

Water Sustainability Fund Application

Bone and Long Pine Creeks Watershed Improvement Project

JULY 31, 2021

Enclosed in this document, in its entirety, is an application for the Nebraska Natural Resources Commission's (NRC) Water Sustainability Fund that has been divided into four categories.

The **Cover Letter** introduces the project and states the Applicant's intent.

The **Application** follows the format in the Application Form provided by the NRC answering all questions and requests for information in Sections A, B, and C. The responses and information provided are intended to address the information requested as directly as possible.

The Application references the **Supplemental Information Attachment (SIA)** where supporting documentation and additional information is contained. The SIA provides additional data and references to support the responses offered in the Application. The information in the SIA is provided in the same order and is numbered the same manner as in the Application. Note that not all sections of the Application will have information included in the SIA.

At the end of the SIA is a **Bibliography** for all external reports, design guidance or other material referenced in the Application. This Bibliography provides the reviewer with additional references relevant to the Application. The combined size of these references prohibits the inclusion of the references within the SIA. Digital copies of the references can be obtained by contacting Kent Zimmerman at NDNR (kent.zimmerman@nebraska.gov) or Mike Sotak at FYRA Engineering (msotak@fyraengineering.com). The information provided in the Bibliography is alphabetical, but each entry is cross referenced back to the Application/SIA section to which it pertains and is referenced.

Cover Letter

Application

Supplemental Information Attachment

Bibliography

Cover Letter



Bone and Long Pine Creeks
Watershed Improvement Project



July 30, 2021

Mr. Tom Riley,

Director, Nebraska Department of Natural Resources

via Electronic Submission

Re: Bone and Lone Pine Creeks Watershed Improvement, Tier 1 Projects (Project)
Application for Water Sustainability Fund Grant (Application)

Director Riley and members of Natural Resources Commission:

In accordance with the rules, regulations and guidelines for Nebraska's Water Sustainability Fund Grant Program, please accept this grant application on behalf of the Middle Niobrara Natural Resources District (MNNRD) for the above-referenced project.

The MNNRD has developed the Draft Watershed Plan and Environmental Assessment for the Bone and Long Pine Creeks Watersheds (Plan-EA). The purpose of the Plan-EA is to provide grade control, bank stabilization, and aquatic ecosystem restoration and rehabilitation within the watershed. Due to the watershed variances and the volume of potential solution types and locations, the proposed alternatives were sorted into Tiers. This Application is for the Tier 1 projects included in the Plan-EA, which includes the specific high priority locations that were identified through the scoping process and interagency and landowner coordination. This Project has received 100 percent funding assistance for planning through the P.L. 83-566 Watershed and Flood Prevention Operations (WFPO) program. It is anticipated that 100 percent of design costs and approximately 50 percent of total construction costs will be funded by WFPO for this Project. There is additionally the potential for additional funding through the Nebraska Department of Environment and Energy (NDEE) 319 Grant and the Nebraska Environmental Trust (NET) described within this application. Best and worst-case scenarios for funding have been included in the Application. Kent Zimmerman at the NDNR will be informed before the November Commission meeting which funding scenario will be requested.

Through this application, and more so in the supporting materials, the benefits of this Project are detailed. Stream degradation and widening and their effects on local infrastructure, land rights, stream ecology and water quality have been identified as the main areas of concern within this watershed, both during scoping and outreach exercises as well as previous studies. This Project includes 36 structures/practices at eleven separate reaches within the Bone Creek, Sand Draw, and Willow Creek sub-watersheds designed to provide grade control and bank stabilization with special consideration to aquatic organism passage and improved aquatic habitat. The value of the Tier 1 structures is greater than the sum of the individual components and the costs and benefits are therefore assessed together as a single Project.

In addition to the application form posted on the NDNR website, which has been copied verbatim into this grant application, there is also an attachment referenced as the Supplemental Information Attachment (SIA) to this application. Contained within the SIA is a bibliography of technical documents related to the project that contain additional information that can be reviewed if desired, including the Draft Plan-EA. In an effort to keep this application as concise as possible, Kent Zimmerman at NDNR will be provided an electronic copy of all of the documents referenced in the bibliography and therefore, copies of said information can be obtained through Mr. Zimmerman. The goal of this application structure was to first provide reviewers with the information required to directly answer the questions in the official application form at a concise level, second to provide additional maps, charts and supporting documents to address the required information in the SIA, and then finally to provide the additional documents that any supporting information provided originates from. We trust that this allows you to quickly review the information you desire and gather additional data as each individual reviewer sees fit.

"Water Sustainability" is defined in Nebraska Title 264 as water use is sustainable when current use promotes healthy watersheds, improves water quality, and protects the ability of future generations to meet their needs.

This watershed has a unique and immediate need to address the stream degradation and associated habitat loss in order to protect and restore the watershed. The rapidly eroding and changing nature of the streams within this watershed requires prompt measures to protect the streams, water quality, and future land use of the watershed. And as argued above, finding any project that would more protect the ability of future generations to meet their needs would be difficult, given the protection this project provides to one of Nebraska's important rural communities and unique ecosystems.

We thank you for your acceptance of this application and stand ready to provide any clarification on any information provided during your review.

Sincerely,

A handwritten signature in black ink that reads "Mike Murphy" followed by the initials "MMURD". The signature is written in a cursive, flowing style.

Mike Murphy

Middle Niobrara NRD General Manager

Cover Letter

Application

Supplemental Information Attachment

Bibliography

Application



Bone and Long Pine Creeks
Watershed Improvement Project

NEBRASKA NATURAL RESOURCES COMMISSION

Water Sustainability Fund

Application for Funding

Section A.

ADMINISTRATIVE

PROJECT NAME: Bone and Lone Pine Creeks Watershed Improvement, Tier 1 Projects (Project)

SPONSOR'S PRIMARY CONTACT INFORMATION (Not Consultant's)

Sponsor Business Name: Middle Niobrara Natural Resources District

Sponsor Contact's Name: Chandler Schmidt

Sponsor Contact's Address: 303 E. Highway 20, Valentine, NE 69201

Sponsor Contact's Phone: 402-376-3241

Sponsor Contact's Email: cschmidt@mnnrd.org

1. **Funding** amount requested from the Water Sustainability Fund:

Grant amount requested. \$ 894,660

- If requesting less than 60% cost share, what %? N/A

If a loan is requested amount requested. \$ 0

- How many years repayment period?
- Supply a complete year-by-year repayment schedule.

2. **Neb. Rev. Stat. § 2-1507 (2)**

Are you applying for a **combined sewer overflow 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
- Attach a copy to your application.
- What is the population served by your project?
- Provide a demonstration of need.
- **Do not complete the remainder of the application.**

3. **Permits Required/Obtained** Attach a copy of each that has been obtained. For those needed, but not yet obtained (box “**NO**” checked), 1.) State when you will apply for the permit, 2.) When you anticipate receiving the permit, and 3.) Your estimated cost to obtain the permit.

(N/A = Not applicable/not asking for cost share to obtain)

(Yes = See attached)

(No = Might need, don't have & are asking for 60% cost share to obtain)

Final design will occur in 2022 and permitting will occur between 2022 and 2025 to accommodate each site's construction schedule. At that time, the required permits for this Project will be obtained. Consultation for Section 7 of the Endangered Species Act is currently underway under the National Environmental Policy Act (NEPA) process with the Natural Resources Conservation Service (NRCS) as the lead federal agency. Any additional required coordination at each specific site will occur during final design, as described in the Draft Watershed Plan and Environmental Assessment for the Bone and Long Pine Creeks Watersheds (Plan-EA), referenced in the Bibliography in the Supplemental Information Attachment (SIA). A cultural resources evaluation has been conducted for the Project and consultation with SHPO and potentially impacted Tribes is complete. A Section 404 permit will be obtained through the US Army Corps of Engineers (USACE) prior to construction. The estimated cost to obtain the permits is \$174,300 and is included in the engineering costs separated out below.

Summary of Costs

Summary of Costs	Tier 1
Construction Total 1/	\$3,491,300
<i>Replacement Costs</i>	\$28,500
Engineering 2/ 3/	\$1,047,400
<i>Construction Observation</i>	\$349,300
<i>Permitting</i>	\$174,300
Land Rights	\$0
Project Administration	\$244,200
Total Costs	\$4,782,900

1/ Includes Replacement Costs

2/ Includes Construction Observation

3/ Includes Permitting

G&P - T&E consultation (required)	N/A <input type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
DNR Surface Water Right	N/A <input type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
USACE (e.g., 404/other Permit)	N/A <input type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
FEMA (CLOMR)	N/A <input checked="" type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input type="checkbox"/>
Local Zoning/Construction	N/A <input type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
Cultural Resources Evaluation	N/A <input type="checkbox"/>	Obtained: YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
Other (provide explanation below)	N/A <input type="checkbox"/>	Obtained: YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

National Pollutant Discharge Elimination System (NPDES) Permit from the Nebraska Department of Environment and Energy (NDEE) as required for construction projects with more than 1-acre of disturbed land.

Coordination with the applicable permitting agencies has occurred throughout the development of the Plan-EA. USACE is a Cooperating Agency to the Plan-EA and the Clean Water Act (CWA) Section 404 permitting requirements were considered during the development of the Plan-EA. The project areas have been reviewed for the presence of historic properties by a professional archeologist. Cultural resource investigations were completed in late October and early November 2019. No cultural resources that are eligible for listing on the National Register of Historic Places were identified during the investigations. Therefore, a determination of "no historic properties affected" was made for these alternatives and the Nebraska State Historic Preservation Offices (SHPO) and Pawnee Nation of Oklahoma concurred with this determination. NRCS Programmatic Consultation evaluation parameters, species matrix, and conservation conditions

were used during the Plan-EA's environmental evaluation in conjunction with input from natural resource specialists at NRCS, Nebraska Game and Parks Commission (NGPC), and U.S. Fish and Wildlife Service (USFWS). Based on discussions with specialists and an assessment of each species' natural history, range, and habitat needs, coordination will occur with USFWS and NGPC during final design to ensure that the Project is not likely to adversely impact any state or federally listed endangered and threatened species.

Although the Project is not within a designated wild and scenic river corridor, they are on tributaries to the Niobrara River and would therefore require a Section 7(a) determination as part of the Wild and Scenic Rivers Act. Section 7(a) of the Act provides a specific standard for review of developments on a stream tributary to the designated river. Such developments may occur as long as the Project "will not invade the area or unreasonably diminish the scenic, recreational, fish, and wildlife values present in the area. This standard applies to Projects outside of the river corridor but on a tributary. This alternative does not invade the designated river.

4. **Partnerships**

List each Partner / Co-sponsor, attach documentation of agreement:

Middle Niobrara Natural Resources District (MNNRD). See the Professional Services Agreement in the Supplemental Information Attachment (SIA).

Identify the roles and responsibilities of each Partner / Co-sponsor involved in the proposed Project regardless of whether each is an additional funding source.

The MNNRD is the sponsor of the Project and is responsible for all contracting for funding, planning, design, and construction.

5. **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 costs associated with the Project are broken out by the components required to complete the Project in the table below. All of the Project costs and the funding breakdown is included in Section A-1 of the SIA. A more detailed breakdown of the construction quantities and cost-estimate is also provided in the SIA Section A-1. Additional funds are being applied for, and federal funding has been acquired. If funding sources are not obtained, MNNRD will be

responsible for implementing the Project. The MNNRD has planned for and budgeted the cost of the design for this Project in their current budget.

NRCS: NRCS is providing funding through the P.L. 83-566 Watershed and Flood Prevention Operations (WFPO) program. WFPO funds were received for the planning and concept design phase of this Project. The WFPO Notice of Grant and Agreement award contract is included as an attachment to the SIA. It is assumed that \$2,791,300 will be provided for funding assistance for the design, construction and construction oversight for the Project. An agreement for these funding will be received once the Plan-EA is approved.

EPA Section 319 Grant Program: A 319 grant application through the Nebraska Department of Environmental Energy (NDEE) has been obtained for a separate Project along Sand Draw Creek with similar goals. The NDEE 319 funds obtained includes \$300,000 and MNNRD is working to seek approval to transfer the obtained NDEE 319 funds towards this Project. There is no foreseen controversy in being able to transition the obtained 319 funds towards this Project as members from NDEE have been made aware of this proposal for transfer and concurrence is expected after their August meeting. A local match of 40% of the grant funds are required through this grant.

NET: MNNRD has received \$1,295,000 of funding through the Nebraska Environmental Trust (NET). These NET funds have been obtained for two separate phases, Phases 3 and 4, which together make up \$1,295,000. The Phases refer to the order in which MNNRD requested grant applications for watershed improvement practices for the Long Pine Creek Watershed Restoration Project. Phase 3 funding is for a separate Project along Sand Draw Creek with similar goals and the Phase 4 funds are for a site included in a Tier 1 project in this Project. The Plan-EA divides the proposed projects from the Plan-EA into two separate Tiers based on priority, unrelated to the NET funding Phases. MNNRD is working to seek approval to transfer the obtained NET funds towards this Project. It is estimated to receive a response about approval to transfer funding in August 2021. The best and worst-case scenarios, dependent on the acceptance of transferring NET funds, are shown in the tables below and in the SIA. We will inform you prior to the November Commission meeting whether the NET funding has been approved.

Worst-Case Funding Breakdown

	Total Costs	FEDERAL		Section 319 Non-Federal Match	Remaining Costs	STATE	LOCAL
		WFPO Cost-Share	NDEE Section 319			WSF Grant Request	Total Local Cost Share
Construction	\$3,491,300	\$1,796,100	\$300,000	\$200,500	\$1,194,700	\$716,820	\$477,880
Engineering	\$1,047,400	\$873,100	-	-	\$174,300	\$104,580	\$69,720
Land Rights	\$0	\$0	-	-	\$0	\$0	\$0
Project Administration	\$244,200	\$122,100	-	-	\$122,100	\$73,260	\$48,840
Totals	\$4,782,900	\$2,791,300	\$300,000	\$200,500	\$1,491,100	\$894,660	\$596,440

Best-Case Funding Breakdown

	Total Costs	FEDERAL		Section 319 Non-Federal Match	Remaining Costs	STATE		LOCAL
		WFPO Cost-Share	NDEE Section 319			NET Funds	WSF Grant Request	Total Local Cost Share
Construction	\$3,491,300	\$1,796,100	\$300,000	\$100,250	\$1,294,950	\$1,225,280	\$69,670	\$0
Engineering	\$1,047,400	\$873,100	-	-	\$174,300	\$69,720	\$104,580	\$0
Land Rights	\$0	\$0	-	-	\$0	\$0	\$0	\$0
Project Administration	\$244,200	\$122,100	-	\$100,250	\$21,850	\$0	\$13,110	\$8,740
Totals	\$4,782,900	\$2,791,300	\$300,000	\$200,500	\$1,491,100	\$1,295,000	\$187,360	\$8,740

6. Overview

In 1,000 words or less, provide a brief description of your project including the nature/purpose of the project and its objectives. Do not exceed one page!

The Project occurs in the Bone and Long Pine Creeks Watersheds (watershed), located in Cherry, Brown, and Rock Counties in Nebraska (see Figure B-1.1 in the SIA). Stream degradation and widening have been identified as the main areas of concern within the watershed. The Project includes the Tier 1 project sites identified in the Draft Watershed Plan and Environmental Assessment for the Bone and Long Pine Creeks Watershed (Plan-EA), which includes a combination of NRCS practices designed for the purposes of providing grade control, bank stabilization, and aquatic ecosystem restoration and rehabilitation within the watershed. The Tier 1 project sites include the high priority locations that were identified through the scoping process and interagency and landowner coordination.

The Tier 1 projects are located at eleven separate stream reaches, identified as Areas of Potential Effect (APEs), shown in Figure B-1.2 in the SIA. The projects include 36 structural components located on Sand Draw, Bone Creek, and Willow Creek as well as unnamed tributaries and gullies to those major streams. The Project components range from small-scale habitat improvements to large-scale rock grade stabilization structures and are dependent on the needs within

each stream reach. Specific descriptions of each structure are included in Table B-1.2 in the SIA. Project types at each site were designed based on the existing site conditions and needs as well as the landowner’s wishes.

Aquatic and wildlife habitat improvements will all be experienced as part of this Project through improved stream stability and aquatic habitat features. Specific structures such as cross-vanes, w-weirs, and cedar revetments were designed to improve aquatic habitat by providing smoother drops, creating pools, and providing habitat cover predominantly in the headwaters where streams are predominantly connected to the floodplain, well-vegetated, and sinuous. The majority of downstream stream reaches within the watershed are disconnected from the floodplain and experiencing degradation and widening. Several grade stabilization structures are proposed in this Project to protect upstream reaches from further widening and degradation by ensuring headcuts do not progress further upstream. Sills were also proposed in these downstream reaches to provide grade stabilization as well as reclaim lost grade.

Other types of projects include implementation of stream crossings per landowner wishes with special consideration to fish passage of sensitive species. Gully protection measures are also included to protect gullies from continued upstream degradation. A pond and sediment basin are both proposed to control larger gullies and hand-built Zeedyk structures are proposed in smaller gullies to protect the gully from further upstream degradation. A sill with fish passage is proposed to create a larger pool for aquatic habitat as well as provide fish passage for to protect existing fish species. Additional streambank and shoreline protection measures were specifically designed to protect specific, threatened structures. Debris removal and critical area planting is also proposed in one Project Area to restore a floodplain that experienced massive degradation and widening in 2019 that transitioned pastureland into a large sand area with woody debris. Please see the Plan-EA for a detailed plans of each proposed Project measure.

7. **Project Tasks and Timeline**

Identify what activities will be conducted to complete the project, and the anticipated completion date.

For multiyear projects please list (using the following example):

<u>Tasks</u>	<u>Year 1\$</u>	<u>Year 2\$</u>	<u>Year 3\$</u>	<u>Remaining</u>	<u>Total \$ Amt.</u>
Permits	\$18,000				\$18,000
Engineering		\$96,000			\$96,000
Construction		\$87,000	\$96,000		\$183,000
Close-out				\$8,000	\$8,000
				TOTAL	\$305,000

- What activities (Tasks) are to be completed.

- An estimate of each Tasks expenditures/cost per year.
- Activities in years 4 through project completion under a single column.

A description of the tasks to be completed for the Project are as follows:

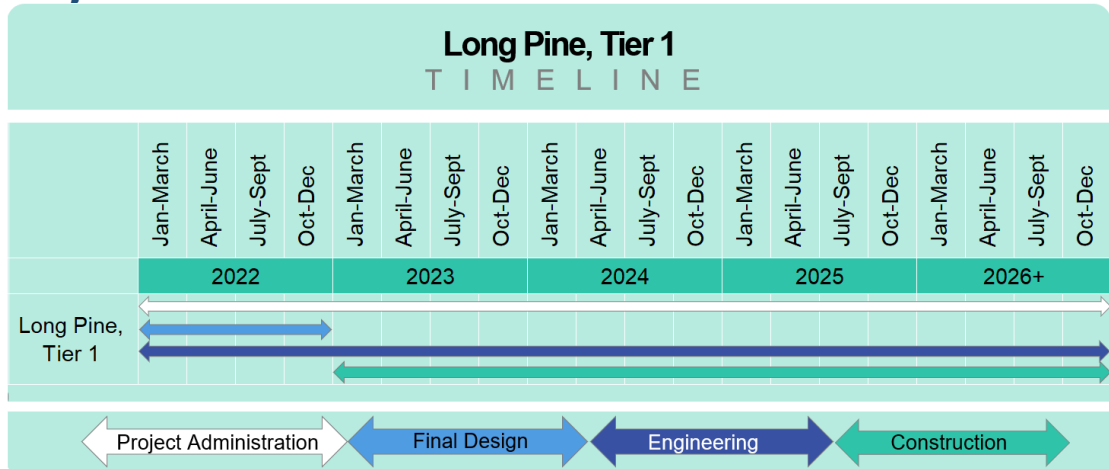
- Construction: all costs to build 36 Tier 1 projects, including mitigation. Major components include mobilization, riprap, excavation, and fill.
- Engineering: final design of 36 Tier 1 projects, surveys, geotechnical investigations, construction observation, and permit acquisition. Engineering costs are based on engineering judgement and similar projects within the state. Construction observation costs are estimated at 10 percent of the construction cost.
- Land Rights: includes easements for construction and maintenance access. Similar projects within the watershed have obtained easements for construction and maintenance access at no cost due to the landowner benefits and limited footprints. Therefore, it is assumed that there are no costs for real property rights associated with this Project. No relocations are anticipated.
- Project Administration: includes project oversight and review, contract administration and supervision, and checking installation measures to ensure the proposed and installed works meet NRCS criteria.

Annual Cost Breakdown

Project Task	Year 1 (2022)	Year 2 (2023)	Year 3 (2024)	Year 4 (2025)	Year 5 (2026)	Year 14 (2035) 1/	Total Amount
Construction	\$0	\$1,536,100	\$1,263,000	\$609,900	\$53,800	\$28,500	\$3,491,300
Engineering	\$942,660	\$26,185	\$26,185	\$26,185	\$26,185	\$0	\$1,047,400
Land Rights	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Project Administration	\$48,840	\$48,840	\$48,840	\$48,840	\$48,840	\$0	\$244,200

1/ Replacement costs

Project Timeline



8. **IMP**

Do you have an **Integrated Management Plan** in place, or have you initiated one? YES NO Sponsor is not an NRD

Section B.

DNR DIRECTOR'S FINDINGS

Prove Engineering & Technical Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 004)

1. Does your project include physical construction (defined as moving dirt, directing water, physically constructing something, or installing equipment)?
YES NO

If you answered "YES" you must answer all questions in section 1.A.
If you answer "NO" you must answer all questions in section 1.B.

If "YES", it is considered mostly structural, so answer the following:

- 1.A.1 Insert a feasibility report to comply with Title 261, Chapter 2, including engineering and technical data; The Project will include a combination of different structural components.

This Project will include 36 structural components. A preliminary design for each component was completed by the MNNRD as part of the Plan-EA. A feasibility analysis was completed as part of the Plan-EA. The plans and technical specifications are included in Appendix C and D in the Plan-EA.

- 1.A.2 Describe the plan of development ([004.01 A](#));

The Plan-EA development included a scoping/investigative phase, an alternatives analysis, and preliminary design.

The investigative/scoping phase was held to identify the resources of concern that were deemed relevant to decision making. Public and agency meetings were held to give the agencies and the public opportunities to discuss opportunities and identify potential resource concerns. Locations for the Tier 1 sites were identified by the public, agencies, and other stakeholders. Site assessments were performed at the identified sites to gather information about the site conditions and specific design needs at each site.

The alternatives analysis looked at each design deficiency and evaluated alternatives for practicability, economic justification, and environmental impacts. Alternatives were analyzed by both a watershed-wide and site-by-site basis, which included both non-structural and structural alternatives. Alternatives were screened to meet both the purpose and need of the Project and evaluated the feasibility, economics, technology, and acceptability to determine the preferred alternative.

Alternatives were screened for viability and a final set of recommendations were determined. Preliminary design was developed for each structural component. Design was guided in accordance with the NRCS practice standards and supporting documents. Hydrologic investigations were performed to verify that structures met all NRCS practice standards criteria.

1.A.3 Include a description of all field investigations made to substantiate the feasibility report (004.01 B);

On-site investigations were conducted by the owner and FYRA Engineering to collect visual observations and gain an understanding of the site-specific needs. A wetland delineation and stream assessment were completed to identify the location and conditions of jurisdictional water bodies within the APEs. This information was used to determine Project impacts and develop design alternatives and/or modifications to reduce potential impacts. A stream assessment was also completed for the site to document current and future channel conditions potentially impacted by the Project. Stream assessments were completed for the APEs in accordance with the methodologies and procedures outlined in the USACE Nebraska Stream Condition Assessment Procedure (NeSCAP) and the NRCS Stream Visual Assessment Protocol Version 2 (SVAPV2). A cultural resources survey was conducted at the project locations. The findings from the wetland, stream, and cultural resource assessments are documented in the APE Wetlands and Streams figures, Stream Assessment Reaches figures and associated stream assessment score tables, and the environmental consequences chapter, all included within the Plan-EA and associated appendices.

1.A.4 Provide maps, drawings, charts, tables, etc., used as a basis for the feasibility report (004.01 C);

Location maps have been inserted into the SIA as Figures B-1.1 and B-1.2. There are numerous maps, charts, tables, etc. that help to define the Project, show design intent, and label site features. They are included throughout this application, in the SIA, and in the Plan-EA.

1.A.5 Describe any necessary water and/or land rights including pertinent water supply and water quality information (004.01 D);

Water rights in the watershed are typically uncontended. There are no water rights from the sources of water impacted by this Project. Landowners at these sites have been willing to grant easements to the MNNRD for construction and maintenance of these sites. The MNNRD does not anticipate any resistance, as the landowners are aware and in favor of the proposed structures.

1.A.6 Discuss each component of the final plan (004.01 E);

The final plan includes a combination of the following structure types. Please see Table B-1.1 in the SIA for the associated Project names and locations of each type of structure.

Restoration structures: Include cross-vanes, w-weirs, and bendway weirs and are designed to provide channel stability and improved aquatic habitat. The cross-vanes and w-weirs are both in-stream grade stabilization structures designed to provide grade stabilization and redirect flows toward the center of the channel to protect from streambank erosion. Bendway weirs are channel defining structures designed to redirect water from the channel banks.

Sills: Sills were designed to reclaim lost streambed grade and provide grade stabilization benefits. The sill heights vary at each location and are based on desired grade reclamation, approximate existing and future stream slopes, and potential to impact flooding upstream of each structure.

Rock Ramps: Rock ramps are designed for long term stability, low maintenance, and resilience of future infrequent runoff events and are designed to deform to “catch” future headcuts and maintain future drops as they progress upstream. The structures include South Dakota Department of Transportation (SDDOT) Class C rock riprap that will be placed along the stream channel bottom and partially up the banks to a height of half the top of bank elevation for the upstream portion of the structure.

Zeedyk Structures: Zeedyk structures are smaller, hand-built structures designed to manage gully erosion and channel incision. These consist largely of natural material such as trees and rocks. The proposed Zeedyk structures consist of a log and fabric structure and rock rundown. Both structures are proposed in small, eroding gullies to protect the gully from eroding further upstream.

Flexamat Crossing: A flexamat crossing is proposed near the headwaters of Sand Draw Creek within APE 5 to provide a stream crossing, to prevent the migration of an existing headcut, to help maintain floodplain connectivity, and to provide aquatic habitat improvements. The proposed crossing uses a vegetated tied concrete block mat (Flexamat or an approved alternative) and is designed to allow for vehicles to cross the stream while still allowing for fish passage.

Sill with Fish Passage: A sill with fish passage is proposed to provide grade stabilization benefits, create a permanent pool with 6-acres in surface area, improve floodplain connectivity and aquatic habitat, and provide passage for aquatic organisms. A spillway with a 5-foot-wide channel along the center is designed at the permanent pool elevation to go around the embankment and designed to accommodate fish and other aquatic organism passage.

Pond: A pond is proposed on a gully that flows to Sand Draw Creek to provide grade control and water quality benefits. The pond was designed in accordance with NRCS Conservation Practice Standard (CPS) Code 378.

Sediment Basin: A sediment basin is proposed on a gully to provide grade control to protect the gully from further degradation. The sediment basin was designed in accordance with NRCS CPS Code 638.

Cedar Revetments: Cedar revetments are proposed for the primary purpose of providing streambank stabilization. The cedar was designed protect the adjacent wetland and associated habitat features and to also protect the adjacent steep channel banks from eroding and causing further pastureland loss. Cedar revetments include wiring together two rows of cedar trees and anchoring the trees into the channel bank.

Rock chute: A rock chute is proposed to provide grade control and protection at an existing headcut and steep slope. Excavation along channel banks will occur throughout the structure to achieve 3H:1V channel bank slopes and riprap will be placed up to the design discharge elevation.

Debris Removal and Planting of Floodplain Bench: This alternative includes removing debris and obstructions, bringing in suitable organic material for plant growth, and seeding an area deposited sand has covered during large flood events in 2019.

Streambank Protection: The toe protection consists of Class C riprap buried into the streambank above the stream's ordinary high water mark and halfway up the bank to protect the bank from additional streambank erosion. Additional streambank protection consists of a earthen fill and riprap that runs parallel to a degrading channel bank and buried riprap in the uplands to protect an adjacent bridge.

- 1.A.7 When applicable include the geologic investigation required for the project (004.01 E 1);

A geologic investigation will not be required for the Project. If any is required, costs would be covered under project administration.

- 1.A.8 When applicable include the hydrologic data investigation required for the project (004.01 E 2);

The hydrology used for the preliminary design was determined using a Square Root Transform (SRT) method, which transfers the flood frequency distribution to other parts of the watershed to approximate discharges. The base frequency distribution was calculated based on a United States Geological Survey (USGS) Stream Gage discharge and adjusted based on drainage area. The USGS

Stream Gage that provided more conservative discharge results was used for the hydrologic analysis. The sills, rock ramps, and rock chute were designed to ensure a stable slope with riprap using the discharge of the 100-year flood event or at the top of bank, whichever is lower.

The pond was designed using the NRCS SITES program to run hydrologic storms to set elevations for the auxiliary spillway and top of dam. Precipitation data was obtained from National Oceanic and Atmospheric Administration (NOAA) and the curve number and time of concentration inputs for the SITES model was calculated using NRCS TR-55 Urban Hydrology for Small Watersheds (TR-55) methodology. The sediment basin was designed in accordance with the NRCS CPS Code 638 procedures. Curve numbers were calculated with the TR-55 methodology and the capacity was calculated using the NRCS Soil Conservation Service (SCS) Runoff Curve number method. The design capacity of the pipe was determined using the NRCS CPS Code 606 procedures. The table below summarizes the design storms that were modeled and are used to size the site in accordance with the NRCS Conservation Practice Standards.

Project Design Storms

	Pond (P2-4)	Sediment Basin (G2-5)
Permanent Pool	50-year lifespan	20-year lifespan
Auxiliary Spillway	10-year, 24-hour	N/A
Top of Dam	50-year, 24-hour	25-year, 24-hour

1.A.9 When applicable include the criteria for final design including, but not limited to, soil mechanics, hydraulic, hydrologic, structural, embankments and foundation criteria (004.01 E 3).

The designs for each structure will adhere to, as a minimum, the requirements in the Nebraska NRCS Conservation Practice Standards for each NRCS practice code (shown in Table B-1.1 in the SIA). Survey will be required during final design due to the highly erosive and quickly evolving nature of streams within the watershed. The locations and size of the proposed structures is subject to change based on the results of these surveys. Additionally, a detailed analysis of the probability for future meanders will be required during final design to design the flanking protection at the cross-vanes, w-weirs, bendway weirs, and rock chutes. The hydraulic and hydrology will need to be revisited during final design.

If “NO”, it is considered mostly non-structural, so answer the following:

1.B.1 Insert data necessary to establish technical feasibility (004.02);

1.B.2 Discuss the plan of development (004.02 A);

- 1.B.3 Describe field or research investigations utilized to substantiate the project conception (004.02 B);
- 1.B.4 Describe any necessary water and/or land rights (004.02 C);
- 1.B.5 Discuss 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).

Prove Economic Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 005)

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 Plan-EA included an alternatives analysis to determine the best alternatives to meet the Project purpose and meet the needs within each specific stream reach. The alternatives were evaluated to satisfy the alternative development and screen criteria requirements of NEPA, Clean Water Act (CWA) Section 404(b)(1) guidelines, and Principles, Requirements, and Guidelines (PR&G) for Federal investments in water resources.

Potential alternatives were identified based on NRCS and other Federal, state, and other published guidance, projects that have been successful within the watershed, and engineering judgement. A range of alternatives that could potentially meet the Project purpose and need within the watershed with reasonable success were considered. These were used to analyze potential solutions at each of the priority locations and the least costly socially and environmentally acceptable alternative that could meet the purpose and need were selected as the preferred alternative included in this Project.

Non-structural alternatives and a combination of non-structural and structural alternatives were evaluated as potential alternatives to meet the Project purpose and need and potentially minimize adverse changes and impacts to existing hydrologic, geomorphic, and ecological processes. Non-structural alternatives evaluated include changes to policy, existing land use, infrastructure, and/or management practices. Policies can help to slow stream degradation or protect future developments from being built too close to a stream, but public and regulatory policies cannot prevent the headcut progression that is common in the area. Changes in land use are equally as ineffective.

One potential nonstructural alternative includes buying the land that is expected to fall within stream limits as the streams continue to degrade and widen and

allow the channel banks to become higher and the stream footprint to continue to expand. However, this would continue to cause loss of pastureland and continue to degrade aquatic ecosystem habitat. Risks to infrastructure, including culverts and bridges, also remain in this alternative. Therefore, this alternative does not meet the Project purpose and need.

Irrigation water management or modifying the amount or timing of water brought into the watershed for irrigation, is another potential nonstructural alternative. Stream flow and groundwater levels within the watershed were studied extensively to determine if any water management alternatives could meet the Project purpose. Although irrigation water management techniques can help to bring the watershed back to equilibrium, changes would not bring immediate relief to locations identified during scoping that need intervention to prevent massive degradation from moving upstream to the headwaters or protecting existing infrastructure and therefore these were not included within the Tier 1 projects.

All viable structural alternatives were analyzed in conjunction with nonstructural alternatives at each stream reach and Tier 1 projects identified within the Plan-EA and described herein represent the least costly socially and environmentally acceptable alternative that could meet the purpose and need.

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 is the project life, up to fifty (50) years; or, with prior approval of the Director up to one hundred (100) years, ([Title 261, CH 2 - 005](#)).

Construction costs were developed based on preliminary design quantities and apply the most current commodity prices based on recent/relative construction bid tabs. Unit costs are shown in Table A-1.2a-c in the SIA. Costs of operation and maintenance of the measures is based on experience from similar structures and is included at 0.75 percent of the construction cost. Replacement costs are included for structures that have a design life less than the Project life.

Benefits for this Project are mostly intangible, meaning that these benefits that cannot be expressed in monetary terms because of the difficulty in annualizing benefits due to the nature of benefits. This application focuses on the intangible benefits and includes costs associated with benefits that are known.

The benefits from this Project can be organized into ecosystem services, described below and associated benefits from this Project that fall under each type of ecosystem service.

Project Ecosystem Services

Ecosystem Services	Project Benefits
Provisioning services: tangible goods provided for direct human use and consumption, such as food, fiber, water, timber, or biomass.	Reduced Erosion and Sedimentation
	Tier 1 and Tier 2 At-Risk Fish Species
	Land and Infrastructure Protection
Regulating services: maintain a world in which it is possible for people to live, providing critical benefits that buffer against environmental catastrophe – examples include flood and disease control, water filtration, climate stabilization, or crop pollination.	Water Quality Improvements
	Regional Water Management Plans
Supporting services: refer to the underlying processes maintaining conditions for life on Earth, including nutrient cycling, soil formation, and primary production.	Stream Stabilization and Improvements
	Improved Public Health & Safety
Cultural services: make the world a place in which people want to live – recreational use, spiritual, aesthetic viewsheds, or tribal values.	Protected Wild & Scenic Rivers
	Improved Fish and Wildlife Habitat
	Improved Recreation

- 3.A 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).

A summary of all initial capital costs related to the Project are presented in the table below, and a more detailed breakdown of the land purchase and construction costs are provided in the SIA. They include all the items listed above. Detailed cost estimates for construction items are included in the SIA Tables A-1.2a-c. A detailed annualized cost-breakdown is included in Table A-1.3 in the SIA. The Project life is 20-years, although many structures are designed to last longer than 20-years. The structures will be constructed separately in different years and are planned to be constructed starting in 2023 through 2026.

Cost Summary

Summary of Costs	Tier 1
Construction	\$3,462,800
Engineering	\$1,047,400
Land Rights	\$0
Project Administration	\$244,200
Replacement Costs (Year 2035)	\$28,500
Total	\$4,782,900

- 3.B 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 intangible or secondary benefits (if any) 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, in a way that justifies economic feasibility of the project such that the finding can be approved by the Director and the Commission (005.02).

Benefits for this Project are intangible, meaning that the benefits cannot be expressed in monetary terms because of the difficulty in annualizing benefits due to the nature of benefits. It is difficult to predict the year and costs of the received benefits from this Project due to the types of benefits and unpredictable nature of the benefitted streams.

Reduction in erosion and sediment: The channel and gully stabilization alternatives will protect the upstream channels and gullies from erosion at the proposed stabilization measure locations. The sill structures, pond, and sediment basin will capture and store accumulated sediment. Benefits may be realized as far downstream as the Niobrara River. Projects will capture approximately 15.5 acre-feet (nearly 4,000 tons) of sediment throughout the Project life behind the sill structures, pond, and sediment basins. Of this, 5.3 acre-feet will likely be stored behind sills at APEs 1, 9, and 11 that are expected to fill quickly based on past projects within the watershed.

Tier 1 and Tier 2 At-Risk Fish Species: Nebraska Natural Legacy Program's Tier 1 and Tier 2 at-risk fish species have potential ranges within streams in the upper reaches of the watershed. The Plains Topminnow (*Fundulus sciadicus*) is currently listed as a Tier 1 species and NGPC has a special interest in protecting this species to protect it from becoming federally listed. This Project includes habitat improvement structures to improve the habitat for the at-risk species and accommodate fish passage. Additionally, larger grade stabilization structures downstream of where these species typically inhabit will stabilize upstream reaches and protect from loss of favorable habitat for these species.

Land and infrastructure protection: Land and infrastructure will be protected through stabilized streambanks that will protect from loss of land and nearby structures. It is estimated that there will be approximately 170-acres of protected land from the increased grade protection throughout the watershed. Several homes and infrastructure will additionally be protected through streambank stabilization measures designed to protect threatened homes and infrastructure. See C-8 for detailed information about the reduced threats to infrastructure.

Water Quality Improvements: Water quality will be improved due to a reduction in sediment and associated nutrients from traveling downstream through

streambank stabilization and sediment trapping structures. See section C-5 for detailed information about how this Project will improve water quality.

Regional Water Management Plans: This Project will support the 2016 Water Quality Management Plan (WQMP) implementation strategy by implementing stream restoration projects within the 2016 WQMP Priority 1 watersheds for stream rehabilitation and improved water quality. Three project sites (APEs 10, 11, and 12) are located along the Bone Creek segment (NI3-12220), identified as a 'Special Priority Area' "with specific, limited, and urgent needs" (2016 WQMP). This alternative would implement stream rehabilitation projects in the Special Priority Areas identified for needing bed and bank stabilization measures in the 2016 WQMP.

Stream Stabilization and Improvements: This Project is designed to restore and improve streams within the watershed. This alternative would provide grade stabilization, headcut progression prevention, and stream restoration measures in the streams and therefore improve overall stream function, improving aquatic and terrestrial habitat and human safety. This Project will protect approximately 306,800-feet of stream upstream of the proposed grade stabilization measures. The upstream benefits would be reflected in improved Nebraska Stream Condition Assessment Procedure (NeSCAP) scores. Without protection from this Project, the protected stream's NeSCAP scores would likely decrease due to the increased degradation that would result in lowered hydraulic conveyance from increased down-cutting and bank failure, poor in-stream habitat, and reduced floodplain connectivity. This Project would additionally protect approximately 331,300-feet from decreased sediment transport to reaches downstream of the Project measures. These downstream reaches would benefit from decreased sedimentation, which would protect water quality from increased nutrients and reduce potential burying and disturbance to habitat features such as cobbles, pools, and snags. This Project would result in a cumulative benefit to 408,500-feet of streams with an estimated 229,600-feet of stream that would benefit from both upstream and downstream protection.

Improved Public Health and Safety: Safety will be improved due to protection of homes and public infrastructure such as stream crossings and roads. Stabilization of stream banks and gullies within the APEs will minimize degradation and erosion and therefore provide a moderate, permanent improvement to public safety in and near the streams within and upstream of the Project areas. This will prevent streams from encroaching on local residences, lowering the risk to loss of life and damage to homes. Additionally, proposed stream stabilization measures are designed to protect specific and upstream road crossings and roads. Protecting road crossings and roads from damage will provide safety benefits to pedestrians who use those facilities.

Protected Wild & Scenic Rivers: Implementation of this alternative would capture approximately 15.5 acre-feet (nearly 4,000 tons) of sediment throughout the

Project life behind the sill structures, pond, and sediment basins as well as additional sediment from reduced streambank erosion. Significant degradation and widening will also be minimized, leading to additional reductions in erosion and sedimentation. This sediment would travel downstream and enter the Niobrara River, which is designated as a Wild and Scenic River. This sediment would eventually continue downstream until eventually piling at the Lewis and Clark Lake on the Missouri River.

Improved Fish and Wildlife Habitat: In-stream aquatic habitat will benefit from additional habitat features and improved stream conditions. This Project will improve in-stream fish habitat by implementing in-stream habitat improvement structures such as cross-vanes, w-weirs, and cedar revetments. The combination of these in-stream habitat projects reduces drop heights to accommodate fish passage and creates favorable habitat for fish species through creation of pools and habitat cover. This alternative would additionally provide grade control along streams, enhancing overall stream function and consequently improve in-stream fish habitat. Aquatic habitat will also benefit from fish passage that structures such as the sill with fish passage and the Flexamat stream crossing were designed to accommodate.

Recreation: Stream related recreational values such as kayaking, tubing, and fishing will benefit from stream stabilization and improved aquatic habitat. This alternative would additionally provide an approximately 6-acre pool upstream of the proposed sill at APE 6 that will provide passive recreational benefits for fishing. The Niobrara River, immediately downstream of the watershed, is a designated wild and scenic river and is an important recreation resource within Nebraska. This Project reduces the influx of sediments and associated nutrients into the Niobrara River thereby helping to protect water quality and ensure recreation opportunities will continue into the future.

- 3.C Present all cost and benefit data in a table to indicate the annual cash flow for the life of the project (005.03).

No annual cash flow is required due to the non-monetary benefits from the Project.

- 3.D 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, demonstrate the economic feasibility of such proposal by such method as the Director and the Commission deem appropriate (005.04). (For example, show costs of and describe the next best alternative.)

The water will increase water sustainability but the majority of benefits from this Project are intangible. These benefits are largely intangible due to their inability to be expressed in monetary terms due to the nature of benefits and difficulty in

assigning costs and annualizing benefits. This application focuses on the intangible benefits. To demonstrate economic feasibility, the benefits are described qualitatively in Section B-3(b) in this application. When available, quantitative values were given to describe the benefits from this Project.

Detailed analysis was performed at each site was performed to determine the preferred alternative included in this Project. All considered alternatives were screened according to environmental and social consequences and a detailed cost analysis was evaluated at each site to ensure the most cost-effective alternative was selected.

Prove Financial Feasibility

(Applicant must demonstrate compliance with Title 261, CH 2 - 006)

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

The MNNRD has planned for and budgeted the cost of the design for this Project in their current budget, as reported in their upcoming fiscal budgets. Their FY22 budget will be approved at the September Board meeting.

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

The MNNRD includes operations and maintenance costs into annual budgets prepared each year. Replacement costs are included in the construction costs, budgeted for in their annual budget.

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

A loan is not involved.

7. Describe how the plan of development minimizes impacts on the natural environment (i.e. timing vs nesting/migration, etc.).

Numerous design alternatives were screened but were refined in the alternatives analysis to avoid and minimize environmental impacts. An on-site environmental field investigation was completed in October 2020 by FYRA to determine the location of wetlands and other Waters of the United States (WOUS) within the Areas of Potential Effect (APEs) for the Project. The investigation looked at wetland characteristics including prevalence of hydrophytic vegetation, permanent or periodic inundation or saturation, and hydric soils. A desktop review was conducted that included investigating soil types within the APEs, the National Wetlands Inventory, topographical maps, and aerial photography. Wetlands were identified and mapped, which can be viewed in the Plan-EA, Appendix C. Wetlands are additionally predicted to establish approximately 2-

feet vertically above and below the permanent pool elevation at the sill at structure G2-2-2. Implementation of stream stability measures, especially in the headwaters of the watershed, are expected to facilitate wetland creation and the combination of grade stabilization type structures will protect the destruction of existing wetlands by halting existing stream degradation. The impacts to wetlands are considered relatively small and this alternative is overall expected to provide a moderate, long-term improvement to wetlands within the watershed.

Stream assessments were completed in October 2020. The field assessment found that streams are largely degrading and widening as they move downstream and become deeply incised and disconnected from the floodplain. There will be minor impacts to streams but will overall improve stream function. All permit constraints will be abided by, which includes potential mitigation and avoiding the relevant nesting windows. Additionally, an NPDES permit for disturbed acres will be obtained, and a Stormwater Pollution Prevention Plan (SWPPP) will be developed to ensure minimal sediment transport from the site to the adjacent waterway.

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

The MNNRD is a regional government agency that focuses on conserving, sustaining, and improving natural resources and the environment. This Project aligns with the types of projects that aligns with MNNRD's roles and have a history of successful implementation, operation, and maintenance. Easements will be acquired so that the MNNRD will have access to all Project lands. All permits will be acquired to ensure all legal facets of the Project have been covered.

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

In the Nebraska Department of Natural Resources (NDNR's) Annual Report and Plan of Work for the Nebraska State Water Planning and Review Process (hereafter referred to as the Annual Report) (NDNR, 2020), the Statewide activities describe Water Sustainability Fund goals. This Project fulfills multiple goals stated below:

- Contribute to multiple water supply management goals including flood control, reducing threats to property damage, agricultural uses, municipal and industrial uses, recreational benefits, wildlife habitat, conservation, and preservation of water resources. (NDNR 2020)

Reducing threats to Wildlife Habitat

This Project is expected to provide moderate, long-term improvement to wetlands within the watershed. Wetlands are predicted to establish approximately 2-feet

vertically above and below the permanent pool elevation at the sill with a permanent pool (G2-2-2). Implementation of stream stability measures, especially in the headwaters of the watershed, are expected to facilitate wetland creation and therefore, improve wildlife habitat. Structures that provide grade stabilization benefits will also protect the destruction of existing wetlands by halting existing stream degradation. This Project would additionally improve in-stream fish habitat by implementing in-stream habitat improvement structures such as cross-vanes, w-weirs, and cedar revetments. The combination of these in-stream habitat projects reduces drop heights to accommodate fish passage and creates favorable habitat for fish species through creation of pools and habitat cover. The Project would additionally provide grade control along streams, enhancing overall stream function and consequently improve in-stream fish habitat.

Conservation and Preservation of Water Resources

Preservation of water resources is achieved by this Project through streambank stability and water quality improvements. The Project contains several structures that offer stream bank protection, alignment benefits, grade control, and 'passive grade control', which stabilize streams and protect and enhance the streams. This Project will additionally improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with water quality plans to improve water quality within the watershed.

Recreation

Stream degradation and widening, decreased water quality, and decreased fish and wildlife habitat in streams within the watershed pose a threat to recreationally significant activities such as fishing, kayaking, and floating. This alternative would improve in-stream fish habitat within streams, resulting in improved fishing within surrounding waterbodies. This alternative would additionally provide an approximately 6-acre pool upstream of the proposed sill at APE 6 that will provide passive recreational benefits for fishing. Additionally, the grade stabilization and streambank protection measures will preserve streams within the watershed will protect the recreational use of streams for kayaking, floating, fishing, and boating. The Niobrara River, immediately downstream of the watershed, is a designated wild and scenic river and is an important recreation resource within Nebraska. This Project reduces the influx of sediments and

associated nutrients into the Niobrara River thereby helping to protect water quality and ensure recreation opportunities will continue into the future.

Reducing threats to Property Damage

Stream degradation and widening are common throughout the watershed and can lead to loss of land, infrastructure damage, and interruptions to essential services. A significant area of land has been lost from previous storms and floods and providing protection will protect considerable land loss in the future. This Project would stabilize stream banks and gullies within and upstream of the APEs to minimize degradation and erosion and protect from loss of land. Several structures are specifically designed to protect specific homes and infrastructure. See C-8 for detailed information about the reduced threats to infrastructure.

10. Are land rights necessary to complete your project? YES NO

If yes:

- 10.A Provide a complete listing of all lands involved in the project.

MNNRD will obtain easements for construction and maintenance access. MNNRD does not currently have the easements but have already initiated communication with the landowners regarding the easement process. All landowners are aware of the Project and at this time and are anticipated to be willing participants for easements. The table below shows the potential parcels that will be acquired for easements. The parcels are subject to change due to the potential to adjust structure locations during final design.

Potential Parcels Involved in Project

APE	Parcels	APE	Parcels
1	090031881	9	090022998
	090031873		090022904
3	090031806		090022734
5	090045939		090022637
	090070321		090022556
6	0090044665	10	090028260
	0090069803		090028287
	090021290		090028171
7	0090041089		090028236
	090040376	090088089	
	090040635	11	090022564
	090040015		090088549
8	090039831	12	090030184
	090040090	13	090088083
	090039572		090088237
9	090023080		090088248

10.B Attach proof of ownership for each easements, rights-of-way and fee title currently held.

The MNNRD will acquire all necessary land rights and easements prior to Project construction. There is no foreseen controversy in acquiring the property required to complete this Project.

10.C Provide assurance that you can hold or can acquire title to all lands not currently held.

The MNNRD held public meetings, mailed out letters to each landowners with potential easements on their property to provide an overview of the proposed work, and held numerous in-person and phone meetings with landowners to answer any questions or concerns. Projects were modified to address any landowners concerns and create a favorable project for each landowner. There is no foreseen controversy in acquiring the property from landowners for this Project. The MNNRD has the power of eminent domain that could be applied if necessary.

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

This Project falls directly in line with the roles and responsibilities of the MNNRD. The MNNRD will obtain all necessary permits and land rights to complete the Project to obtain the authority needed to perform work on their own property.

The MNNRD has the power of eminent domain that could be applied if necessary.

12. Identify the probable consequences (environmental and ecological) that may result if the project is or is not completed.

Without this Project, stream degradation and widening will continue throughout the watershed and result in loss of land. Progressing stream degradation will continue to reduce floodplain connectivity, bedform diversity, and result in wider and warmer streams, thus leading to reduced habitat for fish and other aquatic and terrestrial species. This would additionally result in potentially significant loss of land and infrastructure and the risk from loss of homes and road crossings will continue to worsen. Stream stabilization in combination with sediment basins and sills that trap sediment will therefore, reduce sediment, nutrients, and bacteria transport downstream. Without the proposed basins, sills, and stream stabilization measures with this Project, water quality will continue to worsen with the influx of nutrients to downstream water bodies. As discussed in B.3 above, there are benefits to streams, erosion and sedimentation, wildlife habitat, water resources, recreation, infrastructure and property, and public health and safety that would not be realized if this Project is not completed. There are no negative long-term consequences of this Project. Temporary impacts would include land disturbance that increases erosion and sediment transport but will be minimized with the installation of stormwater pollution prevention measures.

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 above. 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.

Sections of Long Pine Creek, Bone Creek, and Sand Draw are listed as impaired due to high levels of E. Coli bacteria and some having additional impairments from elevated temperatures according to the NDEE Water Quality Integrated

Report (2020 IR). By virtue of reducing stream erosion and trapping sediments, nutrients, and bacteria this Project will improve downstream water quality of raw water drawn for potable use. It will additionally lower risk for contaminants into groundwater. Long Pine and Ainsworth are the two main communities within the watershed. Drinking water in this area comes predominantly from groundwater sources. There are over 180 active, domestic groundwater wells within the watershed. The Projects would influence water supplies to most Sandhill and Niobrara River communities located down-gradient of the proposed projects. There are an estimated 8,000 to 10,000 people in the MNNRD district with an additional 80,000 to 100,000 people visiting the Valentine area for recreational opportunities. While almost all people within the MNNRD district share the same aquifer, we are not suggesting that each and everyone of these people will benefit from this Project.

This Project will improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with water quality plans to improve water quality within the watershed.

A wellhead protection network was created as a voluntary program to help communities protect their public water through delineating Wellhead Protection Areas (WPAs). Wellhead protection areas are protected zones around groundwater wells that supply water to the public water system and are protected from potential contaminants to the water. There are two wellhead protection areas within the watershed to protect the water supplies to the cities of Long Pine and Ainsworth. Groundwater has been found to have high nitrate concentrations in irrigated areas and Management Zones were created in the 1995 MNNRD Ground Water Management Plan to address the groundwater nitrate contamination. There is the potential to have detrimental long-range impacts to drinking water if the sedimentation and associated nutrients continue to enter waters and harm water quality from increased stream erosion. Several streams are already considered impaired and there is the potential for impairments to worsen and become more difficult to remediate. The MNNRD is committed to drinking water safety in the watershed. In September 2019, Brown County received consecutive days of excessive rain amounting to approximately 12-inches of rain. The MNNRD set up a testing spot in Ainsworth, NE to test water

for individuals who may have had issues or well contamination due to excess high water from the rain events.

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.

The MNNRD and Nebraska Department of Natural Resources (NDNR) jointly adopted a Voluntary Integrated Management Plan (IMP) in December of 2020. The goal of the 2020 IMP is to protect the water supplies to sustain its benefits into the future. Goal 2 is to develop systematic approaches for the development and sustainability of water resources, while protecting existing uses and supplies, allowing for growth and changes in use within the District, and promoting coordination between surface water and groundwater users to protect all water uses in the District.

This Project will help achieve Goal 2 of the IMP by protecting water resources within the watershed. Preservation of water resources is achieved by this Project through streambank stability and water quality improvements. The Project contains several structures that offer stream bank protection, alignment benefits, grade control, and 'passive grade control', which stabilize streams and protect and enhance the streams. This Project will additionally improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with water quality plans to improve water quality within the watershed.

It will specifically help achieve Goal 2, Objective 2.4 by providing additional surface water storage through the pond, sediment basin, and sill with fish passage. The IMP was recently established and therefore no work has been completed to achieve the goals of the plan since it was finalized in 2020. The MNNRD has completed all the tasks, stakeholder meetings, and hearings to obtain the approved IMP.

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 MNNRD and NDNR jointly adopted a voluntary Integrated Management Plan in December of 2020. Actions to meet the goals and objectives of this IMP are underway. Watershed Management Plans can be considered existing policies and authorities used to address water quantity issues of an IMP. The goal of the IMP is to protect water users and their investments and interests through improving the understanding of water supplies and uses, protecting existing users, and communicating water resource information.

This Project will provide minimal amounts of recharge and reduction of aquifer depletion as permanent impoundments are not large in scale. The pond (P2-4) and sill with fish passage (G2-2-2) both are designed with permanent pools designed to retain water. The locations of these two structures are in APEs 6 and 7, shown in Figure B-1.2 in the SIA. G2-2-2 is located on Sand Draw and P2-4 is located on a tributary to Sand Draw. The presence of the permanent pools increases aquifer recharge and infiltration by artificially increasing the available head in the pool area. There is also the potential for a groundwater mound to form below the structures to help recharge the upper aquifer. The groundwater mound will first form directly below the reservoir and then expand along the periphery and feed neighboring aquifers. Because the Project is not specifically a recharge Project that measured volume and area, it is difficult to quantify and is subject to current conditions. Aquifer depletion would be reduced due to the increased duration of streamflow after precipitation events. Additionally, the permanent pools would attenuate flows and likely remove water from the system due to evaporation. Cross-basin benefits are not anticipated.

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.

Reducing threats to Wildlife Habitat

This Project is expected to provide moderate, long-term improvement to wetlands within the watershed. Wetlands are predicted to establish approximately 2-feet vertically above and below the permanent pool elevation at the sill with a permanent pool (G2-2-2). Implementation of stream stability measures, especially in the headwaters of the watershed, are expected to facilitate wetland creation and therefore, improve wildlife habitat. Structures that provide grade stabilization benefits will also protect the destruction of existing wetlands by halting existing stream degradation. This Project would additionally improve in-stream fish habitat by implementing in-stream habitat improvement structures such as cross-vanes, w-weirs, and cedar revetments. The combination of these in-stream habitat projects reduces drop heights to accommodate fish passage and creates favorable habitat for fish species through creation of pools and habitat cover. The Project would additionally provide grade control along streams, enhancing overall stream function and consequently improve in-stream fish habitat that would otherwise be threatened to degradation and erosion.

Conservation and Preservation of Water Resources

Preservation of water resources is achieved by this Project through streambank stability and water quality improvements. The Project contains several structures that offer stream bank protection, alignment benefits, grade control, and 'passive grade control', which stabilize streams and protect and enhance the streams. This Project will additionally improve water quality through stabilizing streams, which would reduce stream erosion and therefore reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with water quality plans to improve water quality within the watershed. Without this Project, erosion and sedimentation would continue to increase and threaten water quality.

Recreation

Stream degradation and widening, decreased water quality, and decreased fish and wildlife habitat in streams within the watershed pose a threat to recreationally significant activities such as fishing, kayaking, and floating. This Project would improve in-stream fish habitat within streams, resulting in improved fishing within surrounding waterbodies. This Project would additionally provide an approximately 6-acre pool upstream of the proposed sill at APE 6 that will provide passive recreational benefits for fishing. Additionally, the grade

stabilization and streambank protection measures will preserve streams within the watershed will protect the recreational use of streams for kayaking, floating, fishing, and boating. Without this Project, streams would continue to degrade and widen, threatening key recreational components within the watershed. The Niobrara River, immediately downstream of the watershed, is a designated wild and scenic river and is an important recreation resource within Nebraska. This Project reduces the influx of sediments and associated nutrients into the Niobrara River thereby helping to protect water quality and ensure recreation opportunities will continue into the future.

Reducing threats to Property Damage

Stream degradation and widening are common throughout the watershed and can lead to loss of land, infrastructure damage, and interruptions to essential services. A significant area of land has been lost from previous storms and floods and streams are expected to continue to degrade and widen in the future. The Project provides grade control benefits by stabilizing the streambed and therefore, protecting headcuts from moving further upstream which would otherwise cause the stream to degrade and widen. Most land adjacent to streams is used for agriculture or ranching and landowners will benefit from protection of land used for crops and livestock. This Project would stabilize stream banks and gullies within and upstream of the APEs to minimize degradation and erosion and protect from loss of land. Several structures are specifically designed to protect specific homes and infrastructure.

At APE 12, the 2019 flood event cut off a meander in Bone Creek at APE 12, shifting the stream nearly 600-feet north and eroding the streambank to within 150-feet of a home and within 70-feet of other infrastructure (Parcel 090030184). The rock ramp (G2-70) in combination with streambank protection (BS2-71) are designed to keep flows from the existing bank and protect the bank from further degradation into the adjacent homes and outbuildings. The dwelling and outbuilding have a 2021 assessed value of \$60,005. A bridge was destroyed and replaced by the landowner in 2020. This Project involves implementing buried flank protection (BS2-72) just upstream of the bridge to protect the right pier. At APE 13, a home is located at the top of a steep bank. The home will be threatened if streambank erosion and widening continues. Riprap is currently being used along portions of the slope and this Project includes additional toe protection (BS2-45) to provide additional stability to protect the streambank from eroding closer to the home. The dwelling has a 2021 assessed value of \$183,263. Threats to damage to or loss of these homes current exists as a significant threat to public safety and this Project is designed to lower those threats.

A major state-owned culvert located at the intersection of Old Highway 7 and Sand Draw previously protected the upstream reaches from a headcut of over 15-feet immediately downstream of the culvert and was lost during the 2019 flood events. A new bridge is critical infrastructure that has been designed to be

implemented to replace the lost culvert. The bridge will be critical infrastructure as it provides a crossing to a major road in the area and the new bridge has an estimated construction cost of \$972,412. This Project will include sills (G2-9-1-3) and a grade control structure (G2-70) located downstream of the new bridge. These structures are designed to protect from impending headcuts and reclaim lost grade observed to existing during the site visit. This Project will offer protection to the Old Highway 7 bridge by protecting the observed downstream headcuts from moving upstream and damaging the new bridge. The approximately 15-feet of headcut that was previously held back by the culvert is now progressing upstream, toward the next bridge crossing. Structures G2-8-1 and G2-8-2 are specifically designed to prevent infrastructure damage at the upstream crossings. Grade stabilization projects are located throughout the streams within the watershed and would additionally offer protection from impending headcuts and degrading streams to several other stream crossings. Risks to stream crossings pose a significant threat to public safety and providing grade stabilization benefits will reduce risks to damages to crossings.

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 improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with past water quality plans to improve water quality within the watershed.

Five stream reaches within the watershed are designated as having Primary Contact Recreation beneficial use according to the 2020 IR. This means that they are used, or have a high potential to be used, for recreational activities where the body may come into prolonged contact with the water. Other beneficial uses for streams within the watershed includes Class A or Class B Coldwater Aquatic Life, Class A Agriculture Water Supply, and Aesthetic

Beneficial Use. Improved water quality will increase all beneficial uses listed above for streams and waterbodies within the watershed. Additionally, the Project will improve aquatic habitat and therefore, increase the beneficial use of Class A and Class B Coldwater Aquatic Life. The Project will stabilize streams and protect from widening and erosion, which will improve the aesthetic beneficial uses of all benefitted streams. The residents will benefit from these improved beneficial uses. Much of the watershed's recreational opportunities include water-based recreation such as fishing, kayaking, and tubing. The residents will benefit from improved water quality and stabilized streams for recreational purposes in addition to general land-savings from decreased stream widening. Most streams within the watershed are listed for Class A Agricultural beneficial use, which means that they are used for general agricultural purpose without treatment. Most residents in this area would benefit from improved water for agricultural purposes.

The Niobrara River, immediately downstream of the watershed, is a designated wild and scenic river and is an important recreation resource within Nebraska. This Project reduces the influx of sediments and associated nutrients into the Niobrara River thereby helping to protect water quality and ensure recreation opportunities will continue into the future. This Project will not reduce any beneficial uses.

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.

A cost summary table detailing all of the costs for the proposed Project is provided in a summary table in SIA Section A-1. There are no expected land and water acquisition costs since it is predicted to be able to obtain easements. This Project is cost-effective due to the significant amount of intangible benefits that this Project provides.

Detailed analysis was performed at each site to determine the structural components included in this Project. All viable structural and nonstructural alternatives were screened during the NEPA process and this Project represents the least costly socially and environmentally acceptable alternative that could meet the purpose and need. Cost estimates for each structure are included in SIA Section A-1.

Benefits for this Project are mostly intangible, meaning that the majority of benefits cannot be expressed in monetary terms because of the difficulty in annualizing benefits due to the nature of benefits. It is difficult to predict the year

and costs of the received benefits from this Project due to the types of benefits and unpredictable nature of the benefitted streams. A description of the benefits from the Project are described below:

Reduction in erosion and sediment: The channel and gully stabilization alternatives will protect the upstream channels and gullies from erosion at the proposed stabilization measure locations. The sill structures, pond, and sediment basin will capture and store accumulated sediment. Benefits may be realized as far downstream as the Niobrara River. Projects will capture approximately 15.5 acre-feet (nearly 4,000 tons) of sediment throughout the Project life behind the sill structures, pond, and sediment basins. Of this, 5.3 acre-feet will likely be stored behind sills at APEs 1, 9, and 11 that are expected to fill quickly based on past projects within the watershed.

Tier 1 and Tier 2 At-Risk Fish Species: Nebraska Natural Legacy Program's Tier 1 and Tier 2 at-risk fish species have potential ranges within streams in the upper reaches of the watershed. The Plains Topminnow (*Fundulus sciadicus*) is currently listed as a Tier 1 species and NGPC has a special interest in protecting this species to protect it from becoming federally listed. This Project includes habitat improvement structures to improve the habitat for the at-risk species and accommodate fish passage. Additionally, larger grade stabilization structures downstream of where these species typically inhabit will stabilize upstream reaches and protect from loss of favorable habitat for these species.

Land and infrastructure protection: Land and infrastructure will be protected through stabilized streambanks that will protect from loss of land and nearby structures. It is estimated that there will be approximately 170-acres of protected land from the increased grade protection throughout the watershed. Several homes and infrastructure will additionally be protected through streambank stabilization measures designed to protect threatened homes and infrastructure.

At APE 12, the 2019 flood event cut off a meander in Bone Creek at APE 12, shifting the stream nearly 600-feet north and eroding the streambank to within 150-feet of a home and within 70-feet of other infrastructure (Parcel 090030184). The rock ramp (G2-70) in combination with streambank protection (BS2-71) are designed to keep flows from the existing bank and protect the bank from further degradation into the adjacent homes and outbuildings. The dwelling and outbuilding have a 2021 assessed value of \$60,005. A bridge was destroyed and replaced by the landowner in 2020. This Project involves implementing buried flank protection (BS2-72) just upstream of the bridge to protect the right pier. At APE 13, a home is located at the top of a steep bank. The home will be threatened if streambank erosion and widening continues. Riprap is currently being used along portions of the slope and this Project includes additional toe protection

(BS2-45) to provide additional stability to protect the streambank from eroding closer to the home. The dwelling has a 2021 assessed value of \$183,263. Threats to damage to or loss of these homes current exists as a significant threat to public safety and this Project is designed to lower those threats.

A major state-owned culvert located at the intersection of Old Highway 7 and Sand Draw previously protected the upstream reaches from a headcut of over 15-feet immediately downstream of the culvert and was lost during the 2019 flood events. A new bridge is critical infrastructure that has been designed to be implemented to replace the lost culvert. The bridge will be critical infrastructure as it provides a crossing to a major road in the area and the new bridge has an estimated construction cost of \$972,412. This Project will include sills (G2-9-1-3) and a grade control structure (G2-70) located downstream of the new bridge. These structures are designed to protect from impending headcuts and reclaim lost grade observed to existing during the site visit. This Project will offer protection to the Old Highway 7 bridge by protecting the observed downstream headcuts from moving upstream and damaging the new bridge. The approximately 15-feet of headcut that was previously held back by the culvert is now progressing upstream, toward the next bridge crossing. Structures G2-8-1 and G2-8-2 are specifically designed to prevent infrastructure damage at the upstream crossings. Grade stabilization projects are located throughout the streams within the watershed and would additionally offer protection from impending headcuts and degrading streams to several other stream crossings. Risks to stream crossings pose a significant threat to public safety and providing grade stabilization benefits will reduce risks to damages to crossings.

The Project provides grade control benefits by stabilizing the streambed and therefore, protecting headcuts from moving further upstream which would otherwise cause the stream to degrade and widen. Properties upstream of proposed grade stabilization projects will benefit from protection from loss of land due to stream widening. Most land adjacent to streams is used for agriculture or ranching and landowners will benefit from protection of land used for crops and livestock. Quantifying the threats to land and public and private infrastructure is technically difficult to impossible. The potential value of cost-savings were not calculated from reduced threats to property damage and infrastructure since a benefit to cost ratio is not required due to the intangible project benefits. However, the estimated values of some of the specific structures protected from this Project are listed below.

Protected Structure Values

Structure	Estimated Value
APE 12 Dwelling	\$47,020
APE 12 Outbuilding	\$12,985
APE 13 Dwelling	\$183,263
Old Hwy 7	\$972,412

Water Quality Improvements: Water quality will be improved due to a reduction in sediment and associated nutrients from traveling downstream through streambank stabilization and sediment trapping structures. This Project will improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with past water quality plans to improve water quality within the watershed.

Regional Water Management Plans: This Project will support the 2016 Water Quality Management Plan (WQMP) implementation strategy by implementing stream restoration projects within the 2016 WQMP Priority 1 watersheds for stream rehabilitation and improved water quality. Three project sites (APEs 10, 11, and 12) are located along the Bone Creek segment (NI3-12220), identified as a 'Special Priority Area' "with specific, limited, and urgent needs" (2016 WQMP). This alternative would implement stream rehabilitation projects in the Special Priority Areas identified for needing bed and bank stabilization measures in the 2016 WQMP.

Stream Stabilization and Improvements: This Project is designed to restore and improve streams within the watershed. This alternative would provide grade stabilization, headcut progression prevention, and stream restoration measures in the streams and therefore improve overall stream function, improving aquatic and terrestrial habitat and human safety. This Project will protect approximately 306,800-feet of stream upstream of the proposed grade stabilization measures. The upstream benefits would be reflected in improved Nebraska Stream Condition Assessment Procedure (NeSCAP) scores. Without protection from this Project, the protected stream's NeSCAP scores would likely decrease due to the increased degradation that would result in lowered hydraulic conveyance from increased down-cutting and

bank failure, poor in-stream habitat, and reduced floodplain connectivity. This Project would additionally protect approximately 331,300-feet from decreased sediment transport to reaches downstream of the Project measures. These downstream reaches would benefit from decreased sedimentation, which would protect water quality from increased nutrients and reduce potential burying and disturbance to habitat features such as cobbles, pools, and snags. This Project would result in a cumulative benefit to 408,500-feet of streams with approximately 229,600-feet of stream likely benefiting from both upstream and downstream protection.

Improved Public Health and Safety: Safety will be improved due to protection of homes and public infrastructure such as stream crossings and roads. Stabilization of stream banks and gullies within the APEs will minimize degradation and erosion and therefore provide a moderate, permanent improvement to public safety in and near the streams within and upstream of the Project areas. This will prevent streams from encroaching on local residences, lowering the risk to loss of life and damage to homes. Additionally, proposed stream stabilization measures are designed to protect specific and upstream road crossings and roads. Protecting road crossings and roads from damage will provide safety benefits to pedestrians who use those facilities.

Protected Wild & Scenic Rivers: Implementation of this alternative would capture approximately 15.5 acre-feet (nearly 4,000 tons) of sediment throughout the Project life behind the sill structures, pond, and sediment basins as well as additional sediment from reduced streambank erosion. Significant degradation and widening will also be minimized, leading to additional reductions in erosion and sedimentation. This sediment would travel downstream and enter the Niobrara River, which is designated as a Wild and Scenic River. This sediment would eventually continue downstream until eventually piling at the Lewis and Clark Lake on the Missouri River.

Improved Fish and Wildlife Habitat: In-stream aquatic habitat will benefit from additional habitat features and improved stream conditions. This Project will improve in-stream fish habitat by implementing in-stream habitat improvement structures such as cross-vanes, w-weirs, and cedar revetments. The combination of these in-stream habitat projects reduces drop heights to accommodate fish passage and creates favorable habitat for fish species through creation of pools and habitat cover. This alternative would additionally provide grade control along streams, enhancing overall stream function and consequently improve in-stream fish habitat. Aquatic habitat will also benefit from fish passage that structures such as the sill with fish passage and the Flexamat stream crossing were designed to accommodate.

Recreation: Stream related recreational values such as kayaking, tubing, and fishing will benefit from stream stabilization and improved aquatic habitat. This alternative would additionally provide an approximately 6-acre pool upstream of the proposed sill at APE 6 that will provide passive recreational benefits for fishing. The Niobrara River, immediately downstream of the watershed, is a designated wild and scenic river and is an important recreation resource within Nebraska. This Project reduces the influx of sediments and associated nutrients into the Niobrara River thereby helping to protect water quality and ensure recreation opportunities will continue into the future.

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.

Section 303(d) of the Environmental Protection Agency's Clean Water Act is required to maintain the integrity of the Nation's waters and requires states to establish a list of impaired waters that do not meet water quality standards. Once on the 303(d) list of impaired waters, it is required that a Total Maximum Daily Load (TMDL) report is developed to set goals and pollutant load reductions required for the water body to meet water quality standards. The NDEE 2020 IR lists Sand Draw and reaches of Bone Creek and Long Pine Creek are on the 303(d) list of impaired waters for *E. coli*. Sand Draw and Bone Creek are additionally impaired due to elevated temperatures.

The water quality benefits from this Project will contribute to reductions in the *E. coli* load. This will be achieved through implementation of the pond and sill with fish passage that creates permanent pools. The pools will increase surface area of water that is exposed to sunlight and extend the detention time of the water, allowing for bacteria to die off prior to discharging past the structure. Bank stabilization will additionally reduce the amount of erosion and sediment and sediment-attached (primarily phosphorus and *E. coli*) pollutant loads. Additionally, the cedar revetment (BS2-30) proposed along Bone Creek will assist in lowering the elevated temperatures within Bone Creek. This Project also includes stabilizing and restoring a floodplain that has acquired significant volumes of deposited sand from past storm events. Stabilizing this floodplain through implementing soil and restoring vegetation in this area will improve water quality through the planted vegetation and protect the sand deposits from traveling further downstream. Cedar revetments have a history of increasing

velocities in the channel, creating deeper and cooler streams. This Project will assist in reducing the E. coli loads and lowering elevated temperatures in the streams within the watershed, for which they are impaired and will help meet the goals of the TMDL.

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 designed to protect specific homes and infrastructure. At APE 12, the 2019 flood event cut off a meander in Bone Creek at APE 12, shifting the stream nearly 600-feet north and eroding the streambank to within 150-feet of a home and within 70-feet of other infrastructure (Parcel 090030184). The rock ramp (G2-70) in combination with streambank protection (BS2-71) are designed to keep flows from the existing bank and protect the bank from further degradation into the adjacent homes and outbuildings. The dwelling and outbuilding have a 2021 assessed value of \$60,005. A bridge was destroyed and replaced by the landowner in 2020. This Project involves implementing buried flank protection (BS2-72) just upstream of the bridge to protect the right pier. At APE 13, a home is located at the top of a steep bank. The home will be threatened if streambank erosion and widening continues. Riprap is currently being used along portions of the slope and this Project includes additional toe protection (BS2-45) to provide additional stability to protect the streambank from eroding closer to the home. The dwelling has a 2021 assessed value of \$183,263. Threats to damage to or loss of these homes current exists as a significant threat to public safety and this Project is designed to lower those threats.

A major state-owned culvert located at the intersection of Old Highway 7 and Sand Draw previously protected the upstream reaches from a headcut of over 15-feet immediately downstream of the culvert and was lost during the 2019 flood events. A new bridge is critical infrastructure that has been designed to be implemented to replace the lost culvert. The bridge will be critical infrastructure as it provides a crossing to a major road in the area and the new bridge has an estimated construction cost of \$972,412. This Project will include sills (G2-9-1-3) and a grade control structure (G2-70) located downstream of the new bridge. These structures are designed to protect from impending headcuts and reclaim

lost grade observed to existing during the site visit. This Project will offer protection to the Old Highway 7 bridge by protecting the observed downstream headcuts from moving upstream and damaging the new bridge. The approximately 15-feet of headcut that was previously held back by the culvert is now progressing upstream, toward the next bridge crossing. Structures G2-8-1 and G2-8-2 are specifically designed to prevent infrastructure damage at the upstream crossings. Grade stabilization projects are located throughout the streams within the watershed and would additionally offer protection from impending headcuts and degrading streams to several other stream crossings. Risks to stream crossings pose a significant threat to public safety and providing grade stabilization benefits will reduce risks to damages to crossings.

The Project provides grade control benefits by stabilizing the streambed and therefore, protecting headcuts from moving further upstream which would otherwise cause the stream to degrade and widen. Properties upstream of proposed grade stabilization projects will benefit from protection from loss of land due to stream widening. Most land adjacent to streams is used for agriculture or ranching and landowners will benefit from protection of land used for crops and livestock. Quantifying the threats to land and public and private infrastructure is technically difficult to impossible. The potential value of cost-savings were not calculated from reduced threats to property damage and infrastructure since a benefit to cost ratio is not required due to the intangible project benefits. However, the estimated values of some of the specific structures protected from this Project are listed below.

Protected Structure Values

Structure	Estimated Value
APE 12 Dwelling	\$47,020
APE 12 Outbuilding	\$12,985
APE 13 Dwelling	\$183,263
Old Hwy 7	\$972,412

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.

Sections of Long Pine Creek, Bone Creek, and Sand Draw are listed as impaired due to high levels of E. Coli bacteria and some having additional impairments

from elevated temperatures according to the NDEE Water Quality Integrated Report (2020 IR). The water usage is primarily agricultural through irrigation and livestock watering.

The watershed was part of the Rural Clean Water Program (RCWP) in 1981. A 1991 RCWP 10-year report documents the results of the implemented best management practices applied through the watershed. Successful practices implemented with the RCWP include fertilizer and pesticide management and cedar revetments. The RCWP noted that the inability to address streambank erosion in Bone and Sand Draw Creeks was seen as a major implementation difficulty for the 1991 program study and implementation and therefore further work was identified as a need in these systems. The MNNRD developed the Long Pine Creek Watershed Water Quality Management Plan in 2016 (2016 WQMP). This plan developed a high-level plan to improve water quality throughout the watershed by setting goals and objectives, prioritizing watersheds and identifying special priority areas for specific needs. The 2016 WQMP identified stream restoration and stabilization projects as priority practices to improve water quality and aquatic resources. Additionally, project sites are located along and will improve water quality along the Bone Creek segment (NI3-12220), which was identified as a 'Special Priority Area' in the 2016 WQMP. An in-stream rehabilitation structure, SD-14, located on Sand Draw Creek was completed in the beginning of June 2020 to reduce streambank erosion and enhance aquatic habitat in the watershed.

Implementation of this alternative would provide grade control and stream stabilization benefits and would consequently reduce stream erosion and the influx of nutrients from sediment to downstream waterbodies. Additionally, the construction of the sills, pond, and sediment basin will protect the downstream water quality by detaining sediment that would otherwise enter the downstream water bodies. Restoring and establishing plants on a damaged floodplain area from past floods will also filter nutrients and improve downstream water quality. This Project would provide benefits to stream reaches located downstream of proposed structures. This would include most streams within the watershed including reaches along Sand Draw, Bone Creek, and Willow Creek. There are an estimated 8,000 to 10,000 people in the MNNRD district with an additional 80,000 to 100,000 people visiting the Valentine area for recreational opportunities. While almost all people within the MNNRD district share the same aquifer, we are not suggesting that each and everyone of these people will benefit from this Project.

Other possible solutions include a combination of non-structural alternatives such as policy, existing land use, or management practices that would reduce nutrients from entering the streams. Non-structural alternatives were analyzed, as described in detail in the Plan-EA, but were determined to be ineffective in meeting the Project's purpose and need.

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 MNNRD has been an avid supporter of this Project and have participated in the planning efforts as the local governing jurisdiction. They have been an active participant in the planning process of the Tier 1 alternatives to date. The MNNRD has an expected tax levy for the fiscal year 2022 of \$0.0306 that would result in a total expected budget of \$846,511 for the fiscal year 2022. They have included the cost of the Project in their upcoming annual fiscal budgets and long-range plans.

Other funding sources for the Project include funding through the P.L. 83-566 Watershed and Flood Prevention Operations (WFPO) program. The MNNRD has obtained funds from Nebraska Department of Environment and Energy (NDEE) 319 program and through the Nebraska Environmental Trust (NET). The received NET and funds are for a separate project with similar goals on the Sand Draw Creek, which has fallen through due to lack of cooperation from the landowners. MNNRD is currently working to seek approval to transfer the obtained NET funds towards this Project. They will know in August 2021 whether these funds can be applied to this Project. Please see Table A-1 in the SIA for a cost-breakdown of the obtained funds for both funding alternatives dependent on whether NET funds receipt approval to be transferred. We will inform you before the November commission meeting whether the NET funds are transferred.

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.

“Water Sustainability” means water use is sustainable when current use promotes healthy watersheds, improves water quality, and protects the ability of future generations to meet their needs. The local jurisdiction that manages and

enforces water sustainability is the MNNRD. The 2016 Long Pine Creek Water Quality Management Plan, the 1995 Ground Water Management Plan, and the 2020 Voluntary Integrated Management Plan are all plans that have been created and followed to support sustainable water use.

The goal of the 2020 IMP is to protect the water supplies to sustain its benefits into the future. Goal 2 is to develop systematic approaches for the development and sustainability of water resources, while protecting existing uses and supplies, allowing for growth and changes in use within the District, and promoting coordination between surface water and groundwater users to protect all water uses in the District. This Project will help achieve Goal 2, Objective 2.4 by providing additional surface water storage through the pond, sediment basin, and sill with fish passage.

The 2016 WQMP identified stream restoration projects as potential solutions to improve water quality and aquatic resources. Implementation of this alternative will support the 2016 WQMP implementation strategy by implementing stream restoration projects within the 2016 WQMP Priority 1 watersheds for stream rehabilitation and improved water quality. Three project sites (APEs 10, 11, and 12) are located along the Bone Creek segment (NI3-12220), identified as a 'Special Priority Area' "with specific, limited, and urgent needs" (2016 WQMP). This alternative would implement stream rehabilitation projects in the Special Priority Areas identified for needing bed and bank stabilization measures in the 2016 WQMP. The 2016 WQMP identified stream restoration as being an important measure to improving the ecological stream health and identified stream stabilization as a priority practice. As a major purpose of this Project is stream stabilization, this Project works in conjunction with the goals set up by the 2016 WQMP. The SD-14 Project includes two engineered rock riffle structures and bank stabilization on Sand Draw Creek. The SD-14 Rehabilitation Project was constructed in June 2020 to address issues relating to erosion, streambed degradation, water quality, high sediment loads, and inadequate aquatic habitat to achieve goals from the past plans.

This Project supports sustainable water use by promoting healthy watersheds through providing grade control, bank stabilization, and aquatic ecosystem restoration and rehabilitation. The target area includes streams within the watershed, specifically along reaches within and upstream of the APEs that were identified as high priority areas. The usage of water is predominantly agricultural for irrigation and livestock. This Project will provide benefits to the entire watershed, which is approximately 240,860-acres in area. Ainsworth and Long Pine are the two main towns within the watershed, which has a population of 1,728 and 305 respectively, according to the 2010 Census. The local public within the watershed and specifically in areas near the Project site will benefit most from this Project. Stakeholders of this Project not only include the partners (MNNRD), but also the agencies such as NGPC, USFWS, and the USACE permitting division.

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.

Stream degradation and widening have been identified as the main areas of concern within this watershed, both during recent scoping and outreach exercises as well as previous studies. There is also a need for aquatic ecosystem restoration and rehabilitation. This Project will address these problems by providing site-specific methods to stabilize, protect, and enhance streams and improve aquatic habitat through implementing a combination of grade stabilization, streambank protection, and habitat enhancing structures. This Project will provide benefits to the entire watershed, which is approximately 240,860-acres in area. Ainsworth and Long Pine are the two main towns within the watershed, which has a population of 1,728 and 305 respectively, according to the 2010 Census.

There are several Tier 1 aquatic species of concern located within the streams in this watershed. Nebraska has a special interest in protecting certain species within the watershed, such as the Plains Topminnow, to protect them from becoming federally listed as threatened. Additionally, some of these streams, such as Long Pine Creek, is on the Nationwide Rivers inventory for excellent cold water fishing habitat and recreational opportunity. Nebraska has an interest in protecting and restoring streams that are important recreational resources in Nebraska. This Project will additionally protect approximately 170-acres of land, predominantly used for agricultural and livestock, which impacts the state's agricultural and livestock production and outputs. This Project, as documented here within, will also help meet water quality improvement goals set forth in the TMDLs and state-wide efforts.

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 Project has received funding from the P.L. 83-566 Watershed and Flood Prevention Operations (WFPO) program (shown in the Notice of Grant and Agreement Award in the SIA Attachments). It is anticipated that 100 percent of design costs and approximately 50 percent of total construction costs will be funded by the WFPO for this Project. Additionally on the Federal level, \$300,000 in funds have been obtained from the Environmental Protection Agency's 319 fund, administered locally by the Nebraska Department of Environmental Quality. This is for water quality improvements and namely the basin planned at the head of the reservoir. The NDEE 319 funding certificate is included as an attachment to the SIA.

On the State level, the MNNRD has received funds from the Nebraska Environmental Trust (NET) for a Phase 3 project, which is a separate project with similar goals on Sand Draw Creek, which has fallen through due to lack of cooperation from the landowners. The NET funds have also been received for a Phase 4 project, which is within this Project's area. The combined NET funds would be \$1,295,000. MNNRD is currently working to seek approval to transfer the obtained NET funds towards this Project and expect to hear back in August about approval. The requested amount from the Water Sustainability Fund requested amount will be dependent on the approval for transfer of NET funds. The award letters for the obtained NET funds for both phases is included as attachments to the SIA.

On the local level, MNNRD is responsible for remaining costs and if other funding sources do not come through. The MNNRD will assume future operation and maintenance costs. These partnerships at all levels saves the NRD money that will go towards additional structures that provide a safe watershed to Nebraskans. The best and worst-case cost-share costs are shown below and provided in the SIA in Table A-1.1(a) and A-1.1(b).

Worst-Case Funding Breakdown

	Total Costs	FEDERAL		Section 319 Non-Federal Match	Remaining Costs	STATE	LOCAL
		WFPO Cost-Share	NDEE Section 319			WSF Grant Request	Total Local Cost Share
Construction	\$3,491,300	\$1,796,100	\$300,000	\$200,500	\$1,194,700	\$716,820	\$477,880
Engineering	\$1,047,400	\$873,100	-	-	\$174,300	\$104,580	\$69,720
Land Rights	\$0	\$0	-	-	\$0	\$0	\$0
Project Administration	\$244,200	\$122,100	-	-	\$122,100	\$73,260	\$48,840
Totals	\$4,782,900	\$2,791,300	\$300,000	\$200,500	\$1,491,100	\$894,660	\$596,440

Best-Case Funding Breakdown

	Total Costs	FEDERAL		Section 319 Non-Federal Match	Remaining Costs	STATE		LOCAL
		WFPO Cost-Share	NDEE Section 319			NET Funds	WSF Grant Request	Total Local Cost Share
Construction	\$3,491,300	\$1,796,100	\$300,000	\$100,250	\$1,294,950	\$1,225,280	\$69,670	\$0
Engineering	\$1,047,400	\$873,100	-	-	\$174,300	\$69,720	\$104,580	\$0
Land Rights	\$0	\$0	-	-	\$0	\$0	\$0	\$0
Project Administration	\$244,200	\$122,100	-	\$100,250	\$21,850	\$0	\$13,110	\$8,740
Totals	\$4,782,900	\$2,791,300	\$300,000	\$200,500	\$1,491,100	\$1,295,000	\$187,360	\$8,740

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 is specifically targeted to improve the health and function of the Bone and Long Pine Creeks watersheds, shown in Figure B-1.1 in the SIA. The benefits of this Project include significant improvements to the watershed health and function by providing grade control, bank stabilization, and aquatic ecosystem restoration and rehabilitation. This Project will increase stream function within and upstream of the project areas. Specifically, there will be an overall increase in bed and bank stability and decreases in erosion that will increase aquatic functions from grade and bank stabilization structures. Aquatic species will benefit from the habitat stability and aquatic habitat improvements. Many of the restoration structures with grade stabilization are designed to improve aquatic habitat by providing smoother drops and creating pools for aquatic species. The pools created with the pond and sills will create both deep and shallow open water habitat, and inundated wetlands that will additionally increase aquatic functions.

This Project will additionally improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond, and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with water quality plans to improve water quality within the watershed. The water quality improvements will help contribute to reductions in the E. coli load in portions of Sand

Draw, Bone Creek, and Long Pine Creek. This will be done through stabilizing the streams and will help meet the goals of the TMDL.

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 2020 Annual Report (NDNR 2020), lists the objects as related to the Water Sustainability Fund;

Water Sustainability Fund

The Legislature created the Water Sustainability Fund in LB 906 (2014) and defined governance and appropriation in LB 1098 and LB 1098A. From July 2014 through June 2018, a net \$46,170,000 has been transferred to the fund. Funds committed to projects through June 2018, are \$41,702,715. Per LB 944, the appropriation for FY 2019 was reduced by \$429,557 to \$10,309,520. The transfer for FY 2019 is \$6,000,000 per LB 945. According to *Neb. Rev. Stat. § 2-1506*, the goals of the Water Sustainability Fund are to:

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

The objectives of the fourth, sixth, and seventh goals are met as follows. Costs were evaluated during the alternatives analysis to ensure that the most cost-effective solutions are being implemented.

Reducing threats to Wildlife Habitat

This Project is expected to provide moderate, long-term improvement to wetlands within the watershed. Wetlands are predicted to establish approximately 2-feet vertically above and below the permanent pool elevation at the sill with a

permanent pool (G2-2-2). Implementation of stream stability measures, especially in the headwaters of the watershed, are expected to facilitate wetland creation and therefore, improve wildlife habitat. Structures that provide grade stabilization benefits will also protect the destruction of existing wetlands by halting existing stream degradation. This Project would additionally improve in-stream fish habitat by implementing in-stream habitat improvement structures such as cross-vanes, w-weirs, and cedar revetments. The combination of these in-stream habitat projects reduces drop heights to accommodate fish passage and creates favorable habitat for fish species through creation of pools and habitat cover. The Project would additionally provide grade control along streams, enhancing overall stream function and consequently improve in-stream fish habitat.

Conservation and Preservation of Water Resources

Preservation of water resources is achieved by this Project through streambank stability and water quality improvements. The Project contains several structures that offer stream bank protection, alignment benefits, grade control, and 'passive grade control', which stabilize streams and protect and enhance the streams.

Recreation

Stream degradation and widening, decreased water quality, and decreased fish and wildlife habitat in streams within the watershed pose a threat to recreationally significant activities such as fishing, kayaking, and floating. This alternative would improve in-stream fish habitat within streams, resulting in improved fishing within surrounding waterbodies. This alternative would additionally provide an approximately 6-acre pool upstream of the proposed sill at APE 6 that will provide passive recreational benefits for fishing. Additionally, the grade stabilization and streambank protection measures will preserve streams within the watershed will protect the recreational use of streams for kayaking, floating, fishing, and boating. The Niobrara River, immediately downstream of the watershed, is a designated wild and scenic river and is an important recreation resource within Nebraska. This Project reduces the influx of sediments and associated nutrients into the Niobrara River thereby helping to protect water quality and ensure recreation opportunities will continue into the future.

Reducing threats to Property Damage

Stream degradation and widening are common throughout the watershed and can lead to loss of land, infrastructure damage, and interruptions to essential services. The Project provides grade control benefits by stabilizing the streambed and therefore, protecting headcuts from moving further upstream which would otherwise cause the stream to degrade and widen. A significant area of land has been lost from previous storms and floods and providing protection will protect considerable land loss in the future. This Project would stabilize stream banks and gullies within and upstream of the APEs to minimize degradation and erosion and protect from loss of land. Most land adjacent to streams is used for agriculture or ranching and landowners will benefit from

protection of land used for crops and livestock. Several structures are specifically designed to protect specific homes and infrastructure.

At APE 12, the 2019 flood event cut off a meander in Bone Creek at APE 12, shifting the stream nearly 600-feet north and eroding the streambank to within 150-feet of a home and within 70-feet of other infrastructure (Parcel 090030184). The rock ramp (G2-70) in combination with streambank protection (BS2-71) are designed to keep flows from the existing bank and protect the bank from further degradation into the adjacent homes and outbuildings. The dwelling and outbuilding have a 2021 assessed value of \$60,005. A bridge was destroyed and replaced by the landowner in 2020. This Project involves implementing buried flank protection (BS2-72) just upstream of the bridge to protect the right pier. At APE 13, a home is located at the top of a steep bank. The home will be threatened if streambank erosion and widening continues. Riprap is currently being used along portions of the slope and this Project includes additional toe protection (BS2-45) to provide additional stability to protect the streambank from eroding closer to the home. The dwelling has a 2021 assessed value of \$183,263. Threats to damage to or loss of these homes current exists as a significant threat to public safety and this Project is designed to lower those threats.

A major state-owned culvert located at the intersection of Old Highway 7 and Sand Draw previously protected the upstream reaches from a headcut of over 15-feet immediately downstream of the culvert and was lost during the 2019 flood events. A new bridge is critical infrastructure that has been designed to be implemented to replace the lost culvert. The bridge will be critical infrastructure as it provides a crossing to a major road in the area and the new bridge has an estimated construction cost of \$972,412. This Project will include sills (G2-9-1-3) and a grade control structure (G2-70) located downstream of the new bridge. These structures are designed to protect from impending headcuts and reclaim lost grade observed to existing during the site visit. This Project will offer protection to the Old Highway 7 bridge by protecting the observed downstream headcuts from moving upstream and damaging the new bridge. The approximately 15-feet of headcut that was previously held back by the culvert is now progressing upstream, toward the next bridge crossing. Structures G2-8-1 and G2-8-2 are specifically designed to prevent infrastructure damage at the upstream crossings. Grade stabilization projects are located throughout the streams within the watershed and would additionally offer protection from impending headcuts and degrading streams to several other stream crossings. Risks to stream crossings pose a significant threat to public safety and providing grade stabilization benefits will reduce risks to damages to crossings.

Water Quality:

This Project will additionally improve water quality through stabilizing streams, which would reduce stream erosion and therefore, reduce the influx of sediment and associated nutrients to downstream waterbodies. The Project's sills, pond,

and sediment basin will also trap sediment that would otherwise enter downstream waterbodies. Additional components of this Project include restoring an existing floodplain and promoting plant growth on an area that acquired significant volumes of deposited sand. Stabilizing and restoring this floodplain would reduce the sand deposits from traveling further downstream and improve downstream water quality. The 2016 Water Quality Management Plan identified stream stabilization as a priority practice to improve water quality within the watershed. Stream stabilization is a major purpose of this Project and this Project will work in conjunction with past water quality plans to improve water quality within the watershed.

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.

States are required to establish total maximum daily loads (TMDLs) for pollutants causing impairments in the waterbodies in accordance with the Section 303(d) of the federal Clean Water Act (CWA). The MNNRD has a responsibility to meet TMDLs in the watershed, which are listed for bacteria in the streams. This Project helps to reduce bacteria from agricultural areas by stabilizing streams, reducing the influx of sediment and associated nutrients to downstream waterbodies. "Water Sustainability" is defined in Nebraska Title 264 as when water use is sustainable when current use promotes healthy watersheds, improves water quality, and protects the ability of future generations to meet their needs. This Project promotes healthy watersheds through stabilizing streams throughout the watershed and restoring and rehabilitating the aquatic ecosystem.

Supplemental Information Attachment

Cover Letter

Application

Supplemental Information Attachment

Bibliography



Bone and Long Pine Creeks
Watershed Improvement Project

SECTION A

Section A includes Project cost and funding data for the Project. Costs were based on a design life of 20-years. The unit costs were determined by engineer estimates for project implementation and were based on local experience and engineering judgement. All estimated costs and benefits are subject to change due to local, regional, or world economics.

A-1 Project Cost and Funding Breakdown

Table A-1.1a – Worst-Case Project Cost and Funding Breakdown

	Total Costs	FEDERAL		Section 319 Non-Federal Match	Remaining Costs	STATE	LOCAL
		WFPO Cost-Share	NDEE Section 319			WSF Grant Request	Total Local Cost Share
Construction	\$3,491,300	\$1,796,100	\$300,000	\$200,500	\$1,194,700	\$716,820	\$477,880
Engineering	\$1,047,400	\$873,100	-	-	\$174,300	\$104,580	\$69,720
Land Rights	\$0	\$0	-	-	\$0	\$0	\$0
Project Administration	\$244,200	\$122,100	-	-	\$122,100	\$73,260	\$48,840
Totals	\$4,782,900	\$2,791,300	\$300,000	\$200,500	\$1,491,100	\$894,660	\$596,440

Table A-1.1b – Best-Case Project Cost and Funding Breakdown

	Total Costs	FEDERAL		Section 319 Non-Federal Match	Remaining Costs	STATE		LOCAL
		WFPO Cost-Share	NDEE Section 319			NET Funds	WSF Grant Request	Total Local Cost Share
Construction	\$3,491,300	\$1,796,100	\$300,000	\$100,250	\$1,294,950	\$1,225,280	\$69,670	\$0
Engineering	\$1,047,400	\$873,100	-	-	\$174,300	\$69,720	\$104,580	\$0
Land Rights	\$0	\$0	-	-	\$0	\$0	\$0	\$0
Project Administration	\$244,200	\$122,100	-	\$100,250	\$21,850	\$0	\$13,110	\$8,740
Totals	\$4,782,900	\$2,791,300	\$300,000	\$200,500	\$1,491,100	\$1,295,000	\$187,360	\$8,740

Table A-1.2a – Unit Costs by Project Site

Item	Unit	APE 1		APE 3	APE 5	APE 6	APE 7			
		G2-42	G2-41-1-3	G2-43	SC-2	G2-2-2	P2-4	G2-5	G2-3-1-6, BS2-6-1-3	G2-7
Mobilization	LS	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost
Strip & Remove Topsoil	CY					\$4	\$4	\$4		
Class "A" Riprap	TN		\$55					\$60	\$55	
Class "B" Riprap	TN				\$60	\$60	\$60		\$60	
Class "C" Riprap	TN	\$60		\$60						\$60
Class "E" Riprap	TN		\$100						\$100	
#3 Stone	TN				\$50					
Aggregate	CY				\$50					
Earthen Excavation	CY	\$4	\$4	\$4			\$4		\$4	\$4
Earthen/Sand Fill	CY	\$4				\$4	\$4	\$4		
12" HDPE	LF						\$118			
24" HDPE Riser	EA						\$2,000			
6" PVC	LF							\$12		
8" Slotted Riser	LF							\$500		
Seeding	AC					\$2,000	\$2,000	\$2,000		
Filter Fabric	SY		\$3		\$3				\$3	
Sheet Pile	SF			\$32						\$32
Flexamat	SY				\$70					
Geogrid	SF				\$3					
Grout	CY									\$300
TRM	SY					\$6				

Table A-1.2b – Unit Costs by Project Site

		APE 8	APE 9	APE 10		APE 11		
Item	Unit	G2-8-1-2	G2-9-1-3	BS2-31	BS2-30	G2-33	CP2-34	G2-32
Mobilization	LS	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost
Class "C" Riprap	TN	\$60	\$60	\$60		\$60		\$60
Gravel	TN		\$30					
Earthen Excavation	CY	\$4	\$4	\$4		\$4		\$4
Earthen/Sand Fill	CY		\$4			\$4	\$6	
Seeding	AC		\$2,000				\$2,000	
Filter Fabric	SY							\$3
Tree	EA				\$200			
Tree Clearing	AC		\$3,500					
Sheet Pile	SF			\$32				
Bedding	SY		\$11					
Obstruction Removal	AC						\$2,200	
Duck Bill Anchor	EA				\$150			
Steel Cable	LF				\$2			

Table A-1.2c – Unit Costs by Project Site

		APE 12			APE 13	
Item	Unit	BS2-71	G2-70	BS-72	GS2-45	G2-46
Mobilization	LS	10% Cost	10% Cost	10% Cost	10% Cost	10% Cost
Class "C" Riprap	TN	\$60	\$60	\$60	\$60	\$60
Earthen Excavation	CY	\$4	\$4	\$4	\$4	\$4
Seeding	AC			\$2,000		

Table A-1.3 – Annual Cost Breakdown

Final Design	Construction	APE	Structure Name	Design Life (20 if > 20)	Total Cost	Replacement (2023)
2022	2025	1	G2-41-1	20	\$39,900	
	2025		G2-41-2	20	\$40,500	
	2025		G2-41-3	20	\$48,300	
	2025		G2-42	20	\$108,500	
2022	2025	3	G2-43	20	\$166,000	
	2025		G2-44	10	\$5,900	\$5,900
2022	2023	5	SC2-2	20	\$67,200	
2022	2026	6	G2-2-1	10	\$2,600	\$2,600
	2026		G2-2-2	20	\$102,200	\$20,000
2022	2025	7	G2-3-1	20	\$46,400	
	2025		G2-3-2	20	\$46,400	
	2025		G2-3-3	20	\$55,300	
	2025		G2-3-4	20	\$31,800	
	2025		P2-4	20	\$42,300	
	2025		G2-5	20	\$9,200	
	2025		G2-3-5	20	\$31,800	
	2025		G2-3-6	20	\$31,800	
	2025		BS2-6-1	20	\$6,600	
	2025		BS2-6-2	20	\$6,600	
	2025		BS2-6-3	20	\$6,600	
	2025		G2-7	20	\$119,200	
2022	2023	8	G2-8-1	20	\$265,900	
	2023		G2-8-2	20	\$265,900	
2022	2024	9	G2-9-1	20	\$372,500	
	2024		G2-9-2	20	\$404,200	
	2024		G2-9-3	20	\$520,100	
2022	2024	10	BS2-30	20	\$29,000	
	2024		BS2-31	20	\$117,800	
2022	2023	11	G2-32	20	\$319,800	
	2023		G2-33	20	\$125,500	
	2023		CP2-34	20	\$87,500	
2022	2023	12	G2-70	20	\$470,100	
	2023		BS2-71	20	\$460,400	
	2023		BS2-72	20	\$42,300	
2022	2024	13	BS2-45	20	\$35,100	
	2024		G2-46	20	\$251,700	

SECTION B-1

Section B relevant project information as referenced in Section B of the application. Section B includes location maps and a detailed information about the project types included in this Tier 1 Project phase.

Figure B-1.1 – Project Area (Watershed)

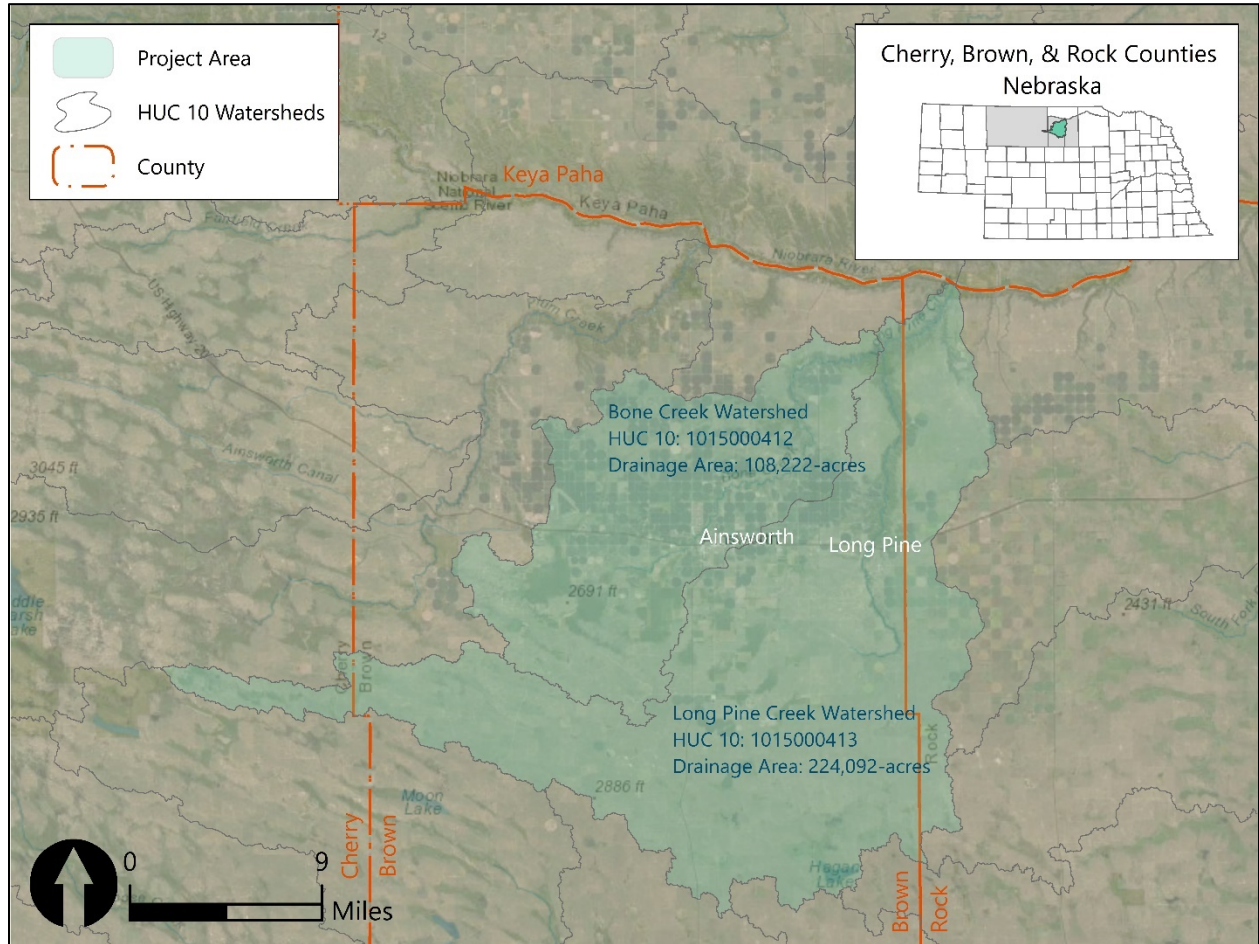


Figure B-1.2 – Tier 1 Project Locations

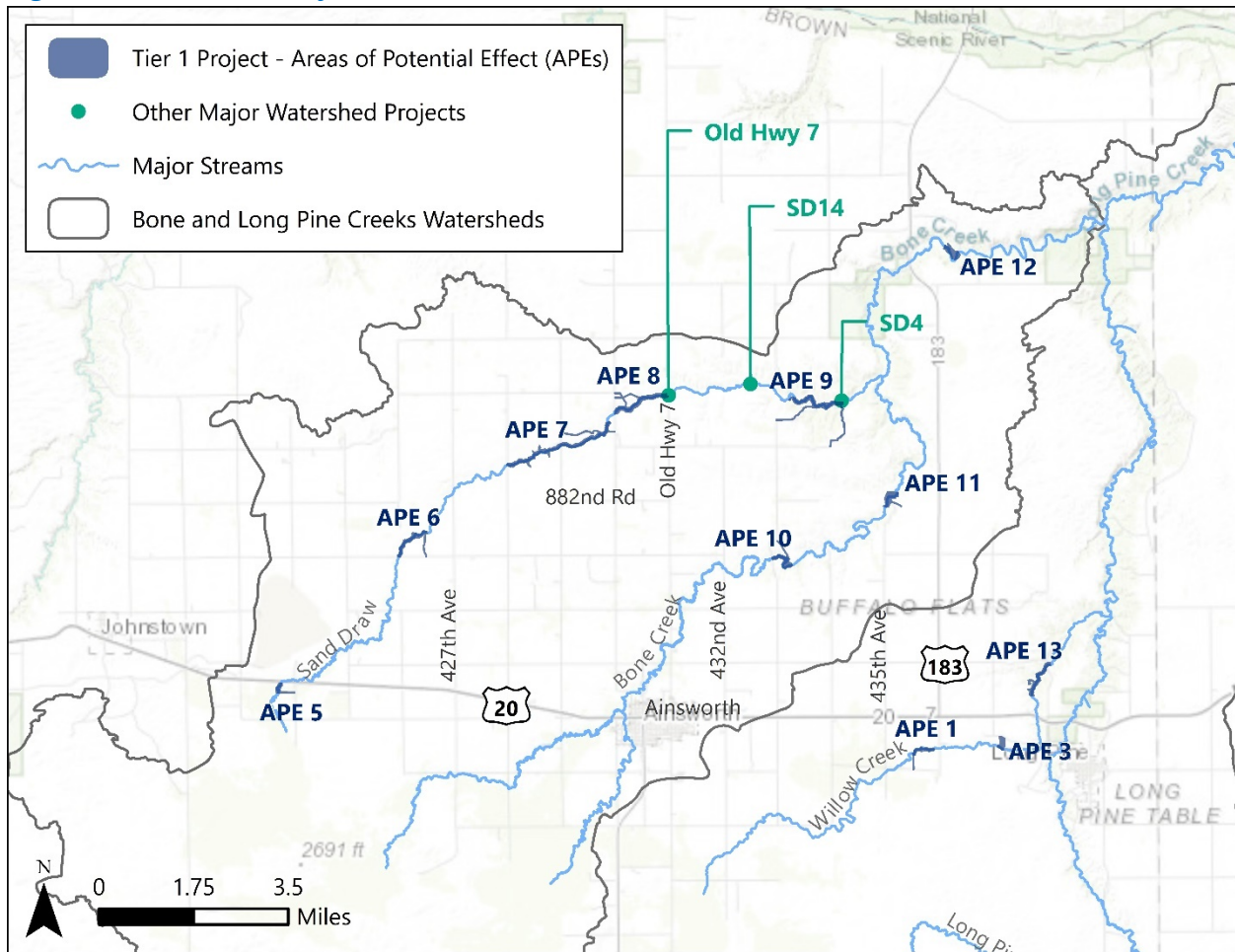


Table B-1.1 – Tier 1 Project Site Descriptions

APE	Practice Type	Description	Name
1	Restoration structure with grade stabilization (410)	Cross vane	G2-41-1
		Cross vane	G2-41-2
		W-Weir	G2-41-3
	Grade stabilization (410)	Sill	G2-42
3	Grade stabilization (410)	Rock ramp	G2-43
	Channel bed stabilization (584)	Zeedyk structure (log and fabric) in gully	G2-44
5	Stream crossing (578)	Flexamat crossing	SC2-1
6	Channel bed stabilization (584)	Zeedyk structure (rock rundown) in gully	G2-2-1
	Grade stabilization (410) & Aquatic organism passage (396)	Sill with fish passage	G2-2-2
7	Restoration structure with grade stabilization (410)	Cross vane	G2-3-1
		Cross vane	G2-3-2
		W-Weir	G2-3-3
		Cross vane	G2-3-4
	Pond (378)	Pond in gully	P2-4
	Water & sediment control basin (638)	Sediment basin in gully	G2-5
	Restoration structure with grade stabilization (410)	Cross vane	G2-3-5
		Cross vane	G2-3-6
	Restoration structure with streambank & shoreline protection (580)	Bendway weir	BS2-6-1
		Bendway weir	BS2-6-2
Bendway weir		BS2-6-3	
Grade stabilization (410)	Rock ramp with grout for crossing	G2-7	
8	Grade stabilization (410)	Rock ramp	G2-8-1
	Grade stabilization (410)	Rock ramp	G2-8-2
9	Grade stabilization (410)	Sill	G2-9-1
	Grade stabilization (410)	Sill	G2-9-2
	Grade stabilization (410)	Sill	G2-9-3
10	Streambank & shoreline protection (580)	Cedar revetments	BS2-30
	Grade stabilization (410)	Rock ramp	BS2-31
11	Grade stabilization (410)	Rock chute	G2-32
	Grade stabilization (410)	Sill	G2-33
	Critical Area Planting (342) & Obstruction Removal (500)	Debris removal and planting of floodplain bench	CP2-34
12	Grade stabilization (410)	Rock ramp	G2-70
	Streambank & shoreline protection (580)	Streambank protection near home	BS2-71
	Streambank & shoreline protection (580)	Streambank protection near bridge	BS2-72
13	Streambank & shoreline protection (580)	Toe protection near home	BS2-45
	Grade stabilization (410)	Rock ramp	G2-46

ATTACHMENTS

MNNRD Professional Services Agreement

NDEE 319 Phase 3 Subaward Certification

NET Project Long Pine Creek Watershed Restoration – Phase 3 Funding Award

NET Project Long Pine Creek Watershed Restoration – Phase 4 Funding Award

WFPO Notice of Grant and Agreement Award



PROFESSIONAL SERVICES AGREEMENT

PROJECT: Long Pine Creek Watershed Improvement Project FYRA Engineering, LLC JOB #: 140-19-01
CLIENT: Middle Niobrara NRD
ADDRESS: 303 E. Highway 20, Valentine, NE 69201
CONTACT: Chandler Schmidt TEL: 402.376.3241 FAX: 402-376-1040
CONSULTANT: FYRA Engineering, LLC
ADDRESS: 12702 Westport Pkwy, Suite 300, Omaha, NE 68138
CONTACT: Michael K. Sotak, P.E. TEL: 402.502.7131 FAX: 402.932.6940
PROJECT DESCRIPTION: Preparation of Watershed Work Plan-EA to meet needs of USDA-NRCS WFPO funding received for LPCWIP as detailed herein.

[X] SCOPE OF SERVICES (See Attachment) [X] SCHEDULE (See Attachment)

COMPENSATION:

The total compensation under this Agreement shall not exceed the dollar amount indicated herein or the amount authorized by Amendment(s) and/or Notice(s) to Proceed (NTP), whichever is the lesser.

[] LUMP SUM. Compensation for these services shall be a Lump Sum of \$ _____.

TIME AND MATERIALS. Compensation for these services will not exceed \$598,500 (the "Authorized Amount") without written authorization and will be based on the following option (per the attached Budget or List of Hourly Rates), and Reimbursable Expenses based on actual costs incurred and approved by FYRA Engineering, LLC and as authorized in writing by Client.

[X] [] Subconsultant's Direct Job Wages times a factor of _____ [X] Budget/List of Subconsultant's Hourly Rates.

[] COST PLUS FIXED FEE. Compensation for these services shall be Subconsultant Cost plus a fixed professional fee, including Reimbursable Expenses. The estimated compensation for services is \$ _____ plus a fixed fee of \$ _____ for a total of \$ _____.

COMPENSATION DETAIL (See Following Pages)

SCHEDULE OF PAYMENTS (See Following Pages)

SERVICES AUTHORIZED BY: [X] Execution of Agreement or [] Amendment(s) and/or NTP

EXECUTION: Execution of this document by duly authorized representatives of FYRA Engineering, LLC and CLIENT, including FYRA Engineering LLC's Standard Conditions (reverse side) and any attachments, Additional Provisions as indicated, and addenda, represents the entire Agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may be amended or modified by written instrument, but such instrument is valid only upon signature by both parties.

CONSULTANT: FYRA Engineering, LLC CLIENT: Middle Niobrara NRD
BY: Michael K. Sotak, P.E. BY: Mike Murphy

SIGNATURE: [Signature] SIGNATURE: [Signature]
TITLE: Owner/Principal Engineer TITLE: General Manager
DATE: 26 September 2019 DATE: 10/15/2019



FYRA ENGINEERING, LLC STANDARD CONDITIONS

SERVICES. FYRA Engineering will perform services for the Project as set forth in attachment and in accordance with these Terms & Conditions. FYRA Engineering has developed the Project scope of service, schedule, and compensation based on available information and various assumptions. The Client acknowledges that adjustments to the schedule and compensation may be necessary based on the actual circumstances encountered by FYRA Engineering in performing their services.

AUTHORIZED REPRESENTATIVES. The officer assigned to the Project by FYRA Engineering is the only authorized representative to make decisions or commitments on behalf of FYRA Engineering. The Client shall designate a representative with similar authority.

PROJECT REQUIREMENTS. The Client shall confirm the objectives, requirements, constraints, and criteria for the Project at its inception. If the Client has established design standards, they shall be furnished to FYRA Engineering at Project inception. FYRA Engineering will review the Client design standards and may recommend alternate standards considering the standard of care provision.

SITE ACCESS. The Client shall obtain all necessary approvals for FYRA Engineering to access the Project site(s).

PERIOD OF SERVICE. FYRA Engineering shall perform the services for the Project in a timely manner consistent with sound professional practice. FYRA Engineering will strive to perform its services according to the Project schedule set forth in attachment. The services of each task shall be considered complete when deliverables for the task have been presented to the Client. FYRA Engineering shall be entitled to an extension of time and compensation adjustment (pending NRCS approval) for any delay beyond FYRA Engineering control.

COMPENSATION. In consideration of the services performed by FYRA Engineering, the Client shall pay FYRA Engineering in the manner set forth in attachment. The parties acknowledge that terms of compensation are based on an orderly and continuous progress of the Project. Compensation shall be equitably adjusted for delays or extensions of time beyond the control of FYRA Engineering.

PAYMENT TERMS. FYRA Engineering shall submit monthly invoices for services performed and Client shall pay the full invoice amount within thirty (30) days of the reimbursement date from NRCS on a quarterly occurrence, in accordance with NRCS reimbursement schedule to Client. Invoices will be considered correct if not questioned in writing within ten (10) days of the invoice date. FYRA Engineering shall be entitled to a 2% per month administrative charge in the event of payment delay. Client payment to FYRA Engineering is not contingent on arrangement of project financing. Invoice payment delayed beyond sixty (60) days of NRCS reimbursement to Client shall give FYRA Engineering the right to stop work until payments are current. Non-payment beyond seventy (70) days shall be just cause for termination by FYRA Engineering.

ADDITIONAL SERVICES. The Client and FYRA Engineering acknowledge that additional services may be necessary for the Project to address issues that may not be known at Project initiation or that may be required to address circumstances that were not foreseen. In that event, FYRA Engineering shall notify the Client and NRCS of the need for additional services and the Client, if approved by NRCS, shall pay for such additional services in an amount and manner as the parties may subsequently agree.

INDEPENDENT CONSULTANT. FYRA Engineering shall serve as an independent consultant for services provided under this agreement. FYRA Engineering shall retain control over the means and methods used in performing their services and may retain subconsultants to perform certain services as determined by FYRA Engineering.

STANDARD OF CARE. Services provided by FYRA Engineering will be performed with the care and skill ordinarily exercised by members of the same profession practicing under similar circumstances. FYRA Engineering will not be liable for the cost of any omission that adds value to the Project.

Subaward Certification

Federal Funding Accountability and Transparency Act

Contract Reference Number: 2021-108887657

DEE Program: 319H DEE Division: WATER

1. Project Name: LONG PINE CONSERVATION AND STABILIZATION PROJECT
2. Sub-recipient/Contractor: MIDDLE NIOBRARA NRD
3. Federal Grant Name: LONG PINE PHASE III
4. Federal Grant Number: C9-007403-28
5. Amount of Proposed Sub-Award: \$300,000.00
6. Program Agreement Number: 56-1982

To be completed by Sub-Recipient:

7. Data Universal Numbering System (DUNS) Number: 627284722

8. Did your organization receive 80% or more of its annual gross revenues from Federal Awards or in Federal contracts preceding the fiscal year?

Yes No

9. If you answered yes to the previous question, did your organization receive \$25,000,000 or more in annual gross revenues from Federal Awards or in Federal contracts the preceding fiscal year?

Yes No

10. If you answered yes to question 8 and 9, is information regarding compensation of top five executives publicly available?

Yes No

11. Are you owned by another entity?

Yes No

12. If yes, what is the DUNS number of the parent entity? N/A

13. Location information

Address of Subawardee:

City VALENTINE

State NEBRASKA

Congressional District 3RD

County CHERRY

Zip Code + 4 69201-2143

14. Primary Location of Performance Under the Award

City AINSWORTH

State NEBRASKA

Congressional District 3RD

County BROWN

Zip Code + 4 69210-1948

15. Are you Suspended or Debarred from participating in government contracts, subcontracts, loans, grants and other assistance programs?

Yes No

Michael Murphy - MURD
Signature of Authorized Official

3/1/2021
Date



FEB 18 2020

Pete Ricketts, Governor
Mark A. Brohman, Executive Director

February 10, 2020

Chandler Schmidt
Middle Niobrara Natural Resources District
303 E. Highway 20
Valentine, NE 69201

RE: **20-104 - Project Long Pine Creek Watershed Restoration - Phase 3**

Dear Chandler Schmidt,

CONGRATULATIONS!

The Board of the Nebraska Environmental Trust met on Tuesday, February 4, 2020, and received a preliminary set of recommendations for funding in the 2020 grants cycle from the Grants Committee. We are pleased to inform you that your project was found eligible and your application was recommended for a grant award in the amount of \$485,000.00 for 2020. The 2020 Board Recommendation Rank Order listing of applications can be found online at <https://environmentaltrust.nebraska.gov/index.html>.

Limited funds were available for funding beyond 2020 and few applicants were recommended for funding beyond one year. If you applied for second and third year funding, please consider submitting an application for the 2021 grant cycle and/or 2022 grant cycle.

The enclosed Rating Results Sheet indicates "optional" points for geographic location. These points are an optional tool for the Board to utilize as necessary to ensure a more equal distribution of Trust funds across the state. This year projects located in District 6 received up to 20 points. All others received zero points for geographic location.

THE NEXT STEPS:

The Board is accepting written public comment on these recommendations through Wednesday, April 1, 2020. Persons wishing to comment may do so by writing to our office, or may appear in person at a public hearing to be held at 1:30 p.m., on Thursday, April 2, 2020, at the Nebraska Environmental Trust Office, 700 South 16th Street, Lincoln, Nebraska. Your appearance at this meeting is optional; it is not necessary to assure your award. Following the hearing the Board will vote to award grants. You will be notified by mail, following the April 2nd board meeting, of the formal action taken regarding your application.

THE NEXT STEPS:

To celebrate your success as a grantee and receive your grant contract, the Trust will be hosting three Grantee Seminars:

1. **Monday, April 6th, 10:30 a.m. to 1:00 p.m. at the Ferguson House, 700 South 16th Street, Lincoln, NE**
2. **Tuesday, April 7th, 10:30 a.m. to 1:00 p.m. at the Ferguson House, 700 South 16th Street, Lincoln, NE**
3. **Thursday, April 9th, 10:30 a.m. to 1:00 p.m. at the Central Platte NRD Office, 215 Kaufman Avenue, Grand Island, NE**

NET is transitioning to an on-line grant management system. Each grantee is also responsible for an on-line environmental review. Individuals who will manage your grant should attend one of the seminars to

receive instructions on submitting information required to process the grant award and to receive project information including:

- 2020 Grant Contract
- Nebraska Conservation and Environmental Review Tool (CERT)
- Grantee Information Form
- Contract Budget Summary
- Public Information Plan
- ACH Form/Instructions
- 2020 Rank Order Listing of Applications
- Statement of Eligibility


Grant contracts and related documents will need to be completed through the on-line portal no later than April 30, 2020. CERT review needs to be completed prior to project activity and a copy of the review approval provided with your first reimbursement request.

The programs at the seminars will cover grant reporting, record keeping, compliance issues and public information topics. The Grantee Seminar will be an excellent opportunity to acquire knowledge on your responsibilities in the grant process and meet and network with other grantees, elected officials and Trust staff. We will be sending an invitation to all the Senators however, you may want to contact your Senator and personally invite them to attend the seminar and/or the luncheon in your area. This would be a perfect time to discuss natural resources issues with them. Contact information for Senators can be found online at <http://www.nebraskalegislature.gov>.

Please contact Allison La Duke by **March 23, 2020** at 402-471-5417 or Allison.Laduke@nebraska.gov to let us know which seminar you will be attending and who will be attending. If you cannot attend the seminar, please contact Marilyn Tabor at 402-471-5541 to make arrangements to get the contract package.

Congratulations on your successful application! Please feel free to contact our staff or me if we can provide any further information or answer any questions.

Sincerely,



Mark A. Brohman
Executive Director

MAB/mt

2020 Rating Results

Application # 20-104
 Sponsor Name: Middle Niobrara Natural Resources District
 Project Name: Long Pine Creek Watershed Restoration - Phase 3

Ratings Statement	Points Available	Average Rating
Advances Trust Priorities	25	22.50
Sound Planning and Design	25	21.67
Direct Measurable Environmental Benefits	20	14.67
Cost-Effective	20	14.00
Duration of Benefits	15	10.00
Matching (non-state) resources (monetary & in-kind)	15	12.50
Prevents Contamination/Degradation of Resources	15	12.00
Many people or communities served	15	9.50
General public benefit	10	5.67
Public/Private Partnerships	10	8.67
Economic Impact	10	5.67
Evaluation Plan	10	6.67
Unique Need	5	2.83
Public Health	5	2.83
Innovation	5	3.00
Replication Potential	5	3.00
Individual or Local Initiative	5	3.17
Sub-Total		158.33
Geographic Distribution (20 points available in District 6)		20
	Grand Total	178.33

Recommendation: Grants Committee recommends full funding of \$485,000 in 2020.

Mark A. Brohman

Signed: _____
 Mark A. Brohman for John Orr, Grants Committee Chair



Pete Ricketts, Governor

Mark A. Brohman, Executive Director

April 19, 2021

Middle Niobrara Natural Resources District

RE: 21-133- LPCW Restoration Phase 4

Dear Chandler Schmidt,

It is our pleasure to convey to you the results of the Environmental Trust Board action on April 8, 2021 and to confirm that your application was funded in the amount of **\$810,000** for 2021. We look forward to the success of the project and are excited to be a partner in your efforts to enhance our natural environment.

Grant Contract Forms

This letter is being sent along with the grant agreement in pdf format. Any restrictions or conditions that were attached to your award are specified in this document. Please contact Mark Brohman if you have any questions or concerns to clarify before signing and returning the contract to our office. The contract becomes effective on the date we receive this signed document. Funds become available to you at that time.

Please complete and email these completed forms to Holly.Adams@Nebraska.gov by May 31, 2021:

1. 2021 Grant Contract
2. Grantee Information Form
3. ACH Form
4. 2021 Public Information Plan

Grant Reporting

In a few weeks you will be able to complete your 2021 Contract Budget through the online portal and subsequent project management. Instructions on how to do this can be found in the attached Portal Guidance document.

The following paragraphs summarize important steps for reimbursement of expenditures for your grant:

- Your reporting schedule and conditions of disbursement are specified in your grant agreement. Agreements provide you 30 days to file reports for the previous reporting period. Failure to file reports as detailed in your agreement may result in forfeiture of your grant.
- Reimbursements and reports will be submitted through the grant portal. If you have any questions whatsoever about what is required of you under the terms of the agreement, please contact staff. We will be happy to help you.

- **Changes in your budget line items or project activities must be approved in writing before you make expenditures.** If you question whether an expense is eligible or not, please contact Mark or Holly before proceeding. We want to emphasize that your award may not be expended on items which were not identified in your grant application and contract budget summary, nor for other items such as past debt or unforeseen organizational expenses.

Again, congratulations and best wishes in this outstanding endeavor.

Sincerely,



Jeff Kanger
Board Chair



Mark A. Brohman
Executive Director



NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number NR196526XXXXC004	2. Amendment Number	3. Award /Project Period Date of Final Signature - 04/30/2021	4. Type of award instrument: Cooperative Agreement
5. Agency (Name and Address) Natural Resources Conservation Service 100 Centennial Mall North, Room 152 Lincoln, NE 68508		6. Recipient Organization (Name and Address) MIDDLE NIOBRARA NATURAL RESOURCES DISTRICT 303 EAST HWY 20 VALENTINE NE 69201-1906 DUNS: 627284722 EIN:	
7. NRCS Program Contact Name: Allen Gehring Phone: 402-437-4037 Email: Allen.Gehring@ne.usda.gov	8. NRCS Administrative Contact Name: KAYLIE ALDERMAN Phone: 919-875-4825 Email: kaylie.alderman@usda.gov	9. Recipient Program Contact Name: Chandler Schmidt Phone: (402) 376-3241 Email: cschmidt@mnnrd.org	10. Recipient Administrative Contact Name: Chandler Schmidt Phone: (402) 376-3241 Email: cschmidt@mnnrd.org
11. CFDA 10.904	12. Authority 33 U.S.C. 701b-1 Public Law 83-566 Public Law 84-1018, 70 Stat. 1088 Public Law 85-865, 72 Stat. 1605 Public Law 86-468, 74 Stat. 131, 132 Public Law 86-545, 74 Stat. 254 16 U.S.C. 1001-1009 68 Stat. 666, as amended Public Law 87-703, 76 Stat. 608 Public Law 90-361, 82 Stat. 250	13. Type of Action New Agreement	14. Program Director Name: Chandler Schmidt Phone: (402) 376-3241 Email: cschmidt@mnnrd.org
15. Project Title/ Description: Watershed Work Plan-Environmental Assessment for the Long Pine Creek Watershed Improvement Project, Middle Niobrara			
16. Entity Type: D = Special District Government			
17. Select Funding Type			
Select funding type:	<input checked="" type="checkbox"/> Federal	<input type="checkbox"/> Non-Federal	
Original funds total	\$665,000.00	\$0.00	
Additional funds total	\$0.00	\$0.00	

Grand total	\$665,000.00	\$0.00	
18. Approved Budget			
Personnel	\$0.00	Fringe Benefits	\$0.00
Travel	\$0.00	Equipment	\$0.00
Supplies	\$0.00	Contractual	\$665,000.00
Construction	\$0.00	Other	\$0.00
Total Direct Cost	\$665,000.00	Total Indirect Cost	\$0.00
		Total Non-Federal Funds	\$0.00
		Total Federal Funds Awarded	\$665,000.00
		Total Approved Budget	\$665,000.00

This agreement is subject to applicable USDA NRCS statutory provisions and Financial Assistance Regulations. In accepting this award or amendment and any payments made pursuant thereto, the undersigned represents that he or she is duly authorized to act on behalf of the awardee organization, agrees that the award is subject to the applicable provisions of this agreement (and all attachments), and agrees that acceptance of any payments constitutes an agreement by the payee that the amounts, if any, found by NRCS to have been overpaid, will be refunded or credited in full to NRCS.

Name and Title of Authorized Government Representative Craig Derickson State Conservationist	Signature	Date
Name and Title of Authorized Recipient Representative Mike Murphy General Manager	Signature <i>Mike Murphy</i> General Manager	Date 6/10/2019

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW., Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

PRIVACY ACT STATEMENT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. Section 522a).

Statement of Work

Purpose

The purpose of this agreement is for the United States Department of Agriculture, Natural Resources Conservation Service, hereinafter referred to as the "NRCS", to provide assistance to the Middle Niobrara Natural Resources District, hereinafter referred to as the "Sponsor", for the Long Pine Creek Watershed Improvement Project Work Plan - Environmental Assessment (Plan-EA) project Brown County, Nebraska, under the Watershed & Flood Prevention Operations (WFPO) Program.

Objectives

Create a NEW Watershed Work Plan-Environmental Assessment (Plan-EA) for the Long Pine Creek Watershed Improvement Project, Brown County, Nebraska.

This agreement currently includes funding for the planning phase and concept design phase adequate enough to develop feasible alternatives and a preferred alternative. If additional funds become available to totally complete the project through construction, an amendment will be proposed with the Sponsor. If agreed by the parties, this agreement will be amended accordingly. This agreement includes clauses for other phases that may or may not be funded.

Budget Narrative

1. NRCS shall pay 100 percent of the costs. There is no financial obligation for the Sponsor.

A. Budget includes the following estimated costs:

Contractual \$665,000 in costs for development of a Watershed Work Plan "Planning". Planning and concept design costs are expenses incurred for surveys and investigations, environmental studies, evaluation of alternatives, and preparation of plans and design prior to the authorization of assistance for the installation of works of improvement. Within the limits of the \$665,000.00; the sponsors may invoice for a maximum of \$29,500.00 for administrative expenses incurred directly from the development of the Watershed Work Plan. Invoiceable administrative expenses will be limited to work and or equipment necessary and directly related to the development of the watershed work plan.

Responsibilities of the Parties:

A. Sponsor will—

1. Coordinate and conduct a minimum of three face to face meetings (location set by the Sponsor) with the Nebraska NRCS Point of Contact (Allen Gehring) and / or his assigned representation and representative(s) of the selected firm. These meetings shall take place at or near watershed plan development phases of 30%, 60% and 90% completion. The purpose is to ensure all stakeholders are operating and progressing towards a common objective / goal.

2. The Sponsor, or sponsors technical representative, shall provide NRCS (Allen Gehring) with a written summary of progress every two (2) weeks, starting after the 30% review and concluding with the delivery of the final design. The summary serves to ensure comments / feedback noted in the 30% and 60% reviews are being addressed. The summary should be limited to a maximum of two (2) pages.

3. Planning must comply with the policy set forth in the NRCS Title 390, National Watershed Program Manual (NWPM). Sponsor may obtain a full copy of this reference manual at <http://directives.sc.egov.usda.gov/>, Manuals, Title 390 – Project Development & Maintenance, Parts 500 -506 – "National Watershed Program Manual"

Planning procedural guidelines for creation of the NEW Watershed Work Plan-Environmental Assessment (Plan-EA) shall follow NRCS Title 390, National Watershed Program Handbook (NWPH). Sponsor may obtain a full copy of this reference handbook at <http://directives.sc.egov.usda.gov/>, Handbooks, Title 390 – Project Development & Maintenance, Parts 600 - 606 – "National Watershed Program Handbook"

NRCS water resources projects must comply with the latest Principles, Requirements, and Guidelines (PR&G) for Water and Land Related Resources Implementation Studies. Refer to this link for information:

•USDA Departmental Manual 9500-013 - USDA Guidance for Conducting Analyses Under the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water Resource

4. Contract for services, as necessary, award and administer any contracts for the installation of the work for the project specified in this agreement in accordance with the Code of Federal Regulations (CFR), 2 CFR § 200.317 through 200.326, applicable state requirements, and the Sponsors' procurement regulations, as appropriate. See general terms and conditions attached to this agreement for a link to the CFR. In accordance with 2 CFR § 200.326 contracts must contain the applicable provisions described in Appendix II to Part 200. Davis-Bacon Act would not apply under this federal program legislation.
5. The contracts for services described in this Agreement shall not be awarded to the Sponsor or to any firm in which any Sponsor's official or any member of such official's immediate family has direct or indirect interest in the pecuniary profits or contracts of such firms. Reference 2 CFR § 200.318 regarding standards of conduct covering conflicts of interest and governing the performance of its employees engaged in the selection, award, and administration of contracts.
6. Take reasonable and necessary action of all contractual and administrative issues arising out of contracts awarded under this agreement.
7. Designate a project liaison to serve between the Sponsor and NRCS and identify that person's contact information with this executed agreement. Any change in the project liaison during the term of this agreement must be immediately communicated to NRCS.
8. Pay the contractor for all services performed in accordance with the agreement and submit a SF270, "Request for Advance and Reimbursement," to the NRCS Program/Technical Contact with all documentation to support the request. Payments will be withheld until all required documentation is submitted and complete.
9. Be responsible for all ineligible project costs. Ineligible costs are costs not referenced in this agreement.
10. Responsible for all costs in excess of the federal cost-share in this agreement.
11. Comply with the applicable requirements in the attached General Terms and Conditions of this agreement.
12. Ensure that requirements for compliance with environmental and cultural resource laws are considered for the proposed works of improvement described in this agreement.
13. Ensure the information in the System for Award Management (SAM) is current and accurate until the final financial report (SF425) under this award or final payment is received, whichever is later.
14. Take reasonable and necessary actions to dispose of all contractual and administrative issues arising out of the contract awarded under this agreement. This includes, but is not limited to disputes, claims, protests of award, source evaluation, and litigation that may result from the project. Such actions will be at the expense of the Sponsor, including any legal expenses. The Sponsor will advise, consult with, and obtain prior written concurrence of NRCS on any litigation matters in which NRCS could have a financial interest.
15. Sponsor must indemnify and hold NRCS harmless to the extent permitted by State law for any costs, damages, claims, liabilities, and judgments arising from past, present, and future acts or omissions of the Sponsor in connection with its acquisition and management of the Watershed & Flood Prevention Operations Program pursuant to this project agreement. Further, the Sponsor agrees that NRCS will have no responsibility for acts and omissions of the Sponsor, its agents, successors, assigns, employees, contractors, or lessees in connection with the acquisition and management of the Watershed & Flood Prevention Operations Program pursuant to this project agreement that result in violation of any laws and regulations that are now or that may in the future become applicable.
16. Be liable to the NRCS for damages sustained by the NRCS as a result of the contractor failing to complete the work within the specified time. The damages will be based upon the additional costs incurred by the NRCS resulting from the contractor not completing the work within the allowable performance period. These costs include but are not limited to personnel costs, travel, etc. The NRCS will have the right to withhold such amount out of any monies that may be then due or that may become due and payable to the Sponsor. This liability is not applicable to the extent that the contract performance time is extended by court judgment unless such judgment results from actions of the Sponsor not concurred in by NRCS.
17. Take necessary legal action, including bringing suit, to collect from the contractor any monies due in connection with the contract, or upon request of NRCS, assign and transfer to NRCS any or all claims, demands, and causes of action of every kind whatsoever that the Sponsor has against the contractor or his or her sureties.
18. Retain all records dealing with the award and administration of the contract for three (3) years from the date of the

Sponsor's submission of the final request for reimbursement or until final audit findings have been resolved, whichever is longer. If any litigation is started before the expiration of the 3-year period, the records are to be retained until the litigation is resolved or the end of the 3-year period, whichever is longer. Make such records available to the Comptroller General of the United States or his or her duly authorized representative and accredited representatives of the Department of Agriculture or cognizant audit agency for the purpose of making audit, examination, excerpts, and transcriptions.

B.NRCS will—

1. Provide support in terms of interpreting NRCS Policy and or Procedures and clarifying deliverable expectations.
2. Review and concur with the watershed plan, concept design and all other documents developed for or by the Sponsor.
3. Designate a Government representative (GR) to serve as liaison with the Sponsor and identify that person's contact information with this executed agreement.
4. Consult with the Sponsor, as requested, in preparing the solicitation and awarding and administering the contract.
5. Make payment to the Sponsor covering the NRCS's share of the cost upon receipt and approval of SF270, withholding the amount of damages sustained by NRCS as provided for in this agreement.
6. NRCS would initiate consultation, where warranted, for cultural resources and other special environmental concerns such as endangered species.

C.SPECIAL PROVISIONS

1. The furnishing of financial, administrative, and/or technical assistance above the original funding amount by NRCS is contingent on there being sufficient unobligated and uncommitted funding in the Watershed Flood Prevention Operations Program that is available for obligation in the year in which the assistance will be provided. NRCS may not make commitments in excess of funds authorized by law or made administratively available. Congress may impose obligational limits on program funding that constrains NRCS's ability to provide such assistance.
2. NRCS, at its sole discretion, may refuse to cost share should the Sponsor, in administering the contract, elect to proceed without obtaining concurrences described in this agreement.

Expected Accomplishments and Deliverables

Sponsor will—

1. Create a new Watershed Work Plan-Environmental Assessment (Plan-EA) that meets or exceeds the policies and procedures defined in the NRCS National Watershed Program Manual and NRCS National Watershed Program Handbook.
2. Prepare concept design and drawings in accordance with standard engineering principles that comply with NRCS programmatic requirements.
3. The Sponsor must ensure each description of the work described in this agreement is reviewed, concurred, and approved by NRCS.
4. Provide NRCS with a copy of all solicitation and request for bids documents prior to release, as well as all awarded contracts and contract modifications.
5. The sponsor must provide NRCS with documentation of the actual cost incurred for the services acquired.
6. Appoint a contracting officer and an authorized representative who will have authority to act for the contracting officer, listing their duties, responsibilities, and authorities. Furnish such information in writing to the NRCS State Conservationist.
7. Provide copies of site maps to appropriate Federal and State agencies for environmental review. Notify NRCS of

environmental clearance, or any unresolved concerns.

8. Dispose of all claims resulting from the contract; secure prior written concurrence of the State Conservationist if NRCS funds are involved.

Resources Required

No other resources required other than funding.

Milestones

TASK: Public Participation - ESTIMATED START: July 2019 - ESTIMATED COMPLETION: April 2021

TASK: Site Data Collection - ESTIMATED START: September 2019 - ESTIMATED COMPLETION: February 2020

TASK: Conceptual Design Alts - ESTIMATED START: November 2019 - ESTIMATED COMPLETION: April 2020

TASK: Writing Draft Plan-EA for NRCS Review - ESTIMATED START – October 2019 - ESTIMATED COMPLETION - June 2020

TASK: Draft Plan-EA for NWMC & NHQ Review - ESTIMATED START - June 2020 - ESTIMATED COMPLETION - August 2020

TASK: Public meeting & Interagency Comments - ESTIMATED START - September 2020 - ESTIMATED COMPLETION - November 2020

TASK: Final Plan-EA - ESTIMATED START - November 2020 - ESTIMATED COMPLETION - January 2021

TASK: Final Plan-EA submitted for Authorization - ESTIMATED START - January 2021 - ESTIMATED COMPLETION – April 2021

GENERAL TERMS AND CONDITIONS

Please reference the below link(s) for the General Terms and Conditions pertaining to this award:

NATURAL RESOURCES CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE

GENERAL TERMS AND CONDITIONS GRANTS AND COOPERATIVE AGREEMENTS

I. APPLICABLE REGULATIONS

a. The recipient, and recipients of any subawards under this award, agree to comply with the following regulations, as applicable. The full text of Code of Federal Regulations references may be found at <https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR> and <http://www.ecfr.gov/>.

(1) 2 CFR Part 25, "Universal Identifier and System of Award Management" (2) 2 CFR Part 170, "Reporting Subaward and Executive Compensation Information" (3) 2 CFR Part 180, "OMB Guidelines To Agencies On Governmentwide Debarment And Suspension (Nonprocurement)" (4) 2 CFR Part 182, "Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)" (5) 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles, And Audit Requirements for Federal Awards"

b. The recipient, and recipients of any subawards under this award, assure and certify that they have and/or will comply with the following regulations, as applicable. The full text of Code of Federal Regulations references may be found at <https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR> and <http://www.ecfr.gov/>.

(1) 2 CFR Part 175, "Award Term for Trafficking in Persons" (2) 2 CFR Part 417, "Nonprocurement Debarment and Suspension" (3) 2 CFR Part 418, "New Restrictions on Lobbying" (4) 2 CFR Part 421, "Requirements for Drug-Free Workplace (Financial Assistance)"

c. Allowable project costs will be determined in accordance with the authorizing statute, the purpose of the award, and to the extent applicable to the type of organizations receiving the award, regardless of tier. The following portions of the Code of Federal Regulations are hereby incorporated by reference. The full text of Code of Federal Regulations references may be found at <https://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR> and <http://www.ecfr.gov/>.

(1) 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles And Audit Requirements For Federal Awards" (2) 48 CFR Part 31, "Contract Cost Principles and Procedures"

II. UNALLOWABLE COSTS

The following costs are not allowed:

a. Costs above the amount authorized for the project b. Costs incurred after the expiration of the award including any no-cost extensions of time c. Costs that lie outside the scope of the approved project and any amendments thereto d. Compensation for injuries to persons or damage to property arising from project activities

This list is not exhaustive. For general information about the allowability of particular items of costs, please see 2 CFR Part 200, "Subpart E – Cost Principles", or direct specific inquiries to the NRCS administrative contact identified in the award.

III. CONFIDENTIALITY

a. Activities performed under this award may involve access to confidential and potentially sensitive information about governmental and landowner issues. The term "confidential information" means proprietary information or data of a personal nature about an individual, or information or data submitted by or pertaining to an organization. This information must not be disclosed without the prior written consent of NRCS.

b. The recipient's personnel will follow the rules and procedures of disclosure set forth in the Privacy Act of 1974, 5 U.S.C. Section 552a, and implementing regulations and policies with respect to systems of records determined to be subject to the Privacy Act. The recipient's personnel must also comply with privacy of personal information relating to natural resources conservation programs in accordance with section 1244 of Title II of the Farm Security and Rural Investment Act of 2002 (Public Law 107-171).

c. The recipient agrees to comply with NRCS guidelines and requirements regarding the disclosure of information protected under Section 1619 of the Food, Conservation, and Energy Act of 2008 (PL 110-246), U.S.C. 8791.

d. The recipient agrees to comply with the “Prohibition Against Certain Internal Confidentiality Agreements:”

1. You may not require your employees, contractors, or subrecipients seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting them from lawfully reporting that waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information. 2. You must notify your employees, contractors, or subrecipients that the prohibitions and restrictions of any internal confidentiality agreements inconsistent with paragraph (1) of this award provision are no longer in effect. 3. The prohibition in paragraph (1) of this award provision does not contravene requirements applicable to any other form issued by a Federal department or agency governing the nondisclosure of classified information. 4. If NRCS determines that you are not in compliance with this award provision, NRCS: a. Will prohibit your use of funds under this award, in accordance with sections 743 and 744 of Division E of the Consolidated Appropriations Act, 2016, (Pub. L. 114-113) or any successor provision of law; b. May pursue other remedies available for your material failure to comply with award terms and conditions.

IV. PRIOR APPROVAL REQUIREMENTS

The following are the most common situations requiring prior approval. However, the recipient is also bound by any other prior approval requirements of the applicable administrative provisions and Federal cost principles.

a. Purpose or Deliverables.—When it is necessary for the recipient to modify the purpose or deliverables, the recipient must submit a written request and justification for the change along with the revised purpose or deliverables of the award to the NRCS administrative contact. The request should contain the following: 1. Grant or agreement number 2. Narrative explaining the requested modification to the project purpose or deliverables 3. A description of the revised purpose or deliverables 4. Signatures of the authorized representative, project director, or both

b. Subaward/contractual Arrangement.—The recipient must submit a justification for the proposed subaward/contractual arrangements, a statement of work to be performed, and a detailed budget for the subaward/contract to the NRCS administrative contact. Subaward/contractual arrangements disclosed in the application do not require additional postaward approval.

c. Absence or Change in Project Leadership.—When a project director or the person responsible for the direction or management of the project—

1. Relinquishes active direction of the project for more than 3 consecutive months or has a 25 percent or more reduction in time devoted to the project, the grantee must notify the NRCS administrative contact in writing, identifying who will be in charge during the project director’s absence. The notification must include the qualifications and the signature of the replacement, signifying his or her willingness to serve on the project.

2. Severs his or her affiliation with the grantee, the grantee’s options include— i. Replacing the project director. The grantee must request written approval of the replacement from the NRCS administrative contact and must include the qualifications and the signature of the replacement signifying his or her willingness to serve on the project. ii. Subcontracting to the former project director’s new organization. The grantee must request approval from the administrative contact to replace the project manager and retain the award, and to subcontract to the former project director’s new organization certain portions of the project to be completed by the former project director. iii. Relinquishing the award. The grantee must submit to the NRCS administrative contact a signed letter by the grantee and the project director that indicates that the grantee is relinquishing the award. The letter must include the date the project director is leaving and a summary of progress to date. A final Standard Form (SF) 425 reflecting the total amount of funds spent by the recipient must be attached to the letter.

3. Transfers the award to his or her new organization, the authorized organization’s representative at the new organization must submit the following to the NRCS administrative contact as soon as the transfer date is firm and the amount of funds to be transferred is known: i. The forms and certifications included in the application package ii. A project summary and work statement covering the work to be completed under the project (deliverables and objectives must be the same as those outlined in the approved proposal) iii. An updated qualifications statement for the project director showing his or her new organizational affiliation iv. Any cost-sharing requirements under the original award transfer to the new institution; therefore, cost-sharing information must be included in the proposal from the new organization

Note: The transfer of an award from one organization to another can take up to 90 calendar days to accomplish, which may result in a delay in the project director resuming the project at the new organization.

d. Budget Revisions.—Budget revisions will be in accordance with 2 CFR Part 200.308.

e. No-Cost Extensions of Time.—When a no-cost extension of time is required, the recipient must submit a written request to the NRCS administrative contact no later than 30 calendar days before the expiration date of the award. The request must contain the following: The length of additional time required to complete the project and a justification for the extension A summary of progress to date An estimate of funds expected to remain unobligated on the scheduled expiration date A projected timetable to complete the portions of the project for which the extension is being requested Signature of the grantee and the project director A status of cost sharing to date (if applicable)

Note: An extension will not exceed 12 months. Requests for no-cost extensions received after the expiration of the award will not be granted. V. PAYMENTS

a. Payment by NRCS to the entity will be made monthly or quarterly (whichever is mutually agreed upon by both parties) on a reimbursable or advanced basis upon completion of work outlined herein. Payment will be executed upon the submission of a properly executed form SF-270 with supporting documentation. The SF-270 must cite the agreement number, remittance address, and billing period. The SF-270 must be sent to the NRCS administrative contact at the email address identified in block 8 of the Notice of Grant/Agreement Award.

b. Unless otherwise specified in the award, the recipient must receive payments through electronic funds transfers.

c. Recipients requesting advances should request payments in amounts necessary to meet their current needs pursuant to procedures contained in the Federal administrative provisions and 31 CFR Part 205.

d. The method of payment between the recipient and its contractors will be in accordance with the policies and procedures established by the recipient except that the contractors may not use the USDA Office of Financial Management/National Finance Center method to request payments. If the grantee makes advance payments to contractors, the grantee must ensure that the timing of such payments is designed to minimize elapsed time between the advance payment and the disbursement of funds. Payment requests from the grantee's contractors will not be sent to NRCS for review or approval.

e. Accounting records for all costs incurred under this award must be supported by source documentation. Such documentation includes, but is not limited to, canceled checks, paid bills, payroll records, and subaward documents. Labor cost charges to this award must be based upon salaries actually earned and the time actually worked on this award. All project costs must be incurred within the approved project period of this award, including any approved no-cost extension of time. Costs that cannot be supported by source documentation or that are incurred outside of the approved project period and budget may be disallowed and may result in award funds being returned to the Federal Government by the recipient.

VI. ACCRUALS

a. Recipients must submit an accrual estimate to the NRCS Program/Technical no later than 15 calendar days prior to the end of the quarter (submit by March 15, June 15, September 15 and December 15th). b. An accrual represents the value of goods or services provided to NRCS for which you have not requested payment. The quality and completeness of NRCS audited financial statements depends on your continuing cooperation and timely information. c. At a minimum, the signed accrual statement should include, "Under agreement number _____, at the close of the quarter ending _____, we have provided or anticipate providing goods or services that we have not requested payment for in the amount of \$_____." Include the name and title of the person preparing the accrual estimate.

VII. FINANCIAL REPORTING

a. Recipients must submit a Federal Financial Report (FFR), SF 425 and 425A, in accordance with the following schedule:

Quarterly Schedule Report Due Date October 1 to December 31 January 31 January 1 to March 31 April 30 April 1 to June 30 July 31 July 1 to September 30 October 31

Reports must be submitted on an accrual accounting basis. Failure to submit reports in accordance with the above schedule may result in suspension or termination of award.

b. A final Report must be submitted no later than 90 calendar days after the completion of the award. For final FFRs, reporting end date must be the end date of the project or agreement period. The reports should be submitted to the NRCS administrative contact identified in award notifications.

VIII. PERFORMANCE MONITORING AND REPORTING

- a. The recipient is responsible for monitoring day-to-day performance and for reporting to NRCS. If the project involves subaward arrangements, the recipient is also responsible for monitoring the performance of project activities under those arrangements to ensure that approved goals and schedules are met.
- b. Every 6 months the recipient must submit a written progress report. Each report must cover—
 1. A comparison of actual accomplishments with the goals and objectives established for the reporting period and, where project output can be quantified, a computation of the costs per unit of output.
 2. The reasons why goals and objectives were not met, if appropriate.
 3. Additional pertinent information including, where appropriate, analysis and explanation of cost overruns or high unit cost.
- c. The recipient must submit a final performance report within 90 calendar days after completion of project.

IX. AUDIT REQUIREMENTS

The recipient is responsible for complying with audit requirements in accordance with 2 CFR 200, Subpart F. A non-Federal entity that expends \$750,000 or more during the non-Federal entity's fiscal year in Federal awards must have a single or program-specific audit conducted for that year.

X. SPECIAL PROVISIONS

- a. The recipient assures and certifies that it will comply with the minimum-wage and maximum-hour provisions of the Federal Fair Labor Standards Act.
- b. Employees of NRCS will participate in efforts under this agreement solely as representatives of the United States. To this end, they may not participate as directors, officers, employees, or otherwise serve or hold themselves out as representatives of the recipient. They also may not assist the recipient with efforts to lobby Congress or to raise money through fundraising efforts. Further, NRCS employees must report to their immediate supervisor any negotiations with the recipient concerning future employment and must refrain from participation in efforts regarding such parties until approved by the agency.
- c. Employees of the recipient will not be considered Federal employees or agents of the United States for any purposes under this agreement.

XI. PATENTS, INVENTIONS, COPYRIGHTS, AND ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER

- a. Allocation of rights of patents, inventions, and copyrights must be in accordance with 2 CFR Part 200.315. This regulation provides that small businesses normally may retain the principal worldwide patent rights to any invention developed with USDA support.
- b. In accordance with 37 CFR Section 401.14, each subject invention must be disclosed to the Federal agency within 2 months after the inventor discloses it in writing to contractor personnel responsible for patent matters. Invention disclosure statements pursuant to 37 CFR Section 401.14(c) must be made in writing to:

Acquisitions Division Grants and Agreements Services Branch 1400 Independence Avenue, SW. Room 6823 South Building Washington, DC 20250
- c. USDA receives a royalty-free license for Federal Government use, reserves the right to require the patentee to license others in certain circumstances, and requires that anyone exclusively licensed to sell the invention in the United States must manufacture it domestically.
- d. The following acknowledgment of NRCS support must appear in the publication of any material, whether copyrighted or not, and any products in electronic formats (World Wide Web pages, computer programs, etc.) that is substantially based upon or developed under this award:
 - “This material is based upon work supported by the Natural Resources Conservation Service, U.S. Department of Agriculture, under number [recipient should enter the applicable award number here].”

In addition, all publications and other materials, except scientific articles or papers published in scientific journals, must include the following statement:

- “Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture.”

e. All publications printed with Federal Government funds will include the most current USDA nondiscrimination statement, available from the Public Affairs Division, Civil Rights Division, or on the USDA and NRCS home pages. If the material is too small to permit the full nondiscrimination statement to be included, the material must, at a minimum, include the statement:

• “USDA is an equal opportunity provider and employer.” Any publication prepared with funding from this agreement must include acknowledgement to USDA, Natural Resources Conservation Service.”

The recipient is responsible for ensuring that an acknowledgment of NRCS is made during news media interviews, including popular media such as radio, television, and news magazines, that discuss in a substantial way work funded by this award.

XII. COST-SHARING REQUIREMENTS

a. If the award has specific cost-sharing requirements, the cost-sharing participation in other projects may not be counted toward meeting the specific cost-share requirement of this award, and must come from non-Federal sources unless otherwise stated in the applicable program announcement.

b. Should the recipient become aware that it may be unable to provide the cost-sharing amount identified in this award, it must— 1. Immediately notify the NRCS administrative contact of the situation. 2. Specify the steps it plans to take to secure replacement cost sharing. 3. Indicate the plans to either continue or phase out the project in the absence of cost sharing.

c. If NRCS agrees to the organization's proposed plans, the recipient will be notified accordingly. If the organization's plans are not acceptable to NRCS, the award may be subject to termination. NRCS modifications to proposed cost sharing revisions are made on a case-by-case basis.

d. Failure by the recipient to notify NRCS in accordance with paragraph (b) above may result in the disallowance of some or all the costs charged to the award, the subsequent recovery by NRCS of some of the NRCS funds provided under the award, and possible termination of the award, and may constitute a violation of the terms and conditions of the award so serious as to provide grounds for subsequent suspension or debarment.

e. The recipient must maintain records of all project costs that are claimed by the recipient as cost sharing as well records of costs to be paid by NRCS. If the recipient's cost participation includes in-kind contributions, the basis for determining the valuation for volunteer services and donated property must be documented.

XIII. PROGRAM INCOME

Income derived from patents, inventions, or copyrights will be disposed of in accordance with the recipient's own policies. General program income earned under this award during the period of NRCS support must be added to total project funds and used to further the purpose and scope of this award or the legislation under which this award is made.

XIV. NONEXPENDABLE EQUIPMENT

Recipients purchasing equipment or products with funds provided under this award are encouraged to use such funds to purchase only American-made equipment and products. Title to nonexpendable equipment purchased with award funds will vest in the recipient upon completion of the award project and acceptance by NRCS of required final reports. When equipment is no longer needed by the recipient and the per-unit fair market value is less than \$5,000, the recipient may retain, sell, or dispose of the equipment with no further obligation to NRCS. However, if the per-unit fair market value is \$5,000 or more, the recipient must submit a written request to the NRCS administrative contact for disposition instructions.

XV. LIMIT OF FEDERAL LIABILITY

The maximum financial obligation of NRCS to the recipient is the amount of funds indicated in the award as obligated by NRCS. However, in the event that an erroneous amount is stated on the approved budget, or any supporting document relating to the award, NRCS will have the unilateral right to make the correction and to make an appropriate adjustment in the NRCS share of the award to align with the Federal amount authorized.

XVI. MODIFICATIONS AND TERMINATIONS

NRCS may amend or modify the award through an exchange of correspondence between authorized officials of the recipient and NRCS. The award is subject to termination if NRCS determines that the recipient has failed to comply with the terms and conditions of the award. In the event that the award is terminated, the financial obligations of the parties

will be those set forth in 2 CFR Part 200.339.

XVII. AWARD CLOSEOUT

Award closeout is the process by which NRCS determines that all required project activities have been performed satisfactorily and all necessary administrative actions have been completed.

Bibliography



Bone and Long Pine Creeks
Watershed Improvement Project

BIBLIOGRAPHY

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Referenced in Application:
Section C-9

Middle Niobrara Natural Resource District. 1995. *Ground Water Management Plan*.

Referenced in Application:
Section C-1, C-11

Middle Niobrara Natural Resource District. 2016. *Long Pine Creek Watershed Water Quality Management Plan*. (2016 WQMP)

Referenced in Application:
Section B-3, B-9, C-4, C-5, C-9, C-11, C-15

Middle Niobrara Natural Resource District. 2021. *Draft Bone and Long Pine Creeks Watershed Plan-EA (Draft Plan-EA)*

Referenced in Application:
Section A-3, A-5, A-6, B-1, B-2, B-7, C-9

Nebraska Department of Environment and Energy, Water Quality Division. 2020. *Water Quality Integrated Report*

Referenced in Application:
Section C-1, C-5, C-7, C-9

Nebraska Department of Natural Resources (NDNR). 2018. Title 264 – *Rules Governing the Administration of the Water Sustainability Fund*.

Nebraska Department of Natural Resources (NDNR). 2020. *Annual Report and Plan of Work for the Nebraska State Water Planning and Review Process*

Referenced in Application:
Section B-9, C-15

Nebraska Department of Natural Resources (NDNR), Middle Niobrara Natural Resources District (MNNRD). 2020. *Voluntary Integrated Management Plan*

Referenced in Application:
Section C-2, C-3, C-11

