PHIL WEISER
Attorney General

NATALIE HANLON LEH
Chief Deputy Attorney General

ERIC R. OLSON
Solicitor General

ERIC T. MEYER
Chief Operating Officer

STATE OF COLORADO
DEPARTMENT OF LAW

RALPH L. CARR COLORADO JUDICIAL CENTER
1300 Broadway, 10th Floor
Denver, Colorado 80203
Phone (720) 508-6000

Natural Resources and Environment Section

AGENDA

Colorado Natural Resources Trustees Meeting
March 17, 2022
9:00 am to 11:00 am

Location: Hybrid In-Person and Zoom Meeting

In-Person:
Ralph L. Carr Colorado Judicial Center
2 East 14th Ave, Denver CO 80203
Room 1E

Zoom Meeting:
Link to Meeting: https://us02web.zoom.us/j/84782342491
Meeting ID: 847 8234 2491

Note: A hyperlink to the meeting will be emailed to Trustees and staff and will be posted on the Trustee website:
https://coag.gov/office-sections/natural-resources-environment/trustees/whats-new/

Open Session

1. Approve Agenda – 1 minute

2. Approval of Minutes from December 10, 2021 Meeting – 1 minute

   Action Item:
   (1) Review and approve minutes from December 10, 2021 meeting

   Document:
   (1) Draft Minutes from December 10, 2021 meeting

3. Discuss Rescheduling Summer Trustee Meeting – 5 minutes

   Action Item:
   (1) Consider rescheduling Summer Trustee Meeting

   Documents: None

4. Budgets Update – (Jennifer Talbert) - 5 minutes

   Action Items: None

   Document:
   (1) Budget Spreadsheet

5. Shattuck Chemical Company – Denver Grant Frontier Restoration Proposal – (David Banas, Susan Newton, Ed Perkins) - 10 minutes

   Action Item:
   (1) Consider approving funding for Grant Frontier Restoration proposal

   Documents:
   (1) Memo from David Banas
   (2) Grant Frontier Restoration proposal
   (3) Draft Resolution approving funding for Grant Frontier Restoration proposal

6. California Gulch – ARWC Project – (David Kreutzer, Susan Newton, Ed Perkins) – 25 minutes

   Action Item:
   (1) Consider approving funding for Upper Arkansas Comprehensive Watershed Restoration Project

   Documents:
   (1) Memo from David Kreutzer
   (2) Upper Arkansas Comprehensive Watershed Restoration Project proposal (including narrative, budget, map and Paklaian resume)
   (3) Draft Resolution approving funding for Upper Arkansas Comprehensive Watershed Restoration Project proposal

7. Suncor – (Susan Newton) – 5 minutes

   Action Items: None

   Documents: None

8. Lowry Landfill – (Emily Splitek, Jennifer Talbert) – 5 minutes

   Action Items: None

   Documents: None

9. Rocky Mountain Arsenal – (David Banas) – 5 minutes

   Action Item:
   (1) Sign Amendment to CD

   Document:
   (1) Amendment to CD

10. Vail Resorts Release – (Jason King) – 5 minutes

    Action Items: None

    Documents: None

11. North Saint Vrain – (Jason King, Melynda May) – 5 minutes

    Action Item:
    (1) Consider whether to approve pursing a claim pending the results of further testing

    Documents: None

12. Bonita Peak Mining District – (Emily Splitek, Jennifer Talbert, David Banas, Doug Jamison) – 5 minutes

    Action Items: None

    Documents: None

Executive Session

13. Bonita Peak Mining District – 10 minutes

    Action Items: None

    Documents: None

Open Session

14. Report from Executive Session – 1 minute

    Action Item: None

    Documents: None

15. Bonita Peak Mining District – 5 minutes

    Action Item:
    (1) Consider options concerning settlement and BPMD Trustee Council

    Documents: None

16. Quick Updates – (Staff) – 20 minutes

    a. West Creek – (Jennifer Talbert)

       Action Items: None

       Documents: None

    b. Kensington Spill – (Melynda May)

       Action Items: None

       Documents: None

c. NRD Master Task Order Contracting Update – (David Kreutzer)

Action Items: None

Documents: None

d. NRD Guidance Update – (David Banas, Jennifer Talbert, Robert Harris)

Action Items: None

Documents: None

e. Infrastructure Bill – (Jennifer Talbert)

Action Item:
(1) Consider whether to pursue infrastructure bill restoration funding

Documents: None

ITEM #1

NO DOCUMENT

ITEM #2

Colorado Natural Resource Damages Trustees
Meeting Minutes
December 10, 2021
(Approved _____)

In Attendance:

TRUSTEES
Phil Weiser, Attorney General
Dan Gibbs, Executive Director, Colorado Department of Natural Resources (DNR)
Shaun McGrath, Director of Environmental Programs, Colorado Department of Public Health and Environment (CDPHE)

STATE TRUSTEE STAFF
Amy Beatie, Deputy Attorney General, Natural Resources and Environment Section (NRE)
David Kreutzer, First Assistant Attorney General, NRE
David Banas, Senior Assistant Attorney General, NRE
Jason King, Senior Assistant Attorney General, NRE
Emily Splitek, Assistant Attorney General, NRE
Tracie White, CDPHE
Jennifer Talbert, CDPHE
Doug Jamison, CDPHE
Susan Newton, CDPHE
Melody Mascarenez, CDPHE
Ed Perkins, Colorado Parks and Wildlife, DNR (CPW)
Robert Harris, CPW
Mindi May, CPW

OTHER STATE STAFF
Laura Kelly, Senior Paralegal, NRE
Dan Graeve, Administrative Assistant, NRE
Phalen Kohlruss-Reuman, AGO Intern

PUBLIC OR GOVERNMENT PROJECT PROPONENTS
Laura Archuleta, U.S. Fish and Wildlife Service
Dani Cook, U.S. Forest Service
Benjamin Lara, U.S. Forest Service
John Smeins, U.S. Bureau of Land Management
Tracie Robb, U.S. Bureau of Reclamation
Josh Nehring, CPW
Tom Waters, CPW
Paul Foutz, CPW
Sarah Mudge, Lake County Commissioner
Adam Beh, Colorado Conservancy Coalition (CCC)
Kyle Clifton, CCC
Luke Javernick, River Science
Chelsey Nutter, River Science
Will Clements, Colorado State University

Open Session

Trustee Weiser called the meeting (held via Zoom) to order at approximately 12:30 p.m. on December 10, 2021. The meeting's purpose was to brief the Trustees on the current status of issues relating to Natural Resource Damages (NRD) projects, and to request direction and/or approval for various actions. Members of the public and project proponents introduced themselves.

Agenda

Trustee Weiser welcomed any feedback on agendas, and suggested that all quick updates be consolidated into one agenda item in the future. Trustee McGrath moved to approve the Agenda, Trustee Gibbs seconded the motion, and the motion was unanimously approved.

Minutes

Trustee Weiser presented the minutes from the October 29, 2021 Trustee Meeting. Trustee Gibbs moved to approve the October 29, 2021 minutes. Trustee McGrath seconded the motion, and the motion was unanimously approved.

Budget Update

Jennifer Talbert presented the budget indicating that there were no new items to report.

Ralston Creek/Carwash

Mindi May reported a notification through the Spill Report of some green fluid escaping from a car wash in Arvada into Ralston Creek. CPW investigated and did not find any impacts to wildlife or fish.

California Gulch

David Kreutzer reported that Trustee Staff sent out a Solicitation for Project Proposals (SPP) and received six proposed projects. Staff recommended Trustee approval of the following five project proposals. Mr. Kreutzer requested Trustee approval for Staff to continue working with the sixth project proponent, the Arkansas River Watershed Council and the Trustees unanimously approved. Staff recommended the following projects:

1) *Central Colorado Conservancy: Property Acquisitions Project* - Adam Beh presented CCC's project proposal to acquire five new parcels along the Arkansas River and protect them under perpetual conservation easements. These properties will also provide connectivity with other protected land previously acquired with Trustee funding.

2) *Colorado Parks and Wildlife: Mount Shavano State Fishery Low-Head Dam Removal Project* - Josh Nearing presented CPW's project proposal to remove the low-head dam on the Arkansas River near the Mount Shavano State Fish Hatchery. Mr. Nearing explained that the dam has not been used since 2000 and it has become a migration barrier for all fish species and a recreational safety hazard.

3) *Colorado State University: Assessing Remediation and Restoration Effectiveness in the Upper Arkansas River Project* - Will Clements presented CSU's project proposal to continue long-term sampling studies regarding the Arkansas River's response to both Superfund remediation and NRDs restoration. Mr. Clements shared CSU's long-term data which quantifies improvements in

water quality and habitats. Trustee Weiser stated the importance of getting these remarkable success stories out to the public, and Trustee Staff added that there is a nationwide need to be able to quantify restoration success.

4) *River Science: Big Cottonwood Post-Fire Long-Term Recovery and Restoration Project* - Luke Javernick presented River Science's project proposal to restore the Big Cottonwood Creek which was adversely impacted by the Hayden Peak Fire of July 2016 and subsequent flooding in 2018. Mr. Javernick explained that the River Science project will focus on widening and raising the channel bed to improve water quality and habitat by using low-cost Process-Based Restoration techniques (hand-built structures and large wood accumulations).

5) *United States Forest Service: Lost Lake Access Project* - Dani Cook presented the USFS's project proposal to relocate the popular Lost Lake destination trail and parking area to make it more sustainable. Ms. Cook explained that the current trailhead and trails have created a braided trail system that causes damage to the riparian area, watershed, and habitat, as well as erosion and degradation of forest health. The USFS proposes the establishment of a trailhead and official trails which will improve wildlife habitat, watershed, and forest health, while extending the recreational user experience.

Trustee McGrath moved to approve the resolution to award $900,000 for the *Property Acquisitions Project proposed by the Central Colorado Conservancy*. Trustee Gibbs seconded the motion, and the motion was unanimously approved.

Trustee Gibbs moved to approve the resolution to award $831,300 for the *Mount Shavano State Fishery Low-Head Dam Removal Project proposed by Colorado Parks and Wildlife*. Trustee McGrath seconded the motion, and the motion was unanimously approved.

Trustee McGrath moved to approve the resolution to award $480,500 for *Assessing Remediation and Restoration Effectiveness in the Upper Arkansas River Project proposed by Colorado State University*. Trustee Gibbs seconded the motion, and the motion was unanimously approved.

Trustee Gibbs moved to approve the resolution to award $113,444 for the *Big Cottonwood Post-Fire Long-Term Recovery and Restoration Project proposed by River Science*. Trustee McGrath seconded the motion, and the motion was unanimously approved.

Trustee McGrath moved to approve the resolution to award $79,830 for the *Lost Lake Access Project proposed by the U.S. Forest Service*. Trustee Gibbs seconded the motion, and the motion was unanimously approved.

North Saint Vrain

Jason King reported that CDPHE's Water Quality Control Division issued a notice of violation and penalty order to MTY Trucking, LLC alleging unauthorized discharge of a pollutant into State water. Mr. King will continue to monitor the situation and gauge MTY's level of cooperation. He added that sampling data is being collected, and after all data has been analyzed, Abt Consulting will begin calculating a preliminary estimate of damages.

Rocky Mountain Arsenal

David Banas reported that Trustee Staff have been working with Shell to amend the original consent decree in federal court so that Staff can administer the remaining Foundation Fund monies together with the Recovery Fund monies. Staff has an agreement with Shell on how to amend the consent decree and preparations are being made to re-open the case so the amendment can be lodged in court.

Standard Metals

Jennifer Talbert reported that a public meeting was held in November with the Coal Creek Watershed group to launch the publication of the Solicitation of Project Proposals for 50% of the Standard Metals settlement funds. Registrations are due in January 2022, and proposals will likely be due at the end of April or May.

Vail/Mill Creek

Mr. King provided an update on the release of contaminated water from Vail's snowmaking system into Mill Creek back in September. Dead fish and a lack of algae were observed, and Department of Agriculture sampling data indicated an elevated level of copper. Staff is waiting on the analysis of the September sampling data.

Executive Session

Deputy AG Beatie recommended the Trustees make a motion to go into Executive Session to consider Agenda Items #10 and #11. She stated the Executive Session is authorized pursuant to section 24-6-402(3)(a)(II) and (III), C.R.S. and other laws that allow the Trustees to enter into Executive Session for specific purposes. At approximately 1:50 p.m., Trustee Gibbs moved to begin an Executive Session to discuss Agenda Items #10 and #11. Trustee McGrath seconded the motion, and the motion was unanimously approved. All members of the public and government project proponents were moved to the Zoom waiting room. The Executive Session was digitally recorded.

At approximately 2:25 p.m., Trustee Gibbs moved to end the Executive Session. Trustee McGrath seconded the motion, and the motion was unanimously approved, whereupon Executive Session was ended. Members of the public or government project proponents in the Zoom waiting room were admitted into the Open Session.

Open Session

Deputy AG Beatie stated that pursuant to statute, the Trustees went into Executive Session to consider Agenda Items #10 and #11. The discussion during Executive Session was limited to those items and no formal action was taken.

Bonita Peaks Mining District (BPMD)

Trustee Gibbs moved to approve the consent decree with Sunnyside Gold Corporation (SGC) for natural resource damages in the amount of $1.6 million. Trustee McGrath seconded the motion, and the motion was unanimously approved. Emily Splitek noted that a 30-day public comment period will occur after the consent decree is lodged in federal court.

Mr. Banas reminded the Trustees about the earlier BPMD settlement with Blue T for approximately $300,000 for both NRDs funding and response costs. Mr. Banas suggested that Staff recommend a certain percentage of that amount for NRDs, so it can be combined with the SGC settlement funds. Ms. Talbert suggested that 50% of the Standard Metals settlement also be included in the combined BPMD NRDs fund. The Trustees directed Staff to develop a plan to combine these funds and present a recommendation at a future Trustee meeting.

At approximately 2:30 p.m., Trustee McGrath moved to adjourn the meeting. Trustee Gibbs seconded the motion, and the motion was unanimously approved.

ITEM #3

NO DOCUMENT

ITEM #4

Natural Resource Damages Accounts

NRD Matter	California Gulch	Fountain Creek	Idarado	Lowry	Rocky Flats
Total Settlement amount	$10,000,000.00	$345,000.00	$1,000,000.00	$1,606,930.00	$10,000,000.00
Total NRD dollars spent	$8,050,786.84	$0.00	$1,561,412.98	$1,257,894.52	$10,000,000.00
Account Balance as of 1/31/22	**CDPHE | DOI $6,222,761.09|$1,200,000**	**$357,303.60**	**$198,883.24**	**$668,421.65**	**$11,338.09**
Trustee Resolution Date	12/10/2021	4/23/2019	6/24/2019	NONE	10/9/2018
Current Trustee awarded amount	$2,325,244.00	$357,303.60	$287,000.00	$0.00	$11,338.09
Pending Contracts	$0.00	$0.00	$0.00	$0.00	$0.00
Current Contract Encumbrances	$77,216.63	$0.00	$168,200.00	$0.00	$11,261.00
Remaining available funds	**$6,145,544.46|$1,200,000**	**$357,303.60**	**$30,683.24**	**$668,421.65**	**$77.09**
Settlement Restrictions	YES	NO	NO	YES	NO
Type of Restriction	Funds must be used in accordance with Restoration Plans developed by the State and USFWS	None	None	Lowry has 2 settlements - (1)revolving loan fund with 200K remaining and (2) groundwater nexus.	National Defense Authorization Act
Interest and explanations	Segregated Funds. Interest not earmarked for site.	Interest goes to CPW to include in Chilcott Diversion Project, no remaining funds available	Interest goes to the Governor's Basin Restoration Project, no remaining funds available	$259,415.26 was returned by DURA. Revolving loan fund balance is $459,415.26. $209,006.39 available for new projects	Interest awarded to Rocky Mountain Youth Corps, no remaining funds available

Natural Resource Damages Accounts

NRD Matter	RMA Recovery Fund	RMA Found-ation Fund	Shattuck	Standard Metals	Summitville	Suncor	Uravan
Total Settlement amount	$17,400,000.00	$10,000,000.00	$1,250,000.00	$415,368.00	$5,000,000.00	$1,230,000.00	$1,000,000.00
Total NRD dollars spent	$12,037,249.70	$8,697,832.00	$1,272,904.00	$0.00	$5,127,125.39	$129,738.44	$1,023,823.62
Account Balance as of 1/31/22	**$8,443,411.63**	**$1,465,838.93**	**$23,156.18**	**$460,892.65**	**$260,732.89**	**$1,129,208.07**	**$345,036.22**
Most recent Trustee Resolution Date	3/24/2021	3/28/2018	NONE	NONE	1/21/2021	10/9/2018	3/24/2021
Current Trustee awarded amount	$5,707,087.93	$1,388,523.00	$0.00	$0.00	$1,171,620.00	$1,230,000.00	$270,000.00
Pending Contracts	$0.00	$0.00	$0.00	$0.00	0.00	0.00	$0.00
Current Contract Encumbrances	$1,474,393.95	$550,000.00	$0.00	$0.00	$21,734.22	$1,093,896.87	$341,678.00
Remaining available funds	**$6,969,017.68**	**$915,838.93**	**$23,156.18**	**$462,479.46**	**$238,998.67**	**$35,311.20**	**$3,358.22**
Settlement Restrictions	NO	NO	NO	NO	YES	NO	NO
Type of Restriction	None	Foundation Fund can only be used with NGC	None	Money received through settlement with insurance company - no NRD requirements	All money must be spent in the Alamosa River Watershed	None	None
Interest and explanations	Recovery Fund-Trustees agreed to work with NGC for restoration projects	Waiting for Amended Consent Decree to reallocate funds to RMA Recovery Fund	Denver submitted a proposal for the remaining funds	Waiting for project submittals for Gunnison River Basin	Interest awarded to TU, no remaining funds available	Interest was not awarded in the 2018 Trustee resolution	Interest awarded to WEEDC, no remaining available funds

ITEM #5

PHIL WEISER
Attorney General

NATALIE HANLON LEH
Chief Deputy Attorney General

ERIC R. OLSON
Solicitor General

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Chief Operating Officer

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STATE OF COLORADO
DEPARTMENT OF LAW

Natural Resources & Environment

March 4, 2022

M E M O R A N D U M

TO: Colorado Natural Resources Trustees

FROM: David Banas
Senior Assistant Attorney General

RE: Greenway Foundation Proposal for Remaining Shattuck Funds

BACKGROUND

Since the 2001 Consent Decree was lodged in federal district court, we have worked with the City and County of Denver, the Greenway Foundation, local community groups and other partners to fund projects with the approximately $2 million in NRDs we recovered from the Shattuck Chemical Company in southwest Denver.

UPDATE

Approximately $23,000 remains in the Shattuck NRD account. In the fall of 2021, staff contacted Denver to discuss the possibility of developing a project to expend these remaining funds. Denver has proposed a project that will remove noxious weeds and plant native species in its Grant Frontier Park.

RECOMMENDATION FOR ACTIONS

Staff recommends approval of the Grant Frontier Restoration proposal for the remainder of the Shattuck NRD funds, including interest.

ATTACHMENTS

1. Grant Frontier Restoration proposal
2. Draft Resolution approving the Grant Frontier Restoration proposal

Shattuck NRD Proposal

Grant Frontier Restoration

March 3, 2022

City and County of Denver

Parks and Recreation

Cincere' Eades

Cincere' Eades

Resiliency and Trails Supervisor

Parks and Recreation/Planning, Design & Construction
101 W. Colfax Avenue, Suite 900 | Denver, CO 80202
www.denvergov.org/parksandrecreation

Background

The City & County of Denver's Department of Parks and Recreation (DPR) portfolio contains an 8.8-acre parcel along the South Platte River known as Grant Frontier Park. The park was renovated in 2017 and contains several nature-play features, various native habitat types, and public art displays. Within the park there is a small channel that funnels water from the South Platte River to create a small island and wetland before connecting back to the main waterway. The small island created by the channel and the surrounding landscapes have a high number of undesirable species present, bare unvegetated ground and contains few wetland plant species. This proposal is requesting funds to manage 2.3 acres of the park in order to control the noxious and undesirable species, expand native habitat through plantings and seeding, and to coordinate these actions closely with Denver Park Staff to ensure comprehensive and on-going care for the natural and cultural resources at this site.

Project Benefits

This project will have direct benefits that focus on expansion of native wetland habitat, water quality, reduction of noxious weeds, and enhanced user experience. In total, 2.3 acres of upland habitat will be restored to a healthy ecological function, .3 acres of new wetland habitat will be created and Denver Park's staff will have enhanced knowledge of natural resource management, promoting proper long-term stewardship of this location.

DPR is requesting $25,000 to assist with the restoration of the site. DPR will match the grant request with $15,000, totaling the project at $40,000.

Outline of the project costs are below.

Proposed Work and Cost

- Vegetation Management = $25,000
  - Noxious and undesirable plant management and control within the 2.3 acres for 2 years
  - Monthly trash and debris removal within the 2.3 acres for 2 years

- Revegetation = $5,000
  - Spot seeding along the 2.3-acre area
  - Planting of wetland herbaceous plugs within the channel totaling .3 acres

- Project Coordination and Planning = $10,000
  - Concept design for wetland planting area of .3 acres
  - Monthly monitoring reports
  - 4 on-site coordination and maintenance meetings with various members of Denver Parks and Recreations Operations and Planning staff

Total project cost = $40,000

Tentative Project Schedule

Project Initiation – April 2022

2 Coordination meetings – Summer/Fall 2022

2 Coordination meetings – Summer/Fall 2023

Project Conclusion – Spring 2024

Supporting images:

Bare ground along wetland channel that need wetland vegetation. (species composition mostly contains upland plants)

Large patches of bare unvegetated ground.

Nature play features on the edge of native habitat types becoming inundated with noxious and undesirable species. Cheatgrass (Bromus Tectorum) and Kochia (Bassia Scoparia) present.

COLORADO NATURAL RESOURCES TRUSTEES
RESOLUTION OF MARCH 17, 2022
CONCERNING THE CITY AND COUNTY OF DENVER PROPOSAL FOR SHATTUCK FUNDS

WHEREAS, the Colorado Natural Resources Trustees ("Trustees") are responsible for the management and direction of Colorado's natural resource damages program;

WHEREAS, the Trustees are responsible for administering State funds to restore, replace, or acquire the equivalent of injured natural resources;

WHEREAS, approximately $23,000 remains of the approximately $2 million in Shattuck Chemical Company NRD funds;

WHEREAS, on March 3, 2022, the City and County of Denver ("Denver") submitted a proposal entitled "Grant Frontier Restoration" ("Grant Frontier Proposal") seeking $25,000 in Shattuck NRD funds to manage 2.3 acres of the Grant Frontier Park in order to control the noxious and undesirable plant species, expand native habitat through plantings and seeding, and to coordinate these actions closely with Denver Park Staff to ensure comprehensive and on-going care for the natural and cultural resources at the site;

NOW THEREFORE, the Colorado Natural Resource Trustees resolve as follows:

The Trustees hereby approve the release to Denver of the remaining available funds from the Shattuck Chemical Company NRD fund, plus any and all accrued interest, the total not to exceed $25,000, to be applied towards the March 3, 2022 Grant Frontier Proposal, subject to the following conditions:

1. This resolution will expire March 17, 2027, and the funds will no longer be available, unless a contract consistent with this resolution is executed by that date.
2. Release of the Funds is contingent on Denver obtaining and contributing the matching funds identified in the Grant Frontier Proposal.
3. Release of the Funds is contingent on compliance with all laws and regulations, including but not limited to: State and Federal laws, local ordinances, permitting and zoning requirements, and water rights requirements.

4. This approval is contingent on the Trustees' staff approval of the final restoration plan and use of the funds for this sole purpose.

_____ _____

Philip J. Weiser
Colorado Attorney General

Date

_____ _____

Shaun McGrath,
Director of Environmental Programs, CDPHE

Date

_____ _____

Dan Gibbs, Executive Director, DNR

Date

ITEM #6

PHIL WEISER
Attorney General

NATALIE HANLON LEH
Chief Deputy Attorney General

ERIC R. OLSON
Solicitor General

ERIC T. MEYER
Chief Operating Officer

STATE OF COLORADO
DEPARTMENT OF LAW

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1300 Broadway, 10th Floor
Denver, Colorado 80203
Phone (720) 508-6000

Natural Resources & Environment

March 4, 2022

M E M O R A N D U M

TO: Colorado's Natural Resources Trustees

FROM: David Kreutzer, First Assistant Attorney General

RE: California Gulch Project: Trustee Council Recommendation

BACKGROUND

California Gulch was one of the original 1983 NRDs cases. A 2008 settlement yielded $10.25 million in natural resources damages for the State and a similar amount for the federal trustees. Beginning in 2009, Trustee staff worked with the federal trustees in a "Trustee Council" to administer these funds pursuant to a Trustee Council Memorandum of Understanding ("MOU"). This collaboration resulted in approval of approximately $8 million in restoration projects along the Arkansas River. In 2020, the MOU was updated to require State Trustee, rather than trustee staff, approval of projects.

The Trustee Council issued a Solicitation for Project Proposals in September 2020, hoping to award approximately $7.2 million in remaining State and federal NRD funds and accrued interest. We received several project proposals in September 2021. We followed the November 2014 Project Selection Guidance in selecting projects to recommend for funding. The Trustee Council has evaluated the proposals, communicated with proponents, and suggested some amendments to the originally submitted projects. You approved most of the projects submitted in September 2021 at the December 2021 Trustee meeting. One project proposal received from the Arkansas River Watershed Collaborative ("ARWC") in September 2021 was incomplete, contained significant budget errors, and was not considered by the Trustees in December 2021.

UPDATE

Following several meetings with the Trustee Council, ARWC submitted a revised Project Proposal, entitled "Upper Arkansas Comprehensive Watershed Restoration Project" on February 23, 2022, and amended the budget and proposal text for a final Project on March 3, 2022. The Trustee Council unanimously supports this proposal.

ARWC proposes to administer, with partners, three initiatives to improve the Upper Arkansas riparian habitat injured by historic mining practices:

• Reclaiming abandoned mining areas through channel stabilization, treatment, and revegetation of fluvial tailings. ARWC, in collaboration with Trout Unlimited, also proposes development of water treatment technology to address contaminated underground mine pool water to ultimately benefit water quality and downstream fish habitat.

• Addressing aquatic species passage and sediment transport by implementing projects to improve existing culverts.

• Reducing forest fuel loading in critical sub-watersheds through forest thinning to reduce possible post-fire flooding and attendant impacts on downstream habitat and recreation.

The California Gulch Trustee Council does appreciate that ARWC worked with us to improve each of their projects and associated budgets through numerous meetings. The Trustee Council looks forward to more fully developed restoration plans to allow for Sate contracting of the projects.

RECOMMENDATION FOR ACTIONS

Please approve and sign the attached Resolution approving ARWC's Proposal.

ATTACHMENTS

Trustee Resolution on ARWC Proposal

California Gulch Natural Resource Damages Solicitation Project Proposal Executive Summary

Proposal Name: Upper Arkansas Comprehensive Watershed Restoration Project

Project Description: This project will focus on restoring, rehabilitating, protecting, and enhancing areas of the Upper Arkansas basin within Lake County through a comprehensive strategy of watershed-based project implementation that includes:

- Addressing stream habitat through in-channel and floodplain restoration to improve aquatic resources and associated riparian habitat.
- Reclaiming the lasting legacy of abandoned mines through channel stabilization, treatment, revegetation of fluvial tailings, and development of water treatment technology that will have the ultimate benefit of protection of water quality and downstream fish habitat.
- Addressing aquatic species passage and sediment transport by implementing projects to improve existing culverts and crossings.
- Reducing fuel loading in uplands of critical sub-watersheds through forest mitigation, which also helps reduce post-fire flooding, and its impacts on downstream values at risk, including but not limited to historic mine sites, public roads, and infrastructure, water quality, and water supplies.

Partners have prioritized all projects through various planning methods, detailed in individual project work plans.

Project Partners: CORE TEAM – ARWC (prime offeror), Lake County, Trout Unlimited
Additional partners: Lake County Open Space Initiative, Colorado Springs Utilities, Aurora Water, Parkville Water District, City of Leadville, Newmont Mining, USFS, USGS, BLM, BOR, DRMS, CPW, and private parties.

Point of Contact: Jonathan Paklaian, Executive Director, ARWC; jonathan@arkcollaborative.org, (719) 510-6373

Signed: _____ 3/3/2022

Project Timeline: 2022 – 2027; **Project total cost**: $7,907,750
NRD Ask: $3,953,875; **Match:** $3,953,875

MASTER Budget

	Overarching	Mines & Habitat	Upland Watershed Protection	Crossings	Total	NRD	Match
Personnel	*$258,000*	*$630,000*	*$99,000*	*$354,250*	*$1,341,250*	*$661,125*	*$680,125*
Contractors	*$20,000*	*$1,246,000*	*$1,700,000*	*$590,000*	*$3,556,000*	*$1,946,000*	*$1,610,000*
Supplies/ Materials	*$9,500*	*$955,500*	*$500*	*$1,481,000*	*$2,446,500*	*$1,291,750*	*$1,154,750*
Travel & Mileage	*$40,000*	*$50,500*	*$11,000*	*$7,500*	*$109,000*	*$55,000*	*$54,000*
Indirect/ Admin	*$18,000*	*$162,000*	*$99,000*	*$176,000*	*$455,000*	*$0*	*$455,000*
TOTAL	**$345,500**	**$3,044,000**	**$1,909,500**	**$2,608,750**	**$7,907,750**	**$3,953,875**	**$3,953,875**

Project Area: Overview map—an interactive version of the map is available at *https://arkcollaborative.maps.arcgis.com/apps/webappviewer/index.html?id=d0fa9cda0749463290cf8a3861fd9d31*

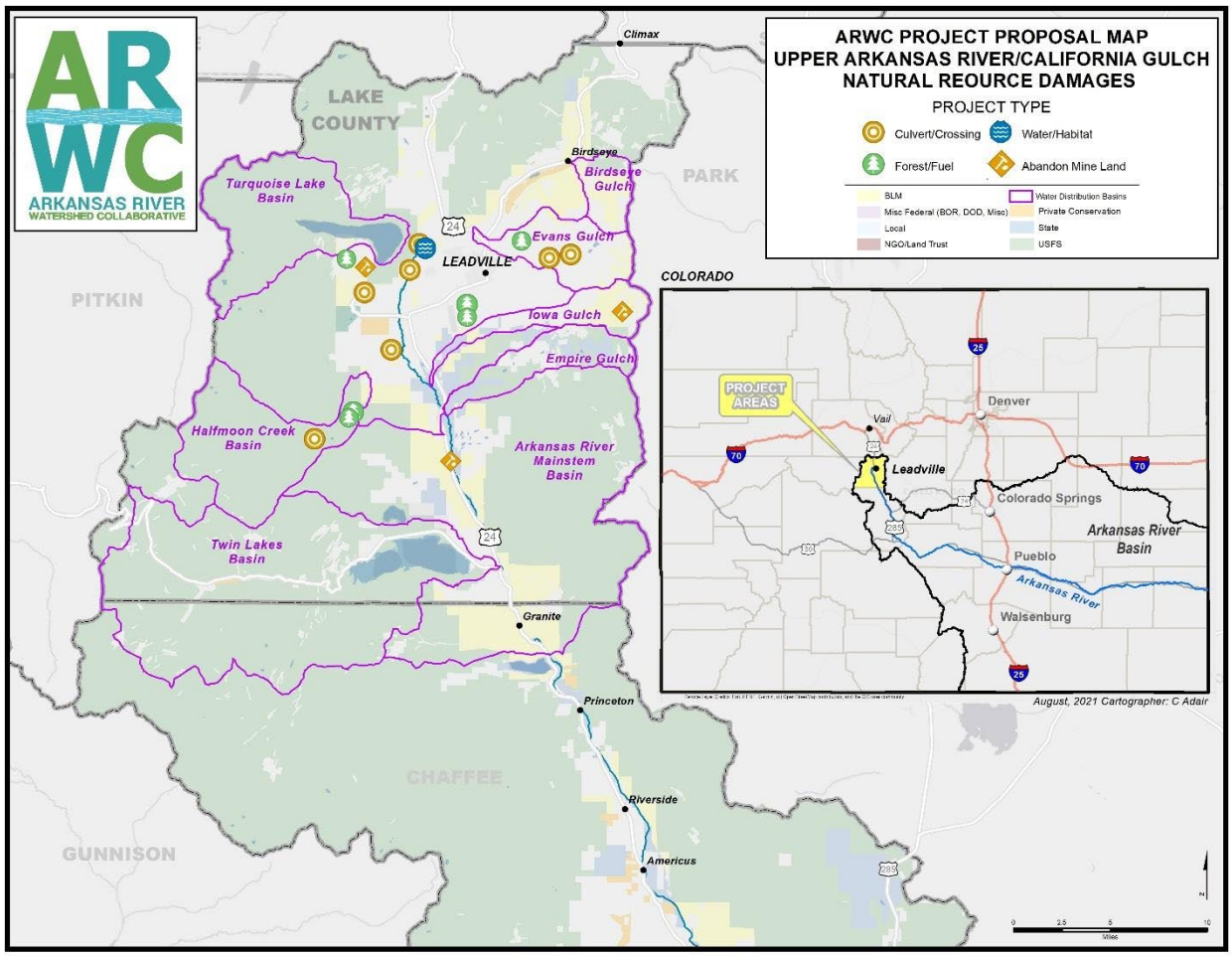


Figure 1. Overview map of all project locations.

Scope of Work

Introduction

The Arkansas River Watershed Collaborative (ARWC), Lake County (the County), and Trout Unlimited (TU) are the lead partners for the Upper Arkansas Comprehensive Watershed Restoration Project (the Project). The Project is designed as a collaborative and holistic approach to implementing a series of partnership projects across the landscape of Lake County where natural resource damages have occurred. ARWC, the County, and TU are the lead agencies, forming a core team. Still, many other partners are already engaged officially within our stakeholder team. They will actively participate in specific projects of the highest priority and area of interest. These partners include federal, state, and local government entities with interest in the resources and private landowners and businesses, such as Newmont and Freeport McMoRan mining companies. This Project will protect natural resources across Lake County. The mix and placement of projects will enhance public safety and recreational opportunities and help protect past investments of NRD funds from the California Gulch Settlement.

The program of work includes program-wide and project-specific monitoring plans and outreach. This program of work is designed to improve aquatic species habitat, terrestrial habitat (including upland forests, wetlands, and riparian), and water quality by addressing four major classifications of projects: A) Overarching Project Management, B) Mines and Habitat, C) Crossings, and D) Upland Watershed Protection. These four proposed programs work in concert in multiple ways to build a more resilient watershed and protect previously damaged resources in the upper Arkansas headwaters region.

A) Overarching Project Management

The Core Team will work on a suite of overarching tasks, including project and stakeholder coordination, outreach, creation of a Sampling and Analysis Plan (SAP) for monitoring, oversight of monitoring and reporting, and management of all components, including final reporting. This portion of the proposal also includes field data collection such as photo point monitoring and field mapping. We anticipate creating an outreach plan and preparing the SAP in the first quarter upon contracting. For outreach, we expect public meetings, tours, the creation of a story map and website for the Project, and interpretive signage as appropriate (with recognition of NRD funding). The Core Team lead for this work is ARWC. Admin is included in specific project areas based on the Federal de minimus of 10% is strictly counted as match.

Table 1. Overarching project management budget breakout.

Overarching						
	SAP/Monitoring	Engagement	Total	NRD	Match	Match Type
Personnel	**$53,000**	**$205,000**	**$258,000**	**$170,000**	**$88,000**	
Lake County	*$5,000*	*$15,000*	*$20,000*	*$0*	*$20,000*	*In-Kind*
ARWC	*$20,000*	*$150,000*	*$170,000*	*$135,000*	*$35,000*	*In-Kind*
TU	*$25,000*	*$20,000*	*$45,000*	*$35,000*	*$10,000*	*In-Kind*
Partners	*$3,000*	*$20,000*	*$23,000*	*$0*	*$23,000*	*In-Kind*
Contractors	**$0**	**$20,000**	**$20,000**	**$7,500**	**$12,500**	
Designer (signage, interp, reports…)		*$20,000*	*$20,000*	*$7,500*	*$12,500*	*Cash*
Supplies/Materials	**$1,000**	**$8,500**	**$9,500**	**$3,750**	**$5,750**	
Printing	*$1,000*	*$2,000*	*$3,000*	*$500*	*$2,500*	*Cash*
Signs		*$6,000*	*$6,000*	*$3,000*	*$3,000*	*Cash*
Misc.		*$500*	*$500*	*$250*	*$250*	*Cash*
Travel & Mileage	**$15,000**	**$25,000**	**$40,000**	**$25,000**	**$15,000**	*In-Kind*
Indirect/Admin	**$4,000**	**$14,000**	**$18,000**		**$18,000**	*In-Kind*
TOTAL	**$73,000**	**$272,500**	**$345,500**	**$206,250**	**$139,250**	

Table 2. Overarching project management metrics and outcomes.

Project Category	Number of Projects	Units	Quantity	Notes
Overarching	**1**			**Team Lead: ARWC**
Stakeholder Coordination		Meetings	30	Quarterly, or as needed for projects, team meetings, coordination with various project sub-teams, etc.
Monitoring	12	Each	12	SAP & monitoring projects
Outreach		Unit	1	Story Map website dedicated to project, public meetings/tours, news articles in local press, interp. signage as appropriate
Management		Unit	1	Reporting, financial management, coordination with NRDA Trust staff, etc.

B) Mines and Habitat

Fish and wildlife depend on well-functioning streams (geomorphically appropriate for the stream type) and healthy riparian habitats. Such stream corridors provide in-channel habitat conducive to all life-stages of fish and high-quality habitat for benthic organisms, avian species, and other species that depend on the connectivity of riverine and terrestrial habitats. Goals within this project will focus on stabilizing stream banks and promoting diverse stream morphology and floodplain connectivity; reducing erosion and downstream sedimentation; enhancing overhead cover for trout; and creating diverse in-stream habitat including pools, riffles, runs, and glides that are crucial to trout spawning habitat. The Core Team lead for this work will be TU, with project work specifically taking place at the Steiner property, which is further described below.

Given the history of mining and associated disturbance in Lake County, the lines between abandoned mine land (AML) reclamation and habitat improvement tend to blur. Therefore, this proposal incorporates several projects focusing on AML reclamation and improvements to target natural resources. Lake County has a long history of robust, historic mining operations, with Iowa and California gulches being mined as early as 1860 for gold. By the 1870s, miners were also taking silver and lead from the area, leading to booming mine towns and villages throughout the county, which posted a population of over 40,000 by 1880. Mining continued at a brisk pace through the 1950s, saw periods of boom and bust, and continues today with operations at the Climax Molybdenum Mine at the headwaters of the Arkansas River. The rich mining history provided many years of economic prosperity to the region and yielded significant environmental degradation. Operating mines are managed under permits, but some historic mines, or abandoned mine land (AML) sites, have issues that continue to degrade water quality and target natural resources. TU will be considered the Core Team lead throughout the subsequent mining sections given its expertise and long history of on-the-ground projects in the area. The specific projects listed below for the Sherman, Dinero, and Fluvial Tailings all have unique aspects that will improve target natural resources such as wetland habitat, enhancement of water quality technology and improvements, and rehabilitation of aquatic, terrestrial riparian habitat adjacent to the Arkansas River.

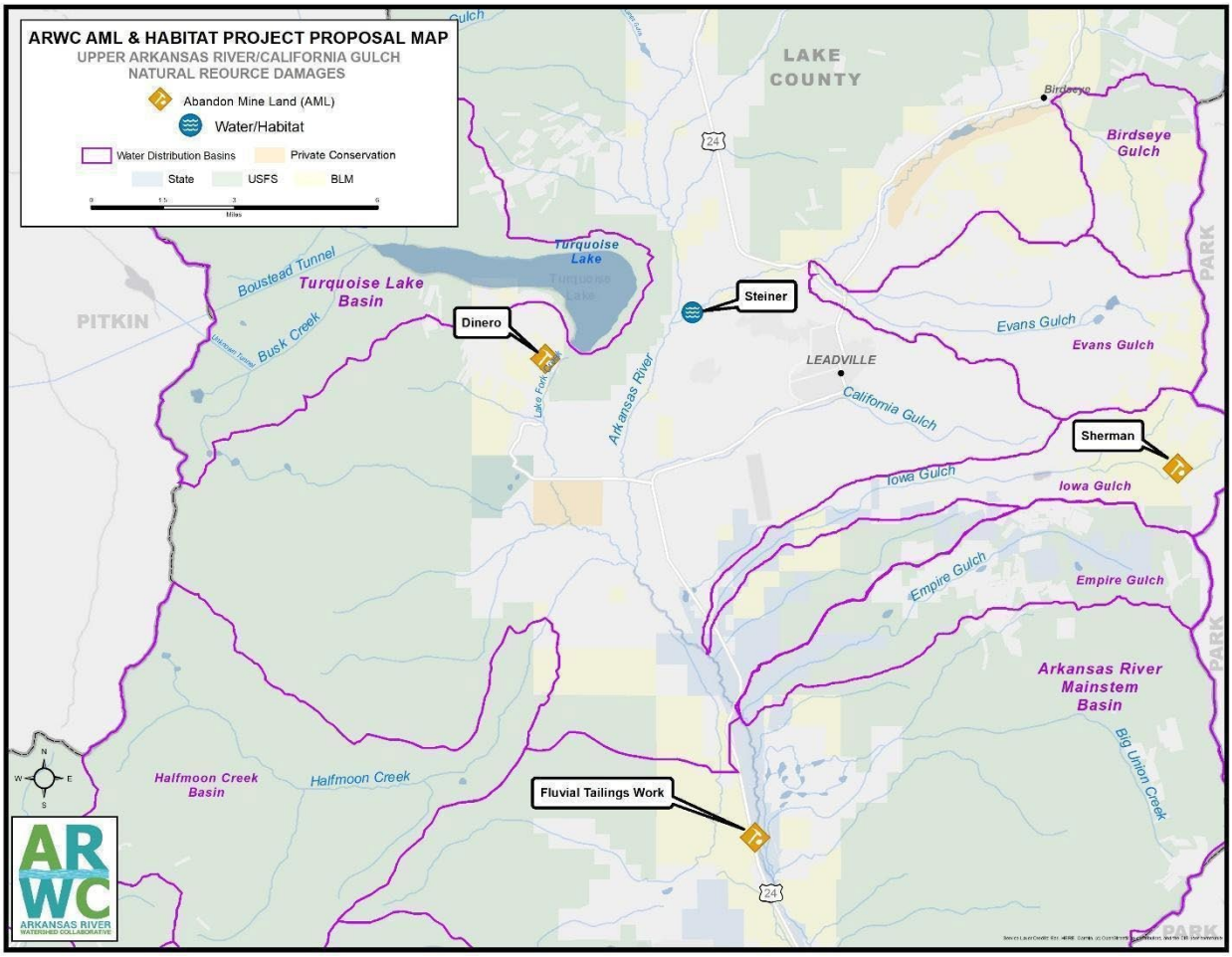


Figure 2. Mines & Habitat overview project location map.

Table 3. Mines & Habitat budget breakout.

Mines & Habitat								
	Sherman	Steiner	Dinero	Fluvial Tailings	Total	NRD	Match (cash and in-kind)	Match Type
Personnel	**$97,000**	**$10,000**	**$467,000**	**$56,000**	**$630,000**	**$281,500**	**$348,500**	
Lake County	*$500*	*$500*	*$500*	*$500*	*$2,000*	*$500*	*$1,500*	*In-kind*
ARWC	*$1,500*	*$1,500*	*$1,500*	*$1,500*	*$6,000*	*$6,000*	*$0*	
TU	*$55,000*	*$8,000*	*$15,000*	*$52,000*	*$130,000*	*$100,000*	*$30,000*	*In-Kind*
USGS			*$425,000*		*$425,000*	*$175,000*	*$250,000*	*Cash and in-kind*
Drms	*$35,000*		*$20,000*		*$55,000*	*$0*	*$55,000*	*In-kind*
BLM			*$5,000*		*$5,000*	*$0*	*$5,000*	*In-kind*
Volunteers/Partners	*$5,000*	*$0*	*$0*	*$2,000*	*$7,000*	*$0*	*$7,000*	*In-kind*
Contractors	**$550,000**	**$270,000**	**$205,000**	**$221,000**	**$1,246,000**	**$888,500**	**$357,500**	
Heavy Equip	*$550,000*	*$190,000*		*$217,500*	*$957,500*	*$657,500*	*$300,000*	*Cash*
Habitat consultant		*$45,000*			*$45,000*	*$22,500*	*$22,500*	*Cash*
Engineering		*$35,000*			*$35,000*	*$0*	*$35,000*	*In-kind*
Lab			*$25,000*	*$3,500*	*$28,500*	*$28,500*		
Drilling			*$143,000*		*$143,000*	*$143,000*		
Geophysical			*$37,000*		*$37,000*	*$37,000*		
Supplies /Materials	**$795,000**	**$33,000**	**$16,000**	**$111,500**	**$955,500**	**$547,000**	**$408,500**	
Limestone				*$23,500*	*$23,500*	*$23,500*		
Compost				*$39,000*	*$39,000*	*$39,000*		
Seed/Willow	*$5,000*	*$5,000*		*$14,000*	*$24,000*	*$21,500*	*$2,500*	*Cash*
Trees for toe wood		*$12,000*			*$12,000*	*$6,000*	*$6,000*	*Cash*
Wattles, straw, silt fence	*$5,000*	*$1,000*		*$35,000*	*$41,000*	*$41,000*		
Sampling Supplies			*$16,000*		*$16,000*	*$16,000*		
Baffles	*$10,000*				*$10,000*	*$10,000*	*$0*	*Cash*
Grout	*$475,000*				*$475,000*	*$275,000*	*$200,000*	*Cash*
Rock	*$300,000*	*$15,000*			*$315,000*	*$115,000*	*$200,000*	*Cash*
Travel & Mileage	**$15,000**	**$3,500**	**$19,000**	**$13,000**	**$50,500**	**$25,000**	**$25,500**	
Indirect/Admin	**$95,000**	**$28,000**	**$2,000**	**$37,000**	**$162,000**	**$0**	**$162,000**	
TOTAL	**$1,552,000**	**$344,500**	**$709,000**	**$438,500**	**$3,044,000**	**$1,742,000**	**$1,302,000**	

Table 4. Mines and habitat metrics and outcomes.

Project Category	Number of Projects	Units	Quantity	Notes
Mines and Habitat	**4**			**Team Lead: Trout Unlimited**
Steiner	1	Linear ft	2000	TU will work with HGD, and private landowner
Dinero	1	Project	1	TU will work with USGS, BLM, and DRMS
Sherman	1	Linear ft	2000	TU will work with DRMS and Freeport McMoRan
Fluvial Tailings	1	Acres	6.88	TU will direct concurrent with other stream corridor work and property owners.

1. Project: East Fork of the Arkansas River

a. **Problem*:*** Work on this segment will improve over 2,000 feet of critical habitat on the Steiner Property immediately upstream of the confluence with East Tennessee Creek. This straightened segment of the East Fork of the Arkansas will be reconnected with an abandoned channel to add sinuosity, slow velocities, and improve targeted natural resources. The increased sinuosity will reconnect the adjacent floodplain to help enhance wetland and riparian habitats previously degraded by historic straightening. The project has a contributing drainage area of 52.2 square miles, draining to the west and south from the continental divide and surrounding high mountain ridges. The current site conditions consist of a bifurcated two channel reach that has hydraulic connectivity to both channel reaches (Figure 2). The southern channel is approximately 1600 LF and carries most of the current channel flow. This channel is fairly steep 1.26% gradient riffle/run channel with limited meander sinuosity. The channel consists of a cobble bed channel with nearly continuous riffle run sequence and little deep pool habitat. Eroding banks are present on several outer bend areas despite dense willow and sod vegetation, and point bar development is present in five locations. Fisheries and aquatic habitat are currently limited by swift riffle flow throughout the reach and limited deep pool/undercut bank habitat. In the Figure below, the northern reach on the site is the historic stream channel, which currently has limited hydraulic connectivity due to the south branch. However, the flow into the north channel is limited, particularly at lower flow rates, and currently has a series of nine (9) beaver dams spread throughout the reach (Figure 2).

b. **Approach:** The plan will reactivate the northern channel given its preferred geomorphic characteristics. This channel has significantly better fisheries potential than the existing southern reach. The channel length is approximately 2000 LF; the historic meander pattern will provide the potential for an excellent riffle/run/pool/glide sequence that will provide deep pool habitat that can be augmented with toe wood treatments. Not only will toe-wood restore aquatic habitat for terrestrial species, but it will provide needed stability of riparian along the 2,000 LF section. Additionally, the newly restored glide areas will provide excellent spawning gravels and substrate material for brown trout that frequent the reach and surrounding waters. Ideally, TU and Colorado Parks and Wildlife (CPW) would approach the property owner before establishing baseline fish surveys on the reach. The local CPW fish biologist has indicated that a historic sampling site (AR0490) is located below the confluence of the East Fork and Tennessee Creek and would like to survey the reach this summer if permitted by the property owner. Not only would this baseline study provide valuable, measurable results regarding design effectiveness, it would also help quantify potential benefits to target natural resources as part of this funding application. Throughout this project, TU will work with local firm Hydro-Geo Designs LLC. and their construction company, Land and Water Services Inc. A preliminary design document is included as part of this grant proposal in Appendix B, which proposes three design Alternatives for the reach and detailed cost estimates for each option. It should be noted that a Final Alternative has not been selected for this project and will likely depend on the funding award. Therefore, project partners have estimated some costs in this proposal based on the design document.

c. **Maps and Photos:** See map for the aerial image of existing and proposed alignment. Also refer to Appendices A and B for current iteration of design and budget for three Alternatives.

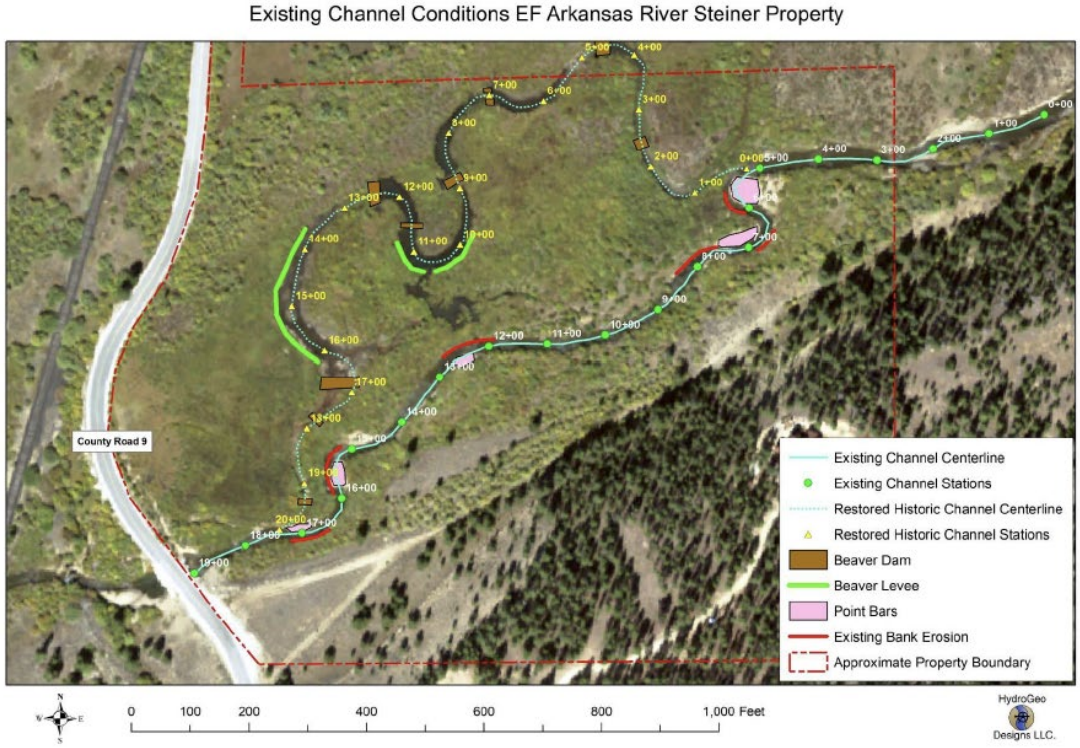


Figure 3. Aerial imagery of the Steiner Property shows the straightened southern channel where flows are routed and the northern, sinuous channel where flows will be intended to go once the project is complete.

2. Project: Sherman Mine and Channel Construction

a. **Problem:** The Sherman Mine (aka Day Mines) is located approximately 8 miles northwest of Leadville in upper Iowa Gulch at the foot of Mt Sherman. The Mine operated from 1968 to 1982, producing primarily silver, lead, and zinc. DRMS completed reclamation on the site in 2008 that reestablished the historic natural drainage route through Iowa Gulch and the re-graded waste rock pile. Following the reclamation work, lateral erosion from runoff and storm events has destabilized and widened the channel resulting in the transport of waste rock and subsequent degradation of the sensitive wetland area below the mine. To mitigate this, DRMS intends to construct grouted riprap channels to stabilize the waste rock and prevent further sedimentation downstream. Another aspect to the problem at this site is the negative effect the current sediment loads are having on a small population of stocked Hayden Creek Cutthroat trout in the upper end of Iowa Gulch downstream of the project site. This population of fish is only one of two in the wild and a very important one to CPW and BLM. The current up and downstream natural fish barriers make this an ideal area to keep Hayden Creek Cutthroat isolated from other species. Additional fingerlings were stocked again in 2021 so this area now has two age classes present after surveys showed the 2020 fish survived the winter and had an adequate food source. Protecting this critical population of Hayden Cutthroats will be a primary goal of target natural resource restoration associated with this project.

b. **Approach:** Approximately 2,000' of drainage channel will be addressed with this project with work being split up into the North Channel, South Channel and Energy Dissipation zones. A mixture of grouted riprap and boulders will be used to stabilize channels in this area to provide a long-term solution to the excessive erosion and mobilization of material that continually plagues the receiving wetland. This large channel network is a necessary addition to the area given a 2008 blowout of the mine portal that sent 8,000 to 10,000 cubic yards of material downstream. This project will take place fully on BLM lands, and provide the opportunity to restore approximately 2 acres of wetland habitat that will result from the stabilization of the Sherman Mine Channel. The result of this project will have the added benefit of habitat improvement that can sustain native greenback trout. Correspondence with BLM Fisheries Biologist has confirmed that stocking has been taking place downstream of the Sherman, but habitat is limited due to sediment influxes from the Sherman site. This project will reduce the high sediment loads and provide better habitat for native fish, and corresponding public access for recreational fishing opportunities on BLM lands.

For additional reference regarding current construction estimates, a detailed Engineer's estimate as associated 100% design is included in Appendix A. Aspects of the Engineer's estimate were used to help inform the budget for this project in the grant proposal. It should be noted that numbers might not exactly match the Engineer's Estimate numbers because partners are expecting funding from other sources and partners to complete this full scope of work. Only part of the budget is requested from the NRD program, while TU, DRMS, and Freeport McMoRan will make up the rest of the funding.

c. Maps and Photos

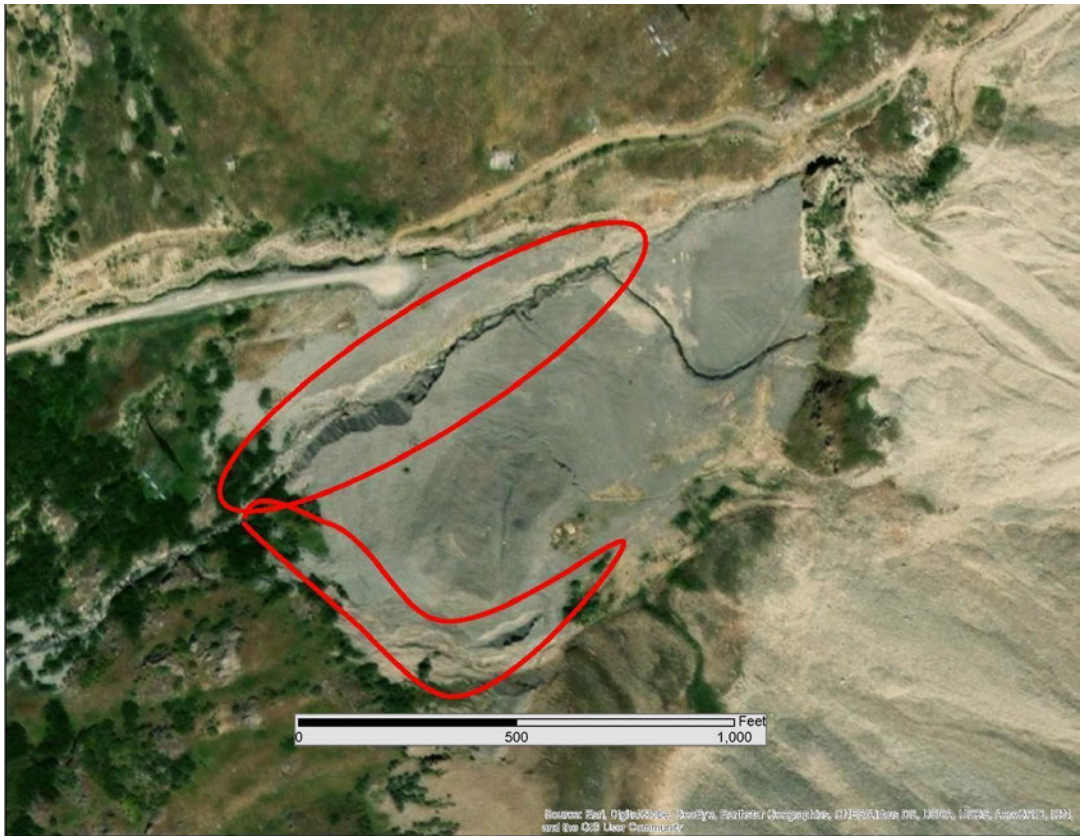


Figure 4. Aerial overview showing north and south channel extents that are part of the design and proposed stabilization actions on site.

Figure 5. Aerial imagery showing extent of the site and available material that can be mobilized. This erosive environment needs to be stabilized to reduce sedimentation that can be seen in the receiving wetland. The event of 2008, where 10,000 CY of sediment was mobilized, could occur again, given recent climatic trends. Installation of this channel network will help stabilize the site long term.

Figure 6. North Channel closeup shows incision and sediment slugs plugging the wetland below in the background.

Figure 7. South Channel depicting severe incision and downcutting that has occurred over the years. This sedimentation and erosion will continue to occur and create an unstable environment until this project is completed.

3. Project: Dinero Mine Tunnel Investigation and Design

a. **Problem:** In 2009, a bulkhead was placed in the Dinero tunnel as part of restoration activities in the upper Arkansas River. After installing the bulkhead, water-quality monitoring indicated decreased metal concentrations and loads in continuing leakage from the Dinero tunnel. However, after bulkhead installation, the mine pool formed behind the bulkhead caused water-quality degradation at several sites in the surrounding area of the Dinero. As of 2017 (the most recent monitoring information), aquatic-life water-quality standards were not being met for zinc concentrations in Lake Fork Creek downstream from Dinero tunnel, a recreational brook trout fishery. While Brook trout are not the target species of this solicitation, factors indicate that Brown trout could persist if water chemistry improved. In recent conversations with USGS Physical Scientists and CPW Fish Biologists, it was noted that the physical habitat along this reach of the Lake Fork is favorable for both brook and brown trout. Water chemistry is likely the underlying issue precluding downstream Brown trout from occupying this reach downstream of the Dinero. Therefore, this project seeks to ultimately restore water resources entering the Lake Fork, which would have the added benefits of rehabilitation of critical brown trout habitat accessible to the public.

b. **Approach:** Provide an innovative solution and technology to improve water quality in the Dinero mine pool using passive treatment technology. Ideally, this technology would be something that other organizations could apply at AML sites where a bulkhead is failing or a collapse is creating an underground mine-pool. The primary outcome of this project would be a verified and vetting technology proved up through site assessment, investigations, and research that could be applied in the field with the help of eventual Good Samaritan legislation. If implemented at the Dinero, this project would have the tangible, local benefits of improved water quality in the Lake Fork, corresponding to improved quantities of brown trout in publicly accessible water.

   Multiple Phases will help to accomplish the goals of this project:

   1) Delineate the extent of the mine pool using surface geophysical techniques combined with analysis of water-quality data collected in the area from 2002-2017.
   2) Analyze geochemistry (using existing data stored in U.S. Geological Survey National Water Information System) of known mine pool outflow locations (Dinero and Nelson mine tunnels and several springs) to identify likely successful potential treatment techniques.
   3) On-the-ground drilling of one or two wells into the Dinero tunnel behind the bulkhead to sample water behind the bulkhead and to provide a point of injection for treatment materials.
   4) Conduct bench-scale tests using Dinero tunnel well water that would help refine potential treatment techniques.
   5) Choose and develop a treatment technique that could be implemented by industry and other organizations at similar sites and eventually at the Dinero tunnel well.
   6) Monitor select sites in vicinity of Dinero tunnel for changes related to treatment.

7) Document and report on study results.

To further refine each Phase, specific aspects of each are described below. It should be noted that Phases 1 through 5 are part of this proposal, with full implementation requiring Good Samaritan legislation.

Phase (1) will be accomplished by conducting (first year) and interpreting (second year) geophysical surveys. In addition, existing water-quality data from monitoring that occurred in the area from 2002-2017 will be analyzed and assessed to help better understand similarities and differences between sources of poor-quality water and to use the geochemistry of the samples to better understand hydrologic connections between the sources.

Phase (2) will analyze existing water-quality data from 2002-2017 to assess (a) how much treatment of sources of poor-quality water will be needed to achieve water-quality standards in Lake Fork Creek; (b) what type of passive treatment technologies are most likely to succeed considering existing water quality. This analysis would occur primarily in the first year of the project.

Phase (3) will be accomplished by using data from Phase (1) to locate and physically drill one or two wells into the Dinero tunnel and/or mine pool to obtain water samples from the mine pool. These drilling locations will also act as potential locations to inject treatment materials into the mine pool. The wells would be drilled during the second year of the project.

Phase (4) will be accomplished by conducting bench scale laboratory tests using water from the Dinero mine pool wells combined with potential treatment materials to determine whether and which treatments achieve water-quality improvement. This phase would be accomplished during the second and third years of the project.

Phase (5) will be to summarize results from Phases (1) – (4) and recommend whether or not full implementation of in situ treatment could proceed at this site. This phase would include presenting findings to stakeholders and input and valuation from stakeholders as to whether proposed water-quality improvement from implementation would be desired. An additional aspect of this Phase would be the summary and development of a guidance document that could be applied at similar sites where technology like this is needed. In addition, full implementation may or may not be viable based on the progress achieved at that time on Good Samaritan protections. This phase would occur during the third year of the project.

The outcome of Phase 5 will be the development of a strategy to improve water quality in the Dinero Mine pool and/or other sites degraded by an associated mine pool with similar conditions. While funding from this program would help complete this study, it is essential to note that funding for abandoned mine land (AML) projects has gained traction through the recent passing of the Infrastructure Bill (IIJA) that will create a hardrock AML program to address both point and non-point source projects. Point source projects or draining mine sites still present enormous liability risks associated with CERCLA and the Clean Water Act, which prevents groups like ARWC and TU and State agencies from tackling this work. There is an immediate need for targeted liability relief to allow Good Samaritans to volunteer and clean up these draining abandoned mines. Recently, there has been positive feedback that draft legislation for Good Sam might be introduced in 2022 that would complement some of

the available funding created through the IIJA. With the lines beginning to blur between water quality and quantity in an ever-growing Western US, we believe that Good Samaritan legislation will happen shortly to start utilizing these new funding sources for point source cleanups, like the Dinero Tunnel.

As part of ARWC's Addendum to the initial proposal, several questions from the Trustee Council (TC) were proposed and answered by project partners. The questions and answers are respectively outlined below for TC review.

c. **Maps and Photos:**

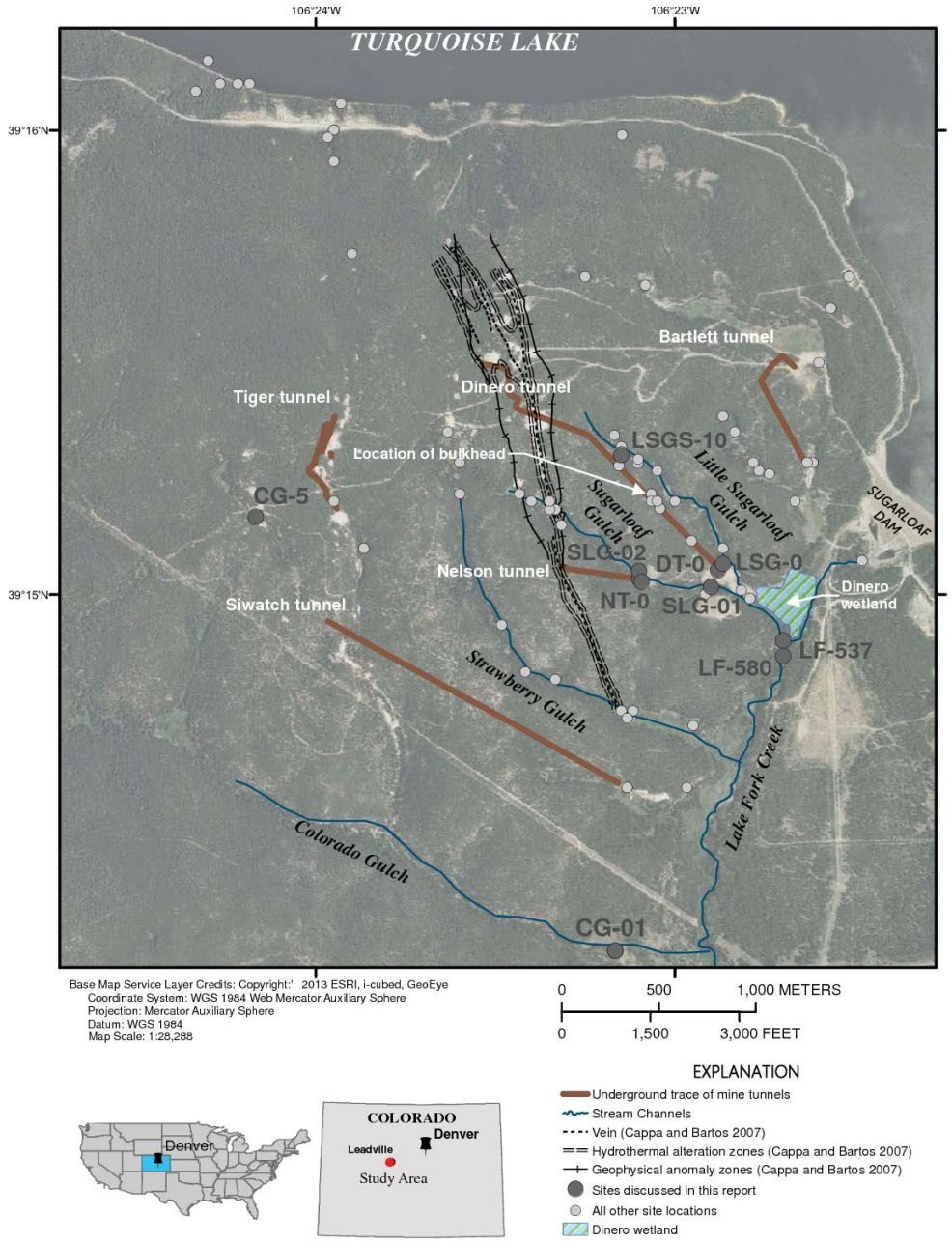


Figure 8. Source: Katherine et al. "The Water-Quality Effects of a Bulkhead Installed in the Dinero Mine Tunnel, near Leadville, Colorado." (2013). Aerial map showing underground workings of the Sugarloaf Mining district in relation to outfalls and receiving surface waters. Note the Dinero Tunnel and its wetland in relation to the Lake Fork of the Arkansas River.

d. **Answers to Questions from Trustees**

To ensure that trustee council (TC) questions are specifically outlined and highlighted, partners have added the following section that provides direct Q&A from project partners. Additional detail has been provided above as to how the phased approach for project implementation would work. It should also be noted that recent Good Sam legislation is primed to be introduced by a bipartisan committee in the spring of 2022.

Question a from Trustees:
Please provide a detailed budget and explain why the 'strategy' or investigative phase is needed? What is the monitoring showing? Is water quality from Dinero impacting aquatic life in the Lake Fork? Is there a monitoring report that can be shared?

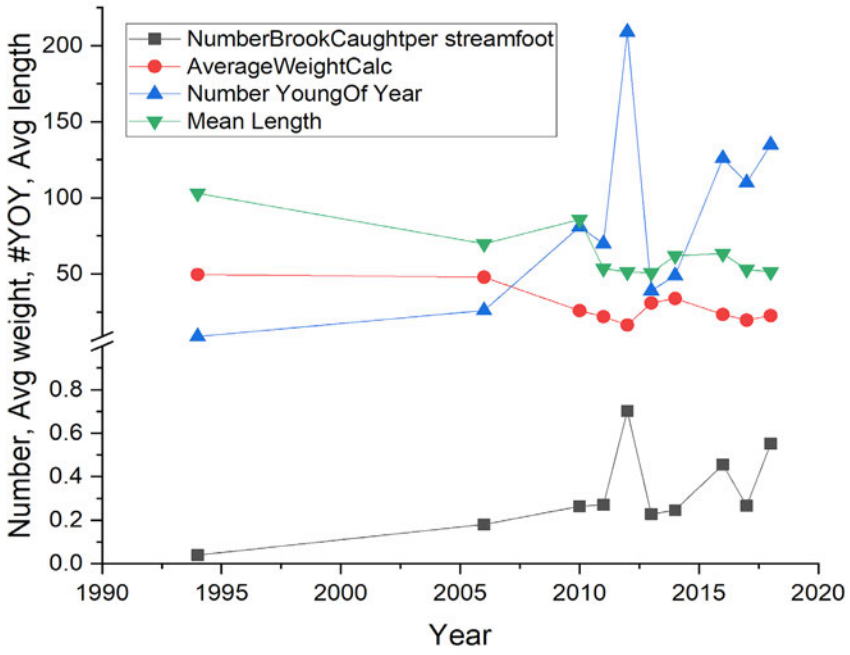
The investigative phase is needed because we simply do not have enough information about the Dinero mine pool geometry and chemistry to implement a treatment strategy at present. We need (1) to delineate the geometry of the mine pool formed behind the Dinero bulkhead, (2) to better understand the composition of water in the mine pool, and (3) to perform bench scale tests to decide which type of passive treatment amendment is most suited to improving the water quality of the Dinero mine pool.

(1) A rough picture of the geometry of the Dinero mine pool can be inferred from the locations of all springs and seeps whose water quality has been negatively affected by discharge from the mine pool. We have that information, and we do understand that rough geometry. But, in the fractured-rock geology of the area, we cannot simply connect the dots between the springs to understand the mine pool geometry. The subsurface between the springs does not have continuous permeability. We need to better understand the geometry of the mine pool to identify potential locations for applying passive treatment to the mine pool. What location(s) for treatment has (have) the most significant potential to impact the greatest number of springs fed by the mine pool? We cannot answer that question without a better picture of mine pool geometry.
(2) The water that flows out of the Dinero tunnel right now is mostly water that flows out of a fracture in front of the bulkhead, not mine pool water that leaks from behind the bulkhead. In addition, the composition of the small amount of leakage that does flow from behind the bulkhead is likely affected by interacting with the concrete of the bulkhead and does not represent in-situ water quality of the mine pool. The selection of treatment materials in the mine pool will depend on the chemistry and stratification of the mine pool. Thus, we need samples of mine pool water from drill holes. These drill holes would also be possible locations to inject treatment material.
(3) We cannot implement a treatment based on our current (2021) limited knowledge of mine pool chemistry. Bench scale tests of different potential treatment materials with the mine pool water are the industry standard for this type of remedy.

USGS conducted water-quality monitoring of the Dinero area from 2006 to 2017 shows slight improvement due to the Dinero bulkhead in Lake Fork Creek, downstream from the Dinero area. The most recent monitoring report (Walton-Day and others, 2021, *attached*, see particularly Figure 5 and

Table 1) shows statistically significant decreases in manganese concentrations in Lake Fork Creek (site LF-580) since the installation of the bulkhead. There is a slight but not statistically significant decrease in zinc concentrations. Manganese loads (load is a measure of the total amount of metal flowing past the site) decrease but not at a statistically significant rate. Zinc loads increase and are not statistically significant. High water years show poorer water quality than low water years (see June 2011 manganese and zinc at LF-580 on fig. 5). This effect may be due to the discharge of more degraded groundwater from the Dinero area to Lake Fork Creek upstream from site LF-580. Manganese water quality standards are generally met at the Lake Fork Creek site, but zinc water-quality standards are not. The increase in zinc load is concerning and may explain why zinc water-quality standards are not being met. Other sites (Nelson tunnel, Sugarloaf Gulch, Little Sugarloaf Gulch) show water-quality degradation after installation of the Dinero bulkhead.

Brook trout data (1994-2018) obtained from Colorado Parks and Wildlife for a site on Lake Fork Creek approximately 300 m downstream from the Dinero area show some evidence of increasing recruitment at the site (more fish per linear feet of stream, and more young of year). But, average weight and length have gone down over the same period, perhaps indicating the effects of more but smaller fish. One brown trout was captured in 1994 and 2018. One lake trout was captured in 2006 and 2011. The site is not stocked, and brook trout dominate, which could be associated with degraded water quality in the reach. Andrew Treble at Colorado Parks and Wildlife concurred that there might be more recruitment at the site, but overall no significant changes. All told, there is some evidence of limited water quality and biotic improvement in Lake Fork Creek. But, several sites upstream near the Dinero tunnel have experienced marked declines in water quality due to the effects of the mine pool behind the Dinero bulkhead that partially negates and could eventually potentially overwhelm the limited improvements that have occurred after bulkhead installation. More remediation is needed to obtain significant, lasting water quality and biotic improvement in Lake Fork Creek downstream from the Dinero area.



Question b:

What is the project deliverable and who might implement any recommendations that could stem from the investigation work?

We see the deliverable as geotechnical and structural drilling data that would provide partners on the feasibility of in-situ treatment behind this bulkhead and others like it. These drilling operations would allow for delineation of the mine pool and where it is located related to the bulkhead and any collapses that might be present. Through this drilling investigation, water quality would also be generated to evaluate metal concentrations at various locations behind the bulkhead. A concurrent pilot study would allow partners to assess which treatment might best apply given underground conditions. The results from these investigations and studies would yield a technology that could be used by industry or other organizations seeking to improve water quality at AML sites.

It should also be noted that while this project has a component of planning and conceptual design, it is primarily a site assessment to lead to eventual (post-project) remedial treatment. The project involves several aspects of fieldwork, including geophysical investigations to understand better underground conditions and the configuration of the mine pool behind Dinero bulkhead and drilling into the mine pool to better understand water quality variation in the mine pool. During drilling, water quality samples would be collected for testing with various remedial techniques to determine the best mixture of amendments to improve water quality in the mine pool, thus the discharge from the Dinero tunnel. This bench-scale testing is a tangible project deliverable to help identify the appropriate treatment technology for underground conditions. Therefore, while aspects of this project involve planning for eventual remediation, there are several tangible deliverables directly associated with fieldwork. There is not enough knowledge about the site to move directly to

remediation. The fieldwork and bench scale testing are necessary to move along the path to remediation.

Question c:

Please better explain the two phases of the project in terms of strategy for treating mine pool water that might be developed and how implementation might follow?

During the project's investigative phase, we would be looking ahead, as much as possible within the demands of the investigation, to implementation. Implementation would ultimately depend on the remedy chosen. Our first choice for partners to implement would be the partners in the study. We would be investigating whether or not this type of in situ treatment of groundwater (the mine pool) would be subject to liability protection under existing statutes or whether Good Sam legislation would be required. There is little to no liability risk for this project because background research, investigative work, and bench scale studies would not be at risk of CWA or CERCLA liability.

Question d:

The project's ultimate goal appears to be largely dependent upon Good Samaritan legislation that will not happen anytime soon. Please describe why implementation of this initial phase is worthwhile at this time instead of when legislation is more certain. For example, would this project provide information that could be used elsewhere?

Partners recognize that Good Sam legislation has not been passed. Still, indications show that a bipartisan draft bill could come out in the next month or so that is supported by industry and not opposed by environmental groups. This aspect is kind of like a chicken vs. the egg scenario. We don't want to wait for Good Sam legislation to be passed, but rather be proactive in developing projects that could be easily implemented if and when legislation were to be passed. All indications lean towards a bill that would include 15 pilot projects, which would be a great fit with this project's scope. Putting in the effort to develop and refine this project now would put partners ahead of the curve for implementation when Good Sam legislation is available for use.

Absolutely this project could provide data and an approach that could be used elsewhere at other AML sites. The steps listed as part of this project would be necessary precursors to full-scale implementation. If these studies and data gathering were to warrant implementation at this site, it would be a good candidate for Good Sam, given legislation would eventually be passed. While the legislative aspect is uncertain, progressing AML treatment like proposed in this study needs to be furthered to improve the suite of water quality technologies available to industry and other entities. More and more, investigations of bulkhead remedies show limited long-term improvement to water quality. However, bulkheads are protective against blowouts and downstream infrastructure. Advancing our capability to improve the water-quality effects of bulkhead remedies would greatly benefit other sites where bulkheads have been used, mainly the Bonita Peak Superfund site and other sites in Colorado and elsewhere. The ultimate technology and approach that comes out of this project would not sit on a shelf but rather be available for implementation at other applicable AML sites. Partners feel passionate that progressing AML treatment like proposed in this study needs to be furthered to improve the suite of water quality technologies available to industry and other entities. This project fills a niche where water quality improvement is still needed in association with

bulkheads, most of which are beginning to fall into aging infrastructure and many of which do not appreciably improve downstream water quality. Partners would ensure that the findings of this project are available to other organizations, given a successful remedy is found.

4. Project: Fluvial tailings

a. **Problem:** Approximately 6.88 acres along the 11-mile reach of the Arkansas River have areas of fluvial tailings originally carried downstream from historic mining operations in the Leadville Mining District. These white, crystalline, contaminated deposits are void of vegetation with high levels of metals. Their exposed condition poses a risk for erosion and exposure to the ecological community and recreational users of the Hayden Meadows area, which has become a winter elk sanctuary and high traffic area for anglers. These fluvial tailings areas are also likely to migrate or leach contaminants to shallow surface/groundwaters and the surrounding ecosystem.

b. **Approach:** During initial remedial and removal actions in OU11, in-situ phytostabilization was wildly successful at remediating these contaminated soils. TU and project partners seek to duplicate these efforts and apply techniques that have been successful at remediating over 100 acres of fluvial tailings at other AML sites across the State. The outcome will be remediated soils with native vegetation that can reduce runoff and storm-water contributions to the river and control excess sediment yields from un-vegetated alluvial fans and banks. Therefore, it is anticipated that 6.88 acres of riparian habitat will be rehabilitated through this project, protecting shallow groundwater and Arkansas River water quality by reducing non-point source loading. These efforts will also positively affect public users that frequent the area for fishing and recreation by improving access and reducing potential exposure.

   The five large fluvial tailings deposits that are part of this project are located near OU11 and where past Superfund activities took place. These remaining fluvial tailings were not completed as part of these actions and remain, leaving a barren landscape prone to localized and downstream environmental degradation (Figure 9).

c. **Maps and Photos**

Figure 9. Current conditions in the five fluvial tailings areas in the Arkansas River floodplain. These areas can continue to degrade surrounding environmental quality and habitat.

These fluvial deposits have already been mapped and quantified per past CPW efforts that Trout Unlimited (TU) will now take over and manage subsequent cleanup actions. Fluvial tailings areas associated with this scope of work are scattered at various locations along the accessible Arkansas River floodplain or adjacent to recently developed walking and angling trails that have been implemented during past actions (Figure 10).

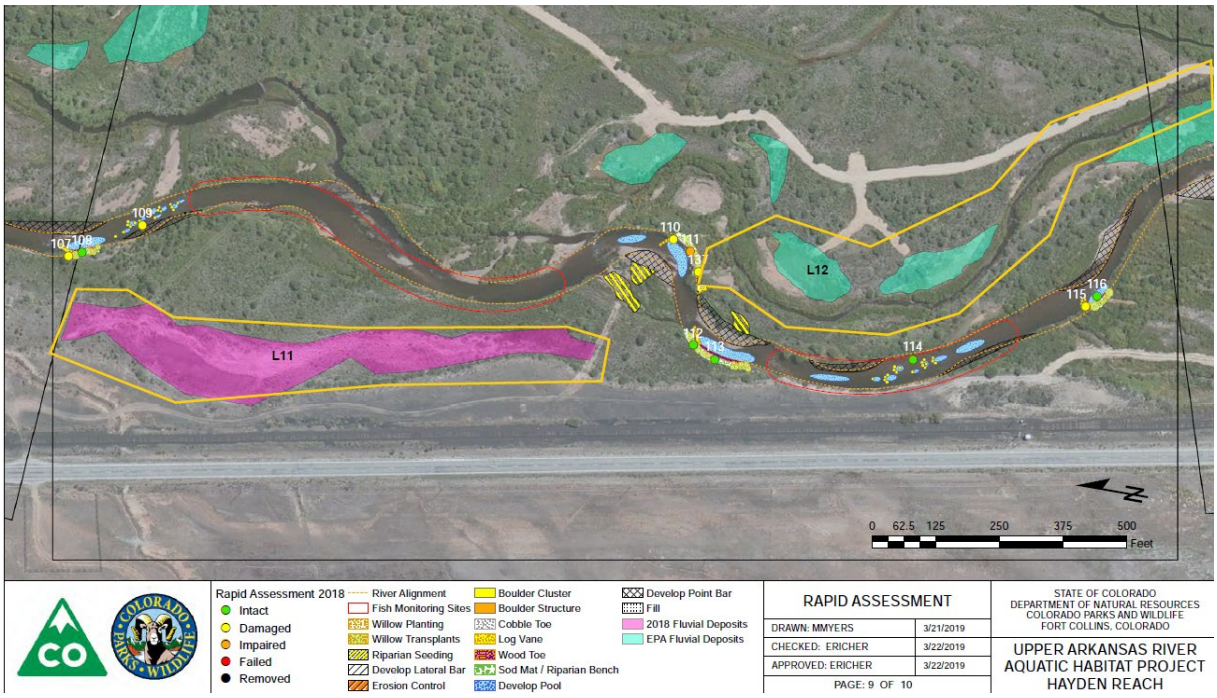


Figure 10. L11 Pink fluvial tailings area highlighted by past CPW UAR study. Each of the five fluvial tailings was mapped and qualified during this work. In this figure, L11 is approximately 83,820 square feet.

As indicated in Figure 10, Fluvial Deposits are labeled with an L and highlighted in pink. Between the five areas L7 through L11, approximately 6.88 acres (7 acres) make up the SOW where NRD funds are requested. Trout Unlimited has a long history of remediating fluvial tailings and mine waste across the State over the past decade. Using best management practices and working with Federal and State agencies have allowed TU to become an industry expert when taking on these projects.

Work is planned to begin in the planning stages for this project in 2022 with the soil sampling in the spring, followed by installation of test plots on all five deposits to figure out the best recipe for reclamation and revegetation. The original OU11 prescription will be considered and validated in the field compared to other best practices for revegetation over recent years. Test plot success will ultimately drive the amendment quantities for full-scale reclamation that will ideally take place in the fall of 2023 or 2024, pending all access agreements, and liability documents are in place between TU, agencies, and landowners. Work to procure these documents will likely begin during 2022 and continue through 2023.

C) Crossings

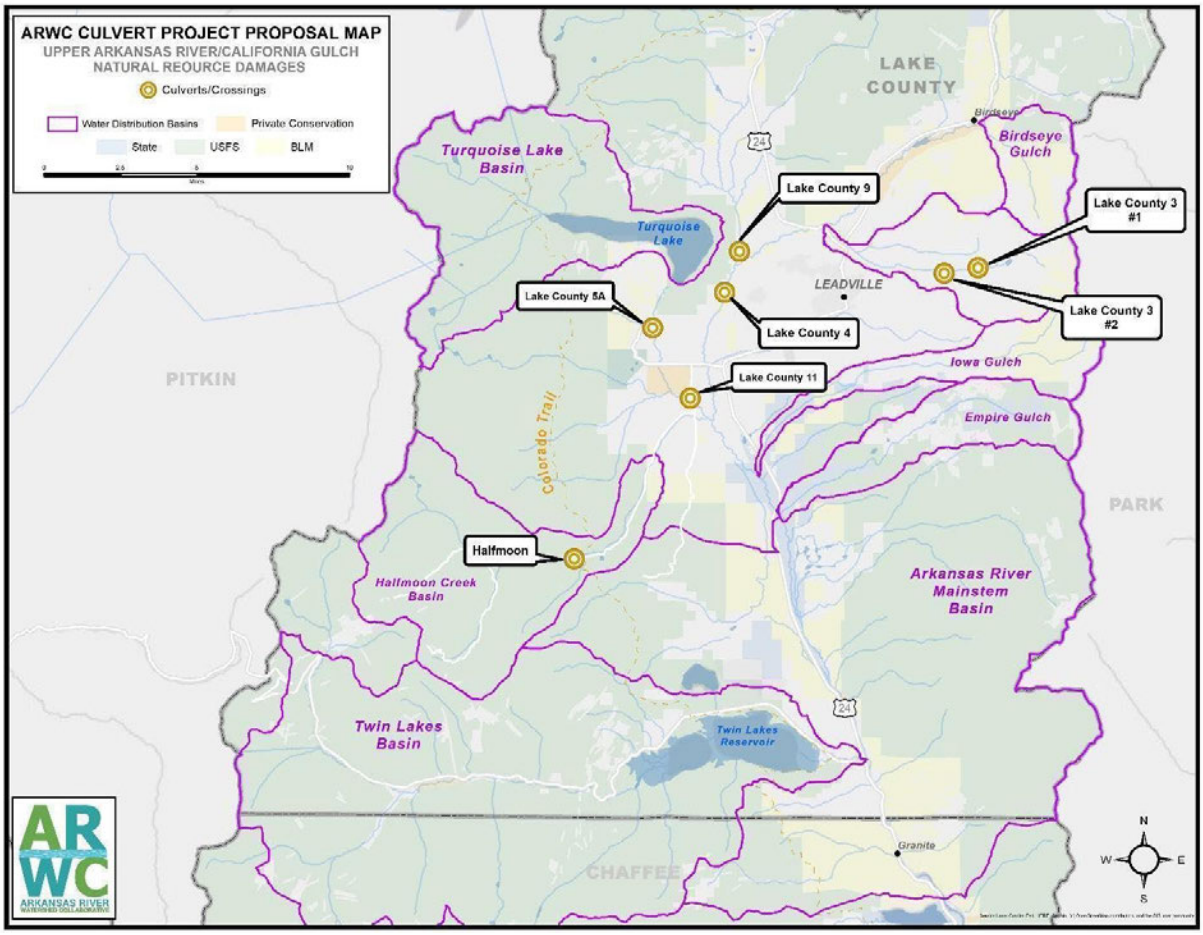


Figure 11. Crossings project location map.

Table 5. Budget breakout table for crossings.

Crossings

	Lake Cty, Rd 5a	Lake Cty, Rd 9	Lake Cty, Rd 3b (2 culverts)	Lake Cty, Rd 4	Lake Cty, Rd 11	USFS Culvert Half Moon	Total	NRD	Match	Match notes
Personnel	**$69,650**	**$58,650**	**$92,650**	**$58,650**	**$58,650**	**$16,000**	**$354,250**	**$163,625**	**$190,625**	
Lake County	*$60,000*	*$49,000*	*$79,000*	*$49,000*	*$49,000*	*$2,000*	*$288,000*	*$136,475*	*$151,525*	*County In-kind committed*
ARWC	*$4,000*	*$4,000*	*$6,000*	*$4,000*	*$4,000*	*$2,000*	*$24,000*	*$6,000*	*$18,000*	*Cash*
TU	*$5,000*	*$5,000*	*$7,000*	*$5,000*	*$5,000*	*$2,000*	*$29,000*	*$20,500*	*$8,500*	*In-Kind*
USFS	*$0*	*$0*	*$0*	*$0*	*$0*	*$5,000*	*$5,000*	*$0*	*$5,000*	*In-kind*
Volunteers/ Partners	*$650*	*$650*	*$650*	*$650*	*$650*	*$5,000*	*$8,250*	*$650*	*$7,600*	*In-kind*
Contractors	**$110,000**	**$90,000**	**$130,000**	**$90,000**	**$90,000**	**$80,000**	**$590,000**	**$200,000**	**$390,000**	
Engineering Design	*$40,000*	*$30,000*	*$40,000*	*$30,000*	*$30,000*	*$20,000*	*$190,000*	*$0*	*$190,000*	*In-kind or cash*
Heavy Equip	*$70,000*	*$60,000*	*$90,000*	*$60,000*	*$60,000*	*$60,000*	*$400,000*	*$200,000*	*$200,000*	*Cash or In-kind*
Supplies/ Materials	**$347,000**	**$197,000**	**$346,000**	**$197,000**	**$197,000**	**$197,000**	**$1,481,000**	**$740,500**	**$740,500**	
Dewatering	*$150,000*	*$0*	*$0*	*$0*	*$0*	*$0*	*$150,000*	*$75,000*	*$75,000*	*Cash*
Seed & Geotex	*$5,000*	*$5,000*	*$6,000*	*$5,000*	*$5,000*	*$5,000*	*$31,000*	*$15,500*	*$15,500*	*Cash*
Culvert (arches)	*$160,000*	*$160,000*	*$290,000*	*$160,000*	*$160,000*	*$160,000*	*$1,090,000*	*$545,000*	*$545,000*	*Cash*
Rock	*$12,000*	*$12,000*	*$18,000*	*$12,000*	*$12,000*	*$12,000*	*$78,000*	*$39,000*	*$39,000*	*Cash*
Grout/ Concrete	*$20,000*	*$20,000*	*$32,000*	*$20,000*	*$20,000*	*$20,000*	*$132,000*	*$66,000*	*$66,000*	*Cash*
Travel & Mileage	**$1,250**	**$1,250**	**$1,250**	**$1,250**	**$1,250**	**$1,250**	**$7,500**	**$0**	**$7,500**	
Indirect/ Admin	**$40,000**	**$30,000**	**$45,000**	**$30,000**	**$30,000**	**$1,000**	**$176,000**	**$0**	**$176,000**	
TOTAL	**$567,900**	**$376,900**	**$614,900**	**$376,900**	**$376,900**	**$295,250**	**$2,608,750**	**$1,104,125**	**$1,504,625**	

Table 6. Outcomes and metrics table for crossings.

Project Category	Number of Projects	Units	Quantity	Notes
Addressing culverts	**7**			**Team Lead: ARWC**
County Roads	6	Each	6	ARWC will coordinate with Lake County, who will oversee implementation
Forest Roads	1	Each	1	ARWC will coordinate with USFS and implement under Stewardship Agreement with San Isabel
Associated bank and channel work	7	Linear ft.	600	Work around culverts will include revegetation of banks, and, as needed, in channel vein

1. **Project: Culvert Replacement**
    a. **Problem:** Historically, little thought was given to how culverts impact the aquatic ecosystem. Planning based exclusively on cost and hydraulic efficiency resulted in narrower structures than the natural channel, using head pressure built up on the upstream entry to the culvert to increase velocity and move water through the narrower opening. As a result, these properties led to downstream scouring and incision and ultimately led to disconnection between the culvert outlet and downstream channel. It also led to bank instability upstream and downstream, channel and bank head-cutting and collapse, over-widening and incision of the channel downstream of the culvert, and sediment transport issues. Given these conditions, natural resources such as fish and terrestrials were often injured due to their inability to pass through degraded structures. Additionally, these issues frequently led to excessive debris and sediment buildup within the culverts from the upstream side. This can result in road damage affecting aquatic and terrestrial species and reducing access for maintenance, the public, and emergency services in the event of flooding or high flows.

    Specifically, 5A Culvert hangs suspended in the air on the downstream side of the roadway throughout the year. Past flooding and washing out at this location worsened the downstream side of this crossing, causing erosion that increased the height from the stream to the culverts. Even in the best conditions, this site will not provide fish passage due to culvert placement but also due to the upstream side challenges of removing debris from Colorado gulch. If this was an oven bridge/box culvert these issues could be mitigated. Additionally, culverts 11 and 9 sit adjacent to past Trustee investment along with the same network of waterways. These locations are either sole egress access roads or one of only two leading to other critical natural resource sites up Halfmoon Creek and to Turquoise Lake. Replacement of these crossings would enhance habitat and provide passage and provide stability for access to other critical natural habitat and resources, especially in the event of an emergency response.

    b. **Approach:** The crossings identified in this proposal are strategically located in areas where target natural resources are of utmost importance given their relation to past mining damages. Additionally, there is Trustee investment upstream and down along the Arkansas and its tributaries. Specifically, Evans Gulch, the drinking water source for Lake County and Leadville, abuts Operable Unit (OU) 6, where partners such as EPA and Trout Unlimited have completed AML cleanup projects. Not only is Evans Gulch significant given its end water use, but it also serves as a wild brook trout fishery. Other important culvert projects include County Road 5A, crossing Lake Fork of the Arkansas River. Lake Fork receives input from the Sugarloaf Mining District and flows into the main stem of the Arkansas River. This area is another essential fishery with numerous options for public access, which also saw stream work completed with Trustee support in 2019. Another crucial geographical zone is the Halfmoon drainage, given its increased usage over the past several years. The culvert located at the Colorado Trail crossing (Halfmoon culvert) severely impedes fish and terrestrial passage and limits upstream migration to

public waters. Numerous culverts included in this proposal suffer from similar underlying issues; they preclude aquatic species passage during most if not all of the hydrograph, they cause perpetual maintenance issues for the agencies responsible for their maintenance, and they present significant safety and access issues for the public.

Seven projects will replace existing culverts with hydrologically and hydraulically appropriate designs that incorporate biological and geomorphic considerations to allow fish and terrestrial species to pass freely between up and downstream sections at all stages of their life cycle. This replacement process will also focus on reducing erosion and sedimentation by performing necessary channel work immediately up and downstream of the impacted culvert. This associated channel work will rehabilitate degraded riparian habitat by narrowing stream channel widths and reconnecting floodplains disconnected by past high velocities and incision. Most of these projects will utilize bottomless arches or large box culverts with a baffle-system design to facilitate fish passage in addition to necessary sediment transport. The secondary benefit of improved sediment transport will be a reduction of debris jams that could limit public access to critical natural resources in important headwater recreation areas. The previously mentioned zones of Evans Gulch, Lake Fork of the Arkansas, and Halfmoon Creek have been impacted by past mining activities. All areas have seen significant improvement in environmental and water quality given efforts by EPA and project partners. These improvements have translated to current wild trout populations and various fishing and public recreation opportunities. However, the degraded conditions described above associated with existing culverts in these areas pose potential terrestrial and aquatic species injury. Implementing proposed culvert replacement at the seven sites included in this proposal will restore and enhance existing terrestrial and aquatic habitat in the Evans Gulch, Lake Fork, and Halfmoon drainages. Therefore, a resulting benefit will be improved public access to these important habitats and their associated natural resources.

c. **Maps and Photos:**

Figure 12. Halfmoon culvert, proposed for replacement on USFS-managed land. Photo looking at inlet of culvert.

Figure 13. Halfmoon culvert on USFS-managed land. Photo looking at outlet of culvert.

Figure 14. Lake County Culvert #2 in Evans Gulch along County Road 3. Shown here during heavy spring runoff and subsequent flooding due to the inadequate intake of culvert

D) Upland Watershed Protection

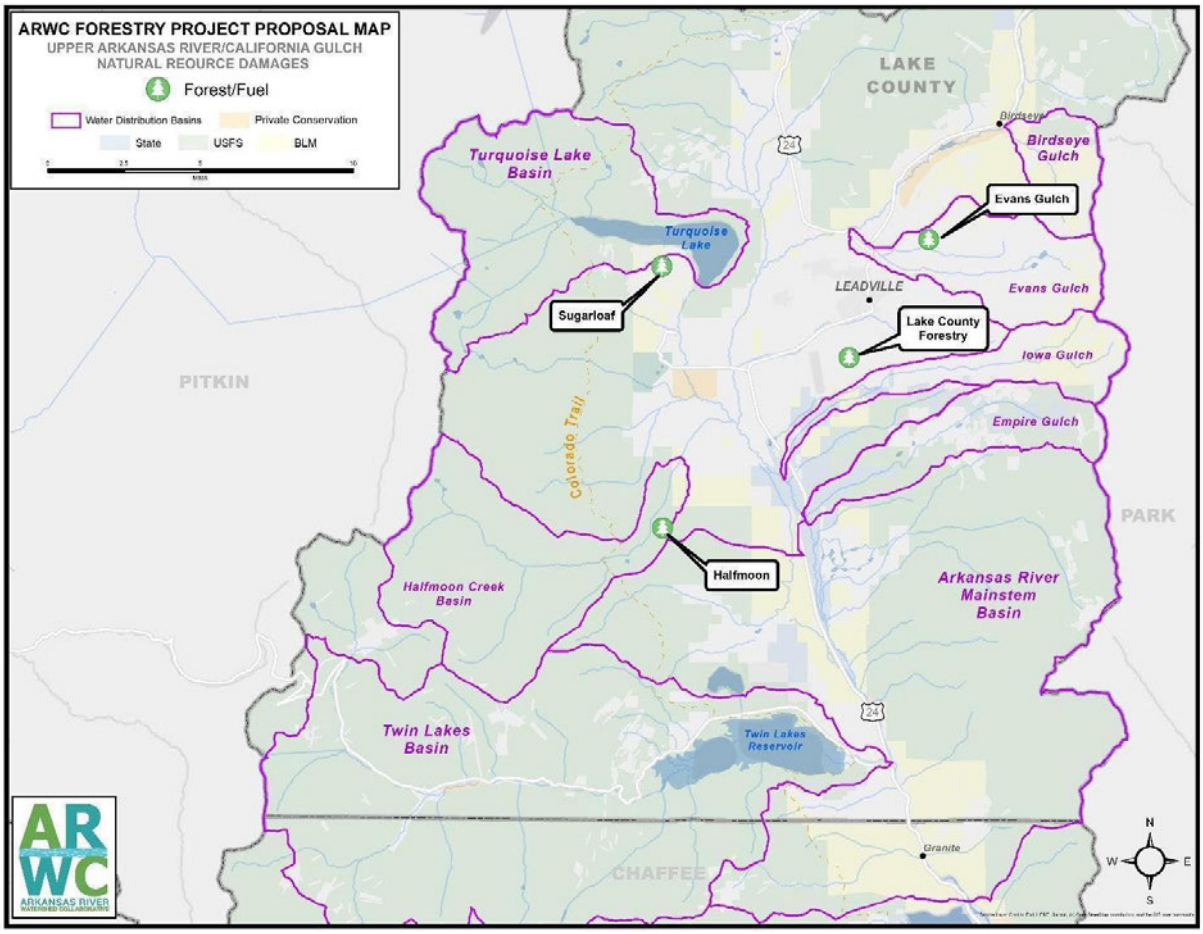


Figure 15. Upland watershed protection project location map.

Table 7. Upland watershed protection budget breakout.

Upland Watershed Protection						
	USFS	County Land	Total	NRD	Match	Match Type
Personnel	**$30,500**	**$68,500**	**$99,000**	**$46,000**	**$53,000**	
Lake County	*$500*	*$3,500*	*$4,000*	*$0*	*$4,000*	*In-kind*
ARWC	*$1,000*	*$65,000*	*$66,000*	*$46,000*	*$20,000*	*Cash*
USFS	*$29,000*	*$0*	*$29,000*	*$0*	*$29,000*	*In-kind*
Contractors	**$800,000**	**$900,000**	**$1,700,000**	**$850,000**	**$850,000**	
Logging	*$800,000*	*$900,000*	*$1,700,000*	*$850,000*	*$850,000*	*Cash*
Supplies/ Materials	**$0**	**$500**	**$500**	**$500**	**$0**	
Misc.	*$0*	*$500*	*$500*	*$500*	*$0*	
Travel & Mileage	**$2,000**	**$9,000**	**$11,000**	**$5,000**	**$6,000**	*In-kind*
Indirect/ Admin	**$2,000**	**$97,000**	**$99,000**	**$0**	**$99,000**	
TOTAL	**$834,500**	**$1,075,000**	**$1,909,500**	**$901,500**	**$1,008,000**	

Table 8. Upland watershed protection metrics and outcomes table.

Upland Watershed Protection:	**4**			**Team Lead: ARWC**
Federal lands	1	Acres	250	ARWC will perform work under a Stewardship Agreement with the San Isabel National Forest
Non-fed lands	3	Acres	250	ARWC will perform work

1. **Project: Address Fuel Loading on USFS, County, and Private Lands**
   a. **Problem:** One of the most critical issues facing headwater watersheds in Colorado is wildfire. Severe and uncharacteristic fires are more frequent from climate change, and Lake County is no exception. And although fires historically occurred less often in this forest type and elevation zone, fuel buildup from decades of fire suppression and a warmer, drier climate will likely result in significant wildfires in the county. Lake County has recognized the criticality of this issue for their values at risk and has actively worked on an updated Community Wildfire Protection Planning process (CWPP). The new CWPP has used a science and data-driven roadmap to identify the highest priority of lands for fuel treatment/forest health projects. As seen in the last two decades, and epitomized by the 2020 fire season, wildfires cause significant and long-term issues for fish, wildlife, water quality, and human values at risk, both during the fire and subsequently for years afterward with altered hydrology and vegetative cover yielding post-fire flooding, ash flows, and debris events.

      Within Lake County, in particular, such post-fire flooding would result in significant harm to stream health and negatively impact macroinvertebrates and fish due to the historic mining

operations. This could potentially undo decades of good work by DRMS, CDPHE, and other partners. Historic mine waste and tailings are prevalent in and adjacent to forested areas throughout Lake County. The map below (Figure 16) shows the abundance of mine features within proximity (500 ft) of drainages throughout Lake County and around California Gulch. These drainages ultimately flow into the upper Arkansas River, which has suffered from historic mine discharge over many decades. And although many years of cleanup and remediation have significantly reduced the inputs from historical mine waste, a large fire and subsequent erosion could mobilize formerly stable or buried deposits (Figure 13). This would have a profound and harmful effect on stream health and biota in the Arkansas River. The most severe impacts would be to the headwaters region, with continuing downstream effects in the lower reaches of the Arkansas.

In California Gulch and surrounding areas, forested mining claims pose a threat to the Yak Treatment plant and, in addition to post-fire flooding damage following a wildfire. Newmont Mining is a participating partner on other lands in the Leadville WUI. There is an opportunity to plan fuel mitigation on their sites in the Industrial Mining District of Lake County.

b. **Approach:** Momentum for fuels reduction and watershed protection is building rapidly in Lake County among multiple partners. This collaborative effort aims to increase the pace and scale of fuel reduction efforts in the region. Many of the steps have focused on planning in the last few years, but multiple projects are scheduled for implementation in 2022. ARWC is managing several fuels reduction projects in Lake County beginning in 2022 with the support of state, federal, and private partners. Additional focus on areas near drainages and mine features proposed here will ultimately result in a much more robust treatment program over the next several years. We selected 500 acres for fuels treatment, with approximately 250 acres on USFS-managed lands. The remaining 250 acres are located on county, private, and mining lands. The Team Lead for coordinating the program is ARWC. And as a watershed-wide organization, ARWC aims to achieve a holistic and cross-jurisdictional project. These combined efforts for fuels reduction and watershed protection are working towards a more resilient stream ecosystem that has suffered damage from mining in California Gulch and other nearby areas.

The USFS completed similar projects in Lake County and is an integral partner for this work. They will provide significant in-kind match and expertise to help guide and carry out this work. There are multiple examples of the USFS's successful treatment efforts in areas throughout Lake County in the photos section below.

c. **Maps and Photos:**

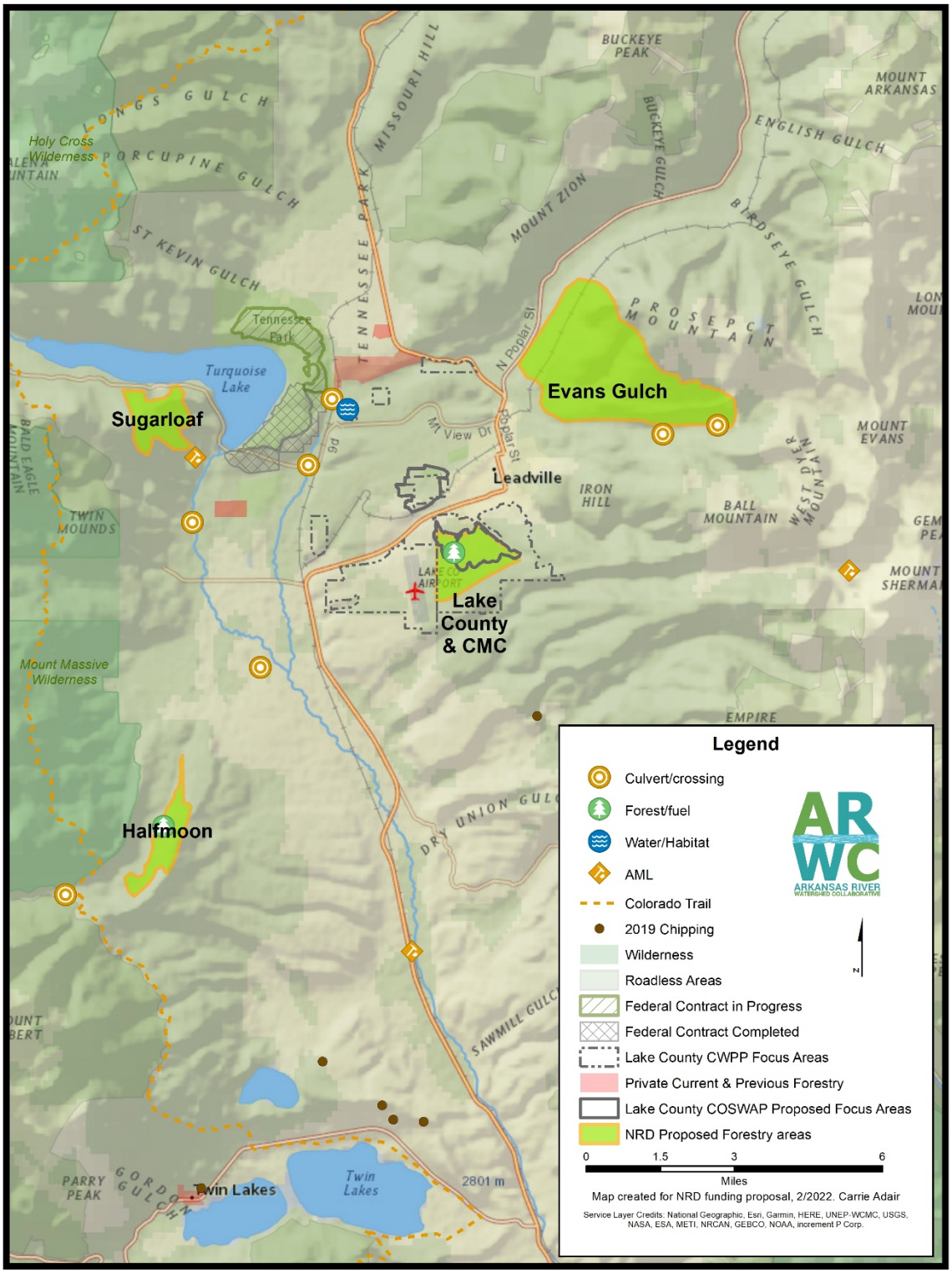


Figure 16. Detail map of proposed work for this and other projects in Lake County.

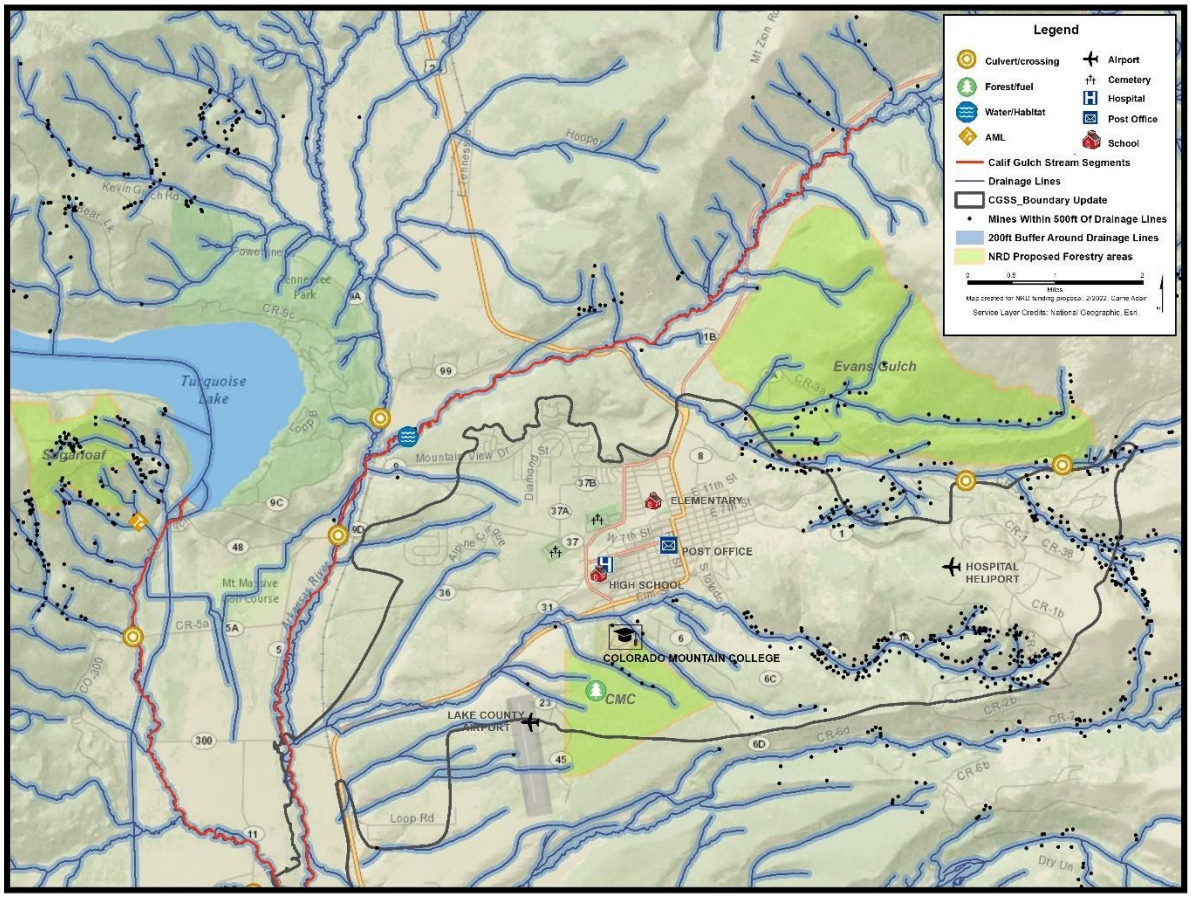


Figure 17. Map showing historic mine features within 500 ft of drainages.

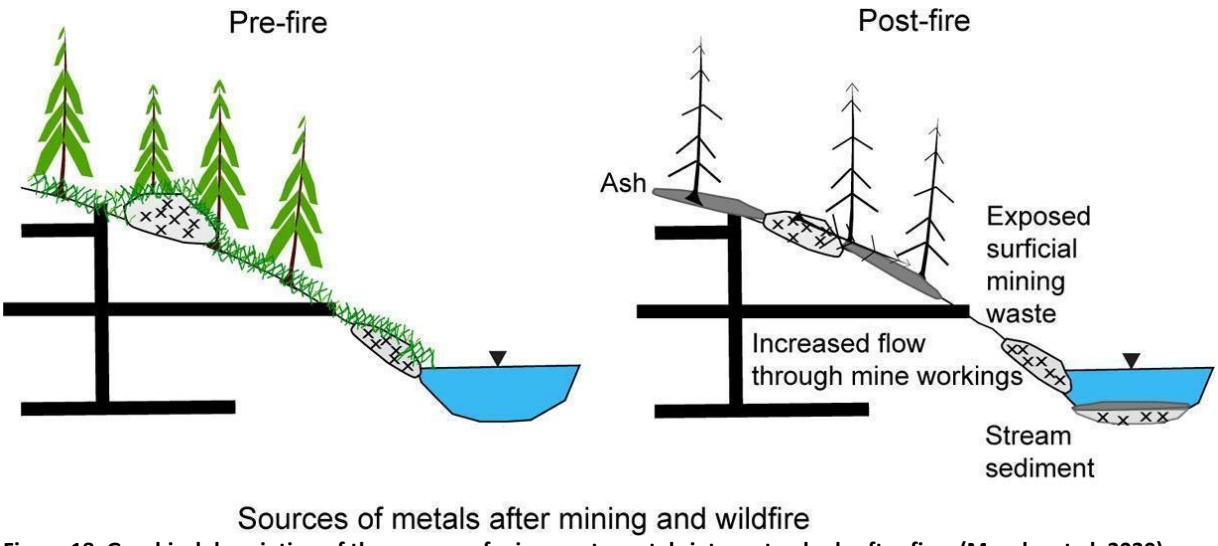


Figure 18. Graphical description of the sources of mine waste metals into watersheds after fires (Murphy et al. 2020).

Figure 19. Previous fuels treatments in Lake County by the USFS from 2020.

Figure 20. USFS work of County Road 9 in Lake County.

Figure 21. Before and after photos from the USFS “Maid of Erin” project in Lake County.

Figure 22. Before and after photos of forest thinning projects undertaken by the USFS in Lake County.

E) SPP Responses

b.) Objectives:

Provide clear, measurable, realistic, time-phased objectives for work.

1. Develop and follow overarching Sampling and Analysis (SAP) and an Outreach Plan, prepared and submitted in 2022, before project implementation. These plans will include partners like ARWC, CMC, LCCD, CCC, LCCFR, CSFS, and the Ember Alliance to ensure a more collaborative and comprehensive approach. Each project will submit an independent work plan to NRDA staff before implementation. Depending upon the monitoring identified in the SAP, an additional project-specific SAP and Quality Assurance Plan may be required for individual projects before implementation.
2. Coordinate variety of projects in such a way as to maximize environmental and social outcomes partner objectives, all while reducing cost per project through contracting and procurement efficiencies.
3. Implement high-quality watershed projects that improve habitat, water quality, public safety, and use and increase resilience to floods and fires.

Table 9. Projected timeline objectives for each project.

	2022	2023	2024	2025	2026
Overarching					
SAP, Outreach Plan					
Project coordination, reporting, admin					
Outreach, stakeholder engagement					
Monitoring					
Habitat and Mines					
Planning, NEPA, Permitting					
Implementation					
Upland Watershed Protection					
Planning, NEPA, Permitting					
Implementation					
Crossings					
Planning, NEPA, Permitting					
Implementation					

c.) Operational plan

i.) *Describe in detail how the work will be implemented.*

This project will be implemented as a stakeholder-driven program of work. ARWC, a collaborative formed by the Arkansas Basin Roundtable to serve the basin in leading watershed and forest-related work, will serve as the prime contractor, coordinating various partners' work to implement this complex project. ARWC will provide point management of the overarching goals, including reporting and oversight of monitoring to assure compliance with an SAP and outreach and provide point on the forestry projects. TU will provide point management for the historic mines and habitat work. ARWC will provide point on crossings. All contracts for external resources will be run by ARWC or TU.

We anticipate that year 1 will primarily be coordinating for NEPA, permits, etc., though general planning for prioritization of projects, community-level plans (such as hazard plans, Community Wildfire Protection Plans, and Basin Implementation Plans, etc.), and similar general planning is **NOT** part of this request. Some projects are shovel-ready and will be ready to move in year one upon approval of the work plan. We anticipate most projects will be implemented in years two through four. Year five will primarily be dedicated to finalizing any remaining work and monitoring and reporting.

Each project (or combination of several projects where they can be coordinated as one) will require a work plan that is a subset to a Statement of Work (SOW) template provided by the TC during review and input over the past few weeks. This SOW will include a project description and a work plan that includes goals, objectives, and primary activities to make up each project. These SOWs will help describe the project-specific implementation and a detailed breakdown of how partners intend to complete projects. Each project will have a point (ARWC, TU, or Lake County), which will develop the work plan for each project(s) it is taking the lead for. The stakeholder team and project-specific collaborators for that project will review the plan and approve it for submittal to NRDA staff before implementation.

ii.) *Describe with whom the offeror will collaborate to accomplish the scope of work.*

- ***CORE TEAM: Jonathan Paklaian and Carol Ekarius, ARWC; Jason Willis, Trout Unlimited; Sarah Mudge, Michael Irwin, and Bryce Ehrlich, Lake County***
- **A) Overarching Project Management:** Lead - ARWC
- **B) Mines & Habitat:** Lead – Trout Unlimited, other partners: ARWC, Lake County, USGS, BLM, BOR, LCOSI, DRMS, CPW
- **C) Crossings:** Lead – ARWC, other partners: TU, USFS, USGS, CPW, Lake County, Aurora Water, Colorado Springs Utilities, Parkville Water District, Upper Arkansas Conservancy District, Pueblo Water, Southeastern Colorado Water Conservancy District
- **D) Upland Watershed Protection:** Lead – ARWC, other partners: USFS, Lake County, Colorado Mountain College, Newmont Mining, Freeport (Climax Mine), CSFS, Aurora Water, Colorado Springs Utilities, Parkville Water District, Upper Arkansas Conservancy District, Pueblo Water, Southeastern Colorado Water Conservancy District, private landowners

iii.) *Describe donors.*

We have a variety of committed partners representing federal agencies, state agencies, municipal water providers and conservancy districts, and local government entities. We also have private entities, such as Newmont Mining or private landowners, committed to specific projects within the

suite of projects. ARWC and TU will jointly seek additional funding through grants and donations, as needed to complete the projects outlined in this application. For example, we plan to make a significant ask through the Arkansas Basin Roundtable to the CWCB Water Supply Reserve grant program. No project will be started until all matching funds for that specific project are fully secured.

iv.) *Provide documentation if applicable:*

v.) *Describe to what degree the proposal matches the goals for the RP/EA.*
The Trustees' objective is to select projects that "restore, rehabilitate, protect, or enhance areas that are related to, proximal to, or have ecological nexus to, the natural resources and related services injured as a result of releases of hazardous substances from historic California Gulch mines."

This project, which takes place in Lake County, is highly consistent with this goal. The combination of projects proposed has an ecological design that will restore, rehabilitate, and enhance areas in or around the area that sustained direct ecological damage due to past mining impacts from the Superfund site —and that suffered the most significant community impacts. For example, Lake County has the highest poverty level in the central mountain region, which is correlated to the boom and bust of a mining economy and lingering environmental impacts left to manage over the years. As such, these projects will: improve habitat in areas directly impacted by the mining that took place in Lake County, for both aquatic and terrestrial species; improve enjoyment and potentially increase use by the public, and help compensate the impacted public most directly for the damages at California Gulch through jobs and local spending by contractors and others during implementation. Additionally, these projects will seek to utilize local materials, labor, and Colorado-based contractors to the greatest extent possible to implement the projects. We also seek a continuation of outreach and education to the community to encourage individual investment and involvement for illustrating need and success.

These proposed projects find the nexus between restoring or rehabilitating riparian and riverine habitats damaged by past practices. While the mines, habitat, and culvert projects will directly improve these physical attributes of stream and floodplains, they also seek to enhance habitat for wild fish and terrestrial species. These efforts will primarily be through reduction of sedimentation, water quality improvements, improving passage and connection, or direct habitat construction encouraging increases in wild fish populations. Together, these things focus on public accessibility either on public lands or ensuring that local populations can get to these areas by improving decaying infrastructure. This holistic and encompassing project will hit on many aspects of critical natural resources that will ultimately improve numerous ecosystems of Lake County.

vi.) *Describe how the proposal will coordinate with complementary, similar, existing, or other proposed projects in the area if any.*
By having such broad partners combining forces, we are proposing the ultimate coordinated project and projects that bring significant leverage in funding and cross-specialized knowledge and commitment to the best overall outcomes. For example, county roads could easily replace culverts without considering habitat. Still, all culvert projects will be aquatic-species passage friendly in this proposal. The projects will address instream channel needs and bank vegetation and stabilization as part of the culvert replacement. Likewise, fuel treatment projects were selected for their importance for protecting habitat and water supplies. Prescriptions are based on best ecological practices for that forest type, as well as BMPs for post-harvest work, such as weed control, or road and trail obliteration.

Lake County continues to work with partners for capacity-building opportunities, including the State of Colorado through the Colorado Strategic Wildfire Action Program (COSWAP). Lake County is also following the lead of Chaffee County's approach to securing dedicated funding.

vii.) *Describe the operation, maintenance and monitoring (OMM) requirements and the entity or entities accepting those responsibilities for a minimum of ten years thereafter…*
Details for each project's OMM will be described in the individual work plans, but all projects will have a single entity that agrees to take on responsibility for the long-term OMM. For example, Lake County is committed to maintaining crossings. The USFS will use prescribed fire to maintain their treatments, and ARWC/Lake County will maintain forest treatments.

viii.) *Describe permits, etc.*
Details for each project's permitting requirements will be described in the individual work plans, but all projects will acquire all necessary permits, and the project point (ARWC, TU, or Lake County) will assure necessary permits are available and all regulations are being complied with prior to and during on-the-ground implementation. These permits will be further described during the development of SOWs for each project. Examples of such permitting could be US Army Corp of Engineers 404; Nationwide 27 permits, Good Samaritan comfort letters or administrative orders on consent (AOC) for CERCLA-related projects, city/county permits, or NEPA-related categorical exclusions or associated approvals for work on USFS system lands.

For work completed on Lake County property, the County has jurisdiction over the culvert sites and some lands identified for fuel mitigation. And since the County is a lead partner, the permitting for these projects will be greatly simplified. Other proposed work occurs on CMC and Newmont lands and the core team has already met with those officers and was given their support.

ix.) *Project schedule*
Details for each project's schedule will be described in the individual work plans. A description of the overall schedule and approach is included in paragraph C(i) above.

x.) *Describe which activities in the operational plan will be tracked, counted, reported, etc.*
Details for each project's activities will be tracked according to criteria developed in the overall SAP, outreach plan, and individual work plans. We will use Smartsheet and an interactive GIS map as part of our tracking. All projects will have photo documentation. All projects will have appropriate units of reportable outcomes (such as linear feet for river work, or acres for fuel mitigation).

xi.) *Describe documentation and deliverables.*
Details for each project's documentation and deliverables will be included in the individual work plans. Overall documentation will include regular reports with each invoice, and a final overall project report and lessons learned document.

Public Communications

Budget Notes: ARWC's staff have completed large, complex projects of this character in the past, such as leading Hayman Fire, Waldo Fire, Spring Creek Fire recovery, and projects such as the Monarch Steep-slope Fuel Mitigation Project. TU's staff has completed similar habitat and mine reclamation projects. ARWC and TU are committed to fundraising for the necessary cash match and have an exceptional track record of accomplishing similar fundraising for the implementation of large-scale, multi-faceted watershed projects. We anticipate ultimately over-matching and aim to produce more outcomes (for example, acres of forest work or culverts).

Key Staff:

ARWC

- Carol Ekarius, Emeritus Director, 40 years of experience managing large-scale, multi-faceted construction projects, forestry projects and programs, river restoration and habitat projects and programs, and grants and agreements.
- Jonathan Paklaian, Executive Director, 10 years of experience managing resource projects and programs, grants, and agreements.
- Carrie Adair, Chief Operations Officer, 12 years of experience managing data and GIS information, watershed programs and projects, and grants and agreements.
- Andy Lerch, Lead Forester, 7 years of experience designing and implementing forestry projects.

Trout Unlimited

- Jason Willis, PE, 12 years experience, specializing in mine reclamation and river restoration

Lake County

- Sarah Mudge, County Commissioner, 5 years experience as a commissioner in Lake County and before that, maintaining and building professional relationships with critical partners and access to resources for Lake County.
- Bryce Ehrlich, Lake County Mapping Department
- Michael Irwin - Director Lake County Public Works - 25+ years Construction and construction management. 17 years with Lake County completing various projects, including Road and Bridge, Landfill, Facilities, and Airport construction.

Full resumes for all key staff available upon request. Carol Ekarius resume attached in Appendices

Public Communication Strategy: Describe the process that will be used to demonstrate inclusiveness, communication, and opportunities for public input throughout the project.

One of the first steps the core team will undertake is the development of an outreach plan. We intend to utilize a story map and website that we will establish for the Project. We intend to do public meetings during the initial kick-off period, in conjunction with Lake County Commissioner meetings, and through at least one separate weekend meeting, to inform the public. We will present through other meetings in the area, such as the Arkansas Basin Roundtable, as appropriate. We will utilize the local newspaper, the Leadville Herald, and the local web blog, Leadville Today, to publish press releases and articles about projects as they are being implemented. Some projects may be suitable for interpretive signage, and if they are, we will include that element in the project's work plan.

Relationship to Ranking Criteria

Screening Criteria	Analysis
Compliance with SPP	We have complied with requirements of the SPP
Compliance with laws	Partners are aware of all legal requirements, and will comply with all laws, rules, regulations, and permitting requirements for each specific project within the overall Project. Note that NEPA has been completed on some specific project areas by other partners, or is underway.
Public health and safety	This Project will improve public health and safety by the selection and design of work being undertaken. For example, improving culverts increases public safety through safe transport as well as emergency response; forestry work reduces the intensity of wildfire, thus reducing all aspects of fire and post-fire impacts; restoration and mine projects improve water quality, which protects public health and safety.
Eligibility	As all projects are in Lake County they have a clear nexus to the historic releases. Forestry work, although a bit unique to an NRD proposal, will protect investments already made with past-NRD, CERCLA, and other investments by reducing the impacts of post-fire flooding to earlier reclamation and restoration sites.
Ranking Criteria	**Analysis**
Public Support	Although early CERCLA work in California Gulch met with some public push back, the community has grown to appreciate the work, and with the NRD projects, there has been greater support as these projects have improved water quality and recreational opportunities. Through the recent CWPP update (see more below) the County performed a citizen survey (488 responses) that shows 90% of respondents support forest mitigation to protect values at risk. The survey also showed that 53% recreate outdoors, but 89% agree that outdoor recreation is critical to the local economy, and support projects that improve the quality of recreation opportunities. (Copy of report available upon request.)
Likelihood of Success	The Core Team and project-specific partners bring decades of experience in implementing such broad programs of work and specific projects as outlined in the overall Project. With a suite of different projects built in, we have a scalable approach that can accommodate the funding availability to get the best projects implemented, and that can result in savings through strategic bundling of procurement to accomplish the projects that are outlined here.
Technical Feasibility	Specific projects outlined here are based on generally acceptable approaches to reclamation and restoration, and the partners bring extensive knowledge of BMPS and these implementation techniques to the table.

Screening Criteria	Analysis
Multiple Natural Resource Benefits	Through the large-scale watershed-based approach we are proposing, we advance a holistic view of the projects with the eye toward maximizing natural resource benefits. For example, by not only incorporating fish passage, but also looking at channel and bank stability when improving culverts, we are concurrently addressing aquatic species and sedimentation issues. Forest projects increase heterogeneity, thus providing habitat for a wider array of species, as well as reducing the impacts of post-fire flooding on water quality.
Time to Provide Benefits	Benefits of some projects, such as culvert improvements, show benefits almost immediately, whereas projects such as forest-health work may take several years after completion to show increases of species diversity, and it may be years before we have a wildfire in the area that would negatively impair water quality if the work is not completed. River restoration projects tend to show the benefits to species and water quality within just a few years, whereas mine-related projects can take many years to show improvement in water quality downstream of the work. We anticipate that the combination of projects, however, will begin to show marked improvements within just a few years at the most.
Duration of Benefits	The watershed-based approach we are using shows benefits for decades if not longer. CERCLA and NRD have already documented such long-term benefits, and the Project will build on that success.
Non-NRD match	We are committed to meeting the minimum 50% match, though as discussed above, we do believe that NRD funding will provide a base upon which we can leverage more resources to increase the outcomes specified in this request. We project only 10% of the project total budget to be represented by in-kind match, and 40% to be cash match.
Protection of Implemented Projects	Most of the project work is taking place on public lands, and thus protected for the future.
Alignment with Regional Planning	This project aligns with plans developed by various partners. The new county-wide CWPP and all-hazard plans, for example, are key to prioritizing forest project acres. The culverts were identified through a multi-party planning process that was funded by Colorado Springs Utilities and Aurora Water last year, and that used a post-fire hydrology assessment to help in prioritizing the culverts in most need of attention.
Public Access	As the majority of projects are on public lands (federal or local) they are accessible to the public.

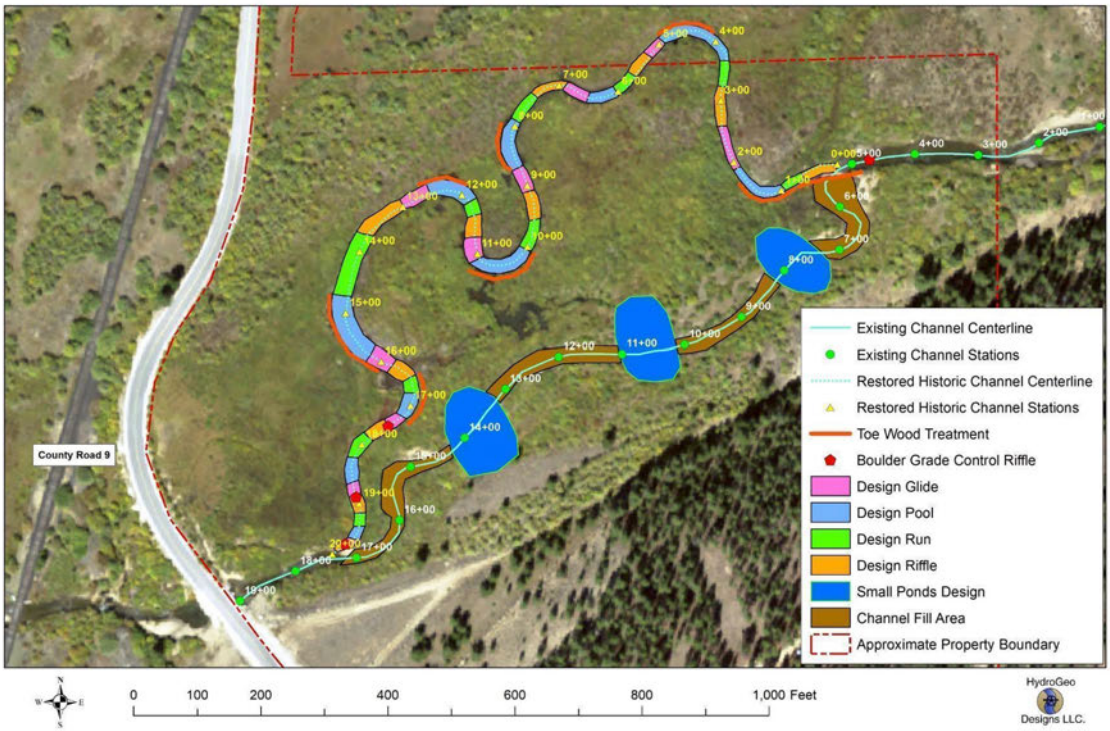
Appendices

Appendix A – Sherman Engineer's Budget Estimate

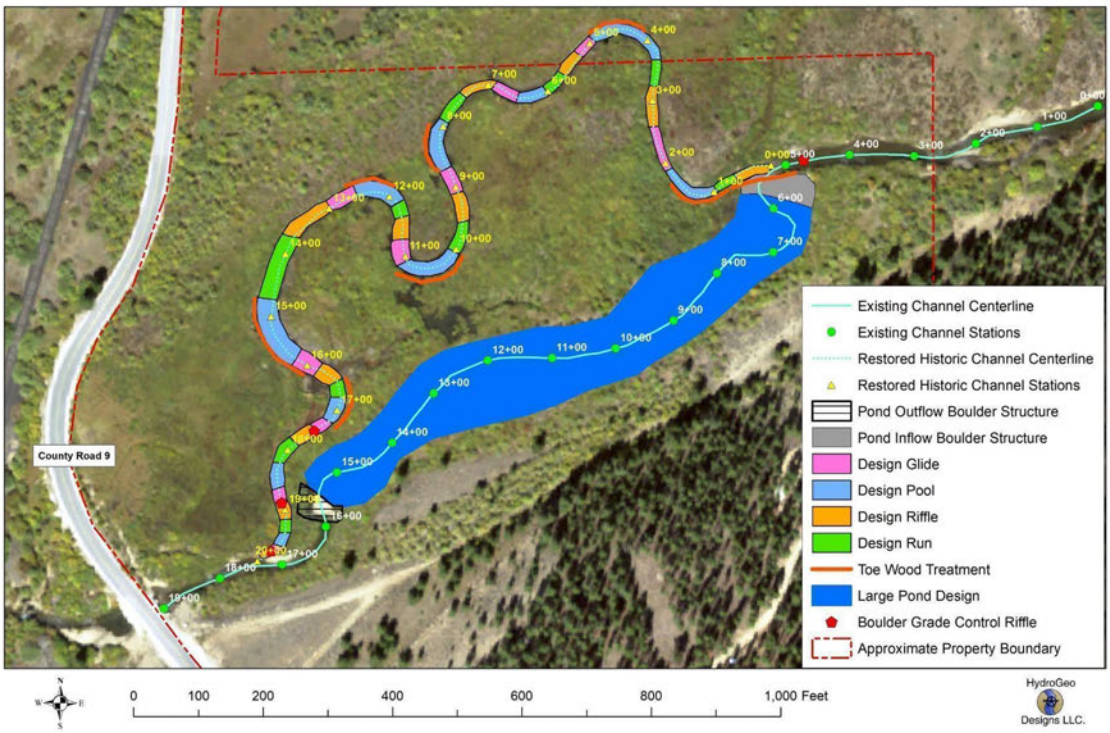
Sherman Channel Project - Engineers Estimate					
ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	AMOUNT
1.0	SHEAP	1	Lump Sum	N/A	$ 2,000.00
2.0	Mobilization & Demobilization	1	Lump Sum	N/A	$ 25,000.00
3.0	Provide & Install Sediment Control	400	Linear Foot	$7.50	$ 3,000.00
4.0	Survey Monument Locate	1	Lump Sum	N/A	$ 1,500.00
5.0	Excavate Test Pits	1	Lump Sum	N/A	$ 1,500.00
6.0	Grouted Riprap Channels				
6.1	Prepare North & South Channels & Energy Dissipation Zone	1	Lump Sum	N/A	$ 50,000.00
6.2	Provide & Install Bedding Material	3,800	Cubic Yard	$22.00	$ 83,600.00
6.3	Provide & Install Drainage Pipe	1	Lump Sum	N/A	$ 4,250.00
6.4	Provide & Install 6-10" Riprap	2,500	Ton	$80.00	$ 200,000.00
6.5	Provide & Install 8-12" Riprap	2,500	Ton	$80.00	$ 200,000.00
6.6	Screen Stockpiled Riprap	2,000	Ton	$10.00	$ 20,000.00
6.7	Provide & Install Boulders	31	Each	$50.00	$ 1,550.00
6.8	Provide & Install Baffles	11	Each	$200.00	$ 2,200.00
6.9	Provide & Install Grout	1,510	Cubic Yard	$315.00	$ 475,650.00
7.0	Diversion Channel				
7.1	Prepare Diversion Channel	1	Lump Sum	N/A	$ 25,000.00
7.2	Provide & Install D50 3" Riprap	3,000	Ton	$22.00	$ 66,000.00
8.0	Construct Slope Ditches & Surface Roughening	1	Lump Sum	N/A	$ 6,500.00
9.0	Additional Equipment Rental – Excavator	5	Hour	$250.00	$ 1,250.00
				TOTAL	**$ 1,169,000.00**
				+ 15%	**$ 1,344,350.00**

Appendix B – Three Alternatives for Habitat & Mines EF Arkansas River

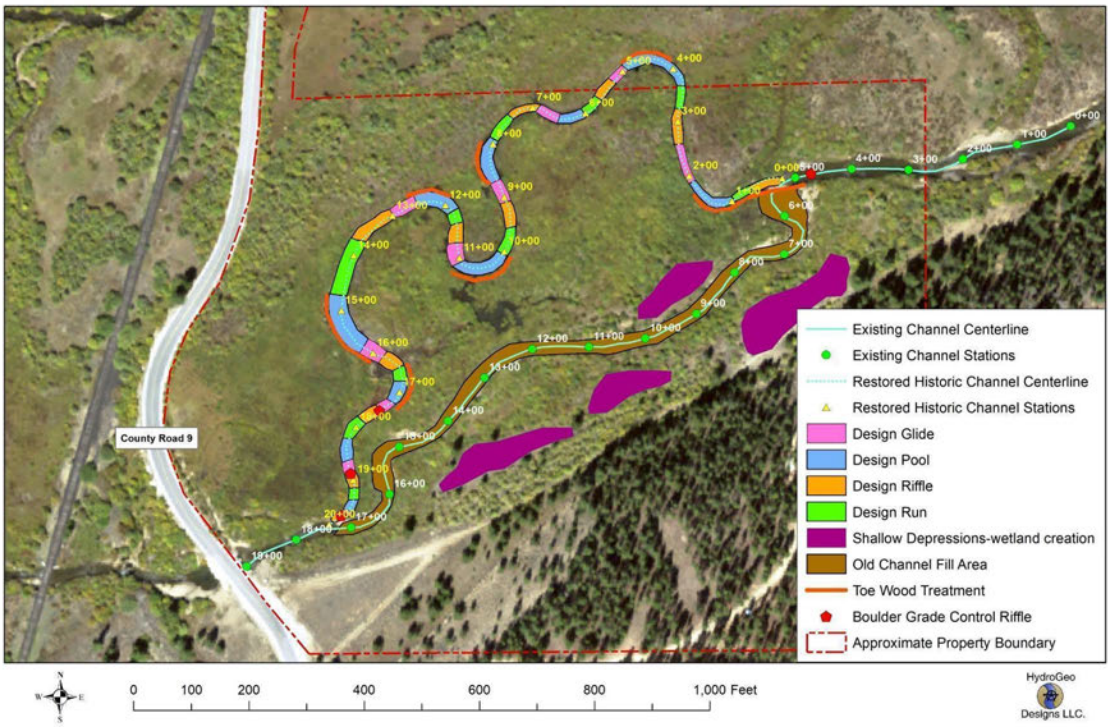
Small Ponds Design EF Arkansas River Steiner Property



Large Pond Design EF Arkansas River Steiner Property



No Pond Design EF Arkansas River Steiner Property



Appendix C – Offeror Information

Offeror's Organization:
The Arkansas River Watershed Collaborative (ARWC) is a 501(c)3 nonprofit watershed group formed by the Arkansas Basin Roundtable membership, which includes representatives of each county in the Arkansas Basin, municipal water providers, water conservancy districts, agricultural, environmental and recreation interests, and ad-hoc federal and state agency representatives. Our staff have connections not only to ARWC, but also to the Coalition for the Upper South Platte and the Purgatoire Watershed Partnership, and over the last several decades have become recognized leaders in the state in implementing such broad-scale collaborative projects. We have worked extensively with federal and state agency partners (particularly CDPHE through the 319 Nonpoint Source Program and CWCB) on grant-driven projects, including overseeing ~$40 million of investments in both the Hayman and Waldo fire recovery efforts. In partnership with the San Isabel National Forest, we are currently implementing a ~$2 million-dollar steep-ground demonstration project on Monarch Pass, which is treating forest acres on slopes up to 60%. We have annual audits, and in some years, we have been audited pursuant to the Federal Single Audit Act when we pass the threshold of $750,000 in federal awards in a single year. We routinely procure over $1 million per year in outside contract services, and in peak years have procured over $11 million in a year.

References among state agency staff with familiarity to our leadership and project work:
Tammy Allen, CDPHE, tamara.allen@state.co.us, 720.236.3154
Chris Sturm, CWCB, chris.sturm@state.co.us, 720.219.4384

Past Performance: See Projects List, Next Page—We have just included funding over $250k. Many lines of our database combine to larger projects. Access to the entire list of funders and projects is available as a smartsheet online document, which can be shared upon request. No projects we have completed have had cost overruns, nor encountered significant technical difficulties.

Funder	Year Approved	Grant Name	Program Type	Amount of Award
USFS	2021	Action Implementation Mitigation	Collab Dev	$4,461,000.00
El Paso County	2013	Waldo	Emerg Mgmnt	$2,100,000.00
NFF with Coke, Aurora, Gates, Vail	2012	Trail Creek	River Resto	$1,680,000.00
City Colo Spgs	2013	Waldo	Emerg Mgnt	$1,629,946.00
CSFS	2009	ARRA	Forestry	$1,565,000.00
USFS	2019	South Ark Stewardship Agreement (Monarch Pass)	Forestry	$1,200,000.00
DNR	2013	Wildfire Mitigation	Forestry	$1,000,000.00
USFS	2012	Waldo	Emerg Mgnt	$759,000.00
CDPHE	2010	Trail Creek	Post Fire	$694,800.00
CWCB	2015	Horse Creek	River Resto	$650,000.00
CDPHE	2014	WALDO	Emerg Mgnt	$500,000.00
Crown	2017	F2F: Building Capacity to Protect Western Watersheds	Collab Dev	$500,000.00
Crown	2020	Crown	Collab Dev	$500,000.00
HCWCD	2020	Spring Fire	Fire Recovery	$500,000.00
Crown	2015	Forest work	Capacity	$500,000.00
DW (CSFS)	2014	USPP DW Non-Fed Lands Forest Treatment Partnership	Forestry	$500,000.00
USFS	2018	CMAT	Emerg Mgmnt	$480,000.00
CDPHE	2016	Horse Creek	River Resto	$433,307.00
CWCB	2019	Monarch	Forestry demo project	$403,739.00
USFS	2011	Trail Creek		$387,000.00
Colorado Springs Utilities	2016	WALDO	Post Fire	$376,500.00
Custer County - CDPHE	2017	Wetmore	Post Fire	$345,074.00
CWCB	2021	Ark Basin Fire & Flood	Mixed programs	$345,074.00
PC LWTF	2009	Park County LWTF	River Resto	$312,000.00
CDPHE	2021	Post-fire BMP Implementation Spring Creek Fire (Idlewild)	Forestry	$300,000.00
DNR	2014	Wildfire Mitigation	Forestry	$293,333.33

CWCB	2017	Ark Watershed Collab Develop	Collab	$291,500.00
CSFS	2009	WPHFI	Forestry	$276,000.00
Crown	2015	Collaborative Development	Forestry	$275,000.00
CWCB	2018	Ark Basin Watershed Health Initiative (ArkWHIP)	Mixed programs	$253,000.00
CSFS	2017	2017 NE Teller Cnty Adjacent Lands Project-Stevens/CAFA	Forestry	$250,000.00

CAROL EKARIUS
Curriculum Vitae

Experience:

2014 to Current. Chief Executive Officer, Coalitions & Collaboratives, Inc. Formed as a new organization by the leadership of the Coalition for the Upper South Platte, this organization helps other nonprofits work on collaborative conservation. COCO is working with a number of place-based affiliates, including providing sub-awards to aid in their efforts; developing innovative programs with the U.S. Forest Service to expand on-the-ground work in communities around the West to reduce wildfire impacts, including operating the AIM grant program, which has funded numerous collaboratives in Colorado, and such as managing the Community Mitigation Assistance Teams; providing support to post-fire communities who are coping with flooding and other challenges following wildfires across the West, including hosting the After The Flames conferences, resource pages, and webinars; and piloting a public/private partnership around forest-carbon market approaches. Carol's strategic and visionary leadership are acknowledged by many in the watershed and forestry universe, with awards such as the 2012 USFS Chief's Award and a 2015 Excellence in Environmental Stewardship Award from the Colorado Department of Public Health and Environment, and appointments such as Environmental Representative to the legislatively established Colorado Forest Health Advisory Council.

2019 to Current. Interim Executive Director, Arkansas River Watershed Collaborative. Carol helped the Arkansas Basin Roundtable to establish a basin-wide watershed collaborative, and has helped develop that organization, which has been focusing on forest health efforts in the headwaters of the Arkansas basin, and on post-fire recovery from fires that have happened in the basin over the last several years.

1999 to 2019. Executive Director, Coalition for the Upper South Platte. Carol helped get this nationally recognized watershed group off the ground, working to oversee all functions and staff, including financial management, project implementation, outreach to the public, grant administration, and other functions required to run a nonprofit organization. CUSP members include major water providers, such as Denver Water, Aurora Water, and Colorado Springs Utilities, as well as county governments, conservation and conservancy districts, and other NGOs. She has represented the organization on various committees and task forces, such as the Front Range Fuel Treatment Partnership Roundtable, the South Platte Protection Plan Committee, and the National Commission on Science and Sustainable Forestry. The group works on projects ranging from fire rehabilitation after many wildfires (including the 2002 Hayman fire and 2012 Waldo Canyon fire), to

environmental education, forest health, river restoration, and weed control projects across public and private boundaries.

1989 to Current: Self-employed Write and Nonprofit Consultant. For over 20 years, Carol worked as a self-employed writer, and as a technical consultant to other nonprofits and the governmental sector. Her freelance writing credentials include 12 books in print, as well as articles in a variety of magazines. Her consulting has included contract report writing, grant writing, meeting facilitation, and project management support on a wide array of projects and programs.

1989-1998: Self-employed Farmer. Carol and her husband owned and operated an organic, grass-based farm in Central Minnesota during this period. She also ran the consulting business from the farm, providing technical support to public and nonprofit entities.

1981-1989: District Manager, Frisco Sanitation District, Frisco, CO. As manager of the District, Carol oversaw day-to-day operations and major construction projects of a sanitation district providing wastewater treatment services to a community of 8,000, and represented the Board in an official capacity. The District's annual operating budget was $500,000 per year, and she managed a $4,000,000 construction project during her tenure. The plant won EPA's National Operation and Maintenance Award under her leadership. In this position, she was a key player in helping to create the first pollution trading regulation in the nation. Under the "Lake Dillon Regulation," Summit County, a national ski country treasure, could continue to grow but also maintain Dillon Reservoir as a high-quality water body for municipal and recreational purposes by utilizing a cap and trade approach to phosphorous pollution.

Other Public and Nonprofit Experience:

1985-1989: Town Board Member, Silverplume (CO)
1984-1989: Board Member, People for Silverplume
1989-1991: Chairman, Sustainable Farming Association of Minnesota
1991-1997: Executive Director, Sustainable Farming Association of MN
1992-1995: Kellogg Foundation Leadership Fellow
1995-1997: Board Member, Minnesota Institute for Sustainable Agriculture (Univ. of MN)
1995-1997: Member, National Sustainable Agriculture Working Group
1998-2004: Board Member, Hartsel Community Library Board
2000-2003: Board Member, Colorado Watershed Assembly
2000-2003: Treasurer, Colorado Watershed Assembly
2001-2002: Executive Committee Member, Colorado Water Trust
2002-Current: Executive Committee Member, Front Range Fuel Treatment Partnership Roundtable
2013: Member, Governor's Wildfire Insurance Task Force
2017-Current: Governor's appointee, Colorado Forest Health Advisory Council
2018-Current: Ex-officio member of the national Wildfire Leadership Council (Washington-level leadership from USFS, DOI, and other organizations)

Education:

1989: BS, Civil Engineering, University of Colorado at Denver
1975: Certificate in Medical Laboratory Technology, Monmouth Medical Center Professional Development Program, Long Branch, NJ
1974: AS, Biology, Ocean County College, NJ

JONATHAN R. PAKLAIAN
Curriculum Vitae

SUMMARY OF QUALIFICATIONS

Accomplished conservationist, collaborator, and manager with over 10 years of experience across the intermountain West. Professional experience in the private sector, non-profit sector, academia, and government agencies. Leadership experience in partnerships, field, laboratory, and classroom. Leadership roles on regional collaborative conservation partnerships and working groups.

EDUCATION

Master of Science in Environmental Sciences and Policy: Northern Arizona University, Flagstaff, Arizona, May 2017.

Bachelor of the Arts in Anthropology – Specialization in Environmental Studies: Michigan State University, East Lansing, Michigan, May 2007.

PROFESSIONAL EXPERIENCE

- **Executive Director:** Arkansas River Watershed Collaborative, Salida, CO. 2021 – Current.
    - Works with Board of Directors and staff to address Arkansas Basin watershed issues including but not limited to ecological health, fire/flood resiliency, water quality, water supply, wildlife habitat, invasive species, and risks to agricultural production.
    - Coordinates and collaborates with diverse stakeholders from private landowners, government agencies, agricultural producers, water districts, and community groups.
    - Oversees all staff, projects, fundraising/development, and programs of the organization.
    - Responsible for overall management and strategy of up to $2 M annual budget for projects throughout the 28,000-acre Arkansas River Watershed.
- **Conservation Programs Manager:** Grand Staircase Escalante Partners, Escalante, UT. 2018 – 2021.
    - Program management for on-the-ground conservation efforts in the Grand Staircase region of Utah.
    - Project manager for one of the largest river restorations projects in Utah, across, 1.3 million-acre watershed.
    - Part of the coordinating committee for the Escalante River Watershed Partnership.
    - Responsible for management and raising of a $250,000 annual program budget.

- **Project Assistant:** SWCA Environmental Consultants, Albuquerque, NM. 2017 –2018.
    - Conduct natural resource desktop reviews, prepare crews for fieldwork with review of special status species, hydrology, soils, and other environmental concerns.

- Coordinate and manage multi-stakeholder projects from kickoff to submittal of deliverables.
- Successfully create proposals and budgets for new projects.
- Compose NEPA documents for review by agency specialists.

- **Vegetation/Habitat and Archaeological Monitoring Field Lead:** The Great Basin Institute, Grand Staircase-Escalante National Monument, Utah. 2016.
  - Mentored and trained AmeriCorps volunteers and led crew in the remote backcountry of southern Utah.
  - Worked in support of the Assessment Inventory and Monitoring (AIM) field project for rangelands.
  - Sampling methods included line-point intercept, canopy gap, soil verification, and plant identification.
  - Other duties performed: GIS mapping, plant keying, quality control of data.

- **Archaeology Crew Chief:** U.S. Park Service, Bryce Canyon National Park, 2012 – 2013.
- **Trail Crew:** U.S. Park Service, Saguaro National Park, 2007.

Experience working for eight different consulting firms with duties ranging from archaeological surveys and excavations, natural resource inventories, and Abandoned Mineral Lands inventories. Coordination of complex fieldwork and reporting projects was a key duty for these positions.

RESEARCH EXPERIENCE

Principal Investigator: *Holocene and Late Pleistocene Paleoenvironmental History using Lake Sediment in the Chuska Mountains, Navajo Nation, New Mexico.* Northern Arizona University, 2013 – 2017.

- Policy component placed science into context with environmental management considerations.
- Established fire event frequency and offered new hypotheses for the biogeography of ponderosa pine on the Colorado Plateau.
- Developed in-depth, working knowledge of plant taxonomy, physical science, GIS, ecology, and statistics.
- Successfully prepared grant proposals for research projects.

Research Assistant: Laboratory of Paleoecology, Northern Arizona University, 2014

- Assisted in the recovery, transportation, and initial processing of sediment cores from Stoneman Lake, Arizona.

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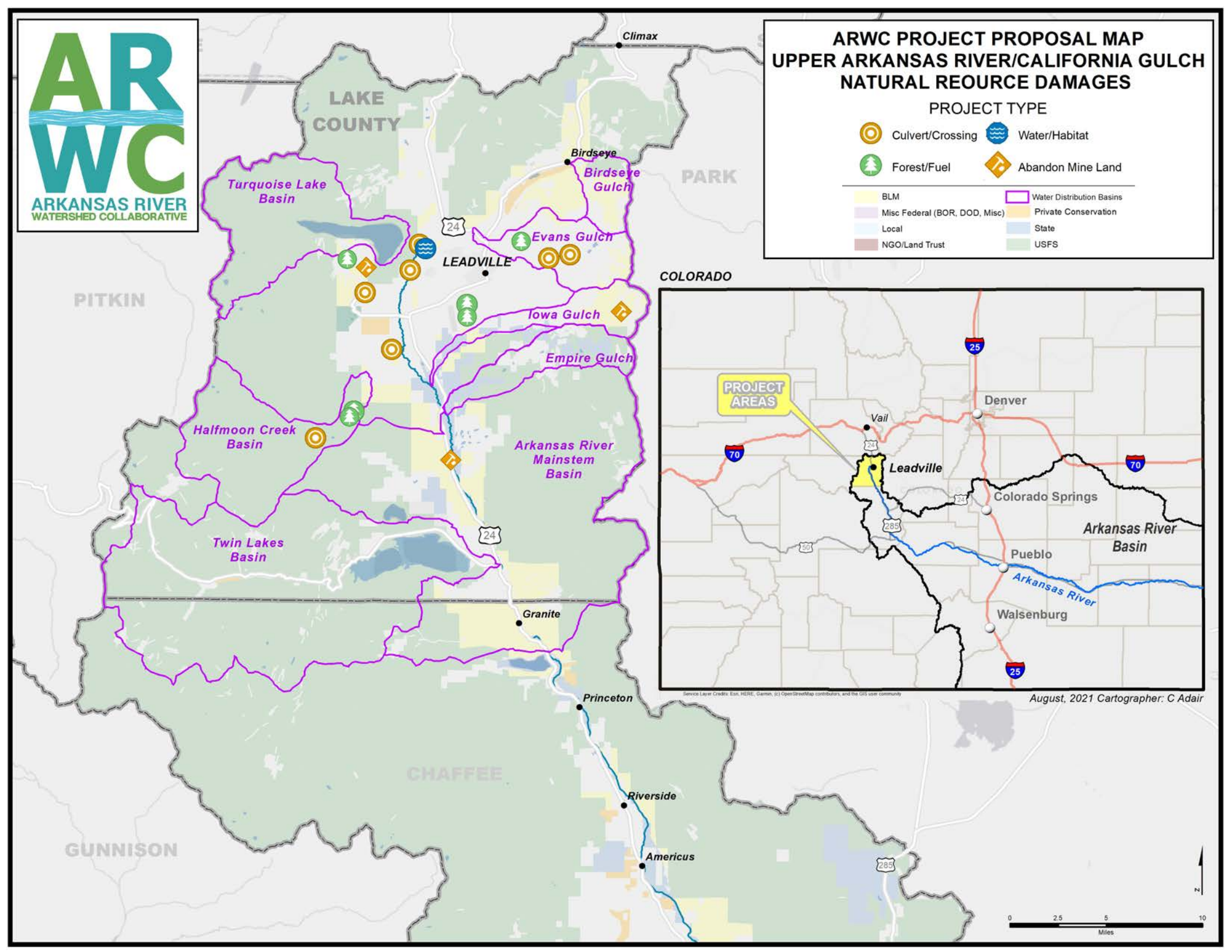
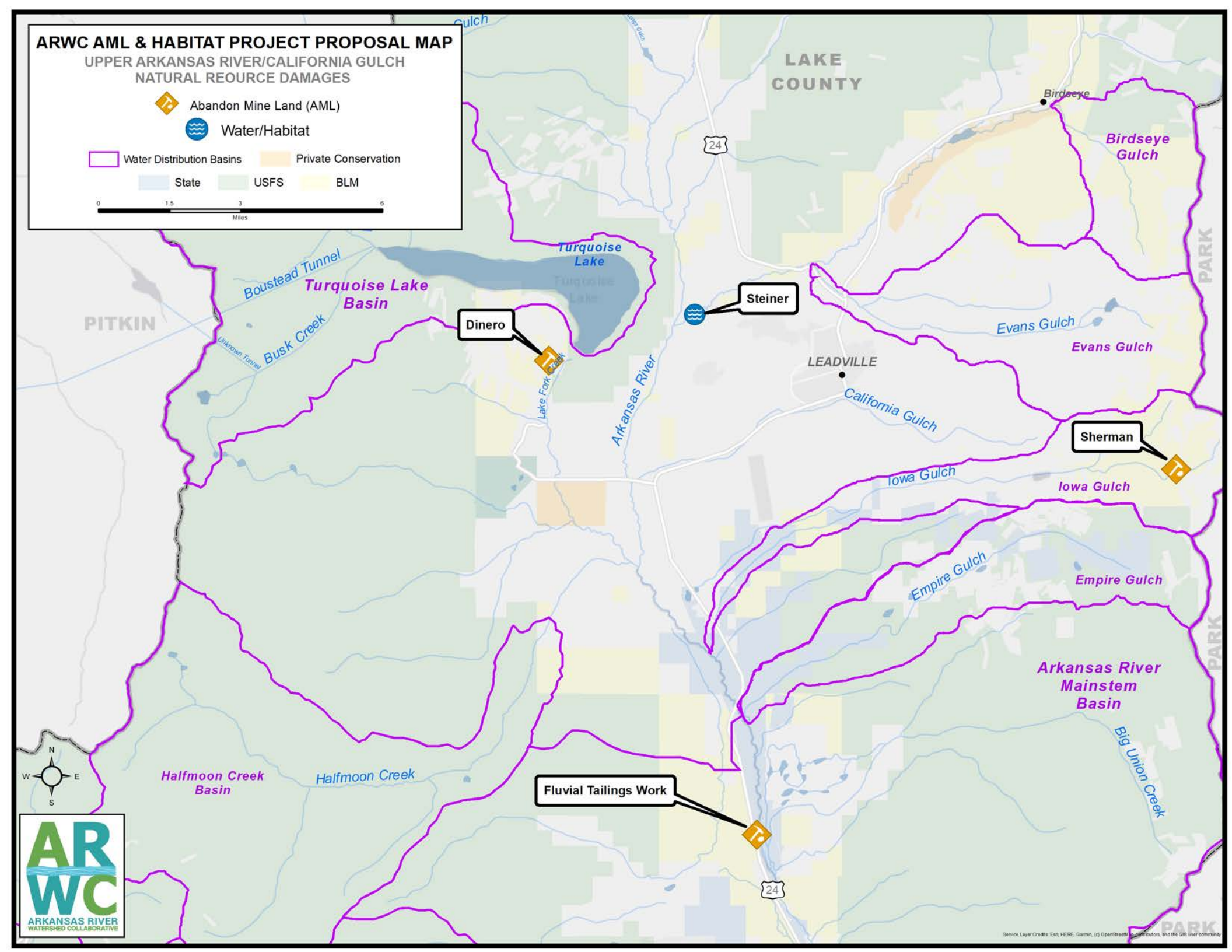
- Department of the Interior NEPA training

Habitat & Mines								
	Sherman	Steiner	Dinero	Fluvial Tailings	Total	NRD	Match (cash and in-kind)	Match Type
Personnel	**$97,000**	**$10,000**	**$467,000**	**$56,000**	**$630,000**	**$281,500**	**$348,500**	
Lake County	*$500*	*$500*	*$500*	*$500*	*$2,000*	*$500*	*$1,500*	*In-kind*
ARWC	*$1,500*	*$1,500*	*$1,500*	*$1,500*	*$6,000*	*$6,000*	*$0*	
TU	*$55,000*	*$8,000*	*$15,000*	*$52,000*	*$130,000*	*$100,000*	*$30,000*	*In-Kind*
USGS			*$425,000*		*$425,000*	*$175,000*	*$250,000*	*Cash and in-kind*
Drms	*$35,000*		*$20,000*		*$55,000*	*$0*	*$55,000*	*In-kind*
BLM			*$5,000*		*$5,000*	*$0*	*$5,000*	*In-kind*
Volunteers/Partners	*$5,000*	*$0*	*$0*	*$2,000*	*$7,000*	*$0*	*$7,000*	*In-kind*
Contractors	**$550,000**	**$270,000**	**$205,000**	**$221,000**	**$1,246,000**	**$888,500**	**$357,500**	
Heavy Equip	*$550,000*	*$190,000*		*$217,500*	*$957,500*	*$657,500*	*$300,000*	*Cash*
Habitat consultant		*$45,000*			*$45,000*	*$22,500*	*$22,500*	*Cash*
Engineering		*$35,000*			*$35,000*	*$0*	*$35,000*	*In-kind*
Lab			*$25,000*	*$3,500*	*$28,500*	*$28,500*		
Drilling			*$143,000*		*$143,000*	*$143,000*		
Geophysical			*$37,000*		*$37,000*	*$37,000*		
Supplies/Materials	**$795,000**	**$33,000**	**$16,000**	**$111,500**	**$955,500**	**$547,000**	**$408,500**	
Limestone				*$23,500*	*$23,500*	*$23,500*		
Compost				*$39,000*	*$39,000*	*$39,000*		
Seed/Willow	*$5,000*	*$5,000*		*$14,000*	*$24,000*	*$21,500*	*$2,500*	*Cash*
Trees for toe wood		*$12,000*			*$12,000*	*$6,000*	*$6,000*	*Cash*
Wattles, straw, silt fence	*$5,000*	*$1,000*		*$35,000*	*$41,000*	*$41,000*		
Sampling Supplies			*$16,000*		*$16,000*	*$16,000*		
Baffles	*$10,000*				*$10,000*	*$10,000*	*$0*	*Cash*
Grout	*$475,000*				*$475,000*	*$275,000*	*$200,000*	*Cash*
Rock	*$300,000*	*$15,000*			*$315,000*	*$115,000*	*$200,000*	*Cash*
Travel & Mileage	**$15,000**	**$3,500**	**$19,000**	**$13,000**	**$50,500**	**$25,000**	**$25,500**	
Indirect/Admin	**$95,000**	**$28,000**	**$2,000**	**$37,000**	**$162,000**	**$0**	**$162,000**	
TOTAL	**$1,552,000**	**$344,500**	**$709,000**	**$438,500**	**$3,044,000**	**$1,742,000**	**$1,302,000**	
Match Notes	*Cash match anticipated from Freeport McMoRan and DRMS based on discussions with TU*	*Cash match anticipated from property owner*	*Cash match anticipated from BLM, USGS, TU and DRMS as well as from water providers and other grants*	*Cash match anticipated from water providers, TU, and other grants*				


ARWC
ARKANSAS RIVER
WATERSHED COLLABORATIVE
ARWC PROJECT PROPOSAL MAP
UPPER ARKANSAS RIVER/CALIFORNIA GULCH
NATURAL REOURCE DAMAGES
PROJECT TYPE
Culvert/Crossing
Water/Habitat
Forest/Fuel
Abandon Mine Land
BLM
Misc Federal (BOR, DOD, Misc)
Local
NGO/Land Trust
Water Distribution Basins
Private Conservation
State
USFS
LAKE COUNTY
PARK
PITKIN
CHAFFEE
GUNNISON
Climax
Birdseye
Birdseye Gulch
Evans Gulch
LEADVILLE
Iowa Gulch
Empire Gulch
Turquoise Lake Basin
Halfmoon Creek Basin
Twin Lakes Basin
Arkansas River Mainstem Basin
Granite
Princeton
Riverside
Americus
24
285
COLORADO
PROJECT AREAS
Vail
Denver
Leadville
Colorado Springs
Pueblo
Walsenburg
Arkansas River
Arkansas River Basin
70
25
50
August, 2021 Cartographer: C Adair
0
2.5
5
10
Miles


ARWC AML & HABITAT PROJECT PROPOSAL MAP
UPPER ARKANSAS RIVER/CALIFORNIA GULCH
NATURAL REOURCE DAMAGES
Abandon Mine Land (AML)
Water/Habitat
Water Distribution Basins
Private Conservation
State
USFS
BLM
0
1.5
3
6
Miles
LAKE COUNTY
PITKIN
PARK
Birdseye
Birdseye Gulch
Turquoise Lake
Turquoise Lake Basin
Boustead Tunnel
Busk Creek
Unknown Tunnel
Dinero
Steiner
Lake Fork Creek
Arkansas River
LEADVILLE
Evans Gulch
California Gulch
Sherman
Iowa Gulch
Empire Gulch
Arkansas River Mainstem Basin
Big Union Creek
Halfmoon Creek Basin
Halfmoon Creek
Fluvial Tailings Work
24
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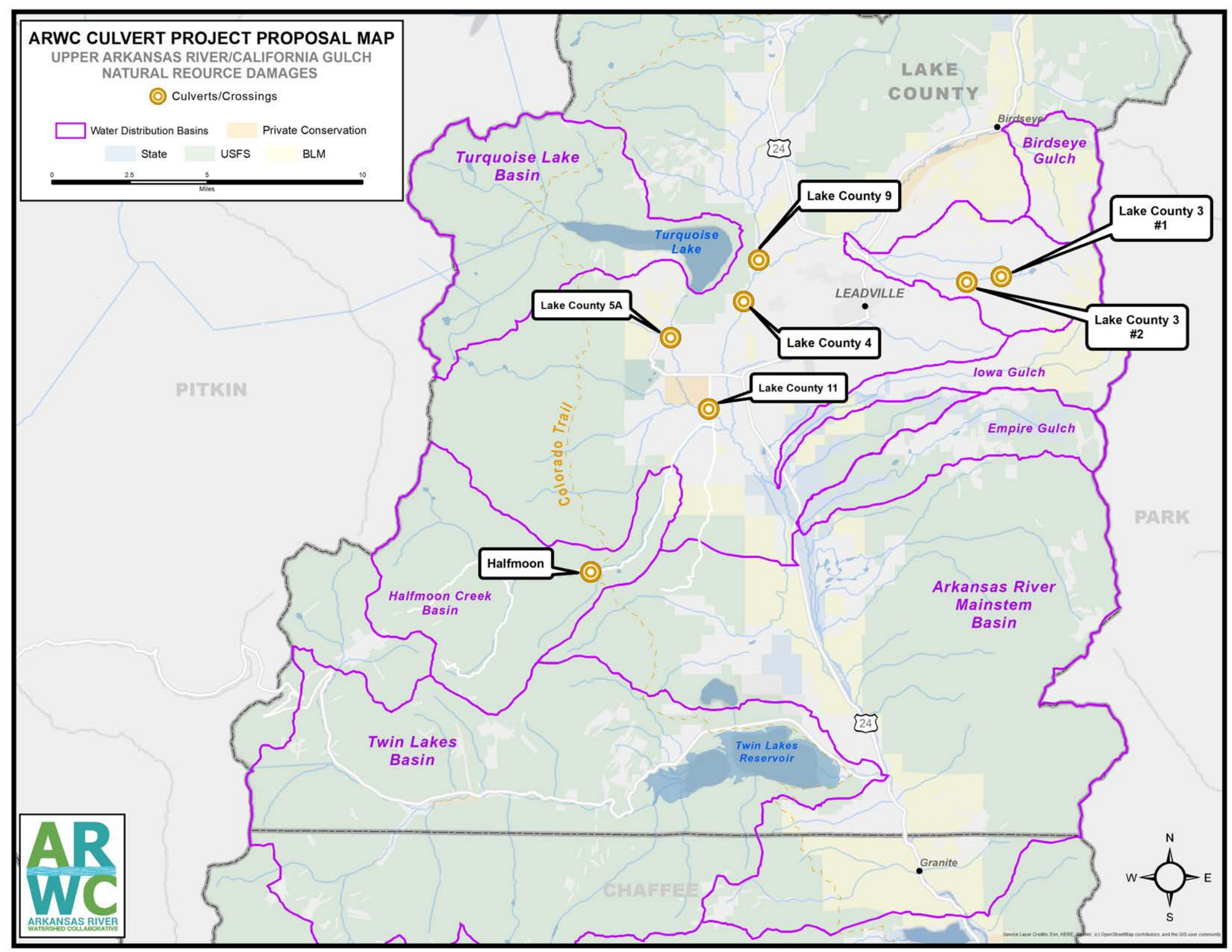
ARWC
ARKANSAS RIVER
WATERSHED COLLABORATIVE


ARWC CULVERT PROJECT PROPOSAL MAP
UPPER ARKANSAS RIVER/CALIFORNIA GULCH
NATURAL REOURCE DAMAGES
Culverts/Crossings
Water Distribution Basins
Private Conservation
State
USFS
BLM
0
2.5
5
10
Miles
LAKE COUNTY
Birdseye
Birdseye Gulch
Turquoise Lake Basin
Turquoise Lake
Lake County 9
Lake County 3 #1
Lake County 3 #2
LEADVILLE
Lake County 5A
Lake County 4
Lake County 11
Iowa Gulch
Empire Gulch
PITKIN
Colorado Trail
PARK
Halfmoon
Halfmoon Creek Basin
Arkansas River Mainstem Basin
Twin Lakes Basin
Twin Lakes Reservoir
24
Granite
CHAFFEE
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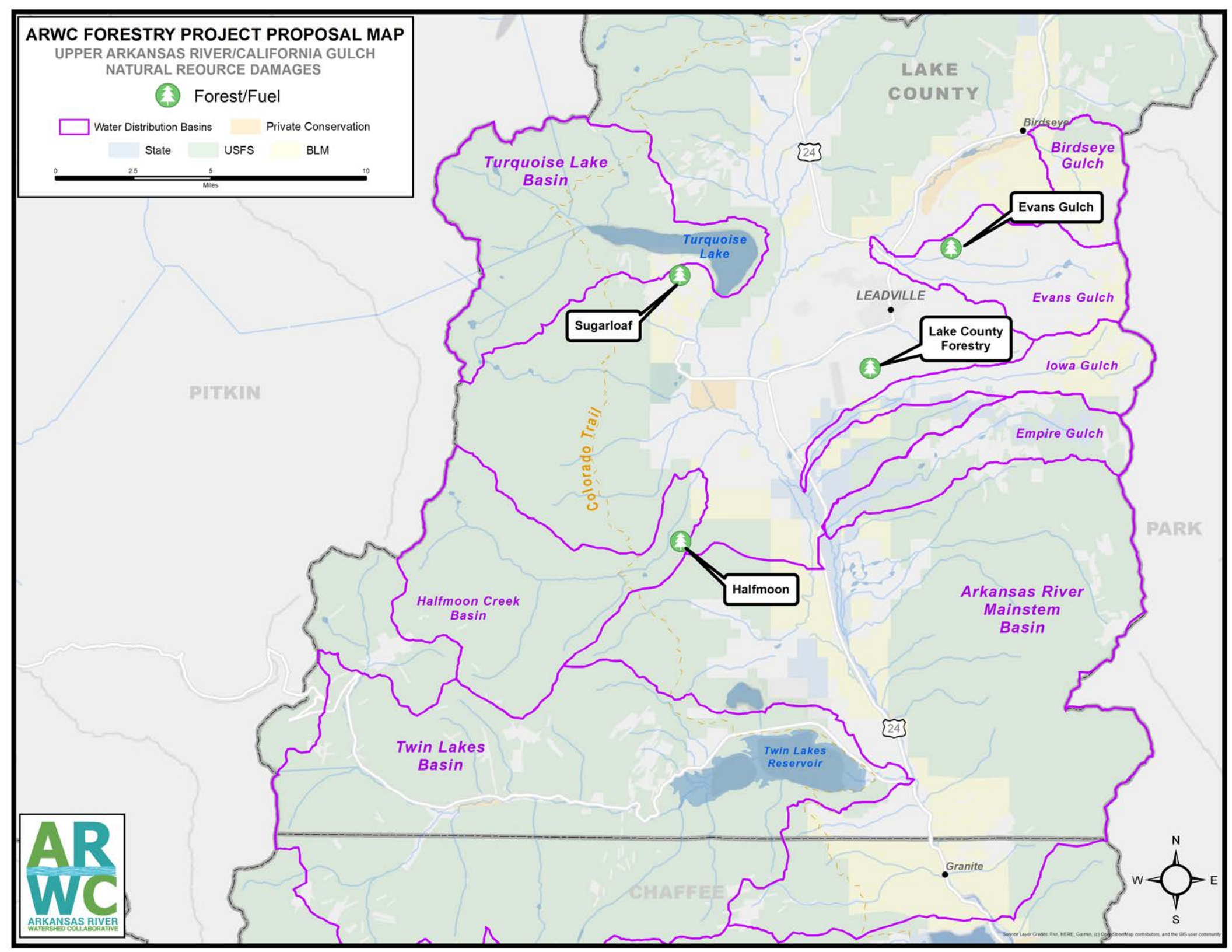
ARWC
ARKANSAS RIVER
WATERSHED COLLABORATIVE


ARWC FORESTRY PROJECT PROPOSAL MAP
UPPER ARKANSAS RIVER/CALIFORNIA GULCH
NATURAL REOURCE DAMAGES
Forest/Fuel
Water Distribution Basins
Private Conservation
State
USFS
BLM
0
2.5
5
10
Miles
LAKE COUNTY
Birdseye
Birdseye Gulch
Turquoise Lake Basin
Turquoise Lake
Evans Gulch
Evans Gulch
LEADVILLE
Sugarloaf
Lake County Forestry
Iowa Gulch
PITKIN
Colorado Trail
Empire Gulch
PARK
Halfmoon
Halfmoon Creek Basin
Arkansas River Mainstem Basin
Twin Lakes Basin
Twin Lakes Reservoir
24
Granite
CHAFFEE
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ARKANSAS RIVER
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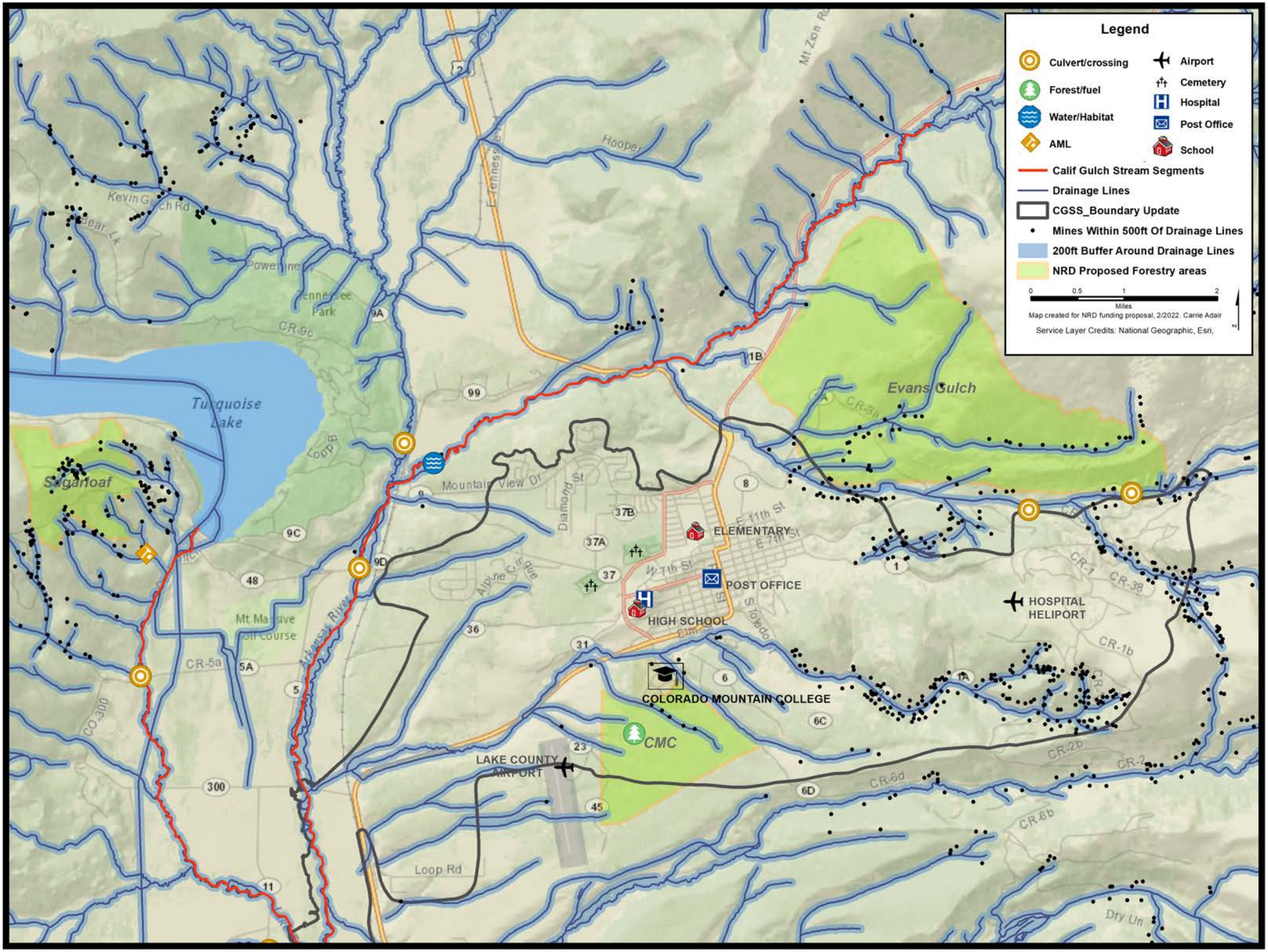
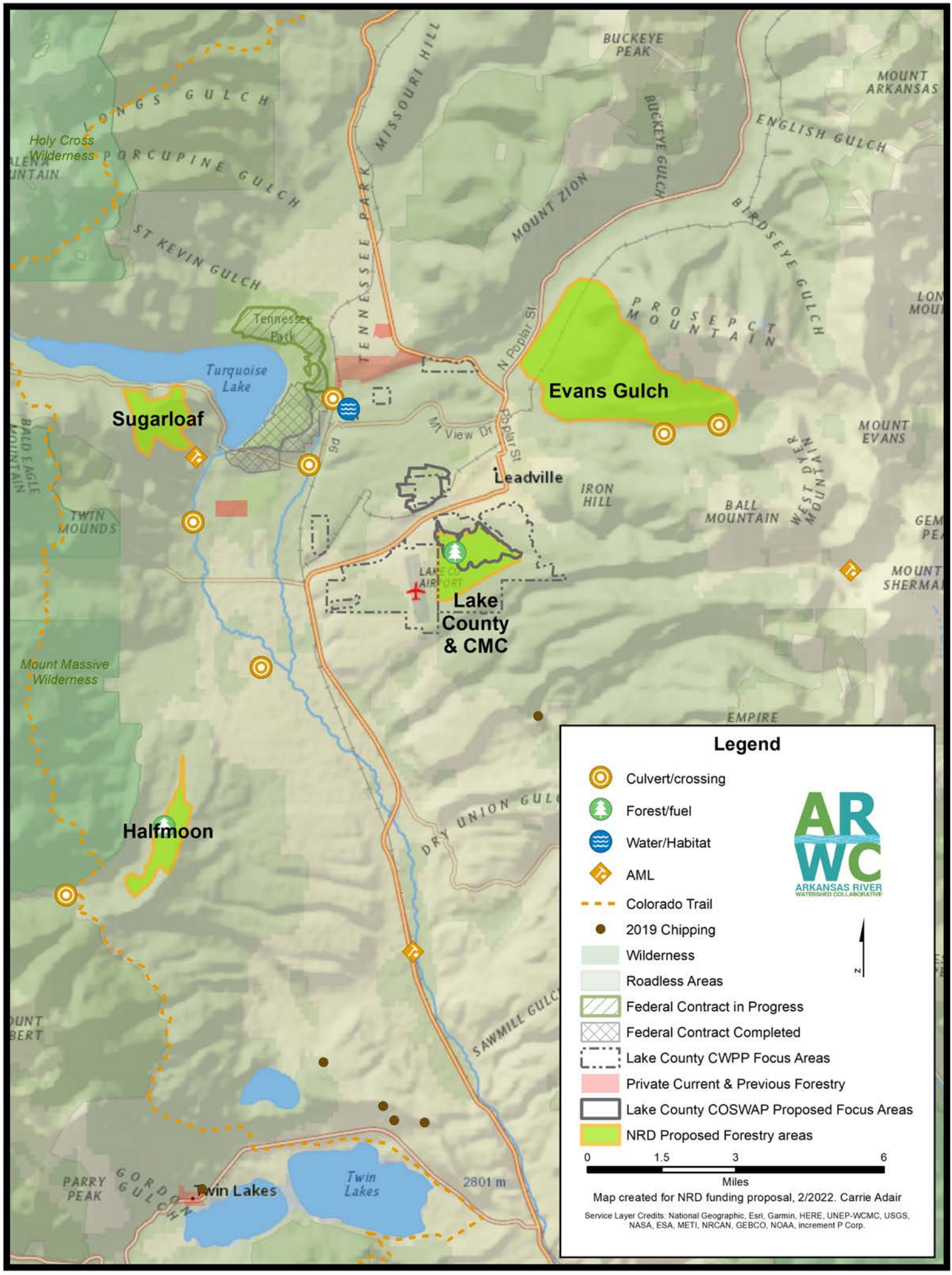


Legend
Culvert/crossing
Forest/fuel
Water/Habitat
AML
Airport
Cemetery
Hospital
Post Office
School
Calif Gulch Stream Segments
Drainage Lines
CGSS_Boundary Update
Mines Within 500ft Of Drainage Lines
200ft Buffer Around Drainage Lines
NRD Proposed Forestry areas
0 0.5 1 2
Miles
Map created for NRD funding proposal, 2/2022. Carrie Adair
Service Layer Credits: National Geographic, Esri,
Turquoise Lake
Sugarloaf
Evans Gulch
ELEMENTARY
POST OFFICE
HIGH SCHOOL
HOSPITAL HELIPORT
COLORADO MOUNTAIN COLLEGE
CMC
LAKE COUNTY AIRPORT
Mountain View Dr
Loop Rd
Hooper
Mt Zion Rd
Kevin Gulch Rd
E 11th St
E 7th St
W 7th St
Alpine Circle
Diamond St
S Toledo St
Arkansas River
CR-9c
CR-5a
CR-1
CR-38
CR-1b
CR-2b
CR-2
CR-6d
CR-6b
CR-3a
CO 300
Dry Un


Sugarloaf
Evans Gulch
Leadville
Lake County & CMC
Halfmoon
Twin Lakes
Turquoise Lake
Tennessee Park
Holy Cross Wilderness
Mount Massive Wilderness
Legend
Culvert/crossing
Forest/fuel
Water/Habitat
AML
Colorado Trail
2019 Chipping
Wilderness
Roadless Areas
Federal Contract in Progress
Federal Contract Completed
Lake County CWPP Focus Areas
Private Current & Previous Forestry
Lake County COSWAP Proposed Focus Areas
NRD Proposed Forestry areas
0 1.5 3 6
Miles
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ARWC
ARKANSAS RIVER WATERSHED COLLABORATIVE

JONATHAN R. PAKLAIAN
Curriculum Vitae

SUMMARY OF QUALIFICATIONS

Accomplished conservationist, collaborator, and manager with over 10 years of experience across the intermountain West. Professional experience in the private sector, non-profit sector, academia, and government agencies. Leadership experience in partnerships, field, laboratory, and classroom. Leadership roles on regional collaborative conservation partnerships and working groups.

EDUCATION

Master of Science in Environmental Sciences and Policy: Northern Arizona University, Flagstaff, AZ, May 2017.

Bachelor of the Arts in Anthropology – Specialization in Environmental Studies: Michigan State University, East Lansing, MI, May 2007.

PROFESSIONAL EXPERIENCE

- **Executive Director:** Arkansas River Watershed Collaborative, Salida, CO. 2021 – Current.
    - Works with Board of Directors and staff to address Arkansas Basin watershed issues including but not limited to ecological health, fire/flood resiliency, water quality, water supply, wildlife habitat, invasive species, and risks to agricultural production.
    - Coordinates and collaborates with diverse stakeholders from private landowners, government agencies, agricultural producers, water districts, and community groups.
    - Oversees all staff, projects, fundraising/development, and programs of the organization.
    - Responsible for overall management and strategy of up to $2 M annual budget for projects throughout the 28,000-acre Arkansas River Watershed.
- **Conservation Programs Manager:** Grand Staircase Escalante Partners, Escalante, UT. 2018 – 2021.
    - Program management for on-the-ground conservation efforts in the Grand Staircase region of Utah.
    - Project manager for one of the largest river restorations projects in Utah, across, 1.3 million-acre watershed.
    - Part of the coordinating committee for the Escalante River Watershed Partnership.
    - Responsible for management and raising of a $250,000 annual program budget.

- **Project Assistant:** SWCA Environmental Consultants, Albuquerque, NM. 2017 – 2018.
    - Conduct natural resource desktop reviews, prepare crews for fieldwork with review of special status species, hydrology, soils, and other environmental concerns.
    - Coordinate and manage multi-stakeholder projects from kickoff to submittal of deliverables.
    - Successfully create proposals and budgets for new projects.
    - Compose NEPA documents for review by agency specialists.
- **Vegetation/Habitat and Archaeological Monitoring Field Lead:** The Great Basin Institute, Grand Staircase-Escalante National Monument, Utah. 2016.
    - Mentored and trained AmeriCorps volunteers and led crew in the remote backcountry of southern Utah.
    - Worked in support of the Assessment Inventory and Monitoring (AIM) field project for rangelands.
    - Sampling methods included line-point intercept, canopy gap, soil verification, and plant identification.
    - Other duties performed: GIS mapping, plant keying, quality control of data.

- **Archaeology Crew Chief:** U.S. Park Service, Bryce Canyon National Park, 2012 – 2013.
- **Trail Crew:** U.S. Park Service, Saguaro National Park, 2007.

Experience working for eight different consulting firms with duties ranging from archaeological surveys and excavations, natural resource inventories, and Abandoned Mineral Lands inventories. Coordination of complex fieldwork and reporting projects was a key duty for these positions.

RESEARCH EXPERIENCE

Principal Investigator: *Holocene and Late Pleistocene Paleoenvironmental History using Lake Sediment in the Chuska Mountains, Navajo Nation, New Mexico.* Northern Arizona University, 2013 – 2017.

- Policy component placed science into context with environmental management considerations.
- Established fire event frequency and offered new hypotheses for the biogeography of ponderosa pine on the Colorado Plateau.
- Developed in-depth, working knowledge of plant taxonomy, physical science, GIS, ecology, and statistics.
- Successfully prepared grant proposals for research projects.

Research Assistant: Laboratory of Paleoecology, Northern Arizona University, 2014

- Assisted in the recovery, transportation, and initial processing of sediment cores from Stoneman Lake, Arizona.

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COLORADO NATURAL RESOURCES TRUSTEES
MARCH 17, 2022 RESOLUTION
CONCERNING ARKANSAS RIVER WATERSHED COLLABORATIVE RESTORATION PROJECTS

WHEREAS, the Colorado Natural Resources Trustees ("Trustees") are responsible for the management and direction of Colorado's natural resource damages program;

WHEREAS, the Trustees and staff have coordinated with federal trustee agency counterparts to form a Trustee Council pursuant to a 2020 Memorandum of Understanding;

WHEREAS, the Trustees are responsible for administering State funds to restore, replace, or acquire the equivalent of injured natural resources;

WHEREAS, the Arkansas River Watershed Collaborative ("ARWC") has requested $3,953,875.00 from the State's California Gulch Natural Resources Damages ("NRDs") fund to fund their Upper Arkansas Comprehensive Watershed Restoration Project ("ARWC Project") which consists of three projects which will help restore, rehabilitate, protect, and enhance areas of the Upper Arkansas basin within Lake County through a comprehensive strategy of watershed-based projects impacted by the historic mining practices. The ARWC Project is comprised of three sub-projects which:

(1) address abandoned mining areas through channel stabilization, revegetation of fluvial tailings, and development of water treatment technology;

(2) address aquatic species passage and sediment transport by improving existing back-roads culverts; and

(3) reduce upland fuel loading to reduce possible post-fire flooding, and its impacts on downstream riparian habitat, all have a strong nexus to the NRDA injury because they directly or indirectly restore riparian habitat and provide resource benefits for the same type of resources that were injured.

WHEREAS, the ARWC Project proposal describes these sub-projects generally, including their geographic areas and their benefits to natural resources and the environment, but does not include specific restoration plan details.

NOW THEREFORE, the Colorado Natural Resource Trustees resolve as follows:

Colorado Natural Resources Trustees Resolution #2022-03-17-02

The Trustees do hereby approve allocation of $3,953,875.00 from the California Gulch NRD fund to fund the ARWC Project dated March 3, 2022.

This approval is subject to the following conditions:

(1) This resolution will expire March 16, 2027, and the funds will no longer be available, unless a contract consistent with this resolution is executed by that date.

(2) Release of the Funds is contingent on compliance with all laws and regulations, including but not limited to: State and Federal laws, local ordinances, and permitting and zoning requirements.

(3) Release of the Funds will be on a sub-project by sub-project basis. Funding for a sub-project is contingent on Trustee staff approval of the restoration plan for that sub-project.

(4) Release of the Funds is on a reimbursable basis or as conditioned in the funding agreement between ARWC and the Colorado Department of Health and Environment.

_____ _____

Philip J. Weiser Date
Colorado Attorney General

_____ _____

Shaun McGrath
Director of Environmental Programs, CDPHE Date

_____ _____

Dan Gibbs, Executive Director, DNR Date

ITEM #7 – 8

NO DOCUMENTS

ITEM #9

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No. 83-C-2386

STATE OF COLORADO,

Plaintiff,

vs.

UNITED STATES OF AMERICA,
SHELL OIL COMPANY, et al.,

Defendants.

AMENDMENT TO 2008 CONSENT DECREE BETWEEN SHELL OIL COMPANY AND THE STATE OF COLORADO

Plaintiff State of Colorado (the "State") and Defendant Shell Oil Company ("Shell") (collectively, the "Parties") have agreed to the entry of this Amendment to 2008 Consent Decree ("Amendment to Consent Decree").

BACKGROUND

1. Since the Court entered the 2008 Consent Decree, attached as **Exhibit 1** to this Amendment, Shell has transferred the funds and the property as described in that document.

2. Pursuant to paragraph 6 of the 2008 Consent Decree, **Exhibit 1**, the $10 million Shell donated to the Colorado Department of Natural Resources Foundation Fund ("Foundation Fund") may only be used to fund projects selected by the Northeast Greenway Corridor workgroup ("NGC"), a collection of Denver metro area governments and a non-profit. The

balance of the money paid to the State by Shell and the United States and held in the Colorado Natural Resources Recovery Fund ("Recovery Fund"), approximately $17.4 million, was not subject to this limitation.

3. Using money from the Foundation Fund and the Recovery Fund, together with matching funds generated by project proponents, and working together with the NGC, the State has funded over $50 million in natural resource restoration projects in the Denver metro area.

4. Approximately $1 million remains in the Foundation Fund and approximately $7 million remains in the Recovery Fund.

5. The NGC no longer exists.

6. The State wishes to issue a Solicitation for Project Proposals to seek new projects to expend the remaining funds in both the Recovery Fund and the Foundation Fund for projects that restore, replace or acquire the equivalent of the injured resources without the constraint that the remaining funds in the Foundation Fund be used only for projects selected by the NGC. Shell supports this course of action. Additionally, the State circulated this Amendment to Consent Decree to the seven constituents of the former NGC for their review.

AMENDMENT

7. The Parties agree the 2008 Consent Decree is hereby amended to nullify future application of the provision in Paragraph 6 that requires Foundation Fund monies be used solely for the Greenway Project and any provisions associated therewith which may effectuate, or require, or be construed to require any future compliance with said provision in Paragraph 6. This does not affect the use of the money in the Recovery Fund, which remains subject to the 2008 Consent Decree and the separate Consent Decree with the United States.

FOR THE STATE OF COLORADO:

_____
PHILIP J. WEISER
Attorney General
Colorado Natural Resources Trustee

Dated: _____

_____
SHAUN MCGRATH
Director, Environmental Programs, Colorado Department of Public Health and Environment
For Jill Hunsaker Ryan, Executive Director, Colorado Department of Public Health and Environment
Colorado Natural Resources Trustee

Dated: _____

_____
DAN GIBBS
Executive Director, Colorado Department of Natural Resources
Colorado Natural Resources Trustee

Dated: _____

Approved as to form:

/s/ David E. Banas
DAVID E. BANAS*
Senior Assistant Attorney General
Colorado Attorney General's Office

Dated: _____

FOR SHELL OIL COMPANY:

_____
Signature

Name: _____

Title: _____

Date: _____

Approved as to form:

_____
Signature

Name: _____

Title: _____

Date: _____

So ordered this ____ day of _____, 2022.

BY THE COURT:

_____
United States District Court Judge

ITEMS #10 – 16

NO DOCUMENTS