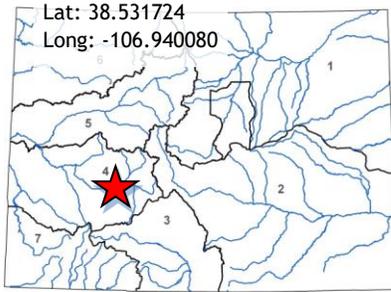




Water Plan Grant Application



L O C A T I O N	
County/Countries:	Gunnison
Drainage Basin:	Gunnison

D E T A I L S	
Total Project Cost:	\$213,153
Water Plan Grant Request:	\$90,678
Other CWCB Funding:	\$0
Other Funding Amount:	\$114,975
Applicant Match:	\$7,500
Project Type(s): Construction and Engineering	
Project Category(Categories): Agricultural, Environment & Recreation	
Measurable Result:	1,000' of stream restored or protected, \$2000/year efficiency savings

This project is a collaborate effort between Trout Unlimited, the Upper Gunnison River Water Conservancy District, and several agricultural partners to reconstruct six separate diversion structures in the upper Gunnison basin. One diversion is located on Steuben Creek (Lawrence Ditch), one is located on Cochetopa Creek (Eastside Ditch), two are located on Tomichi Creek (McCanne 2 Ditch and Hannah J Winters No. 2), one diversion is shared by three ditches on Ohio Creek (Otis Moore/Gleason/Hildebrand No. 2), and one diversion is located on Pass Creek, tributary to Ohio Creek (Pass Creek Ditch). Each of these structures have similar characteristics in that they require regular maintenance, are contributed to channel instability, and are challenging to manage during high and low flow periods. The new structures will reduce annual in-channel disturbance and labor necessary to manage the structures. The new designs will minimize erosion, and control scour to enhance channel function and aquatic habitat. A detailed description of each diversion and proposed improvements is included below. These diversions are used to divert water to over 800 acres of grass pasture and hay meadow and 14 water right owners will benefit from this project. Each site will include localized riparian and habitat restoration in the proximity of each diversion.

This project furthers several Colorado Water Plan critical action goals relating to agriculture, including encouraging agriculture efficiency and resiliency while promoting agricultural productivity. Project objectives include enhancing access to water rights, updating aging infrastructure, reducing in channel disturbance needed for diversion maintenance, and improving instream habitat. The project also utilizes collaborative partnerships between environmental and agricultural interests, supporting infrastructure projects with multi-benefits, improving water management, and furthering the use of integrated planning to identify and implement priority projects.

Funding Recommendation:

Staff recommends Board approval of \$90,678 to Trout Unlimited for the Catalyst Funding for the Upper Gunnison Diversion Modernization Project.



Last Updated: June 2020

Colorado Water Conservation Board

Water Plan Grant Application

Instructions

To receive funding for a Water Plan Grant, applicant must demonstrate how the project, activity, or process (collectively referred to as “project”) funded by the CWCB will help meet the measurable objectives and critical actions in the Water Plan. Grant guidelines are available on the CWCB website.

If you have questions, please contact CWCB at (303) 866-3441 or email the following staff to assist you with applications in the following areas:

- | | |
|-------------------------------------|-----------------------------|
| Water Storage Projects | Matthew.Stearns@state.co.us |
| Conservation, Land Use Planning | Kevin.Reidy@state.co.us |
| Engagement & Innovation Activities | Ben.Wade@state.co.us |
| Agricultural Projects | Alexander.Funk@state.co.us |
| Environmental & Recreation Projects | Chris.Sturm@state.co.us |

FINAL SUBMISSION: Submit all application materials in one email to waterplan.grants@state.co.us in the original file formats [Application (word); Statement of Work (word); Budget/Schedule (excel)]. Please do not combine documents. In the subject line, please include the funding category and name of the project.

Water Project Summary

Name of Applicant	Trout Unlimited	
Name of Water Project	Upper Gunnison Diversion Modernization	
CWP Grant Request Amount		\$ 90,678
Other Funding Sources <u>Water Right owners in-kind and cash</u>		\$ 20,000
Other Funding Sources <u>UGRWCD (will request)</u>		\$ 35,000
Other Funding Sources <u>UGRWCD (secured) Lawrence Ditch</u>		\$10,000
Other Funding Sources <u>UGRWCD engineering/optimization secured</u>		\$ 19,000
CRD 7A -will request		\$ 30,975
Applicant Funding Contribution in-kind (secured)		\$ 7,500



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Total Project Cost	\$ 213,153
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Applicant & Grantee Information	
Name of Grantee(s) Trout Unlimited	
Mailing Address: 1777 North Kent Street, Suite 100 Arlington VA, 22209	
FEIN: 38-161215	
Organization Contact: Danielle Typinski	
Position/Title: Grant Compliance Coordinator	
Email: danielle.typinski@tu.org	
Phone: (703)284-9429	
Grant Management Contact: Jesse Kruthaupt	
Position/Title; Upper Gunnison Project Manager	
Email; jesse.kruthaupt@tu.org	
Phone: 970-209-0976	
Name of Applicant (if different than grantee)	
Mailing Address	
Position/Title	
Email	
Phone	
Description of Grantee/Applicant	
Provide a brief description of the grantee's organization (100 words or less).	



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Trout Unlimited (TU), the nation's largest coldwater conservation organization, representing more than 150,000 members and volunteers nationwide, including 10,000 in Colorado, has a program in the Gunnison Basin focused on water use solutions that will benefit agricultural operations as well as protect and improve cold water trout habitat. Jesse Kruthaupt works for Trout Unlimited as the upper Gunnison project manager.

[Empty text area for additional information]

Type of Eligible Entity (check one)

<input type="checkbox"/>	Public (Government): Municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
<input type="checkbox"/>	Public (Districts): Authorities, Title 32/special districts (conservancy, conservation, and irrigation districts), and water activity enterprises.
<input type="checkbox"/>	Private Incorporated: Mutual ditch companies, homeowners associations, corporations.
<input type="checkbox"/>	Private Individuals, Partnerships, and Sole Proprietors: Private parties may be eligible for funding.



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X	Non-governmental organizations (NGO): Organization that is not part of the government and is non-profit in nature.
	Covered Entity: As defined in Section 37-60-126 Colorado Revised Statutes .

Type of Water Project (check all that apply)	
	Study
X	Construction
	Identified Projects and Processes (IPP)
X	Other - Engineering

Category of Water Project (check the primary category that applies and include relevant tasks)	
	Water Storage - Projects that facilitate the development of additional storage, artificial aquifer recharge, and dredging existing reservoirs to restore the reservoirs' full decreed capacity and Multi-beneficial projects and those projects identified in basin implementation plans to address the water supply and demand gap.. <i>Applicable Exhibit A Task(s):</i>
	Conservation and Land Use Planning - Activities and projects that implement long-term strategies for conservation, land use, and drought planning. <i>Applicable Exhibit A Task(s):</i>
	Engagement & Innovation - Activities and projects that support water education, outreach, and innovation efforts. Please fill out the Supplemental Application on the website. <i>Applicable Exhibit A Task(s):</i>
X	Agricultural - Projects that provide technical assistance and improve agricultural efficiency. <i>Applicable Exhibit A Task(s): task 2</i>
X	Environmental & Recreation - Projects that promote watershed health, environmental health, and recreation. <i>Applicable Exhibit A Task(s):</i>
	Other Explain:

Location of Water Project	
Please provide the general county and coordinates of the proposed project below in decimal degrees . The Applicant shall also provide, in Exhibit C, a site map if applicable.	
County/Countries	Gunnison County
Latitude	38.531724°
Longitude	-106.940080°



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Water Project Overview

Please provide a summary of the proposed water project (200 words or less). Include a description of the project and what the CWP Grant funding will be used for specifically (e.g., studies, permitting process, construction). Provide a description of the water supply source to be utilized or the water body affected by the project, where applicable. Include details such as acres under irrigation, types of crops irrigated, number of residential and commercial taps, length of ditch improvements, length of pipe installed, and area of habitat improvements, where applicable. If this project addresses multiple purposes or spans multiple basins, please explain.

The Applicant shall also provide, in Exhibit A, a detailed Statement of Work, Budget, Other Funding Sources/Amounts and Schedule.

This project is a collaborate effort between Trout Unlimited, the Upper Gunnison River Water Conservancy District, and several agricultural partners to reconstruct six separate diversion structures in the upper Gunnison basin. Two of these diversions (McCanne 2 and Hannah J Winters No. 2) are located on Tomichi Creek, one (Lawrence Ditch) is located on Steuben Creek, one (Eastside) is located on Cochetopa Creek, and one diversion is share by the Otis Moore, Gleason, Hildabrant No. 2 ditches on Ohio Creek.

Each of these structures have similar characteristics in that they require regular maintenance, are contributed to channel instability near the diversions during high flow periods and are challenging to divert water rights during low flow periods. The new structures will reduce in-channel disturbance and labor to operate, thereby improving access to decreed water rights. The designs will minimize erosion, and control scour to enhance channel function and aquatic habitat. A detailed description of each diversion and proposed improvements is included in the in the scope of work attached to this application.

These diversions are used to divert water to over 700 acres of grass pasture and hay meadow. A total of 12 water right owners will benefit from this project. Each site will include localized riparian and habitat restoration in the proximity of the diversions.

Measurable Results

To catalog measurable results achieved with the CWP Grant funds, please provide any of the following values as applicable:

	New Storage Created (acre-feet)
	New Annual Water Supplies Developed or Conserved (acre-feet), Consumptive or Nonconsumptive
	Existing Storage Preserved or Enhanced (acre-feet)



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1000	Length of Stream Restored or Protected (linear feet)	
\$2000/year	Efficiency Savings (indicate acre-feet/year OR dollars/year)	
	Area of Restored or Preserved Habitat (acres)	
	Quantity of Water Shared through Alternative Transfer Mechanisms	
	Number of Coloradans Impacted by Incorporating Water-Saving Actions into Land Use Planning	
	Number of Coloradans Impacted by Engagement Activity	
	Other	Explain:

Water Project Justification

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

The proposed water project shall be evaluated based upon how well the proposal conforms to Colorado's Water Plan Framework for State of Colorado Support for a Water Project (CWP, Section 9.4, pp. 9-43 to 9-44;)

This project will protect pre-compact agricultural water rights, improve cold water trout habitat, and reduce the amount of labor necessary to annually maintain/operate irrigation diversions.

This project will help meet the following 3 of the goals listed in the Gunnison BIP, pp 30-31.

Primary Goal:

1. Protect existing uses: The infrastructure and habitat improvements planned will protect and improve environmental, and agricultural uses on eight properties and recreational uses on Cochetopa Creek as the Eastside diversion is located on Bureau of Land Management.

Complementary Goals

6. Maintain or, where necessary, improve water quality throughout the Gunnison Basin: The proposed in-channel improvements will reduce erosion and improve channel stability, eroded banks near the structures will recover and riparian vegetation established. Over time, it is expected that stream channels will transform to a narrower deeper profile leading to lower water temperatures and providing better refuge for trout.

The Colorado Water Plan Water Plan frequently references collaboration and multiple use projects. In section 6.6, page 6-157, the third goal listed is "Support the development of multipurpose projects and methods that benefit environmental and recreational water needs as well as water needs for communities or agriculture". This project will involve coordination between NGO's, private land owners, and local agencies to address environmental, recreational, and agricultural water needs.

On page 1-6 of the Colorado Water plan sites three core water values. The second value is "Efficient and effective water infrastructure promoting smart land use." This project will upgrade ranch infrastructure and demonstrate how irrigation diversion design can be used to manage healthy riverine ecosystems and productive agriculture.



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Related Studies

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

Upper Gunnison Watershed Management Planning.
Ohio Creek System Optimization Review

Previous CWCB Grants, Loans or Other Funding

List all previous or current CWCB grants (including WSRF) awarded to both the Applicant and Grantee. Include: 1) Applicant name; 2) Water activity name; 3) Approving RT(s); 4) CWCB board meeting date; 5) Contract number or purchase order; 6) Percentage of other CWCB funding for your overall project.



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Grant Name	CWCB Funding Source	Agreement Number	Amount	Start Date	End Date	Match Amount Cash	Match Amount inkind	Total Project Amount	CWCB Percentage
Upper Gunnison Multiple Diversion Project	WSRF and CWP	POGG1 202100002108	\$ 71,731	8/6/2020	8/31/2023	\$ 60,000	\$ 12,269	\$ 154,000	
									47%
Appling Tech to monitor grass CU	CWP	POGG1 202100002064	\$29,394	7/24/2020	6/1/2022	\$ 21,055	\$ 12,236	\$ 62,685	47%
Innovative Irrigation Efficiency for Mountain Meadows	CWP-Agriculture	POGG1,20200000 0009	\$54,048	7/1/2019	7/1/2024	\$50,860	\$8,000	\$112,908	
									48%
Octate Properties Channel and Irrigation Improvement	CWP-Environment/R recreation	POGG1, 202000002815	\$11,589	2/1/2020	6/20/2022	\$127,000	\$3,000	\$141,589	
Cimmaron Canal Diversion Gate Replacement/Water Mgt. Plan	CWP Environment/R recreation	not executed yet	\$18,918	TBD	TBD	\$15,000	\$3,000	\$48,418	8%
Cimmaron Canal Diversion Gate Replacement/Water Mgt. Plan	WSRF-GBRT Basin Funds	not executed yet	\$11,500	TBD	TBD				39%
Blue River Integrated Water Mgt. Plan	Stream Restoration-SMP	CTGG12020-032	\$126,819	7/1/2019	12/31/2021	\$32,000	\$31,710	\$253,639	
									50%
Blue River Integrated Water Mgt. Plan	CWP-Environment/R recreation	CTGG12020-032	\$30,000	7/1/2019	12/31/2021				
Blue River Integrated Water Mgt. Plan	CWP-Engagement/Innovation	CTGG12020-032	\$16,000	7/1/2019	12/31/2021				
Blue River Integrated Water Mgt. Plan	WSRF-CBRT Basin Funds	CTGG12020-032	\$17,110	7/1/2019	12/31/2021				
Monarch Pass Gravel Pit Reclamation		not executed yet	\$77,389	TBD	TBD				
Tomichi Creek Flow Restoration		CTGG1 2018-902	\$75,000	5/4/2018	10/31/2022			\$ 220,000.00	34%
Tomichi Creek Flow Restoration-WSRF Grant		CTGG1 2018-901	\$34,500	5/4/2018	10/31/2022			\$ 220,000.00	16%
Colorado Abrams Creek Cutthroat		CTGG1 2018-298	\$364,711	1/4/2018	9/1/2022	\$549,700	\$74,700	\$1,341,650	27%
Ware Hinds Fish Bypass	WSRF-CBRT Basin Funds and State Funds (50/50)	POGG1 2017-0749	\$63,500	2/14/2017	12/31/2018	\$91,880	\$19,550	\$174,930	
									36%
Irrigators in Kremmling Windy Gap Reservoir Bypass	WSRF-CBRT	CTGG1 2017-0667	\$465,400	11/29/2016	9/30/2018	\$465,400			
Windy Gap Reservoir Bypass Project	CWP-Environment/R recreation	POGG1 2016-0900 CTGG1 2019-2233	\$30,000 \$325,237	5/18/2016 12/3/2018	1/31/2017 11/30/2023	\$1,803,910		\$2,129,147	
									15%
San Miguel River Stream Management Plan Pilot	WSRF-SWBRT	POGG1 2016-0800	\$96,413	3/22/2016	5/31/2021	\$20,138	\$12,000	\$128,551	
									75%
Kerber Creek Restoration		POGG1 2015-0286	\$30,000	6/10/2015	10/31/2016				
River Ranch Irrigation Diversion		CTGG1 2015-3313	\$113,000	6/9/2015	5/31/2016	\$70,000		\$183,000	62%
Redburn Ranch Diversion Dam		CTGG1 2015-2791	\$148,500	1/27/2015	6/1/2018				
South Arkansas River Restoration		POGG1 2015-0175	\$10,000	11/14/2014	10/31/2016				
Upper Ohio Creek Flow Restoration		POGG1 2015-0161	\$6,000	10/10/2014	12/31/2014	\$ 9,850.00		\$ 175,000.00	3%



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Taxpayer Bill of Rights	
The Taxpayer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect your application.	
None	

Submittal Checklist	
x	I acknowledge the Grantee will be able to contract with CWCB using the Standard Contract .
Exhibit A	
x	Statement of Work ⁽¹⁾
x	Budget & Schedule ⁽¹⁾
	Engineer's statement of probable cost (projects over \$100,000)
	Letters of Matching and/or Pending 3 rd Party Commitments ⁽¹⁾
Exhibit C	
x	Map (if applicable) ⁽¹⁾
x	Photos/Drawings/Reports
	Letters of Support (Optional)
	Certificate of Insurance (General, Auto, & Workers' Comp.) ⁽²⁾
	Certificate of Good Standing with Colorado Secretary of State ⁽²⁾
	W-9 ⁽²⁾
	Independent Contractor Form ⁽²⁾ (If applicant is individual, not company/organization)
Engagement & Innovation Grant Applicants ONLY	
	Engagement & Innovation Supplemental Application ⁽¹⁾

(1) Required with application.

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



Last Updated: June 2020

Colorado Water Conservation Board
Water Plan Grant - Exhibit A

Statement Of Work

Date:	06/28/2021
Name of Grantee:	Trout Unlimited
Name of Water Project:	Upper Gunnison Irrigation Diversion Modernization
Funding Source:	Agricultural Category

Water Project Overview:

This project is a collaborate effort between Trout Unlimited, the Upper Gunnison River Water Conservancy District, and several agricultural partners to reconstruct six separate diversion structures in the upper Gunnison basin. One diversion is located on Steuben Creek (Lawrence Ditch), one is located on Cochetopa Creek (Eastside Ditch), two are located on Tomichi Creek (McCanne 2 Ditch and Hannah J Winters No. 2), one diversion is shared by three ditches on Ohio Creek (Otis Moore/Gleason/Hildebrand No. 2), and one diversion is located on Pass Creek, tributary to Ohio Creek (Pass Creek Ditch).

Each of these structures have similar characteristics in that they require regular maintenance, are contributed to channel instability, and are challenging to manage during high and low flow periods. The new structures will reduce annual in-channel disturbance and labor necessary to manage the structures. The new designs will minimize erosion, and control scour to enhance channel function and aquatic habitat. A detailed description of each diversion and proposed improvements is included below.

These diversions are used to divert water to over 800 acres of grass pasture and hay meadow and 14 water right owners will benefit from this project. Each site will include localized riparian and habitat restoration in the proximity of each diversion.

Project Objectives:

Objectives for this project include:

- Improve access and control of pre compact water rights.
- Update antiquated irrigation infrastructure to increase water use efficiency and labor efficiency.
- Reduce in channel disturbance needed for diversion maintenance.
- Improve channel stability and instream habitat.



Last Updated: June 2020

Tasks
Task 1 – Lawrence Ditch Diversion.
Description of Task:
<p>Lawrence Ditch diverts water from Steuben Creek, tributary to the Gunnison River west of Gunnison, Colorado. Four water rights are decreed to Lawrence ditch totaling 5 cfs: 3 cfs appropriated on 6/1/1878, 1.25 cfs appropriated on 5/31/1888, .5 cfs appropriated on 4/30/1898, and .25 cfs appropriated on 6/1/1901. These water rights were adjudicated on 9/14/1906.</p> <p>The existing diversion structure requires the use of tarps, hay bales and other debris to divert water during low flow periods. The existing headgate is made out wood, is difficult to operate and prone to leaking. Through this project, the water right owner will work with Trout Unlimited to update the Lawrence Ditch diversion and headgate. The new diversion will be designed to accommodate high flows with the option to use stop boards during low flow periods to dam the creek and divert decreed water rights. A new water-tight ditch headgate will be installed in the wing-wall of the structure.</p> <p>An engineering firm has been selected to survey the site and design the new diversion structure and headgate. The new structure will accommodate peak stream flows, minimize scour and bank erosion, and improve access to water rights during low flow periods.</p> <p>The water right owner has secured \$20,000 from the UGRWCD to assist with the completion of this project. Project is planned for construction in the fall or 2021.</p>
Method/Procedure:



Last Updated: June 2020

Tasks
<p>The water right owner has hired Applegate Engineering to complete survey and design of the new diversion. Survey was completed in June 2021. Design is planned for completion in August of 2021. A contractor will be selected to complete the rehabilitation work in accordance with the project design documents and under the supervision of Trout Unlimited, water right owner and engineer. Construction tasks will involve:</p> <ul style="list-style-type: none">• Excavation• Concrete pour headgate installation• Bank and channel grading.• Place geotextile fabric• Backfill and place riprap• Site clean-up, revegetation <p>Trout Unlimited will manage grant reporting, contracting and invoices.</p>
<p>Deliverable:</p> <ul style="list-style-type: none">• Design documents• Photo points of construction progress and completion• Final Report summarizing project.

Tasks
Task 2- Eastside Ditch
Description of Task:



Last Updated: June 2020

Tasks
<p>The Eastside Ditch is located on Cochetopa Creek 18.25 miles from the confluence with Tomichi Creek. There are two water rights decreed to the Eastside Ditch totaling 6 cfs; 1.3cfs adjudicated on 5/17/1910, and 4.7 cfs adjudicated on 4/19/1943. The Eastside ditch point of diversion sits on Bureau of Land Management property ¼ mile upstream from the irrigated meadows on Wild Rose Ranch.</p> <p>The diversion structure functions well during high flows, but the water right owner has to manipulate the channel bed to raise the water elevation to the headgate inlet during low flow periods. This task will involve upgrading the existing diversion dam to a permanent rock cross-vane structure. The headgate is in good shape and will not need replacement.</p> <p>This project was identified through the Upper Gunnison Watershed Management Planning effort. Project partners plan to complete survey and design in the fall of 2021 with support from the UGRWCD and Applegate Group Engineering. The BLM has been notified of the project and project partners will coordinate with the BLM Gunnison Field office as the project is implemented.</p>
<p>Method/Procedure:</p> <p>Applegate Engineering will complete survey and 30% design in the fall of 2021, this work will be paid for by the Upper Gunnison River Water Conservancy District. Funding from the CWCB will be used to complete final design in later 2021 or yearly 2022. Additional grant funding for construction will be requested from the UGRWCD annual grant program.</p> <p>Once funding is secured and design completed, a contractor will be selected to construct the new diversion in accordance with the project design documents and under the supervision of Trout Unlimited, water right owner and engineer. Construction is planned for summer of 2022.</p> <p>Trout Unlimited will manage grant reporting, contracting and invoices.</p>
<p>Deliverable:</p> <ul style="list-style-type: none"> • Design documents • Photo points of construction progress and completion • Final Report summarizing project.

Tasks
<p>Task 3 – McCanne 2 Ditch</p>
<p>Description of Task:</p>



Last Updated: June 2020

Tasks

The McCanne 2 Ditch is located on Tomichi Creek 12.85 miles upstream from the confluence with the Gunnison River. There are eleven water rights decreed to the McCanne 2 totaling 48.677 cfs; 8.336 collectively between McCanne 1, 2 and 3 adjudicated on 5/1/1894; 2.438 cfs adjudicated on 4/29/1904; 1.5cfs adjudicated on 9/03/1918; 36 cfs adjudicated on 4/19/1943; and .43cfs adjudicated on 12/31/2012.

The McCanne 2 diversion is made of rock, concrete and other debris and is typically requires maintenance after high flow events. The most recent repair involved rerouting the creek that had out flanked the structure to the south. Years of disturbance and instability have created a large pool and eroded banks downstream of the diversion. This issue is exacerbated when the water right owners have to manipulate the channel bed to seal the dam and raise the water elevation to the headgate inlet during low flow periods. Tomichi Creek is prone to elevated temperatures and sediment load. Over time, addressing the issues at this diversion, and other neighboring diversions TU is working to improve, is expected to improve water quality through the stream reach.

This task will involve design and construction phase. The new diversion will be a series of rock cross vanes designed to maintain water elevation for the ditch inlet, and control scour and erosion downstream of the diversion. The south wing of the structure will be hardened and gradually sloped to allow peak flows to access the floodplain without outflanking and washing around the structure. The headgate will be replaced with a updated watertight structure.

This project was identified through the Upper Gunnison Watershed Management Planning effort. Project partners plan to complete survey in the fall of 2021 and design in winter of 2022. Construction is planned for fall of 2022.

Method/Procedure:

Trout Unlimited will assist the water right owner complete channel cross section surveys of the diversion area, and elevations of the headgate, flume, and ditch. Funding requested from the CWCB will be used to hire Applegate Engineering design and for construction of the diversion. Matching funds will be requested from the UGRWCD annual grant program and CRD 7A funds.

Once funding is secured and design completed, a contractor will be selected to construct the new diversion in accordance with the project design documents and under the supervision of Trout Unlimited, water right owner and engineer. Construction is planned for fall of 2022.

Trout Unlimited will manage grant reporting, contracting and invoices.

Deliverable:



Last Updated: June 2020

Tasks
<ul style="list-style-type: none">• Design documents• Photo points of construction progress and completion• Final Report summarizing project.

Tasks
Task 4 - Hannah J Winters No 2
Description of Task: <p>The Hannah J Winters No 2 is located on Tomichi Creek 1 mile upstream from the confluence with Quartz Creek. There are two water rights decreed to this ditch totaling 12.09 cfs; 3.8 cfs adjudicated on 4/29/1904, and 8.29 cfs adjudicated on 4/19/1943.</p> <p>The existing diversion structure consists of rock material on opposing banks that support logs stacked across the channel. The logs are removed in the fall or during high flow periods and placed across the channel during lower flow periods to raise the water elevation to the headgate inlet. A variety of other material is used during very low flow periods to seal gaps between the logs. Placement and removal of the logs is labor intense and leaving them across the channel during high flows can cause diversion failure. The alignment of the diversion directs high velocity water toward the stream bank downstream of the diversion and contributing to bank erosion and channel over widening.</p> <p>This task will involve upgrading and realigning the existing diversion dam. The new diversion will use similar mythology by using concrete block buttresses to support stop logs. A walkway and hoist will be constructed to span the channel be used to remove logs as needed. The updated structure will improve operator safety and reduce labor. Realignment will reduce erosion on the downstream bank, and rock rip-rap material will be used to harden the channel where the new structure is installed. The headgate is in good shape and will not need replacement. The proposed design will mimic other diversions on Tomichi Creek that have functioned well during high and low flow periods. Converting to a rock cross-vane structure was deemed not feasible due to the elevation needed to raise the water and risk of flooding.</p>
Method/Procedure:



Last Updated: June 2020

Tasks
<p>Water right owner has contacted All Weather Earthworks to complete the project because their experience designing and constructing similar diversions in the basin. Project partners will finalize design in the fall of 2021 and request additional funding from the UGRWCD annual grant program in February 2022.</p> <p>Once funding is secured, project partners will contract with All Weather Earthworks to complete the diversion in the fall of 2022.</p> <p>Trout Unlimited will manage grant reporting, contracting and invoices.</p>
<p>Deliverable:</p> <ul style="list-style-type: none"> • Design documents • Photo points of construction progress and completion • Final Report summarizing project.

Tasks
<p>Task 5 – Gleason/Hildebrand/Otis Moore</p>
<p>Description of Task:</p> <p>The Gleason, Otis Moore and Hildebrand No 2 ditches are located on Ohio Creek 6.35 miles upstream from the confluence with the Gunnison River. There are eight water rights decreed to these three ditches totaling 93.511 cfs; 16.011cfs adjudicated on 9/14/1906, 69.50 cfs adjudicated on 4/24/1941, and 8cfs adjudicated on 6/20/1957.</p> <p>There are two headgates that take water from Ohio creek to the Gleason and Otis Moore ditch, and a headgate that takes water to the Hildebrand No 2 Ditch. One diversion made of rock, tarps and other debris is used to raise water to the ditch inlets. The diversion requires annual maintenance and is built-up because the Gleason/Otis Moore inlets sit too high above the average water elevation to consistently receive water. The Gleason/Otis Moore ditch relies on tail water from upgradient fields to effectively irrigate, when that tailwater is not available owners experience shortages. A 25-foot concrete retaining wall connects the Gleason/Otis Moore headgates with the Hildebrand No 2 headgate. Portions of this wall are collapsing. The Hildebrand No 2 flume is submerged due to an elevated culvert down stream from the flume.</p> <p>Applegate Group was contracted by the UGRWCD to evaluate and provide recommendations to improve this diversion location. Those recommendations are included as an attachment in the Exhibit C. The UGRWCD plans to pay for survey and design. Conceptual design includes replacing the Gleason/Otis Moore headgates</p>



Last Updated: June 2020

Tasks
<p>with one headgate at a lower elevation, stabilizing the concrete retaining wall, lowering the Hildebrand No 2 culvert that restricts flume flow, and update the diversion with a permanent rock cross vane structure.</p> <p>This project was identified through the Upper Gunnison Watershed Management Planning effort. Project partners plan to complete survey in the fall of 2021, design in winter of 2022. Construction is planned for fall of 2022.</p>
<p>Method/Procedure:</p> <p>Applegate Engineering will complete survey and 30% design in the fall of 2021, this work will be paid for by the Upper Gunnison River Water Conservancy District. Funding from the CWCB will be used to complete final design in later 2021 or yearly 2022. Additional grant funding for construction will be requested from the UGRWCD annual grant program and CRD 7A fund</p> <p>Once funding is secured and design completed, a contractor will be selected to construct the new diversion in accordance with the project design documents and under the supervision of Trout Unlimited, water right owner and engineer. Construction is planned for summer of 2022.</p> <p>Trout Unlimited will manage grant reporting, contracting and invoices.</p>
<p>Deliverable:</p> <ul style="list-style-type: none"> • Design documents • Photo points of construction progress and completion • Final Report summarizing project.

Tasks
<p>Task 6 – Pass Creek Ditch</p>
<p>Description of Task:</p>



Last Updated: June 2020

Tasks
<p>Pass Creek Ditch is located on Pass Creek 1.55 miles upstream from the confluence with Ohio Creek. There is one water right decreed for pass creek ditch decreed for 14cfs with an adjudication date of 4/29/1941. Pass Creek Ditch diversion is a push-map dam that has to be rebuilt each summer after spring run-off, some years a tarp's are used to dam the creek to divert water into the ditch inlet.</p> <p>This task will involve upgrading the existing diversion dam to a permanent rock cross-vane structure. The headgate needs to be reset but is in good shape and will be reused.</p>
<p>Method/Procedure:</p> <p>Trout Unlimited will assist the water right owner complete channel cross section surveys of the diversion area, and elevations of the headgate, flume, and ditch. Funding requested from the CWCB will be used for materials and labor to construct the new diversion. Matching funds will be requested from the UGRWCD annual grant program.</p> <p>Once funding is secured and design completed, a contractor will be selected to construct the new diversion in accordance with the project design documents and under the supervision of Trout Unlimited, water right owner. Construction is planned for fall of 2022.</p> <p>Trout Unlimited will manage grant reporting, contracting and invoices.</p>
<p>Deliverable:</p> <ul style="list-style-type: none"> • Design documents • Photo points of construction progress and completion • Final Report summarizing project.

Tasks
Task 7 - Grant Admin
Description of Task:



Last Updated: June 2020

Tasks
<p>This task will involve contracting, project management, payments to contactors, reimbursement invoices to CWCB, and accounting of project expenses.</p>
<p>Method/Procedure:</p>
<p>15% of project contracted expenses is included in the budget.</p>
<p>Deliverable:</p>
<p>Project oversight, accounting, insurance, reporting and management of tasks.</p>

Budget and Schedule
<p>This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.</p>



Last Updated: June 2020

Reporting Requirements

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

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

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

The CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Payment

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

Costs incurred prior to the effective date of this contract are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of this contract must be provided to CWCB in hard copy and electronic format as part of the project documentation.

Performance Measures

Performance measures for this contract shall include the following:

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

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

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

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



Last Updated: June 2020

Performance Measures

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COLORADO

**Colorado Water
Conservation Board**

Department of Natural Resources

Colorado Water Conservation Board

Water Plan Grant - Exhibit C Budget Template Instructions

**** Please select the most appropriate budget template for your project from the worksheet tabs below. A general budget template is provided, as well as templates for studies, construction, and engineering projects.****



COLORADO
 Colorado Water
 Conservation Board
 Department of Natural Resources

Colorado Water Conservation Board

**Water Plan Grant - Exhibit C
 Budget and Schedule**

Prepared Date: 06/29/2021

Name of Applicant: Trout Unlimited

Name of Water Project: Upper Gunnison Diversion Modernization

Project Start Date: 10/25/2021

Project End Date: 10/25/2024

Task No.	Task Description	Task Start Date	Task End Date	Grant Funding Request	Match Funding	Total
1	Lawrence Ditch	10/25/2021	10/25/2024	\$ 11,800.00	\$ 17,700.00	\$29,500
2	Eastside Ditch	10/26/2021	10/26/2024	\$ 14,050.00	\$ 10,675.00	\$24,725
3	McCanne 2 Ditch	10/27/2021	10/27/2024	\$ 25,600.00	\$ 33,500.00	\$59,100
4	Hannah J Winters No 2 Ditch	10/28/2021	10/28/2024	\$ 10,000.00	\$ 15,000.00	\$25,000
5	Gleason/Hildebrand/Otis Moore	10/29/2021	10/29/2024	\$ 14,780.00	\$ 34,170.00	\$48,950
6	Pass Creek Ditch	10/30/2021	10/30/2024	\$ 2,620.00	\$ 4,430.00	\$7,050
7	Grant Mangement and Admin	10/31/2021	10/31/2024	\$ 11,827.50	\$ 7,000.00	\$18,828
Total				\$90,678	\$122,475	\$213,153



Colorado Water Conservation Board

Water Plan Grant - Detailed Budget Estimate

Fair and Reasonable Estimate

Prepared Date: 6/29/2021
Name of Applicant: Trout Unlimited
Name of Water Project: Upper Gunnison Diversion Modernization

EXAMPLE C: Construction

Task 1 - Lawrence Ditch

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Survey/Engineering	LS	1	\$ 8,000	\$ 8,000	\$ 3,200	\$ 4,800
Rock Material	CY	125	\$ 65	\$ 8,125	\$ 3,250	\$ 4,875
Concrete	CY	25	\$ 135	\$ 3,375	\$ 1,350	\$ 2,025
Excavation	HR	200	\$ 30	\$ 6,000	\$ 2,400	\$ 3,600
Headgate	EA	1	\$ 4,000	\$ 4,000	\$ 1,600	\$ 2,400
Total				\$ 29,500.00	\$ -	\$ 11,800.00

Task 2 - Eastside Ditch

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Survey/Engineering	EA	1	\$ 8,000	\$ 8,000	\$ 6,000	\$ 2,000
Rock Material	CY	125	\$ 65	\$ 8,125	\$ 3,250	\$ 4,875
Mobilization	HR	3	\$ 200	\$ 600		\$ 600
Excavation	HR	200	\$ 40	\$ 8,000	\$ 4,800	\$ 3,200
Total				\$ 24,725.00	\$ -	\$ 14,050.00

Task 3 - McCanne 2 Ditch

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Survey/Engineering	EA	1	\$ 15,000	\$ 15,000	\$ 10,000	\$ 5,000
Rock Material	CY	300	\$ 65	\$ 19,500	\$ 7,800	\$ 11,700
Mobilization	HR	3	\$ 200	\$ 600	\$ -	\$ 600
Excavation	HR	80	\$ 200	\$ 16,000	\$ 4,800	\$ 11,200

Headgate	EA	1	\$ 8,000.00	\$ 8,000.00	\$ 3,000	\$ 5,000.00
Total				\$ 59,100.00	\$ -	\$ 25,600.00 \$ 33,500.00

Task 4 - Hannah J Winters No 2 Ditch

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Rock Material	CY	50	65	\$ 3,250.00	\$ -	\$ 3,250.00
Concrete	CY	50	135	\$ 6,750.00	\$ -	\$ 6,750.00
Metal and Fabrication	HR	60	150	\$ 9,000.00	\$ 4,000.00	\$ 5,000.00
Excavation	HR	30	200	\$ 6,000.00	\$ 6,000.00	\$ -
Total				\$ 25,000.00	\$ -	\$ 10,000.00 \$ 15,000.00

Task 5 - Gleason/Hildebrand/Otis Moore

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Survey/Engineering	EA	1	\$ 12,000	\$ 12,000	\$ -	\$ 12,000
Rock Material	CY	150	\$ 65	\$ 9,750	\$ 3,900	\$ 5,850
Concrete	CY	20	\$ 135	\$ 2,700	\$ 1,080	\$ 1,620
Culvert	EA	1	\$ 1,500	\$ 1,500	\$ 600	\$ 900
Labor	HR	60	\$ 50	\$ 3,000	\$ 1,200	\$ 1,800
Excavation	HR	60	\$ 200	\$ 12,000	\$ 4,800	\$ 7,200
Headgate	EA	1	\$ 8,000.00	\$ 8,000.00	\$ 3,200	\$ 4,800
Total				\$ 48,950.00	\$ -	\$ 14,780.00 \$ 34,170.00

Task 6 - Pass Creek Ditch

Sub-task	Unit	Quantity	Unit Cost	Total Cost	CWCB Funds	Matching Funds
Survey	EA	1	\$ 500	\$ 500	\$ -	\$ 500
Rock Material	CY	30	\$ 65	\$ 1,950	\$ 780	\$ 1,170
Moblization	HR	3	\$ 200	\$ 600	\$ 240	\$ 360
Excavation	HR	200	\$ 20	\$ 4,000	\$ 1,600	\$ 2,400
Total				\$ 7,050.00	\$ -	\$ 2,620.00 \$ 4,430.00

Task 7- Grant Mangement and Admin

TU grant admin overhead			15%	\$ 78,850.00	\$ 11,828	\$ 7,000.00
TOTAL				\$ 213,152.50	\$ 90,678	\$ 122,475

Memorandum

Date: 5/26/2021

AG Job No.: 21-106

To: Sonja Chavez, Upper Gunnison WCD

From: Craig Ullmann
Steven Morris

**RE: Otis Moore, Gleason, and Hildebrand Diversion and
Water Management Improvement**

The purpose of this memo is to provide recommendations to improve the diversions, headgates and water management for the Otis Moore, Gleason, and Hildebrand ditches on Ohio Creek north of Gunnison.

On April 30, 2021, Applegate engineers and representatives from the Upper Gunnison River Water Conservancy District met with Steven Elsy, Colton Crittenton, Keith and Bob. Challenges with the current system and ideas for improvement for the diversions were discussed. The Otis Moore and Gleason headgates on Ohio Creek have issues diverting their full decree. The current diversion structure consists of rocks, tarps and other debris. According to users, sedimentation and floating debris are not an issue due to upstream diversions. We noted that the Hildebrand flume is not measuring flow accurately as it appears to be submerged due to the downstream culvert elevation. We observed return flows from Maybohm, Henry Perrier and Lone Pine into the Gleason, which users attested are significant at multiple locations. Accounting for these is necessary when adjusting the headgate for diverting flows from the creek.

Our recommendations for consideration in order to improve diversions, headgate functionality, and water management are as follows:

- Leveling the Hildebrand culvert downstream of the flume would allow for improved accuracy of flume measurement.
- Installing a new headwall and gate structure at a lower elevation for the Otis Moore/Gleason ditches along with lowering their flume would allow for improved diversion capability. See Figure 2.
- The existing rock dam diversion could be improved by replacing with cross vanes or other engineered structures. This would create a more permanent in-channel diversion structure that would both allow for decreed diversions and maintain the integrity of the channel in high and low flows while also allowing for fish passage. See Figures 2 and 3.
- The significant tailwater runoff channel from Maybohm, Henry Perrier and Lone Pine that currently flows into the Gleason about 300ft downstream from their headgate could be routed back into Ohio Creek before the diversion. This would help alleviate issues arising from changing tailwater inflows necessitating adjustment of the headgate on the creek. See Figures 1 and 4.
- If rerouting the tailwater into Ohio Creek is deemed infeasible or undesirable, installing an additional flume upstream of Otis Moore/Gleason split (at County Rd 818) would allow for tailwater inflows to be measured and allow for headgate adjustments as needed. Headgate and SCADA controls could further improve system efficiency accounting for real-time management of streamflow diversion and tailwater inflows. See Figure 1.

If this concept is of interest to the waters users, some next steps are described below:

- Topographical survey of the entire headgate area by a local professional surveyor would aid in any further engineering design. This would include the Ohio Creek channel and banks before and after diversions, tailwater channel, and all structures and inverts of ditches.
- A feasibility study using this survey data could be conducted to advance the design to verify concept and estimate costs for potential grants or future planning.

Legend

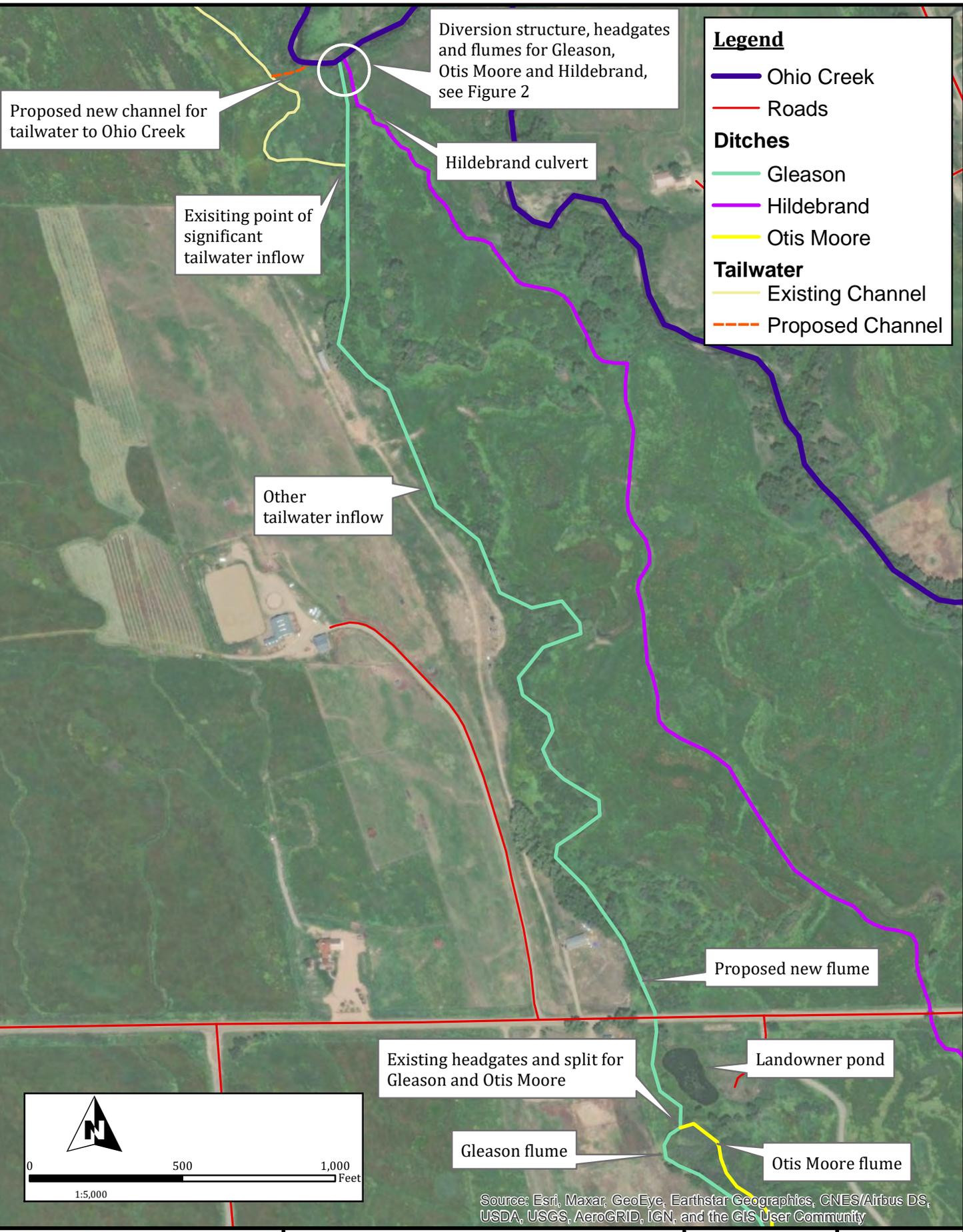
- Ohio Creek
- Roads

Ditches

- Gleason
- Hildebrand
- Otis Moore

Tailwater

- Existing Channel
- Proposed Channel



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

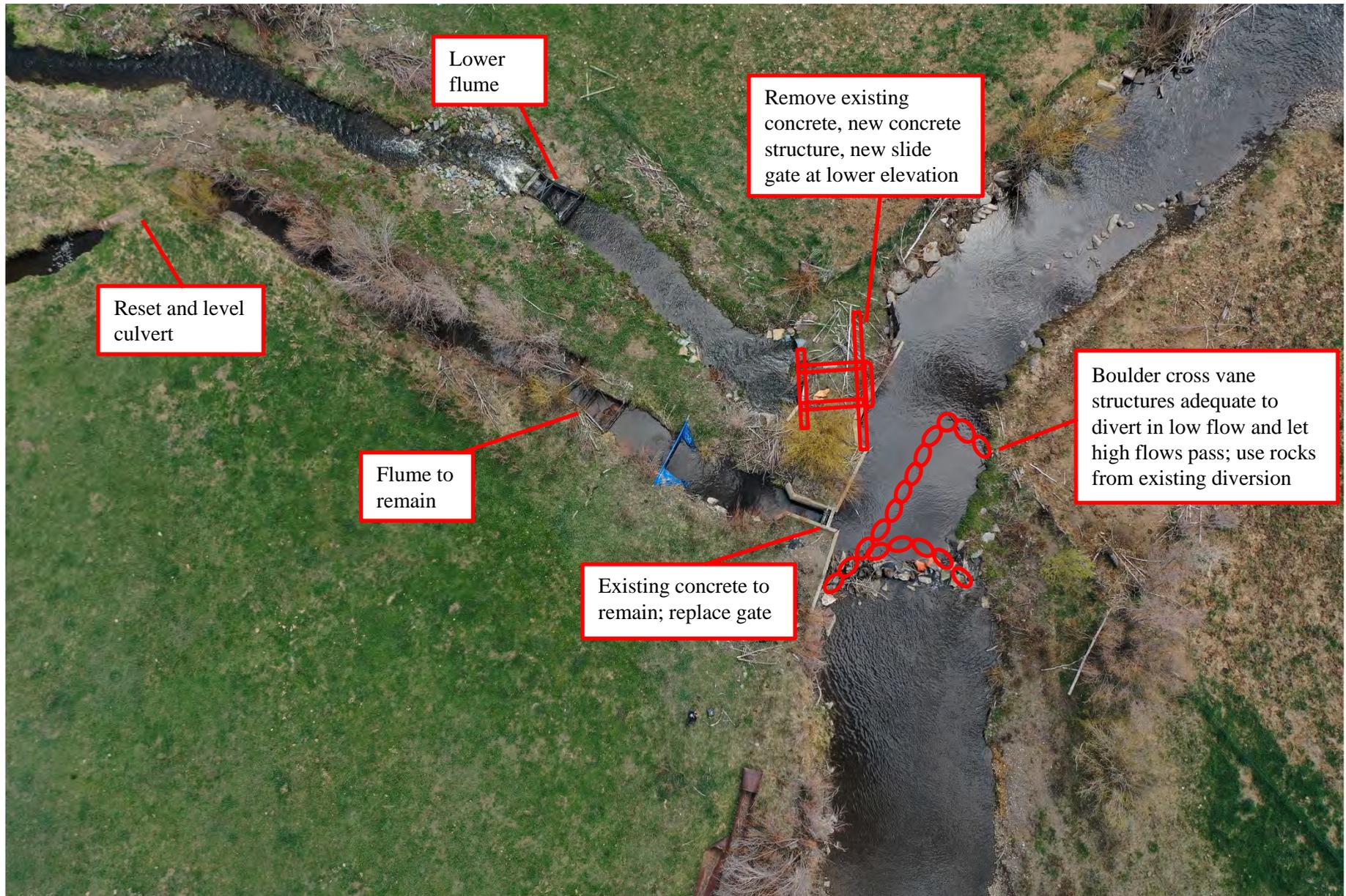
Date Saved: 5/26/2021 2:19:30 PM
 Path: N:\21106 (UGRWCD)\Drawings\GIS\Otis Moore Diversion to Split.mxd

Applegate Group, Inc.
 Water Resource Advisors for the West
 1490 West 121st Ave., Ste 100 Phone: (303) 452-6611
 Denver, CO 80234-2728 Fax: (303) 452-2759
 www.ApplegateGroup.com e-mail: info@applegategroup.com

Otis Moore, Gleason, Hildebrand Diversions
 Diversions to Gleason/Otis Moore Split

Date: 26 May 2021
 Job #: 21-106
 Drawn By: SRM

Figure: **1**
 Of: 4



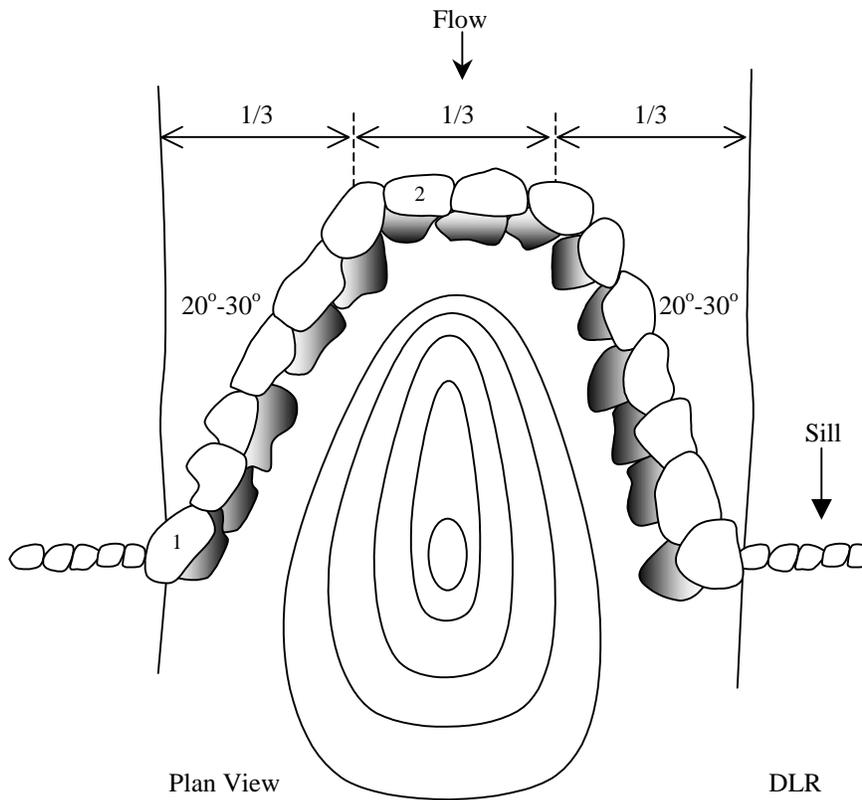
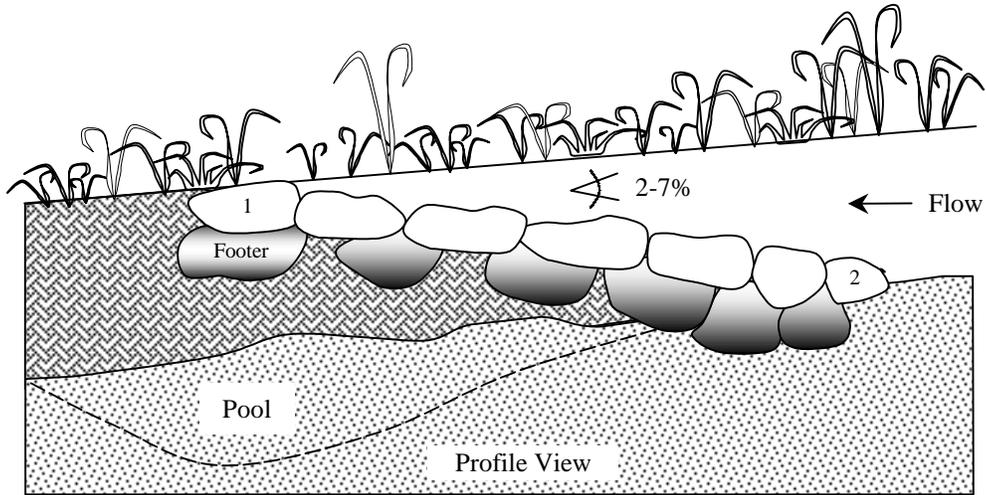
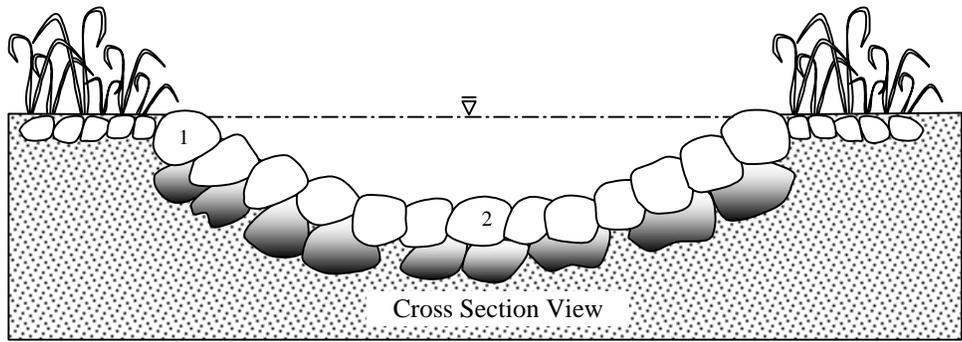


Figure 3. Cross section, profile and plan view of a Cross-Vane



June 25, 2021

Colorado Water Conservation Board
Colorado Water Plan Grants
Agricultural Category

RE: Gleason Ditch Headgate and Diversion

Dear Mr. Funk,

The Ohio Meadows HOA owns water rights in the Gleason Ditch and we are writing this letter to offer our support to the Gleasen/Otis Moore Diversion improvement project.

During the last two years our irrigation manager has coordinated with the Upper Gunnison River Water Conservancy District (UGRWCD) and Trout Unlimited to identify solutions to water management challenges in Ohio Creek. This project is a direct result of that planning and coordination.

The existing Gleason Ditch headgate and diversion is difficult to operate and requires the use of tarps, hay and other debris to divert water from Ohio Creek. The headgate inlet sits higher than the average water elevation which limits access to water rights during periods of below average flows. The proposed design will lower the headgate inlet elevation, reconstruct a permanent rock cross-vane type dam allowing improved channel stability and improved access to irrigation water for three ditches that use that dam for diversions.

I encourage the Colorado Water Conservation Board to grant Trout Unlimited funds requested for the Gleason Ditch Headgate and Diversion project.

Thank you for your time and consideration.

Sincerely,

Name: Zach Husted

Title: HOA Board Member

Address: 239 Pashuta Drive Gunnison, CO 81230

Phone: (720) 261-2196

From: [Keith Brockschmidt](#)
To: [Jesse Kruthaupt](#)
Subject: Fwd: Lowering Gleason - Otis Moore Headgate at Ohio Creek
Date: Wednesday, June 30, 2021 9:26:53 AM

Keith Brockschmidt
Competitive Edge Promotions, Inc.

----- Forwarded message -----

From: Bob Donna G <bdgochenaur@earthlink.net>
Date: Fri, Jun 25, 2021 at 5:26 PM
Subject: Lowering Gleason - Otis Moore Headgate at Ohio Creek
To: Jesse Kruthaupt <Jesse.Kruthaupt@tu.org>
Cc: Steve Crittendon <csigunnison@gmail.com>, Elizabeth Gillis <ohiomeadowshoa@gmail.com>, Keith Brockschmidt <compedge9@gmail.com>

Jesse,

Thanks for your presentation yesterday on the potential work to improve the Lone Pine, Gleason, and Otis Moore Ditch functionality. Here's where Ranches at Ohio Creek Association stands on the issues:

1. We have "sincere interest" in, and support, the concept of lowering the Gleason - Otis Moore Headgate and flume, and in-stream rock structure/dam improvements as outlined in your "DRAFT Otis Moore Memo", e-mailed to various parties on 14 Jun 2021, and are prepared to put some money toward the project if grants become available to fund most of the work (per your e-mail, this assumes a user contribution of 10-15% of total project cost (possibly around \$6-8k total from the users). Accordingly, we would like to see the UGRWCD move forward with a 30% design effort to better delineate the work and costs. Obviously if cost estimates were to significantly increase from the preliminary estimates, we would need to reassess the project.
2. Since the Gleason Ditch is primarily fed from tailwater from irrigation west of the Gleason (including significant Maybohm and Lone Pine water that flows across Horse River Ranch) we DO NOT support Applegate Group, Inc's recommendation to re-route the existing Maybohm, Henry Perrier and Lone Pine tailwater runoff channel (which currently flows into the Gleason Ditch about 300 feet downstream from the Gleason headgate) to return to Ohio Creek upstream of the Gleason - Otis Moore diversion. Because of the tailwater from Horse River Ranch, we'll have to carefully monitor the new Gleason headgate, anyway. And, if something prevents this headgate lowering project from moving forward, the very last thing we'd want to see is that proposed tailwater runoff channel diversion to occur -- that would negatively impact the efficacy of the Gleason - Otis Moore Ditch.

The existing Gleason system works OK if water users west of the Gleason begin irrigating their property promptly, since full flow in the Gleason is dependent upon their tailwater (and how long that tailwater takes to reach the Gleason is also dependent upon their soil moisture before they begin irrigating. We love big snowpack and wet springs). In dry years,

the existing Gleason system works less well, and we tend not to receive as many days of full flow that Ohio Creek could otherwise, even in dry years, provide the Gleason.

If the headgate lowering project proceeds, I anticipate we'll use it to move flow into the Gleason sooner in the season, so that Gleason users can improve their soil moisture, and get their meadows wet a little sooner in the season, which will accelerate the return of tailwater from Ohio Meadows and Ranches at Ohio Creek back into the system. We'll obviously coordinate closely with water users west of us, so that we can shut down the Gleason headgate as needed when their tailwater reaches the Gleason ditch, both to avoid taking more water than we have a right to and, more importantly from our perspective, to avoid flooding at either County Rd 818 or Seneca Drive in the Ohio Meadows subdivision (or for that matter washing out various control structures on Ranches at Ohio Creek).

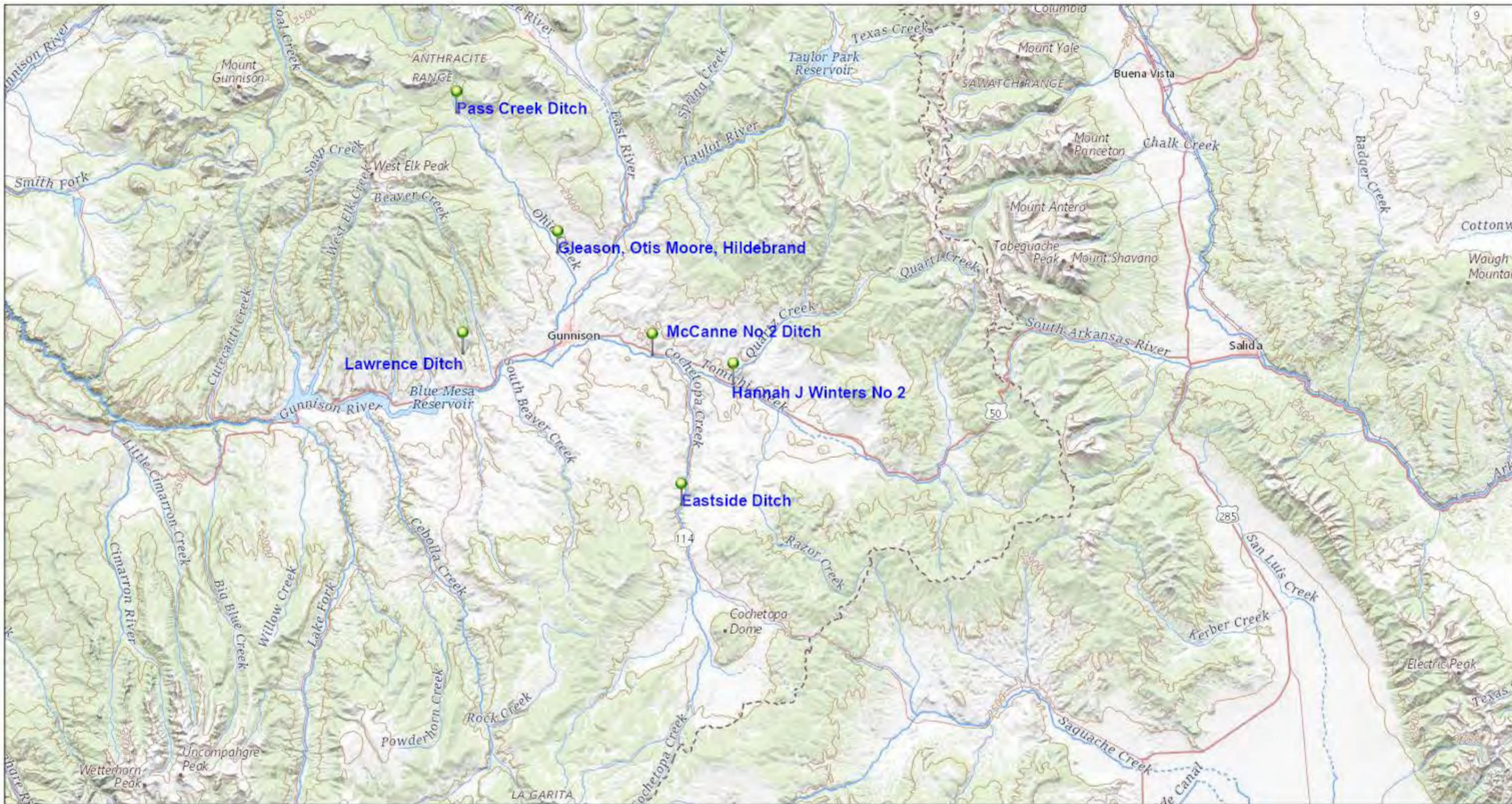
Thanks for all your help in these efforts.

Sincerely,

Bob

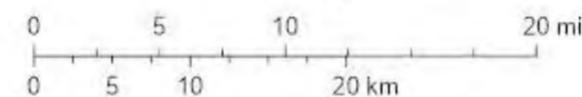
Robert Gochenaur, President, Ranches at Ohio Creek HOA

UG Diversion Modernization



July 1, 2021

1:577,791



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS

Eastside Ditch Concept



Ditch flow

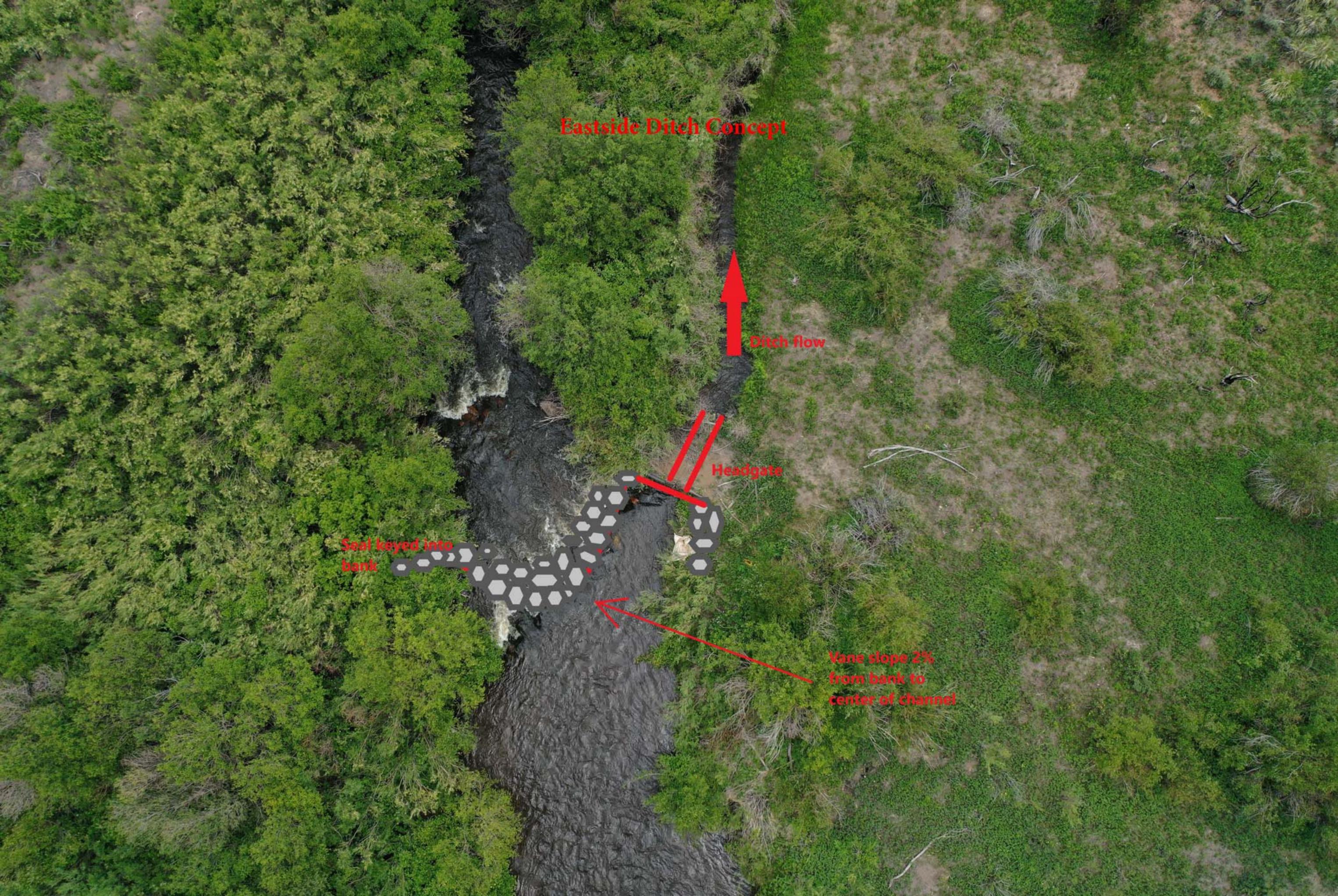


Headgate

Seal keyed into bank



**Vane slope 2%
from bank to
center of channel**



Hannah J. Winters No 2 downstream



Hannah J. Winters No 2

 HANNAH J WINTERS NO 2D

McCanne 2 Ditch Diversion



McCanne 2 looking downstream



McCanne 2 Ditch

 McCanne 2 Ditch



Gleason/Otis Moore

Hildebrand NO 2



Pass Creek Ditch

