2069 - Critical Conservation Areas (CCAs) - Prairie Grasslands Region - 2020 - BFRWP Irrigation Efficiency and Soil Health

Project Name: 2069 - BFRWP Irrigation Efficiency and Soil Health

Funding Pool: Critical Conservation Areas (CCAs) | **CCA: Prairie Grasslands Region**

Lead Partner: Belle Fourche River Watershed Partnership(621215123) | **Partner Name: Justin Krajewski**

Lead State: SD | **Partner States:**

Partner Address: , , | **Project Director Contact: justin.krajewski@respec.com | (605) 877-2134**

Project Start and End Years: 2020 - 2023 | **Project Type: RCPP Classic**

Primary Resource Concern: Degraded Plant Condition | **Additional Resource Concern: Field sediment, nutrient and pathogen loss**

Description of Goals and Objectives:

The BFRWP Irrigation Efficiency and Soil Health Project will leverage $1,203,000.00 of FA and $468,429 TA from RCPP with $1,674,000 of partner contributions from the SD DENR and BFID over the next 3 years to install on-the-ground conservation practices that address degraded plant condition and field sediment, nutrient and pathogen loss resource concerns and result in conservation benefits to the watershed's plant productivity and soil health. The NRCS and the BFRWP have a long and successful partnership. The project area includes the irrigated lands and conveyances within the BFID. The project is located in Prairie Grasslands Region RCPP CCA and in the Pierre Shale Plains (60A) MLRA. Flood-irrigated fields reduce plant productivity, decrease soil health, and deliver sediment to the Belle Fourche River. The BFRWP and BFID will improve delivery efficiency on the Moore, Sipalla, Town Site, Sorenson, Anderson, and Meade Laterals. The BFRWP and NRCS will offer RCPP contracts to eligible producers to address the project's resource concerns and includes Sprinkler System (442); Irrigation Pipeline (430), Irrigation Water Management (449), Structure for Water Control (587), Pumping Plant (533), and Cover Crop (340) practices. There are currently no regulations within the project area that require producers install these conservation practices as part of this proposed RCPP project. The BFRWP has been the recipient of 319 grants totaling more than $8.5 million dollars from SD DENR. The RCPP investment and leveraged partner contributions will be used to convert over 5,000 flood-irrigated acres and more than 15,000 feet of earthen laterals to more to more efficient application and delivery systems. The BFRWP, NRCS, and BFID will inform producers about the RCPP project through meetings, direct mailings, BFRWP's website, radio and newspaper ads.

Description of Expected Environmental, Economic, and Social Outcomes:

With the RCPP investment of $1,203,000 dollars matched by $1,674,000 partner contributions over three (3) years, the BFRWP and NRCS have made a lasting improvement to the plant productivity, health, and vigor of the watershed and BFID over the current degraded plant conditions and field sediment, nutrient and pathogen losses by converting more than 5,000 flood-irrigated acres to more efficient sprinkler-irrigation systems, which improved our irrigation efficiencies, increased our plant productivity, and restored our soil health by 50 percent that benefited the watershed for 20 years. With the RCPP investment of $1,203,000 dollars matched by $1,674,000 partner contributions over three (3) years, the BFRWP and NRCS have made a lasting improvement to the plant productivity, health, and vigor of the watershed and BFID over the current degraded plant conditions and field sediment, nutrient and pathogen losses by converting more than 15,000 earthen laterals to more efficient buried PVC pipelines, which improved our irrigation water deliver efficiencies, reduced water losses, and increased our water availability by saving 15 acre-feet of irrigation water that benefited the watershed for 20 years.

Partner Information

Partner/Entity Name	Partner/Entity Type	Contribution Amount
South Dakota Department of Environment and Natural Resources	SG-State Government	$ 1,555,000.00
Belle Fourche Irrigation District	WD-Water district with water delivery authority to agricultural producers	$ 94,000.00
Belle Fourche River Watershed Partnership	NP-Not-for-profit organization or entity	$ 25,000.00
		1674000.00

2069 - Critical Conservation Areas (CCAs) - Prairie Grasslands Region - 2020 - BFRWP Irrigation Efficiency and Soil Health

Partner Contributions Summary

Contribution Category	Total Amount
FA: RCPP Land Management Activity Related FA Expenditures	$1,108,000.00
TA: "Enhancement" Expenditures per APF	$88,000.00
TA: "Other" TA per APF	$453,000.00
Total IN-Kind Contribution	**$47,000.00**
Total Cash Contribution	**$1,602,000.00**

Funding Request Summary

Partner Contribution Ratio	1.00
Total Project Cost	$1,671,429.00
Total Financial Assistance Requested	$1,203,000.00
Total Technical Assistance Requested	$468,429.00
Total Partner Enhancement TA Requested	$84,000.00
Total Implementation TA Requested	$384,429.00
Total NRCS Implementation TA	$196,429.00
Total Partner Implementation TA Requested	$188,000.00

2069 - Critical Conservation Areas (CCAs) - Prairie Grasslands Region - 2020 - BFRWP Irrigation Efficiency and Soil Health

Financial Information

RCPP Financial Assistance Funding Request

Type of Assistance	Request Type	Total Funding Requested
Financial Assistance (FA)	Land Management	$1,203,000.00

Contract Type	Fiscal Year	State	Amount
Land Management	2020	SD	$ 317,000.00
Land Management	2021	SD	$ 325,000.00
Land Management	2022	SD	$ 325,000.00
Land Management	2020	SD	$ 44,000.00
Land Management	2021	SD	$ 140,000.00
Land Management	2022	SD	$ 52,000.00
		Total Financial Assistance Requested:	**$ 1,203,000.00**

RCPP Technical Assistance Funding Request

Type of Assistance	Request Type	Total Funding Requested
Technical Assistance (TA)	Enhancement TA	$84,000.00
Technical Assistance (TA)	Partner Implementation TA	$188,000.00
	Total Partner TA Requested	$272,000.00

Technical Assistance Type	State	Amount
Enhancement TA	SD	$ 84,000.00
Partner Implementation TA	SD	$ 52,000.00
Partner Implementation TA	SD	$ 136,000.00

Narratives

1 Describe the compelling need for the project and an overview of how the project will generate targeted conservation benefits.

The NRCS and the Belle Fourche River Watershed Partnership (BFRWP) have had a long and successful partnership focused on local resource concerns, installed on-the-ground conservation practices, and informed participants about the benefits. Because of our partnership, over 19,000 flood-irrigated acres were converted to sprinklers; increasing irrigation efficiencies, reducing sediment runoff, and improving soil health in the watershed. The project's primary resource concern is "Degraded Plant Condition" with an additional resource concern of "Field sediment, nutrient and pathogen loss". There are undesirable conditions for plant productivity and health for the alfalfa and grain crops grown on the flooded fields. The productivity and vigor of these flood-irrigated crops does not meet the yield potential in the area. Since the 1880s, flood irrigation has been used in the area and is still used on approximately 53 percent of the 78,000 irrigated acres in the watershed. Alfalfa and hay accounts for 65 percent of crop production along with small grains and corn. Irrigated lands are located on floodplains along the Belle Fourche River and its tributaries and on high river terraces. Soils vary from sandy loam along the river to clay loams and heavy clay on high terraces on the north side of the river. Flood-irrigation involves gravity flooding the field from a ditch and allowing the water to infiltrate the soil. Some fields have ridges, furrows, or corrugations that spread water. Application rates are inexact and uneven. Heavy textured soils in the area require a high level of specialized irrigation delivery and application management practices to meet producers' plant health and crop production goals. These soils become waterlogged adversely affecting crops like alfalfa, barley, wheat, and corn. Then, a shallow, hard pan develops and leads to soil compaction, decreased water infiltration, and aeration stress in crops, especially alfalfa. This compaction requires deep tillage that leaves the soil bare during the fall and spring when water and wind erosion occurs within the watershed. These bare, flood-irrigated fields reduce plant productivity and vigor, decrease soil health (infiltration and organic matter), and deliver sediment to the Belle Fourche River. These conditions result in irrigation-induced erosion, which increases runoff and/or loss of unused water, field sediment, nutrients, salts, and pathogen bacteria to rivers, creeks, lakes, and reservoirs, degrades soil health, and increases salinity. More than 600 producers irrigate over 78,000 acres in the watershed; including 256 center pivots on 21,000 acres. Annual

water deliveries average 55,000 acre-feet in the BFID. From 1995-2004, the average delivery efficiency was 47 percent averaging 61,900 acre-feet of losses or unused water annually. The “losses” and “unused water” is the portion of water released from Orman Dam that is not delivered to irrigators but lost to seepage, evaporation, and/or discharged from the ends of canals and laterals into drains, creeks, and the river. Many improvements have been made since 2004 and the estimated delivery efficiency is now 60 percent. These improvements will continue with this RCPP project on the Moore, Sipalla, Town Site, Sorenson, Anderson, and Meade Laterals. The majority of these flood to sprinkler conversions have been completed since 2000 and include installation of center pivots and side rolls or wheel-lines, and traveling guns. These sprinkler systems allow producers to better manage the volume, uniformity, and frequency of their irrigation applications. So, these improved sprinkler systems have enabled producers to adopt irrigation scheduling to monitor soil-water content, to minimize tillage or plowing activities, and to plant cover crops keeping the bare soil protected resulting in the improvement of water infiltration, optimizing crop production, conserving water allotments, and decreasing pollutant runoff.

2 Describe rationale for inclusion of each RCPP activity type (e.g., rental contracts, entity-held easements) in project proposal, and how each activity relates to the generation of conservation benefits.
The BFRWP’s Irrigation Efficiency and Soil Health RCPP project includes the Land Improvement/ Management/Restoration RCPP activity type because the conservation practices and components that will be installed during the 3-year project use producer contracts similar to the NRCS’ covered program authorities associated with EQIP and CSP. The BFRWP and NRCS will offer Land Improvement RCPP contracts to eligible producers to address the project’s primary resource concern of “Degraded Plant Condition” and additional resource concern of “Field sediment, nutrient and pathogen loss” on eligible lands within the watershed. The BFRWP and NRCS will employ similar application, ranking, and contracting processes as currently used for the NRCS EQIP and CSP programs. However, the BFRWP will consider necessary modifications to payment schedules, ranking criteria, and application bundling, which could potentially leverage more partner contributions for greater conservation benefits, in consultation with NRCS and subject to approval in accordance with NRCS and USDA policies. The conservation practices and components proposed for this project primarily include, but are not limited to the following practices; Sprinkler System (442); Irrigation Pipeline (430), Irrigation Water Management (449), Structure for Water Control (587), Pumping Plant (533), and Cover Crop (340). These conservation practices and components will adhere to NRCS standards and specifications in accordance with planning, installation, and operation/maintenance requirements as defined in the contracts. These conservation practices and components are included in the “South Dakota RCPP-EQIP.pdf” available at the NRCS South Dakota CSP, EQIP, and RCPP Payment Schedules website, https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/?cid=nrcseprd1328264. The Land Improvement RCPP activity type will be used to develop and complete RCPP Financial Assistance Funding producer contracts for the installation of the needed irrigation application and delivery conservation practices and components. This Land Improvement RCPP activity type will also be used to implement RCPP eligible activities with non-NRCS funds (C) from partner contributions. The Land Improvement RCPP activity type will be used to convert flood-irrigation systems to sprinkler-irrigation systems, convert the earthen ditch laterals to buried PVC pipelines to improve irrigation water delivery and application efficiencies and improve soil health on irrigated lands. Lastly, the BFRWP is not currently proposing any other RCPP activity type, such as Land Rentals, Easements (U.S. -held or entity-held), and Public Works/Watershed for their BFRWP Irrigation Efficiency and Soil Health RCPP Project.

3 Describe the rationale for the proposed geographic scope of the project.
The BFRWP’s Irrigation Efficiency and Soil Health RCPP project includes the irrigated lands and the irrigation conveyances (canals, laterals, and ditches) within the subwatersheds along the Belle Fourche River and its tributaries within the boundaries of the Belle Fourche Irrigation District (BFID) as shown on the uploaded map. The Belle Fourche River Watershed is shown in the inset of the uploaded map of the proposed area of the RCPP project. The geographic scope was based on the location of the irrigated lands and delivery conveyances in the project area. The project area is located in Prairie Grasslands Region RCPP Critical Conservation Area (CCA), which provides an opportunity the BFRWP and its partners to address local resource concerns while improving agricultural productivity and achieving regional natural resource goals and conservation priorities. The proposed RCPP project is also situated within the Pierre Shale Plains (60A) Major Land Resource Area (MLRA). Excessive flood irrigation runoff, inefficient water delivery, and unused irrigation water on the erodible Pierre soils are responsible for approximately 20 percent of the sediment load in the Belle Fourche River. Approximately 53 percent of these irrigated lands within the watershed are flood-irrigated causing sediment to be mobilized by unused water/runoff crossing fields, water in the canals and laterals, and water in the intermittent streams carrying tail water/runoff to the drains, creeks, and the river. In 2018, there were approximately 12,000 to 16,000 flood-irrigated acres that identified using gated pipe, furrows, or corrugations that could be converted to sprinkler systems because of the field’s favorable soil conditions and physical dimensions. These potential projects are shown as light blue on the uploaded along with the completed sprinkler conversion, shown as red field boundaries and the flood-irrigated fields displayed with black outlines. If these acres were converted, then 47 percent to 53 percent of the total irrigated acres would have been converted to sprinkler systems. These percentages probably represent the potential acres available to convert within the watershed. The leveraged partner contributions will used to convert flood-irrigated fields to sprinkler-irrigation systems within the Horse Creek Watershed. RCPP funds will be used be used on needed irrigation application and delivery conservation practices (e.g. sprinkler system, pipeline, irrigation scheduling, cover crops, soil health) in all of the subwatersheds within the project area (BFID boundary) as shown on the uploaded map. The proposed BFID lateral projects (Moore, Sipalla, Town Site, Sorenson, Anderson, and Meade Laterals) funded by both leveraged partner contributions and RCPP funds are labeled and shown on the uploaded map.

4 Describe proposed approach for evaluating the success of the project, including outcomes.
The BFRWP will ensure success of the proposed RCPP project by continuing to inform producers of the financial and technical assistance available to install on-the-ground conservation practices and components that address their degraded plant condition and field sediment, nutrient and pathogen loss resource concerns and result in conservation

benefits to their land's plant productivity and soil health. The BFRWP's Proposal to the NRCS RCPP, titled "BFRWP Irrigation Efficiency and Soil Health" (Project #2069) will leverage $1,203,000.00 of financial assistance (FA) and $468,429 technical assistance (TA) from RCPP with $1,674,000 of partner contributions from the South Dakota Department of Environment and Natural Resources' (SD DENR) and Belle Fourche Irrigation District's (BFID) over the next three (3) years. The BFRWP will measure success by quantifying the amount of flood-irrigated acres converted to sprinkler systems and the amount of earthen ditches converted to buried pipelines along with monitoring the expected positive changes that will occur in soil health (organic matter, water infiltration, soil compaction, etc) and water quantity/quality (streamflow and sediment) on completed projects throughout the project area and watershed. With the RCPP investment of $1,203,000 dollars matched by $1,674,000 partner contributions over three (3) years, the BFRWP and NRCS have made a lasting improvement to the plant productivity, health, and vigor of the watershed and BFID over the current degraded plant conditions and field sediment, nutrient and pathogen losses by converting more than 5,000 flood-irrigated acres to more efficient sprinkler-irrigation systems, which improved our irrigation efficiencies, increased our plant productivity, and restored our soil health by 50 percent that benefited the watershed for 20 years. With the RCPP investment of $1,203,000 dollars matched by $1,674,000 partner contributions over three (3) years, the BFRWP and NRCS have made a lasting improvement to the plant productivity, health, and vigor of the watershed and BFID over the current degraded plant conditions and field sediment, nutrient and pathogen losses by converting more than 15,000 earthen laterals to more efficient buried PVC pipelines, which improved our irrigation water deliver efficiencies, reduced water losses, and increased our water availability by saving 15 acre-feet of irrigation water that benefited the watershed for 20 years.

5 Will this project help producers meet or avoid natural resource regulatory requirements? If so, describe how.
The BFRWP's Proposal to the NRCS RCCP, titled "BFRWP Irrigation Efficiency and Soil Health" (Project #2069) will assist producers installing on-the-ground conservation practices and components that address their degraded plant condition and field sediment, nutrient and pathogen loss resource concerns and result in conservation benefits to their land's plant productivity and soil health. However, there are currently no regulations within the project area that require producers to install these conservation practices as part of this proposed RCPP project. Although, this proposed RCPP project will leverage partner contributions that BFRWP uses to improve water quality on the Belle Fourche River and Horse Creek, which are listed as impaired on the SD DENR's Integrated Report and have had total maximum daily loads (TMDLs) for total suspended sediment (TSS) and Escherichia coli (E. coli) developed and approved by the EPA. Since 2004, the BFRWP has partnered with producers, NRCS, and BFID along with many other partners to install conservation practices and best management practices (BMPs) that reduce sediment and E. coli; however, these implementation efforts were voluntary and not mandated by any local, state, or federal regulation.

6 Describe the plan and lead partner's experience managing and tracking the delivery of third-party contributions (if included in the proposal).
The Belle Fourche River Watershed Partnership (BFRWP) is a 501c3 organization that has been committed to conservation within the Belle Fourche Watershed for more than 20 years. Voting board members include the District Chairs from the Butte, Lawrence, and Elk Creek Conservation Districts, and the BFID. Other active members include state and federal natural resource agencies, agricultural producers, and the general public. The NRCS and BFRWP have had a long-term successful partnership that has included several planning and implementation projects. The BFRWP's proposed RCPP project does not currently involve any "third-party" contributions that are not considered eligible partners. However, the BFRWP has been the recipient of past and current 319 assessment and implementation grants totaling more than $8.5 million dollars from SD DENR. Currently, the BFRWP has an agreement with the SD DENR that is providing $816,000 of 319 funds to manage the implementation irrigation and riparian/rangeland conservation practices and BMPs within the watershed. Furthermore, the BFRWP recently submitted an additional $796,000 request of 319 funds for implementation. The BFRWP has tracked partner contributions and completed progress and final reports using the SD DENR's Grant Reporting and Track System (GRTS) and the SD NPS Project Management System Online TRACKER website. Also, the BFRWP has conducted annual financial reviews and audits performed by independent accounting firms to ensure proper accounting procedures are adhered to during grant projects ensuring the BFRWP fiduciary responsibilities and duties.

7 Describe how partner contributions add value to the proposed project to leverage and multiply the benefits of the potential committed RCPP funding.
The $1,674,000 of partner contributions from the SD DENR and BFID effectively doubles the amount of flood-irrigated acres that will be converted to sprinkler systems and the amount of earthen ditches converted to buried pipelines that will improve soil health (organic matter, water infiltration, soil compaction, etc) and water quantity/quality (streamflow and sediment) throughout the project area. The BFRWP's Irrigation Efficiency and Soil Health RCPP Project (#2069) will leverage $1,203,000.00 of financial assistance (FA) and $468,429 technical assistance (TA) from RCPP with $1,674,000 of partner contributions from the SD DENR and BFID over the next three (3) years to install on-the-ground conservation practices that address degraded plant condition and field sediment, nutrient and pathogen loss resource concerns and result in conservation benefits to the watershed's plant productivity and soil health. The proposed RCPP project has resulted in greater coordination amongst the BFRWP, NRCS, BFID, SD DENR, local producers and other partner agencies and organizations within the watershed. The RCPP investment of $1,203,000 dollars matched by $1,674,000 partner contributions over three years will improve the plant productivity, soil health, and reduce sediment, nutrient and pathogen losses by converting over 5,000 flood-irrigated acres and more than 15,000 earthen laterals to more to more efficient application and delivery systems.

8 Provide a justification for why this project could not be carried out through other NRCS Farm Bill programs--what RCPP flexibilities does the project take advantage of?
The proposed RCPP project and Land management producer contracts enable the BFRWP and NRCS to coordinate financial and technical assistance and target areas within the watershed. These can enhance the conservation benefits from installed practices while leveraging additional contributions committed by our project partners, SD DENR and

BFID, to greatly improve our implementation efforts within the project area. The RCPP flexibilities that are crucial for this proposed RCPP project include allocation of EQIP funds to livestock operations and wildlife habitat; which do not apply to RCPP and has hampered producers' applications in the past. Other flexibilities that the BFRWP will consider using in coordination with NRCS and RCPP partners are project/partner-driven ranking pools and bundling the RCPP producers' applications that can be prioritized by NRCS for funding. This will enable the BFRWP to work with more than one producer in an area or served by a BFID lateral to convert several flood-irrigated fields to sprinkler systems for greater conservation benefits. The flexibility of RCPP to work with eligible partners; including producer associations, cooperatives, or groups, state or local governments, American Indian tribes, water and irrigation districts, and others is an advantage available to the BFRWP, partners, and producers that does not exist within other NRCS Farm Bill programs.

9 Does the partner plan to target project funding to particular locations or producers based on a scientific assessment or research-based plan? If so, please describe the approach.
The BFRWP's Irrigation Efficiency and Soil Health RCPP project includes the irrigated lands and the irrigation conveyances (canals, laterals, and ditches) within the subwatersheds along the Belle Fourche River and its tributaries within the boundaries of the Belle Fourche Irrigation District (BFID) as shown on the uploaded map. The geographic scope was based on the location of the irrigated lands and delivery conveyances in the project area. Approximately 12,000 to 16,000 flood-irrigated acres were identified and mapped that could be converted to sprinkler systems because of the field's favorable soil conditions and physical dimensions. The leveraged partner contributions will used to convert flood-irrigated fields to sprinkler-irrigation systems along Horse Creek while RCPP funds will be used be used to fund producer contracts providing financial assistance for the installation of sprinkler systems, pipelines, and cover crops along the Belle Fourche River and its tributaries (Horse, Indian, Dry, Ninemile, Owl, Whitewood, Willow drainages) in all of the subwatersheds within the project area (BFID boundary) as shown on the uploaded map. The proposed BFID lateral projects (Moore, Sipalla, Town Site, Sorenson, Anderson, and Meade Laterals) funded by both leveraged partner contributions and RCPP funds are labeled and shown on the uploaded map. The earthen ditch to buried pipeline projects were selected because they are situated on sandy soils and water losses total more than 15 acre-feet annually. Several assessments, inventories, and plans have been completed within the watershed that guide the BFRWP and partners implementation efforts and are listed below. - Belle Fourche Irrigation District Water Conservation Plan, January 2005 - Phase I Watershed Assessment Final Report and TMDL, Belle Fourche River Watershed, January 2005 - Belle Fourche River Watershed Management and Project Implementation Plan, Segments 1 through 9, 2002 through 2019 - Hydrogeologic Atlas of the Northern Black Hills: Elevation and Depth-to-Aquifer Maps, January 2013 - Ten-Year Belle Fourche River Watershed Strategic Implementation Plan, January 2005 and 2013 The BFRWP has used the following models to analyze conservation benefits within the watershed and include the following tools: - NRCS Revised Universal Soil Loss Equation (RUSLE2) - EPA Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) - EPA Hydrological Simulation Program – FORTRAN (HSPF) - NRCS Farm Irrigation Rating Index (FIRI) - NRCS Surface Irrigation Soil Loss (SISL) - SD DENR Rapid Geomorphic Assessment (RGA) - EPA Spreadsheet Tool for Estimating Pollutant Loads (STEPL)

10 Describe any proposed innovative methods or approaches for conservation planning, implementation, or assessment, and/or the proposed use of promising new technologies that have a demonstrated likelihood of success.
The BFRWP and NRCS have provided financial and technical assistance to producers to convert flood-irrigated fields to sprinklers and then implemented irrigation scheduling to improve irrigation application efficiency, increase plant productivity, and restore soil health. These producers have recognized the benefit in switching to more efficient irrigation methods because they were able to reduce tillage operations that were required when flood-irrigation caused compaction and infiltration problems on their fields. These irrigators reported gains in water conserved while increasing crop production and minimizing irrigation induced soil erosion. Also, the BFID has installed 55 automated head gates and equipment on their canals, laterals, ditches, and checks that enables them to optimize water deliveries and provider irrigators with timely water allotments while minimizing water losses or unused water leaving the end of the canals, laterals, and ditches. The BFRWP and BFID will continue to identify any needed technological improvements and coordinate with NRCS on any proposed innovative method or approach during this RCPP project that will demonstrate conservation benefits in the watershed.

11 Is this a brand-new project or is this part of an existing effort? Describe the extent of project activities completed to date, and how the proposed activities relate to any existing efforts. Include a brief description of any historical coordination with NRCS staff or programs.
The BFRWP's Irrigation Efficiency and Soil Health Project #2069 is an expansion of an existing partnership effort that has been going since 1998. The NRCS and the BFRWP have had a long and successful relationship that has focused on addressing local resource concerns. This conservation partnership has been very active with installing on-the-ground conservation practices and informing participants about the benefits of these practices as detailed in the Belle Fourche River Watershed Management and Project Implementation Plan's Segments 1 through 9. Because of this accelerated local effort over the past years, there has been a substantial number of flood-irrigated acres converted to center pivot sprinklers, which has improved irrigation efficiencies and reduced sediment to the Belle Fourche River. The BFRWP would continue to coordinate activities with the NRCS, SD DENR, and BFID through frequent staff phone and email communications, including weekly staff meetings, monthly conservation and irrigation district meetings, and quarterly partnership meetings. NRCS field office personnel are essential to the success of the BFRWP watershed implementation efforts and this proposed RCPP project.

12 Describe the lead partner?s experience managing Federal funding awards or similar projects and conservation projects, including the execution of deliverables and engagement with ag producers and private landowners to get conservation on the ground.
The BFRWP is the lead partner sponsor for their Irrigation Efficiency and Soil Health RCPP Project (#2069) and will coordinate with producers, NRCS, SD DENR, and BFID to

ensure proper execution of the RCPP project and completion of RCPP producer contracts. The BFRWP has been successfully implementing conservation projects with the agricultural community within the watershed for over 14 years. Their mission statement is to coordinate available resources to address concerns associated with the Belle Fourche River Watershed and the riparian areas within. Much of the BFRWP's focus has been working with the agriculture community within the watershed to promote improved conservation practices. The BFRWP has had an active EPA 319 implementation project within the watershed since 2004 with a goal of reducing total suspended solids (TSS) in the Belle Fourche River. Many additional conservation benefits have been recognized through this project including enhanced soil health on both rangelands and croplands, reduced sediments in the Belle Fourche River and an increase in efficiency of irrigation water use. Along with their 319 project, the BFRWP has successfully administered four NRCS funded grants, including; one Conservation Innovation Grant, two Cooperative Conservation Partnership Initiative grants, and one Conservation Collaboration Grant/Agreement. These grants assisted with irrigation scheduling, rangeland planning, and rangeland conservation projects. Additionally, the BFRWP has successfully implemented several of the South Dakota Department of Agriculture's Coordinated Natural Resources Conservation Grants. In total, the BFRWP has administered over $14 million in conservation grants over the past 14 years with an additional $12 million dollars provided as local match to these projects. The BFRWP has been responsible for all fiduciary responsibilities along with providing progress and final reports for all of these projects. Success of these projects has been demonstrated not only by completing these grant requirements but more importantly by improving water quality, soil health, and local adoption of these on the ground conservation practices. The benefits of these grants will be seen in the watershed for years to come. Responsibilities for operation and maintenance of 319 funded BMPs would be provided through conservation district/landowner contracts. Contracts developed for BMP installation would specify operation and maintenance needs, procedures for BMP failure or abandonment, and the life span of the BMPs terms agreed upon in the contract. The NRCS and consultants would be responsible for completing operation and maintenance scheduling, on-site evaluations, and follow-up with landowners when actions are necessary to ensure BMP operation for its designated life span. The BFRWP and NRCS will be responsible for ensuring conservation practices installed through RCPP producer Land management contracts are properly installed, certified, and maintained. Compliance with NRCS RCPP regulations will be adhered to by the BFRWP for this proposed RCPP project.

13 Describe proposed producer outreach activities designed to identify, inform, and enroll eligible producers and entities in RCPP contract activities.
The BFRWP, NRCS, and BFID will inform producers within the project area about the RCPP project and its benefits. A project coordination meeting between the BFRWP, NRCS, BFID, and SD DENR will be held to schedule tasks that will be completed to identify, inform, and enroll eligible producers and entities in RCPP Land management contract activities. This meeting will be scheduled soon after the project agreement is signed by the BFRWP and NRCS. An outline of the project's approach, schedule, roles, and responsibilities will be discussed. Dates for producers' meetings, perhaps located in Belle Fourche, Nisland, Newell, and/or Vale, will then be determined in cooperation with the NRCS and BFID. These meetings will be an opportunity to introduce the RCPP project and its benefits to producers, landowners, irrigators, residents, and other interested stakeholders. These meetings are also present an ideal opportunity for the BFRWP, NRCS, and BFID to introduce themselves and the RCPP project benefits to producers. An informational letter will be sent from the BFRWP directly to the producers and irrigators in the project area. This letter is an effective tool for soliciting participation in the RCPP project and can also extend invitations to attend producer meetings. BFRWP staff would be responsible for completing the outreach and education activities in cooperation with NRCS and BFID personnel. Also, the BFRWP's website (www.bellefourchewatershed.com) would be updated to provide the latest RCPP program information, an overview and status of the RCPP project. Coordination with NRCS to inform producers of the RCPP project on the South Dakota NRCS' website and news release would also be completed. The BFRWP holds education and outreach events throughout the year, including public meetings, informational booths, website updates, radio sound bites, rainfall simulator demonstrations, and watershed tours. These events are good venues to explain the RCPP project, present RCPP program information, and answer questions that producers have regarding the RCPP project and its benefits. The BFRWP's outreach and education efforts have reached at least 9,500 people during the last 2 years. Several informative sound bites will be broadcasted on local radio and newspaper advertisements to increase producer awareness the RCPP project, producer meetings, and RCPP enrollment processes.

14 Describe any proposed efforts to encourage or include the participation of historically underserved producers, including socially disadvantaged, beginning, limited resource and veteran farmers and ranchers, or to include as a contributing partner(s) an organization(s) working with or representing those groups of producers.
The BFRWP will coordinate with the NRCS personnel to encourage participation of historically underserved producers, including socially disadvantaged, beginning, limited resource and veteran farmers and ranchers, in the proposed RCPP Project. Applicable NRCS and USDA procedures will be adhered to by the BFRWP to ensure participants are informed about the RCPP project while guaranteeing privacy. Also, the BFRWP will inform local veterans organizations about the RCPP project opportunities, including but certainly not limited to the following: the American Legion Posts in Nisland (Emil Gurwell SD Post 233), Belle Fourche (Miller-Magee, SD Post 32), Sturgis (Meade, SD Post 33), and Spearfish (SD Post 164) along with Veterans of Foreign Wars (VFW) Posts in Belle Fourche (Post 3312 Center of the Nation), Spearfish (Post 5860 Queen City), Newell (Post 5807 Newell), and in Sturgis (Post 2730 Paha Sapa).

BFRWP RCPP Project Boundary

Belle Fourche Reservoir (Orman Dam)

Slaughter Reservoir

Sipalla Lateral

Anderson Lateral

Moore Lateral

Town Site Lateral

Meade Lateral

Belle Fourche

Fruitdale

Nisland

Newell

Vale

Butte

Meade

Lawrence

Inlet Canal

Johnson Lateral

Mawer Lateral

Sorenson Lateral

Butte Lateral

Todd Lateral

Indian Creek Lateral

Gregory Lateral

Laflemme Lateral

Arpan Lateral

Young Lateral

North Canal

Bitty Creek

Indian Creek

Horse Creek

Deadman Creek

Beresford Lateral

Deadman Lateral

Coyote Lateral

Finn Lateral

Town Site Lateral

Dead Creek Lateral

Antelope Lateral

North Lateral

Hull Lateral

Wilson Lateral

Richards Lateral

Wood Lateral

Perry Lateral

South Canal

Shaw Lateral

Beal Lateral

Vale Lateral

Belle Fourche River

Magpie Creek

Bull Creek

Ghost Creek

Crow Creek

Roundout Creek

Salt Creek

Wildcat Creek

Owl Creek

Pool Creek

Middle Creek

Grummit Canyon Creek

Hay Creek

Redwater Creek

Cox Lake

Spearfish Creek

Spring Creek

False Bottom Creek

Crooked Oak Creek

Maloney Creek

Stinkingwater Creek

Whitewood Creek

Cottonwood Creek

Ninemile Creek

Bitter Creek

Lonetree Creek

Dry Creek

Newell Lake

Sand Creek

Willow Creek

Jug Creek

Butte Creek

Station Elm Creek

Mud Elm Creek

Eightmile Creek

Fourmile Creek

85

212

34

79

Service Layer Credits:
Created by: RESPEC Consulting Date: 4/29/2021
Document Name: BFID_NAIP_RCPP_Map 2021.mxd

Legend

- WQ/Flow Monitoring Sites
- BFID RCPP Projects
- Cities
- Horse Creek Watershed
- Potential Pivots
- Completed Pivots
- Flood Irrigated
- Canal
- Lateral
- BFRWP RCPP Project Boundary
- Belle Fourche River
- Reservoirs and Lakes
- Counties

N

Miles

0 4 8

BELLE FOURCHE RIVER
WATERSHED PARTNERSHIP