Revised Budget

current sources of funding and OHF request

project expense	OHF request	applicant and other Project sponsors	total project costs		
construction	\$253,779	\$1,036,321	\$1,295,100		

- ND State Water Commission
 - \$971,325
- USFWS
 - \$15,000
- Local Sources
 - \$50,000 Hettinger County WRD
 - \$5,000 City of New England

October 30, 2019

North Dakota Industrial Commission Attn: Outdoor Heritage Fund Program State Capitol – Fourteenth Floor 600 East Boulevard Avenue, Dept. 405 Bismarck, ND 58505

Subject: North Dakota Outdoor Heritage Fund Grant Application – Cannonball River Fish Passage at Karey Dam Hettinger County Water Resource Board

Dear Outdoor Heritage Advisory Board,

The Hettinger County Water Resource Board is pleased to submit the attached Outdoor Heritage Fund Grant Application Request for the Karey Dam Fish Passage Project.

This is a new project that will re-establish upstream fish passage, improve river connectivity, and will provide enhanced habitat for fish and aquatic biota. One Conservation Priority Level 1 fish species and 2 Level fish species as identified in the 2015 North Dakota State Wildlife Action Plan will directly benefit from reestablished river connectivity. The Level 1 listed blue sucker, a large river fish, has previously been considered for listing under the federal Endangered Species Act but was not listed. Dams and associated river fragmentation have been identified as primary factors that have led to a decline in blue sucker populations. Approximately 84 miles of the Cannonball River will be reconnected following completion of the proposed project.

Removal of the existing dam will also improve safety and liability exposure of the Board by eliminating the existing hydraulic roller conditions.

The project directly addresses the objectives of Directive C of the Outdoor Heritage Fund Program.

We look forward to a successful outcome from your review. If you have any questions, please contact me.

Sincerely,

they Krechmann

Terry Kirschmann Secretary/Treasurer Hettinger County Water Resource Board

Outdoor Heritage Fund Grant Application

Instructions



After completing the form, applications and supporting documentation may be submitted by mail to North Dakota Industrial Commission, ATTN: Outdoor Heritage Fund Program, State Capitol – Fourteenth Floor, 600 East Boulevard Ave. Dept. 405, Bismarck, ND 58505 or by e-mail to <u>outdoorheritage@nd.gov</u>. It is preferred that both a hard copy and electronic copy are <u>submitted</u>.

You are not limited to the spacing provided, except in those instances where there is a limit on the number of words. If you need additional space, please indicate that on the application form, answer the question on a separate page, and include with your submission.

The application and all attachments must be received or postmarked by the application deadline. You will be sent a confirmation by e-mail of receipt of your application. You may submit your application at any time prior to the application deadline. <u>Applicants are strongly encouraged to submit applications prior to the deadline for staff review in order ensure that proposals will be complete when submitted on deadline date.</u> Incomplete applications may not be considered for funding.

<u>Please review the back of this form to determine project eligibility, definitions, budget criteria, and statutory requirements.</u>

Project Name Cannonball River Fish Passage at Karey Dam

Name of Organization Hettinger County Water Resource Board

Federal Tax ID# 45-0304487

Contact Person/Title: Terry Kirschmann, Secretary/Treasurer

Address: 336 Pacific Avenue

City: Mott

State: ND

Zip Code: 58646

E-mail Address: <u>TKirschmann@nd.gov</u>

Web Site Address (Optional)

Phone: (701) 824-2655

Fax # (if available)

List names of co-applicants if this is a joint proposal

MAJOR Directive:

Choose only one response

O **<u>Directive A</u>**. Providing access to private and public lands for sportsmen, including projects that create fish and wildlife habitat and provide access for sportsmen;

O **<u>Directive B</u>**. Improving, maintaining and restoring water quality, soil conditions, plant diversity, animal systems and by supporting other practices of stewardship to enhance farming and ranching;

• <u>Directive C</u>. Developing, enhancing, conserving and restoring wildlife and fish habitat on private and public lands; and

O **<u>Directive D</u>**. Conserving natural areas and creating other areas for recreation through the establishment and development of parks and other recreation areas.

Additional Directive:

Choose all that apply

• Directive A.

O Directive B.

O Directive C.

O Directive D.

Type of organization:

- O State Agency
- Political Subdivision
- O Tribal Entity
- O Tax-exempt, nonprofit corporation.

Abstract/Executive Summary.

Summarize the project, including its objectives, expected results, duration, total project costs and participants. (no more than 500 words)

Karey Dam (Dam) is located in Township 136, Range 97W, NW ¼, SW ¼ Sec. 32 on the Cannonball River in Hettinger County approximately 2 miles west of the town of New England. The Dam is a low-head structure under the jurisdiction of Hettinger County Water Resource Board (Board) according to NDCC § 61-16.1-39 and § 61-16.1-40. The Dam was built in 1930 by the Civilian Conservation Corps (CCC) for irrigation purposes with recreation as a secondary benefit.

The Board completed a feasibility study in May 2018 that examined three alternatives to address the failing structure. The preferred alternative is to remove the existing dam and replace it with an engineered rock ramp with the same crest height as the existing dam. The preferred alternative to

construct an engineered rock ramp will improve river connectivity, re-establish fish passage and reduce the long-term maintenance requirements. Approximately 84 miles of the Cannonball River will be reconnected following completion of the proposed project. One Conservation Priority Level 1 and two Level 2 fish species listed in the 2015 North Dakota State Wildlife Action Plan will directly benefit from improved river connectivity. As part of the feasibility study, the Board hosted two well-attended public meetings in New England, ND Access to the Dam is through an existing public easement owned by City of New England, and the City fully endorses ongoing project. This access will be improved as necessary.

The project location in and below the ordinary high water mark of the Cannonball River is included in the navigable waters of the State and part of the Sovereign Lands of North Dakota, N.D. Admin. Code § 89-10-01-03, N.D.C.C. § 61-33-01.

The Board is actively working with adjacent landowners to secure public access easements that are anticipated to be in place prior to the start of construction.

Project Duration:

Construction to begin in fall 2020 and will be completed by winter 2020/2021.

Permits required prior to construction are already obtained or in the final stages of review. The USACE 404 permit has been issued, SHPO concurrence obtained and the State Construction Permit and Sovereign Lands permits in the final stages of review by the State Engineer.

Indicate the intended schedule for drawing down OHF funds.

The Board intends to drawdown OHF funds during the construction period of the project during fiscal year 2020.

Amount of Grant request: \$258,779

Total Project Costs: \$1,295,100

Note: in-kind and indirect costs can be used for matching funds.

Amount of Matching Funds: \$1,036,321

<u>A minimum of 25% Match Funding is required.</u> Indicate if the matching funds will be in-kind, indirect or cash. Please provide verification that these matching funds are available for your project. Note that effective as of July 1, 2015 no State General Fund dollars can be used for a match unless funding was legislatively appropriated for that purpose.

Amount of Match	Funding Source	Type of Match
\$971,321	ND State Water Commission	Cash
		In-Kind
		Indirect
\$15,000	US Fish and Wildlife Service	Cash
		In-Kind
		Indirect
\$50,000	Hettinger County Water	Cash
	Resource Board	In-Kind
		Indirect

Certifications

• I certify that this application has been made with the support of the governing body and chief executive of my organization.

• I certify that if awarded grant funding none of the funding will be used for any of the exemptions noted in the back of this application.

Narrative

Organization Information – Briefly summarize your organization's history, mission, current programs and activities.

Include an overview of your organizational structure, including board, staff and volunteer involvement. (no more than 300 words)

The Hettinger County Water Resource Board (Board) is a political subdivision of the State that has been in existence for decades. The Board is governed by a four member board of managers and a secretary/treasurer appointed by the Hettinger County Commission. It has the responsibility within Hettinger County to manage, conserve, protect, develop and control waters of the state for the benefit of the public. It is the policy of the Board to provide management, conservation, protection, development and control of water resources, to work cooperatively with other resource agencies to strengthen and mutually support related programs, and protect and promote the health, safety and general welfare of the people of North Dakota.

The Board manages a variety of programs including those related to drainage permits, legal drains, maintaining, protecting and controlling streamflow, protection and maintenance of water bodies, managing flooding issues, protection and maintenance of water quality and construction, operation and maintenance of a variety of dams.

Hettinger County has approximately 2,500 residents with a population that relies largely on farming. The Board has limited resources to conduct legislatively mandated duties. The proposed local share of \$50,000 may seem like a small amount compared to total project cost. However, it is a large commitment for the Board with respect to some of the other commitments they have.

Activities of the Hettinger County Water Resource Board are supported by the current annual mill levy of 4.0 mils that generated \$88,460.93 in 2019. Expenditures from this revenue is: \$14,000 for salaries and \$28,000 for special programs, with the remainder utilized for mandated items as noted in the previous paragraph along with legal fees and insurance costs.

The Board has minimal staff. To accomplish program goals, the Board retains professional services for legal and engineering needs when necessary.

The Karey Dam Fish Passage Project is an important ongoing project for the Board, which has a strong local support and involvement from area residents.

Purpose of Grant – Describe the proposed project identifying how the project will meet the specific directive(s) of the Outdoor Heritage Fund Program

Identify project goals, strategies and benefits and your timetable for implementation. Include information about the need for the project and whether there is urgency for funding. Indicate if this is a new project or if it is replacing funding that is no longer available to your organization. Identify any innovative features or processes of your project. Note: if your proposal provides funding to an individual, the names of the recipients must be reported to the Industrial Commission/Outdoor Heritage Fund. These names will be disclosed upon request.

For tree/shrub/grass plantings: provide a planting plan describing the site design, planting methods, number of trees/shrubs by species and stock size, grass species and future maintenance. A statement certifying that the applicant will adhere to USDA-NRCS tree/shrub/grass planting specifications along with the name of the governmental entity designing the planting may be substituted for a planting plan.

For projects including Section 319 funding: provide in detail the specific best management practices that will be implemented and the specific projects for which you are seeking funding.

For projects including fencing: A minimum cost share of 40% by the recipient is preferred. Include detailed information on the type of fencing to be installed, whether funding is requested for boundary fencing, new or replacement of existing fencing, and/or cross fencing.

The fish passage project at Karey Dam directly addresses the objectives of the Outdoor Heritage Fund Directive C of restoration, enhancement and conservation of fish and wildlife habitat. Re-establishing fish and aquatic biota passage at the Karey Dam site will reconnect approximately 84 miles of the Cannonball River now fragmented by the existing dam. All riverine species of aquatic biota will benefit from increased access to seasonally important habitats as well as increasing the resiliency of the connected reach of the river to period drought cycles. One Conservation Priority Level 1 and two Level 2 fish species as listed in the 2015 ND State Wildlife Action Plan will directly benefit, including the Level 1 listed blue sucker; previously a federal candidate species under the Endangered Species Act.

Is this project part of a Comprehensive Conservation Plan?

If yes, provide a copy with the application.

Note: Projects involving buildings and infrastructure will only be considered if part of a Comprehensive Conservation Plan. Please refer to the "Definitions" section at the back of the form for more details.

Management of Project – Provide a description of how you will manage and oversee the project to ensure it is carried out on schedule and in a manner that best ensures its objectives will be met.

Include a brief background and work experience for those managing the project.

The Board, as project sponsor, has retained Barr Engineering Co. (Barr) to complete engineering, design, and permitting of these projects and to assist the Board with public and stakeholder engagement. Barr has extensive experience in similar projects, with successful design, permitting and construction of similar projects on time and on budget. Barr will provide bid preparation and construction engineering services for the project, including meetings with the contractors QA/QC of construction activities, managing the schedule, and holding the contractor accountable for most efficient use of taxpayer funds for completion of the project on time and on budget.

Evaluation – Describe your plan to document progress and results.

Please be specific on the methods you will utilize to measure success. Note that regular reporting, final evaluation and expenditure reports will be required for every grant awarded.

The Board will develop a formal construction management plan for the project, including records and invoice management framework. A monthly progress report will be submitted to the OHF that would also include copies of the invoices accrued and proposed activities until the next progress report.

Financial Information

Project Budget – Use the table below to provide an itemized list of project expenses and describe the matching funds being utilized for this project.

Indicate if the <u>matching funds</u> are in the form of cash, indirect costs or in-kind services. The budget should identify all other committed funding sources and the amount of funding from each source. <u>A</u> <u>minimum of 25% match funding is required</u>. An application will be scored higher the greater the amount of match funding provided. (See Scoring Form.)

Certain values have been identified for in-kind services as detailed under "Budget Information" at the back of this form. Refer to that section and utilize these values in identifying your matching funds. NOTE: No indirect costs will be funded. Supporting documentation for project expenses, including bids, must be included or application will be considered incomplete.

Project Expense	OHF Request	Applicant's Match Share (Cash)	Applicant's Match Share (In-Kind)	Applicant's Match Share (Indirect)	Other Project Sponsor's Share	Total Each Project Expense
Construction	\$ 258,779	\$ 50,000	\$ 0.00	\$ 0.00	\$ 986,321	\$ 1,295,100
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
	\$	\$	\$	\$	\$	\$
Total Costs	\$ 258,779	\$ 50,000	\$ 0.00	\$ 0.00	\$ 986,321	\$ 1,295,100

Note: Costs for seeding, fencing, pipelines, wells, and cover crops cannot exceed NRCS Field Office Tech Guide without justification. Projects involving perimeter fencing must follow NRCS eligibility standards.

Budget Narrative – Use the space below to provide additional detail regarding project expenses.

Appendix B shows the Engineers Opinion of Probable Cost for construction and the associated individual bid items. The mid-range cost estimate is being used for purposes of planning and cost-share requests to potential partners. The Board has received 75% cost share assistance under the eligible Dam Safety category from the ND State Water Commission. Cost-share is applied to all project costs rather than to each individual bid item; all bid items are required for completion of the project. The expenses outlined in this request do not include legal and administrative fees, as the Board expects to cover them on its own.

The USFWS funding commitment letter and the minutes of the April 9, 2019 ND State Water Commission meeting when the Karey dam cost-share was approved are included in Appendix. E.

Sustainability – Indicate how the project will be funded or sustained in future years. Include information on the sustainability of this project after OHF funds have been expended and whether the sustainability will be in the form of ongoing management or additional funding from a different source.

The preferred alternative of engineered rock ramp is designed not to require ongoing maintenance as high flows are designed to flow over the structure without causing damage. The Board will fund future maintenance of the project through their general fund and through cost share support from partnering agencies. The cost share support and role from partnering agencies will be established post-construction.

Partial Funding – Indicate how the project will be affected if less funding is available than that requested.

If funding from the Outdoor Heritage Fund is not obtained, the project will be delayed until such time that sufficient funding is secured. The Board may not be able to afford the project without sufficient cost-share funding partners. Anticipated benefits to fish species in Levels 1 and 2 of the ND State Wildlife Action plan would be delayed or not occur.

Partnership Recognition - If you are a successful recipient of Outdoor Heritage Fund dollars, how would you recognize the Outdoor Heritage Fund partnership? * *There must be signage at the location of the project acknowledging OHF funding when appropriate.*

The Board will provide signage at the facility identifying the names of all the project sponsors. The project vicinity is noted for its fishing, and outdoor recreation opportunities. The signage with the Outdoor Heritage Fund listed as a project sponsor will be viewed and appreciated by all who visit. The Board will develop a media campaign centered on the project and the Outdoor Heritage Fund w will be identified as a critical partner in the project.

Awarding of Grants - Review the appropriate sample contract for your organization on the website at <u>http://www.nd.gov/ndic/outdoor-infopage.htm</u>.

Can you meet all the provisions of the sample contract? Yes No If there are provisions in that contract that your organization is unable to meet, please indicate below what those provisions would be:

ABOUT OHF:

The purpose of the North Dakota Outdoor Heritage Fund is to provide funding to state agencies, tribal governments, political subdivisions, and nonprofit organizations, with higher priority given to projects that enhance **conservation** practices in this state by:

<u>Directive A</u>. Providing access to private and public lands for sportsmen, including projects that create fish and wildlife habitat and provide access for sportsmen;

Directive B. Improving, maintaining and restoring water quality, soil conditions, plant diversity, animal systems and by supporting other practices of stewardship to enhance farming and ranching;

<u>Directive C</u>. Developing, enhancing, conserving and restoring wildlife and fish habitat on private and public lands; and

<u>Directive</u> D. Conserving natural areas and creating other areas for recreation through the establishment and development of parks and other recreation areas.

EXEMPTIONS

Outdoor Heritage Fund grants may not be used to finance the following:

- Litigation;
- Lobbying activities;
- Any activity that would interfere, disrupt, or prevent activities associated with surface coal mining operations; sand, gravel, or scoria extraction activities; oil and gas operations; or other energy facility or infrastructure development;
- The acquisition of land or to encumber any land for a term longer than twenty years; or
- Projects outside this state or projects that are beyond the scope of defined activities that fulfill the purposes of Chapter 54-17.8 of the North Dakota Century Code.

OHF funds may not be used, except after a finding of exceptional circumstances by the Industrial Commission, to finance:

- A completed project or project commenced before the grant application is submitted;
- A feasibility or research study;
- Maintenance costs;
- A paving project for a road or parking lot;
- A swimming pool or aquatic park;
- Personal property that is not affixed to the land;
- Playground equipment, except that grant funds may be provided for up to 25% of the cost of the equipment not exceeding \$10,000 per project and all playground equipment grants may not exceed 5% of the total grants per year (see Definitions/Clarifications for how this will be calculated);
- Staffing or outside consultants except for costs for staffing or an outside consultant to design and implement an approved project based on the documented need of the applicant and the expenditures may not exceed 5% of the grant to a grantee if the grant exceeds \$250,000 and expenditures may not exceed 10% of the grant to a grantee if the grant is \$250,000 or less (see Definitions/Clarifications for how this will be calculated);
- A building except for a building that is included as part of a comprehensive conservation plan for a new or expanded recreational project (see Definitions/Clarifications for definition of comprehensive conservation plan and new or expanded recreational project); or

• A project in which the applicant is not directly involved in the execution and completion of the project.

The goal of the Industrial Commission is that at a minimum 15% of the funding received for a biennium will be given priority for recreation projects that meet Directive D.

The following projects are not eligible for funding, unless there is a finding of exceptional circumstances by the Industrial Commission include:

- Construction or refurbishment of indoor/outdoor ice rinks,
- Construction or refurbishment of indoor/outdoor athletic courts and sports fields,
- Other substantially similar facilities.
- Infrastructure that is not part of a comprehensive conservation plan.
- Projects not meeting a minimum funding request of \$2,500.

Budget Information

In-kind services used to match the request for Outdoor Heritage Fund dollars shall be valued as follows:

•	Labor costs	\$15.00 an hour
•	Land costs	Average rent costs for the county as shown in the most recent publication of the USDA, National Agricultural Statistics Services, North Dakota Field Office
•	Permanent Equipment	Any equipment purchased must be listed separately with documentation showing actual cost. (For example: playground equipment)
•	Equipment usage	Actual documentation
•	Seed & Seedlings	Actual documentation
•	Transportation	Mileage at federal rate
•	Supplies & materials	Actual documentation
• • •	Equipment usage Seed & Seedlings Transportation Supplies & materials	Actual documentation Actual documentation Mileage at federal rate Actual documentation

More categories will be added as we better understand the types of applications that will be submitted. We will use as our basis for these standards other State and Federal programs that have established rates. For example, the North Dakota Nonpoint Source Pollution Management Program has established rates. If your project includes work that has an established rate under another State Program, please use those rates and note your source.

Definitions/Clarifications:

Building - Defined as "A structure with a roof either with walls or without walls and is attached to the ground in a permanent nature."

<u>Comprehensive Conservation Plan</u> - Defined as "A detailed plan that has been formally adopted by the governing board which includes goals and objectives--both short and long term, must show how this building will enhance the overall conservation goals of the project and the protection or preservation of wildlife and fish habitat or natural areas." This does not need to be a complex multi-page document. It could be included as a part of the application or be an attachment.

<u>New and Expanded Recreational Project</u> means that the proposed building cannot be a replacement of a current building. The proposed building must also be related to either a new or expanded recreational project--either an expansion in land or an expansion of an existing building or in the opportunities for recreation at the project site.

<u>Playground equipment calculation</u> - Only the actual costs of the playground equipment (a bid or invoice showing the amount of the equipment costs must be provided) - cannot include freight or installation or surface materials or removal of old equipment, etc.

<u>Staffing/Outside Consultants Costs</u> - If you are requesting OHF funding for staffing or for an outside consultant, you must provide information in your application on the need for OHF funding to cover these costs. For example, if you are an entity that has engineering staff you must explain why you don't have sufficient staff to do the work or if specific expertise is needed or whatever the reason is for your entity to retain an outside consultant. If it is a request for reimbursement for staff time then a written explanation is required in the application of why OHF funding is needed to pay for the costs of that staff member(s)' time. The budget form must reflect on a separate line item the specific amount that is being requested for staffing and/or the hiring of an outside consultant.</u> This separate line item will then be used to make the calculation of 5% or 10% as outlined in the law. Note that the calculation will be made on the grant less the costs for the consultant or staff.

Scoring of Grants

<u>**Oral Presentation.**</u> Please note that you will be given an opportunity to make a ten-minute Oral Presentation at a meeting of the Outdoor Heritage Fund Advisory Board. These presentations are strongly encouraged.

Open Record. Please note that your application and any attachments will be open records as defined by law and will be posted on the Industrial Commission/Outdoor Heritage Fund website.

All applications will be scored by the Outdoor Heritage Fund Advisory Board after your tenminute oral presentation. The ranking form that will be used by the Board is available on the website at <u>http://www.nd.gov/ndic/outdoor-infopage.htm</u>.

Awarding of Grants

All decisions on requests will be reported to applicants no later than 30 days after Industrial Commission consideration. The Commission can set a limit on duration of an offer on each application or if there isn't a specific date indicated in the application for implementation of the project, then the applicant has until the next Outdoor Heritage Fund Advisory Board regular meeting to sign the contract and get the project underway or the commitment for funding will be terminated and the applicant may resubmit for funding. Applicants whose proposals have been approved will receive a contract outlining the terms and conditions of the grant.

Responsibility of Recipient

The recipient of any grant from the Industrial Commission must use the funds awarded for the specific purpose described in the grant application and in accordance with the contract. The recipient cannot use any of the funds for the purposes stated under Exemptions on the first page of this application.

If you have any questions about the application or have trouble submitting the application, please contact Andrea Pfennig at 701-328-3786 or <u>apfennig@nd.gov</u>.

Revised: September 14, 2018

Certification

The information contained in this grant application has been developed under the authority of the Hettinger County Water Resource District who will meet the financial and other program requirements of the Outdoor Heritage Fund Program. Technical support was provided by Mandar Nangare, of Barr Engineering Co., who is available to answer engineering and other technical related questions. Mr. Nangare can be contacted at (701) 255-5474

Signed:

They Kreachmann

Terry Kirschmann, Secretary-Treasurer Hettinger County Water Resource Board

Date: October 30, 2019

GOVERNOR, Doug Burgum DIRECTOR, Terry Steinwand DEPUTY, Scott A. Peterson



* "VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

Hettinger County Water Resource District Mr. Donald Urlacher, Chairman 336 Pacific Avenue Mott, ND 58646

Dear Mr. Urlacher:

Re: Support for Karey Dam Modification

North Dakota's rivers and streams are vital resources providing sources of drinking water, recreational opportunities as well as important habitat for fish and other aquatic organisms. The meandering nature of streams and their associated riparian vegetation provide important fish and wildlife habitat.

The North Dakota Game and Fish Department supports the reconfiguration of Karey dam to a rock arch ramp design. This design will increase the connectivity of the Cannonball River by allowing fish and other aquatic organisms to more freely move within the river system. The ability for movement of organisms up and down the river allows them to better adapt to natural or manmade disturbances that may influence the river.

Sincerely,

Greg Link, Chief Conservation and Communication Division North Dakota Game and Fish Department

Appendix A Vicinity Map



Appendix B Engineers Opinion of Probable Cost At 90% Design

PREPARED BY: BARR ENGINEERING CO.

90% Design Level

ENGINEER'S OPINION OF PROBABLE COST

PROJECT: Karey Dam Rehabilitation

LOCATION: Hettinger County, North Dakota

PROJECT #: 34211001.00

	ESTIM	ATED COSTS			
Item No:	Item Description	Unit	Estimated Quantity	Unit Cost	Total Cost
1	Mobilization & Demobilization	LS	1	\$ 118,000.00	\$ 118,000.00
2	Temporary Erosion Control	LS	1	\$ 20,000.00	\$ 20,000.00
3	Clearing and Grubbing	LS	1	\$ 12,000.00	\$ 12,000.00
4	Strip and Stockpile Topsoil	LS	1	\$ 6,000.00	\$ 6,000.00
5	Water Control	LS	1	\$ 100,000.00	\$ 100,000.00
6	Barbed Wire Fence Removal	LF	101	\$ 6.00	\$ 606.00
7	New Barbed Wire Fence	LF	50	\$ 10.00	\$ 500.00
8	Remove Existing Dam	LS	1	\$ 80,000.00	\$ 80,000.00
9	Sediment Removal	CY	3890	\$ 25.00	\$ 97,250.00
10	PS-27.5 Sheetpile	SF	2980	\$ 27.50	\$ 81,950.00
11	Geotextile Fabric (NDDOT Type RR)	SY	1925	\$ 2.50	\$ 4,812.50
12	Granular Filter - Channel (12" USACE Type B2)	TON	1027	\$ 50.00	\$ 51,350.00
13	Granular Filter - Banks (9" USACE Type B2)	TON	650	\$ 45.00	\$ 29,250.00
14	Base Rock - Channel (30" NDDOT Grade I Riprap)	TON	2566	\$ 80.00	\$ 205,280.00
15	River Bank Riprap (24" NDDOT Grade I Riprap)	TON	1826	\$ 75.00	\$ 136,950.00
16	Boulders (3'-4' Nominal Diameter)	EA	243	\$ 370.00	\$ 89,910.00
17	Chinking Rock	TON	30	\$ 90.00	\$ 2,700.00
18	Cobbles	TON	60	\$ 80.00	\$ 4,800.00
19	Bank Excavation	CY	1593	\$ 6.00	\$ 9,558.00
20	Bank Grading	SY	500	\$ 10.00	\$ 5,000.00
21	Place Salvaged Topsoil	СҮ	643	\$ 8.50	\$ 5,465.50
22	Mulch and Seed	LS	1	\$ 9,000.00	\$ 9,000.00
	Construction Cost Subtotal				\$1,070,400
	10% Construction Cost Contingency				\$107,000
	10% Construction Engineering Support				\$117,700
	TOTAL PROJECT COST (Mid Range Estimate)				\$1,295,100
	Low Range Estimate (-5%)				\$1,230,300
	High Range Estimate (+10%)				\$1,424,600

Notes:

¹ Design Work Completed to Approximately 90% Design Level.

² Quantities Based on Design Work Completed.

³ Unit Prices Based on Information Available at This Time.

⁴ This 90% Design Level (Class 1 per ASTM E 2516-11) cost estimate is based on designs, quantities and unit prices. Costs will change with further design. Time value-of-money escalation costs are not included. Contingency is an allowance for the net sum of costs that will be in the Final Total Project Cost at the time of the completion of design, but are not included at this level of project definition. The estimated accuracy range for the Total Project Cost as the project is defined is -5% to +10%. The accuracy range is based on professional judgement considering the level of design completed, the complexity of the project and the uncertainties in the project as scoped. The contingency and the accuracy range are not intended to include costs for future scope changes that are not part of the project as currently scoped or costs for risk contingency. Operation and Maintenance costs are not included.

BARR

Appendix C Site Photos



Photo 1: Karey Dam 06-08-2018 View upstream from spillway and eroding abutments



Photo 2: Karey Dam 06-08-2018 View from river right showing spillway and both abutments

Appendix D Issued for Permitting Plans

KAREY DAM REHABILITATION PROJECT HETTINGER COUNTY WATER RESOURCE DISTRICT CANNONBALL RIVER NEW ENGLAND, NORTH DAKOTA





TABLE C-01

	ABBREVIATIONS					
ABBREVIATION	DESCRIPTION					
APPROX.	APPROXIMATE					
AVE	AVENUE					
ELEV.	ELEVATION					
FT	FEET					
NAVD	NORTH AMERICAN VERTICAL DATUM					
NAD	NORTH AMERICAN DATUM					
ND	NORTH DAKOTA					
SW	SOUTH WEST					
SF	SQUARE FEET					
STA	STATION					
TBD	TO BE DETERMINED					
T.O.	TOP OF					
TYP	TYPICAL					
WSE	WATER SURFACE ELEVATION					

GENERAL NOTES:

1. LEFT BANK AND RIGHT BANK NOMENCLATURE IN THIS DRAWING SET REFERS TO THE LEFT AND RIGHT RIVER BANKS WHEN LOOKING DOWNSTREAM

THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY MATTHEW T.

PETERSON, REGISTRATION NUMBER PE-10289 ON 05/17/2019 AND THE ORIGINAL DOCUMENT IS STORED AT BARR ENGINEERING COMPANY,



NORTH DAKOTA ONE CALL: CALL BEFORE YOU DIG. 1-800-795-0555 or 811

CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD-LOCATING ALL SITE UTILITIES, PRIVATE AND PUBLIC, PRIOR TO STARTING THE WORK, ALL UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE, ANY UTILITIES DAMAGED BY CONTRACTOR SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER

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AS SHOWN 8/23/2017 ZJN MTP2 MTP2 HETTINGER COUNTY WATER RESOURCE DISTRICT MOTT, NORTH DAKOTA

5ER: Dale W. Urevig FILE: MIDESIGNI34211001.0034211001_C-01.DWG PLOT SCALE: 1/2 PLOT DATE: 5/162019 8.21 AM





Project Office:

Ph: 1-800-632-2277 Fax: (701) 222-6371 www.barr.com

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linneapolis, Minn h: 1-800-632-22

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 PRELIMINARY DRAFT - 60% DESIGN

- 5/23/18

O BY CHK APP. DATE

BARR ENGINEERING CO. 234 WEST CENTURY AVENUE BISMARCK, ND 58503 8/23/2017 ZJN MTP2 MTP2 MTP2

AS SHOWN



EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR EXISTING FENCE EXISTING TREE/BRUSH LINE EXISTING SHORELINE EXISTING CONTROL POINT EXISTING GRAVEL ROAD EXTENTS OF TOPOGRAPHIC SURVEY (SEE NOTE 3) SEDIMENT PROBE LOCATION, SEE TABLE 1

LEGEND

TABLE 1: SEDIMENT PROBE SUMMARY										
NAME	DEPTH									
P-1	2.3'									
P-2	5.9'									
P-3	3.7'									
P-4	5.2'									
P-5	3.1'									
P-6	4.7'									
P-7	5.0'									
P-8	5.3'									
P-9	2.8'									
P-10	5.4'									
P-11	4.7'									
P-12	5.9'									

ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

	BARR PROJECT No.					
NARET DAW REHADILITATION	34211001.00					
HETTINGER COUNTY ND						
HET HINGER COONTT, ND	CLIENT PROJECT No.					
EXISTING CONDITIONS	DWG. No.	REV. No.				
PLAN	C-02	0				



KAREY DAM REHABILITATION HETTINGER COUNTY, ND	BARR PROJECT No. 34211001.0 CLIENT PROJECT No.	00
PROJECT LAYOUT	DWG. №.	REV. No.
PLAN	C-03	0



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/linneapolis, Minnesota h: 1-800-632-2277

DATE RELEASED

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O. BY CHK. APP. DATE

REVISION DESCRIPTION

	BARR PROJECT No.					
	34211001 00					
HETTINGER COUNTY, ND	CLIENT PROJECT No.					
SITE ACCESS AND STAGING						
	DWG. No.	REV. No.				
PLAN	C-04	0				



SUMMARY OF BASE CASE WATER CONTROL PLAN WORK:

- 1. REMOVE A PORTION OF THE EXISTING DAM AND ALLOW THE WATER LEVEL UPSTREAM OF THE EXISTING DAM TO MATCH TAILWATER LEVELS, TO APPROX. ELEV. 2558 2559, AS SHOWN ON GRAPH 5 ON DRAWING C-06.
- 2. CONSTRUCT UPSTREAM AND DOWNSTREAM COFFERDAMS AND INSTALL BYPASS PIPE TO ROUTE WATER FLOW AROUND THE ROCK RIFFLE AREA. PROPOSED SHEETPILE SEEPAGE BARRIER MAY BE UTILIZED IN THE UPSTREAM COFFERDAM CONSTRUCTION IF THE CONTRACTOR DESIRES.
- 3. DEWATER AREA BETWEEN UPSTREAM AND DOWNSTREAM COFFERDAMS USING SUMPS AND PUMPS. DISCHARGE WATER DOWNSTREAM OF DOWNSTREAM COFFERDAM AND UPSTREAM OF FLOATING SILT CURTAIN.
- 4. COMPLETE DAM REMOVAL AND CONSTRUCT ROCK RIFFLES. MAINTAIN SUBGRADE OF ROCK RIFFLES IN DEWATERED CONDITION THROUGHOUT RIFFLE CONSTRUCTION.
- 5. REMOVE UPSTREAM AND DOWNSTREAM COFFERDAMS AND BYPASS PIPE. BACKFILL AND COMPACT ANY EXCAVATION FROM BYPASS PIPE REMOVAL



GENERAL WATER CONTROL NOTES:

- CONTRACTOR SHALL SUBMIT A WATER CONTROL PLAN TO BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION AND SHALL MODIFY THE BASE CASE WATER CONTROL PLAN AS CONTRACTOR DEEMS NECESSARY. THE BASE CASE PLAN IS INTENDED TO DEMONSTRATE AN ACCEPTABLE APPROACH TO MANAGE THE WATER. 1
- 2.
- CONTRACTOR'S COFFERDAMS SHALL NOT CONTAIN LOOSE FILL IN DIRECT CONTACT WITH FLOW. ACCEPTABLE COFFERDAM PRODUCTS INCLUDE SAND BAGS, PORTADAM, WATER INFLATED DAMS, JERSEY BARRIERS, OR SHEET PILE. OTHER OPTIONS MUST BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. 3.
- 4. SEE SHEET C-06 FOR SITE HYDROLOGIC CONDITIONS.
- 5. MAINTAIN A MINIMUM OF 1.0' FREEBOARD ON COFFERDAMS WHILE WORKING BETWEEN COFFERDAMS. IF 1.0' MINIMUM FREEBOARD IS REACHED, EVACUATE WORK AREA AND CONSULT WITH ENGINEER.
- MINIMUM COFFERDAM ELEVATIONS ARE: UPSTREAM: 2566.0 DOWNSTREAM: 2562.0
- 7. CONTRACTOR SHALL SELECT BYPASS PIPE (OR PIPES) SIZE AND INVERT ELEVATIONS BASED ON SITE HYDROLOGIC CONDITIONS AND CONTRACTOR'S RISK TOLERANCE.

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NJB2	MTP2	-	2/19/19	PRELIMINARY DRAFT - 90% DESIGN										Checked	MTP2	
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THIS DOCUMENT WAS ORIGINALLY ISSUED AND SEALED BY MATTHEW T.

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LEGEND: EXISTING MINOR CONTOUR — 1210 — EXISTING MAJOR CONTOUR - EXISTING EDGE OF WATER EXISTING WETLAND BOUNDARY EXISTING FENCE EXISTING TREE/BRUSH LINE 533 EXISTING TREE ---- EXTENTS OF TOPOGRAPHIC SURVEY - CONSTRUCTION LIMITS COFFERDAM SS - BYPASS PIPE - PUMP DISCHARGE PIPE SUMP

THE WATER CONTROL PLAN SHOWN HERE IS THE BASE CASE WATER CONTROL PLAN. ALL DETAILS, MODIFICATIONS, ADDITIONS AND DELETIONS TO THIS PLAN SHOULD BE ADDRESSED IN THE CONTRACTOR'S WATER CONTROL PLAN.

6. CONTRACTOR SHALL SELECT COFFERDAM ELEVATIONS BASED ON SITE HYDROLOGIC CONDITIONS AND CONTRACTOR'S RISK TOLERANCE.

ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

	BARR PROJECT No.		
NARET DAWI KENADILITATION	34211001.00		
HETTINGER COUNTY, ND	CLIENT PROJECT No.		
WATER CONTROL	DWG. No.	REV. No.	
PLAN	C-05	0	







GENERAL NOTES:

- NO GAGE EXISTS AT THE KAREY DAM. GAGES UPSTREAM AND DOWNSTREAM OF THE OUTLET ARE USED TO ESTIMATE THE FLOWS AT THE KAREY DAM. RELEVANT GAGING STATIONS ON THE CANNONBALL RIVER ARE SHOWN ON THE MAP ABOVE.
- FLOW DATA SHOWN IS BASED ON MONTHLY AVERAGES OVER THE LIFE OF EACH OF THE GAGES. FLOW DATA IS PRESENTED FOR INFORMATION ONLY AND ACTUAL FLOWS AT THE DAM CAN VARY GREATLY FROM THE AVERAGE VALUES PRESENTED HERE.

	USGS GAGE 06350000	USGS GAGE 06349900	KAREY DAM
LOCATION	REGENT, ND	NEW ENGLAND, ND	NEW ENGLAND, ND
PERIOD OF RECORD	1950-2019 (69 YEARS)	1978-1981 (4 YEARS)	
CONTRIBUTING AREA (SQ MI)	580	285	283

2 TABLE: SUMMARY OF RELEVANT GAUGING STATIONS ON THE CANNONBALL RIVER





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PETERSON, REGISTRATION NUMBER PE-10289 ON 05/17/2019 AND THE
ORIGINAL DOCUMENT IS STORED AT BARR ENGINEERING COMPANY,
4300 MARKETPOINTE DR. SUITE 200, MINNEAPOLIS, MN 55435

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	ESTIMATED DISCHARGE (CFS)
ow	0.16
w	12
١T	809
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NT	3570
NT	7050
NT	8660
NT	12400

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	C-06	0	



LEGEND



KAREY DAM REHABILITATION HETTINGER COUNTY, ND	BARR PROJECT №. 34211001.00 CLIENT PROJECT №.		
DEMOLITION	DWG. No.	REV. No.	
PLAN, ELEVATION, AND SECTION	C-07	0	



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a fa a a a	2570	EXISTING INDEX CONTOUR
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		SEDIMENT REMOVAL AREA
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	BARR PROJECT No. 34211001.00		
	CLIENT PROJECT No.		
PLAN, SECTION, AND PROFILE	DWG. No. C-08	REV. No. 0	



KAREY DAM REHABILITATION HETTINGER COUNTY, ND	BARR PROJECT No. 34211001.00 CLIENT PROJECT No.		
ROCK RIFFLE AND RIVER BANK STABILIZATION	DWG. No.	REV. No.	
PLAN AND PROFILE	C-09	0	



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5A	332110.25	1363982.90	2564.8		9A	332067.05	1364055.22	2561.6
5B	332121.08	1363984.60	2564.3		9B	332079.14	1364054.83	2561.1
5C	332140.02	1363992.18	2563.3		9C	332098.97	1364060.92	2560.1
5D	332148.28	1363997.82	2563.3		9D	332103.21	1364063.56	2560.1
5E	332162.36	1364012.83	2564.3		9E	332117.37	1364078.58	2561.1
5F	332167.98	1364022.51	2564.8		9F	332122.32	1364089.43	2561.6
бA	332098.22	1364002.49	2564.0		10A	332056.42	1364071.96	2560.8
6B	332109.48	1364002.94	2563.5		10B	332068.48	1364071.63	2560.3
6C	332128.99	1364009.09	2562.5		10C	332088.25	1364077.79	2559.3
6D	332137.45	1364014.39	2562.5		10D	332092.49	1364080.45	2559.3
6E	332151.44	1364029.22	2563.5		10E	332106.59	1364095.55	2560.3
6F	332156.72	1364039.05	2564.0		10F	332111.51	1364106.45	2560.8
7A	332088.88	1364019.34	2563.2		11A	332045.70	1364091.84	2560.0
7B	332099.86	1364020.00	2562.7		11B	332057.73	1364089.80	2559.5
7C	332119.11	1364026.42	2561.7		11C	332077.53	1364094.69	2558.5
7D	332125.88	1364030.65	2561.7		11D	332081.75	1364097.35	2558.5
7E	332140.06	1364045.08	2562.7		11E	332094.69	1364113.09	2559.5
7F	332145.44	1364054.57	2563.2		11F	332098.03	1364124.75	2560.0
8A	332079.01	1364036.37	2562.4		12A	332038.10	1364107.93	2559.2
8B	332090.33	1364037.20	2561.9		12B	332049.53	1364106.77	2558.7
8C	332109.68	1364044.04	2560.9	1	120	332068.96	1364112.84	2557.7
8D	332113.94	1364046.66	2560.9		12D	332082 52	1364126.84	2558.7
8E	332128.65	1364060.81	2561.9	1	12E	332086.90	1364138 23	2559.2
8F	332134.41	1364070.39	2562.4	1 '	126	332000.90	1304130.23	2333.2

	BARR PROJECT No.		
RARET DAWI REHADILITATION	34211001.00		
HETTINGER COUNTY, ND	CLIENT PROJECT No.		
ROCK RIFFLE ELEVATION	DWG No	REV No	
PLAN AND TABLES	C 10	0	
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ROCK RIFFLE	
	DWG. No.
DETAILS AND IT FICAL SECTION	C-11





Inneapolis, Minnesota h: 1-800-632-2277

DATE RELEASED

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REVISION DESCRIPTION

ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

KAREY DAM REHABILITATION HETTINGER COUNTY, ND	BARR PROJECT No. 34211001.00 CLIENT PROJECT No.	
TEMPORARY EROSION CONTROL	DWG. No.	REV. No.
PLAN	C-13	0



ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

	BARR PROJECT No. 34211001.00 CLIENT PROJECT No.	
DETAILS	DWG. No. C-14	REV. No. 0

Appendix E Partner Commitments

Placeholder Page for USFWS Letter of Funding Commitment

MINUTES

North Dakota State Water Commission Bismarck, North Dakota

April 9, 2019

The North Dakota State Water Commission (State Water Commission or Commission) held a meeting at the State Office Building, Bismarck, North Dakota, on April 9, 2019. Governor Burgum called the meeting to order at 1:01 p.m., and requested Garland Erbele, State Engineer, and Chief Engineer-Secretary to the State Water Commission, call the roll. Governor Burgum announced a quorum was present.

STATE WATER COMMISSION MEMBERS PRESENT:

Governor Burgum, Chairman Doug Goehring, Commissioner, ND Department of Agriculture, Bismarck Katie Andersen, Jamestown Michael Anderson, Hillsboro Richard Johnson, Devils Lake Leander McDonald, Bismarck Mark Owan, Williston Matthew Pedersen, Valley City Jason Zimmerman, Minot

OTHERS PRESENT:

Garland Erbele, State Engineer, and Chief Engineer-Secretary, State Water Commission State Water Commission Staff Jennifer Verleger, General Counsel, Attorney General's Office Approximately 50 people interested in agenda items.

The meeting was recorded to assist in compilation of the minutes.

CONSIDERATION OF AGENDA:

The agenda for the April 9, 2019, State Water Commission meeting was presented; there were no modifications.

CONSIDERATION OF DRAFT MINUTES FOR FEBRUARY 14, 2019, and MARCH 14, 2019, SUBCOMMITTEE MEETING MINUTES:

The draft minutes for the February 14, 2019, State Water Commission meeting and March 14, 2019, subcommittee meetings were reviewed. There were no modifications.

April 9, 2019 Page 1 of 13 It was moved by Governor Burgum, seconded by Commissioner Anderson, and unanimously carried, that the minutes for February 14, 2019, and March 14, 2019, subcommittee meetings be approved as presented.

STATE WATER COMMISSION FINANCIAL REPORTS:

The allocated program expenditures for the period ending February 28, 2019, were presented and discussed by David Laschkewitsch, Director of Administrative Services. The total expenditures were within the authorized budget amounts.

The Project Summary for the 2017-2019 Biennium, **APPENDIX A**, provided information on the committed and uncommitted funds from the Resources Trust Fund and the Water Development Trust Fund. The final summary for projects showed approved projects totaling \$660,585,359 with expenditures of \$285,064,246. A balance of \$20,893,968 remains available to commit to projects in the 2017-2019 biennium.

The oil extraction tax deposits into the Resources Trust Fund total \$287,050,417 through March 2019 and are currently \$64,439,905 or 28.9 percent above budgeted revenues.

Deposits received for the Water Development Trust Fund total \$23,874,965 through March 2019 and are currently \$14,874,965 above the budget revenues of \$9,000,000. The large increase was due to a settlement agreement between the state and the major tobacco companies over enforcement of the 1998 Tobacco Master Settlement agreement. The next scheduled deposit is April 2019 and anticipated to be \$9,000,000.

David introduced Heide Delorme. Heide will join the State Water Commission April 22 as Director of Administrative Services. David retires from this position April 30 after 35 years of service to the State of North Dakota.

LEGISLATIVE UPDATE

Garland Erbele provided a brief update on House Bills 1085, 1320, and Senate Bills 2139, 2090, 2362, and 2020.

VALLEY CITY - \$480,283 (SWC Project No. 1504-08)

Valley City requested cost-share assistance for the Permanent Flood Protection Erosion Sites project. In 2009 Valley City encountered a record flood and a near record flood in the 2011. Repeated flooding eroded the natural vegetation that supported the river banks at the erosion sites. Without the natural vegetation, the erosion has accelerated during non-flooding years.

April 9, 2019 Page 2 of 13 The proposed project would armor two erosion sites by utilizing riprap within the channel and seeding. The projects would consist of earthwork, fabric, riprap, and erosion control items. Permanent flood protection is not planned in these areas for several years; however, the erosion control is needed to ensure emergency measures are implemented in the interim. The estimated construction cost is \$600,354. The funding request included construction, construction engineering, and permitting of the project areas. Valley City requested 80 percent cost-share, or \$480,283, for construction and construction engineering costs of the project. The cost-share request is attached as **APPENDIX B.**

Secretary Erbele recommended the State Water Commission approve the request of Valley City for state cost-share at 80 percent at an amount not to exceed \$480,283. This approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

It was moved by Commissioner Goehring and seconded by Commissioner Johnson that the State Water Commission approve state cost-share at 80 percent at an amount not to exceed \$480,283. The approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Zimmerman, Goehring, and Governor Burgum voted aye. Commissioner Pedersen abstained. There were no nay votes. Governor Burgum announced the motion carried.

MINOT SYSTEM WIDE IMPROVEMENT FRAMEWORK (SWIF) - \$214,279 (SWC Project No. 2107-02)

On June 22, 2017, the State Water Commission originally approved funding for Minot's 2017 levee repair, bank stabilization, and snagging and clearing project which included improvements necessitated as part of the SWIF process for the existing flood control system. Bids for the construction of the project came in under the engineer's original estimate, and Minot requested the unused funds of \$368,778 be reallocated to additional SWIF-related efforts which was approved on June 14, 2018. On October 11, 2018, the State Water Commission approved an additional \$387,433 for the project, totaling \$756,211 in cost-share funds. The cost-share for the project is 50 percent for eligible bank stabilization portions and 60 percent for eligible flood control portions.

Minot requested an additional \$214,279 for cost-share funding to complete the project. The new cost-share total would be \$970,490 in state funds. The cost-share request is attached as **APPENDIX C.**

April 9, 2019 Page 3 of 13 Secretary Erbele recommended the State Water Commission approve the request of Minot for additional state cost-share at an amount not to exceed \$214,279. This approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

It was moved by Commissioner Goehring and seconded by Commissioner Zimmerman that the State Water Commission approve the request of Minot for additional state cost-share at an amount not to exceed \$214,279. The approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

DEVILS LAKE OUTLET OPERATIONS FUNDING APPROPRIATION - \$2,500,000 (SWC Project No. 416-10)

For the 2017-2019 biennium, \$5,000,000 was budgeted in the State Water Commission's General Water Management Bucket, included in HB 1020, for Devils Lake Outlet Operations. The project has operated on carryover funding from the 2015 -2017 biennium, and none of the 2017-2019 funds have yet been approved for the project.

The carryover funds are sufficient to cover operation costs for the remainder of this biennium, but they will not be adequate to cover the recently mediated settlements with landowners adjoining the Devils Lake West End Outlet. State Water Commission staff requested obligation of \$2,500,000 of the \$5,000,000 to cover these associated costs.

Secretary Erbele recommended the State Water Commission approve the amount of \$2,500,000 for Devils Lake Outlet Operations, from the funds appropriated by HB 1020 to the State Water Commission for the 2017-2019 biennium.

It was moved by Commissioner Owan and seconded by Commissioner Goehring that the State Water Commission approve the amount of \$2,500,000 for Devils Lake Outlet Operations, from the funds appropriated by HB 1020 to the State Water Commission for the 2017-2019 biennium.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye.

There were no nay votes. Governor Burgum announced the motion unanimously carried.

BOURET DAM REHABILITATION PROJECT - \$591,750 (SWC Project No. 0531)

Benson County Water Resource District (District) requested cost-share assistance for the Bouret Dam rehabilitation project. Bouret Dam is located near Minnewaukan. Bouret Dam was originally built by the Works Progress Administration (WPA) on the Sheyenne River in 1939. According to NDCC § 61-16.1-39 and 61-16.1-40, the District is responsible for maintenance of the dam.

Bouret Dam is currently experiencing downstream and structural erosion along with severe cracks at the abutments and separated wing walls. In May 2018, the District completed a feasibility study to determine alternatives for the dam. The District's preferred alternative is removing the existing failing dam and replacing it with an engineered rock ramp. The sponsor indicated the engineered rock ramp would eliminate the existing risk posed by the hydraulic roller, improve river connectivity, enhance recreational opportunities, and reduce the long-term maintenance requirements. The District advanced the project to 90 percent design with cost-share assistance from the State Water Commission.

Construction will begin in fall 2019 or spring 2020. The District owns the land needed for construction. Design is expected to be complete in spring 2019 and construction by fall 2019. The total cost of the Bouret Dam rehabilitation project is \$789,000. The District requested 75 percent cost-share, or \$591,750, for the project. Current State Water Commission policy is to provide 75 percent cost-share assistance to remedy dam safety issues and 40 percent cost-share for recreation projects. In this instance, simply removing the dam would eliminate the threat to public safety, and the rock ramp will provide a recreational benefit. The recommendation was for 75 percent cost-share on the dam removal costs (\$174,000) and 40 percent cost-share on the rock ramp construction (\$223,000). The total cost-share recommendation was \$397,000. The cost-share request is attached as **APPENDIX D**.

Secretary Erbele recommended the State Water Commission approve the request for state cost-share participation in the Bouret Dam rehabilitation project at an amount not to exceed \$397,000. This approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

It was moved by Commissioner Johnson and seconded by Commissioner Andersen that the State Water Commission approve 75 percent cost-share on the dam removal costs (\$174,000) and 75 percent cost-share on the rock ramp construction (\$417,750) for total

> April 9, 2019 Page 5 of 13

state cost-share in an amount not to exceed \$591,750. The approval is subject to the entire contents of the recommendation, obtaining all applicable permits, and the availability of funds.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

After further discussion, Governor Burgum requested State Water Commission staff to provide Commissioners with updated low-head dam numbers.

KAREY DAM REHABILITATION PROJECT - \$971,325 (SWC Project No. 1453)

Hettinger County Water Resource District (District) requested cost-share assistance for the Karey Dam rehabilitation poject. Karey Dam is located near New England. Karey Dam was originally built by the Civilian Conservation Corps in 1930 for the primary purpose of irrigation. According to NDCC § 61-16.1-39 and 61-16.1-40, the Hettinger County Water Resource Board (Board) has responsibility for maintenance of the dam.

Under its current condition, the dam poses a risk to public safety as a drowning hazard due to the hydraulic roller. The dam currently faces significant downstream and structural erosion along with severe cracks at the abutments and separated wing walls. The right abutment was washed out during spring 2018 runoff events. In May 2018, the Board completed a feasibility study (30 percent design) to determine alternatives for the dam.

The District's preferred alternative involves removing the existing failing dam and replacing it with an engineered rock ramp. The District indicated the engineered rock ramp will eliminate the risk associated with the existing hydraulic roller, improve river connectivity, enhance recreational opportunities, and reduce the long-term maintenance requirements. The Board has advanced the project to 90 percent design level with cost-share assistance from the State Water Commission. Construction will begin late fall 2019 or spring 2020.

The total cost of the Karey Dam rehabilitation project is \$1,295,100. The District requested 75 percent cost-share, or \$971,325, in state funds for the project. Current State Water Commission policy is to provide 75 percent cost-share assistance to remedy dam safety issues and 40 percent cost-share for recreation projects. In this instance, simply removing the dam eliminates the threat to public safety, and the rock ramp would provide a recreational benefit. The recommendation was for 75 percent cost-share on the dam removal costs (\$211,000) and 40 percent cost-share on the rock ramp construction (\$406,000). The total cost-share recommendation was \$617,000. The cost-share request is attached as **APPENDIX E.**

Secretary Erbele recommended the State Water Commission approve the request by the District for state cost-share participation in the Karey Dam rehabilitation project at an amount not to exceed \$617,000. This approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits and the availability of funds.

It was moved by Commissioner McDonald and seconded by Commissioner Pedersen that the State Water Commission approve 75 percent cost-share on the dam removal costs (\$211,000) and 75 percent cost-share on the rock ramp construction (\$760,325) for total state cost-share in an amount not to exceed \$971,325. The approval is subject to the entire contents of the recommendation, obtaining all applicable permits, and the availability of funds.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

<u>GOSCHKE DAM - \$44,010</u> (SWC Project No. 0849-01)

Pembina County Water Resource District (District) requested cost-share assistance for the Goschke Dam Spillway Gate Retrofit project. Goschke Dam is located near Cavalier. The Dam is in need of a new gate/operator, as well as platform and trash rack. The District requested the gate portion of the requested cost-share be expedited due to the importance of the gate being replaced before this spring's runoff. The State Engineer approved the gate replacement cost-share of \$75,000 on March 11, 2019. This pending request is for the replacement of the platform and trash rack. The updated total cost of the project after bid was \$158,680 which is eligible for 75 percent cost-share as a dam safety project with a cost-share of \$119,010. The request is for the remaining costs of the project which include the replacement of the platform and trash rack for \$58,680 resulting in additional cost share of \$44,010. The cost-share request is attached as **APPENDIX F.**

Secretary Erbele recommended the State Water Commission approve the request for state cost-share participation in the Goschke Dam at an amount not to exceed \$44,010. This approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

It was moved by Commissioner Goehring and seconded by Commissioner Johnson that the State Water Commission approve state cost-share at 75 percent, not to exceed \$44,010. The approval

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is subject to the entire contents of the recommendation, obtaining all applicable permits, and the availability of funds.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

UPPER MAPLE RIVER DAM - \$82,320 (SWC Project No. 1878-02)

Maple-Steele Joint Water Resource District (District) requested cost-share assistance for Upper Maple River Dam outlet channel improvements. Upper Maple Dam is located near Hope. A preliminary design for the project was completed. The channel downstream of the principal spillway structure has experienced significant erosion during recent high-flow events. The project would include reconstruction of the failed side slopes, remove unsuitable material, and reinforce the channel with rip rap to protect the dam from future erosion from high-flow events. The District owns the land needed for construction. Design will be completed in spring 2019 and construction completed in fall 2019. The estimated cost of \$147,000 includes construction, engineering, and other related project costs.

The total cost of the Upper Maple River Dam outlet channel improvements project is \$147,000. The District requested 75 percent cost-share as a dam safety project. However, when the dam was originally constructed approximately three to four years ago, the cost-share percentage for the project was 60 percent as a flood control project. The State Water Commission's initial inspection of the dam, shortly after construction was finished, noted the lack of adequate rip-rap at the outlet of the principal spillway. Therefore, the recommendation is to approve cost-share of 60 percent, the same as would have been provided had sufficient rock been placed at the time of the original construction. With contingencies at 10 percent of construction costs and administrative costs ineligible, the cost-share would be \$82,320. The cost-share request is attached as **APPENDIX G.**

Secretary Erbele recommended the State Water Commission approve the request for state cost-share participation in the Upper Maple River Dam outlet channel improvements at an amount not to exceed \$82,320. This approval is subject to the entire contents of the recommendation contained herein, obtaining all applicable permits, and the availability of funds.

It was moved by Commissioner Zimmerman and seconded by Commissioner Goehring that the State Water Commission approve state cost-share at 60 percent, not to exceed \$82,320. The approval

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is subject to the entire contents of the recommendation, obtaining all applicable permits, and the availability of funds.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

<u>SOUTHWEST PIPELINE PROJECT (SWPP) – AWARD OF CONTRACT FOR TRANSFER</u> <u>OF OWNERSHIP STUDY</u> (SWC Project No. 1736-99)

Based on the direction provided during the February 14, 2019, State Water Commission meeting, State Water Commission staff met with Apex Engineering Group and the project team to negotiate a cost for the SWPP transfer of ownership study. Multiple meetings were held to discuss the scope of the various tasks identified in the Request for Proposal. The project team was also requested to provide a cost for the study divided into two phases.

Phase 1 included the scope of services required to determine the merits and demerits of the state divesting the ownership of the SWPP and the resulting impact to the state, Southwest Water Authority (SWA), and SWPP users. Completing a comparative analysis of the different funding models used by other regional water systems in North Dakota was included as an optional item in Phase 1. Phase 2 included the scope of services required to define the processes and estimate the costs required to transfer ownership of SWPP from State Water Commission to SWA.

The total cost for Phase 1 which included the comparative analysis of different funding models task is \$176,579. The cost for Phase 1 without the comparative analysis is \$127,143. The cost for Phase 2 is \$141,495. Work on Phase 2 would wait until it is determined if ownership of SWPP should be transferred.

The total cost to complete all the tasks together is \$308,344, and the study would be completed by December 2019. The total cost to complete the tasks with Phase 1 first, followed by Phase 2 is \$318,074. The schedule showed the final report for Phase 1 and Phase 2 completed by December 2019 and June 2020 respectively. State Water Commission staff reviewed the proposed budget along with rate sheets provided by the project team, and believe the costs are appropriate given the scope of work.

Included as **APPENDIX H** are tables with the different tasks, scope, and costs for Phases 1 and 2 discussed above, the draft scope of services, and schedule to complete the study with all tasks awarded together and schedule to complete Phase 1 of the study followed by Phase 2. Two options for the Commission included 1) award the contract for all tasks for a total of \$308,344, and 2) award the contract for Phase 1 with or without the comparative analysis. The award of Phase 1 would include an option to add Phase 2 at a later date based on results of Phase 1.

There was additional discussion regarding the importance of the comparative analysis, and staff were directed to include a comparison of the various governance models as part of the scope for this task.

After discussion, the following motion was made:

It was moved by Commissioner Pedersen and seconded by Commissioner Owan that the State Water Commission award the contract to Apex Engineering Group to complete the transfer of ownership study proposed in Phase 1 with comparative analysis in the amount of \$176,579.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

RED RIVER VALLEY WATER SUPPLY PROJECT (RRVWSP) PERMIT #1416A:

In 1967, State Engineer and Secretary to the State Water Conservation Commission, Milo Hoisveen, granted the U.S. Bureau of Reclamation Water Permit #1416 that allocated 3,145,000 acre-feet annually from the Missouri River for the Garrison Diversion Unit. At the time, it was the single largest water right ever issued in the United States.

In 1986, as a result of the Garrison Diversion Reformulation Act, State Engineer Vern Fahy split Permit #1416 into two parts: #1416, and #1416A and assigned Permit #1416A to the State Water Commission. Permit #1416 kept 1,212,348 million acre-feet annually and 1,932,652 million acre-feet annually went to Permit #1416A.

In 1999, Permit #1416A was split again and assigned 15,000 acre-feet annually to Permit #1416A-01 in the name of the State Water Commission – Northwest Area Water Supply (NAWS) project.

Garrison Diversion Conservancy District (GDCD) is moving forward with planning and construction of the RRVWSP. GDCD requested 120,000 acre-feet of water from the Missouri River using State Water Permit #1416A. The original request is attached as **APPENDIX I.**

April 9, 2019 Page 10 of 13 If the request is approved, the State Engineer would follow standard operating procedures found in NDCC 61-04 and NDAC 89-03 to split and assign the requested quantity of water into the name of GDCD. A statutory procedure would then be followed whereby the approved point of diversion would be moved to a location south of Washburn identified by GDCD as the intake location on the Missouri River.

Secretary Erbele recommended the State Water Commission approve 120,000 acrefeet per year at a rate of 165 cubic feet per second from State Water Commission Water Permit #1416A be assigned to the GDCD for the purpose of supplying water to the RRVWSP from the Missouri River.

After discussion, the following motion was made:

It was moved by Commissioner Zimmerman and seconded by Commissioner Pedersen that the State Water Commission approve 120,000 acre-feet per year at a rate of 165 cubic feet per second from State Water Commission Water Permit #1416A be assigned to the GDCD for the purpose of supplying water to the RRVWSP from the Missouri River.

Commissioners Andersen, Anderson, Johnson, McDonald, Owan, Pedersen, Zimmerman, Goehring, and Governor Burgum voted aye. There were no nay votes. Governor Burgum announced the motion unanimously carried.

ECONOMIC ANAYSIS (EA) AND LIFE CYCLE COST ANALYSIS (LCCA) POLICY DEVELOPMENT

Pat Fridgen, Director of Planning and Education, discussed legislation passed by the North Dakota Legislature in 2017, that created NDCC 61-03-21.4 requiring the State Engineer to: "develop an economic analysis process for water conveyance projects and flood-related projects expected to cost more than one million dollars, and a life cycle analysis process for municipal water supply projects. When the State Water Commission is considering whether to fund a water conveyance project, flood-related project, or water supply project, the State Engineer shall review the economic analysis or life cycle analysis, and inform the State Water Commission of the findings from the analysis and review."

Guidance documents and fillable models for EA and LCCA are completed and were approved by the Commission last summer. It is the expectation of the Legislature that those analysis requirements be implemented by the agency starting with the 2019-2021 biennium beginning July 1, 2019.

April 9, 2019 Page 11 of 13 Existing Legislation provides little direction in terms of how the results of the EA and LCCA are to be used by the Commission. In addition, it does not appear at this stage of the current Legislative session that the requirements to conduct EA and LCCA are going to be removed. Therefore, language will likely need to be added to the agency's cost-share policy to provide necessary guidance.

At the recommendation of the Finance, Planning, and Budget Subcommittee, State Water Commission staff was directed to discuss before the full Commission. There was discussion of whether or not staff should begin drafting policy language related to EA and LCCA requirements and implementation.

After discussion, it was determined that State Water Commission staff would draft language to place in the cost-share policy based on the statute.

PROJECT UPDATES:

Commission staff provided brief updates on the following projects with the summary updates attached as **APPENDIX J**:

Jon Kelsch, Construction Section Chief, Devils Lake Outlet; Laura Ackerman, Investigations Section Chief, Missouri River and Mouse River; Tim Freije, NAWS Project Manager; and, Sindhuja S.Pillai-Grinolds, SWPP Project Manager.

LEGAL UPDATES:

Jennifer Verleger, General Counsel, Attorney General's Office, provided brief legal updates on State Water Commission and Office of the State Engineer litigation, attached as **APPENDIX K.** Legal updates will continue as a standing agenda item.

ROUNDTABLE UPDATES WITH COMMISSIONERS:

Commissioner Pedersen indicated the permanent flood protection erosion sites project is coming together well with the flood protection project.

Commissioner Johnson indicated the Devils Lake Advisory Board will meet May 9 with Canada and Minnesota. The flood levels in Devils Lake are looking positive.

April 9, 2019 Page 12 of 13 There being no further business to come before the State Water Commission, Governor Burgum adjourned the April 9, 2019, meeting at 3:45 p.m.



Doug Burgum, Governor Chairman, State Water Commission

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Garland Erbele, P.E. North Dakota State Engineer, and Chief Engineer-Secretary to the State Water Commission

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