STATE OF COLORADO
INTERAGENCY AGREEMENT

COVER PAGE

Paying State Agency Department of Natural Resources Colorado Water Conservation Board (CWCB)	**Contract Number** CMS Number: 172710 Encumbrance Number: GAE PDAA 2022*3528
Performing State Agency Department of Natural Resources Colorado Division of Parks and Wildlife (CPW)	**Agreement Performance Beginning Date** The Effective Date
Contract Maximum Amount Entire Contract term for all applicable fiscal years: $205,000	**Agreement Expiration Date** November 30, 2026
	Agreement Authority Authority for this grant is found in House Bill HB21-1260, funding for the Colorado Water Plan. This Agreement is exempt from the procurement code under 24-101-105(1)(a)(II).

Agreement Purpose

Grant funds will contribute to the total construction costs of the North Elk Creek Fish Barrier. The North Elk Colorado River Cutthroat Trout (CRCT) face two related and urgent threats: the competitive and genetic effects of non-native fish and re-occurring exposure to Whirling Disease (WD). The fish barrier is phase one of a three-phase project which will facilitate a time-sensitive resolution to both of these threats and provide high quality habitat to support a large native CRCT population.

Exhibits and Order of Precedence

The following Exhibit(s) and attachment(s) are included with this Agreement:

1. Exhibit A – Statement of Work.
2. Exhibit B – Schedule and Budget.

In the event of a conflict or inconsistency between this Agreement and any Exhibit or attachment, such conflict or inconsistency shall be resolved by reference to the documents in the following order of priority:

1. The provisions of the main body of this Agreement.
2. Exhibit A – Statement of Work.
3. Exhibit B – Schedule and Budget.

Principal Representatives

For the Paying State Agency:

Andrea Harbin Monahan
Department of Natural Resources
Colorado Water Conservation Board
1313 Sherman Street, #718
Denver, CO 80203
andrea.harbinmonahan@state.co.us

For the Performing State Agency:

Paula Nicholas
Department of Natural Resources
Colorado Division of Parks and Wildlife
6060 Broadway
Denver, CO 80216
paula.nicholas@state.co.us

SIGNATURE PAGE

THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

Each person signing this Agreement represents and warrants that the signer is duly authorized to execute this Agreement and to bind the Party authorizing such signature.

STATE OF COLORADO
Jared S. Polis, Governor

Colorado Department of Natural Resources Dan Gibbs, Executive Director Division of Parks and Wildlife	Colorado Department of Natural Resources Dan Gibbs, Executive Director Division Name
Signature: DocuSigned by: Reid DeWalt 4BE5374883BC4B7...	Signature: DocuSigned by: 402FDB4714E84D2...
Printed Name: Reid DeWalt	Printed Name: Russ Sands
Title: Assistant Director of Wildlife and Natural Resources	Title: CWCB Section Chief
Date: December 2, 2021 | 2:14 PM MST	Date: December 2, 2021 | 3:47 AM PST

In accordance with §24-30-202, C.R.S., this Agreement is not valid until signed and dated below by the State Controller or an authorized delegate.

STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

Signature: DocuSigned by: Ion Cotsapas 70E3DF1B09EE4E8...

Printed Name: Ion Cotsapas

Title: DNR Procurement Director

Effective Date: December 3, 2021 | 4:18 PM MST

1. PARTIES

This Interagency Agreement (this "Agreement") is entered into by and between the Paying Agency, (the "Paying Agency"), and the Performing Agency, (the "Performing Agency") who are named on the Cover Page of this Agreement. The Paying Agency and the Performing Agency may each individually be referred to as a "Party" and collectively as the "Parties." Each Party is an agency of the STATE OF COLORADO, hereinafter called the "State."

2. TERM AND EFFECTIVE DATE

A. Effective Date

This Agreement shall not be valid or enforceable until the Effective Date.

B. Term

The Parties' respective performances under this Agreement shall commence on the Agreement Performance Beginning Date shown on the Cover Page for this Agreement and shall terminate on the Agreement Expiration Date shown on the Cover Page for this Agreement unless sooner terminated or further extended in accordance with the terms of this Agreement.

C. Termination for Convenience

Either Party may terminate this Agreement for convenience by giving the other Party 90 days prior written notice setting forth the date of termination.

3. STATEMENT OF WORK AND BUDGET

A. Work

The Performing Agency shall complete the Work as described in this Agreement and in accordance with the provisions of Exhibit A and Exhibit B. The Paying Agency shall have no liability to compensate the Performing Agency for the delivery of any goods or the performance of any services that are not specifically set forth in this Agreement.

B. Goods and Services

The Performing Agency shall procure goods and services necessary to complete its obligations using Agreement funds and shall not increase the maximum amount payable hereunder by the Paying Agency.

4. PAYMENTS TO THE PERFORMING AGENCY

A. Maximum Amount

Payments to the Performing Agency are limited to the unpaid, obligated balance of the Agreement funds. The Paying Agency shall not pay the Performing Agency any amount under this Agreement that exceeds the Agreement Maximum Amount.

B. Payment Procedures

i. The Performing Agency shall initiate payment requests by invoice to the Paying Agency, in a form and manner approved by the Paying Agency. To facilitate Fiscal Year End closing, final invoices for each Fiscal Year should be submitted to the Paying Agency by July 15th of the following Fiscal Year.

ii. The Paying Agency shall pay each invoice within 30 days following the Paying Agency's receipt of that invoice, so long as the amount invoiced correctly represents

work completed by the Performing Agency and previously accepted by the Paying Agency during the term that the invoice covers.

iii. In accordance with the Fiscal Procedures Manual, each Agency shall report the outstanding balance of this Agreement on Exhibit AR_AP at Fiscal Year end.

5. RECORDS, MAINTENANCE AND INSPECTION

A. Maintenance

During the term of this Agreement and for a period terminating upon the later of (i) the six year anniversary of the final payment under this Agreement or (ii) the resolution of any pending Agreement matters (the "Record Retention Period"), each Party shall maintain, and allow inspection and monitoring by the other Party, and any other duly authorized agent of a governmental agency, of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the work or the delivery of services or goods hereunder.

B. Inspection

The Paying Agency shall have the right to inspect the Performing Agency's performance at all reasonable times and places during the term of this Agreement. The Performing Agency shall permit the Paying Agency, and any other duly authorized agent of a governmental agency having jurisdiction to monitor all activities conducted pursuant to this Agreement, to audit, inspect, examine, excerpt, copy and/or transcribe the Performing Agency's records related to this Agreement during the Record Retention Period to assure compliance with the terms hereof or to evaluate performance hereunder. Monitoring activities controlled by the Paying Agency shall not unduly interfere with the Performing Agency's performance hereunder.

6. CONFIDENTIAL INFORMATION

Each Party shall treat the confidential information of the other Party with the same degree of care and protection it affords to its own confidential information, unless a different standard is set forth in this Agreement. Each Party shall notify the other Party immediately if it receives a request or demand from a third party for records or information of the other Party.

7. DISPUTE RESOLUTION

The failure of a Party to perform its respective obligations in accordance with the provisions of this Agreement is a breach of this Agreement. In the event of disputes concerning performance hereunder or otherwise related to this Agreement, the Parties shall attempt to resolve them at the divisional level. If this fails, disputes shall be referred to senior departmental management staff designated by each Party. If this fails, the executive director of each Party shall meet and attempt resolution. If this fails, the matter shall be submitted in writing by both Parties to the State Controller, whose decision shall be final.

8. NOTICES AND REPRESENTATIVES

Each individual identified as a Principal Representative on the Cover Page for this Agreement shall be the Principal Representative of the designating Party. All notices required or permitted to be given under this Agreement shall be in writing, and shall be delivered **(A)** by hand with receipt required, **(B)** by certified or registered mail to such Party's Principal Representative at the address set forth on the Cover Page or **(C)** as an email with read receipt requested to the Principal Representative at the email address, if any, set forth on the Cover Page for this Agreement. Either Party may change

its Principal Representative by notice submitted in accordance with this section without a formal amendment to this Agreement. Unless otherwise provided in this Agreement, notices shall be effective upon delivery of the written notice.

9. GENERAL PROVISIONS

A. Assignment

The Performing Agency's rights and obligations under this Agreement are personal and may not be transferred or assigned without the prior, written consent of the Paying Agency. Any attempt at assignment or transfer without such consent shall be void. Any assignment or transfer of the Performing Agency's rights and obligations approved by the Paying Agency shall be subject to the provisions of this Agreement.

B. Counterparts

This Agreement may be executed in multiple, identical, original counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

C. Digital Signatures

If any signatory signs this Agreement using a digital signature in accordance with the Colorado State Controller Contract, Grant and Purchase Order Policies regarding the use of digital signatures issued under the State Fiscal Rules, then any agreement or consent to use digital signatures within the electronic system through which that signatory signed shall be incorporated into this Agreement by reference.

D. Third Party Beneficiaries

Except for the Parties' respective successors and assigns, this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to this Agreement, and do not create any rights for such third parties.

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit A

Statement Of Work

Date:	**June 26, 2021**
Name of Grantee:	**Colorado Parks and Wildlife**
Name of Water Project:	**North Elk Creek Fish Barrier Construction**
Funding Source:	**Environmental & Recreation Project Fund**

Water Project Overview:

These grant funds will contribute to the total construction costs of the North Elk Creek Fish Barrier. The anticipated total cost of construction is approximately $410,000. Project work already completed includes surveying the watershed, completing the NEPA process, engaging local landowners, and procuring a final design.

The Colorado River Cutthroat Trout (*Oncorhynchus clarkii pleuriticus*; CRCT) population in North Elk Creek has been a conservation priority for the White River National Forest and Colorado Parks and Wildlife (CPW) for at least 20 years. The White River drainage is an important area for the management of CRCT because of its historically robust native trout populations. It is our intent to help secure native CRCT populations in those areas where they have and continue to do well. The genetics of the North Elk fish are sufficiently pure and unique to make a significant contribution to the sustainability of CRCT in the region. Secondly, the habitat in the upper North Elk Creek watershed is of sufficient scale (~18,100 acres and 11.2 miles of fish-bearing habitat in three tributaries and the mainstem) and quality that it is expected to provide habitat to a large enough CRCT population to withstand natural disturbances and otherwise persist indefinitely. A population with 11.2 miles of connected habitat would occupy a stream segment larger than approximately 97% of other Colorado conservation populations (based on 2015 data).

The North Elk CRCT face two related and urgent threats: the competitive and genetic effects of non-native fish and re-occurring exposure to Whirling Disease (WD). Non-native Brook Trout now occupy the mainstem and a considerable portion of the North Elk headwaters. Brook Trout compete with CRCT for habitat and resources and reproduce to such an extent that their presence necessarily reduces the number of CRCT that can persist in the stream. Secondly, non-native Rainbow Trout are known to move upstream to the mainstem of North Elk Creek into at least the lower portions of the headwater tributaries. Rainbow Trout, in addition to exerting a similar competitive pressure as Brook Trout, will breed with CRCT and produce hybrid offspring which dilutes the native genetic base.

Furthermore, the downstream reaches of North Elk Creek now have high levels of *Myxobolus cerebralis* (Mc), the causative agent of WD, and fish that move upstream into the headwater reaches may be carriers of Mc and constantly re-introduce the parasite further upstream in the watershed. There are two hosts required by Mc to complete its lifecycle: salmonid fish and an aquatic oligochaete, *Tubifex tubifex*. Young-of-the-year fish incur fatal nerve damage and skeletal deformities, and therefore WD can effectively end recruitment into the

adult trout population. Young CRCT have little to no natural resistance, having only recently been exposed to the parasite which was first observed in Colorado in the 1980s.

The fish barrier we propose to construct aims to facilitate a time-sensitive resolution to both of these threats and provide high quality habitat to support a large native CRCT population. Water Plan Grant funds will contribute to preventing the invasion and mixing of WD-positive nonnative fish with the WD-negative and genetically pure North Elk Creek CRCT inhabiting the upper portion of the drainage. All partners are heavily involved in the CRCT Conservation Team, and in implementation of the 2006 CRCT Conservation Strategy. Building fish barriers to provide habitat solely for the use of native CRCT is among the objectives outlined in the Conservation Strategy (Objective 2: Secure and enhance conservation populations) (CRCT Conservation 2006). Once the fish barrier is constructed and monitored for efficacy, CPW plans to reclaim a portion of the North Elk Creek drainage and eventually re-establish the unique genetics of the North Elk Creek CRCT with WD-negative fish into waters upstream of the fish barrier.

Project Objectives:

The proposed project has several phases, the first and only of which would be supported by the CWCB Water Plan Grant. This first task includes construction of the North Elk Creek Fish Barrier that has the following objective:

a) to prevent upstream movement of fish under a range of hydrologic conditions while causing minimal disruption to natural stream processes

Additional tasks are mentioned here to provide the overall scope of the project. However, CWCB Water Plan Grant funding is not being requested to accomplish these tasks. The second task includes monitoring the efficacy of the North Elk Creek Fish Barrier in meeting the objective identified in Task 1. Task 3 includes reclamation of the North Elk Creek watershed upstream of the constructed fish barrier. The objective of this task would include removal of all fish upstream of the fish barrier to ensure the stream remains fishless for a sufficient duration to interrupt the Mc life cycle and thereby eliminate the parasite. Nehring et al. (2015) determined that myxospores produced and introduced into the environment by infected fish may have a long-term viability of less than one year, absent a fish host to sustain the life cycle. The last portion of this task includes re-establishing genetically pure and WD-negative North Elk Creek CRCT upstream of the fish barrier, and subsequently monitoring the restoration to ensure ongoing project success.

Tasks

Task 1 – Construction of the North Elk Creek Fish Barrier (proposed for CWCB Water Plan Grant funds)

Description of Task:

This project has several stages of outcomes, only the first of which would be funded through this Water Plan Grant process. The first task includes the construction of the fish barrier itself. Project partners have worked with two engineers over the past several years through several iterations of designs to develop a fish barrier that will successfully prevent the upstream movement of fish throughout a range of hydrologic conditions while causing minimal disruption to natural stream processes.

Method/Procedure:

The NEPA process for this project is complete. A 100% engineered design for the fish barrier is also complete. We are anticipating that the fish barrier will not significantly alter the hydrologic regime or sediment transport capability of North Elk Creek. Once the small pool upstream of the fish barrier fills with water, stream flow rate into the structure will be equivalent to stream flow out of the structure. The pool upstream of the fish barrier will also fill with sediment on the descending limb of the hydrograph and scour on the ascending limb. As the pool begins to fill with bedload and the upstream stream channel bed elevation starts to approach the fish barrier crest elevation, the stream will transport sediment in a more natural manner. The partners have worked closely with the fish barrier design engineer to create a structure that will accommodate sediment/bedload transport and that will not accumulate or aggrade material downstream of the fish barrier.

Project partners are prepared to submit a U.S. Army Corps of Engineers 404 permit application once full funding is secured. The funding we are seeking from CWCB will assist us in our fundraising efforts. Provided the estimated project costs are secured, Colorado Parks and Wildlife will hire a consultant to construct the fish barrier. We are anticipating construction will occur across one field season and during the low flow time frame from August-October.

Deliverable:

The outcome of this task is a successfully constructed fish barrier within North Elk Creek that prevents the upstream movement of non-native fish throughout a range of hydrologic conditions while causing minimal disruption to natural stream processes.

Tasks

Task 2 – Monitoring the North Elk Creek Fish Barrier for Efficacy (funded by partners and other sources)

Description of Task:

The project partners will monitor the fish barrier once it is constructed to demonstrate that the fish barrier does in fact prevent upstream non-native fish movement at a range of hydrologic conditions while not jeopardizing natural stream processes. CWCB Water Plan Grant funding is not being requested to accomplish this task.

Method/Procedure:

We propose to complete this task by electrofishing fish in North Elk Creek upstream and downstream of the constructed fish barrier and utilizing a combination of implanted tags and/or other physical marks on fish to evaluate individual fishes' success in surmounting the fish barrier. A typical scenario would involve marking fish from upstream of the fish barrier, releasing them downstream of the fish barrier, and subsequently monitoring upstream of the fish barrier to confirm no marked fish re-entered the reach. This method could provide an evaluation of fish behavior at the fish barrier, and what size of fish and hydrologic conditions were associated with fish passage or failure to pass.

Deliverable:

We aspire to make this information available to other practitioners so that we may contribute to the body of empirical evidence related to the ever expanding use of fish barriers in the native fish conservation context. After confirming the North Elk Creek Fish Barrier prevents upstream movement of fish, we will proceed with Task 3.

Tasks
Task 3 – North Elk Creek Fish Reclamation and Restoration (funded by partners and other sources)
Description of Task:
Upon meeting the previous outcomes, CPW will remove all non-native fish from the North Elk Creek watershed upstream of the fish barrier, the final step in ultimately protecting the genetically pure population of CRCT from competition or hybridization with non-native species present downstream. CWCB Water Plan Grant funding is not being requested to accomplish this task.
Method/Procedure:
Task 3 would likely be accomplished with a chemical reclamation upstream of the fish barrier. The length of stream in which CPW will chemically treat post-fish barrier construction will depend on the extent of upstream non-native fish invasion at that time. Next, following reclamation, the sections of stream treated will be left fishless for a period of time sufficient to reduce or eliminate the presence of WD upstream of the fish barrier. Once enough time has passed to sufficiently disrupt the lifecycle of Mc, genetically pure and WD-negative North Elk Creek CRCT will be re-established into the treatment reach. The restoration of the North Elk Creek CRCT population will be subsequently monitored to ensure ongoing project success.
Deliverable:
With completion of this task, approximately 11.2 miles of North Elk Creek will be restored to a genetically pure and WD-negative population of North Elk Creek CRCT. This population will be protected from invasion by non-native, WD-positive fish with the construction of the fish barrier (Task 1) and subsequent removal of non-native fish upstream of the fish barrier (Task 3). This project will occur entirely on publicly accessible U.S. Forest Service lands within the White River National Forest, and will also protect a unique recreational opportunity for anglers to fish for CRCT in their native range.

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit B
Schedule and Budget

Prepared Date: June 26, 2021

Name of Applicant: Tory Eyre, Colorado Parks and Wildlife

Name of Water Project: North Elk Creek Fish Barrier Construction

Project Start Date: November 20, 2021

Project End Date: November 30, 2026

Task No.	Task Description	Task Start Date	Task End Date	Grant Funding Request	Match Funding	Total
1	Construction of Fish Barrier	12/15/21	11/30/26	$205,000	$205,000	$410,000
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
						$0
			Total	$205,000	$205,000	$410,000

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Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Detailed Budget Estimate

Prepared Date: 26-Jun-21
Name of Applicant: Tory Eyre, Colorado Parks and Wildlife
Name of Water Project: North Elk Creek Fish Barrier Construction

Construction

Task 1 - Construction of Fish Barrier

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Mobilization / Demobilization / Bonding / Insurance	LS	1	N/A	$ 68,320.00	$ 34,160	$ 34,160
Construction Stake Out	LS	1	$ 1,000	$ 1,000.00	$ 500	$ 500
Dewatering / Care of Water	LS	1	$ 8,000	$ 8,000.00	$ 4,000	$ 4,000
Erosion Control	LS	1	$ 500	$ 500.00	$ 250	$ 250
					$ -	
Barrier Installation					$ -	
Excavation for Channel Reshaping and Barrier	CY	2500	$ 17.00	$ 42,500.00	$ 21,250	$ 21,250
Fill for Channel Reshaping and Barrier	CY	1502	$ 5.00	$ 7,510.00	$ 3,755	$ 3,755
Furnish, Deliver and Place Backfill for Walls	CY	165	$ 50.00	$ 8,250.00	$ 4,125	$ 4,125
Furnish, Deliver and Place baselayer for Zblocks	CY	60	$ 50.00	$ 3,000.00	$ 1,500	$ 1,500
Furnish, Deliver and Place Concrete Eco-Blocks for Diversion Dam	PER BLOCK	164	$ 395.00	$ 64,780.00	$ 32,390	$ 32,390
Furnish, Deliver and Place Concrete Zblocks for Ramp	PER BLOCK	36	$ 3,125.00	$112,500.00	$ 56,250	$ 56,250
Furnish, Deliver and Place Rip Rap (D50 18") for Bank Protection	CY	101	$ 50.00	$ 5,050.00	$ 2,525	$ 2,525
Furnish, Deliver and Place Geotextile Fabric (CDOT Class 1)	SQFT	2500	$ 1.50	$ 3,750.00	$ 1,875	$ 1,875
Furnish, Deliver and Place BentoMat CLT Geotextile	SQFT	2500	$ 5.00	$ 12,500.00	$ 6,250	$ 6,250
Fill and Shaping for Berm	CY	201	$ 20.00	$ 4,020.00	$ 2,010	$ 2,010
Contingency				$ 68,320.00	$ 34,160	$ 34,160
TOTAL				$ 410,000.00	$ 205,000	$ 205,000