NEBRASKA NATURAL RESOURCES COMMISSION

Water Sustainability Fund

Application for Funding

Section A.

ADMINISTRATIVE

PROJECT NAME: River Flow Augmentation Delivery Structures

PRIMARY CONTACT INFORMATION

Entity Name: Nebraska Public Power District

Contact Name: Randy Zach

Address: 1414 15th Street, Columbus NE 68601

Phone: 402-563-5377

Email: rrzach@nppd.com

Partners / Co-sponsors, if any: N/A

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

   Grant amount requested. $ 205,068 [60% of the total]

   Loan amount requested. $ NA

   If Loan, how many years repayment period? Click here to enter text.

   If Loan, supply a complete year-by-year repayment schedule.
   Click here to enter text.

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☒	Obtained: YES☐	NO☐
Surface Water Right	N/A☒	Obtained: YES☐	NO☐

USACE (e.g., 404 Permit)	N/A☒	Obtained: YES☐	NO☐
Cultural Resources Evaluation	N/A☒	Obtained: YES☐	NO☐
Other (provide explanation below) Click here to enter text.	N/A☒	Obtained: YES☐	NO☐

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. Click here to enter text.

   If yes what is the population served by your project? Click here to enter text.

   If yes provide a demonstration of need. Click here to enter text.

   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? Click here to enter text.

   If yes, describe the changes that have been made since the last application. Click here to enter text.

   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.

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.
$ 0.

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:

The following responses demonstrate project feasibility. The problem that will be solved by the project is that Nebraska Public Power District's (NPPD) current river structures and gates were not designed to pass the small amounts of flow as required with transfers of water in an accurate manner. While measuring water flowing through them is possible, its accuracy is as low as +/- 30-50% at low flows due to turbulence. The purpose for the project is to build structures to ensure that the proper amount of water is bypassing the river diversion structures and can be measured. The benefit of the project is to protect against the risk of insufficient flows to NPPD's customers or other surface water users. This project will decrease that risk by more accurately measuring bypassed water than the current river gates would allow. The project will provide measurement accuracy of 5% or better. In a water-scarce area, this improvement in accuracy is significant. The structures provide control, measurement, and documentation of water flows less than 100 cubic feet per second (cfs) from water to be provided for instream beneficial uses, likely either from the canals themselves or from upstream canals to one of a variety of beneficial uses.

A discussion of the plan of development (004.01 A

NPPD proposes to construct two river delivery structures to deliver and measure up to 100 cfs of surface water flow for river augmentation below NPPD's Dawson County and Gothenburg irrigation canal headgates. Each structure will include: a gate capable of measuring flow, supports for the gate, screening, supervisory control and data acquisition (SCADA), and a means of conducting the water from the new gate to the river channel. The augmentation deliveries would occur annually during June-September. The structures will have a useful life of at least 40 years. The Gothenburg Canal and Dawson County Canal structures each will be capable of delivering through the diversion structure up to 100 cfs. For example this flow rate equates to approximately 22,000 acres of the consumptive portion of irrigation water rights transferred to instream uses.

The project purpose is to provide accurate measurement for surface water for instream enhancement purposes for threatened and endangered species for the Platte River Recovery Implementation Program (PRRIP) in the near future and potentially other beneficial uses in the farther future.

Project feasibility was determined by conducting an engineering evaluation of the drawings and diversion structure and subsequent development of engineering plans, drawings (See Attachment A) and the cost estimate of the project.

Task 0 is to procure gates and materials for construction.
Task 1 will include mobilization of the equipment necessary to install the gate structure and the gate. Equipment needed includes an excavator or backhoe, pickup truck, dump truck, etc.
Task 2 is to excavate for placement of the structures to hold the gates. The total excavation is expected to include approximately 2000 cubic yards of material.
Task 3 involves forming for and placing of concrete for the gate structure. Sixty-three yards of reinforced concrete will be poured for the structures in total. The gate structure will include an open chute that will receive the gates in a later task.
Task 4 is the installation of the gates by using heavy equipment such as a backhoe or crane to lift the gate into position for its final placement.
Task 5 is installation of 135 feet of 48" corrugated metal pipe that will run from the gate through the existing diversion structure to the river channel.
Task 6 is installation of electrical wiring to the project from nearby sites that already have electricity. Also 300 cubic yards of concrete riprap will be placed to prevent erosion surrounding the structure.
Task 7 installing debris diverters to prevent debris from interfering with the structures.
Task 8 Electrical wiring and installation of the SCADA and Programmable Logic Control (PLC) card equipment will occur. Configuration and testing will follow to ensure everything is in working order.
Task 9 is the final task which includes any backfilling, grading, seeding, and erosion protection where needed.

The project can be started as early as the spring of 2018 with an estimated completion date of December 31, 2018. Drawings associated with the project are in Attachment A "Drawings".

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

NPPD personnel including engineering and engineering techs performed the field investigations consisting of LIDAR surveys which were incorporated into the engineering drawings in Attachment A "Drawings".

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

See drawings in Attachment A "Drawings".

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

None needed for these projects as it will be done on NPPD property.

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

Required geologic investigation (004.01 E 1);
None needed.

Required hydrologic data (004.01 E 2);
None needed. These will be gate structures to release smaller rates of flow than the existing NPPD radial gates at the sites.

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

NPPD information from existing structures at the sites was used. See drawings in Attachment A "Drawings".

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);
See above.

A description of field or research investigations utilized to substantiate the project conception (004.02 B);
See above.

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

Water bypass at the diversion structure will include water from NPPD provided for instream uses or other canals or sources that need to pass these diversion structures, including from upstream sources.

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).

Existing structures will not be affected physically or operationally.

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 that NPPD studied was to build these types of release/measurement structures at a location on our canals after the water is diverted into the irrigation canals. The engineering estimate of that project was $467,474. The current design of putting the measurement structures adjacent to our river gates is more economical by $125,694 or 27%. This cost savings is a benefit of the project.

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).

  See Attachment B "Cash Flow Form". The estimated construction period is September-December 2018 and the estimated project life is at least 40 years.

  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 project will increase water sustainability by enabling lower flows to bypass NPPD's two irrigation diversion structures, thus helping to ensure the proper amount of water is being bypassed. If too much water is bypassed, NPPD's and other water users could be left short of water.

  The next best alternative that NPPD studied was to build these types of release/measurement structures at a location on our canals after the water is diverted into the irrigation canals. The engineering estimate of that project

was $467,474. The current design of putting the measurement structures adjacent to our river gates is more economical by $125,694 or 27%. This cost savings is a benefit of the project.

NPPD's project is an integral part of providing augmentation to surface flows for the PRRIP. Nebraska is a party to PRRIP for endangered species compliance. The project could, in the future, also facilitate augmentation water for the Central Platte Natural Resources District (CPNRD) Integrated Management Plan; The Twin Platte Natural Resources District (TPNRD) Integrated Management Plan; and The Tri-Basin Natural Resources District (TBNRD) Platte River Integrated Management Plan.

Intangible benefits include any non-consumptive use of water in the river that is not the primary use. For example if the primary use of the water is for endangered and threatened species, then recreation, the river ecosystem, and wildlife habitat would be intangible benefits. Another benefit is that this project could be used as a pilot for allowing the NDNR to more accurately measure water passing river diversions, increasing knowledge necessary for real time water administration.

- 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).
  See Attachment B "Cash Flow Form".
- 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).
  NA

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

NPPD has sufficient funds to pay for its 40% of costs. NPPD is a public corporation and political subdivision of the state of Nebraska with 2016 revenues of approximately $1,154,000,000.
NPPD can commit to its share of the costs of the project through its Irrigation business unit budgets.

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

O&M repair costs are contained within NPPD Irrigation business unit. NPPD has sufficient funds to pay for its 40% of costs and to cover OM&R.

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

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

The project will minimize impacts to the natural environment because the project will be built adjacent to existing NPPD irrigation river gates. This will ensure that minimal excavation or otherwise disturbing the environment is accomplished and appropriate erosion control measures will be used and maintained. All ground and vegetation that is disturbed during construction will be restored using proper backfilling processes, grading, and native grass seeding.

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

NPPD is a public power and irrigation district that operates under statutes of the state of Nebraska. NPPD's irrigation canals have operated for approximately 125 years, NPPD has provided for operation, maintenance, construction and monitoring of its irrigation canals and as such is qualified, responsible and legally capable of carrying out this project, which is contained entirely on its property. We have 8 employees in the irrigation business unit and have a budget within NPPD's budget to provide for this need.

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

NPPD's project is an integral part of providing augmentation to surface flows for the PRRIP of which Nebraska is a party. One of the PRRIP's objectives is to decrease shortages of Platte River flows for endangered species target flows. Additionally the project could in the future also facilitate augmentation water for the Central Platte, Twin Platte, or the Tri-Basin Natural Resources Districts' Platte River Integrated Management Plans.

10. Are land rights necessary to complete your project?

YES☐ NO☒

If yes, provide a complete listing of all lands involved in the project.
Click here to enter text.

If yes, attach proof of ownership for each easements, rights-of-way and fee title currently held.
Click here to enter text.

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

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

The project is on NPPD's property and 404 permit requirements are covered under the Corps' nationwide permit for Irrigation Facilities.

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

The consequences of these projects are positive in that there will be more verifiable and measurable water made available to beneficial uses including threatened and endangered species, habitat, and other integrated management uses.

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.

   These structures facilitate additional water that can increase flows in the central Platte River and lower Platte River that benefit municipal wellfields especially during drought conditions.

Cities that utilize water that is hydrologically connected to the Platte River are Kearney, Grand Island, Lincoln, and Omaha. The combined population of those cities is approximately 750,000. Delivery of this water would augment Platte River flows during drought conditions or for increases in population should the water be designated to this beneficial use.

Concerns have occurred by these cities regarding lower Platte River flows ability to recharge aquifers of their wellfields.

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

NPPD's project is an integral part of river flow augmentation that in could be the Platte River Recovery Implementation Program (PRRIP) as proposed or could provide water for flow augmentation below Lexington as may be required by the IMP's for the following plans: 1) the Central Platte Natural Resources District (CPNRD) Integrated Management Plan (IMP) issued September 15, 2009 by the CPNRD and the Nebraska Department of Natural Resources (NDNR); the Twin Platte Natural Resources District (TPNRD) Integrated Management Plan issued August 13, 2009 by the TPNRD and the NDNR; and the Tri-Basin Natural Resources District (TPNRD) Platte Basin Integrated Management Plan issued August 11, 2009 by the TPNRD and the NDNR.

NPPD has filed applications with NDNR that would affect the assignment of the relinquished water appropriations through the transfer statutes to instream use. NPPD has investigated multiple means to get the water delivered past the Gothenburg and Dawson County diversion structures in a measurable manner.

The following goals and objectives of the IMPs could benefit from the project: 1) to provide offset water for IMPs, and 2) to minimize conflicts between water users. The project can assist in these by accurately measuring transferred water.

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.

The project contributes to water sustainability goals because it passes streamflow through the irrigation diversions for a variety of potential instream uses. These potential beneficial uses include agricultural, municipal, industrial, recreational, and wildlife water users as well as enhanced groundwater recharge from the river below the Gothenburg and Dawson County canal diversions.

The reach of the Platte River that will benefit is generally from the west border of Dawson County to the Missouri River on the Platte River, including endangered species habitat in the central Platte River. The amount of flow provided through each of these structures is approximately 100 cfs. This will enhance the ability meet the PRRIP or IMP objectives because the water will be available when river flows are particularly stressed, thereby enhancing water sustainability goals for the Platte River.

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 project can provide benefits to multiple water supply goals of endangered species/wildlife habitat, supplementing downstream flows that can benefit municipal supplies, augmentation of groundwater recharge, provide recreation benefits, and downstream drought protection.

   It will do so by accurately measuring flows to by-pass the diversion structures and thereby protect existing water users on the canals from bypassing more water than required.

   A long range forecast of the expected benefits this project could have versus continuing on current path is that deliveries from these structures provide at least a 40-year solution that does not currently exist if NPPD were to solely use the existing river gates for measurement.

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.

The project maximizes the beneficial use of Nebraska's water by accurately measuring flows to bypass the diversion structures for transfers of up to 100 cfs of water at each diversion structure while maintaining an adequate water supply to NPPD existing canal customers. While the near future benefit is to PRRIP water goals, the project has the future ability to provide for other instream beneficial uses including groundwater recharge, municipal, industrial, recreational, wildlife water users, and Integrated Management Plans.

The project provides a beneficial impact to the state's residents by accurately measuring flows to ensure no harm to other water users. Use of water is important to Nebraska's residents. The 2015 Nebraska Rural Poll (http://ruralpoll.unl.edu/priorities) shows the majority of rural Nebraskans consider water use for residential use, irrigation, and preserving habitat as medium or high priority. Each of these can be protected by the project.

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 estimated total construction costs are $341,780. O/M costs are expected to be approximately $46,400/year to be derived from NPPD's irrigation revenues (see Attachment B "Cash Flow Form"). There are no land and water acquisition costs.

The next best alternative that NPPD studied was to build these types of measurement structures at a location on our canals after the water is diverted into our irrigation canals. The engineering estimate of that project was $467,474. The current design of putting the measurement structures adjacent to our river gates is more economical by $125,694 or 27%.

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.

Colorado, Wyoming, Nebraska and the Department of Interior formed a unique partnership with the goal of developing a shared approach for managing the Platte River for endangered and threatened species. Water users from the three states, U.S. Bureau of Reclamation, U.S. Fish & Wildlife Service, and local and national conservation groups joined the effort. Together, these stakeholders developed an innovative approach for improving the management of the Platte — for the health of the ecosystem and the people that depend on it. The PRRIP is the result of that planning effort. The PRRIP is focused on implementing this shared vision for creating and maintaining habitats on the Platte, including river flows. This includes reducing shortages to target flow in the Platte River from Lexington to Chapman, Nebraska.

The NPPD project will help the state and PRRIP meet its obligations by ensuring that water bypasses existing structure and that measurements are accurate.

The current deficiency is that NPPD's current river gates were neither designed to measure water flow nor to make the small adjustments in flow as required with transfers of water. While measuring water flowing through them is possible, its accuracy is as low as +/- 30-50% at low flows due to turbulence. The project will ensure that the proper amount of water is bypassing the river diversion structures. The benefit of the project is to protect is to protect against the risk of insufficient flows to NPPD's customers or other surface water users. This project will decrease that risk by more accurately measuring bypassed water than the current river gates would allow. The project will provide measurement accuracy of 5% or better. In a water-scarce area, this improvement in accuracy is significant.

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 Untied 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.

These structures will increase the capability of the existing diversion structures to bypass higher flows and possibly helping to protect the diversion structures from harmful effects of those high flows.

It is important to the State of Nebraska to use water wisely. This project will enable accurate measurement of bypassed water to ensure water users are not harmed by the potential of being short of water.

Public security, public health and safety will be maintained by this project.

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 includes temperatures and dissolved oxygen which can be enhanced below the diversion structures by increasing flows. This project will provide for the accurate measurement of flows from NPPD's transfers.

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.

NPPD has obtained a letter of support from Central Platte NRD and the Platte River Recovery Implementation Program. See Attachment C. NPPD will use its Irrigation business unit's revenues to fund its portion of the project. There are no local funding resources for this project that we are aware of.

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 Central Platte Natural Resources District (CPNRD) has an Integrated Management Plan and is involved with the Basin-Wide Plan for Joint Integrated Water Resources Management of Overappropriated Portions of the Platte River Basin, Nebraska, and the Platte Basin Coalition.

See the above answer and other IMP questions above.

The following goals and objectives of the IMPs could benefit from the project: 1) to provide offset water for IMPs, and 2) to minimize conflicts between water users. The project can assist in these by accurately measuring transferred water.

The primary stakeholders are NPPD, our irrigation customers (protect their water supply), and the PRRIP.

Others who could benefit in the future are those that benefit from downstream flow by default or contract.

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.

The problem that will be solved by the project is that NPPD's current river gates were neither designed to measure water nor to make the small adjustments in flow as required with transfers of water. While measuring water flowing through them is possible, its accuracy is as low as +/- 30-50% at low flows due to turbulence. The purpose for the project is to build bypass structures with measurement capabilities to ensure that the proper amount of water is bypassing the river diversion structures. The benefit of the project is to protect against the risk of insufficient flows to NPPD's customers or other surface water users. This project will decrease that risk by more accurately measuring bypassed water than the current river gates would allow. The project will provide measurement accuracy of 5% or better. In a water-scarce area, this improvement in accuracy is significant. The structures provide control, measurement, and documentation of water from transfers from irrigation to one of a variety of beneficial uses. Projects such as NPPD's should be considered statewide.

The benefits of accurately measuring transferred water apply to water users in the state. This project could be used as a pilot for allowing the NDNR to more accurately measure water passing river diversions without having to reconstruct the diversion itself. This is important when there is water that is required to be bypassed because it is protected in the river to a point downstream.

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.

  This will utilize funds that would be provided by NPPD irrigation customers offsetting a significant cost to them.

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.

  The project contributes to watershed health and function by accurately measuring surface water deliveries that increase flows in the Platte River during June-September at times when it has historically been extremely low or dry. These flows improve the hydrologic system that benefits aquatic life and other species that use the river, including endangered species.

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 2015 Annual Report includes the following objectives that the project helps to meet. Objective number "3. Support locally developed water management plans for managing hydrologically connected water supplies" could be met because the project accurately measures water, which is imperative in preventing water user conflicts for IMPs.

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 Mandate in the case of this application is the Endangered Species Act (ESA). Under the ESA, federal agencies must ensure that their activities under their authority do not harm the continued existence of any threatened or endangered species or adversely modify

critical habitat. NPPD currently has a Federal Energy Regulatory Commission (FERC) license for its North Platte hydropower project, which requires FERC to carry out "…programs for the conservation of endangered species and threatened species…" (Reference: Section 7(a) of the ESA of 1973). ESA Section 7 requires consultation with the U.S. Fish and Wildlife Service (USFWS). The USFWS concluded that the threatened piping plover and the endangered whooping crane, least tern and pallid sturgeon, could be affected by water diversions and other changes in land use throughout the Platte River Basin, including NPPD's hydro project. The PRRIP brings together the states (Wyoming, Colorado, and Nebraska), federal government, water users, and environmental groups to work collaboratively to improve and maintain the associated habitats for the designated species. The PRRIP is intended to address the ESA concerns including loss of habitat in Central Nebraska by managing key land and water resources in the central Platte region and in the process avoiding harm to the lower Platte River stretch.

The project we are requesting funding for can help meet the PRRIP goals by accurately measuring surface water transfers to instream use to benefit the species mentioned. One of goals of the PRRIP is 130,000-150,000 AF of additional water was needed in the central Platte River below to offset shortages to target flows. The PRRIP is the mechanism that has been set up to achieve the water goals, among other goals. Delivery of water through these structures will help the PRRIP achieve its water objectives and will provide for sustainability by adding flows to the Platte River.

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 problem that will be solved by the project is that NPPD's current river gates were neither designed to measure water nor to make the small adjustments in flow as required to pass water in the smaller quantities that occur with transfers of water. While allowing water to flow through the larger river radial gates is possible, its accuracy of measurement is as low as +/- 30-50% at low flows due to turbulence. The purpose for the project is to build bypass structures with more accurate measurement capabilities to ensure that the proper amount of water is bypassing the river diversion structures. The benefit of the project is to protect against the risk of not having enough water for irrigation customers or the flow being bypassed. The project will provide measurement accuracy of 5% or better. The structures provide control, measurement, and documentation of water from transfers from irrigation to one of a variety of beneficial uses.

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 following are tasks that are expected to be completed in 2018.

Task 0 is to procure gates and materials for construction.
Task 1 will include mobilization of the equipment necessary to install the gate structure and the gate. Equipment needed includes an excavator or backhoe, pickup truck, dump truck, etc.
Task 2 is to excavate for placement of the structures to hold the gates. The total excavation is expected to include approximately 2000 cubic yards of material.
Task 3 involves forming for and placing of concrete for the gate structure. Sixty-three yards of reinforced concrete will be poured for the structures in total. The gate structure will include an open chute that will receive the gates in a later task.
Task 4 is the installation of the gates by using heavy equipment such as a backhoe or crane to lift the gate into position for its final placement.
Task 5 is installation of 135 feet of 48" corrugated metal pipe that will run from the gate through the existing diversion structure to the river channel.

Task 6 is installation of electrical wiring to the project from nearby sites that already have electricity. Also 300 cubic yards of concrete riprap will be placed to prevent erosion surrounding the structure.
Task 7 installing debris diverters to prevent debris from interfering with the structures.
Task 8 Electrical wiring and installation of the SCADA and Programmable Logic Control (PLC) card equipment will occur. Configuration and testing will follow to ensure everything is in working order.
Task 9 is the final task which includes any backfilling, grading, seeding, and erosion protection where needed.

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.

NPPD is the sole project sponsor and is fully capable of completing the project. The Platte River Recovery Implementation Program is contracting for transferred water.

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.

NPPD is requesting funding for $ 205,068 of the total project cost of $341,780. Other contributions for the 40% will come from the NPPD irrigation business.

5. Support/Opposition

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

Widespread support for the project exists for accurately measuring surface water transfer deliveries for providing additional water in the river. Attachment C “Letters of Support” is two letters of support from the PRRIP and Central Platte NRD. Similar projects have been built in the immediate area on the 30 Mile Canal, Cozad Ditch, and Orchard/Alfalfa Canal. No opposition exists.

List of attachments:
Attachment A - Drawings
Attachment B - Cash Flow Form
Attachment C - Letters of Support