

**Water Supply Reserve Fund
Water Activity Summary Sheet
July 21-22, 2021
Consent Agenda Item 2(c)**

Applicant & Grantee: Town of Oak Creek

Water Activity Name: Sheriff Dam Rehabilitation - Advanced Hydrology and Gate Replacement

Water Activity Purpose: Agricultural, Municipal/Industrial, Needs Assessment, Nonconsumptive (Environmental & Recreational) - Implementation

County: Rio Blanco & Routt Counties

Drainage Basin: Yampa River

Water Source: Sheriff Dam/Oak & Trout Creeks

Amount Requested: \$73,750 Yampa/White/Green Basin Account
\$73,750 Total Request

Matching Funds: **Basin Account Match = \$221,250 (cash)**

- 75% of Total Project Cost (meets 25% min)

Staff Recommendation:
Staff recommends approval of up to \$73,750 from the Yampa-White-Green Basin Account to help fund the project: Sheriff Dam Rehabilitation - Advanced Hydrology and Gate Replacement

Water Activity Summary: Sheriff Reservoir provides the sole source of water storage for the Town of Oak Creek (population 944), who owns the dam and water rights in the reservoir. Sheriff Reservoir provides recreational benefits to Routt and Rio Blanco Counties through fishing, camping, hiking, kayaking, hunting, and wildlife viewing. Releases from Sheriff Reservoir to Oak Creek through the Rich Ditch help minimum flows in Trout Creek and Oak Creek through public lands in the Routt National Forest and flows for agricultural use.

Significant dam safety issues have been identified at this 67-year-old dam, including inadequate spillway capacity and sinkholes in the dam's foundation which have been temporarily repaired but need a permanent solution. The outlet works gate stem and gate are failing due to the age of the equipment, which is as old as the dam, and need to be replaced.

A CWCB Loan Feasibility report indicates a rehabilitation cost of \$13 million. The key cost driver is the increased spillway size. If approved, the Town would utilize WSRF funds to



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Colorado Water Conservation Board
Water Supply Reserve Fund
Grant Application

Instructions

All WSRF grant applications shall conform to the current [2020 WSRF Criteria and Guidelines](#).

To receive funding from the WSRF, a proposed water activity must be recommended for approval by a Roundtable(s) **AND** the approved by the Colorado Water Conservation Board (CWCB). The process for roundtable consideration and recommendation is outlined in the 2020 WSRF Criteria and Guidelines. The CWCB meets bimonthly.

If you have questions, please contact the WSRF Grant Program Manager (for all Roundtables) or your Roundtable Liaison:

<p>Ben Wade ben.wade@state.co.us 303-866-3441 x3238 (office)</p>	<p>Sam Stein Sam.stein@state.co.us 303-866-3441(office)</p>
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WSRF Submittal Checklist (Required)

YES NO This request was recommended for CWCB approval by the sponsoring roundtable.

YES NO I have read and understand the [2020 WSRF Criteria and Guidelines](#).

YES NO Grantee will be able to contract with CWCB using the [Standard Contract](#).¹

Application Documents included:

YES NO Exhibit A: Statement of Work

YES NO Exhibit B: Budget & Schedule

YES NO Letters of Matching Commitments (Town of Oak Creek 25% matching funds)

YES NO Exhibit C: Map²

YES NO Photos/Drawings/Reports (CWCB Feasibility Study, January 2021)

YES NO Letters of Support (Routt County Commissioners)

Contracting Documents³

YES NO Detailed/Itemized Budget³ (*Excel Spreadsheet – see Template*)

YES NO Certificate of Insurance⁴ (*General, Auto, & Workers’ Comp.*)

YES NO Certificate of Good Standing⁽⁴⁾

YES NO W-9 Form⁴

YES NO Independent Contractor Form⁴ (*If applicant is individual, not company/organization*)

YES NO Electronic Funds Transfer (ETF) Form⁴

¹Click “Grant Agreements”. For reference only/do not fill out or submit/required for contracting

² See “Exhibit C” for a map of the General Location.

³Additional documentation providing a Detailed/Itemized Budget maybe required for contracting. Applicants are encouraged to coordinate with the CWCB Project Manager to determine specifics.

⁴ Required for contracting. While optional at the time of this application, submission can expedite contracting upon CWCB Board approval.



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Schedule		
CWCB Meeting	Application Submittal Dates	Type of Request
January	October 1	Basin Account
March	December 1	Basin/Statewide Account/Water Plan Grant Match ¹
May	February 1	Basin Account
July	April 1	Basin Account
September	June 1	Basin/Statewide Account
November	August 1	Basin Account

¹ If either the basin or statewide match includes matching funds from a pending Water Plan Grant, both must be submitted by December 1st deadline for March Board meeting review.

Water Activity Summary	
Name of Applicant	Town of Oak Creek
Name of Water Activity	Sheriff Dam Rehabilitation – Advanced Hydrology and Gate Replacement
Approving Roundtable(s)	Basin Account Request(s) ¹
Yampa White Green Basin Roundtable	\$73,750
Basin Account Request Subtotal	\$73,750
Basin Account Request Subtotal Approved by Roundtable	\$73,750
Statewide Account Request ⁽¹⁾	\$ - N/A -
Total WSRF Funds Requested (Basin & Statewide)	\$73,750
Total Project Costs	\$295,000

¹ Please indicate the amount recommended for approval by the Roundtable(s)

Grantee and Applicant Information	
Name of Grantee(s)	Town of Oak Creek
Mailing Address	129 Nancy Crawford Blvd. P.O. Box 128 Oak Creek, CO 80467



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Grantee and Applicant Information	
FEIN	
Grantee's Organization Contact¹	David Torgler
Position/Title	Town Administrator/Clerk
Email	david@townofoakcreek.com
Phone	970-736-2422
Grant Management Contact²	Sandy Jacobs
Position/Title	Treasurer
Email	sandy@townofoakcreek.com
Phone	970-736-2422
Name of Applicant (if different than grantee)	N/A
Mailing Address	
Position/Title	
Email	
Phone	

¹ Person with signatory authority

² Person responsible for creating reimbursement invoices (Invoice for Services) and corresponding with CWCB staff.

Description of Grantee
Provide a brief description of the grantee's organization (100 words or less).
<p>The Town of Oak Creek (Town) is a municipality located in located in Routt County with a population of 944 people. The sole source of water storage for the Town is provided by Sheriff Dam. Sheriff Dam and the storage water rights associated with the reservoir are owned by the Town. Sheriff Dam is located in Rio Blanco County on Trout Creek.</p>

Type of Eligible Entity (check one)	
X	Public (Government): municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
	Public (Districts): authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises



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Type of Eligible Entity (check one)	
<input type="checkbox"/>	Private Incorporated: mutual ditch companies, homeowners' associations, corporations
<input type="checkbox"/>	Private Individuals, Partnerships, and Sole Proprietors: are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
<input type="checkbox"/>	Non-governmental organizations: broadly, any organization that is not part of the government
<input type="checkbox"/>	Covered Entity: as defined in Section 37-60-126 Colorado Revised Statutes

Type of Water Activity (check one)	
<input type="checkbox"/>	Study
<input checked="" type="checkbox"/>	Implementation

Category of Water Activity (check all that apply)		
<input checked="" type="checkbox"/>	Nonconsumptive (Environmental)	
<input checked="" type="checkbox"/>	Nonconsumptive (Recreational)	
<input checked="" type="checkbox"/>	Agricultural	
<input checked="" type="checkbox"/>	Municipal/Industrial	
<input checked="" type="checkbox"/>	Needs Assessment	
<input type="checkbox"/>	Education & Outreach	
<input type="checkbox"/>	Other	Explain:

Location of Water Activity	
Please provide the general county and coordinates of the proposed activity below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Countries	Sheriff Dam (Rio Blanco County)/ Town of Oak Creek (Routt County)
Latitude	40.1488
Longitude	-107.1368

Water Activity Overview
<p>Please provide a summary of the proposed water activity (200 words or less). Include a description of the activity and what the WSRF funding will be used for specifically (e.g., studies, permitting, construction). Provide a description of the water supply source to be utilized or the water body affected by the activity. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, area of habitat improvements. If this project addresses multiple purposes or spans multiple basins, please explain.</p> <p>The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, and Schedule.</p>



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Water Activity Overview

Sheriff Reservoir provides the sole source of water storage for the Town of Oak Creek (population 944), who owns the dam and water rights in the reservoir. Sheriff reservoir provides recreational benefits to Routt/Rio Blanco Counties in through fishing, camping, hiking, kayaking, hunting, and wildlife viewing. Releases from Sheriff Reservoir to Oak Creek through the Rich Ditch help minimum flows in Trout Creek/Oak Creek through public lands in the Routt National Forest and flows for agricultural use.

Significant dam safety issues have been identified at this 67-year-old dam, including inadequate spillway capacity and sinkholes in the dam's foundation (temporarily repaired) which need a permanent solution. The outlet works gate stem and gate are failing due to the age of the equipment, which is as old as the dam, and need to be replaced.

A CWCB Loan Feasibility report indicates a rehabilitation cost of \$13 million. The key cost driver is the increased spillway size. The Town would utilize the WSRF to work with the DWR to optimize mountain hydrology and refine the rehabilitation design potentially reducing the project cost by millions of dollars. WSRF funding would also be used to replace the outlet gate in 2021.

Measurable Results

To catalog measurable results achieved with WSRF funds please provide any of the following values.

	New Storage Created (acre-feet)	
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive	
987 AF, Reservoir Storage	Existing Storage Preserved or Enhanced (acre-feet)	
	Length of Stream Restored or Protected (linear feet)	
	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
37 Acres, Reservoir Surface Area	Area of Restored or Preserved Habitat (acres)	
	Length of Pipe/Canal Built or Improved (linear feet)	
X	Other	Explain: Water released from the reservoir enhances stream flows in Trout Creek and Oak Creek and fisheries in the Routt National Forest. Stream flows also provide additional agricultural water in Routt County.

Water Activity Justification

Provide a description of how this water activity supports the goals of [Colorado's Water Plan](#), the most recent [Statewide Water Supply Initiative](#), and the respective [roundtable Basin Implementation Plan and Education Action Plan](#) ⁽¹⁾. The Applicant is required to reference specific needs, goals, themes, or Identified Projects and Processes (IPPs), including citations (e.g., document, chapters, sections, or page numbers).

For applications that include a request for funds from the Statewide Account, the proposed water activity shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan criteria for state support (CWP, Section 9.4, pp. 9-43 to 9-44;)(Also listed pp. 4-5 in [2020 WSRF Criteria and Guidelines](#)).



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Water Activity Justification

Measurable objectives in the Colorado Water Plan (CWP) Executive Summary which are addressed by this water activity are the Supply-Demand Gap and Storage. By not requiring Sheriff Dam operate at a reservoir restriction or be drained for dam safety concerns, working to rehabilitate Sheriff Dam will preserve 987 acre-feet of existing storage and not set the Supply-Demand Gap and additional storage goals further behind.

Another measurable objective from the CWP Executive Summary addressed by this water activity is the objective for Watershed Health, Environment and Recreation. Maintaining storage in Sheriff Dam provides recreation for Rio Blanco and Routt Counties. The reservoir itself is used for fishing, camping, hiking, kayaking, stand-up paddling, horseback riding, hunting, and wildlife viewing. Water released from the reservoir enhances the fishery in the Routt National Forest along Trout Creek as well as in-stream flows in Oak Creek.

Chapter 4: Water Supply of the CWP identifies “The Role of Storage” on page 4-14 as “*being critical to the ability to maintain stable water supplies*”. Additionally, water storage infrastructure is identified as supporting “*all types of use—including agricultural, environmental, municipal, and industrial—in periods of drought; complying with interstate compacts; and augmenting stream systems to allow water use by water users that would otherwise not have a right to divert under the prior appropriation system.*” Rehabilitation of Sheriff Dam will ultimately serve these purposes by preserving the reservoir’s function as water storage for spring runoff which is later released as a supply source for the Town of Oak Creek in drier summer months. The instream flow right in Trout Creek below Sheriff Dam is very junior compared to the Town of Oak Creek’s water rights, but will benefit from releases made at Sheriff Dam for the Town of Oak Creek. Additionally, agriculture water needs will also benefit from releases made in drier months as more flow will be present in both Trout Creek and Oak Creek.

The Yampa White Green (YWG) Basin Implementation Plan (BIP) Executive Summary includes eight goals to meet future water demands of the YWG basin. This water activity address several of the goals which are listed below along with how this water activity helps to address the goal.

- Improve agricultural water supplies to increase irrigated land and reduce shortages: The 987 acre-feet of storage which would be preserved through the rehabilitation of Sheriff Dam is decreed for irrigation as well as municipal uses.
- Identify and address Municipal and Industrial (M&I) water shortages: Without supplemental water storage, during dry years the Town of Oak Creek may require additional water beyond what is available to divert in Oak Creek presenting a potential water shortage. Any future growth of the Town of Oak Creek would increase the potential for water shortages. Preservation of Sheriff Dam would help reduce the risk of M&I water shortages for the Town.
- Quantify and protect non-consumptive water uses: Non-consumptive water uses such as recreation opportunities like fishing and kayaking are provided by Sheriff Reservoir, along with enriched fish habitat along Trout Creek and Oak Creek made possible by late summer and fall reservoir releases.
- Restore, maintain, and modernize water storage and distribution infrastructure: The rehabilitation of Sheriff Dam would be completed using the standards set by the Colorado Division of Water Resources *Rules and Regulations for Dam Safety and Dam Construction*.
- Develop an integrated system of water use, storage, administration and delivery to reduce water shortages and meet environmental and recreational needs: Water releases from Sheriff Dam during dry months would supplement natural stream flows below Sheriff Dam which would be a benefit to water shortages for environmental and recreational needs along Trout Creek and Oak Creek and through public Lands in the Routt National Forest.

¹ Access Basin Implementation Plans or Education Action Plans from Basin drop down menu.



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Matching Requirements: Basin Account Requests	
<p>Basin (only) Account grant requests require a 25% match (cash and/or in-kind) from the Applicant or 3rd party and shall be accompanied by a letter of commitment as described in the 2020 WSRF Criteria and Guidelines (submitted on the contributing entity's letterhead). Attach additional sheet if necessary.</p>	
Contributing Entity	Amount and Form of Match (note cash or in-kind)
Town of Oak Creek	\$73,750 – cash matching funds
DOLA Grant (secured)	\$147,500
Total Match	\$221,250
If you requested a Waiver to the Basin Account matching requirements, indicate the percentage you wish waived.	

Matching Requirements: Statewide Account Requests	
<p>Statewide Account grant requests require a 50% match as described in the 2020 WSRF Criteria and Guidelines. At least of 10% of the required Statewide Account Grant request match shall be cash from Basin Account funds whether that is from one or multiple basins; and the remaining 40% of the required match may be provided from any source, including other grants, cash from the Basin Account, or any combination of cash, in-kind services, or in-kind materials, and shall be accompanied by a letter of commitment. Attach additional sheet if necessary.</p>	
Contributing Entity	Amount and Form of Match (note cash or in-kind):
Total Match	\$
If you requested a Waiver to the Statewide Account matching, indicate % you wish waived. (Max 50% reduction of requirement).	



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Related Studies

Please provide a list of any related studies, including if the water activity is complimentary to or assists in the implementation of other CWCB programs.

A Feasibility Study and Report was prepared by W. W. Wheeler and Associates, Inc. (Wheeler) for the Town of Oak Creek, Colorado and the Colorado Water Conservation Board (CWCB) and was completed in January of 2021. This report documents the feasibility and financing for rehabilitation of the Town's Sheriff Dam. The high rehabilitation costs from the feasibility study identified the need for additional advanced hydrology to try and reduce spillway construction costs, as well as led to the discovery and temporary repair of sinkholes in the glacial moraine foundation which would need to be addressed in the rehabilitation construction.

Previous CWCB Grants

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order

A Colorado Water Conservation Board grant was provided to complete the Feasibility Study for the Sheriff Dam Rehabilitation

1. Applicant name: Town of Oak Creek
2. Water Activity Name: Loan Feasibility Study Grand Sheriff Lake Rehab
3. Approving RT(s): N/A
4. CWCB board meeting date: N/A, Approval was provided by executive director
5. Purchase Order: POGG1,PDAA,201900002258

Tax Payer Bill of Rights

The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

N/A

work with the Division of Water Resources to optimize mountain hydrology and refine the rehabilitation design potentially reducing the project cost by millions of dollars. WSRF funding would also be used to replace the outlet gate.

Discussion: The dam rehab proposal is consistent with the Yampa-White-Green Roundtable’s Basin Implementation Plan, in particular, its goals of identifying & addressing the M&I water shortages; quantify and protect non-consumptive water uses; restore, maintain and modernize water storage, administration and delivery to reduce water shortages and meet environmental and recreational needs; and the project provides for multiple beneficiaries for the Basin.

Issues/Additional Needs: No issues or additional needs have been identified.

Eligibility Requirements: The application meets requirements of all eligibility components.

Evaluation Criteria: Staff has determined this activity satisfies the Evaluation Criteria.

Funding Sources/Match	Cash	In-Kind	Total	Status
Town of Oak Creek	\$73,750	\$0	\$73,750	Secured
Dept of Local Affairs	\$147,500	\$0	\$147,500	Secured
Sub-Total Matching Funds	\$221,250	\$0	\$221,250	
WSRF Yampa-White-Green Basin Account	\$73,750	\$0	\$73,750	Secured
Total Project Costs	\$295,000	\$0	\$295,000	

CWCB Project Manager: Matt Stearns



March 24, 2021

Colorado Water Conservation Board
Water Supply Planning Section
WSRF Application
1313 Sherman Street, Room 718
Denver, CO 80203

RE: Town of Oak Creek, Sheriffs Reservoir Rehabilitation

The Yampa White Green (YWG) Basin Roundtable approved funding of \$73,750 from the YWG Basins Roundtable account for the Town of Oak Creeks Sheriffs Reservoir Rehabilitation. The application was considered fully and unanimously approved by the YWG Basin Roundtable at the March 10, 2021 meeting. There was a quorum of members present at the meeting.

As summarized within the grant application, the Water Activity purpose of the Sheriffs Reservoir Rehabilitation project is to update hydrology and hydrologic hazard classification reports, design and construct outlet gate replacement, determine potential failure modes for the reservoir and to update the financial plan for the rehabilitation of the reservoir.

The overall project aligns and aids in achieving YWG Basin Implementation Plan goals including, but not limited to: a) identify and address M&I water shortages; b) quantify and protect non-consumptive water uses; c) restore, maintain and modernize water storage and distribution infrastructure; d) develop an integrated system of water use, storage, administration and delivery to reduce water shortages and meet environmental and recreational needs; and the e) project provides for multiple beneficiaries.

The project has the support of the Routt County and the local water district to move forward with designs to repair the reservoir that ultimately is for the benefit for the Town of Oak Creek and the recreational users of Sheriffs Reservoir.

For additional assistance please contact me at (970) 629-2525 or aldenvb@yahoo.com.

A handwritten signature in blue ink that reads 'Alden Vanden Brink'.

Alden Vanden Brink
Yampa - White - Green Basin Roundtable, Chair



May 11, 2021

The Honorable Nikki Knoebel, Mayor
Town of Oak Creek
P.O. Box 128
Oak Creek, CO 80467

RE: EIAF 9363 - Oak Creek Reservoir Planning, Design & Construction

Dear Mayor Knoebel:

The Department of Local Affairs is in receipt of your application for state Energy and Mineral Impact Assistance funds. These revenues are derived from oil, gas, carbon dioxide, coal, and metals extracted in Colorado.

Your project was reviewed based on a variety of factors such as its connection to energy impact, degree of need, measurable outcomes, amount of request, relationship to community goals, level of local match and community support, management capacity, resiliency and how ready the project is to begin. Competition for these limited funds was intense and we had many more requests than we had funds available.

Congratulations! After thorough review, I am excited to offer a grant award in the amount of \$147,500 to assist with the above mentioned project.

This grant offer is made from federal mineral lease proceeds.

Please contact your DOLA Regional Manager, Greg Winkler, at 970-744-0760 for information on how to proceed. Expenditure of State funds prior to the contract being fully executed cannot be included in the contract budget or reimbursed by the State. Per our program guidelines, this offer is valid for one year from the date of this letter.

I wish you success with your project. Thank you for helping Colorado build an economy where all Coloradans can thrive.

Sincerely,

Rick M. Garcia
Executive Director

cc: Bob Rankin, State Senator
Dylan Roberts, State Representative
David Torgler, Town of Oak Creek
Greg Winkler, DOLA





522 Lincoln Avenue,
Suite #30
Steamboat Springs, CO 80487

www.co.routt.co.us

Timothy V. Corrigan
District I

Tim Redmond
District II

M. Elizabeth Melton
District III

March 1, 2021

Town Manager, David Torgler
Oak Creek Town Council
129 Nancy Crawford Blvd.
P.O. Box 128
Oak Creek, CO 80467

Dear Honorable Mayor, Town Council and Town Manager,

The Routt County Commissioners would like to formally offer our support for a grant from the Yampa, White and Green River Roundtable Basin to fund engineering repair for the Sheriff Dam and Reservoir that includes reconstruction of an outlet gate and structure. We understand that without the storage of Sheriff Reservoir, Oak Creek would potentially be without water for several weeks each year impacting the Town's potable water supply and the aquatic life in Oak Creek.

We applaud your creativity in leveraging this grant by applying for a matching grant from the Colorado Department of Local Affairs (DOLA). This is a great example of organizations working together to resolve local issues.

We wholeheartedly support your effort to strengthen the water infrastructure of Oak Creek as well as your tenacity to identify funding structures for this effort. As we all know, our region has suffered economically from the COVID-19 pandemic and any additional funds that can help us keep our community safe and healthy and ensure our infrastructure for decades to come is a valuable project in our minds.

We understand that the Sheriff Reservoir provides the sole source of water storage for the Town of Oak Creek, which has a population of 944 people. Your request for this grant is of the utmost importance since we have been informed that the Colorado Division Water Resources (DWR) Division 6 Dam Safety Engineer identified this significant dam issues at this 67-year-old structure.

We hope you are awarded this grant and we look forward to working with you for the future of Oak Creek.

Sincerely,

DocuSigned by:

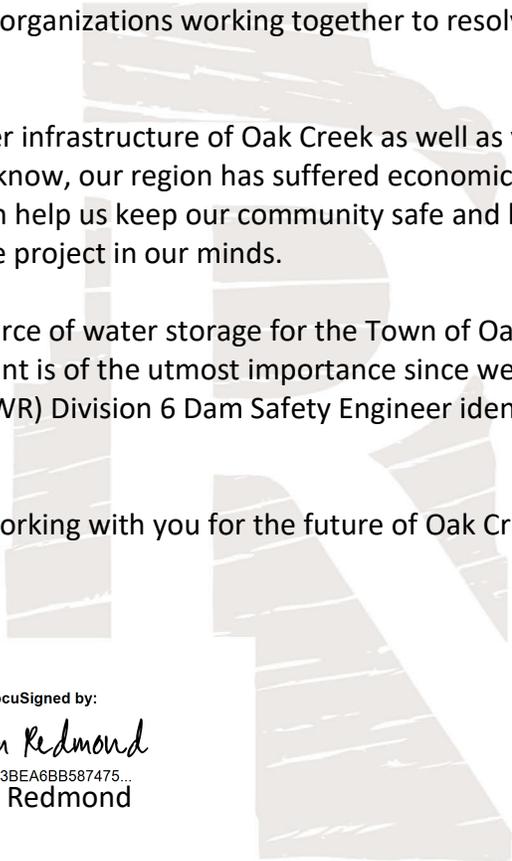
3CC9745DB809454...
Tim Corrigan

DocuSigned by:

1B496C950D344C6...
Beth Melton

DocuSigned by:

0E3BEA6BB587475...
Tim Redmond





David Torgler, Administrator/Clerk

March 25, 2021

Colorado Water Conservation Board
c/o Ben Wade
Project Manager
Water Supply Planning
1313 Sherman St., Rm. 721
Denver, Colorado 80203

RE: WSRF Grant for the Town of Oak Creek for the Rehabilitation of Sheriff Dam

Dear Board members:

The Town of Oak Creek, Colorado, population 944, is the owner of the Sheriff Reservoir and Dam. Sheriff Reservoir is the sole source of the Town's drinking water supply. The State Dam Engineer, Town officials and consulting engineers have been working to address problems with the 67-year old dam. A feasibility study was completed by W. W. Wheeler & Associates, a consulting engineer, in late January 2021 to document the feasibility and financing for rehabilitation of the Dam. The 2021 WSRF Grant Funds will be used to work with Colorado's Division 6 Dam Safety Engineer to undertake an evaluation using updated hydrology techniques that are likely to reduce the estimated \$10 - \$13 million cost of the spillway replacement project that is scheduled for 2023 (if project funding can be secured). The Town must also replace the one outlet valve which releases water from Sheriff Reservoir into Oak Creek that is as old as the dam and in poor shape.

In March 2021 the Town applied to the Yampa White Green Basin Roundtable for a WSRF Grant in the amount of \$73,750 for twenty five percent (25%) of the anticipated cost to complete the above referenced hydrological investigation and to replace the outlet valve in 2021. The Basin Roundtable approved the grant request, subject to CWCB approval.

The Town Board has committed \$73,750 as in-kind matching funds using Town Water Fund capital reserves. The Town Board has applied for DOLA funding for \$147,500 which will (if awarded) be fifty percent (50%) of the cost to complete the above referenced hydrological investigation and replacement of the outlet valve.

The Town of Oak Creek sincerely appreciates your consideration of its funding request.

Sincerely,

David Torgler

cc: Town Board

129 Nancy Crawford Boulevard, P.O. Box 128, Oak Creek, Colorado 80467
(970) 736-2422



Last Update: March 17, 2020

<https://cwcb.colorado.gov/>

Colorado Water Conservation Board	
Water Supply Reserve Fund	
<u>Exhibit A - Statement of Work</u>	
Date:	March 30, 2021
Water Activity Name:	Sheriff Dam Rehabilitation – Advanced Hydrology and Gate Replacement
Grant Recipient:	Town of Oak Creek (Town)
Funding Source:	Yampa/White/Green Basin Round Table; Town of Oak Creek matching funds, possible Colorado Department of Local Affairs (DOLA) Energy/Mineral Impact Assistance Fund Grant
Water Activity Overview: (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for. (PLEASE DEFINE ALL ACRONYMS).	
<p>Sheriff Reservoir provides the sole source of water storage for the Town of Oak Creek (population 944). The Town owns the dam and water rights in the reservoir. Significant dam safety issues have been identified at this 67-year-old dam which need to be addressed with a comprehensive dam rehabilitation project. Dam issues include inadequate spillway capacity and sinkholes in the dam's glacial moraine foundation (which have been temporarily repaired) but will need a permanent solution. The outlet works gate and gate stem are failing due to the age of the equipment, which is as old as the dam, and need to be replaced.</p> <p>A CWCB Loan Feasibility report prepared by the Town's engineer, W.W. Wheeler & Associates, indicates a rehabilitation project cost of \$13 million. The key Project cost driver is the increased spillway size. The Town would utilize the WSRF to work with the Colorado Division of Water Resources in 2021 to optimize mountain hydrology and conduct a risk analysis to refine the final design that could reduce the project cost by millions of dollars. WSRF funding would also be used to replace the outlet gate and gate stem as a subtask to the overall dam rehabilitation.</p>	
Objectives: (List the objectives of the project. (PLEASE DEFINE ACRONYMS).	
<p>The dam rehabilitation project objective is to reduce the risk of dam failure and preserve the Town's water supply and recreational benefits provided by the reservoir and instream flows in Trout Creek and Oak Creek. By working with the Colorado Division of Water Resources (DWR) to refine the basin hydrology, it is anticipated the inflow design flood (IDF) could be reduced requiring a smaller and more affordable spillway. A reduced IDF would then be used to determine the subsequent hazard classification and other design criteria. The Town would then be able to finalize a financial plan to address the remaining dam safety issues.</p> <p>During the hydrology and design refinement analysis, the Town would complete a smaller project to replace the old and failing outlet works gate. Repairs to the existing outlet gate provide a temporary dam safety improvement allowing the town to better control the reservoir water level during spring runoff and other storms. Repairs to the existing gate will allow the Town to fully utilize their storage right in Sheriff Reservoir to satisfy raw water needs during drier summer months as well as facilitate reservoir draw-down requirements for the eventual dam rehabilitation construction.</p>	



Last Update: March 17, 2020

<https://cwcb.colorado.gov/>

Tasks
Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)
<u>Task 1 – 2021 Engineering Evaluations</u>
<p>Description of Task:</p> <p>Sub-Task 1 and 2: Engineering evaluations would begin with the completion of an advanced hydrology study while working with the Colorado Division of Water Resources (DWR) and their new Mountain Hydrology procedures to evaluate appropriate reductions to the spillway design storm. The mountain hydrology study would be summarized a Hydrology Report. The inflow design storms from the Hydrology Report would then be used to complete a Hydrologic Hazard Analysis Report.</p> <p>Sub-Task 3: The next engineering evaluation would be to complete a Hazard Classification Report and updated Emergency Action Plan (EAP).</p> <p>Sub-Task 4: Complete an engineering evaluation to design a replacement for the outlet works gate and gate operator. The design will include the addition of an air vent pipe and reservoir grade beam.</p> <p>Sub-Task 5: The completed Hydrology Report, Hydrologic Hazard Analysis Report, Hazard Classification Report and Emergency Action Plan (from sub-tasks 1, 2 and 3) would be used to complete a Potential Failure Modes Analysis (PFMA) workshop.</p> <p>Sub-task 6: Use the PFMA to update the financial plan and cost estimate for dam rehabilitation design.</p> <p>Sub-task 7: Complete and EAP Tabletop exercise with the Town and DWR.</p>
<p>Method/Procedure:</p> <p>The new Mountain Hydrology approach currently being developed by the DWR would include a more in-depth analysis of the basin infiltration as well as incorporate envelope curve methods to scale inflow design storms. The inflow design storms are then routed through the reservoir and downstream 2D inundation model to determine the Hydrologic Hazard according to the DWR's Guidelines for Hydrologic Hazard Analysis. The Hydrologic Hazard determines the critical rainfall required (Probable maximum precipitation, 10,000-year, 1,000-year or 100-year precipitation event) to be used for spillway sizing. Adequately representing the basin runoff response through a mountain hydrology evaluation would directly impact the Hydrologic Hazard and may lead to a reduction in the critical rainfall event as well as required overall spillway capacity. The two analyses are closely intertwined, and both contribute to the spillway sizing.</p> <p>The Hazard Classification Report includes a sunny day breach development scenario, reservoir routing and downstream inundation evaluation. The Hazard Classification will be completed according to the DWR's <i>Guidelines for Hazard Classification</i> and will determine design requirements for the rehabilitation design of Sheriff Dam (except for the spillway size). The Hazard Classification Report would be used to update the Town's Emergency Action Plan (EAP) which would be used for future emergency preparedness and tabletop exercises.</p>



Last Update: March 17, 2020

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Tasks
<p>The outlet gate is at the end of its design life and needs to be replaced. Engineering sub-task #4 includes the design a smaller project which would be completed independently and ahead of the Sheriff Dam Rehabilitation project to expedite the timeline under which the outlet works gate repairs could be made. A reliable and working outlet gate would benefit the future Sheriff Dam Rehabilitation project as well as day-to-day operations of the reservoir for the Town. The gate replacement would also include the addition of an appropriately sized air vent pipe and reservoir grade beam, both of which would be required to meet Colorado Dam Safety Rules and Regulations as part of the overall Sheriff Dam Rehabilitation.</p> <p>The updated financial plan would reflect the final design based on sub-task numbers 1 through 7.</p> <p>The PFMA Analysis and EAP Tabletop exercise would be conducted by Wheeler with the Town and DWR.</p>
<p>Grantee Deliverable: (Describe the deliverable the grantee expects from this task)</p>
<p>Hydrology Report Hydrologic Hazard Analysis Report Hazard Classification Report Tabletop Exercise of the Emergency Action Plan Potential Failure Modes Analysis (PFMA) Workshop Updated Financial Plan Design Drawings and Specifications for the Outlet Works Gate Replacement Design Summary Report of the Gate Replacement</p>
<p>CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)</p>
<p>Based on the reporting requirements of the Yampa White Green Basin Round Table (YWG-BRT) Grant, Progress Reports and a Final Report are required. Town of Oak Creek as the “applicant” shall provide a progress report every 6 months to the CWCB, beginning from the time at which there is an issuance of a purchase order or the execution of a contract. The Progress Reports will detail the project status and include a description of any major issues that have occurred, and corrective action taken to address these issues.</p> <p>The Final Report will include a summary of the project and how the project was completed, describe any obstacles encountered and how these obstacles were overcome, confirm matching commitments have been fulfilled and include photographs, summaries of meetings and engineering reports/designs. Engineering reports to be included in the Final Report will include the following Grantee Deliverables listed above: Hydrology Report, Hydrologic Hazard Analysis Report, Hazard Classification Report, Design Drawings and Specifications for the Outlet Works Gate Replacement, and the Design Summary Report of the Gate Replacement.</p>



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Tasks
Provide a detailed description of each task using the following format: (PLEASE DEFINE ACRONYMS)
<u>Task 2 - Outlet Works Gate Replacement, Construction and Engineering Administration</u>
Description of Task:
Design the outlet works gate replacement along with the required air vent pipe and reservoir staff gage. Also include construction administration services during construction.
Method/Procedure:
Design and construct a replacement outlet works gate following the Colorado Division of Water Resources 2020 <i>Rules and Regulations for Dam Safety and Dam Construction</i> .
Grantee Deliverable: (Describe the deliverable the grantee expects from this task)
New Outlet Gate Construction Final Construction Report of the Gate Replacement On-site Construction Engineering and Observation Services
CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)
Based on the reporting requirements of the Yampa White Green Basin Round Table (YWG-BRT) Grant, Progress Reports and a Final Report are required. Town of Oak Creek as the “applicant” shall provide a progress report every 6 months to the CWCB, beginning from the time at which there is an issuance of a purchase order or the execution of a contract. The Progress Reports will detail the project status and include a description of any major issues that have occurred, and corrective action taken to address these issues. The Final Report will include a summary of the project and how the project was completed, describe any obstacles encountered and how these obstacles were overcome, confirm matching commitments have been fulfilled and include photographs, summaries of meetings and engineering reports/designs. Engineering reports to be included in the Final Report will include the Final Construction Report which is among the Grantee Deliverables listed above.



Last Update: March 17, 2020

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Budget and Schedule

Exhibit B - Budget and Schedule: This Statement of Work shall be accompanied by a combined [Budget and Schedule](#) that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in [excel format](#). A separate [excel formatted](#) Budget is required for engineering costs to include rate and unit costs.

Reporting Requirements

Progress Reports: The grantee shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

Final Report: At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

Payments

Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

Performance Requirements

Performance measures for this contract shall include the following:

(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

(b) Accountability: Per the Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per the Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.

(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.

(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.



Colorado Water Conservation Board

Detailed Budget Estimate

Date: Prepared Jan 20, 2021
Water Activity Name: Sheriff Dam Rehabilitation, Advanced Hydrology and Gate Replacement
Grantee Name: Town of Oak Creek

2021 Engineering Evaluations

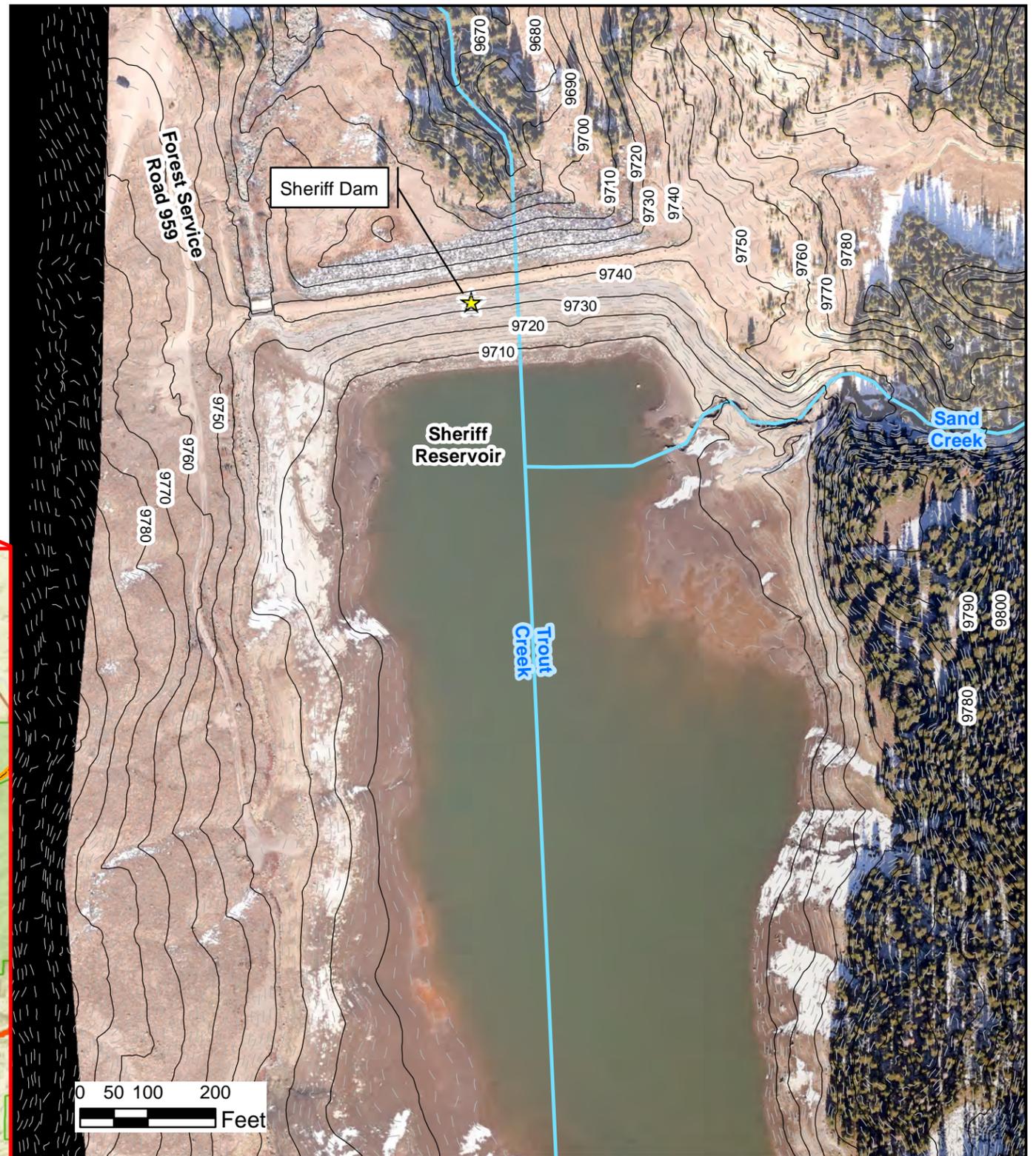
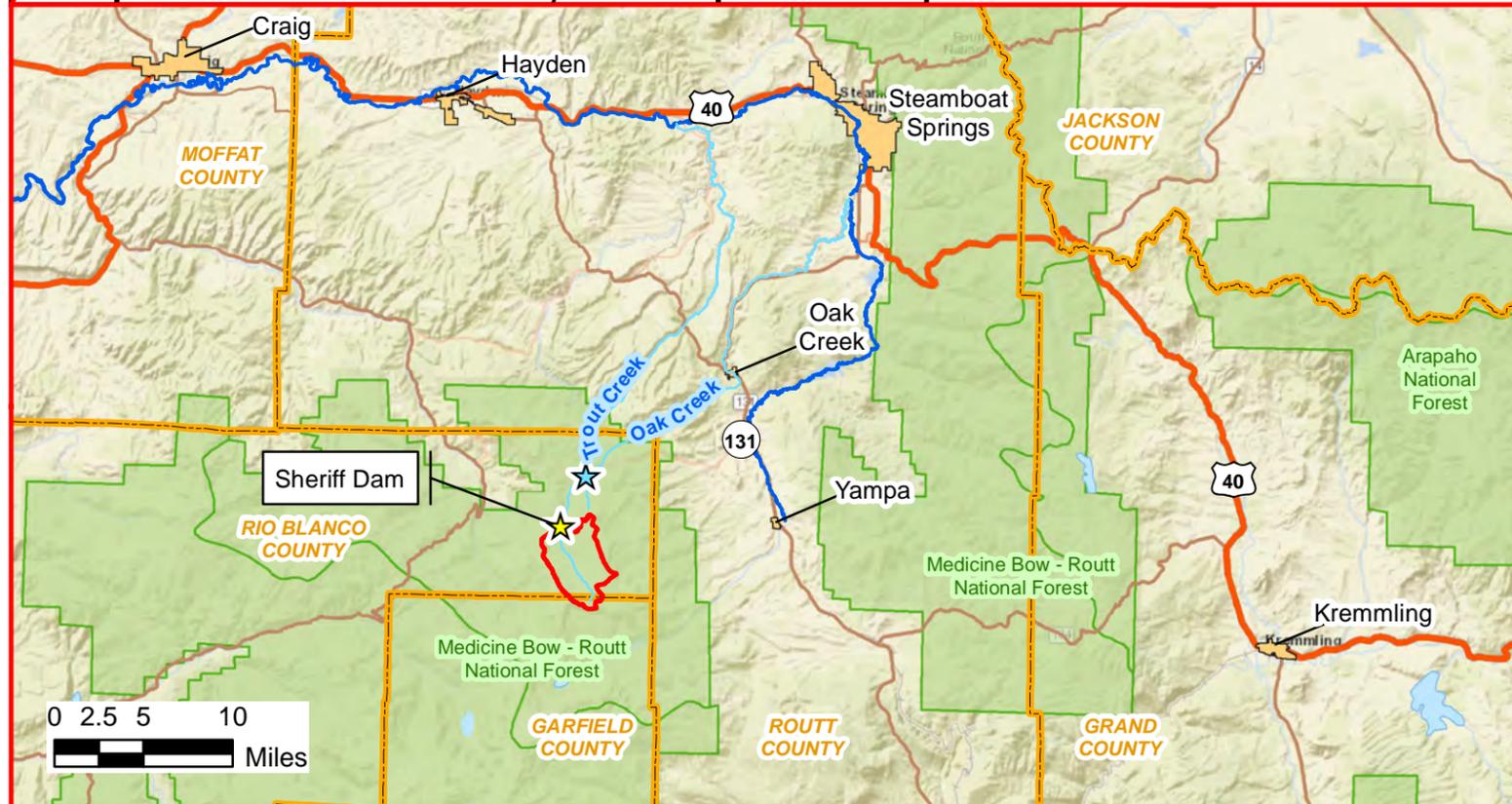
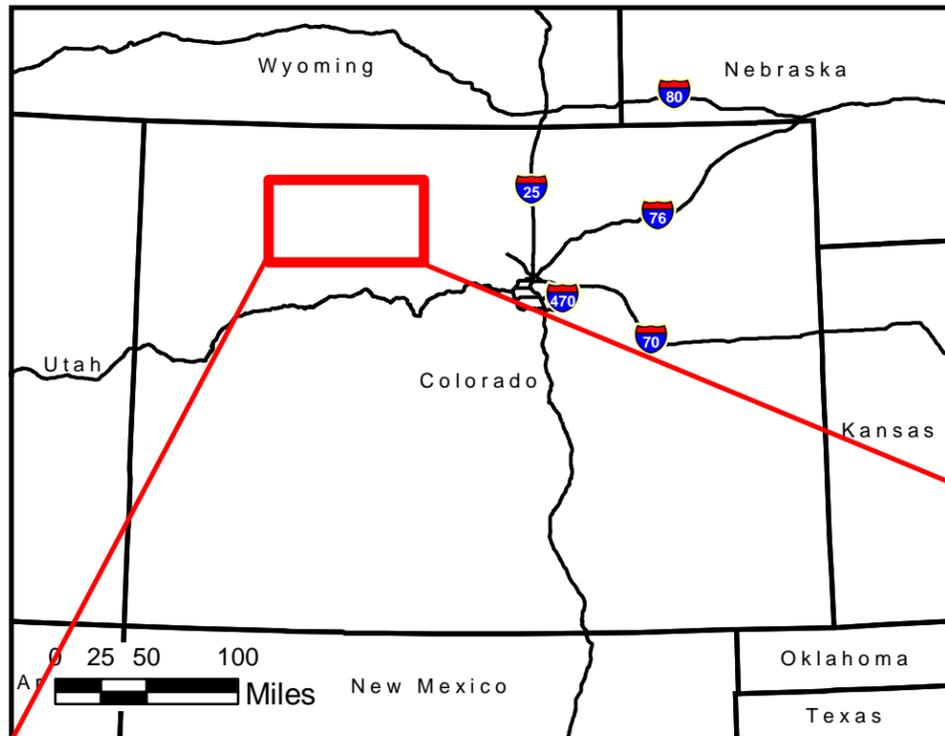
Task 1 - Design and Construction, Analysis and Reports

Sub-Task Number	Sub-Task Description	Senior Project Manager	Project Engineer	Staff Engineer	CADD Drafter	Administrative Assistant	Subtotal	Task 1 Project Total	CWCB/YWG BRT Funds 25%	Matching Funds (DOLA + Oak Creek) 75%
		\$171	\$144	\$118	\$83	\$78				
		Estimated Hours								
1	Hydrology Report (Mountain Hydrology/ Envelope Curve Analysis)	32	24	120		4	\$23,400	\$ 23,400	\$ 5,850	\$ 17,550
2	Hydrologic Hazard Analysis and Report (Determine Spillway Sizing)	16	8	40	8	4	\$9,584	\$ 9,584	\$ 2,396	\$ 7,188
3	Hazard Classification Analysis and Report (Set Design Criteria)	16	8	40			\$8,608	\$ 8,608	\$ 2,152	\$ 6,456
4	Evaluation for Outlet Gate Repair/Replacement	40		60	32	8	\$17,200	\$ 17,200	\$ 4,300	\$ 12,900
5	PFMA Analysis and Workshop	48	48	32			\$18,896	\$ 18,896	\$ 4,724	\$ 14,172
6	Update Financial Plan	40		40			\$11,560	\$ 11,560	\$ 2,890	\$ 8,670
7	EAP Tabletop Exercise	16		24		2	\$5,752	\$ 5,752	\$ 1,438	\$ 4,314
Task 1 TOTAL		208	88	356	40	18		\$ 95,000	\$ 23,750	\$ 71,250

Outlet Works Gate Replacement - Construction and Engineering Administration

Task 2 - Construction

	Unit	Quantity	Unit Cost	Total Cost	Task 2 Project Total	CWCB/YWG BRT Funds 25%	Matching Funds (DOLA + Oak Creek) 75%
Vent Pipe and Staff Gage							
Concrete	CY	60	\$1,000	\$60,000	\$ 60,000	\$ 15,000	\$ 45,000
Miscellaneous Metal Work (Vent Pipe)	LF	160	\$100	\$16,000	\$ 16,000	\$ 4,000	\$ 12,000
Outlet Gate Replacement							
New gate and operator	LS	1	\$50,000	\$50,000	\$ 50,000	\$ 12,500	\$ 37,500
Trash Rack	LS	1	\$15,000	\$15,000	\$ 15,000	\$ 3,750	\$ 11,250
Earthwork and Reclamation	LS	1	\$20,000	\$20,000	\$ 20,000	\$ 5,000	\$ 15,000
Construction Administration							
Escalation, Bidding & Change Order Contingency	LS	1	\$24,000	\$24,000	\$ 24,000	\$ 6,000	\$ 18,000
Construction Engineering	LS	1	\$15,000	\$15,000	\$ 15,000	\$ 3,750	\$ 11,250
Task 2 TOTAL					\$ 200,000	\$ 50,000	\$ 150,000



LEGEND:

- ★ Sheriff Dam
- ★ Rich Ditch
- 10-FT Contours
- - - 2-FT Contours
- Yampa River
- Trout Creek
- Oak Creek
- Drainage Basin = 12.2 Sq. Miles
- Counties

NOTES:

Aerial imagery of Sheriff Dam flown October 27, 2018 and provided by Landmark Consultants, Inc. Sheriff Reservoir was drawn down during the aerial survey approximately 36 feet below the dam crest. Rich Ditch is a diversion structure which conveys flows from Trout Creek to Oak Creek. Oak Creek supplies water to the Town of Oak Creek.



JANUARY 2021



**Sheriff Reservoir
Yampa/White/Green
Basin Grant Application**

1859.02

EXHIBIT C