions

The Consortium's Plan will identify, evaluate, and prioritize response actions and activities that can be implemented quickly during a drought. These response actions will be evaluated for their effectiveness during specific stages of a drought as a means to manage limited supplies and decrease the severity of impacts. The assessment of response actions will include timeframes required to implement the action and the likely conveyance benefits that may result from actions in upstream tributary areas. Potential scenarios that will be evaluated include:

- Surplus water supplies held in storage in three locations in the basin through new storage or repurposing of existing storage;
- Streamflows generated by retiming canal recharges in the Middle Loup Subbasin;
- Streamflows generated by reduced alluvial groundwater pumping;
- Streamflows generated by groundwater augmentation pumping;
- Alluvial aquifer recharge by sandpit storage;
- Call on the river to administer surface water rights.

These measures will be evaluated for how responsive they are in alleviating water supply shortages during drought periods. Additional actions related to administrative actions, such as water administration and increased mandates for water conservation will also be reviewed for their effectiveness in responding to the specific drought needs identified in the Plan.

These response actions will be assessed for constraints that may exist due to the reliability and temporal variability in available water supplies, physical limitations on infrastructure capacity, and maximum delivery rates, as well as the likely range of benefits that would be derived through conveyance of each management action under a range of streamflow conditions. For each responsive action, an assessment of conveyance will be determined based on the empirically derived model that will support drought monitoring. This approach will allow for scenario testing to develop a matrix of predicted streamflow rates and aquifer storage productivity that will serve to set operational objectives aimed at achieving the necessary targets to avoid critical trigger levels. Additionally, this analysis may identify areas where increased monitoring of river and aquifer conditions is required.

Once a full assessment has been completed to determine the likely streamflow benefits associated with action, the Consortium will focus on evaluating the associated legal constraints, inclusive of likely permitting requirements, environmental constraints, third party impacts, and cost of implementation.

3.5 Operational and Administrative Framework

The operational and administrative framework for monitoring, and potential mitigation and response measures will be identified and evaluated as part of the Lower Platte River Drought Contingency Plan. The operational, institutional and regulatory limitations associated with planning, implementing and operating each of the mitigation and response measures will be evaluated through this planning effort. The Consortium's multiagency regional approach will enable it to most efficiently enhance water supply reliability and improve the Lower Platte River areas resiliency to future droughts. The operational framework will ensure that clear roles are established for continuous drought monitoring, development and implementation of mitigation measures, initiation of response actions, including emergency response actions, and updates to the Plan.

3.6 Plan Update Process

The Consortium will develop a schedule for Plan updates and will work to integrate this schedule with other existing planning efforts. **Table 3** below shows the various planning efforts of the group and the update and review schedules associated with each plan.

Table 3. Previous water planning and drought planning efforts of Consortium members.

Name of Plan	Most Recent Review/Update	Frequency of Reviews
State of Nebraska Drought Mitigation and Response Plan	2000	Annual Meeting
Lower Platte South Natural Resources District Integrated Management Plan	2015	Annual Review
Lower Platte North Natural Resources District Integrated Management Plan	2016	Annual Review
Papio-Missouri River Natural Resources District Integrated Management Plan	2015	Annual Review
Lower Platte River Basin-Wide Plan	2016	Annual Review
Lincoln Water System Facilities Master Plan	2014	Periodic
Metropolitan Utilities District Water Alert Emergency Plan	2002	Periodic

Additionally, the Plan will describe responsibilities of the Consortium members in maintaining key drought planning data and monitoring drought conditions as the Plan is implemented.