Upper Gunnison River Water Conservancy District

210 West Spencer Avenue, Suite B • Gunnison, Colorado 81230
(970) 641-6065 • www.ugrwcd.org

BOARD OF DIRECTORS
AGENDA - REGULAR MEETING

Monday, April 22, 2019

MISSION STATEMENT

To be an active leader in all issues affecting the water resources of the Upper Gunnison River Basin.

5:30	p.m.	1.	Call to Order
5:32	p.m.	2.	Agenda Approval
5:35	p.m.	3.	Consent Agenda Items: Any of the following items may be removed for discussion from the consent agenda at the request of any Board member or citizen: • Approval of March 25, 2019 Minutes • Consideration of Operating Expenses • Consideration of Non-Operating Expenses
5:40	p.m.	4.	Legal and Legislative Matters
5:50	p.m.	5.	Manager's Report
6:00	p.m.	6.	Peanut Lake Project Update – Hedda Peterson – Crested Butte Land Trust
6:20	**p.m.**	**7.**	**Dinner Break**
6:35	p.m.	8.	Discussion of District Procurement Guidelines
6:50	p.m.	9.	Board/Staff/Committee Members Reports • Treasurer's Report • Taylor Park Reservoir • Drought Contingency Planning Update o Water Bank Work Group Discussion • Watershed Management Planning • Update on Scientific Endeavors Within the District
7:50	p.m.	10.	Colorado River Water Conservation District Update – Bill Trampe
8:10	p.m.	11.	Miscellaneous Matters
8:20	**p.m.**	**12.**	**Citizens Comments**
8:30	p.m.	13.	Future Meetings • Next Meeting – May 21, 2019 in Lake City
8:40	p.m.	14.	Summary of Meeting Action Items
8:45	p.m.	15.	Adjournment

Note: This agenda is subject to change, including the addition of items or the deletion of items at any time. All times are approximate. Regular meetings, public hearings, and special meetings are recorded and action can be taken on any item. The board may address individual agenda items at any time or in any order to accommodate the needs of the board and the audience. Persons with special needs due to a disability are requested to call the District at 641-6065 at least 24 hours prior to the meeting.

The listing under "CONSENT AGENDA" is a group of items, which the Board has already reviewed, to be acted on with a single motion or vote. This agenda is designed to expedite the handling of limited routine matters by the Board. The Board President will ask if any Board member or citizen wishes to have any specific item discussed. Items removed from consent agenda for discussion may be rescheduled later in this meeting, or at a future meeting.

AGENDA ITEM 3

Upper Gunnison River Water Conservancy District
Regular Board Meeting Minutes
March 25, 2019

The Board of Directors of the Upper Gunnison River Water Conservancy District conducted a regularly scheduled meeting on Monday, March 25, 2019 at the District offices, 210 West Spencer Avenue, Suite B, Gunnison, Colorado.

Board Members Present: Michelle Pierce, George Sibley, Julie Vlier, John Perusek, Bill Nesbitt, Rebie Hazard, Julie Nania and Rosemary Carroll.

Board Members Not Present: Andy Spann, Stacy McPhail and Kathleen Curry.

Also Present:
Ian Billick, RMBL
Travis Brooks, Eagle Ridge Ranch
Cheryl Cwelich, UGRWCD Intern
Michael Dale, National Park Service
Will Dujardin, Town of Crested Butte
Tom Grant, Wet Meadows Coordinator
Tyler Hanson, Mill Creek Ranch
Jonathan Houck, Gunnison County Commissioner
Jesse Kruthaupt, Trout Unlimited
Frank Kugel, General Manager
John McClow, General Counsel
Brandon Miller, US Fish and Wildlife Service
Cathie Pagano, Gunnison County
Hedda Peterson, Crested Butte Land Trust
Beverly Richards, Administrative Assistant
Bob Robbins
Don Sabrowski
Rob Strickland, Midnight Marketing
Alphonse Taramarcaz
Sue Wallace, CBSPOA

1. CALL TO ORDER

Board President Michelle Pierce called the meeting to order at 5:30 p.m.

2. AGENDA APPROVAL

Michelle Pierce said the board has received additional non-operating expenses for approval.

George Sibley moved and John Perusek seconded approval of the agenda as presented. The motion carried.

3. CONSENT AGENDA ITEMS

Julie Nania moved and George Sibley seconded approval of the consent agenda items. The motion carried.

4. LEGAL MATTERS

John McClow said there has been progress on a possible settlement of the Taylor Park Reservoir issues. He has been working with the Colorado River District and the Justice Department Attorney and they have come up with a document that is consistent with what was discussed at a previous meeting.

5. LEGISLATIVE ISSUES

John McClow said Frank attended the State Affairs Committee as the District's representative. Regarding House Bill 19-1218, there was a motion to support which failed the Committee; therefore, State Affairs takes no position. Later in the day, the bill passed out of the House Energy & Environment Committee seven to four. John provided an update on other bills in the legislative memo included in the board packets.

Bill Nesbitt asked for an update on the concept of the bill. John said the bill proposes that the owner of a water right will be allowed to loan the water to the CWCB. There will be an assessment by the State Engineer associated with the loan that provides assurances there will be no injury to other water users. The analysis of injury will be done in advance of approving the loan, where the applicant for loan approval will have to provide evidence of historic consumptive use. There is also be a period where protests will be allowed, both before the loan is approved and at the end of each year during the loan, from anyone who thinks they may have been injured as a result of the loan. This is a proposed extension of an existing program where there have been fifteen loans and no protests since 2004. Rebie Hazard asked about the notification process. John said they will include notifications to the in-stream flow notifications list and the Substitute Water Supply Plan list. These will be made via e-mail and regular mail.

6. MANAGER'S REPORT

Frank Kugel said that since last month's report and the current report, significant improvements have occurred to the water supply outlook. According to the drought map dated March 12, the extreme drought conditions have improved with Gunnison and Saguache counties being considered drought free. The persistence map shows that Colorado is almost totally drought free and long-range forecasts indicate it should stay that way for some time.

According to the SNOTEL map for the Blue Mesa group, the current information matches 2017 closely, which was a good year for precipitation. Frank spoke with a representative from KBUT who asked about flooding. It is too early to tell, but in 2017 we had significantly greater snowpack but there was no flooding.

The 6- to 10-day and 8- to 14-day forecasts show near normal temperatures and above normal precipitation. The April through July forecast shows normal temperatures and significantly wetter than normal precipitation. This is encouraging from a water supply perspective and they are monitoring flooding conditions closely.

Frank said he traveled to Lake City at the request of one of the county commissioners. He provided some pictures of the avalanche areas near Lake San Cristobal. The drought monitor shows an improvement in this area based on the amount of snow they have had so far this season. He also said that he has been unable to provide Meridian Lake Reservoir updates as the Crested Butte Avalanche Center has advised not going into this area due to existing avalanche conditions. Frank showed a video of the lake and outlet he took with his drone.

7. DROUGHT CONTINGENCY PLANNING UPDATE

John McClow said he provided a memo in the board packet that gives an update of the proposed CWCB work plan which is how the state is going to pursue the framework for demand management. This is heavily oriented toward citizen input. The seven states principals' letter was sent to Congress with agreed on language for proposed legislation. Sub-committees in the House and Senate will hold hearings on the legislation later this week. There has been some push back on the environmental impacts of reoperation of the CRSP reservoirs. House leadership will not entertain any bill that even touches environmental issues as it is too close to the current administration's policy on environmental issues. The current language is designed to address that concern.

The District has directed staff to research the economic impact of demand management. John has spoken with Harvey Economics and they will prepare a proposal to be presented to the board at the April meeting. He has also had meetings with Andy Spann and Jesse Kruthaupt to discuss possible new pilot projects related to participation in a demand management program that might be considered good ideas from the perspective of the agricultural community.

8. DINNER BREAK

9. RMBL WEATHER STATION UPDATE

Ian Billick with Rocky Mountain Biological Laboratory gave an update on the six weather stations funding partially by UGRWCD and being upgraded by NCAR. They have a 5-year contract and have spent 25,000 to 30,000 on the sensor packages. They have begun the long process of getting them operational. Frank asked when they would be able to provide useful and shareable data from these stations. Ian said they are online now, and they plan on making this data actionable for making predictions which will close the loop on some of the models. Rosemary Carroll said actual snow depth data using solar radiation is an important component of these stations. Ian said the weather station and the data they generate was a great investment and will be useful in the long run.

Frank asked about the avalanches that have occurred off Gothic Mountain. Ian said as many people know, Billy Barr has tracked avalanches since the 70's and has the most complete data set in the world. Based on his information, they have had 5% less snow but 40% more water which makes it an above average year. This unusual combination will likely cause many spring slides. Bill Nesbitt asked about dust on snow events as compared to years past. Ian said currently there are none, but they typically occur in April and May and so could still have an affect on runoff. They are currently involved with a couple of other studies such as working with Jeff Deems on a snow pit in the Gothic townsite to provide more data on avalanches, developing more information on albedo incidents, and wind measurements at high alpine locations.

10. SOCIAL MEDIA CAMPAIGN AND WEBSITE DESIGN UPDATE

Rob Strickland with Midnight Marketing gave a brief overview of the website that is currently in development. He also discussed how the changes to the website will be integrated into the social media campaign the District is undertaking. He encouraged the board to provide input regarding the website to staff. Once all input is received and changes made, the website will be ready for launch. This should happen within the next couple of weeks.

11. BOARD/STAFF/COMMITTEE MEMBERS REPORTS

Treasurer's Report: Bill Nesbitt said investors are talking about what the Federal Reserve is anticipating and as of January 29, there is a 72% probability that they will cut interest rates. It does not look like there will be a rate hike and the District has stability with the rate structure that we have. This reaffirms that we should not change our current plan.

Taylor Park Reservoir: Julie Vlier said the first TLUG meeting was held on March 8. Dave Gochis from NCAR attended the meeting to present information about runoff forecasting and modeling tools and was very well received. There is a great snowpack this year and is forecasted to produce above-average runoff conditions. This presents an opportunity for us to refine the models and decision making with regards to Taylor Reservoir releases.

Ernie Cockrell was not in attendance at the meeting but was represented by Rory Birdsey and their input was that this is an opportunity to make some larger releases in May. This will be discussed at the next meeting scheduled for May 8 where they hope to hear from key stakeholders and set releases that will have multiple benefits.

Gunnison Basin Roundtable: Frank Kugel said at the last meeting they discussed WSRF grant applications, an update on drought contingency planning, and Phase III of the risk study. The Roundtable also approved a letter of support for the Shady Island project.

Grant Committee: Rosemary Carroll said the committee was tasked with distributing $150,000 in grant funds. They received several excellent requests which covered a great diversity of projects. The total amount requested was $251,236 for the $150,000 budgeted.

The Grant Committee recommended funding the following projects:

1. Cottonwood Pass Vault Toilet Project	$ 13,691
2. Canal Trail Bridge/Deck (Funded through WMP)	$ 0
3. Coldharbour Institute Water Management Plan	$ 12,200
4. CBSPOA Irrigation Efficiency Project	$ 12,855
5. Eagle Ridge Ranch Enhancement Project	$ 5,000
6. Gleason Ditch Improvement Project	$ 3,750
7. Gunnison Valley Waterways Signage Project	$ 0
8. Harris Bohm Potato Diversion Improvement Project	$ 14,000
9. Innovation Irrigation Efficiency Project	$ 20,860
10. Lower Twister Snowmaking Line Replacement	$ 5,000
11. Milk Creek Ranch Irrigation Improvement Project	$ 7,000
12. Road Beaver Creek Fish Barrier and Diversion Project	$ 6,000
13. Shady Island River Park Project	$ 40,000

14. Slate River Watershed Integrated Monitoring Project	$ 4,569
15. Slate River Working Group Project	$ 5,075
16. Slumgullion Earthflow Conservation Project	$ 0
Total Recommended for Funding	$150,000

Rebie Hazard said that while the vote on the Cottonwood Toilet was split among the committee members she does think this is an important project, though it is not normally the District does with their grant funding. She said that she envisions many requests such as this since the need is everywhere. Frank said the committee put a caveat on this funding recommendation with the acknowledgement that they would not entertain any other requests of this nature from the Forest Service.

Bill Nesbitt said that since this is the second year where the funding requests exceeded the budgeted funding amount, he would again champion an increase in this line item when discussing the next year's budget. Julie Vlier agreed with Bill and said that the projects recommended for funding represent the District's water users and it is important to have that diversity. She questioned the reasoning behind only funding $5,000 for the Lower Twister snowmaking line project as this is in a reach of the East River that typically goes dry and causes problems for the fishery. Julie Nania said the application did not specifically address the benefits of this project and the committee was uncomfortable with funding a project that was the result of poor maintenance in the past. The committee recommended partial funding to open communications about these and other issues with the ski resort.

Julie Vlier moved approval of the grant committee's recommendations as presented. No second was required for a recommendation by a committee. The motion carried.

Watershed Management Planning Committee: The board received a memo summarizing the last committee meeting. George Sibley said that as the committee is finishing up Phase I of the planning process, they are looking at what does and does not work from the needs assessment model. The meeting also involved discussions about how to get this information to stakeholders to increase participation in the process. The committee is also looking forward to Phase II which analyzes the Taylor River, Gunnison mainstem, and Cebolla Creek. The next WMP committee meeting will take place on April 8 at 1:00 p.m.

Update on Scientific Endeavors Within the District: Rosemary Carroll said the have some Airborne Snow Observatory (ASO) flights scheduled between April 8 and April 13. They are aiming for between 12 and 20 snow pits to ground-truth the aerial data, mostly in the East River basin including

Washington Gulch and the upper East River. They are also working on flights in the Taylor River, Ohio Creek, and Coal Creek basins. She also said that Jeff Deems is investigating an additional SNOTEL site in the Coal Creek-Kebler Pass-Ohio Pass area. They hope to have a definitive location for this by May 1.

Education Committee: Bill Nesbitt said he received an email from the Lake Fork Valley Conservancy about interpretative signage and whether they could receive funding from the Education Committee. Frank said is not sure if such a project should be funded through this committee. Bill would like to schedule a meeting to discuss this and the school district curriculum. Frank will send out a Doodle poll to schedule the meeting.

12. MISCELLANEOUS MATTERS

There were no miscellaneous matters discussed.

13. CITIZEN COMMENTS

Tom Grant wanted to thank the board and staff for the flowers that were sent when his baby was born. He also wanted to the let the board know that the Wet Meadows project has received the USDA Wings Across America Habitat Award. This is an award that is given out at the national level. The Forest Service will do the press releases as they nominated the project for the award.

Michael Dale from the National Park Service said they are predicting Blue Mesa Reservoir to reach 690,000 to 700,000 acre-feet of storage this year which is approximately 87% of capacity. This prediction is based on the Gunnison Tunnel taking their full amount of water. Frank said the Uncompahgre Valley Waters Users are not planning on placing a call this year so in conjunction with that this could be an above-average year for irrigation in our district.

14. FUTURE MEETINGS

The next regular board meeting is scheduled for April 22, 2019.

The Watershed Management Planning Committee will meet on April 8, 2019 at 1:00 p.m.

There will be a Taylor Park Vegetation Management Project Workshop on March 26, 2019 beginning at 4:30 p.m. The location for the meeting is the west wing of the Savage Library at the University. Tom Grant said there will be a second meeting held on April 22, 2019.

The Southwestern Water Conservation District's annual conference has been rescheduled for the fall.

There will a conference titled 'Growing Water Smart in the Headwaters' in Keystone at the end of April. This conference is being put on by the Sonoran Institute and is geared toward counties and municipalities and water management.

15. SUMMARY OF MEETING ACTION ITEMS

Frank will send out a Doodle poll to determine a date for the next Education Committee meeting.

16. ADJOURNMENT

Board President Michelle Pierce adjourned the March 25, 2019 meeting at 8:18 p.m.

Respectfully Submitted,

_____
George Sibley, Secretary

APPROVED:

_____
Michelle Pierce, President

UPPER GUNNISON RIVER WATER CONSERVANCY DISTRICT BUDGET SUMMARY

January 1 - December 31, 2019

4/12/19

Budget Line no.		March	YTD	2019 Budget	% of Budget
	REVENUE				
1	General Property Tax	$ 386,057	$ 423,068	$ 1,121,568	37.72%
2	Specific Ownership Tax	7,367	19,399	65,000	29.85%
3	Penalties & Interest on Taxes	-	-	3,300	0.00%
4	Interest on Investments	2,394	6,062	40,000	15.15%
5	Water Quality Monitoring Program - Passthrough	-	13,392	20,780	64.45%
6	Aspinall Water Contract Sales	8,764	13,779	18,500	74.48%
7	Cloudseeding Program - Passthrough	23,750	47,500	103,450	45.92%
8	Wet Meadows Project - Passthrough	55,134	110,268	272,314	40.49%
9	Watershed Management Planning - Passthrough	22,500	45,000	175,000	25.71%
10	Miscellaneous	496	613	1,000	61.32%
	Elk Home Ditch Passthrough	-	-	-	
11	Unspent Funds from Previous Year	-	-	37,291	0.00%
12	Additional Contribution from Reserve Fund	-	-	405,233	0.00%
13	**TOTAL REVENUES**	**$ 506,463**	**$ 679,081**	**$ 2,263,436**	30.00%
	Operating Expenses				
14	Administrative Salaries	$ 27,206	$ 81,619	$ 326,476	25.00%
15	Staff Salaries	8,525	25,575	102,300	25.00%
16	Payroll Taxes	2,841	8,522	33,316	25.58%
17	Employee Benefits	7,907	24,130	93,373	25.84%
18	Public Outreach	1,905	14,196	33,000	43.02%
19	Audit & Accounting	-	-	7,500	0.00%
20	Utilities and Association Dues	1,314	3,947	13,396	29.47%
21	Bonding and Insurance	-	401	10,274	3.90%
22	Office Telephone	735	1,206	7,110	16.96%
23	Office Equipment	324	921	14,020	6.57%
24	Legal Publication	31	574	6,000	9.57%
25	Administrative Travel & Expenses	1,329	8,380	22,000	38.09%
26	Office Expenses	1,333	4,586	16,850	27.21%
27	Postage	-	-	1,500	0.00%
28	Board of Directors' Expenses	797	4,178	12,000	34.81%
29	Meeting Expenses	-	855	3,500	24.42%
30	Election Expenses	-	-	-	
31	County Treasurers' Fees	12,248	15,467	35,696	43.33%
32	Board of Directors' Fees	400	1,400	6,920	20.23%
33	Board of Directors' Mileage	193	614	2,200	27.92%
34	Memberships & Dues	-	8,105	10,010	80.96%
35	Manager's discretionary fund	-	-	3,000	0.00%
36	**Total Operating Expenses**	**$ 67,088**	**$ 204,674**	**$ 760,441**	26.92%
	Non-Operating Expenses				
37	General Consulting	$ 568	$ 568	$ 5,000	11.36%
38	Recreational In-Channel Diversion	-	-	8,192	0.00%
39	Taylor Park Projects	6,377	6,377	6,377	100.00%
40	Lake San Cristobal - Fees & Repair	-	-	14,225	0.00%
41	Basin Augmentation Program	-	-	49,000	0.00%
42	Building Expenses	-	-	11,000	0.00%
43	Aspinall Unit Water Contract Costs	16,276	16,472	315,160	5.23%
44	Regional Water Supply Improvement Program	40,543	123,369	689,764	17.89%
45	Basinwide Planning	15,989	25,277	230,000	10.99%
46	Water Quality Monitoring Program	-	42,473	137,278	30.94%
47	Endangered Fish Recovery Program	-	3,000	3,000	100.00%
48	Contribution to Spencer Ave. Assoc. Reserve	10,000	10,000	10,000	100.00%
49	Contribution to Reserve Fund Balance	-	-	-	
50	**Total Non-Operating Expenses**	**$ 89,753**	**$ 227,536**	**$ 1,478,996**	15.38%
51	Contingency	$ -	$ -	$ 24,000	0.00%
52	**TOTAL EXPENDITURES**	**$ 156,841**	**$ 432,210**	**$ 2,263,437**	19.10%
53	Revenue Over (Under) Expenditures	$ 349,622	$ 246,871	$ (0)	

UGRWCD & UGRWAE BANK BALANCES, INTEREST RATES, MATURITY DATES

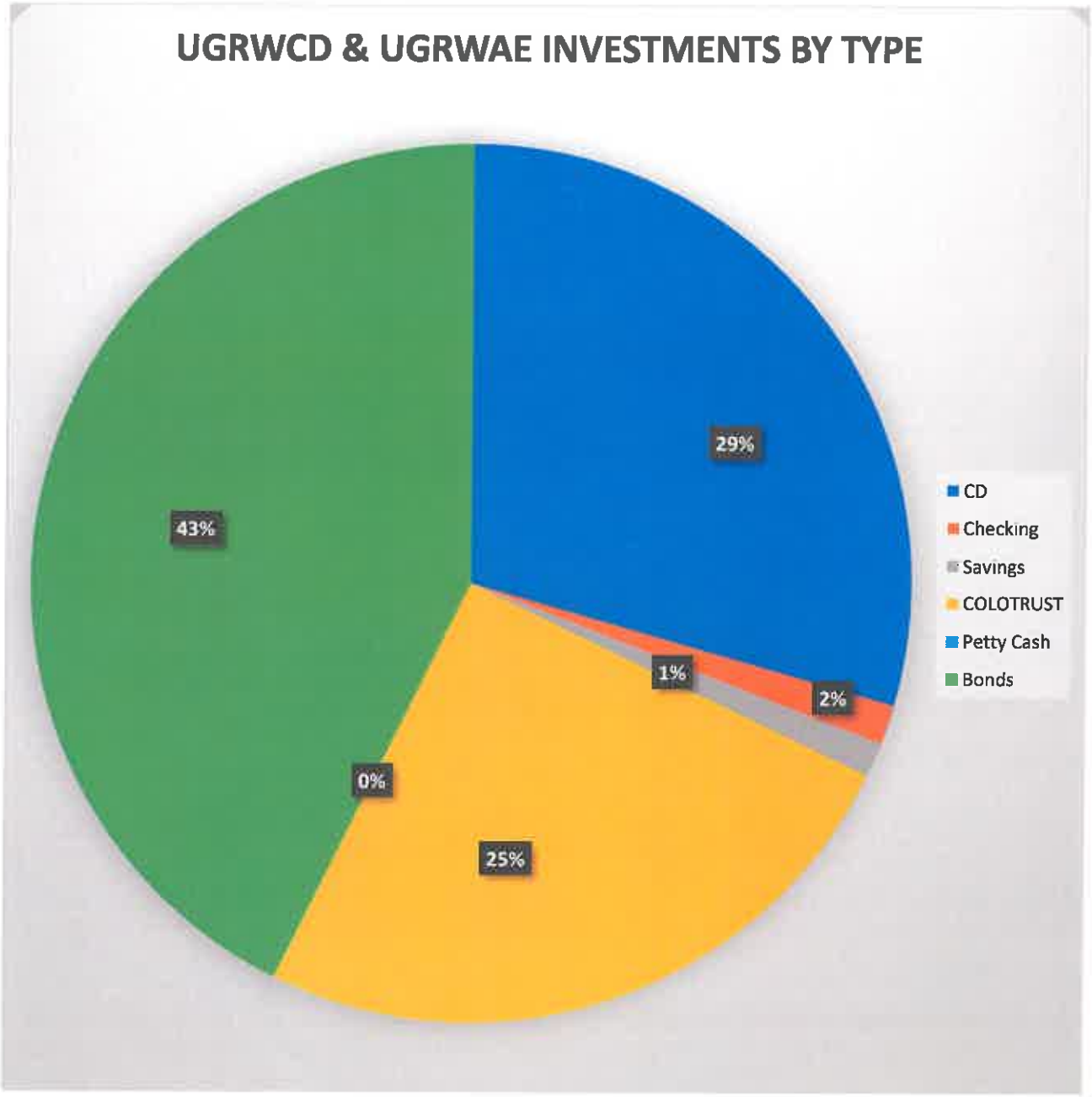
UGRWCD General Ledger # and Account Name		Balance 3/31/2019	Interest Rate	Maturity Date	Bond Callable Date
Sigma Bond 14	$	270,000.00	1.60%	9/18/2020	9/18/2018
1420 Community Banks of Colo. CD		51,376.59	1.55%	6/26/2020	
1400 Gunnison Savings & Loan CD		104,847.15	1.31%	8/10/2019	
1390 Comm. Banks of Colo. CD Lake City		101,129.09	0.40%	8/20/2019	
Sigma Bond 12		200,000.00	1.125%	10/11/2019	
1450 Compass Bank CD		100,000.00	2.500%	11/18/2019	
1410 Bank of the West CD		103,086.41	1.51%	12/22/2019	
1470 Mountain View Bank CD		101,079.14	2.65%	2/10/2020	
1310 Gunnison Bank & Trust CD		131,594.42	1.00%	2/14/2020	
1430 Wells Fargo CD thru Sigma		150,000.00	2.35%	2/14/2020	
Sigma Bond 15		200,000.00	2.15%	2/20/2020	2/20/2019
1280 Gunnison Bank & Trust CD		114,951.68	1.24%	2/26/2020	
Sigma Bond 11		405,000.00	1.19%	7/13/2020	7/13/2020
Sigma Bond 9		100,000.00	1.62%	2/17/2021	2/17/2021
Sigma Bond 10		250,000.00	1.55%	5/17/2021	5/17/2021
Sigma Bond 13		399,980.00	2.00%	2/15/2022	2/15/2022
1460 Guaranty Bank CD		100,000.00	2.80%	3/1/2021	
1440 JP Morgan Chase CD (through Sigma)		200,000.00	3.25%	7/31/2023	7/31/2019
1011 Bank of the West Checking		24,338.70	0.01%	N/A	
1380 NuVista Federal Credit Union Share		26.00	0.05%	N/A	
1295 COLOTRUST PLUS+		526,744.83	2.58%	N/A	
1290 COLOTRUST PRIME		508,038.56	2.35%	N/A	
Sigma Money Market Account		54,020.66		N/A	
Petty Cash		97.00	N/A	N/A	
TOTAL UGRWCD	**$**	**4,196,310.23**			

UGRWAE Account Name		Balance 3/31/2019	Interest Rate	Maturity Date
Bank of the West Checking	$	37,774.02	N/A	N/A
COLOTRUST PLUS+		38,642.29	2.58%	N/A
TOTAL UGRWAE	**$**	**76,416.31**		
TOTAL UGRWCD + UGRWAE	**$**	**4,272,726.54**		

Total UGRWCD and UGRWAE Deposits by Bank		
COLOTRUST	$	1,073,425.68
Bank of the West		165,199.13
Community Banks of Colo.		152,505.68
Gunnison Savings & Loan		104,847.15
Gunnison Bank & Trust		246,546.10
Wells Fargo		150,000.00
Compass Bank		100,000.00
Sigma Financial		1,879,000.66
Guaranty Bank		100,000.00
NuVista Credit Union		26.00
Petty Cash		97.00
JP Morgan Chase		200,000.00
Mountain View Bank		101,079.14
TOTAL ALL BANKS	**$**	**4,272,726.54**

UGRWCD & UGRWAE INVESTMENTS BY TYPE

CD	29%	$ 1,258,064.48
Checking	1%	62,112.72
Savings	1%	54,046.66
COLOTRUST	25%	1,073,425.68
Petty Cash	0%	97.00
Bonds	43%	$ 1,824,980.00
Total	100%	$ 4,272,726.54



Upper Gunnison River Water Conservancy District
Operating Expenses for Approval

4/10/2019

Name	Account		Amount
Anthem	Employee Benefits	$	207.43
APEX Cleaning Service	Office Cleaning	$	340.94
Atmos Energy	Utilities	$	74.78
Atmos Energy	Utilities	$	73.54
Beverly Richards	Staff Salary	$	2,455.14
Business Leasing Solutions	Copier	$	215.84
Bill Nesbitt	BOD Expenses	$	238.96
Citibank	Various	$	1,103.46
Citibank	Various	$	113.22
City of Gunnison Finance	Utilities	$	106.25
City of Gunnison Finance	Utilities	$	116.87
Colorado Dept. of Revenue	State Withholding Tax	$	3,559.00
Colorado State Treasurer	State Unemployment Ins. Tax	$	321.58
Crested Butte News	Public Outreach = $125.00. Legal Publication = $7.47	$	132.47
EFTPS	Payroll Taxes	$	9,453.90
Frank Kugel	Administrative Salary	$	5,539.41
Frank Kugel	Administrative Travel	$	491.59
Frank Kugel	Administrative Travel	$	233.26
Great West (CCOERA)	Employee Benefits	$	11,010.77
Gunnison Country Publications	Public Outreach = $80.00 Legal Publication = $12.08	$	92.08
Jill Steele	Staff Salary	$	2,053.79
John McClow	Administrative Salary	$	9,291.86
John McClow	Employee Benefits	$	202.00
John McClow	Administrative Travel	$	1,409.20
Kathleen Curry	Administrative Travel	$	185.60

4/10/2019

Upper Gunnison River Water Conservancy District
Operating Expenses for Approval

KBUT	Public Outreach	$	1,000.00
Pinnacol Assurance	Workers Compensation Insurance	$	371.00
The Paper Clip	Office Expenses	$	225.44
Rocky Mountain Health Plans	Employee Benefits	$	4,529.54
Spencer Avenue Business Park	Condo Dues	$	550.00
Silver World Publishing	Public Outreach = $100.00. Legal Publication = $11.00	$	111.00
Verizon Wireless	Office Telephone	$	695.37
Western Colorado State University	Public Outreach (GPLI)	$	300.00
United Healthcare	Employee Benefits	$	93.30
Total Operating Expenses Payable		**$**	**56,898.59**

Upper Gunnison River Water Conservancy District
Non-Operating Expenses for Approval

4/15/2019

Name	Account		Amount
Dept. of the Interior, USGS	Water Quality Monitoring Program	$	21,871.00
North American Weather Consultants, Inc.	Cloud Seeding	$	32,200.25
D. Helton Consulting, LLC	General Consulting	$	568.00
Trout Unlimited	Grant Program (2018)	$	3,310.98
U.S. Bureau of Reclamation	Aspinall Water Contract Costs	$	27.97
Synergy Land & Livelihoods	Wet Meadows	$	5,333.37
Hartman Brothers	Cloud Seeding	$	19.33
RigNet	Cloud Seeding	$	45.36
Wilson Water Group	Watershed Management Planning	$	4,335.00
Uncompahgre Valley Water Users Association	Taylor Park Reservoir	$	6,377.00
Non-Operating Expenses Payable		**$**	**74,088.26**

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Company Account Number	Payment Date	New Balance	Minimum Amount Due	Enter Amount Paid
XXXX-XXXX-XX47-2174	04/19/2019	$1,103.46	$1,103.46	1103.46

21090840 - 000042 - 0001 - 0002 - 2

SOC 521 O UPPER GUNN **T0000042
JILL STEELE
210 W SPENCER AVE
SUITE B
GUNNISON CO 81230-2544

CITIBANK
P.O. BOX 78025
PHOENIX, AZ 85062-8025

For a credit balance refund, or a telephone or address change, please place an X in the parentheses and make the desired changes on the reverse side. Thank you. ( )

Payment coupon: Please tear along perforation and return this portion with your payment. Make company check or money order payable in U.S. dollars on a U.S. bank to Citibank. Include company account number on check or money order. No cash please. Do not staple or tape your check to this coupon.

CITIBANK CORPORATE CARD

Statement Date 03/25/19

Payment Date 04/19/19

Company Credit Limit	Available Credit	Cash Advance Limit	Available Cash Limit
$10,500	$9,396	$00	$00

received 4-1-19

For customer service call or write 1-800-248-4553 P.O. Box 6125 Sioux Falls, SD 57117

Send payments to: Citibank P.O. Box 78025 Phoenix, AZ 85062-8025

COMPANY SUMMARY

SOC 521 O UPPER GUNN XXXX-XXXX-XX47-2174		Previous Balance	Payment Allocation	Credits	Purchases and Advances	Interest Charges	New Balance
	Purchases	2,083.65	- 2,083.65	- 258.20	1,361.66		1,103.46
	Advances						
Company Totals	TOTAL	2,083.65	- 2,083.65	- 258.20	1,361.66		1,103.46

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Your total finance charge paid for 2018 was $0.00.

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Sign-up for email or text message alerts to know when your statement is ready to view. When on the go, access your account and recent activity through your mobile device at www.citimanager.com/mobile

CARDMEMBER SUMMARY

KUGEL,FRANK J XXXX-XXXX-XX48-2314		Previous Balance	Payments	Credits	Purchases and Advances	Interest Charges	New Balance
	Purchases			- 258.20	750.47		492.27
Monthly Limit:	Advances						
$7,000	TOTAL			- 258.20	750.47		492.27

MCCLOW,JOHN H XXXX-XXXX-XX76-1828		Previous Balance	Payments	Credits	Purchases and Advances	Interest Charges	New Balance
	Purchases				611.19		611.19
Monthly Limit:	Advances						
$7,000	TOTAL				611.19		611.19

Date Rec._____ Addn. Chd._____
Mgr. Appr._____ Amt. Appr._____
Bd. Appr. Date_____ Bd. Initials_____
Pd. Date_____ Chk_____
Account(s)_____

DAYS IN BILLING PERIOD: 28		Purchases	Cash Advances
Balance Subject			
To Interest Charges	>	.00	.00
Periodic Rate	>	.6250%	.0000%
ANNUAL PERCENTAGE RATE	>	7.50%	0.00%

Payment Due:	1,103.46
Amount Over Credit Limit:	.00
Amount Past Due:	.00
MINIMUM AMOUNT DUE:	1,103.46

citi

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XXXX-XXXX-XX47-2174

Statement Date
03/25/19

COMPANY BOOKKEEPING DETAIL

SOC 521 O UPPER GUNN XXXX-XXXX-XX47-2174

Monthly Limit	Cash Limit*	Available Credit Line	Available Cash Line**
$10,500	$00	$9,396	$00

Sale Date	Post Date	Reference Number	Type of Activity	Total Amount	
03-18	03-19	74046589078077000011831	PAYMENT - THANK YOU	2,083.65	PY

INDIVIDUAL CARDHOLDER ACTIVITY

KUGEL,FRANK J XXXX-XXXX-XX48-2314

Monthly Limit	Cash Limit*
$7,000	$00

Sale Date	Post Date	Reference Number	Type of Activity	Amount	
02-26	02-27	24692169057100139099648	AMAZON PRIME AMZN.COM/BILL WA	12.99	
02-26	02-27	24717059057270570329459	GOBINS INC 719-5442324 CO	108.04	
02-28	03-01	24692169059100032165429	AMZN MKTP US MI02J2SL1 AMZN.COM/BILL WA	6.75	
03-02	03-04	24692169061100834141681	AMAZON WEB SERVICES AWS.AMAZON.CO WA	31.02	
03-01	03-04	24055239060207523100408	IC CONNEX 970-209-6920 CO	184.97	
03-06	03-06	24692169065100783919182	FYF FROMYOUFLOWERS 800-838-8853 CT	66.46	
03-07	03-08	24692169066100513340062	AMAZON.COM MI8T76YF1 AMZN.COM/BILL WA	54.44	
03-07	03-08	24430999066400818025476	MSFT E02007ODAC 800-642-7676 WA	100.00	
03-08	03-11	24492159067894751797775	PAYPAL WEATHERYRWA 402-935-7733 WI	41.25	
03-08	03-11	24603169069030091599083	CAFE SILVESTRE GUNNISON CO	54.47	
03-16	03-18	74692169075100128949186	GAYLORD ROCKIES RESORT AURORA CO	258.20	CR
			031943 ARRIVAL: 03-13-19		
03-15	03-18	24269799076001165231192	BRICK OVEN PIZZA - CRE CRESTED BUTTE CO	78.09	
03-18	03-20	24270769078083724148875	DENVER POST CIRCULATION 303-832-3232 CO	11.99	
			TOTAL PURCHASES/ADVANCES/CREDITS	492.27	

MCCLOW,JOHN H XXXX-XXXX-XX76-1828

Monthly Limit	Cash Limit*
$7,000	$00

Sale Date	Post Date	Reference Number	Type of Activity	Amount
03-07	03-08	24692169066100909990777	REI PAYMENT CENTER 800-227-9597 OH	512.19
03-11	03-12	24906419070069659715830	DROPBOX CDX6C3XNQNJ7 888-4468396 CA	99.00
			TOTAL PURCHASES/ADVANCES/CREDITS	611.19

*Cash Advance Limit is a portion of your Total Monthly Limit
**Available Cash Line is a portion of your Available Credit Line

4480715000147221600113220011322253

citi

Company Account Number	Payment Due	New Balance	Minimum Amount Due	Enter Amount Paid
XXXX-XXXX-XX47-2216	04/19/2019	$113.22	$113.22	113.22

21080840 - 000043 - 0001 - 0002 - 2

521 O UPPER GUNNISON DB **70000041
JILL STEELE
210 W SPENCER AVE
SUITE B
GUNNISON CO 81230-2544

CITIBANK
P.O. BOX 78025
PHOENIX, AZ 85062-8025

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Payment coupon: Please tear along perforation and return this portion with your payment. Make company check or money order payable in U.S. dollars on a U.S. bank to Citibank. Include company account number on check or money order. No cash please. Do not staple or tape your check to this coupon.

CITIBANK CORPORATE CARD

Statement Date 03/25/19

Payment Date 04/19/19

Company Credit Limit	Available Credit Line	Cash Advance Limit	Available Cash Line
$3,000	$2,886	$00	$00

received 4-1-19

For customer service call or write 1-800-248-4553 P.O. Box 6125 Sioux Falls, SD 57117

Send payments to: Citibank P.O. Box 78025 Phoenix, AZ 85062-8025

COMPANY SUMMARY

521 O UPPER GUNNISON DB XXXX-XXXX-XX47-2216		Previous Balance	Payment Allocation	Credits	Purchases and Advances	Interest Charges	New Balance
	Purchases	1,903.81	- 1,903.81		113.22		113.22
	Advances						
Company Totals	TOTAL	1,903.81	- 1,903.81		113.22		113.22

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Your total finance charge paid for 2018 was $0.00.

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Sign-up for email or text message alerts to know when your statement is ready to view. When on the go, access your account and recent activity through your mobile device at www.citimanager.com/mobile

CARDMEMBER SUMMARY

TRAVEL ADVANCE 5 XXXX-XXXX-XX48-2256		Previous Balance	Payments	Credits	Purchases and Advances	Interest Charges	New Balance
	Purchases				113.22		113.22
Monthly Limit:	Advances						
$20,000	TOTAL				113.22		113.22

COMPANY BOOKKEEPING DETAIL

521 O UPPER GUNNISON DB XXXX-XXXX-XX47-2216

Monthly Limit	Cash Limit*	Available Credit Line	Available Cash Line**
$3,000	$00	$2,886	$00

Sale Date	Post Date	Reference Number	Type of Activity	Total Amount
03-18	03-19	74046589078077000011849	PAYMENT - THANK YOU	1,903.81 PY

DAYS IN BILLING PERIOD: 28	Purchases	Cash Advances
Balance Subject		
To Interest Charges >	.00	.00
Periodic Rate >	.0000%	.0000%
ANNUAL PERCENTAGE RATE >	0.00%	0.00%

Payment Due:	113.22
Amount Over Credit Limit:	.00
Amount Past Due:	.00
MINIMUM AMOUNT DUE:	113.22

citi®

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XXXX-XXXX-XX47-2216

Statement Date
03/25/19

INDIVIDUAL CARDHOLDER ACTIVITY

TRAVEL ADVANCE 5 XXXX-XXXX-XX48-2256

Monthly Limit	Cash Limit*
$20,000	$00

Sale Date	Post Date	Reference Number	Type of Activity	Amount
03-15	03-18	24733099075091065000890	CO GUNNISON CO SVS DENVER CO	67.23
03-20	03-22	24431069080975017930975	SAFEWAY #0617 GUNNISON CO	45.99
			TOTAL PURCHASES/ADVANCES/CREDITS	113.22

Date Rec._____ Addn. Cht._____
Mgr. Appr._____ Amt. Appr._____
Bd. Appr. Date_____ Bd. Initials_____
Pd. Date_____ Chk#_____
Account(s)_____

*Cash Advance Limit is a portion of your Total Monthly Limit
**Available Cash Line is a portion of your Available Credit Line

DI-1040

UNITED STATES DEPARTMENT OF THE INTERIOR
DOWN PAYMENT (BILL) REQUEST

Make Remittance Payable To: U.S. Geological Survey
Billing Contact: B Ward Phone: 303-236-6908

Bill #: 90717405
Customer: 6000001042
Date: 04/11/2019
Due Date: 06/10/2019

Remit Payment To: United States Geological Survey
P.O. Box 71362
Philadelphia, PA 19176-1362

Payer: UPPER GUNNISON RIVER
210 WEST SPENCER AVE, SUITE B
WATER CONSERVANCY DISTRICT
GUNNISON CO 81230

Additional forms of payment may be accepted. Please email GS-A-HQ_RMS@USGS.GOV or call 703-648-7683 for additional information.

To pay through Pay.gov go to https://www.pay.gov.

Checks must be made payable to U.S. Geological Survey. Please detach the top portion or include bill number on all remittances.

Amount of Payment: $ _____

Date	Description	Qty	Unit Price		Amount
			Cost	Per	
04/11/2019	For the streamflow and water quality monitoiring program. Billing is each Federal quarter per agreement. 19REJFACO106 Date Rec._____Addn. Cist._____ Mgr. Appr._____Amt. Appr._____ Bd. Appr. Date_____Bd. Initials_____ Pd. Date_____Cit#_____ Account(s)_____	1	21,871.00	1	21,871.00
				Amount Due this Bill:	21,871.00

Accounting Classification:
Sales Order: 80136
Sales Office: GCRE
Customer: 6000001042
Accounting #: 10982843

TIN: *****5208

Received
4-15-19

North American Weather Consultants, Inc.
8180 So. Highland Drive, Ste B-2
Sandy, UT, USA 84093
801-942-9005
801-942-9007 fax
accounting@nawcinc.com
www.nawcinc.com

Invoice

Date	Invoice #
4/8/2019	19-1896

received
4-15-19

Bill To

Upper Gunnison Water Conservancy District
attn: Frank Kugel
210 W. Spencer Ave., Suite B
Gunnison, CO 81230

Contract Number	Terms
18-420	Net 30

Quantity	Description	Rate	Amount
	Fixed Monthly Operations Cost, Cloud Seeding Project, Mar 15 - Apr 15, 2019	9,000.00	9,000.00
2,222.25	Reimbursable Seeding Generator Hours, Feb 1 - Mar 31, 2019	9.00	20,000.25
2	Operations and maintenance of Lake Irwin remote generator Feb 15 - Apr 15, 2019	1,600.00	3,200.00

Date Rec. 4-15-19 Addn. Ckd. ✓
Mgr. Appr. _____ Amt. Appr. _____
Bd. Appr. Date _____ Bd. Initials _____
Pd. Date _____ Ck# _____
Account(s) Cloud Seeding

	Total	**$32,200.25**

D. HELTON CONSULTING, LLC
504 GREENHORN DRIVE
CANON CITY, COLORADO 81212
PHONE (719) 345-3472
CELL (720) 201-2824

April 4, 2019

Upper Gunnison River Water Conservancy District
C/O John H. McClow, Esq.
210 West Spenser, Suite B
Gunnison, Colorado 81230

INVOICE

Project Description: Calculation of Annual and Five-year Average Volumetric Criteria as provided in Paragraph 18.B.(2) in the Decree in Case No. 11CW31

Billing Period: November 6 through December 3, 2018

Work Completed:

1) Consulted on the telephone with client.

2) Reviewed the Decree in Case No. 11CW31 and in particular the provisions of Paragraph 18.B.(2).

3) Compiled the requisite data and calculated the daily, monthly, and annual inflows into Taylor Park Reservoir taking into account the daily evaporation therefrom.

4) Prepared summary tables and transmitted same to client. See my December 3, 2018 email.

Itemized Charges:

D. Helton 4.0 hours @ $142.00 per hour $568.00

TOTAL AMOUNT DUE $568.00

D. HELTON CONSULTING, LLC

Duane D. Helton

Duane D. Helton

Date Rec. 4-4-19 Admin. Cist.
Mgr. Appr. Asst. Appr.
Bd. Appr. Date Bd. Initials
Pd. Date Ck#
Account(s)

Trout Unlimited
604 Elsa Court Gunnison, Colorado

Date: 4/8/19
Invoice: 1

Billed To: UGRWCD
Address: 210 West Spencer Ave
Address: Gunnison, CO 81230
Attn: Frank Kugel

INVOICE

Grant Program
Project Name: Tomichi Water conservation Program
Grant Number:
Billing Period: May 2018- April 2019

Materials			
	Rate	Hours/Units	Total
Hobo loggers and sensors	$220	2	$440
	$139	3	$417
			$
		Total Materials	**$857**
OPERATING EXPENSES			
Subcontractor Costs			
Gordon Gianni		Contract $400/month	$2000
Other Costs			
		Expenses	**$2857**
		SUBTOTAL	**$**
Basis for Indirect		**$**	
INDIRECT CHARGES (TU Administrative Overhead @ 15.89%)			**$453.98**
		INVOICE TOTAL	**$3310.98**
		RETENTION (5%) (If needed)	**$**
		TOTAL BILLING	**$3310.98**

Matching paid CWCB, and SCPP: $ $140,000

Invoice Submitted by: Jesse Kruthaupt
Name: Jesse Kruthaupt
Title: Upper Gunnison

Jill Steele

From: Frank Kugel
Sent: Tuesday, April 9, 2019 2:29 PM
To: Jill Steele
Subject: FW: Tomichi Conservation Program Invoicing
Attachments: Upper Gunnison Budget_Schedule .xlsx; Upper Gunnison Invoice Tomichi Water Conservation Program.pdf

FYI

Frank

From: Jesse Kruthaupt <Jesse.Kruthaupt@tu.org>
Sent: Tuesday, April 9, 2019 2:04 PM
To: Frank Kugel <fkugel@ugrwcd.org>
Cc: Beverly Richards <beverly@ugrwcd.org>
Subject: Tomichi Conservation Program Invoicing

Hi Frank, Attached is an invoice for expenses from the Tomichi Water Conservation Program and the budget from last spring. The Upper Gunnison funding was earmarked for monitoring during program implementation. The included receipts are for data loggers purchased and installed. The included contract between Gordon Gianniny was for manual stream measurements during the season.

As I mentioned during the February board presentation I only used $3310.98 of the $10,000 approved. I understood that the board was interested in using the remaining funds for additional monitoring or research but I wasn't clear on what would be acceptable for additional monitoring. Doing some post project grass production measurements won't be very expensive so I was thinking possibly these funds could go toward a more focused pilot like with have talked about.
If that is okay with the board I have two options with this existing TU project code:

1. I can keep the project code open but would need to clarify what would qualify as "approved" expenses and would need an acknowledgement that the UG is okay using the funding in a separate related project. Pro - I can pay invoices/materials on the spot then get reimbursed from the District when project is complete. Con – TU will change admin fee (15%) for expenses.
2. Close this project code out and coordinate with the district on future expenses – Expenses would be paid directly by District for materials or contractors.

I think we can figure this out when you get back. But, if you have any quick thoughts maybe Bev, John and I can coordinate while you're on vacation.

Thanks, Hope you have a great trip.

Jesse

TROUT UNLIMITED
Upper Gunnison Project Specialist
(970) 209-0976 | jkruthaupt@tu.org | www.tu.org

Hartman Brothers, Inc.
524 North First Street
Montrose, CO 81401
Tel.: (970) 240-8535
Fax: (970) 249-6675

allair
GASES • INDUSTRIAL • BEVERAGE
HARTMAN BROTHERS est. 1904

STATEMENT OF ACCOUNT

Customer : M05447

UPPER GUNNISON RIVER WATER CON
210 WEST SPENCER AVE , SUITE B
GUNNISON, CO 81230

Statement Date: Mar 31, 2019

Conditions: NET 30 DAYS

Date Y M D	T	Invoice	Delivery Note	Customer P.O. No	Inv./Credit Amt.	Payment Amt.	Balance
2019/03/31	D	288853			19.33		19.33
TOTAL ------->					19.33	0.00	19.33

Date Rec. 4-3-19 Admn. Chkd. [initials]
Mgr. Appr. [initials] Amt. Appr. 19.33
Bd. Appr. Date ______ Bd. Initials ______
Pd. Date ______ Ck# ______
Account(s) cloud seeding

CODES (T) :
I - INVOICE
C - CREDIT NOTE
U - UNAPPLIED CREDIT
S - FINANCE CHARGE
D - CYLINDER RENTAL
L - CYLINDER LEASE
F - MONTHLY FACILITY
R - MACHINE RENTAL

CURRENT	31 - 60 DAYS	61 - 90 DAYS	90+ DAYS
19.33	0.00	0.00	0.00

RigNet

Invoice	**201903_472**
Date	31 March, 2019
Account	C201008

Upper Gunnison River Water Conservancy District
210 W. Spencer Ave
Suite B
Gunnison, CO 81230
United States

Remittance should be mailed to:
RigNet, Inc.
P. O. BOX 941629
Houston, TX 77094
Phone: +1 281 674 0683
Email: ar@rig.net

Airtime Period **1 Mar - 31 Mar 2019**

Summary

Total Airtime and Fees this Period	USD	45.36
Total Amount This Invoice	**USD**	**45.36**

Terms: Net 30

Please include Invoice Number and Account Number with your payment

For Wire Transfers, please remit to:
Bank Name: Bank of America
Acct Name: RigNet, Inc.
Account No: 488025116355
SWIFT # BOFAUS3NABA
Routing # 026009593ABA
ACH# 111000025

Date Rec. 4-5-19 Addn. Cist.
Mgr. Appr. Amt. Appr.
Bd. Appr. Date Bd. Initials
Pd. Date Ck#
Account(s) Cloud Seeding

Summary per Product

Product	Charge Type		Amount (USD)
IDP	Subscription Fee		33.00
IDP	Airtime		10.41
IDP	Other		1.95
		Total for IDP	**45.36**
Total charges (excl tax) for this invoice			**45.36**

March 31, 2019

wilsonwater group

Frank Kugel
Upper Gunnison River Water Conservancy District
2010 West Spencer, Suite B
Gunnison, CO 82130

RE: Watershed Management Planning in the Upper Gunnison River Basin

Frank,

Below is an invoice for professional services of Wilson Water Group for the WMP in the Upper Gunnison River Basin Ohio Creek, East River, and Lake Fork Sub-basins for the period through March 25, 2019. Primary activities and progress reports follow the invoice.

Professional Services for Upper Gunnison River Basin Watershed Management Planning

Staff	Hours	Rate	Total
Sub-consultant Fees (Alpine Environmental Consultants)			$ 4,335.00
Amount Due this Invoice			**$ 4,335.00**

Primary Activities

Task 1 – Stakeholder Outreach
- Continued coordination

Task 2 – Mapping and Data Compilation
- No efforts this period

Task 3 – Follow-up Inventories
- AEC continued to write the assessment section of the draft reports

Task Budget Status

Work Task	Budget	Current Costs	Cumulative Costs	Percent Spent
1 – Stakeholder Outreach	$ 21,900	$ 0.00	$ 18,075.00	83%
2 – Mapping and Data Compilation	$ 66,300	$ 0.00	$ 64,736.99	98%
3 – Follow-up Inventories	$ 172,800	$ 4,335.00	$ 167,104.68	97%
Total	**$ 261,000**	**$ 4,335.00**	**$ 249,916.67**	**96%**

Date Rec. 4-1-19 Addn. Chd.
Mgr. Appr. [illegible] Amt. Appr. 4335.00
Bd. Appr. Date _____ Bd. Initials _____
Pd. Date _____ Ck# _____
Account(s) _____

Received 4-1-19

UNCOMPAHGRE VALLEY WATER USERS ASSOCIATION
P O BOX 69
MONTROSE, CO 81402
(970)249-3813
(970)249-6830 (fax)

BILL TO: Upper Gunnison River Water
Conservancy District
210 W. Spencer Ave., Ste. B
Gunnison, CO 81230-2544

DATE: 4/1/2019
INVOICE#: 2019O&M

QUANTITY	DESCRIPTION	PRICE	AMOUNT
2019	**Annual payment due the UVWUA on Taylor Park Reservoir Operation and Storage Agreement** (Contract No. 06-07-00027 dated 8/28/75)(Supplement dated 4/16/90)		$6,377.00
		TOTAL DUE	$6,377.00

received
4-12-19

Date Rec. 4-12-19 Admin. Chk. M
Mgr. Appr. _____ Asst. Appr. _____
Bd. Appr. Date _____ Bd. Initials _____
Pd. Date 4-22 Ck# _____
Account(s) Taylor Park Reservoir

AGENDA ITEM 4

LEGISLATIVE ACTIVITY REPORT

COLORADO GENERAL ASSEMBLY

2019 REGULAR SESSION

April 15, 2019

The following are bills of interest to the District that are still alive or recently deceased in the General Assembly, including the position taken by the District at the Colorado Water Congress State Affairs Committee. The Bills are listed in numerical order. Updates from the previous report are in red.

HOUSE BILL 19-1006 CONCERNING MEASURES TO MITIGATE THE EFFECTS OF WILDFIRES WITHIN WILDLAND-URBAN INTERFACE AREAS, AND, IN CONNECTION THEREWITH, CREATING A STATE GRANT PROGRAM TO PROMOTE FOREST MANAGEMENT FUELS REDUCTION PROJECTS IN SUCH AREAS.

House Sponsors: McLachlan and Carver Senate Sponsor: Fields

This bill was rewritten with a strike below amendment (attached).

Status: 1/04/2019 Introduced in House; Assigned to Rural Affairs and Agriculture Committee

03/18/2019 | House Committee on Rural Affairs & Agriculture Refer Amended to Appropriations

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support.

HOUSE BILL 19-1050 CONCERNING THE PROMOTION OF WATER-EFFICIENT LANDSCAPING ON PROPERTY SUBJECT TO MANAGEMENT BY LOCAL SUPERVISORY ENTITIES.

House Sponsor: Titone Senate Sponsor: None

Section 1 of the bill augments an existing law that establishes the right of unit owners in common interest communities to use water-efficient landscaping, subject to reasonable aesthetic standards, by specifically extending the same policy to common areas under the control of the community's governing board.

Sections 2 and 3 extend existing water conservation requirements, currently applicable only to certain public entities that supply water at retail and their customers, to property management districts and other special districts that manage areas of parkland and open space.

Status: 1/4/2019 Introduced In House - Assigned to Energy & Environment

1/17/2019 House Committee on Energy & Environment Refer Amended to House Committee of the Whole

1/25/2019 House Second Reading Passed with Amendments.
1/28/2019 House Third Reading Passed – No Amendments
2/1/2019 Introduced in Senate – Assigned to Local Government

* * * * *

3/7/2019 Signed by Governor

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support

HOUSE BILL 19-1082 CONCERNING THE RIGHTS OF A WATER RIGHTS EASEMENT HOLDER.

House Sponsors: Catlin and Valdez, D. Senate Sponsor: Coram

The bill clarifies that water rights easement holders may maintain, repair, and improve their easement. The bill was amended a second time in the Senate; the House concurred in the Senate amendments. The final bill is attached.

Status: 1/11/2019 Introduced in House; Assigned to Rural Affairs & Agriculture Committee

1/28/2018 House Committee on Rural Affairs & Agriculture Refer Amended to House Committee of the Whole

The amendment adopted the suggestion that a new section be added rather than changing the language of the existing statute. The amended version is attached.

1/30/2019 House Second Reading Passed with Amendments

1/31/2019 House Third Reading Passed – No Amendments.

2/5/2019 Introduced in Senate – Assigned to Agriculture & Natural Resources.

* * * * * *

3/18/2019 Sent to the Governor for signature

3/28/2019 Signed by Governor

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support

HOUSE BILL 19-1113 CONCERNING THE PROTECTION OF WATER QUALITY FROM ADVERSE IMPACTS CAUSED BY MINERAL MINING.

House Sponsors: Roberts and McLachlan (Arndt, Buentello, McCluskie, Titone)

Senate Sponsor: Donovan

Current law does not address reliance on perpetual water treatment as the means to minimize impacts to water quality in a reclamation plan for a mining operation. **Section 1** of the bill requires most reclamation plans to demonstrate, by substantial evidence, a reasonably forseeable end date for any water quality treatment necessary to ensure compliance with applicable water quality standards.

Current law allows a mining permittee to submit an audited financial statement as proof that the operator has sufficient funds to meet its reclamation liabilities in lieu of a bond or other financial assurance. **Section 2** eliminates this self-bonding option and also requires that all reclamation bonds include financial assurances in an amount sufficient to protect water quality, including costs for any necessary treatment and monitoring costs.

Status: 1/15/2019 Introduced In House; Assigned to Rural Affairs & Agriculture

2/4/2019 House Committee on Rural Affairs & Agriculture Refer Amended to House Committee of the Whole

2/6/2019 House Second Reading Passed with Amendments

2/7/2019 House Third Reading Passed – No Amendments

2/11/2019 Introduced in Senate – Assigned to Agriculture & Natural Resources

3/7/2019 Senate Committee on Agriculture & Natural Resources Refer Amended to Senate Committee of the Whole

3/11/2019 Senate Second Reading Laid Over Daily - No Amendments

3/13/2019 Senate Second Reading Passed with Amendments - Committee

3/14/2019 Senate Third Reading Passed - No Amendments

3/18/2019 House Considered Senate Amendments - Result was to Laid Over Daily

3/18/2019 House Considered Senate Amendments - Result was to Concur – Repass

* * * * * * * * * * * *

4/4/2019 Signed by Governor

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support. At the February 4 meeting, the State Affairs Committee voted to support the bill. I testified at the House Rural Affairs & Agriculture Committee hearing on behalf of the State Affairs Committee and the UGRWCD. The amendment was a minor clarification regarding end dates (noted in the description above).

HOUSE BILL 19-1218 CONCERNING THE COLORADO WATER CONSERVATION BOARD'S AUTHORITY TO USE WATER THAT A WATER RIGHT OWNER VOLUNTARILY LOANS TO THE BOARD FOR INSTREAM FLOW PURPOSES.

House Sponsor: Roberts

Senate Sponsor: Donovan

Under current law, the Colorado water conservation board (board), subject to procedural requirements established to prevent injury to water rights or decreed conditional water rights, may use loaned water for instream flows if the loaned water is used for preserving the natural environment of a stream reach that is subject to a decreed instream flow water right held by the board. The bill expands the number of years within a 10-year period that a loan may be exercised from 3 years to 5 years and allows a loan to be renewed for up to 2 additional 10-year periods.

The bill also expands the board's ability to use loaned water for instream flows to allow loans to:

Improve the natural environment to a reasonable degree pursuant to a decreed instream flow water right held by the board; or

Preserve or improve the natural environment to a reasonable degree for a stream reach for which the board does not hold a decreed instream flow water right.

In considering whether to accept one of the new types of loans authorized by the bill, the board must evaluate the proposed loan based on a biological analysis performed by the division of parks and wildlife. The board is required to promulgate rules regarding the necessary steps for reviewing and accepting such a loan.

The bill was amended in Committee and on the House floor, as follows:

The loan cannot be utilized for more than three consecutive years.

The provision allowing a loan in a reach where the CWCB does not hold an instream flow water right was removed.

Clarifies that the applicant must reapply for each extension, including evaluation of injury.

In the event of an appeal to the water court of the State Engineer's finding of no injury, the applicant for the loan has the burden of proving no injury. The appeal process is clarified with additional detail regarding procedure.

Status: 3/4/2019 Introduced In House - Assigned to Energy & Environment

3/25/2019 Scheduled for hearing; Energy & Environment Committee

3/29/2019 Passed Second Reading with Amendments

4/1/2019 Passed Third Reading, No Amendments

4/2/2019 Introduced In Senate - Assigned to Agriculture & Natural Resources

Scheduled for Senate Agriculture & Natural Resources March 17

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support

At the April 8 State Affairs Committee meeting a motion was made to reconsider the Committee's support of the bill. The motion failed to meet the required 2/3 majority.

SENATE BILL 19-186 CONCERNING THE EXPANSION OF AGRICULTURAL CHEMICAL MANAGEMENT PLANS TO PROTECT SURFACE WATER

Senate Sponsors: Donovan and Coram

House Sponsor: Arndt

Under current law, the commissioner of agriculture is responsible for the management of the use of agricultural chemicals to protect groundwater, and the commissioner adopts rules establishing agricultural management plans for this purpose. The bill expands the scope of the commissioner's agricultural management plans to include the protection of state waters, which includes surface and subsurface waters.

Status: 3/5/2019 Introduced In Senate - Assigned to Agriculture & Natural Resources

4/4/2019 Senate Committee on Agriculture & Natural Resources Refer Unamended to Finance

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support

SENATE BILL 19-212 **CONCERNING GENERAL FUND SUPPORT TO IMPLEMENT THE STATE WATER PLAN, AND, IN CONNECTION THEREWITH, MAKING AN APPROPRIATION.**

Senate Sponsors: ***Rankin****, Moreno, Zenzinger, Priola, Tate*

House Sponsors: ***Esgar****, Hansen, Becker, Bird, Buentello, Cutter, Duran, Exum, Gonzales-Gutierrez, Gray, Jackson, Kipp, McLachlan, Michaelson, Jenet, Roberts, Singer, Sirota, Snyder, Tipper, Titone, Valdez D., Weissman*

Appropriates $8.3 million from the general fund to the department of natural resources (department) for use by the Colorado Water Conservation Board to finance grants; and appropriates $1.7 million from the general fund to the department for use by the board for stakeholder outreach and technical analysis to develop a water resources demand management program.

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Support

As of 4/5/2019 the bill passed Senate and House.

AGENDA ITEM 5

MEMORANDUM

TO: UGRWCD Board Members

FROM: Frank Kugel

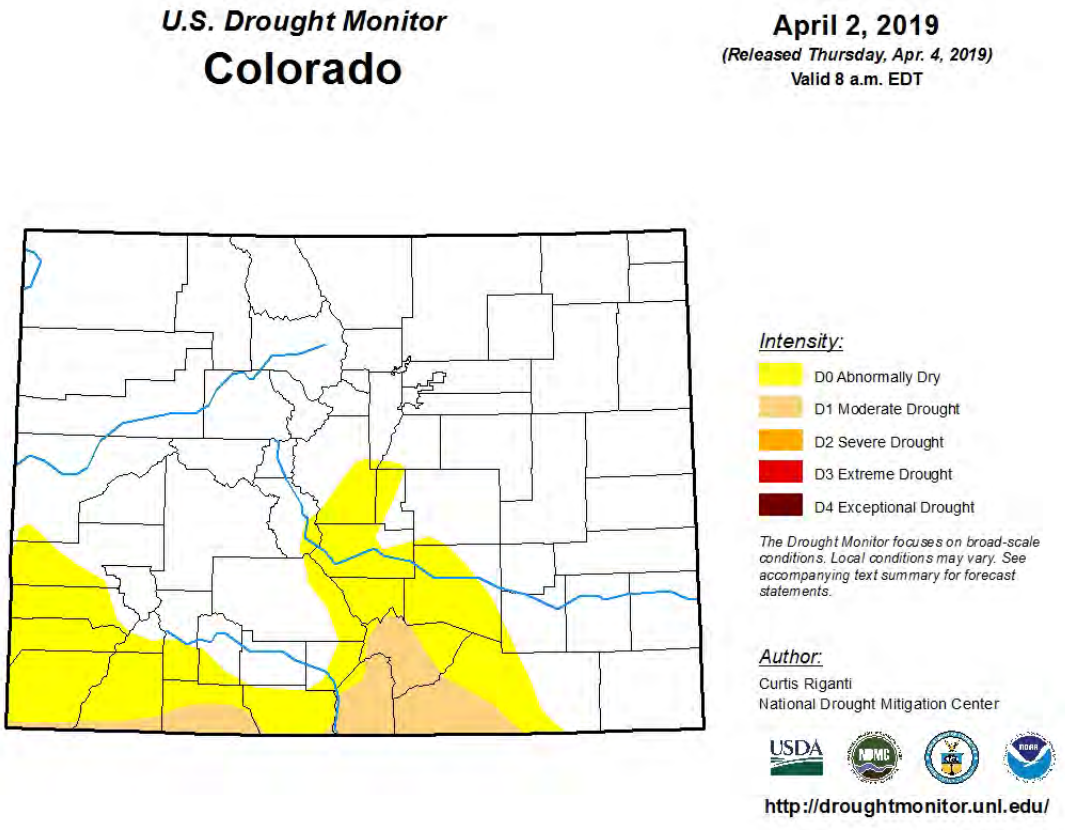
DATE: April 22, 2019

SUBJECT: April Manager's Report

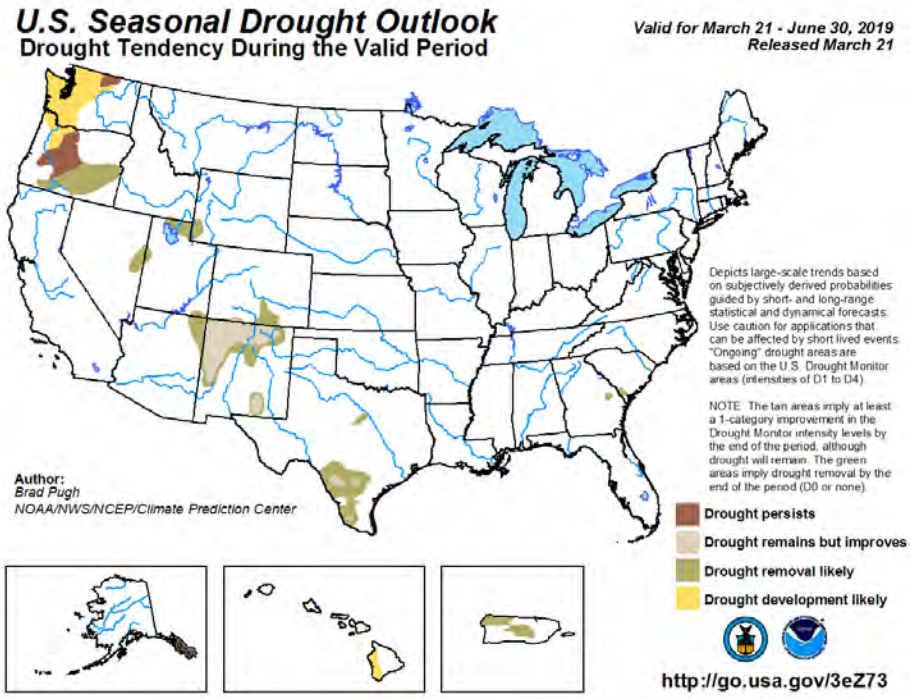
Water Supply Update

The Gunnison Basin received 215 percent of normal precipitation in March. For the five months of the 2019 Water Year beginning October 1, we have received 131 percent of normal precipitation. Unregulated inflows into Blue Mesa Reservoir were 78 percent of normal for March, while Taylor Park Reservoir inflows were 106 percent of normal.

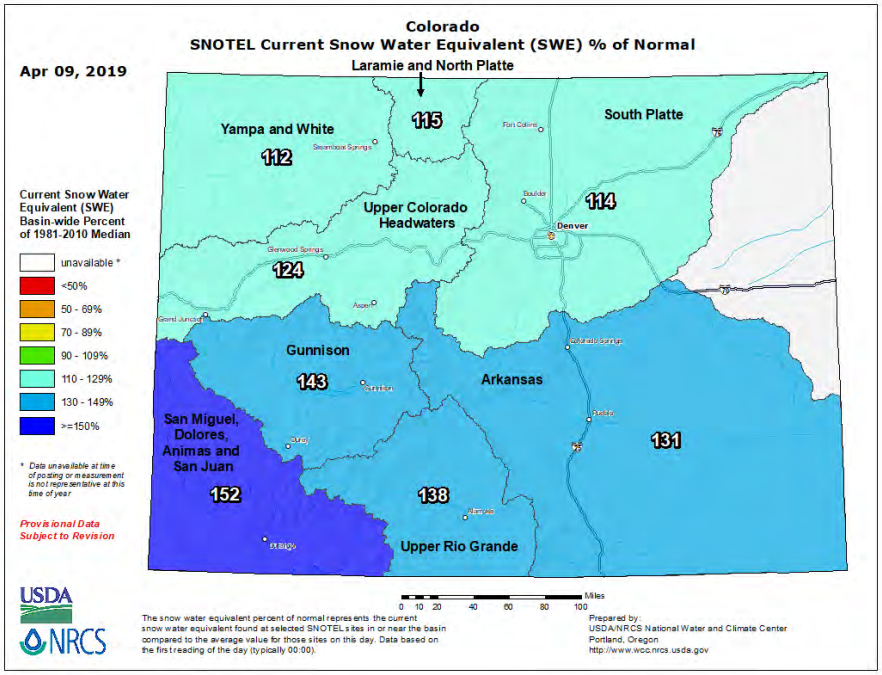
Water supply conditions across our district have continued to improve dramatically over the past month, with the Drought Intensity level improving from Abnormally Dry to None.



Western Colorado drought conditions are predicted to continue through May, but the severity is expected to improve as shown below (forecast as of March 21).



All of the basins in Colorado have significantly above-normal snowpack for this date.



The chart below shows all our basin snotels reporting above normal snowpack for this date.

Colorado SNOTEL Snow / Precipitation Update Report

Based on Mountain Data from NRCS SNOTEL Sites

Provisional data, subject to revision

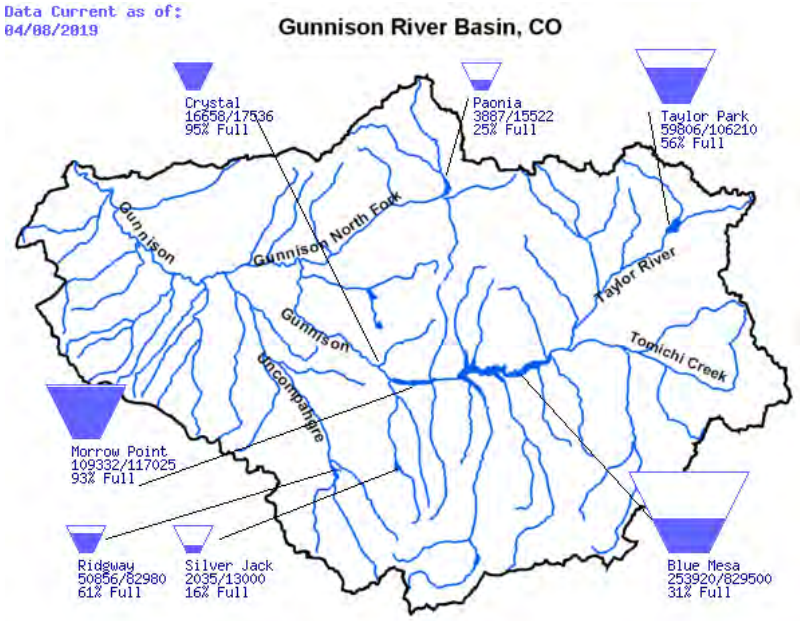
Data based on the first reading of the day (typically 00:00) for Tuesday, April 09, 2019

Basin Site Name	Elev (ft)	Snow Water Equivalent			Water Year-to-Date Precipitation		
		Current (in)	Median (in)	Pct of Median	Current (in)	Average (in)	Pct of Average
GUNNISON RIVER BASIN							
Butte	10160	19.3	13.7	141	19.0	16.4	116
Cochetopa Pass	10020	7.2	3.0R	240	9.9	7.5R	132
Columbine Pass	9400	-M	16.0	*	-M	23.6	*
Idarado	9800	18.7	13.8	136	22.9	19.3	119
Mc Clure Pass	9500	19.8	16.0	124	26.6	21.3	125
Mesa Lakes	10000	24.1	17.8	135	30.7	21.7	141
Overland Res.	9840	17.8	11.7	152	22.0	16.9	130
Park Cone	9600	14.7	10.0	147	14.9	12.3	121
Park Reservoir	9960	36.4	26.4	138	39.6	28.0	141
Porphyry Creek	10760	21.5	15.9	135	18.9	15.8	120
Red Mountain Pass	11200	33.3	24.0	139	32.9	26.8	123
Sargents Mesa	11530	14.2	N/A	*	16.7	N/A	*
Schofield Pass	10700	50.6	32.7	155	39.8	32.8	121
Slumgullion	11560	21.3	14.4	148	20.6	13.8	149
Upper Taylor	10640	19.4	N/A	*	24.3	N/A	*
Wager Gulch	11100	16.9	N/A	*	19.6	N/A	*
Basin Index (%)				**143**			**128**

The five long-term snotels above Blue Mesa Reservoir are averaging 133%, while the three snotels above Taylor Park Reservoir are averaging 134%.

Storage in Blue Mesa Reservoir rose slightly over the past month and is currently at 7439.18 feet, or 80 feet below the spillway, which corresponds to a reservoir storage of 31 percent of capacity. The low level thus far for the 2019 water year has been 7437.17 feet recorded on March 10.

Taylor Park Reservoir is currently at an elevation of 9303.35 feet, or 27 feet below the spillway. The release rate from Taylor Park Dam is currently 117 cfs.



Lake Powell continued to release storage last month while Lake Mead gained storage. Lakes Powell and Mead are now at elevations 3568.70 and 1089.82 feet (37 and 42 percent of capacity), respectively.

Gunnison River flows in the Black Canyon and near Whitewater are currently 424 and 2660 cfs, respectively. The Gunnison Tunnel turned on for the season on April 1 and is currently diverting 406 cfs.

The National Weather Service is forecasting cooler temperatures and wetter than normal conditions for both its 6-10 day forecast period beginning April 15 and its 8-14 day forecast beginning April 17. The current forecast for April through June (released March 21) calls for warmer temperatures and above normal precipitation.

AGENDA ITEM 8

SECTION C. PROCUREMENT OF PRODUCTS AND SERVICES

1.0 PURPOSE

This procedure describes the limitations associated with purchasing products or services.

2.0 RESPONSIBILITY

The General Manager is responsible for the administration of this procedure for purchasing of non-legal products and services and is responsible for execution of all product and service purchases.

The General Counsel is responsible for the administration of this procedure for purchasing of legal products and services. The General Counsel shall provide or review all contracts.

The Board of Directors is responsible for approving product purchases and services that exceed limits established herein.

3.0 DEFINITIONS

Products: Any service required by the District that does not potentially involve intellectual property, and any physical item intended for use by the District.

Services: Any engagement with a person or entity whose principal deliverable constitutes some form of intellectual property.
Local: Within the District's geographic boundaries and the counties represented. Component product or service purchases: When a product or service is a component or element of a larger system or purchase.

4.0 PRODUCTS

4.1 The General Manager, General Counsel, or his/her representative(s), should evaluate the need and identify the product most likely to meet the need. This evaluation should consider and balance price, quality, service, warranty, availability, performance, longevity, and function.

4.2 Whenever a product(s) is/are a component of a larger existing system, it may be purchased separately. Whenever a product(s) is/are a component of larger new system, the components may not be purchased separately if the total component system exceeds $10,000.

4.3 Where the General Counsel has identified legal products, he/she shall use these guidelines in preparing the purchase or

recommendation for purchase to the General Manager and Board of Directors. The General Manager shall be responsible for the actual purchase.

4.4 The General Manager may establish product supply contracts from which specific task orders may be issued. These general contracts will be reviewed and renewed annually.

4.5 Unless specifically mentioned in the annual Budget Message, any Operating Budget purchase greater than $2,000 must have prior Board approval.

4.6 Product Purchases Greater Than $5,000 and Less Than or Equal to $10,000

4.6.1 For product purchases greater than $5,000 and less than or equal to $10,000, written bids are not necessary. The General Manager shall prepare a written comparison of the factors listed in §4.0.1 for the Board's review and as a purchase record. The District does not require the use of purchase orders, except where required to do so in conjunction with the use of the District's tax-exempt certificate.

4.6.2 Whenever possible the District may purchase products locally without seeking competitive quotes. However, the preference for local suppliers is not intended to preclude the District from purchasing products from non-local sources whenever it is in the District's interest to do so.

4.7 Product Purchases Greater Than $10,000

4.7.1 For product purchases greater than $10,000 written bids shall be requested from a minimum of three vendors. Bids shall be solicited by written request. A copy of a printed product description, price, etc. from a vendor catalog may be used as a substitute for a written bid from a vendor. Copies of the bids received shall be retained in the files of the District for two (2) years or the life of the project, when appropriate. The District does not require the use of purchase orders, except where required to do so in conjunction with use of the District's tax-exempt certificate.

4.7.2 Should the General Manager/General Counsel be unable to identify three vendors or be unable to obtain three bids, the General Manager/General Counsel should prepare a recommendation to the Board for consideration using the available information.

4.7.3 The Board must approve all product purchases greater than $10,000.

4.8 Purchase of Computer Equipment and Services

4.8.1 The District will give preference to local suppliers provided:

- The equipment is a nationally recognized brand,
- It is purchased with a warranty and timely service contracts for maintenance and support,
- The local supplier meets the qualifications of the vendor for maintaining the hardware, software, and/or network design and integration,
- Does not exceed a 15% premium associated with non-local suppliers.

4.8.2 The District, at its discretion, may purchase non-local computer equipment hardware, software, network systems, or services it deems necessary to ensure an adequate level of risk management, operational reliability, and protection of its electronic systems and files.

5.0 Services

5.0.1 The General Manager, General Counsel, or his/her representative(s), should evaluate the need and develop a scope of work for the required service. This evaluation should consider and balance price, quality, warranty, availability, liability, competence, performance, and ability to deliver the required service.

5.0.2 Whenever a service's deliverable can reasonably be considered a component of a larger deliverable, the components may not be purchased separately if the total of the components exceeds $20,000.

5.1 Service Purchase Less Than or Equal to $100,000

5.1.1 For any service less than or equal to $100,000 that is a part of or constitutes the total of an approved budget line item, the General Manager or General Counsel may solicit letter scopes of work and estimates. A comparison of cost, qualification, knowledge, availability, predicted performance, and deliverables should be made. The General Manager shall prepare a written comparison of the factors considered for the Board's review and as a purchase record. Award to the successful provider, by the Board, may be based solely on the letter proposal.

5.1.2 The General Counsel will present contract forms as may be necessary for evaluating the work performed for the Board's review and approval.

5.2 Service Purchase Greater Than $100,000

5.2.1 For services greater than $100,000 the General Manager or General Counsel must complete a bidder selection process consisting of preparation of scope of work, solicitation of qualified bidders, review of bidders, bidder interviews if necessary, and bid award.

5.2.2 The General Counsel shall prepare such contract forms as may be necessary for the work performed. Award to the successful provider, by the Board, may be based solely on the letter proposal.

5.2.3 The Board shall approve all service contracts that exceed $100,000.

5.3 Sole Source Purchases

5.3.1 The staff and Board shall use this section as a guideline to recommend and approve the use of sole source contracts.

5.3.2 No single sole source contract should exceed $100,000.

5.3.3 The following criteria should be used to evaluate the use of a sole source contract. Circumstances may dictate additional criteria. The staff or Board should identify and record any such additional criteria when a sole source contract is recommended or approved.

Conflicts of interest – where there may be potential conflict of interest among qualified bidders, the bidder with the least or no conflict may be engaged using a sole source contract.

Qualifications – where the work requires specialized knowledge, education, expertise, or experience.

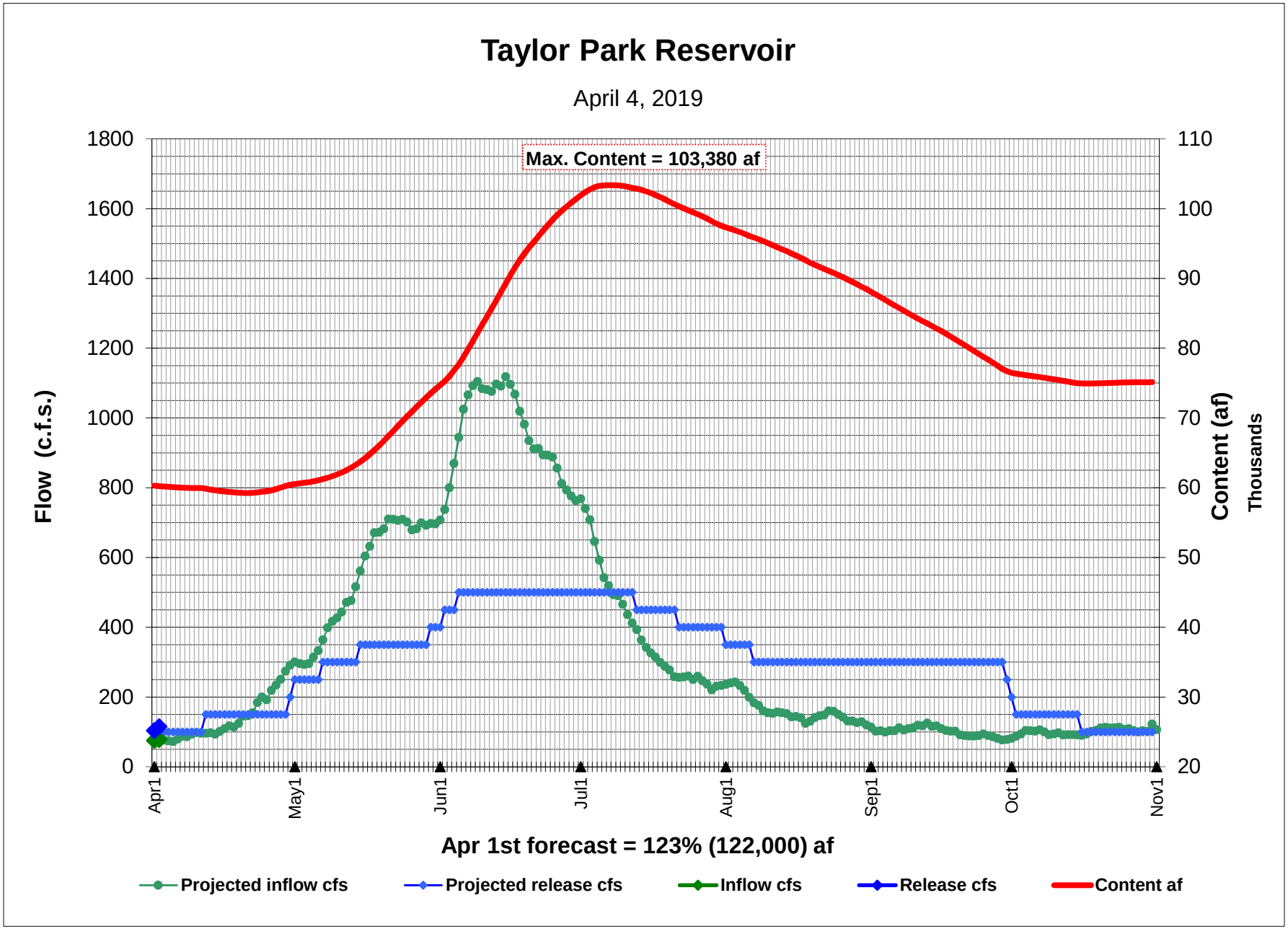
5.3.4 The use of a sole source contract does not eliminate the requirement that the staff develop a scope of work, refine the scope of work with the potential bidder, and review the materials with the Board prior to its approval.

AGENDA ITEM 9

Proposed Operation
Taylor Park Reservoir
Apr 1st forecast = 123% (122,000) af
April 4, 2019

Month	Inflow ac-ft	Average Inflow cfs	Outflow ac-ft	Average Outflow cfs	EOM Content ac-ft	EOM Elevation ft
					58,761	
Nov 1-15	1,600	54	1,660	56	58,701	9302.55
Nov 16-30	1,730	58	1,670	56	58,761	9302.59
Dec 1-15	1,670	56	1,650	55	58,781	9302.60
Dec 16-31	1,900	60	1,750	55	58,931	9302.71
Jan 1-15	1,730	58	1,640	55	59,021	9302.77
Jan 16-31	1,920	61	1,760	55	59,181	9302.88
Feb 1-15	1,960	66	1,670	56	59,471	9303.09
Feb 16-28	1,480	57	1,440	56	59,511	9303.12
Mar 1-15	2,300	77	1,790	60	60,021	9303.47
Mar 16-31	2,430	77	2,100	66	60,351	9303.70
Apr 1-15	2,580	87	3,410	115	59,521	9303.13
Apr 16-30	5,470	184	4,560	153	60,431	9303.75
May 1-15	11,710	394	8,430	283	63,711	9305.98
May 16-31	21,700	684	11,310	356	74,101	9312.60
Jun 1-15	29,540	993	14,380	483	89,261	9321.26
Jun 16-30	26,970	906	14,880	500	101,351	9327.57
Jul 1-15	15,690	527	14,580	490	102,461	9328.13
Jul 16-31	8,350	263	13,290	419	97,521	9325.62
Aug 1-15	5,560	187	9,520	320	93,561	9323.55
Aug 16-31	4,410	139	9,520	300	88,451	9320.82
Sep 1-15	3,280	110	8,930	300	82,801	9317.69
Sep 16-30	2,720	91	8,820	296	76,701	9314.16
Oct 1-15	2,830	95	4,560	153	74,971	9313.13
Oct 16-31	3,360	106	3,180	100	75,151	9313.23

preliminary



preliminary

UPPER GUNNISON RIVER WATER CONSERVANCY DISTRICT

MEMORANDUM

FROM: John H. McClow, General Counsel
TO: Board of Directors
RE: Drought Contingency Planning Update
DATE: April 15, 2019

Interstate Update

The seven states principals met in Phoenix on March 19 and signed a joint letter to Congress urging passage of the federal legislation authorizing the Secretary of the Interior to implement the Drought Contingency Plan agreement (attached). Imperial Irrigation District did not join in the letter and lobbied against the legislation. The bill (H.R. 2030 - attached) passed the House and Senate and awaits the President's signature. There is presently no indication that he will not do so.

Colorado Update

The staff memo and proposal for the Colorado Water Conservation Board has begun the process of organizing the workgroups for stakeholder input on a demand management plan.

Seeking Work Group Members
As directed by the 2019 Work Plan for Intrastate Demand Management Feasibility Investigations, the Colorado Water Conservation Board will be finalizing subject matter work groups through the end of April. We are looking for individuals that possess subject matter expertise, and are interested in serving as a member of one of the following work groups:
Law and Policy
Monitoring and Verification
Water Rights Administration and Accounting
Environmental Considerations\
Economic Considerations
Funding
Education and Outreach
Agricultural Impacts
If interested, please send your name, contact information, and a brief summary of your work on Colorado River issues and water management solutions by April 19th, 2019 to Brent Newman.

Senate Bill 19-212 appropriates $1.7 million from the general fund to the department for use by the board for stakeholder outreach and technical analysis to develop a water resources demand management program. The bill has passed both houses.

From: Beverly Richards
To: Beverly Richards
Subject: Water Bank Work Group - invitation!
Date: Monday, April 8, 2019 8:15:00 AM

Gentlemen, This is the email the River District has fought to write for too long.

At Wednesday's meeting of the Water Bank Work Group all parties (River District, Southwestern, Tri-State and Nature Conservancy) agreed to invite and encourage your participation as an active and equal partner in the WBWG's efforts.

As I believe you know, the overwhelming focus of the Work Group in the year ahead will be on evaluation of potential secondary impacts to our communities from implementation of a demand management program. Our goal is to ID potential impacts under various demand management scenarios in order advocate for a DM program structured to minimize and mitigate those impacts. To this end, the WBWG selected BBC Research and Consulting out of Denver to lead a $200,000 study.

We will also be closely following the next phases of the Risk Management study and the progress of the CWCB's eight work groups, themselves focused on other areas of DM, as well as other allied DCP/DM activities.

I'm happy to share any and all details with you regarding past work of the Work Group, though I think you know most, or the proposed Scope of Work (in development) with BBC, or anything else you'd like to know or discuss regarding the Water Bank Work Group.

Our invitation for you to join the WBWG comes with a cost-share request but not a full cost-share. After a 20-minute session of voodoo math, we arrived at a request of $9,500 from each of you/your organization to join the WBWG in order to fully fund and execute the Secondary Impact Study.

If you are willing to join our efforts and contribute to the Economic Impact Study, please let me know, and I or Sonja Chavez will provide you with the cost-share agreement that all of the parties are currently executing.

Chris Treese | External Affairs Manager
201 Centennial Street | PO Box 1120
Glenwood Springs, CO 81602
T: 970.945.8522, ext. 219 | C: 970.379.7634
ctreese@crwcd.org | www.ColoradoRiverDistrict.org
Colorado River District
Protecting Western Colorado Water Since 1937

COLORADO RIVER WATER BANK
COST-SHARING AGREEMENT FOR
RESEARCH COMPLETION AND PILOT PROJECT

This Colorado River Compact Water Bank Cost-Sharing Agreement is made on the last date of signature of the undersigned parties hereto, by and between the following entities:

The Colorado River Water Conservation District ("River District"), acting by and through its Colorado River Water Projects Enterprise, whose address is P.O. Box 1120, Glenwood Springs, Colorado 81602.

The Southwestern Water Conservation District ("Southwestern District"), whose address is 841 Second Avenue, Durango, Colorado 81301.

The Nature Conservancy ("TNC"), whose address is 2424 Spruce Street, Boulder, CO 80302.

The Front Range Water Council ("FRWC"), whose address is 220 Water Avenue Berthoud, CO 80512.

Tri-State Generation and Transmission Association, Inc. ("Tri-State"), whose address is 1100 W. 116th Avenue, Westminster, CO 80233.

The foregoing entities are sometimes referred to herein individually as a Party and collectively as the Parties.

RECITALS

A. Most of the Parties have shared in the costs of a number feasibility studies on water banking concepts. The Parties wish to include Tri-State in the work group and extend their cost sharing to support two additional projects: 1) the completion of "Phase IIC" research by Colorado State University that examines split season irrigation on larger parcels than previously studied in Delta, Gunnison, Mesa, Montezuma and Montrose Counties, and 2) implementation of a conserved consumptive use pilot project ("CCUP") within the Grand Valley Project ("GVP").

B. The Phase IIC research is funded in part by an Alternative to Agricultural Water Transfer Grant in the amount of $180,000 from the Colorado Water Conservation Board (2014C Grant). Most of the Parties have contributed toward a total of $120,000 in matching cash funds to the Phase IIC study. The full Scope of Work of the Phase IIC research has not yet been determined. The Phase IIC study and contributed funds have been managed by the River District as the fiscal agent.

C. The Colorado Water Conservation Board has issued an Alternative Agricultural Water Transfer Grant for the CCUP within the GVP in the amount of $200,000 to the Grand Valley Water Users Association ("GVWUA"). The GVWUA operates the GVP and will manage the CCUP. The CCUP is described in Exhibit A, as attached. The Parties will together contribute matching cash funds to the CCUP, along with additional match contributions from individual or other parties.

D. The Parties wish to enter into this Agreement to provide a mechanism for collecting and distributing cost share contributions ("Cost Shares").

AGREEMENT

1. The Parties agree that the River District will act as the fiscal agent for this Agreement and will receive and distribute Cost Shares on behalf of the Parties. As the fiscal agent, the River District will provide the administrative and accounting services required by this Agreement.

2. The Parties authorize the River District to enter into an appropriate agreement with Colorado State University to complete the Phase IIC research with the funds provided by the 2014C Grant and by the Cost Shares under this Agreement, following a consensus determination of the Parties on the Scope of Work.

3. Under this Agreement, the five Parties agree that each individual Party will be responsible for a Cost Share of $35,000, for a total of $175,000 for the two-year pilot project. The $175,000 will be allocated between the completion of the Phase IIC research and the implementation of the CCUP by consensus of the Parties. Therefore, each Party agrees to budget for and allocate $35,000 for the two-year pilot project for their contribution, subject to appropriation by their respective governing bodies, but no Party shall be responsible for payment of the obligations of any other Party.

4. Each Party shall pay $35,000 for the two-year pilot project in Cost Share to the River District within 90 days of the effective date of this Agreement.

5. The River District intends to enter an agreement with the GVWUA for the payment of up to $175,000, as determined by the Parties pursuant to this Agreement toward implementation of the CCUP.

6. The Parties will negotiate in good faith to amend this Agreement to seek authorization of additional expenditures if necessary to complete the work under Grant 2014C and the CCUP.

7. This Agreement shall automatically terminate thirty days after the Final Report pursuant to the 2014C Grant is tendered to the CWCB or the completion of the CCUP, whichever occurs last. The Parties' obligation to pay the River District their Cost Share shall survive termination of this Agreement.

8. This Agreement is the entire agreement between the Parties regarding the subject matter hereof and shall be modified by the Parties only by a duly executed written instrument approved by all the Parties.

9. This Agreement may be executed in any number of counterparts.

COLORADO RIVER WATER CONSERVATION DISTRICT

By: _____ Date: October 19, 2016
Name: R. Eric Kuhn Title: General Manager

SOUTHWESTERN WATER CONSERVATION DISTRICT

By: _____ Date: _____
Name: _____ Title: _____

THE NATURE CONSERVANCY

By: _____ Date: _____
Name: _____ Title: _____

FRONT RANGE WATER COUNCIL

By: _____ Date: _____
Name: _____ Title: _____

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

By: _____ Date: _____
Name: _____ Title: _____

COLORADO RIVER WATER CONSERVATION DISTRICT

By: R Eric Kuhn Date: October 19, 2016
Name: R. Eric Kuhn Title: General Manager

SOUTHWESTERN WATER CONSERVATION DISTRICT

By: Bruce T. Whitehead Date: 10/28/16
Name: Bruce Whitehead Title: Executive Director

THE NATURE CONSERVANCY

By: _____ Date: _____
Name: _____ Title: _____

FRONT RANGE WATER COUNCIL

By: _____ Date: _____
Name: _____ Title: _____

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

By: _____ Date: _____
Name: _____ Title: _____

COLORADO RIVER WATER CONSERVATION DISTRICT

By: _____ Date: October 19, 2016
Name: R. Eric Kuhn Title: General Manager

SOUTHWESTERN WATER CONSERVATION DISTRICT

By: _____ Date: _____
Name: _____ Title: _____

THE NATURE CONSERVANCY

By: _____ Date: 10/28/16
Name: Taylor Hawes Title: Program Director

FRONT RANGE WATER COUNCIL

By: _____ Date: _____
Name: _____ Title: _____

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

By: _____ Date: _____
Name: _____ Title: _____

COLORADO RIVER WATER CONSERVATION DISTRICT

By: _____ Date: October 19, 2016
Name: R. Eric Kuhn Title: General Manager

SOUTHWESTERN WATER CONSERVATION DISTRICT

By: _____ Date: _____
Name: _____ Title: _____

THE NATURE CONSERVANCY

By: _____ Date: _____
Name: _____ Title: _____

FRONT RANGE WATER COUNCIL

By: _____ Date: _____
Name: _____ Title: _____

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

By: _____ Date: _____
Name: _____ Title: _____

COLORADO RIVER WATER CONSERVATION DISTRICT

By: Richard Eric Kuhn Date: October 19, 2016
Name: R. Eric Kuhn Title: General Manager

SOUTHWESTERN WATER CONSERVATION DISTRICT

By: _____ Date: _____
Name: _____ Title: _____

THE NATURE CONSERVANCY

By: _____ Date: _____
Name: _____ Title: _____

FRONT RANGE WATER COUNCIL

By: _____ Date: _____
Name: _____ Title: _____

TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC.

By: Barry W. Ingold Date: 31 OCT 2016
Name: Barry W. Ingold Title: Senior Vice President - Generation

FRONT RANGE WATER COUNCIL

1600 West 12th Avenue
Denver, CO 80204-3412

November 3, 2016

Colorado Water Conservation Board
Attn: Michelle Garrison
1313 Sherman Ave., Room 718
Denver, CO 80203

Re: Alternative Agricultural Water Transfer Methods Grant Program Application for the Grand Valley Water Bank Pilot Project

Dear Colorado Water Conservation Board Members:

The Front Range Water Council is committed to contribute $35,000 to support the above referenced grant application for the implementation of the Grand Valley Water Bank Pilot Project. This commitment will be effective upon finalization of the grant agreement and will contribute towards the total estimated project cost of $1.2 million.

This pilot project builds on the past efforts of the Water Bank Work Group, which has received previous support from the Colorado Water Conservation Board. The project demonstrates how a locally created program can benefit agricultural water users, and also help address basin-wide challenges within the Colorado River Basin. Please feel free to contact me if you have any questions or require additional information related to the Council's support for this program.

Sincerely,

James S. Lochhead
President, Front Range Water Council

[1]Aurora Water, Colorado Springs Utilities, Denver Board of Water Commissioners, Municipal Subdistrict - Northern Colorado Water Conservancy District, Northern Colorado Water Conservancy District, Board of Water Works of Pueblo, Southeastern Colorado Water Conservancy District, Twin Lakes Reservoir & Canal Company

EXHIBIT A
COLORADO RIVER WATER BANK COST-SHARING AGREEMENT FOR RESEARCH COMPLETION & PILOT PROJECT

Statement of Work for Conserved Consumptive Use Pilot Project

TASK 1: CONTRACTING

Description of Task:
1. Assemble information from interested participants and verify eligibility with project requirements.
2. Select participants and establish contracts to reduce their consumptive use.

Deliverables:
1. Signed contracts with 10 participants.

TASK 2 – MONITORING & VERIFICATION

Description of Task:
1. Develop monitoring plans for each participating contract to verify.
2. Complete monitoring site visits throughout the growing season.

Deliverables:
1. Monitoring Plans for each contract.
2. Monitoring site visit documentation for each participating contract in 2017.

TASK 3 – STATUS REPORT

1. Prepare a summary report of confirmed participants for 2017.

TASK 4 – EVALUATION & FINAL REPORT

Tasks:
1. Evaluate pilot program success and document lessons learned from the perspective of both individual participants, GVWUA staff and board, and the WBWG.
2. Develop recommendations for a longer term water bank program with GVWUA.
3. Identify other potential opportunities for water bank pilots with other water users on the West Slope.

Deliverables:
1. Final summary report with evaluation and recommendations.

BUDGET

Task	Expense	Funding WBWG	CWCB
CONTRACTING	$ 730,000	$ 680,000	$ 50,000
MONITORING & VERIFICATION	$ 15,000	$ 15,000	$ -
STATUS REPORT	$ 5,000	$ 5,000	$ -
EVALUATION & FINAL REPORT	$ 15,000	$ -	$ 15,000
GVWUA PROJECT MANAGEMENT	$ 135,000	$ -	$ 135,000
GVWUA INFRASTRUCTURE	$ 145,000	$ 145,000	
$ 1,045,000		$ 845,000	$

Grand Valley Water Banking Pilot
as a Project of the Water Bank Working Group

The Water Bank Work Group (WBWG) is a representative group of stakeholders that is exploring the use of a voluntary and compensated market approach to temporarily reduce consumptive uses in the Colorado River Basin in Colorado in order to address the risks of ongoing drought and potential water shortages. The group, which was formed in 2009, consists of the Colorado River District, Southwestern Water Conservation District, The Nature Conservancy, the Front Range Water Council, and the State of Colorado. In 2016, Tri-State Generation and Transmission Association, Inc. joined the WBWG. The WBWG regularly consults with agricultural representatives, Native American tribes, and the Bureau of Reclamation. The WBWG's effort is aimed at avoiding long-term agricultural dry up and water supply disruption on the West Slope, minimizing risk for all water Colorado River users, and protecting or improving the health of our rivers and streams.

The WBWG has identified a larger scale water bank pilot project for conserving the consumptive use of water from the Colorado River, working with the Grand Valley Water Users' Association (GVWUA), a non-profit corporation formed in 1905 as part of the Bureau of Reclamation's Grand Valley Project. The GVWUA operates the Grand Valley Diversion Dam, the 55-mile long Government Highline Canal, and 150 miles of piped and open laterals, providing irrigation water to approximately 23,500 acres of irrigated land.

The Grand Valley water banking project, referred to as the Conserved Consumptive Use Pilot Project, builds upon the past work of the WBWG to provide a larger scale test of how a voluntary and compensated program to reduce water use can work on the ground to help address issues associated with the Colorado River Compact and declining reservoir levels in ways that work for water users, water managers, and other stakeholders, while benefitting the environment.

PROJECT DESCRIPTION & OUTCOMES

This pilot project currently involves GVWUA contracting with willing shareholder participants in 2017 to reduce their consumptive water use for irrigation. GVWUA has selected participants based on a lottery of interested applicants that meet the eligibility criteria developed by the GVWUA Board of Directors. GVWUA will contract with each participant to define the acreages and the associated water savings practices for 2017. GVWUA will then monitor each participant for compliance in reducing water use and will account for and manage the water from the conserved consumptive use within its system. The water from the conserved consumptive use will be used primarily for hydropower generation at the Grand Valley Power Plant, and after such use this water will be delivered to the top of the 15-mile reach, a section of critical habitat for the four endangered fish species in the Colorado River. From there, the water will make its way downstream to support reservoir levels in Lake Powell. If successful, this project can be replicated and applied to other watersheds within the Colorado River Basin in order to improve water security for our communities, agriculture, and the environment.

For 2017, GVWUA will contract with ten participating shareholders and implement four different water savings practices on approximately 1,250 acres. These practices include a full season of fallowing and three options for partial-season fallowing with irrigation water available after August 1, September 1, and October 1. Each practice has an associated estimate of reduced consumptive use and corresponding payment. The total consumptive water savings for the 2017 participating acres is estimated not to exceed 3,243 acre-feet. The GVWUA Board of Directors anticipates signing contracts with participants for the 2017 pilot project before December 1, 2016.

If funds can be made available for a 2nd year of the pilot project, the GVWUA Board of Directors has expressed interest in continuing the pilot project in 2018. Adjustments to the eligibility criteria, among other changes, to the program are being considered for the 2nd year to test the scalability and wider acceptance of the water banking concept.

PROJECT OBJECTIVES

The Conserved Consumptive Use Pilot Project will significantly advance a number of goals related to building a program that addresses the risks and uncertainties associated with increasing demand on Colorado River Basin water resources. More specifically, this project will:

- Test the nuts and bolts of how a demand management program can work with an irrigation entity and its members. This includes testing mechanisms for estimating conserved consumptive use from reduced irrigation practices, selecting participants, monitoring and verifying that those practices take place on the ground, tracking and managing that water within an irrigation system while continuing historical diversions, and assessing the associated economic outcomes.
- Directly involve a diverse group of water users, water managers, State entities, and environmental interests in creating solutions that reduce the risk of water shortages to all sectors.
- Help transition from short-term, small scale pilot projects, to longer term, larger scale programs that will significantly advance efforts aimed at addressing issues at Lake Powell and Colorado River Compact risks.
- Help develop and test water banking as a tool that irrigation entities and ditch companies can use to help finance long term infrastructure improvements that improve water management and enable ongoing benefits to multiple parties.

PROPOSED BUDGET

This proposed budget for the 2-year pilot project is $2.2 million, which includes payments to participating water users and to the GVWUA for administration and infrastructure improvements.

Expenses			Funding		
Payments to Participants	-	$1,570,000	Water Bank Work Group	-	$175,000
GVWUA Administration	-	$340,000	Colorado Water Conservation Board	-	$400,000
GVWUA Infrastructure	-	$290,000	Grant Programs/Public Funding	-	$725,000
			Foundations/Philanthropic support	-	$900,000
TOTAL	-	$2,200,000		-	$2,200,000
			Confirmed:	-	$875,000
			Remaining:	-	$1,325,000

BBC RESEARCH & CONSULTING

Study of Impacts from Potential Upper Basin Demand Management Program

The Colorado River Water Bank Work Group

PROPOSAL

Proposal

January 11, 2019

Study of Impacts from Potential Upper Basin Demand Management Program

Prepared for
The Colorado River Water Bank Work Group

Prepared by
BBC Research & Consulting
1999 Broadway, Suite 2200
Denver, Colorado 80202-9750
303.321.2547 fax 303.399.0448
www.bbcresearch.com
bbc@bbcresearch.com

BBC RESEARCH & CONSULTING

BBC RESEARCH & CONSULTING

January 10, 2019

Mr. Chris Treese
External Affairs Manager
Colorado River Water Conservation District

Re: BBC Team's Proposal in Response to RFP for Study of Impacts from Potential Upper Basin Demand Management Program

Dear Chris:

On behalf of BBC Research & Consulting and our teammates ERO Resources Corporation and Headwaters Corporation, I am pleased to provide our proposal in response to your RFP.

We are excited about this potential opportunity to work with you and other members of the WBWG on this important study. Our team brings exceptional experience to this endeavor including extensive prior public involvement work with Western Slope water stakeholders, current experience in assessing direct and secondary economic impacts associated with water availability in each major river basin in Colorado, and experience in designing and developing markets focused on obtaining voluntary, short-term reductions in water use. George Oamek, our team member from Headwaters Corporation, has also examined community resiliency and "tipping points" in the context of water transfers from the Lower Arkansas Basin.

Our proposal is intended to provide all of the information requested in your RFP. Please let me know if you would also like references for the BBC team, or other additional information. We look forward to discussing this opportunity with you.

Sincerely,

Douglas L. Jeavons
Managing Director

1999 Broadway
Suite 2200
Denver, CO 80202

Tel: 303.321.2547
Fax: 303.399.0448
bbcresearch.com

Table of Contents

SECTION I.

Overview of BBC Team and Resumes for Key Team Members

SECTION I.
Overview of BBC Team and Resumes for Key Team Members

To best meet the WBWG's needs in this assignment, BBC Research & Consulting has teamed with two subcontractors. Dr. George Oamek of Headwaters Corporation has led a number of previous studies regarding the economic effects of short-term, compensated water transfer or demand management programs in Colorado's Lower Arkansas Valley and other regions, and was the author of the concept of "tipping points" related to regional economies and water use. ERO Resources, based in Denver, has extensive experience in analyzing effects of water resource management for NEPA compliance, including substantial public input processes in Colorado and other states.

This section provides a brief overview of the qualifications of each of the three firms comprising the BBC team, and resumes for key staff members for this assignment. The project manager for the BBC team will be Douglas Jeavons, Managing Director of BBC Research & Consulting.

Introduction to BBC Research & Consulting

BBC Research & Consulting (BBC) is one of the oldest and largest privately-held economic research and consulting firms in the Rocky Mountain region. Since its founding in 1970, BBC has successfully undertaken more than 5,000 studies on a wide range of subjects. BBC has performed numerous water resource planning and financial feasibility studies for large and small water utilities, water districts, hydropower projects, state water management agencies, and other water and wastewater-related entities. BBC's expertise in analyzing and projecting water demand and evaluating economic aspects of water use is widely recognized throughout the western U.S.

BBC has conducted assignments for numerous large municipal water and wastewater providers such as Denver Water, the Phoenix Water Services Department, the San Antonio Water System, Colorado Springs Utilities, Aurora Water, Fort Collins Utilities, the City of Greeley, and the New York City Department of Environmental Protection. Other clients have included the Colorado Water Conservation Board, the Bureau of Reclamation, the Corps of Engineers, the Northern Colorado Water Conservancy District, the Colorado River Water Conservation District, the Texas Water Development Board, the Lower Colorado River Authority (TX), and the Guadalupe Blanco River Authority (TX).

BBC is currently serving as the "water economists" for the State of Colorado's update to the Statewide Water Supply Initiative (SWSI) and the next iteration of the State Water Plan. Previously, BBC developed long-term water demand projections for the Yampa Basin (on behalf of the Colorado River Water Conservation District and the U.S. Fish and Wildlife Service), as well as detailed economic and demographic analyses and forecasts for Northwest Colorado (on behalf

of the Associated Governments of Northwest Colorado and the Colorado Department of Local Affairs).

Introduction to Headwaters Corporation

Headwaters Corporation (http://www.headwaterscorp.com) is a multi-discipline water resources firm specializing in river-related issues, water resources planning, and natural resource economics. Colorado offices are located in Lakewood and Fort Collins. Since 2006, Headwaters has been the Program Manager for the Platte River Recovery Implementation Program (PRRIP), focusing upon developing land and water habitat for Endangered Species in Central Nebraska. A major accomplishment has been the successful use of an Adaptive Management Program to guide restoration activities and modify future plans based on knowledge gained. In addition to the PRRIP, Headwaters has broadened into municipal water planning, permitting, and water conservation, working in various capacities for the cities of Aspen, Greeley, Thornton, Steamboat Springs, Estes Park, and others.

For this effort, Headwaters will bring expertise in the area of agricultural economics and regional economic impact analysis. We will assist BBC Research in estimating direct and indirect impacts of temporary and voluntary transfers to irrigators and other West Slope business enterprises. In addition, we will use experienced gained from our PRRIP water acquisition activities for insights to what possible pricing and other economic incentives might achieve desired water transfer goals. In addition to the traditional, multiplier-based approach of measuring regional economic impacts that may be utilized here, Headwaters is experienced in supplementing this approach to assess the cumulative economic threshold impacts, or tipping points, associated with potential changes in business activity resulting from water transfers.

Introduction to ERO Resources Corporation

Since 1981, ERO Resources Corporation (ERO) has been a leader in facilitating and incorporating public input on a range of Colorado water projects both on the Front Range and Western Slope. With offices in Denver, Hotchkiss, and Durango, we have extensive experience as well as geographic extent and diversity important for this project. ERO understands first-hand the diversity and uniqueness present in communities on the Western Slope, and is experienced with sectors important to this project, including local governments, water managers, and the agricultural and recreational communities. ERO's clients include small ranching interests, rural water utilities and water providers, and large water utilities such as Ute Water, Colorado Springs Utilities and Northern Colorado Water Conservancy District, demonstrating experience with small, rural water supply and efficiency projects as well as large, regional water supply projects. ERO has completed NEPA compliance, including public involvement processes, for land management agencies such as Bureau of Land Management and the Forest Service, water-focused agencies such as the U.S. Army Corps of Engineers and Bureau of Reclamation, and other regulatory agencies including the National Park Service and Federal Highway Administration. For this effort, ERO will draw from this extensive West Slope project work to provide insight and contacts key to establishing an effective and productive public involvement processes.

Key Staff for this Assignment

The following pages provide resumes for key project staff from each team member.

Douglas L. Jeavons
BBC Research & Consulting

Mr. Jeavons joined BBC Research & Consulting in 1992 as an associate, became a director of the firm in 1996 and currently leads the firm's water and natural resources practice. His career emphasis includes regional economic modeling and assessment, natural resource and environmental economics and public finance.

Water-related Projects/Customer Surveys

- **Colorado State Water Plan.** Mr. Jeavons is currently directing BBC's work as Colorado's water economy specialist for the next update to the state water plan and its supporting technical analyses (SWSI). BBC's roles include development of long-term state, basin and county population projections under multiple scenarios; evaluation of existing water markets and potential enhancements, evaluation of public attitudes and values concerning water in Colorado and examination of potential economic impacts from future agricultural, municipal and industrial water shortages.

- **Platte River Water Supply and Conservation Study.** Mr. Jeavons co-managed BBC's role in this study to develop and analyze a preferred alternative for meeting the needs of endangered species in and along the Platte River system in eastern Nebraska. Working on behalf of the states of Wyoming, Colorado and Nebraska, Mr. Jeavons had primary responsibility for examining the costs and benefits of alternatives related to agricultural water use.

- **Economic Studies in Lower Arkansas Valley.** In 2017-2018, Mr. Jeavons studied the regional economic and fiscal effects of proposed projects to consolidate surface and ground water supplies onto prime farmlands, improve irrigation efficiency and provide reliable water supply to proposed dairies, greenhouses and other new agribusinesses in Bent, Otero and Prowers counties.

- **Socioeconomic Forecasts for NW Colorado.** Mr. Jeavons completed a comprehensive study of future economic and demographic growth in northwest Colorado in 2008-2009. Commissioned by the Associated Governments of Northwest Colorado and the State of Colorado, this assignment focused on the near and long-term economic and fiscal impacts of energy development on local counties and communities.

- **Yampa Valley Future Water Needs Projections.** In 1996-1997, Mr. Jeavons worked with a management team comprised of the United States Fish and Wildlife Service, several state and local government agencies, and representatives of environmental and local economic interests to develop long-term water need forecasts for Routt County and Moffat County in northwestern Colorado. This study involved detailed assessment and projection of economic growth by sector, and corresponding water demands over a fifty-year period.

Douglas L. Jeavons, continued

- **NW Colorado Energy Water Needs.** In an assignment related to BBC's work for the AGNC and DOLA, Mr. Jeavons assisted the Basin Roundtables with the Phase I evaluation of water requirements for future energy development in the region.

- **Southern Delivery System EIS.** Mr. Jeavons directed the socioeconomic portions of this EIS. Key socioeconomic issues included potential water quality impacts to agricultural and municipal users in the Arkansas River system, potential recreation impacts and financial effects on participating systems and ratepayers. Socioeconomic effects from construction and operation of proposed project reservoirs and pipelines were also examined.

- **TWDB Socioeconomic Impact Assessment Framework.** For the Texas Water Development Board and the Medina County Groundwater Conservation District, Mr. Jeavons developed a framework for assessing socioeconomic impacts from interbasin transfers. This mid-1990s work provided the "guide book" for State of Texas evaluations of other transfers proposed in the state. As part of this work, Mr. Jeavons reviewed past water transfers throughout the western U.S. and conducted a case study of economic impacts of potential water transfers within the San Antonio region.

- **Upper San Pedro River Conservation and Reuse Study.** Mr. Jeavons co-directed BBC's work to identify and assess alternatives to reduce water use and manage water resources in the Upper San Pedro watershed in southern Arizona. This effort was conducted on behalf of the Upper San Pedro Partnership, an organization comprised of diverse representatives from local governments, local ranchers and property owners, environmental interests and state and federal agencies.

- **Public Opinions and Attitudes Regarding Water in Colorado.** In 2012-2013, Mr. Jeavons led a major statewide survey for the Colorado Water Conservation Board (CWCB) to examine Colorado residents' perceptions regarding water and water-related issues. Nearly 2,000 residents across Colorado participated in the survey, providing statistically-valid results for each of six different regions throughout the state. Survey topics included respondents' knowledge of Colorado water use and issues; perceptions of household water service relative to other utilities and services; assessments of the performance of government agencies tasked with regulating water use and quality; perceptions of water scarcity; greatest water-related concerns; and most trusted sources for water-related information. The study also gathered information on residents' willingness-to-pay to address water-related concerns.

Education

M.A., Economics, University of Colorado, 1992
B.A., International Affairs, Lewis and Clark College, 1984

Michael A. Verdone, Ph.D.
BBC Research & Consulting

Dr. Verdone is a Senior Associate at BBC Research & Consulting (BBC) in the water and natural resource practice. Since joining BBC, Dr. Verdone has supported several water-related projects during his time at BBC on behalf of clients including Denver Water and CWCB.

Relevant Project Examples

- **Colorado Statewide Water Supply Initiative and State Water Plan Update.** Dr. Verdone developed probabilistic projections of the future population of river basins as part of the Colorado Water Conservation Board's Statewide Water Supply Initiative (SWSI) 2016 update and drafted a report on the economics of Alternative Transfer Methods.
- **Denver Water Non-Residential Demand Analysis.** Dr. Verdone led the development of a population-based model to forecast Industrial, Commercial and Institutional (ICI) water demand for Denver Water.
- **Denver Water Pipe Corrosion Study.** On behalf of Denver Water, Dr. Verdone led a statistical study to estimate the effectiveness of different water treatments in terms of reducing the amount of lead contained in water flowing through lead service lines.
- **City of Greeley Milton Seaman Reservoir Expansion EIS.** On behalf of the City of Greeley, Dr. Verdone conducted a probabilistic analysis of the City's future water demands as part of a purpose-and-need assessment for a proposed reservoir expansion.
- **Northern Integrated Supply Project (NISP) EIS.** Dr. Verdone recently worked on behalf of the Army Corps of Engineers to estimate how water conservation savings would affect the future municipal water demands of proponents of a proposed reservoir in Northern Colorado.
- **Leavitt and Alkali Creek Reservoir EIS's in Wyoming.** On behalf of the Wyoming Water Development Commission, Dr. Verdone is supporting EIS's evaluating the socioeconomic effects of two reservoir projects in Northern Wyoming aimed at enhancing agricultural water supplies.
- **Montana Painted Rocks Reservoir Expansion Feasibility Study.** Dr. Verdone is currently supporting BBC's work on behalf of the Montana Department of Natural Resources and Conservation. Dr. Verdone has analyzed irrigators ability-to-pay for additional water supplies if the reservoir is expanded, and contributed to BBC's analysis of the market for additional water storage for municipal, domestic and environmental purposes. During the latter stages of this project, Dr. Verdone will also be assisting in BBC's analysis of repayment options for the costs of increasing reservoir storage.

Education

Ph.D. Natural Resource and Environmental Economics, Colorado State University, 2016
M.A., Economics, University of Colorado, 2007
B.A., Economics, Colorado State University, 2005

George E. Oamek, Ph.D.

Headwaters CORPORATION

Education

Ph.D., Agricultural Economics, Iowa State University, 1988

M.S., Agricultural Economics, Colorado State University, 1980

B.S., Agricultural Economics, Colorado State University, 1979

Expertise

Dr. Oamek has over 30 years of experience in conducting regional economic impact studies, utility finance studies, agricultural economics, economic feasibility studies, and natural resource economics. He is also a regular contributor to Irrigation Age magazine, focusing upon the economics of irrigated agriculture.

Recent Project Experience

City of Aspen, Colorado: Water Supply Reliability Study. Principal investigator involving the development of a risk-based Monte Carlo framework for estimating future shortages to the Aspen municipal water supply system. Specific uncertainties considered included current flows in Castle and Maroon Creeks, future impacts of climate change, and future demands.

Platte River Recovery Implementation Program, Kearney, Nebraska: Various Financial and Economic Studies, ongoing. Dr. Oamek is a Senior Member of the PRRIP's Executive Director's Office. Recent efforts include water lease negotiations, storage project feasibility analyses, regional economic impact estimates of PRRIP spending, evaluation of irrigation-related water conservation measures, and probabilistic analysis of short duration high flows (SDRF) on the Platte River for habitat restoration.

Colorado Water Conservation Board and Lower Arkansas Water Conservancy District, Evaluation of Potential Economic Thresholds, or Tipping Points, Resulting from Water Transfers. Lead analyst for developing a methodology for estimating potential impacts to the number and types of rural businesses resulting from rural to urban water transfers. The analysis concluded that there is both a theoretical and empirical basis for considering business thresholds, or tipping points, when conducting regional economic studies. Test cases in the Lower Arkansas Valley demonstrated that economic impacts resulting from water transfers were likely understated in previous economic studies.

Dominion Water and Sanitation District, Greenwood Village, Colorado: Technical Support for Rates, Fees, and Water Acquisition, ongoing. Dr. Oamek assists the Sterling Ranch development and their water provider, Dominion Water and Sanitation, in financial decision-making. Recent efforts have included water supply negotiations with Aurora, Denver, and other South Metro providers. Wastewater activities have involved Roxborough WSD and the development of a design-build-operate package for treatment plant operations.

Western Resource Advocates, Boulder, Colorado: Economic and Financial Impacts of the Proposed Flaming Gorge Pipeline, 2011. Developed a detailed finance plan for the proposed 540-mile Flaming Gorge Pipeline, stretching from the Flaming Gorge Reservoir to the Colorado Front Range, including sources and uses of funds. The analysis was used to determine the probable price of project water used for municipal water supply, assuming two project financing scenarios: private investment funds and public funds from a collaboration of agencies. In addition, the economic impacts to the recreation industry of Upper Colorado River states were estimated.

Xcel Energy, Denver, Colorado, Evaluation of Shoshone Water Right Appraisals. Negotiations are on ongoing between Xcel Energy and Colorado Western Slope interests about the future of the Shoshone water right on the Colorado River. This effort focuses upon independently assessing the estimated monetary value of the water right for purposes of a possible future transaction.

Northern Colorado Water Conservancy District, Berthoud, Colorado: Water Rate Studies. Dr. Oamek updated cost allocation methods and revised irrigation water rates. Irrigation rates are based on an ability-to-pay method developed by Dr. Oamek as part of their 1997 rate study. He is currently teamed with Jacobs/CH2M on a study to determine optimal levels of financial reserves.

City of Greeley, Colorado: Milton Seaman Reservoir EIS, ongoing. George is on the third-party evaluation team for this effort, reviewing the City's estimate of long-term water demand.

Denver Water, Denver, Colorado: Technical Support for Water Treatment Plant Site Selection. As part of upgrading their northern system, Denver Water was faced with either rebuilding their Moffat Water Treatment Plant or construct a new plant near Ralston Reservoir. Dr. Oamek conducted a risk-based analysis to numerically quantify previously non-quantified decision variables, including the financial cost of delay, future capital costs, financial risks of uncertain future water quality regulations, risks to the public, and other random events.

Northern Colorado Water Conservancy District, Northern Integrated Supply Project EIS, Berthoud, Colorado. Dr. Oamek developed the recreation economics component for the NISP Supplemental Draft EIS, located near Fort Collins, Colorado. He is teamed with BBC Research & Consulting.

Colorado Water Conservation Board and Lower Arkansas Water Conservancy District, Farm Financial Decision Model for Water Leases, Denver, Colorado, 2011. Lead analyst for developing multi-year decision model for irrigators contemplating leasing water to municipalities.

Lower Arkansas Valley Water Conservancy District, Economic Feasibility of a Rotational Fallow Leasing Program for Agricultural Water Transfers, Rocky Ford, Colorado. Lead Economist for investigating the feasibility of a rotating fallow program for the irrigators in Colorado's Lower Arkansas Valley, for purposes of leasing water to Colorado Front Range municipalities. In addition to economic feasibility, this involves developing the Program's market structure, negotiations of leases, and the allocation of lease revenues.

Town of Estes Park, Colorado, Stormwater Utility Feasibility Study. Lead investigator for assessing the feasibility of whether Estes Park should establish a Stormwater utility for purposes of funding future flood prevention and drainage measures. In response, the Town is currently

attempting to establishing a Stormwater utility and is considering various TABOR issues in how it may be structured.

Professional Endeavors

Headwaters Corporation, 2016-present

CH2M HILL, 1987-95, 2014-2015

Honey Creek Resources, Inc., 2004-2014

HDR Engineering, Inc., 1995-2004

Aleta Powers, *Environmental Scientist/President*

Aleta has worked for ERO since 1994 and has experience in National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and Clean Water Act (CWA) compliance. Her project experience includes highway construction, power transmission lines, trails and other recreation facilities, reservoir re-operation, water supply systems, oil and gas, and mining operations. In addition to federal and state planning and permitting, Aleta has experience in local and municipal issues such as open space resource planning and management, natural resource assessments, and wetland delineation and mitigation. Aleta's projects span the western United States, with a focus on meeting the needs of local clients in western Colorado.

Education

Graduate coursework in Environmental Sciences, Colorado School of Mines

2006: M.S. Environmental Science, Hydrology Emphasis, University of Colorado at Denver

1992: B.A. Geography/Sociology, University of Northern Colorado

Parkville Water and Sanitation District Permitting, Lake County, CO
Coordinated NEPA and Corps permitting for a pipeline project for Leadville's water supply using groundwater and a rebuild project for a historic flume around Big Evans Reservoir. Corps consultation with the State Historic Preservation Office also required cultural resource mitigation, which was resolved by placing a segment of flume adjacent to the Mineral Belt Trail and placing an interpretive sign designed by ERO.

Grand Mesa Water Conservancy District, Delta County, CO
Completed wetland delineation and compliance, cultural resource surveys, and a biological assessment (BA) for the Grand Mesa National Forest on behalf of the Grand Mesa Water Conservancy District. Biological assessment (BA) species included Canada lynx and Colorado River fish. Completed a compensatory wetland mitigation plan for implementation to address impacts on nearly 0.5 acre of wetlands.

Whitewater Phase II Infrastructure Project, CO
Completed a BA, including Colorado hookless cactus surveys, and coordinated a Class I archaeological file search and Class III pedestrian surveys. Completed wetland delineations for river crossing areas and worked with the FWS, BLM, USFS, and Mesa County.

Various OXY USA Projects, CO
Project manager for various rare plant surveys, raptor surveys, noxious weed inventories, and cultural resource surveys, as well as other NEPA tasks for several OXY gas projects in the Piceance Basin. Projects include new well field development (pads, roads, and pipelines); injection wells and tie-in systems; man camps; and compressor station placement.

Parkville Water and Sanitation District, Lake County, CO
Prepared an environmental report for the USDA funding for a water supply project in Leadville, Colorado. Completed wetland, cultural, and T&E species field reviews and consultation. For the Big Evans Flume replacement project, conducted wetland and cultural surveys, 404 permitting, and completed cultural resource mitigation in the form of flume preservation and interpretation.

Logan Wash Resource Studies, CO
Completed wetland, T&E species, wildlife and raptor reviews, and plant surveys and coordinated a cultural resource survey for the proposed conversion of a well to a salt water disposal well with remote injection facility, discharge line, and potential power line upgrade in Garfield County.

Eastern New Mexico Rural Water System EA, Quay, Roosevelt and Curry counties, NM
Project manager for a 160-mile municipal water system EA focusing on resources such as the threatened Arkansas River shiner, cultural resources, and socioeconomic conditions. ERO has provided ongoing environmental services to comply with U.S. Bureau of Reclamation requirements, including Section 106 compliance on realigned pipeline segments.

Denver Water IDIQ Management
Coordinated, managed, and provided staffing assignment and quality review for the ongoing Denver Water on-call contract. Projects include cultural resources inventory and evaluation, wetland delineation and jurisdictional/nonjurisdictional determinations, and wetland permitting.

Cassandra Shenk, *Environmental Planner and NEPA Specialist*

Cassandra has worked for ERO since 2014 and has extensive experience with the National Environmental Policy Act (NEPA), as well as developing experience with Clean Water Act permitting, natural resource assessment and impact mitigation. Cassandra has conducted community development projects related to agriculture and water in Delta and Montrose counties. Her experience includes founding and managing Teens on Farms (nine years) and managing a domestic water system within a farming community on Rogers Mesa (seven years).

Education

1992: B.S. Chemistry major, minor in English and mathematics, Eastern Mennonite University

1995: M.S. Chemistry, Montana State University

Affiliations & Certifications

Watershed Committee Member, Western Slope Conservation Center

Supervisor, Delta Conservation District, 2011-2014 (former)

Certified Water System Operator, Class D, Rogers Mesa Domestic Water Company, 2011-2018

Colorado Riverwatch, Certified water quality sampler for Division of Wildlife Riverwatch Program, 2010

Fire Mountain Canal Salinity Reduction Piping Project, CO

Lead project manager/environmental planner providing NEPA compliance support for a 4.3-mile pipeline project designed to improve water efficiency and delivery to irrigation water users on Rogers Mesa. Managed public scoping and comment process, lead author for the Environmental Assessment (EA), Endangered Species Act (ESA) compliance documentation, and habitat loss and replacement documentation required by the Salinity Control Act.

Gould Canal Improvement Project, CO

Conducted habitat loss assessment for an 11.2-mile irrigation canal improvement project on Fruitland Mesa. Analyzed water sources, land use, and environmental resources along the mesa and potential effects to biota because of water supply changes. Met with agriculture producers and irrigation company leaders to identify and design a suitable habitat replacement site; planning is in process.

Certified Water Operator, Rogers Mesa, CO

Certified water systems operator for the domestic system on rural Rogers Mesa serving over 390 customers, primarily farmers and land owners. Responsible for water utility delivery. Participated in policy-level discussions pertaining to land use and water, and retention of agriculture land in production.

Tri-State Montrose-Nucla-Calhone Transmission Line Improvement Project Environmental Assessment, CO

Contributed NEPA expertise and technical writing assistance in support of an EA for a transmission line upgrade project spanning public lands managed by four agencies (two Bureau of Land Management (BLM) offices and two U.S. Forest Service offices). Analyzed and summarized impacts for key resources in the project area, including the scenic Dolores River Canyon, Gunnison sage grouse habitat, soils and geology, and timber.

Blanche Park Reservoir, Grand Mesa National Forest, CO

Assisted with an EA and permitting to rebuild a breached reservoir for the Grand Mesa Water Conservancy District, as part of a project to improve water storage on the Grand Mesa. Project included analysis of historic water rights and potential impacts on fen wetlands.

Bridge Scour Project, Bridges #Gar108-01.59, Garfield County, CO

Completed wetland reports and Corps nation-wide permits/pre-construction notification for three bridge scour protection projects along the Colorado river and the Roaring Fork river, including protections and impacts in endangered fish habitat.

Founder and Project Manager, Teens on Farms, CO

Managed youth agriculture education project, networking with 43 diverse agriculture producers in Delta and Montrose Counties to arrange placements for summer youth employment (2008 to 2016). Worked with youth on organic produce farms, cattle operations, specialty crops (herbs, garlic, potatoes, asparagus), conventional row crops and orchards.

Ad-hoc Committee for Rogers Mesa Center for Experiential Ag, CO

Convened a working group to study and plan for operating an 80+-acre closed agriculture research facility on Rogers Mesa, as a community project devoted to education, food production/service, and research.

William J. Mangle, *Natural Resource Planner/Principal*

Bill has a broad background in natural resource and natural resource assessments, open space planning, National Environmental Policy Act (NEPA) documentation, and water resource studies throughout Colorado and the intermountain West. He has a strong interdisciplinary background that balances biological sciences, environmental and land use planning, natural resource policy, and community involvement. These technical and professional skills have enabled Bill to effectively coordinate and manage diverse project teams and develop creative and strategic solutions to natural resource problems and issues.

Education

2001: M.S. Natural Resource Policy and Planning, University of Michigan School of Natural Resources and Environment

1996: B.A. History/Political Science, Colorado College

Moffat Collection System Project Mitigation Plan, CO
Assisted Denver Water with the development of a mitigation plan and adaptive management framework clearly articulates proposed resource impact mitigation commitments as well as monitoring and adaptive management protocols, consistent with existing agreements and regulatory requirements.

Arkansas Valley Conduit EIS, CO
Recreation resource lead for the EIS encompassing resources through most of Colorado's Arkansas River basin. Evaluated existing resources and potential effects, including those resulting from hydrological or aquatic habitat changes, on water- and land-based resources.

Windy Gap Firming Project EIS, Larimer, Boulder, Grand, and Summit Counties, CO
Recreation resource lead for the inventory and analysis of recreation resources within the study area, including commercial and private boating, fishing, and river-corridor access amenities. Evaluated the potential effects of project alternatives using hydrological data and GIS analysis, and documented those effects in the draft and final EIS.

Southern Delivery System (SDS) EIS, El Paso, Pueblo, Fremont, and Chaffee Counties, CO
Lead investigator for recreation resources in the SDS study area, including the Arkansas River, Pueblo Reservoir, and Colorado Springs area resources. Evaluated the potential effects of project alternatives using hydrological data (for water-based resources) and GIS analysis, and documented the effects in a draft and final EIS.

Water Resources Management Plan and EIS, Mojave National Preserve, CA
Project manager for a management plan and EIS and coordinated with NPS staff for the Mojave National Preserve. The plan and EIS will analyze the effects and tradeoffs of water resource management alternatives that balance with cultural resources and wildlife needs.

Bill Williams River and Alamo Dam Framework Report, AZ
Provided the U.S. Fish and Wildlife Service with a framework report to provide context and a basis for decision-making and associated environmental analysis (NEPA and ESA) related to future Alamo Dam operations and water releases along the Bill Williams River in western Arizona. The objectives of the framework report were to articulate management decisions to be made, clarify management variables and alternatives, summarize existing information and identify data gaps, and describe the next steps moving forward.

Cherry Creek Open Space Conservation and Stewardship Plan, Denver, Arapahoe, and Douglas Counties, CO
Assisted with resource composite mapping and public involvement for completion of a regional watershed conservation plan for the multijurisdictional Cherry Creek Basin.

Bluff Lake Natural Area Management Plan, Denver, CO
Conducted site management, resource planning recommendations, and monitoring for a nature preserve in Denver's Stapleton redevelopment area.

75th Street Raw Water Line, Boulder County, CO
Prepared a 1041 Land Use Permit application to allow the construction of a water supply line between Boulder Creek and the City of Lafayette.

SECTION II.

Project Approach and Anticipated Deliverables

SECTION II.
Project Approach and Anticipated Deliverables

The BBC team's proposed approach to the Upper Basin Demand Management Program Economic Study generally follows the task outline provided in the Request for Proposals, with some suggested modifications to improve study efficiency. The anticipated deliverables are consistent with the expectations outlined in the RFP.

The following narrative provides a discussion of the BBC team's approach to the four principal tasks outlined in the RFP for this study, and the study deliverables.

Task 1. Develop and Implement a Process for Community Input

The success of the proposed economic study in capturing the key economic and community tradeoffs involved in potential voluntary demand management activities will require the involvement and participation of Western Slope stakeholders. The BBC team proposes a robust community input process to:

- gather local information and perspectives to enhance the analysis and description of baseline economic conditions, relationships and trends that will be developed in Task 2;
- refine and validate the framework for analyzing the benefits and costs of potential demand management measures defined in Task 3; and
- review the results from the analysis of demand management scenarios developed in Task 4 and enhance understanding and "buy-in" regarding the analysis from key stakeholders.

From their Western Slope offices in Hotchkiss and Durango, ERO Resources will act as the primary facilitator for the BBC team in establishing and conducting the community input process. ERO brings decades of expertise in facilitation and public involvement planning to the team, as well as recent and relevant experience with West Slope sectors important to this study including local governments, agriculture and recreation.

The BBC Team, with ERO, envisions establishing a core committee with representatives selected from key sectors across the project's study area, knowledgeable about secondary impacts from changes in water use and strongly networked within their sector/community. The core committee will convene, in person, at two regional locations during the course of the study for the community workshops. If desired by the team, a web-based interactive survey tool may be used to formalize input from stakeholders and communities and streamline the reporting process (see Subtask 1f [Optional] Survey). Key project team members from BBC and/or Headwaters Corporation will attend each of the community workshops.

The BBC team envisions four mandatory subtasks, and 2 optional subtasks, during Task 1.

Subtask 1a. Organization and logistics. The BBC team will work with the WBWG to organize committees and identify committee members and finalize the stakeholder process

design. We anticipate at least four workshops with committee members during the project, and ongoing communication between workshops. This effort will be informed by extensive stakeholder work that was completed as part of the development and implementation of Colorado's Water Plan. The BBC Team anticipates focusing on engaging entities that can inform secondary impacts analysis from water demand management scenarios (e.g., entities most closely tied to potential secondary impacts from water use changes), as well as potential voluntary participants in the demand management scenarios.

Information from Task 2 will be used in selecting the committee structure and membership. The team will map economic and demographic information across the region and consider data gaps, high risk sectors, and potential "tipping points" as well as beneficiaries. The committee structure will likely span the study area and may include the four major river basins in western Colorado: the Gunnison and Southwest river basins, and the Yampa/White/Green and Colorado basins. Agricultural sectors tracked by the USDA-NASS (National Agriculture Statistics Service) will be targeted for representation, based on scale and nature of economic contributions, with consideration to potential secondary impacts. Likely sectors considered include: beef cattle ranching and farming, fruit and tree nut farming, other crop farming (hemp, vegetables), as well as specialty crops tied to agritourism.

Figure II-1 provides an example of potential committee representation.

Figure II-1.
Hypothetical Example of West Slope Core Committee Representation

Sector	Example regional representation[1]	Example demographic range
Water suppliers	Southwest basin and Colorado basin	Individual ditch company, CDWR staff member
Local government	Gunnison river basin, Yampa/White/Green basin	Delta County commissioner, director of public works for town of Craig
Chambers of commerce	Southwest basin and Colorado basin	Towns from diverse socioeconomic standing, such as Aspen, and Cortez
Agriculture sectors representing a range of water use practices and potential impacts	Gunnison river basin, Yampa/White/Green basin	Small-scale organic grower, large-scale row crop farmer or livestock producer. Consider ethnic or socioeconomic representation.
Environment	Southwest basin and Colorado basin	San Miguel Watershed Coalition member, Eagle River Watershed Council member
Recreation	Gunnison river basin, Yampa/White/Green basin	Rafting, boating, fishing organizations or businesses, such as Gunnison River Expeditions/ Pleasure Park, Trout Unlimited
Industry	Southwest basin and Colorado basin	Oil and gas executive, power generation executive

[1]Representation spans the four west slope basins as shown, but could be narrowed to a smaller, focused study area if desired.

Subtask 1b. Initial workshops. We anticipate two initial, ½ - day workshops, one in a northern location (Grand Junction), drawing committee members from the Colorado and Yampa/White/Green river basins, and one in a southern location (potentially Montrose or Durango), drawing participation from the Gunnison and Southwest river basins. The purpose of the initial workshops will be to discuss the study, describe the general approach, and obtain initial input from workshop participants in terms of key economic relationships and considerations relevant to describing the economic baseline and developing the economic analysis framework. A conference call/go-to-meeting prior to the workshop will be conducted to prepare workshop participants, and to articulate workshop objectives and outcomes. The in-person workshops will be interactive and hands-on, with a high level of discussion and dialogue envisioned in order to ensure economic relationships are identified. Outcomes from the workshop will be used to inform focus areas for Subtasks 1c and 1d.

Subtask 1c. Ongoing communication. The BBC team will update committee members between the initial workshops described in Subtask 1b and subsequent face-to-face meetings. One efficient way to provide updates would be through a periodic email to committee members (at least once every two months as the study progresses). The BBC team will also field emails and inquiries from committee members, or others, throughout the course of the study.

Subtask 1d. Preliminary findings workshops. The study team will meet again with the committees to go over preliminary findings, and again solicit input and feedback. We anticipate the second set of workshops (again assumed to take place in two Western Slope locations) would take place when the study is approximately 75 percent completed – perhaps six or seven months into the overall project schedule. This workshop will provide the opportunity for the study team to further validate the analytical framework developed in Task 3 and, obtain community input regarding demand management scenarios. A conference call/go-to-meeting would be held prior to the workshop, to prepare participants.

Subtask 1e (optional). Draft report workshops. If desired by the WBWG, the study team will meet with the committees again after providing our draft report to them for review. This final workshop would provide the opportunity to further explain the key findings from the study (and identify areas where further explanation may be needed in the final report) and obtain committee feedback and comments in a more interactive manner than a written comment and response format. For purposes of the budget presented in Section IV, we have priced this subtask as an optional element for the WBWG's consideration.

Subtask 1f (optional). On-line interactive survey. A survey tool could be developed to address key questions and data gaps identified during Tasks 2, 3 and 4. The tool could be used in aiding dialogue/discussion in a workshop or meeting setting and timed to occur either during workshops or between workshops, depending on specific data needs. If used during workshops or meetings, the survey would bring consistency to the nature of information gathered from different regions, and could streamline the information gathering and reporting process.

Task 1 Deliverables. The BBC team anticipates the following deliverables for Task 1:

- List of key stakeholders and final community input plan (to be agreed upon with WBWG).
- Meeting notes from each workshop.

- Administrative record of all communications received from participants outside of formal workshops.
- Survey data (Subtask 1f- optional).

Task 1 Assumptions:
Workshop participants will include 15 to 20 persons, including the BBC team representatives, for each workshop.

Task 2. Establish Economic Baseline

The second proposed task for this study is to develop a detailed description of current Western Slope economic conditions and recent trends, with particular emphasis on the direct and secondary relationships between the region's economic sectors and the consumptive and non-consumptive uses of water. We anticipate that the economic baseline will both help to guide the development of the economic framework developed in the following task to analyze the effects of a demand management program and provide benchmarks that will assist in placing those effects in context. The economic baseline will also assist in developing the most useful breakdown of the overall study region into smaller areas for purposes of the subsequent analyses.

Subtask 2a. Data gathering and analysis. The BBC team will begin task 2 by collecting and analyzing current economic and water use data, and recent trends in those data at the county level, throughout the study area. We have a head start on portions of this analysis from our current work as the "water economists" for the Colorado Water Conservation Board in the ongoing update to the SWSI analysis for Colorado's Water Plan. As part of that work, we have developed a case study of the potential economic ramifications of the gaps identified in the previous SWSI analysis for each major river basin. We have also analyzed the direct and secondary economic effects of agricultural, municipal and industrial water use by basin, using the IMPLAN economic modeling system. Other useful sources of information for Task 2 will include the county-level economic profiles developed by the Colorado State Demography Office as well as standard sources of secondary economic and demographic data including the Census Bureau, the Bureau of Economic Analysis, and other sources. Information on water-related recreation and tourism activity will be gathered from sources such as the Colorado River Outfitters Association, Ski Country USA, Colorado Parks and Wildlife and other industry information sources and studies.

Subtask 2b. Identification of study subareas. Based on the analysis undertaken in Subtask 2a, the BBC team will recommend a breakdown of the overall Western Slope study area into smaller components for purposes of the economic baseline – and for purposes of the subsequent development of the economic framework and evaluation. At a minimum, we would anticipate dividing the overall Western Slope study area into at least four subareas, such as a structure consistent with the current Colorado Basin Roundtable structure – e.g. into the Colorado Basin, Gunnison Basin, Southwest Basin and the Yampa/White Basin. BBC will provide our recommendations regarding study area definitions to the WBWG to obtain approval or recommended modifications prior to the following subtask.

Subtask 2c. Documentation and narrative. In the final Task 2 subtask, the BBC team will develop a narrative profile of the economic and water use baseline for the Western Slope study area and each subarea defined in subtask 2b. Based on our extensive experience in developing regional socioeconomic profiles for NEPA studies and other purposes, we anticipate the profile will use tables and graphics extensively to highlight key components of the analysis. In addition to illustrating key economic and demographic trends, the profile will focus on the relationships of economic sectors to consumptive and non-consumptive water uses.

The profile will also discuss the potential economic resiliency of different sectors and communities throughout the study area related to changes in water availability. Community resiliency assesses the impact to the population and economic base of the area resulting from a range of potential impacts to local and regional businesses. Baseline data for this discussion would focus upon the number and types of businesses in potentially affected West Slope communities, correlated to local population and the distance from other communities offering these services. From this data, business thresholds, or tipping points, at which local impacts may cause existing businesses to close or new businesses to open, could be developed. Previous work by members of the project team in the Lower Arkansas Valley found both a theoretical and empirical basis for these business thresholds, or tipping points. This information supplements the incremental impacts measured by the IMPLAN modeling system by estimating potential cumulative impacts to the number and types of businesses in affected communities.

Task 2 Deliverables. The BBC team anticipates the following deliverables for Task 2:

- Recommendations regarding subarea definitions for this study and definitions agreed upon with the WBWG.
- Draft economic baseline report.
- Final economic baseline report (responding to comments on the draft).

Task 3. Develop Framework for Economic Analysis

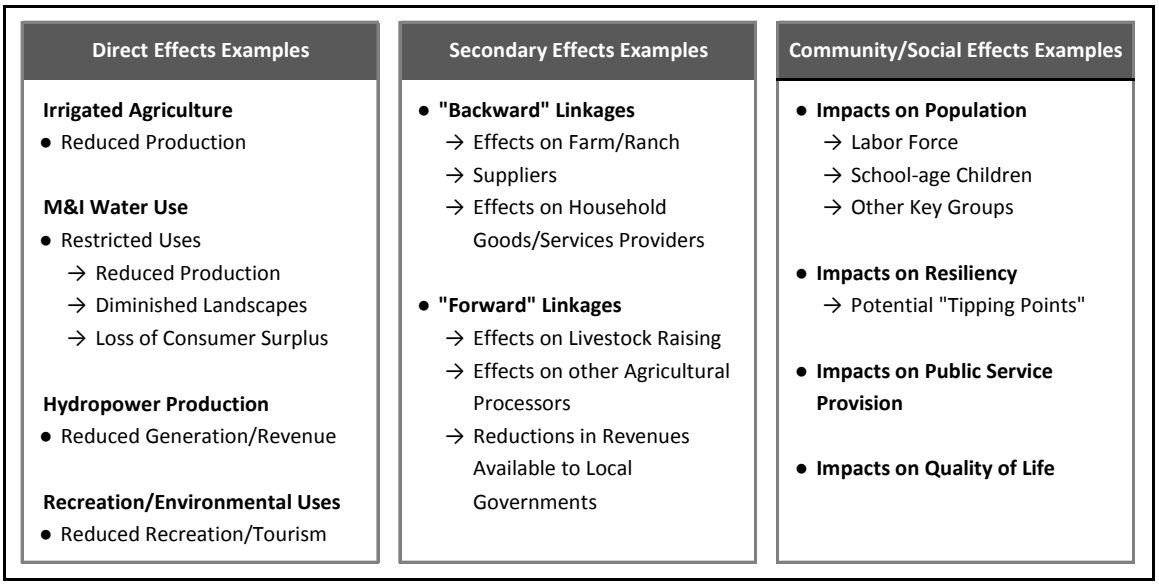
During the third task, the BBC team will develop the framework and quantitative models required to evaluate the economic effects of potential short-term water demand management programs. To assess the benefits from demand management programs, the framework will also need to be able to assess the economic and social/community consequences of a potential curtailment under the Colorado River Compact for purposes of comparison.

Subtask 3a. Discussions with WBWG regarding potential demand management options, possible effects from Compact curtailment, and other information. To assist in developing and specifying the framework, the BBC team will seek input from the WBWG at the outset of Task 3 regarding the range of options that might be included in the demand management scenarios to be analyzed in Task 4 and the potential scale of target water use reductions, as well as any available information on the projected likelihood of a Compact curtailment in the future and how a curtailment might be administered. The evaluation of the benefits and costs of potential demand management scenarios (to be completed in Task 4) may also require some hydrologic modeling and data related to both elements of the potential demand management scenarios as well as the potential effects of a curtailment under the

Colorado River Compact. Our proposal assumes the WBWG will provide any necessary hydrologic analyses, modeling and results to assist in this study.

Subtask 3b. Development of the framework. Reductions in water use – whether temporary, voluntary and compensated under potential demand management programs or involuntary and less predictable under a Compact-related curtailment, would result in direct and secondary (indirect and induced) economic effects on the region. Those effects could also have broader social/community ramifications. Figure II-2, below, provides a high-level view of potential direct and secondary economic effects and possible community and social effects from changes in water availability. The figure is not intended to be comprehensive, but simply to illustrate some of the important effects that could occur throughout the region.

Figure II-2.
Potential Economic and Community/Social Effects from Changes in Water Availability



Many of the types of effects shown in Figure II-2 can be quantitatively evaluated using the framework that will be developed in Task 3. Effects on quality of life will have to be assessed qualitatively, but can be evaluated based on prior social impact studies in other locations.

The BBC team proposes to use the IMPLAN economic modeling software to translate direct changes in water availability (under demand management scenarios or a Compact curtailment) into economic terms such as output, employment, value-added and labor income. IMPLAN also provides detailed estimates of secondary effects resulting from "backward" linkages – e.g. effects on other industries that supply the directly affected sectors and their employees. Input-output models such as IMPLAN do not automatically capture "forward" linkages, but information from the model can be used to estimate those effects as well. In the BBC team's work on the CWCB/SWSI case study to analyze the potential economic consequences of failing to meet the projected water need "gaps" in the future, the economic effects from forward linkages related to irrigated agriculture (such as cattle raising) were found to often be larger than the direct economic effects on hay and crop producers.

Task 3 Deliverables. The BBC team anticipates the following deliverables for Task 3:

- Draft report documenting the economic and community/social effects framework. The documentation will include key assumptions and estimated economic relationships (e.g. multipliers) specific to each of the subareas for the analysis agreed upon during Task 2.
- Final economic framework report (responding to comments on the draft).

Task 4. Evaluate Range of Demand Management Scenarios

In the final task, the BBC team will use the framework developed in Task 3 to evaluate a range of alternative demand management scenarios. We will identify direct and secondary economic effects, as well as community/social effects, under each scenario. To the extent feasible based on available information, the benefits from each scenario will also be evaluated based on their potential to reduce the probability of a future Compact curtailment (and avoid the economic consequences that a curtailment would produce).

Subtask 4a. Discussions with WBWG regarding potential target volumes and locations for water demand management scenarios. The BBC team will again confer with the WBWG at the outset of Task 4 to discuss potential elements and water use reduction goals for the demand management scenarios. If available, we will also review and incorporate information from the West Slope Roundtable Risk Study – Phase 3. Prior to conducting our evaluation and documenting the results, we will seek agreement upon the set of demand management scenarios to be analyzed.

Subtask 4b. Evaluation of scenarios. The BBC team will then evaluate the effects of each demand management scenario using the framework developed in task 3. We will also place the effects in context based on the economic baseline for the study area and its subregions developed in Task 2. Our evaluation will include a readily digestible comparison of the results for each scenario.

The evaluation will include our recommendations regarding potential compensation requirements under each demand scenario. The BBC team has experience in developing voluntary, market-based programs for short-term reductions in agricultural water use in several different locations including the Lower Arkansas Valley, south Texas and Nebraska, which will help us to develop realistic estimates of the level of compensation that may be required to obtain sufficient participation in the voluntary measures.

We will also provide our assessment of the potential need for mitigation to address uncompensated economic and fiscal effects, and how such mitigation might be administered. BBC team member Headwaters Corporation has been developing irrigation water leases in Central Nebraska for environmental purposes. In addition to economic insights and incentives gained from this process, we have also learned that there is a cultural component associated with irrigation water transfers, in the sense that irrigated agriculture is often viewed as a lifestyle and value system as well as a business enterprise. A high degree of sensitivity to these cultural components, an emphasis on personal relationships, and patience will be important requirements for the success of a WBWG voluntary demand management program. We will also

provide our assessment of the potential need for mitigation to address uncompensated economic and fiscal effects, and how such mitigation might be administered.

Task 4 Deliverables. The BBC team anticipates the following deliverables for Task 4:

- Agreed upon list of alternative scenarios to be evaluated.
- Draft report documenting the evaluation of the scenarios.
- Final evaluation report (responding to comments on the draft).
- Overall final study report, incorporating task reports from Tasks 2 through 4 and including an executive summary and final documentation.

SECTION III.

Proposed Schedule and Budget

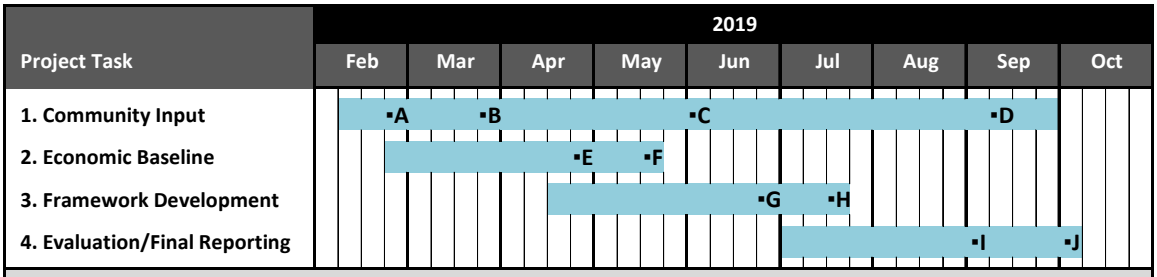
SECTION III.
Proposed Schedule and Budget

The BBC team's proposed schedule for this assignment reflects our anticipated time requirements for each task, presumed two to three-week review periods on our draft reports, and the overall schedule goals outlined in the RFP. Our proposed budget is consistent with the plan of work outlined in the preceding section. As with many consulting assignments, we believe there are opportunities to either streamline or enhance the workplan, and we look forward to feedback from the WBWG regarding its desired level of effort for this project.

Proposed Schedule

The BBC team's proposed schedule, by task, is shown in Figure III-1. Overall, we have designed the schedule to meet the shorter end of the 8 to 10-month performance goal outlined in the RFP – recognizing that scheduling challenges, deliverable review timeframes and other factors more often extend project schedules than shorten them. Figure III-1 also highlights anticipated dates for key milestones throughout the project.

Figure III-1. Proposed Project Schedule and Key Milestones



Project Milestones Shown in Schedule Chart:	
A: Final Community Input Plan	F: Final Economic Baseline Report
B: Initial Stakeholder Workshops	G: Draft Framework Report
C: Second Round Stakeholder Workshops	H: Final Framework Report
D: Optional Workshops to Review Draft Report	I: Draft Evaluation Report
E: Draft Economic Baseline Report	J: Final Report

Proposed Budget and Hourly Rates

The BBC team's proposed budget for this assignment is summarized in Figure III-2. We propose to complete the base elements of the work plan described in Section II for a not to exceed budget of $185,000. The base budget corresponds to almost 1,100 anticipated professional hours for this assignment, and includes just under $11,700 in expected direct expenses – primarily reflecting local travel costs associated with community involvement workshops and client meetings.

Figure III-2 also shows projected costs associated with the two optional subtasks to further enhance the community involvement task (Task 1) – as described in Section II. The optional subtasks are independent of one another, so the WBWG can choose to incorporate one, both or neither of these options.

Figure III-2. Proposed Project Budget

Task	Team Hours	Professional Fees	Direct Expenses*	Total Cost
1 Community Involvement	386	$55,890	$8,090	$63,980
2 Economic Baseline	220	$33,900	$0	$33,900
3 Framework Development	308	$50,760	$2,300	$53,060
4 Evaluation/Final Report	184	$32,760	$1,300	$34,060
Total Base Proposal	**1,098**	**$173,310**	**$11,690**	**$185,000**
Optional Tasks				
Additional Workshops	112	$16,000	$3,500	$19,500
Interactive Survey	40	$5,080	$500	$5,580

Hourly rates. The 2019 hourly rates for the BBC team are provided in Figure III-3.

Figure III-3.
BBC Team 2019 Hourly Rates

Staff Level/Name	Hourly Rate
BBC Research & Consulting	
Managing Director (Jeavons)	$200
Senior Associate (Verdone)	$155
Research Associate	$125
Data Visualist	$95
ERO Resources	
Powers	$160
Mangle	$150
Shenk	$120
Graphics Specialist	$105
Admin Staff	$65
Headwaters Corporation	
Oamek	$195

Harvey Economics ♦ 469 South Cherry Street, Suite 100 ♦ Denver, Colorado 80246
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April 16, 2019

Mr. John McClow
Upper Gunnison River Water Conservancy District
210 West Spencer, Suite B
Gunnison, Colorado 81230

Re: Upper Gunnison Water Demand Management Economic Impact Study

Dear John:

This letter represents a Harvey Economics (HE) proposal to the Upper Gunnison River Water Conservancy District ("Upper Gunnison District" or "District") to conduct an analysis of the economic impacts of possible future water demand management programs on irrigators and others located within the District's boundaries. This work will specifically focus on the effects of agricultural fallowing programs undertaken by irrigators within the District. This proposal responds to your request, based on an initial phone conversation with Susan Walker on March 25th and a follow-up conversation with Ed Harvey and Susan Walker on April 12th, 2019.

HE's proposal includes a discussion of our project understanding, a scope of work, and administrative aspects such as budget and schedule. We have also included a firm description and qualifications, including resumes, as Attachment A. Attachment B is a list of HE's hourly rates, by staff position. If we have misunderstood any aspect of your needs, please let us know so that we can modify this proposal. Once signed, this document will become a letter agreement between us, or you may use this letter as an attachment to the District's contract.

Although we will seek certain information from the District, HE will perform this work independently and develop the findings on our own. You may suspend our work by written notice at any time, and you may use the results as you see fit. Besides the Board, HE can present the findings to other agencies or public entities at your request upon completion of the work.

Project Understanding

Water interests throughout the State of Colorado have long been watchful of the Colorado River Compact and our state's ability to meet its obligations. Colorado, along with other Colorado River Basin states, has entered into an agreement to maintain a minimum of storage in the Lower Basin which might require additional flows contributed by the water users in our State. A number of entities, including the CWCB, the Water Bank Working Group (WBWG) and East Slope interests, have been considering how to respond to future calls for additional Colorado River water. One response has been exploration of the prospect of a large-scale water bank to help mitigate the impact of a Compact Call, should that happen. The general concept is to forsake marginal water use now so that an abrupt and potentially devastating reduction in the use of Colorado River water does not

occur at some point in the future. A wide-spread agricultural fallowing program is one component being considered as part of an overall demand management program for Colorado; that type of program is aimed at temporarily reducing irrigation activity in the Upper Colorado River Basin in order to provide water for storage in Lake Powell. Specific details of a such programs and the economic and other impacts of those programs are, as of yet, undetermined in any meaningful or substantiated way. Much more needs to be worked out, including protection of the banked water, the total cost of the water bank, who will pay for it, and the role of entities outside the Colorado River Basin boundaries.

For many West Slope entities, including the Upper Gunnison District, the economic impacts of a fallowing and water banking program have emerged as a looming question. What if the reduction in agricultural activity materially affects the agricultural economy? What if the change in water use patterns causes local economies to decline? This Study will shed light on these issues with specific focus on the water users and economic sectors active within the District. In this way, the District can get ahead of these programs, hopefully influencing their formulation in a more favorable, or less damaging way.

The Upper Gunnison District covers portions of Gunnison, Hinsdale and Saguache counties; the District includes seven sub-basins, each with different characteristics. Over 90 percent of consumptive use within the District is agricultural in nature, largely focused on growing forage (hay) and supporting livestock. This Study will specifically address the effects of potential voluntary and mandatory fallowing programs on the following groups:

- A representative individual irrigator;
- A group of irrigators located on a single tributary;
- The economy within the District, as a whole.

Scope of Work

HE envisions the following tasks to complete this work:

Task 1. Kick-off meeting/ administrative logistics. At the outset of this Study, HE will plan for a kick-off meeting with District staff to refine the work scope as needed with the following assumptions:

a. For the purposes of analysis, how the voluntary and mandatory plans will actually work;

b. Logistics and participants for the irrigator workshops;

c. Data sources and technical support provided by the District;

d. Coordination and other communication protocols; and

e. Other questions, concerns or advice from the District.

We assume that the discussions pertaining to the above list will not materially change the work scope, budget or schedule, but will be essential in establishing how the study will be conducted. HE assumes this meeting will be held in Gunnison.

Task 2. Prepare for and conduct irrigator workshops. Input from irrigators within the District who may potentially be included or affected by the fallowing programs will provide valuable information for the economic model and the analytical work.

It will be important to determine the geographic resolution of the study and the number of irrigator workshops needed. HE understands that there are seven sub-basins within the Upper Gunnison District, but we believe that level of study resolution is not justified from a cost or schedule standpoint. We propose gathering information from irrigators within the three Water Districts that comprise the Upper Gunnison District and working with the District's sub-basin coordinators. Our budget and schedule are based that assumption. Therefore, we would like to work with District staff to prepare for and conduct three (3) separate irrigator workshops. These workshops would focus on:

- Explanation of a potential fallowing/ water banking program (an overview of its purpose and how it might work);
- Identification of agricultural and water changes and effects; and
- Specific irrigator responses if a water bank were implemented, i.e. potential participation, farm operational changes and financial changes. For example, how would agricultural producers in the region change their spending patterns?

We will rely on District staff for certain workshop logistics, including identification of workshop participants and reservation of an appropriate location.

Task 3. Hydrology and water rights. HE will call on the District and its experts to understand two non-economic aspects of this study: the pattern of water right seniority within the District and the hydrologic effects that will occur with participation in this fallowing program.

Since the Drought Contingency Plan (DCP) relates to Colorado River Compact, the question will arise about whether or not an irrigator's water rights are senior to the Compact, or what portion of those rights are senior. Assuming that date is November 1922, pre-Compact rights would not be subject to a mandatory fallowing program. This might mean that a single irrigator has some portion or lands irrigated with pre-Compact water and some portion with post-Compact water. Alternatively, some irrigators might have only one water right or a set which fall one way. If those irrigators with predominantly pre-Compact water do not participate in fallowing, the reductions in water use would need to be made up by the irrigators with the post-Compact rights. This will substantially change the magnitude and pattern of impact. We will rely on District staff to help us distinguish lands with pre-Compact rights.

We will also seek the District's help in understanding how the stream flows will change as one or more irrigators in a stream system participate in this program. Ditch system operations, sub-surface irrigation, lakes might affected. Stream flows might be affected which might have an impact on recreation and tourism. We hope to get District help in developing these hydrologic assumptions.

Task 4. Direct effects on individual irrigators and irrigator groups. The operational and economic changes from voluntary or mandatory fallowing programs will be estimated at the individual and irrigator group levels in this task. We will project changes in agricultural operations if an irrigator participates in the fallowing program. How would production and revenues change? How would producers in the agricultural sector change spending patterns? How about on-farm labor and personal income?

HE will consider the information from the irrigator workshops, along with crop budgets, commodity prices and other economic data to prepare these projections. As proposed, we will distinguish different impact patterns among the Upper Gunnison District's three separate Water Districts. This information will be an important building block of the economic impact analysis.

Task 5. Economic Impacts of the agricultural demand management programs on the Upper Gunnison District. This task brings together the results and knowledge gained from previous tasks to determine the economic effects resulting from possible fallowing programs.

Knowledge of current economic and demographic conditions within the District will provide a foundation for examining changes as the result of the implementation of a fallowing program. HE will gather information about such topics as population; employment by sector; wages and income; business activity; agricultural operations and individual farm economics from secondary sources (i.e. Census Bureau, Bureau of Economic Activity, Department of Agriculture, county level economic development and agricultural agencies) and possibly from District staff to develop a profile of current economic conditions. That data will provide a baseline for the overall impact analyses.

The HE Team will create a unique, District specific model that links the implementation of a fallowing program to changes in economic conditions across the District's geography. The model will incorporate baseline data for Gunnison County, presuming that the small portions of the District within Hinsdale and Saguache Counties are represented in the Gunnison County data. Economic and agricultural data are most commonly reported at the county level. Model outputs (economic effects) will be reported for the District, reflecting changes to the Gunnison County baseline data.

The key challenge of this task is to develop a series of predictive equations that do the following:

- Project changes in agricultural operations if an irrigator participates in the fallowing program from the previous task.

- Project changes in economic activity for input and output sectors connected to agriculture. The HE Team would aggregate the changes among agricultural operators and then estimate the economic changes to the directly linked sectors in terms of sales and employment and personal income.

- Impacts on recreation and tourism will be estimated as relevant, based on changes in stream flows in affected locations.

- Project changes in indirect and induced economic activity in the region. The HE Team will then develop equations to predict the economic and demographic changes to the District, driven by the changes from the previous steps.

Development of the model will rely on several inputs:

- Information provided by the participants of the irrigator workshops will be vital to the agricultural assumptions, such as demand management implementation, operational changes, and spending patterns. HE's experiences in previous studies, coupled with extension agent crop budgets will also be considered.

- HE will incorporate a region-specific set of economic multipliers into the model. Those multipliers will allow HE to input specific changes to the agricultural sector in order to determine the direct, indirect and total economic effects to the District.

Task 6. Coordination with the CWCB and the WBWG. Both the Colorado Water Conservation Board (CWCB) and the Water Bank Working Group (WBWG), as well as other groups, are currently working to evaluate different types of demand management programs and their effects, including economic, environmental and legal considerations, among others. Although the efforts of the CWCB and the WBWG are focused on larger geographic areas (i.e. the West Slope or the entire State) and are also likely to occur over a longer period of time, it may be useful for HE and the District to coordinate with CWCB and the WBWG during the course of this Study or afterwards. For example, it might be mutually beneficial to confirm fallowing program assumptions or other information. This work scope assumes one meeting each with CWCB and the WBWG over the phone or in Denver.

Task 7. Project administration and reporting. The HE Team will informally keep the District apprised of study progress and interim results. We will discuss the results of the irrigator workshops. We will involve the District in any coordination with outside demand management initiatives. Each month, we will prepare a written progress report to accompany our invoice. We will be available for any follow-up questions.

HE will prepare a report based on the completed work tasks described above. We will address individual tasks, data sources, assumptions, analytical techniques and outcomes. We have included a Board presentation of the draft results. Following this presentation and review of the draft, the HE Team will finalize the report.

Administrative Aspects

HE Team. The HE Team will be primarily comprised of Ed Harvey, Susan Walker and Jessica Harvey. Ed Harvey will provide project oversight, contract conformance and quality control; he will be involved in the planning for irrigator workshops and will oversee the model development and analysis tasks. Susan Walker will be the technical lead, heading up all tasks related to model development and impact evaluation. Jessica Harvey will be the point of contact at HE for the District and will lead the irrigator workshops. The HE Team also includes Julie Shiflett, an HE contract employee located on the West Slope. Julie specializes in agricultural economics; she will focus on agricultural operations and changes in that sector. Resumes for each Team member are included in the attachments to this proposal letter.

Proposed budget. HE's cost will be on a time and materials basis, according to the rate schedule provided in Attachment B with this proposal. Total costs will not exceed $69,425, estimated on a Task by Task basis as shown in Exhibit 1, below.

Exhibit 1.
Harvey Economics Proposed Budget for the Upper Gunnison Water Demand Management Economic Impact Study

Task	Total Cost
Task 1. Kick- Off Meeting	$4,815
Task 2. Prepare for and Conduct Irrigator Workshops	$9,780
Task 3. Hydrology and Water Rights	$3,750
Task 4. Direct Effects on Irrigators	$10,830
Task 5. Economic Impacts on District	$15,160
Task 6. Coordination with State/ WBWG	$2,350
Task 7. Project Administration and Reporting	$19,130
Out of Pocket Expenses	$3,610
Total Project Cost	**$69,425**

Notes: (1) Administrative work included in Task 1 includes billing activities and other coordination with the District.
(2) Out of pocket expenses include all travel related expenses and purchase of regional multipliers.

Invoices will be monthly and due in 30 days. Interest at the rate of HE's commercial bank will apply after 30 days. Should any litigation become necessary to enforce the terms of this agreement, HE shall be entitled to its reasonable attorney fees and costs if it is the prevailing party in such litigation.

Schedule. We estimate that this effort will be completed within five (5) months from written agreement to proceed, assuming timely inputs.

You may sign and date this letter and that will constitute our contract. Please let me know if we missed anything or if you have any questions.

Yours truly,

Edward F. Harvey
Principal

_____ _____

Name_____ Date

Attachment A
Harvey Economics Qualifications

Firm Overview

Ed Harvey founded HE in 2002 to provide focused, applied economic research and consulting to business and government clients. Mr. Harvey has served public and private sector clients in the western U.S. over the past four decades. In addition to Mr. Harvey, our other economists and staff bring decades of experience and specialized knowledge to our work. Given their experience and expertise, Susan Walker and Jessica Harvey now share ownership of the firm with Mr. Harvey. Our firm has an outstanding record of employee retention, which facilitates our working relationships, communication and workforce planning.

Among other services, HE's capabilities include:

- ✓ Economic and demographic forecasting
- ✓ Economic modeling
- ✓ Socioeconomic impact analyses
- ✓ Conservation studies
- ✓ Resource demand projections
- ✓ Resource valuation
- ✓ Benefit-cost studies
- ✓ Economic base analysis
- ✓ Financial feasibility analysis
- ✓ Market assessments
- ✓ Public involvement and outreach
- ✓ Survey research
- ✓ Cost recovery and rate studies
- ✓ EIS preparation/ NEPA analysis
- ✓ Expert testimony

These services are applied to a variety of natural resource-based markets or economic sectors, including water and wastewater, energy and minerals, agriculture, tourism and recreation, land use and other resources. HE is situated in the Cherry Creek area of Denver. With a staff of five, HE offers a fully capable office, with three economists, a research associate and a project assistant. The Harvey Economics website is www.harveyeconomics.com.

Team Qualifications

Together, the HE Team offers extensive expertise in several specific areas relevant to this work:

- ***Expertise in socioeconomic impact analysis.*** Socioeconomic impact analyses address impacts to a vast array of economic and demographic resources. HE has completed numerous socioeconomic impact analyses, many as part of the highly scrutinized EIS or EA process, focused on water or other resource development projects. We have also performed these analyses as part of smaller scale permitting processes, related to statewide regulations and for private industry interested in future expansion. All of

HE's economists have either MBAs or Masters Degrees with an economic focus and have been performing this type of work at Harvey Economics for many years.

- ***Working experience with West Slope water providers and water users.*** HE has performed financial studies for conservation and conservancy districts and other entities across the West Slope for many years. Examples include water-related feasibility studies for the Southwestern Water Conservation District, Colorado River Water Conservation District, Upper Gunnison River Water Conservancy District and Rio Blanco Water Conservancy District; NEPA work for Grand County; socioeconomic impact analyses for the Ute Water Conservancy District; and an on-going facility/ water rights valuation effort involving multiple West Slope entities. These projects involve municipal, agricultural, recreational and environmental components.

- ***Knowledge of regional economic and demographic conditions on the West Slope.*** HE has completed many West Slope projects over the years, requiring detailed knowledge of the local and regional economy and population characteristics. HE has examined historical population and economic changes across many areas of the West Slope, has researched projections from different agencies and developed our own projections for special geographic areas. Work completed for the State, municipalities, water districts and other entities has led to a familiarity with different economies throughout the counties of the West Slope.

- ***Knowledge of agricultural operations, agricultural economics and alternative transfer methods (ATMs):*** For different clients, HE has evaluated the structure of ATM arrangements, changes in crop yields, and financial feasibility of ATMs. HE has also studied the economic viability of on-going agricultural operations in the lower South Platte Basin and the Arkansas River Basin. Having worked on projects in Colorado, Wyoming and other western states for decades, changes in agricultural activity, technology and economic influences play a large role in much of HE's work. Prices of commodities and farm inputs, the availability of land and water, and changes in technology and infrastructure are all regular components of our work.

- ***Extensive experience regarding public involvement on projects.*** Much of HE's work completed for municipalities, irrigation districts and other groups involves working with various segments of the public, either to gather comments and other feedback, or to explain economic analyses, methods or results. For example, we recently completed a study for the Larimer County Department of Natural Resources that required our active participation in County Commissioner and other Board meetings as well as various public meetings. Several projects have involved working group sessions with or presentations before City Councils.

Resumes for each HE Team Member follow.

YEARS EXPERIENCE

Total **45**

At Harvey Economics **16**

EDUCATION

MSBA, Economics, University of Denver

BA, Economics, University of Denver

PROFESSIONAL AFFILIATIONS

Colorado Commission for Judicial Performance

AWWA

AWRA

Colorado Water Congress

American Planning Association

LOCATION

Denver, CO

Edward Harvey, Harvey Economics

Ed Harvey has devoted the bulk of his career to studying the economic effects of water, mineral, energy and environmental resource use and community changes in the western U.S. During his 45-year career, Mr. Harvey has completed financial feasibility studies, rate studies, economic impact studies, analyses of future resource demands and resource valuation studies. He conducts economic studies related to water availability, drought, water quality, infrastructure development, irrigation, water conservation and non-structural water resource issues. Mr. Harvey created the natural resource economics practice at BBC Research & Consulting in 1973 and served as a Managing Director from 1981 until 2002 when he formed Harvey Economics.

Select Project Experience

Upper Gunnison Feasibility Project, Colorado. Mr. Harvey completed the economic and financial components of studies for two proposed projects under consideration by the Upper Gunnison Water Conservancy District to secure conditional water rights. Direct and indirect benefits were assigned to ranchers, homeowners, environmental, and recreational users. Financing plans were developed for each construction option, considering grant and loan programs from governmental agencies.

Proposed Water Rights Purchase, Colorado. Mr. Harvey is working with a group of regional entities to value and negotiate the purchase of a high priority water right and associated power plant. He is working on due diligence, the structure of the offer, funding alternatives, and an approach to negotiating with the current owners.

Grand Lake Water Clarity EA, Colorado. Mr. Harvey is working to evaluate the economic effects of several alternatives focused on improving water clarity in Grand Lake. Impacts to power generation and WAPA customers is a focus of this work.

Animas La Plata Feasibility Study, Colorado. Mr. Harvey determined the need for additional water supplies for a region of southwestern Colorado as part of an on-going project to develop conditional water rights. He also completed financial analyses of several specific projects designed to develop those rights.

San Luis Valley Groundwater Fees, Colorado. Harvey Economics completed an analysis of groundwater pumping fees for the certain members of the Rio Grande Water Conservation Sub-District. This region is facing critical groundwater shortages and limited surface supplies. Mr. Harvey examined agricultural water use, yields, operating costs and profits for growers in this area. Ability to pay was a critical issue.

White River Reservoir, Colorado. Mr. Harvey assessed the need for, and economic benefits and financial feasibility of a new reservoir in the White River Basin of Colorado. This effort for the Rio Blanco Water Conservancy District related to an analysis of future water demands for additional water storage facilities in the region. Mr. Harvey worked to devise a preliminary funding plan, including local beneficiaries, Federal and State

Edward Harvey, Continued

contributions. His work included quantification of benefits and assessment of beneficiaries ability to pay for the project. Hydropower, recreation and environmental benefits were important elements of the feasibility study.

Arkansas Valley ATM Projects, Colorado. Mr. Harvey has completed a variety of work in the Arkansas Valley over many years on behalf of the City of Aurora. Relevant projects include evaluation of shared land and water ownership models between the municipality and farmers; evaluation of other types of lease agreements and water purchases; and assessment of the "tipping point" of impacts to local agricultural communities and economies as the result of water leases.

Colorado Agriculture Water Transfer Decision Tool. Harvey led the development of a tool to aid agricultural producers in evaluating water transfer lease options. Specific farm characteristics are inputs into determining financial feasibility for individual operations.

South Platte Basin ATM projects. Harvey is leading three ATM projects on the lower South Platte. One agricultural water transfer in Larimer County was recently completed. Another one is being led by Colorado Open Lands. In each, Mr. Harvey helps formulate the financial offer based on farm economics and needs of all parties.

SWSI Alternative Agricultural Transfers Roundtable, Colorado. Mr. Harvey developed information regarding the financial background and impacts associated with alternative transfer programs, including interruptible supply agreements, long-term rotating fallowing program and water banks.

FLEX Market Water Pricing Model. The FLEX Market concept is designed to facilitate alternative water transfers by streamlining the legal and transactional costs to encourage alternative water transfers. Mr. Harvey developed an escalator for the price of water to mitigate the price risk in a longer-term FLEX Market agreement. The escalator was a composite index of the factors that influence the price of water in the South Platte Basin.

Ute Water Pipeline EIS, Colorado. Mr. Harvey led the economic analyses related to the planning of the Ute Water Conservancy District's Plateau Creek Pipeline project. Growth impacts of the project were a specific issue. He analyzed demographic projections, water demand forecasts, financial feasibility, rate impacts and socioeconomic impacts of the proposed pipeline. This evaluation and concurrent discussion with the utility's Board led to development of a water rates, tap fee and financing strategy.

Collbran Project Facility Transfer Analyses, Colorado. Mr. Harvey directed the economic and financial analysis of benefits, costs and risks of transferring the Bureau of Reclamation's Collbran Project into the hands of the Ute and Collbran Water Conservancy Districts. He specifically examined the effects on public power users and the Western Area Power Administration. Mr. Harvey played a key role in drafting legislation, responding to Congressional Budget Office issues and developing support for the proposal from the public power community. Additionally, he established agreement on value and terms with the Bureau.

Grand Mesa Metropolitan Water District Penalty Assessment, Colorado. Mr. Harvey is helping the District in a dispute over discharge violations and penalties. The financial quantification of the benefits and costs of project and penalty delays is at issue.

Susan H. Walker, Harvey Economics

Ms. Walker is a firm Director at Harvey Economics and has been with the company since 2005. Her work largely focuses on planning endeavors related to water, energy, tourism and other natural resource sectors. Ms. Walker's project experience includes rate studies, demand projections, socioeconomic impact analysis, cost – benefit analysis, project financing and valuation of resources and facilities. She is an expert at economic and demographic research, analysis and modeling. Ms. Walker has completed work for municipalities, utilities, special districts and private industry, as well as county, state and federal agencies.

YEARS EXPERIENCE

Total **15**

At Harvey Economics **13**

EDUCATION

MS, Forest Economics, Colorado State University

BS, Forest Management, University of Vermont

PROFESSIONAL AFFILIATIONS

AWRA

Colorado Water Congress

LOCATION

Denver, CO

Relevant Project Experience

White River Reservoir Feasibility, Colorado. Ms. Walker evaluated the need for and economic benefits of a potential new reservoir in western Colorado. She conducted an analysis of future water demands for municipal use, energy development, recreation and environmental purposes and worked to quantify benefits to each sector from additional regional water storage. Using projected capital and operating costs, Ms. Walker completed a benefit cost analysis for three alternatives. A financing plan identified potential project partners, associated benefits and cost shares.

WQCD Nutrient Regulation Cost/Benefit Study, Colorado. Ms. Walker estimated the value of benefits to water providers, recreational users and habitat and aquatic life from a reduction in nutrients in lakes and streams for this study, conducted for the Water Quality Control Division of Colorado. She developed detailed cost-benefit models that incorporated the annual capital and operating costs to point source dischargers and the estimated benefits of nutrient reduction over a 20-year period. Cost benefit models were developed by region and at the statewide level for three levels of regulation.

Purgatoire Water Benefits, Colorado. Ms. Walker studied the economic benefits of water produced by coalbed methane (CBM) production in Las Animas County, Colorado. CBM wells within the Purgatoire watershed currently produce water which supports a variety of uses, including agriculture and recreational activity. Ms. Walker estimated the economic benefits of CBM water to each of those uses. She also gathered information about the regional economy and estimated the benefits of CBM industry activities to the region, in terms of employment, income, tax revenues and total benefits to Las Animas County.

Storage / Exchange Value in the Fryingpan-Arkansas Project, Colorado. Ms. Walker conducted a study to determine the fair market value of storage space in the Bureau of Reclamation's Fryingpan-Arkansas Project reservoirs, as well as the market value of exchange potential between reservoirs. She gathered information on the value of existing storage and exchange transactions or contracts and provided an analysis of the relevant transactions, accounting for specific factors affecting the value of each contract.

Glendo Reservoir Full Utilization Study, Wyoming. Working for the Wyoming Water Development Commission, Ms. Walker quantified the economic costs and benefits associated with re-operation of Glendo Reservoir. She evaluated costs and benefits to recreational amenities and State Park finances; hydropower generation; agricultural productivity and access to irrigation water supplies; and environmental amenities. This

project involved the Bureau of Reclamation, US Army Corps of Engineers, the States of Wyoming and Nebraska, several State of Wyoming agencies and other stakeholders.

SWSI 2050 Projections, Colorado. As part of SWSI 2010, Harvey Economics prepared population projections for Colorado through the year 2050 by county and by river basin. Projections were based on assumptions of future economic conditions and projections of employment trends by major industrial sector. Ms. Walker gathered and assessed economic data in support of these assumptions and incorporated jobs projections into a model with county specific variables to obtain population numbers. The model accounted for such variables as multiple job holding rates, unemployment rates and labor force participation rates for each county. The model reflected low, middle and high growth projections scenarios, each supported by scenario specific assumptions.

Larimer County Parks and Open Space Fee Study, Colorado. Ms. Walker completed an evaluation of user fees at reservoir parks and open spaces, including an analysis of the revenue requirements to cover future operating and capital costs at those locations. Ms. Walker's revenue projections incorporated visitation trends and regional and local demographic projections. Recommendations included flat increases in all types of fees; implementation of fees at certain non-fee locations; and differential fees by time of use. The study also included an overview of user fees charges at comparable locations and opportunities for low-income visitors. Ms. Walker presented study findings at several Advisory Board meetings, public Open Houses and a work session with the County Commissioners.

Halligan Water Supply Project EIS, Colorado. Ms. Walker completed an evaluation of the socioeconomic, recreational and land use impacts of the proposed expansion of Halligan Reservoir. She quantified project impacts and determined the geographic extent, duration and magnitude of resource effects. Fiscal impacts, demand for public services and changes in property values were addressed. Changes in activity days and the quality of certain recreational experiences related to changes in stream flows. Land use issues were largely related to changes in agricultural operations and the associated regional identity and character.

Interstate Stream Commission Cost Benefit Study, New Mexico. This study, conducted for the Interstate Stream Commission, provided a basis for the funding of certain water development projects in New Mexico. For each project, Ms. Walker identified specific beneficiaries, annual water yields and detailed cost schedules. She worked to quantify the benefits of developed water to municipal and industrial uses, recreational activity, environmental uses and the agricultural industry. Using her estimates of project benefits and the available cost data, Ms. Walker developed a cost benefit model that incorporated the information for a period of fifty years and allowed for a comparison of costs and benefits over that period.

SWSI Alternative Agricultural Transfers Roundtable, Colorado. Ms. Walker worked to provide SWSI's Alternative Agricultural Transfers Roundtable with information to enhance the committee's understanding of the financial background and issues associated with water leasing programs. She provided information on the costs and benefits of alternative transfer programs, including administrative and operating costs to the parties involved and resource costs of purchasing a water lease. She identified third party benefits and beneficiaries and addressed costs that could be borne by the public or other groups. Ms. Walker also compared the economic impacts of alternative transfer programs to permanent dry-up conditions in local areas of agricultural importance.

YEARS EXPERIENCE

Total **14**

At Harvey Economics **8**

EDUCATION

MSBA, Finance, University of Denver

BA, Communications, Tulane University

PROFESSIONAL AFFILIATIONS

AWRA

Colorado Water Congress

LOCATION

Denver, CO

Jessica Harvey, Harvey Economics

Jessica Harvey joined Harvey Economics (HE) in 2011 after completing a Masters in Business Administration from the University of Denver (DU) with an emphasis in Finance. She brings considerable expertise in financial analysis and business operations to her work. In addition to financial analysis, Ms. Harvey has a background in marketing, market research and communications. Jessica's project experience includes research, data collection, financial modeling and forecasting, cost-benefit analysis and financial feasibility analysis.

Relevant Project Experience

Confidential Proposed Water Rights Purchase, Colorado. Harvey Economics is working with a group of west slope interests in valuing and negotiating a high priority water right and associated power plant. The project is ongoing and confidential. Ms. Harvey has helped in determining the value of the assets as well as the structure of the offer. She has worked with the group for three years on valuation, due diligence, structure and approach and continues to support the effort to achieve an agreement.

White River Reservoir Feasibility, Colorado. Ms. Harvey played a role in the development of a preliminary financial feasibility assessment and funding plan for a potential new reservoir to be located in northwest Colorado. She focused primarily on the financial benefits as well as the ability and willingness to pay components of the project. Based on information gathered through interviews and reviewing budget documents, Ms. Harvey was able to develop the initial funding plan outline. This project is now beginning the next phase of work, including a more detailed benefits analysis and financial plan.

Fraser Rate Support, Town of Fraser Colorado. Harvey Economics worked with the Town of Fraser to evaluate and formulate an agreement with a local developer regarding out of town water and wastewater service. Ms. Harvey worked to develop a strategic plan for negotiating a fair agreement between the Town and the developer. She calculated of the costs of service and system infrastructure costs. She also conducted market research to identify comparable agreements and performed data analysis and modeling to help to structure the offer.

Grand Mesa Metropolitan District Penalty, Colorado. This study entailed an analysis of a Colorado Department of Public Health and Environment (CDPHE) proposed penalty assessment for Grand Mesa Metropolitan Water District #2 (District). The District failed to implement required wastewater treatment plant improvements and therefore, CDPHE proposed a penalty due to the neglected improvements. HE completed a valuation assessment of the proposed penalty on behalf of the District. Ms. Harvey worked to select an appropriate discount rate to bring the penalty value to present day dollars, based on an applicable cost index. This work mainly focused on the portion of the penalty related to the economic benefit the District received from not investing in the infrastructure improvements.

Animas La Plata Feasibility, Colorado. This on-going project concerns conditional water rights related to a major water project in western Colorado. Ms. Harvey is supporting the investigation for the need for additional water supplies in the area and will also analyze the financial aspects of developing the conditional water rights. The

Jessica Harvey, Continued

project included an analysis of the impact that the additional water will have on agricultural productivity and recreation and tourism on the local economy.

Grand Lake Water Clarity EA, Colorado. Harvey Economics is working for Grand County and the Colorado River Water Conservation District regarding the issue of water quality and clarity in Grand Lake. Under the organization of the Bureau of Reclamation, a cooperating group has been formed to assess possible alternatives to achieve greater clarity in Grand Lake. Project costs will be split between Northern Water and Western Area Power Administration (WAPA). Ms. Harvey is working with Reclamation to evaluate the effects of several alternatives on power generation and WAPA customers. Ms. Harvey participates in all cooperating group meetings that pertain to the issue of power and supports Grand County and the River District in the evaluation of related economic impacts.

San Luis Valley Groundwater Fees, Colorado. Harvey Economics recently completed an analysis of groundwater pumping fees for the Rio Grande Water Conservation Sub-District (District). Ms. Harvey analyzed the District's budget, specifically studying agricultural revenue sources. Ms. Harvey supported the evaluation of impacts of increased groundwater fees to agricultural operations and the regional economy. She also identified and evaluated alternative solutions to groundwater mining activity. Part of this study included research on demand elasticity for agricultural assessments. Ms. Harvey researched data sources to support HE's findings in relation to agricultural price elasticity.

NISP EIS Update, Colorado. Harvey Economics helped to evaluate the conservation programs of the 15 water providers that are participants in the Northern Integrated Supply Project (NISP) EIS. Located in northern Colorado, NISP focuses on several water storage and distribution alternatives. Project participants include a mix of Front Range cities and water districts. Ms. Harvey helped evaluate the largest water users in the region as a part of the demand calculations. Jessica conducted extensive interviews to learn how much water the large water users are currently using and what they believe they will need in the future.

Purgatoire Water Benefits, Colorado. Ms. Harvey studied the economic benefits of water produced by coalbed methane (CBM) production in Las Animas County, Colorado. CBM wells within the Purgatoire watershed currently produce water which supports a variety of uses, including agriculture and recreational activities. Ms. Harvey supported the HE team in identifying the complete set of current uses of CBM water in the local area and to estimate the benefit of the water to each of those uses. This work involved gathering county and local level demographic and economic datasets in order to estimate the characteristics of the watershed.

New Mexico ISC Cost Benefit Analysis, New Mexico. This study, conducted for the Interstate Stream Commission, provided a basis for the funding of certain water development projects in New Mexico. Harvey Economics undertook this analysis of these projects under consideration for funding. Ms. Harvey looked at various proposed watershed rehabilitation projects designed to increase yield or improve water quality. She investigated project costs per acre-foot of increased supply and described the potential benefits of watershed improvements if implemented.

College America Case, Colorado. HE was hired by the Colorado Attorney General's Office as part of lawsuit in the Consumer Fraud Division brought against the for-profit university, College America. HE was hired to be an expert witness and completed a complex market research study. Ms. Harvey worked on a survey of about 400 College America Graduates to obtain career and financial information. Ms. Harvey managed the survey process, analyzed the data and made conclusions based on the results. Harvey Economics engaged California Research firm, Davis Research to conduct the telephone surveys. A ruling has yet to be made on the case.

Julie Stepanek Shiflett, PhD

P. O. Box 288, Collbran, Colorado 81624
970-812-6873
julie@juniperconsulting.org
www.juniperconsulting.org

Summary

PhD agricultural economic consultant with 20 years' experience in agricultural economic market analysis (analysis of trends, forecasts, and market concentration), survey design, market modeling, feasibility studies, economic impact studies, data management, policy recommendations, and college-level course instruction.

Experience

Founder, Juniper Economic Consulting, Inc., Collbran, Colorado, 12/2002-Present

American Sheep Industry Association (ASI) Consultant, 12/2002-Present

- "Analysis of U.S. and Imported Lamb Demand," American Lamb Board, with Deborah Marsh, 1/2007, 5/2015, 4/2017
- "Sheep Industry Economic Impact Analysis," 8/2008, 8/2011, 8/2017
- "U.S. Sheep Industry Research, Development, and Education Priorities," Team member, 6/2016
- "Nontraditional Lamb Market in the United States: Characteristics and Marketing Strategies," 4/2010
- Monthly lamb market economic analyses and forecasting, American Lamb Board, 12/2003-ongoing
- Monthly lamb and wool market economic analyses and forecasts for the ASI magazine, *Sheep Industry News*, 12/2002-ongoing
- Data management: Maintain sheep, lamb, pelt and wool weekly data for ASI, 12/2002-ongoing

Market Analyst Consultant, 12/2002-Present

- Economic Impact of Colorado's Sheep Industry, Colorado Wool Authority, 9/2018-ongoing
- U.S. Wool Market Analysis, Kentucky Sheep and Goat Development Office, 11/2017-ongoing
- "The Real Wage Benefits Provided to H-2A Sheep Herders and the Economic Cost to Colorado Ranchers," Colorado Wool Growers Association, 3/2010
- Weekly market news analysis of the meat goat market for the American Boer Goat Association, 9/2007-8/2008
- Analysis of market concentration for the California Tomato Export Group Certificate Analysis, Wasson Idea Farming, 4/2005
- "I-70 Community Profile" and "I-70 Corridor Housing Projections," I-70 Corridor Regional Economic Advancement Partnership, 9/2002 and 9/2003
- Analysis of the U.S. Department of Agriculture Packers and Stockyards Act, Rocky Mountain Farmers Union, 2/2003
- Colorado Springs, Colorado Electric Utility Research, Dr. Paul Prentice, Farm Sector Economics, Inc., 10/2005 and 3/2007

Economic Feasibility Consultant, 12/2002-Present

- All-Natural, Local Meats: Yampa Valley Farms, Colorado, 1/2014
- Family-Oriented Game Hall, Montrose, Colorado, 6/2011
- White Buffalo Certified Organic Kitchen, Colorado, 9/2010
- Holy Cow Packing Plant, Colorado, 8/2010
- Biodiesel: "Feasibility of Resource Conservation Holdings, LLC Jatropha Research, Development and Commercialization Project in Southwest Florida," 1/2009
- Horton Sheep Enterprise, Wyoming, 10/2005
- Heartland BioComposites, a composite wood-substitute manufacturer, Wyoming, 3/2004
- Biodiesel, Blue Sun Biodiesel, Inc., Colorado, 6/2003 (with Dr. Paul Prentice, Farm Sector Economics, Inc.)
- Agritainment opportunities, May Farms, Colorado, 5/2003
- Feasibility of the proposed National Farm Marketing Board, North Dakota, 8/2003

Part-Time Lecturer, Western Colorado Community College, a division of Colorado Mesa University,
Grand Junction, Colorado, 8/2016-5/2018

- Agricultural Economics, Agricultural Marketing, Farm & Ranch Management, Agricultural Finance, and Feeds & Feeding

Administrator, De Beque – Plateau Valley Conservation District, Collbran, Colorado, 1/2014-12/2015

- Wrote and was awarded Conservation District Annual Grant; helped develop Annual Plans of Work; Managed budget

Shmoop University Writer, Online at Shmoop.com, 2013 and 2015

- Reviewed Advanced Placement (AP) Macroeconomic test review materials, 8/2015
- Wrote Advanced Placement (AP) Microeconomic online course, 1/2012-6/2013

Senior Economist, U.S. Department of Agriculture, Packers and Stockyards Administration (GIPSA),
Denver, Colorado, 7/2000-12/2001

- Co-authored a report to Congress on market power, competition, and concentration by U. S. cattle and sheep packers

Assistant Economic Researcher, World Bank, Lusaka, Zambia, 5/1995-8/1995

- Helped analyze Zambia's agricultural advantage by participating in a cost-benefit analysis of alternative commodities

Research Assistant, Michigan State University-U. S. Agency for International Development (USAID)
Cooperative Agreement, East Lansing, Michigan and Addis Ababa, Ethiopia, 8/1994-5/1999

- Analyzed Ethiopia's challenges and opportunities in adopting improved cereals and fertilizer

Economist, U. S. Agency for International Development (USAID), Kampala, Uganda, 5/1993-8/1994

- Helped promote agribusiness in Uganda by evaluating the costs and benefits of Ugandan international trade

Education

PhD Agriculture Economics, Michigan State University, East Lansing, Michigan, 1999
Concentrations: Analysis of Food System Organization and Performance; Trade and Policy
MA Economics, The American University, Washington, D.C., 1993
Concentration: International Development
BA Economics, University of Colorado, Boulder, Colorado, 1991

Computer programming: Stata, SAS, SPSS, IMPLAN, LimeSurvey

PhD Dissertation: "Lessons from Ethiopia's High-Input Technology Promotion Program: How the Organization of the Fertilizer Subsector Affects Maize Productivity," Department of Agricultural Economics, Michigan State University, 1999

Publications (More listings available upon request)
Shiflett, J. and D. Anderson, Department of Agricultural Economic, Texas A&M, "Marketing," *Sheep Production Handbook*, American Sheep Industry Association, Inc. 2010 and 2016

Presentations (More listings available upon request)
Shiflett, J. "Analysis of the U.S. Nontraditional Lamb Market," Colorado Wool Growers Annual Meeting, Montrose, CO, July 2016

References

Paul Rodgers, Deputy Director of Policy, American Sheep Industry Association, Inc. *(retired July 2018)*, 9785 Maroon Circle, Suite 360, Centennial, CO 80112, 304-647-9981, prodgers2@earthlink.net.

Peter Orwick, Executive Officer, American Sheep Industry Association, Inc., 9785 Maroon Circle, Suite 360, Centennial, CO 80112, 303-771-3500, peter@sheepusa.org.

ATTACHMENT B

2019 HARVEY ECONOMICS BILLING RATES

Professional Level	Hourly Rate*
Principal	$235
Director	200
Senior Associate	185
Associate	170
Research Associate	165
Project Assistant	75

Note: Approved direct or out-of–pocket expenses are billed at cost.

*Hourly rates are fully loaded to include salary, benefits, overhead and profit.

Preliminary Proposal for Upper Gunnison Recovery and CU pilot project

April 16, 2019

Prepared by: Jesse Kruthaupt, Trout Unlimited

Prepared for: Frank Kugel and John McClow, Upper Gunnison River Water Conservancy District.

Overview

Jesse Kruthaupt was asked to assist the Upper Gunnison River Water Conservancy District to develop a research project to evaluate the volume of consumptive use reduction and grass production/recovery impacts on Upper Gunnison irrigated meadows resulting from a full season without irrigation.

Jesse Kruthaupt (Trout Unlimited) will work with Dr. Perry Cabot (CSU) to develop and manage this study. Other partners will be recruited to refine the proposed tasks and assist with data analysis and reporting. Assistance from a WSCU intern housed by the District would be valuable.

Because irrigated lands in the Upper Gunnison are at a range of elevations, experience a variety of precipitation, operate under a variety of management practices, and can possess different soil characteristics caution should be taken when evaluating and sharing the study results. To help capture this variation it would be ideal to evaluate sites with different characteristics.

Two sites have been volunteered for this research. Partners are working to identify additional sites.

1. Trampe Ranch - 3.33-acre parcel on the mainstem of the Gunnison, Trampe Ranch. This meadow is irrigated “upland” bench. This field has a thinner soil layer on top of well drained cobble and sand.

2. Buttermore Property - 3-acre parcel on Ohio Creek. This is irrigated meadow near the Ohio Creek channel with thicker soil than the Trampe site. It may be difficult to isolate from other irrigation. This field will be evaluated once snow melts off.

3. Additional sites (East, Cochetopa,?)

The test plots will not receive irrigation during the 2019 irrigation season. Adjacent fields will be used as control plots and be irrigated as they were historically. Sites will be monitored starting in 2019 and continue through 2022. The owners who have volunteered fields for the test will be compensated at $250/ton for production losses experienced during the four-year period.

Objectives

1. Measure production losses from full season fallow.
    a. Measure and record production on the irrigated meadow that do not receive irrigation during the 2019 irrigation season. Compare this production to adjacent fully irrigated fields.
2. Measure how long it takes for test field to fully recover after one year without irrigation.
    a. Measure and record production on the test plots parcel under full irrigation during the following 3 years. Compare these measurements to production on adjacent fields that was not fallowed.
3. Compare consumptive use differences between fallowed field and fully irrigated field using aerial imagery, handheld radiometer, and field measurements. Continue consumptive use monitoring until 2022 or until field production completely recovers.
    a. Measure Normalized Difference Vegetation Index (NDVI) with hand held radiometer or drone.
    b. Evaluate Land-Sat imagery and the difference between the test field and adjacent control fields.
    c. Install atmometer or other evapotranspiration (ET) monitoring device at the sites. Record measurements on weekly basis.
    d. Install a shallow ground water monitoring well to compare ground water and temporal relationship to aerial imagery and other ET monitoring.
    e. Install soil moisture sensors at 6 and 18 inches to identify soil moisture in root zone and relationship to consumptive use, crop stress, and ground water.

Budget

Estimated to $8,700.

Some of the equipment needed for monitoring this project will overlap with existing projects TU and CSU are working on. Trout Unlimited has $7,000 of unused monitoring funding from the Tomichi Water Conservation Program. With board approval, this could be put toward Atmometer, Soil moisture sensors, or land owner compensation.

Soil Moisture sensors - $1200

- 6 at $200 = $1200. There is potential the base station needed for these would overlap with TU's Innovative Efficiency Project (task 3 radio telemetry).

Radiometer

- CSU existing

Drone flights

- This is not included in the budget but could be an option to investigate. It would likely be $2-3 thousand for the flights, image processing, and analysis.

Atmometer - $500

- 2 at $250 = $500 (these would be district property)

Labor for monitoring, coordination and analysis -$2000

- TU – In-kind
- CSU – In-kind
- Intern - $1500-$2000

Production loss compensation – $5,000

- This shouldn't exceed 20 tons for the three years on the 6.33 participating acres. At $250/ton = $5000

MEMORANDUM

TO: Board of Directors

FROM: Watershed Management Planning Committee

DATE: April 8, 2019

SUBJECT: Summary of Watershed Management Planning Committee Meeting

MISSION STATEMENT

The mission of the Watershed Management Planning Group (WMPG) is to help protect existing water uses and watershed health in the Upper Gunnison Basin in the face of pressure from increased water demands and permanent reductions in water supply.

A meeting of the Watershed Management Planning (WMP) Committee was held on April 8, 2019 at 1:00 p.m.

George Sibley, Camille Richard, Michelle Pierce, Stacy McPhail, Jesse Kruthaupt, Tom Grant, Molly McConnell, Bob Robbins, Frank Kugel and Beverly Richards were in attendance.

George Sibley called the meeting to order. He opened the meeting by reading the mission statement of the Watershed Management Planning Group.

Status of Report Writing and Proposed changes to CWCB Report Content

Staff provided a status of the report writing. Edits are still being made to Sections 2 and 3 for all three sub-basins. George has provided a draft of the introduction and there has been input to the legal framework for John to incorporate. Deadline for completion of these sections is April 15. Staff also said that based on input from the Upper Gunnison Board, the report being developed for the CWCB and due June 30, 2019, should be in the format of an executive summary and will only summarize the work that was completed in Phase I. The draft will be completed on April 15 and will be distributed to the committee for input. Camille Richard suggested to contact CWCB to determine the exact content required for this report.

George Sibley also provided a summary sheet for the Copper Creek to Brush Creek confluence reach on the East River which includes a summary of the uses and identified problems or options on this reach. This will be used to provide a summary of the reaches to stakeholder with links to the more detailed information contained in the needs assessment reports. He asked for input from the group on this document. Staff also provided an updated proposed scoping projects spreadsheet for the group's information. Also, Julie Nania provided a draft summary of a pilot project on the East River that was approved as part of the District's 2019 grant program. The summary could be used as a template for other demonstration projects that will be part of Phase II.

Discussion of Meetings Slated for Spring and Summer 2019

Ohio Creek – Jesse Kruthaupt said he is only planning one on one meetings with water users in his basin. He suggested that three irrigation efficiency projects he is working on with Ohio Creek landowners be considered as demonstration projects for WMP purposes; he has applications for CWCB funding submitted for all three. After discussion, the WMP committee agreed to accept them as demonstration project. He will continue working on demonstration projects, and will develop more formal stakeholder meetings for next fall to provide results from the modeling and the demonstration projects. Stacy McPhail, the Ohio Creek representative on the UGRWCD board, agreed with this plan as it will provide more tangible results than are available at this point.

East River – Julie Nania was not in attendance so there was no discussion of meetings scheduled in the sub-basin.

Lake Fork – Camille Richard provided a proposed schedule for stakeholder outreach in the Lake Fork and Cebolla sub-basins. This schedule included meetings for the Pete's Lake demonstration project, presentation of assessment results to the community to aid in identifying options, discussions about boater conflicts, River Restoration Corridor meetings, conducting interviews with residents in the Cebolla sub-basin, and attending various summer events with information about the watershed management planning process.

Tom Grant discussed the possibility of members from the group becoming involved with local focus area groups that are being reestablished to become part of watershed and wetlands management planning in the Upper Gunnison Basin. This will bring interaction with not only stakeholders but with federal agencies as well. He will provide the group with more information for those that are wanting to attend these meetings.

Status of Phase II Contracting

Staff said the statements of work and budgets for Phase II were sent to Chris Sturm with the CWCB on April 1st but have not heard from him about the status of the year 1 and years 2 and 3 purchase orders or if changes are needed.

There was some discussion of the procurement policy for consultants that the CWCB wants the WMP committee to use in executing the new grant – whether to re-adopt an UGRWCD policy or use the state procurement policy; staff was asked to look into the two options.

Meeting Wrap-up and Action Items

- There will be a work-group meeting held on April 22, 2019 beginning at 9:00 a.m. to discuss what was learned in Phase I and to develop a management plan for Phase II

- The next meeting for the Watershed Management Planning Committee is scheduled for May 13, 2019 beginning at 1:00 p.m.

Action items include:

- Staff will check on procurement guidelines for the District.
- Jesse Kruthaupt will develop a status report template for monthly distribution
- Staff will develop a Powerpoint presentation for State of the River meeting to be held in Gunnison in May. This will include presentation projects and modelling challenges as part of the watershed management planning process
- Group members will continue editing sections with a completion date of no later than April 15.
- Sub-basin coordinators will determine what information will be needed for stakeholder meetings to be held in the spring and summer including reach summaries
- Group members and staff will provide input on introduction section to George Sibley
- Staff will draft criteria for demonstration or pilot projects to be discussed at next committee meeting.

Adjournment

The meeting was adjourned at 2:40 p.m.

AGENDA ITEM 11

TO

Daily Summary for Month --> **Apr**

	River Call				Average Flow		Taylor Park Reservoir						Silver Jack Reservoir				Aspinall Unit									GUNNISON TUNNEL ALLOCATION								
							Reservoir			1st Fill	2nd Fill	Other	Aspinall	Reservoir		BP Accnt	AU Accnt	Reservoir Contents			Total Aspinall Unit Inflow			1st Fill	Contract	Streamflow and Divs		Type of Water Diverted into Tunnel						Tot 1st fill
Day of Month	Silver Jack Reservoir & Juniors In Priority (1=Yes, 0=No)	TP Releases from TP 2nd Fill Rec/Fish (1=Yes, 0=No)	Excess Released TP Inflow and AU Nat Inflow (cfs)	Gun Tunnel (GT) Shortage after AU Nat Inflow and TP Inflow (cfs)	3-Day Average Excess TP Inflow and AU Nat Inflow (cfs)	3-Day Ave. GT Shortage after AU Nat Inflow and TP Inflow (cfs)	TP Res. Content (af)	TP - USGS outflow (cfs)	TP Computed Inflow (cfs)	1st Fill - Storage - in TP (af)	2nd Fill - Storage - in TP (af)	Other Account Storage in TP - Storage - (af)	AU Storage in TP - (af)	SJ Res Content (af)	SJ Inflow to Reservoir Storage (cfs)	BP - Storage - in SJ (af)	AU Water - Storage - in SJ (af)	BM Res Content (af)	MP Res Content (af)	CR Res Content (af)	AU Change in Storage (af)	Computed rel from CR (cfs)	AU inflow below TP & with AU Aug Rel (cfs)	1st Fill - Storage - in AU (af)	UGRWCD Contract water (af)	Gun. River below East Portal (cfs)	Total Gunnison Tunnel Divs (cfs)	GT Divs - AU inflow minus TP released inflow (cfs)	GT Divs - TP Released Inflow (cfs)	GT Divs - SJ Storage Inflow by AU Exch (cfs)	GT Divs - UGRWCD Contract Water Rel (cfs)	GT Divs - Rel from 2nd Fill for Rec/Fish (cfs)	GT Divs - 1st Fill Credit in AU (cfs)	GT Divs - AU Storage by exchange w/ 2nd Fill in TP (cfs)	Remain. 1st Fill Credits in TP and AU (af)
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(11)	(14)	(15)	(19)	(25)	(30)	(35)	(37)	(40)	(44)	(48)	(50)	(54)	(58)	(62)	(63)	(65)	(69)	(70)	(71)	(74)	(75)	(76)	(77)	(78)	(79)	(80)	(82)	(83)
1	1	0	553	0	671	0	60,353	104	75	52,022	0	0	9,568	1,999	0	1,999	0	249,350	106,783	17,047	189	577	589	0	0	465	112	112	0	0	0	0	0	0	52,022
2	1	0	529	0	598	0	60,281	115	79	52,178	0	0	9,340	1,995	0	1,995	0	248,912	107,426	16,982	140	670	647	0	0	473	197	197	0	0	0	0	0	0	52,178
3	1	0	591	0	557	0	60,037	115	0	52,178	0	0	9,112	1,991	0	1,991	0	249,204	107,904	16,630	417	669	786	0	0	474	195	195	0	0	0	0	0	0	52,178
4	1	0	739	0	619	0	60,008	115	101	52,377	0	0	8,884	1,988	0	1,988	0	249,793	108,135	16,322	512	668	833	0	0	474	194	194	0	0	0	0	0	0	52,377
5	1	0	861	0	730	0	59,965	116	94	52,564	0	0	8,654	1,991	1	1,991	0	250,482	108,089	16,446	788	668	961	0	0	474	194	194	0	0	0	0	0	0	52,564
6	1	0	1,081	0	893	0	59,878	116	73	52,708	0	0	8,424	1,996	3	1,996	0	251,417	108,343	16,505	1,248	667	1,202	0	0	474	193	193	0	0	0	0	0	0	52,708
7	1	0	1,325	0	1,089	0	59,821	116	87	52,881	0	0	8,194	2,007	5	2,007	0	252,845	108,560	16,563	1,703	667	1,431	0	0	474	193	193	0	0	0	0	0	0	52,881
8	1	0	1,284	0	1,230	0	59,807	116	109	53,096	0	0	7,984	2,035	14	2,035	0	253,633	109,308	16,650	1,620	770	1,492	0	0	453	317	317	0	0	0	0	0	0	53,096
9	1	0	1,389	0	1,333	0	59,821	117	124	53,343	0	0	7,731	2,084	25	2,084	0	255,816	108,971	16,656	1,854	828	1,668	0	0	425	404	404	0	0	0	0	0	0	53,343
10	1	0	1,460	0	1,378	0	59,864	117	139	53,616	0	0	7,499	2,130	23	2,130	0	258,006	108,591	16,809	1,964	831	1,725	0	0	427	404	404	0	0	0	0	0	0	53,616
11	1	0	1,222	0	1,357	0	59,778	117	74	53,764	0	0	7,267	2,155	13	2,155	0	259,351	108,746	16,928	1,617	832	1,552	0	0	428	404	404	0	0	0	0	0	0	53,764
12	1	0						0														0			0	0	0				0			
13	1	0						0														0			0	0	0				0			
14	1	0						0														0			0	0	0				0			
15	1	0						0														0			0	0	0				0			
16								0																	0	0							
17								0																	0	0							
18								0																	0	0							
19								0																	0	0							
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27								0																	0	0							
28								0																	0	0							
29								0																	0	0							
30								0																	0	0							
31																																	
Total	15	0	11,032	0	10,455	0		1,264	953						84						12,033	7,848	12,886			5,041	2,807	2,807	0	0	0	0	0	
Tot (af)			21,882	0	20,737	0		2,507	1,891						168						23,867	15,567	25,559			9,999	5,568	5,568	0	0	0	0	0	
Min	1	0	529	0	557	0	59,778	0	0	52,022	0	0	7,267	1,988	0	1,988	0	248,912	106,783	16,322	140	0	589	0	0	0	0	112	0	0	0	0	0	0	52,022
Max	1	0	1,460	0	1,378	0	60,353	117	139	53,764	0	0	9,568	2,155	25	2,155	0	259,351	109,308	17,047	1,964	832	1,725	0	0	474	404	404	0	0	0	0	0	0	53,764

Annual Summary (all values in ac-ft) Note: Reservoir content is the end of the month content

	(days)	(days)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)		(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)	(af)
Nov	30	0	26,913	0	25,308	0	58,780	3,317	3,649	35,362	0	0	23,417	1,096	346	1,096	0	249,793	104,066	14,160	4,751	20,001	24,273	0		18,992	1,009	916	94	0	0	0	0	35,362
Dec	31	0	23,617	0	24,083	0	58,964	3,393	3,577	38,931	0	0	20,033	1,488	393	1,488	0	248,523	107,465	14,762	2,731	20,424	20,598	0		19,867	558	549	9	0	0	0	0	38,931
Jan	31	0	23,098	0	23,041	0	59,219	3,393	3,647	42,477	0	0	16,741	1,800	311	1,800	0	251,368	106,737	15,108	2,483	20,390	19,977	0		19,863	527	426	101	0	0	0	0	42,477
Feb	28	0	22,902	0	22,638	0	59,562	3,097	3,440	45,915	0	0	13,647	2,027	228	2,027	0	247,404	107,174	15,582	-3,054	25,553	19,971	0		25,044	509	507	2	0	0	0	0	45,915
Mar	31	0	33,944	0	33,423	0	60,411	3,872	5,958	51,873	0	0	9,774	2,004	66	2,004	0	249,448	108,661	16,882	2,832	29,456	28,416	0		29,027	430	430	0	0	0	0	0	51,873
Apr	15	0						2,507														15,567				9,999	5,568							
May	0	0	0	0	0	0		0	0						0						0	0	0			0	0	0	0	0		0	0	0	
Jun	0	0	0	0	0	0		0	0						0						0	0	0			0	0	0	0	0		0	0	0	
Jul	0	0	0	0	0	0		0	0						0						0	0	0			0	0	0	0	0		0	0	0	
Aug	0	0	0	0	0	0		0	0						0						0	0	0			0	0	0	0	0		0	0	0	
Sep	0	0	0	0	0	0		0	0						0						0	0	0			0	0	0	0	0		0	0	0	
Oct	0	0	0	0	0	0		0	0						0						0	0	0			0	0	0	0	0		0	0	0	
Total	166	0	130,474	0	128,492	0		19,579	20,272						1,345						9,724	131,391	113,235			122,791	8,601	2,827	206	0	0	0	0	
Min	0	0	0	0	0	0	58,964	0	0	38,931	0	0	9,774	1,488	0	1,488	0	247,404	106,661	14,762	-3,054	0	0	0		0	0	0	0	0	0	0	0	38,931
Max	31	0	33,944	0	33,423	0	60,411	3,872	5,958	51,873	0	0	20,033	2,027	393	2,027	0	251,368	107,465	16,882	2,832	29,456	28,416	0		29,027	5,568	549	101	0	0	0	0	51,873

Upper Gunnison River Water Conservancy District

210 West Spencer Avenue, Suite B • Gunnison, Colorado 81230
(970) 641-6065 • www.ugrwcd.org

MEMORANDUM

TO:	Board of Directors, Upper Gunnison River Water Conservancy District
FROM:	Jill Steele, Office Manager
DATE:	April 9, 2019
SUBJECT:	Electronic Payment of Board of Directors' Fees

I have been asked to look into paying Board of Directors' fees electronically, for those who would like that option. I spoke with Mollie Sullivan with the Bank of the West, and we discussed some options.

Mollie recommended their Webdirect Value program, which would provide the District with the ability to originate and process Automated Clearing House payments, such as Board of Directors' fees and mileage quarterly payments. ACH Services carries a $10.00 monthly fee, plus $.50 per ACH item processed. If all board members received their payments electronically, the annual cost to the District would be $142.00.

Before proceeding to sign up for this service, I would like to know if this is something the board would like to do.

Thank you.

Upper Gunnison River Water Conservancy District

210 West Spencer Avenue, Suite B • Gunnison, Colorado 81230
(970) 641-6065 • www.ugrwcd.org

April 15, 2019

The Honorable J. Steven Patrick, Chief District Judge
Gunnison County Courthouse
200 East Virginia Avenue
Gunnison, CO 81230

Dear Judge Patrick:

The term of four seats on the Board of Directors of the Upper Gunnison River Water Conservancy District (UGRWCD) will expire as of the date of the annual meeting of the District on June 24, 2019. The terms are for the directors in Division 1 (Hinsdale County); Division 2 (Saguache County); Division 3 (Tomichi); and Division 5 (Crested Butte). These are currently held by Michelle Pierce, Rebie Hazard, Kathleen Curry, and Rosemary Carroll, respectively. The terms of the board of directors are specified in the reorganization decree for the UGRWCD decreed in Civil Action No. 5618 on October 8, 1991. A current list of those terms is attached for your convenience.

The procedure for the appointment of board members to regular terms is described in Section 37-45-114(1)(a), C.R.S. (2018). The UGRWCD will publish a notice of vacancy for the board member position in the Gunnison Country Times, Crested Butte News, Lake City Silver World and Saguache Crescent during the weeks of April 22 and April 29, 2019. We suggest the following schedule for the appointment process: Applications would be accepted by the Court until 5:00 pm on Friday, May 31, 2019. The Court would then review the applications, consider any letters of recommendation, conduct interviews, and make the appointments. Since the appointees will be requested to attend the board meeting on June 24, we would respectfully request that the District and the appointees be notified by June 17 in order to have everyone adequately prepared for the meeting.

Please let us know if you wish to make any changes to this proposed schedule. Thank you for your attention to this matter.

Very truly yours,

Frank J. Kugel
General Manager

Enclosures
cc: Board Members, UGRWCD

UPPER GUNNISON RIVER WATER CONSERVANCY DISTRICT
2019 STATUS OF BOARD OF DIRECTORS

Directors for the Board of the Upper Gunnison River Water Conservancy District are appointed, after receipt of applications, by the appropriate Judicial District Court to serve four-year terms or to fill unexpired terms if a board member resigns. The directors are appointed to represent geographical divisions described below. Prospective directors must be owners of real property in the division in question and be knowledgeable in water matters.

Applications for the vacancies must be received by the Court by 5:00 pm, Friday, May 31, 2019, and must specify that the applicant has resided within the District for a period of one year and resides in and is the owner of real property within the particular county and division whose director's term is expiring. **Applications must be sent to The Honorable J. Steven Patrick, Chief District Judge, Gunnison County Courthouse, 200 East Virginia Avenue, Gunnison, CO 81230 by the deadline specified above. The current vacancies are highlighted.**

DIVISION 1

The Hinsdale County division, which shall include that portion of Hinsdale County which lies within the District. That division shall be entitled to one director.

Michelle Pierce
Term expires: June 2019

DIVISION 2

The Saguache County division, which shall include that portion of Saguache County which lies within the District. That division shall be entitled to one director.

Rebie Hazard
Term expires: June 2019

DIVISION 3

The Tomichi division, which shall include all of that portion of the Tomichi Creek drainage which lies east of the Gold Basin Road (County Road 38) except that portion thereof which lies within the City of Gunnison and within Division 2. That division shall be entitled to one director.

Kathleen Curry
Term expires: June 2019

DIVISION 4

The Taylor River division which shall include the following: (a) All of the Taylor River drainage, (b) That portion of the Gunnison River drainage which lies east of the Gunnison River and north of the Gunnison City limits, (c) That portion of the Gunnison River drainage which lies west of the Gunnison River and north of the south section line of Sections 28 and 29, Township 51 North, Range 1 East, N.M.P.M., and east of the ridge line between the Ohio Creek and Gunnison River drainages, and (d) That portion of the East River and Cement Creek drainages which lies south of an east-west line which commences on the west at the southwest corner of Section 15, Township 14 South, Range 86 West, 6th P.M., and continuing easterly along the south section line of said Section 15 and adjoining section lines to the east to a point on the section line between Sections 16 and 21, Township 14 south, Range 84 West, 6th P.M. at which said section line intersects the ridge line between the Taylor River and Cement Creek drainages. That division shall be entitled to one director.

Julie Vlier
Term expires: June 2020

DIVISION 5

The Crested Butte division, which shall include all of the East River and Cement Creek drainages except that portion thereof which is located within division 4. That division shall be entitled to two directors.

Rosemary Carroll
Term expires: June 2019

Julie Nania
Term expires: June 2021

DIVISION 6

The Ohio Creek division, which shall include all of the Ohio Creek and Antelope Creek drainages and that area of the Gunnison River drainage which lies west of the Gunnison River from its confluence with Antelope Creek on the south to the south boundary of division 4 on the north. That division shall be entitled to one director.

Stacy McPhail
Term expires: June 2022

DIVISION 7

The Gunnison River division, which shall include all of the Gunnison River and Tomichi Creek drainages except that portion thereof which lies within divisions 1, 2, 3, 4, 6 and 8. That division shall be entitled to one director.

Andy Spann
Term expires: June 2022

DIVISION 8

The City of Gunnison division, which shall include that area of the District which lies within the city limits of the City of Gunnison. That division shall be entitled to three directors.

Bill Nesbitt
Term expires: June 2020

George Sibley
Term expires: June 2022

John Perusek
Term expires: June 2022

NUNATAK ALTERNATIVE ENERGY SOLUTIONS

SERVICES AGREEMENT

This SERVICES AGREEMENT (this **"Agreement"**) is made and entered into as of 04/04/2019 (the **"Effective Date"**) by and between Nunatak Alternative Energy Solutions, Inc. a Colorado corporation with its principal place of business at 159 Bear Tr, Almont, Colorado, and its Successors and Assigns (**"Provider"**) and Frank Kugel whose residence is at 210 West Spencer Avenue, Suite B, Gunnison, CO 81230 (**"Customer"**). The Provider and Customer shall hereinafter be referred to individually as a **"Party"** and collectively as the **"Parties"**.

BACKGROUND

Customer wishes to obtain, and Provider is willing to provide, certain services as more specifically described below and on attached Estimate (**"Services"**), on the terms and conditions set forth in this Agreement.

AGREEMENT

1. SCOPE OF SERVICES

1.1 Provision of Services. During the term of this Agreement, Provider will provide the following Services:

- Design and installation of roof-mounted 7kw PV system with LG350 panels and Enphase microinverters, with interconnections of 2.8kw on Meter B and 4.2kw on Meter C.
- Customer orientation to operation and monitoring of the PV system

1.2 System Location. 210 West Spencer Avenue, Suite B, Gunnison, CO 81230

1.3 Start and Completion Dates are estimates based on current scheduling. These dates may change.

Approximate start date: TBD 2019 Approximate completion date: TBD 2019

Provider will not be liable for any delay or failure in achieving implementation that is due to the failure of Customer and/or one or more third parties. The Parties shall agree to extend any dates or time periods relevant to performance by Provider under this Agreement to account for any delays caused by Customer and/or one or more third parties. Solarize Program participants will be scheduled as time allows.

1.4 Limited Scope. This Agreement does not include labor or materials for the following work:

- N/A

2. MEDIA. Please check box below if you would prefer Provider to **NOT** use any photos or other media of your renewable energy system in their marketing materials. Leaving box unchecked indicates that Provider may use this media in their marketing materials.

☐ *Customer prefers system photos and other media NOT be used in Provider's marketing materials*

3. COST. In consideration of the Services provided by Provider hereunder, Customer shall pay Provider in accordance with the following terms:

The cost of the above scope of work is estimated at the sum of: $29,633.60. Any changes will be initiated by a change order agreed to by both parties. **Any applicable Solarize discounts will be applied to Final Payment amount on final invoice.**

4. **SCHEDULE OF PROGRESS PAYMENTS.**

a. Down Payment:	Due when Agreement is signed and returned:	$10,000.00
b. Second Payment:	Due when equipment is delivered on site:	$9,900.00
c. Estimated Final Payment	Due upon substantial completion of Services when Final Invoice is issued:	$9,733.60
	Total of all Payments Above (Estimated total lump sum price):	$29,633.60

I hereby agree to the Schedule of Progress Payments above: FJK

FJK

Customer initial

5. **INDEMNIFICATION BY CUSTOMER.** The Customer agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Provider, its officers, directors, employees and agents from and against any liabilities, damages and costs (including reasonable attorneys fees and costs of defense) to the extent caused by the negligent acts, errors or omissions of the Customer, the Customer's contractors, consultants or anyone for whom Customer is legally responsible, subject to any limitations of liability contained in this agreement

6. **INDEMNIFICATION BY PROVIDER.** The Provider agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Customer, its officers, directors, employees and agents from and against any liabilities, damages and costs (including reasonable attorneys fees and costs of defense) arising out of the death or bodily injury to any person or the destruction or damage to any property, to the extent caused, during the performance of Services under this Agreement, by the negligent acts, errors or omissions of the Provider or anyone for whom the Provider is legally responsible, subject to any limitations of liability contained in this agreement.

7. **WARRANTY.** Provider hereby warrants installation labor for five years, which covers correct installation of system components in accordance with all applicable building codes and up to industry standards. Warranty period begins upon completion of the system installation.

8. **DISCLAIMER OR WARRANTIES.** Provider makes no warranties relating to the materials, express or implied. Al manufacturers' warranties, if applicable, stand independently for their respective products. Provider not responsible for damage to system due to neglect of regular maintenance of system, including but not limited to: clearing of snow from the array and areas around the array.

9. **LIMITATION OF LIABILITY.** IN NO EVENT WILL PROVIDER OR CUSTOMER BE LIABLE FOR ANY INDIRECT, PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT, INCLUDING LOSS OF BUSINESS, REVENUE, PROFITS, USE, OR OTHER ECONOMIC ADVANTAGE, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, EVEN IF PROVIDER HAS BEEN PREVIOUSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND EVEN IF ANY EXCLUSIVE REMEDY PROVIDED FOR HEREIN FAILS OF ITS ESSENTIAL PURPOSE.

10. Provider, and any subcontractor of the Provider, reserve the right to discontinue work if Customer or anyone present at the jobsite appears to be under the influence of drugs or alcohol, threatening, or otherwise disruptive to the Provider or any of the Provider's subcontractors. The Customer will be responsible for paying for the scheduled time to work at the jobsite that day in addition to the total lump sum price.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

Nunatak Alternative Energy Solutions, Inc.

"Provider"

By: _____

Name: Lena Wilensky

"Customer"

Frank Kugel

Frank Kugel (Apr 4, 2019)

Sign

Name: Frank Kugel

Print

Nunatak Alternative Energy Solutions
159 Bear Trail
Almont, CO 81210
(970) 642-5554
info@nunatakenergy.com
www.nunatakenergy.com

Estimate

ADDRESS
UGRWCD

ESTIMATE #	DATE	EXPIRATION DATE
1347	03/27/2019	04/30/2019

JOB
LG 7kw

SALES REP
Lena

ACTIVITY	QTY	AMOUNT
Grid-Direct PV System Grid-Direct PV System: 7kwDC grid-direct PV system with LG350W panels and Enphase IQ microinverters, roof mounted on comp shingle roof, interconnection on Meters B and C, web-based monitoring with reliable WiFi connection, rapid shutdown compliant.		20,683.60T
Labor and Design:New Construction Labor Billable time for design, installation, and commissioning of new systems.		8,000.00
Shipping Costs Shipping Costs	1	700.00
Permit State Electrical Permit *tax exempt*	1	250.00

Final system design pending additional site visit to confirm roof structure and grid interconnection.

Panel choice dependent on availability at contract signing date.

SUBTOTAL	29,633.60
TAX (0%)	0.00
TOTAL	**$29,633.60**

Accepted By

Accepted Date

Upper Gunnison River Water Conservancy District

210 West Spencer Avenue, Suite B • Gunnison, Colorado 81230
(970) 641-6065 • www.ugrwcd.org

April 1, 2019
(submitted electronically via email)

Acting Forest Supervisor Chad Steward
GMUG National Forest
2250 South Main St.
Delta, CO 81416
chadstewart@fs.fed.us

District Ranger Matt McCombs
Gunnison Ranger District
216 N. Colorado St.
Gunnison, CO 81230
mmccombs@fs.fed.us

Reviewing Officer and Regional Forester Brian Ferebee
USDA Forest Service Rocky Mountain Region
740 Simms
Golden, CO 80401
R02admin_review@fs.fed.us

Reviewing Officer and Deputy Regional Forester Tammy Whittington
U.S. Forest Service
Rocky Mountain Region
1617 Cole Blvd.
Building 17
Lakewood, CO 80401
tamarawhittington@fs.fed.us

Re: Crested Butte Mountain Resort Ski Area Projects Draft Record of Decision and Final Environmental Impact Statement.

Dear Mr. Steward, Mr. McCombs, Mr. Ferebee, and Ms. Whittington:

The Upper Gunnison River Water Conservancy District's mission is to be an active leader in all issues affecting the water resources of the Upper Gunnison River Basin. As such, the District provides the following comments on the Draft Record of Decision (DROD) and Final Environmental Impact Statement (FEIS) for the Crested Butte Mountain Resort (CBMR) Ski Area Projects published on February 15, 2019. This letter is not an administrative objection to the DROD but is intended to identify our outstanding concerns about the DROD and FEIS. The UGRWCD requests that the United States Forest Service (USFS) consider the comments below when assessing actions in the project area.

In our comment letter on the Draft Environmental Impact Statement, we requested that the document use the proper terminology for the minimum bypass flow and instream flow water right. The FEIS incorporated several changes to correct terminology errors. However, the following errors remain in the DROD.

At page ROD-11 the text in paragraph two reads "As is required by existing bypass flow agreements and its water rights, CBMR will continue to limit its snowmaking diversions from the East River to pumping rates not exceed its decreed water right of 6 cfs. By continuing to comply with requirements of its instream flow agreements with the State of Colorado and the Forest Service, snowmaking will not cause the East River to flow at less than the required minimum bypass flow." This sentence is incorrect for the following reasons:

- A water right does not limit the amount of water a user can divert under all circumstances. Free river conditions occur when there is more water than all perfected water rights on a river system, enabling any water user, with or without water rights, to use water from that waterway. In the case of the CBMR snowmaking diversion, free river conditions could occur during the late fall and early winter due to a lack of diversions by downstream senior water users. Because free river conditions could occur, it is inaccurate to say that CBMR's water rights limit its snowmaking diversions. The current pumping capacity of the snowmaking diversion, natural flows in the East River, and the need to maintain compliance with the minimum bypass flow requirement are the factors that limit the diversion rate, not the water right.

- The minimum bypass flow is not self-implementing. CBMR staff must continue to employ the regression equation to assure that snowmaking diversions do not cause flow in the East River to fall below 7.0 cfs, or 6 cfs in December for a duration not to exceed 360 hours.

- CBMR does not have "instream flow agreements" with the State of Colorado. The Colorado Water Conservation Board, an agency of the State, holds instream flow water rights in this reach, but the requirements referred to in the DROD are imposed by the minimum bypass flow requirement established by Colorado Parks and Wildlife and the Forest Service.

To make the ROD accurate, we recommend that the text on page ROD-11 be revised to read "CBMR will continue to limit its snowmaking diversions from the East River to comply with the minimum bypass flow requirement established by Colorado Parks and Wildlife and the Forest Service, including the continued use of the regression formula to determine actual diversion rates. Snowmaking will not cause the East River to flow at less than the minimum bypass flows."

For the same reasons provided above the sentence in paragraph two on page 38 of the FEIS should be revised to read "The natural flow of the East River, the minimum bypass flow, and pumping capacity of the intake limit the diversion rate for snowmaking. Flow in the river is monitored using a regression formula, and during dry periods snowmaking ceases in order to maintain the minimum bypass flow."

Additionally, the word "junior" should be deleted from the final sentence in paragraph one on page 38. The minimum bypass flow is not a water right and is therefore not junior to CBMR's water right, it is a condition of the special use permit.

On page 222 the FEIS incorrectly states that the minimum bypass flow applies to the Mt. Crested Butte Water and Sanitation District (MCBWSD). The minimum bypass flow was established by the Forest Service and Colorado Parks and Wildlife and applies only to CBMR. Please remove the final two sentences in the paragraph titled "Snowmaking" on page 222 of the FEIS, that read "These increases would be required to meet the minimum bypass agreements specified in the MCBWSD's water rights permit, and not CBMR's. Further analysis of these bypass flow agreements and their impacts to the East River are outside the scope of this Final EIS." Finally, the language that suggests the minimum bypass

flow applies to MCBWSD was not included in the draft environmental impact statement. This letter represents our first opportunity to comment on this error.

Given that water for snowmaking is diverted from the East River, we continue to contend that the East River should have been included in the affected area analyzed in the FEIS.

Thank you for the opportunity to provide comments on the CBMR DROD and FEIS.

Sincerely,

Frank J. Kugel, General Manager
Upper Gunnison River Water Conservancy District
210 W. Spencer Ave., Suite B
Gunnison, CO 81230
(970) 641-6065
fkugel@ugrwcd.org

Lake Fork River Improvement Project: Phase II

Final Report
March 31, 2019

Prepared by:

Lake Fork Valley Conservancy
P.O. Box 123
Lake City, CO 81235

Submitted to:

UGRWCD
ATTN: Frank Kugel
210 West Spencer, Suite B
Gunnison, CO 81230

Executive Summary

The Lake Fork Valley Conservancy completed river improvements along approximately 3000 linear feet of the Lake Fork of the Gunnison, at the north end of the Town of Lake City. This is Phase II of a three phase project to improve the river through Town.

The overall goal of the Lake Fork River Enhancement Project is to improve the ecological health and recreational quality of Henson Creek and the Lake Fork River in the vicinity of Lake City.

Specific objectives are the following:

1) Increase fisheries habitat quality resulting in a 50% increase in brown and rainbow trout biomass;
2) Improve the hydraulics of the river to maintain existing or even reduce base flood elevation and facilitate effective bed load movement;
3) Improve bank stability to protect private and public assets along the river;
4) Provide quality recreational experiences along the river via increased public access, improved fishing and boating opportunities, and safer access to the river.

The project involved construction of several instream structures along the Lake Fork, primarily focusing on the Lake Fork River below 8 ½ Street Bridge. Additional work was completed just upstream of the 5th Street Pedestrian Bridge. In addition to river channel construction, we completed live transplanting of willows and cottonwoods during the channel construction process in fall of 2016 and planted 150 pole cuttings of willows and cottonwoods in the spring of 2017. These transplants thrived in summer of 2017 but suffered during the drought of 2018. We anticipate summer of 2019 to be much more amenable to transplant growth and recruitment due to high runoff and higher than normal projected precipitation.

Ten interpretive trail plaques were installed along the improved sections of Henson and the Lake Fork and are being used for environmental education with local youth. We added an extension trail on the Memorial Park terrace along with additional recreational infrastructure installed by the Town of Lake City.

LFVC purchased all of Block 4 and two lots in Block 13 in the Town of Lake City (approximately 2 acres), below the 8 ½ Street Bridge. This will be managed as an open space river park and kept in a natural condition with limited recreational infrastructure.

Final project cost was $506,060.58, of which the UGRWCD grants covered $84,170. This has been matched with $421,890.58, from both cash and in-kind sources. For Task 5, which the UGRWCD grants were targeted for, cost match was $95,964.64 (56%).

INTRODUCTION AND BACKGROUND

Over the past century, the Lake Fork of the Gunnison and Henson Creek in Lake City, CO, have been significantly modified by channelization, heavy metals, and failure of upstream tailings dams. The Lake Fork Valley Conservancy (LFVC) began a planning process in 2009 to restore over 7,500 linear feet of river through Town. LFVC, in partnership with the Town of Lake City, completed Phase I improvements on lower Henson Creek and at the confluence with the Lake Fork in October 2014. This work covered 3,300 linear feet of river with a combined investment of over $500,000.

Phase II of the River Project covers approximately 3,000 linear feet of the Lake Fork from the 5th Street pedestrian bridge downstream to past the sewage treatment facility north of Lake City (Figure 1). In the early 1980's, temporary berms were constructed at the north end of town to divert flood waters from the highway so that the Colorado Department of Transportation could engineer the slope beneath to withstand high flows, completed in the 1990's. High flows from 2011 to 2015 eroded much of the berm on the northwest side of the river, threatening private property and creating a highly unstable and braided channel (Figures 2-3). This area has great potential for restoration through the removal of the berms, realignment of the channel, and reestablishment of riparian forest and wetland vegetation, as visualized in Figure 4. Major project components include in-channel improvements and revegetation, installation of an interpretive river trail system with public/private signage, and acquisition of properties and easements to create an open space river park. River channel improvements and revegetation will enhance aquatic and riparian habitats, stabilize banks, improve hydraulics, and improve recreational experiences for anglers and boaters. The interpretive river trail system will help to increase knowledge and appreciation of the river's rich cultural and natural history and reduce trespass. Acquisition of properties for an open space river park will help preserve key riparian communities that are considered relatively rare, protect an important floodway through Town, and increase the amount of river available to the public.

OBJECTIVES

The overall goal of the Lake Fork River Enhancement Project is to improve the ecological health and recreational quality of Henson Creek and the Lake Fork River in the vicinity of Lake City.

Specific objectives are the following:

5) Increase fisheries habitat quality resulting in a 50% increase in brown and rainbow trout biomass;
6) Improve the hydraulics of the river to maintain existing or even reduce base flood elevation and facilitate effective bed load movement;
7) Improve bank stability to protect private and public assets along the river;
8) Provide quality recreational experiences along the river via increased public access, improved fishing and boating opportunities, and safer access to the river.

PROJECT TASKS

TASK 1 – Project Design and Permitting

Description of Task and Outcomes

A 60% engineered design plan for river channel construction has been completed for Phase II of the river project, which includes an additional 2,500 linear feet of river not constructed as part of this funding (future Phase III of the project, currently partially funded). This was completed by our design engineer, Brett Jordan from HydroGeo Designs (HGD), out of Buena Vista, CO. Design details, construction drawings and construction were combined into a design-build program for Phase II with our contractor, WEBCO, Inc. HydroGeo Designs sub-contracted with WEBCO to form a highly effective Design Build team, who successfully completed Phase I for the LFVC. Detailed design drawings (Appendix A) and final report were submitted to CWCB along with all data, under Watershed Restoration Program Grant Order #POGG1 PDAA 20150000000000000290.

Hinsdale County Floodplain and US Army Corps of Engineers permit applications were approved in September 2016, prior to construction work. Permit approvals are contained in Appendix B. We were delayed in getting approvals due to added requirement by the Grand Junction USACE office to complete wetland delineation and cultural surveys. These reports can be found in Appendix C and D.

Status of Deliverables Timeline

Deliverables	**Proposed Timeframe**	**Completed By:**
Completion of 60% engineered design	Sept 2015 – February 2016	Design Drawings Oct 2015; Report April 2016
Flood plain, USACE permits	February – April 2016	Final approvals Sept 2016

TASK 2 - In-Channel Construction

Description of Task and Outcomes

All in-channel construction has been completed under this funding cycle. Construction work was done from the 5th Street pedestrian bridge downstream to below the sewage treatment facility north of town (Sheets 3, and 5-9 in Attachment B – Design Drawings). Construction work was completed by our existing contractor, WEBCO, Inc., with construction oversight by Brett Jordan, HydroGeo Designs.

Table 1 shows the work and costs originally proposed as part of the CWCB WSRA Scope of Work, compared to what was actually done in the field. Deliverables are construction of 3 cross vanes, 13 vanes, 3 j-hooks, 1 boulder habitat cluster, and 220 linear feet of floodplain sills. In addition, 4,010 cubic yards of floodplain material was reshaped and the old levees downstream

of 8½ Bridge were removed (see photo montage in Figure 5). Any shrubs and trees disturbed during reshaping were transplanted to newly created floodplains (see Task 3). We had to reduce the number of smaller structures such as clusters and vanes due to the large size of the boulders that were delivered. Once the large cross vanes and j hooks were constructed, we did not have enough rock to complete all proposed structures. But this ensures that these larger structures will withstand higher flood levels. Vanes we were able to construct were strategically placed in critical bends of the river to ensure stability.

Table 1. WEBCO's 60% Engineered design estimates compared to final construction costs.

	Total Proposed in Phase II Design:			***Completed:***	
Item	***Unit cost***	***number***	***Total***	***number***	***Final Cost***
Rock (CY)	$120.00	970.5	$116,460.00	986.5*	$118,380.00
Cross vanes (equipment)	$5,000.00	3	$15,000.00	3	$15,000.00
J hooks (equipment)	$3,200.00	3	$9,600.00	3	$9,600.00
Vanes (equipment)	$1,200.00	21	$25,200.00	13	$16,350.00
Bed Sills (equipment) (linear foot)	$10.00	226	$2,260.00	220	$2,200.00
Boulder clusters (equipment)	$315.00	10	$3,150.00	1	$315.00
gravel removel and channel reshaping	$10.00	40100	$62,500.00	4150	$41,500.00
Transplants	LS		$2,000.00	LS	$2,200.00
Mobilization	LS		$2,500.00	LS	$3,350.00
Phase I structure maintenance (per hour)	$200.00	10	$2,000.00	10	$2,000.00
Construction oversight (HGD)			$30,000.00		$24,000.05
Bonding			-	LS	$7,753.00
TOTAL			**$270,670.00**		**$242,648.05**
*100 CY of rock was left over from Phase I. Webco charged for 886.5 CY during Phase II.					

Maintenance work was done on some structures. A couple of cross vanes had rocks that had tilted a bit during the high flows of 2015 and 2016. These were straightened. One cross vane pool was dredged a bit as it had filled in during these events. We removed some boulder clusters below the cross vane at the fishing pier at Memorial Park (Phase I). This is a popular swimming hole and the clusters were causing a hazard for people who were jumping into the hole beneath the cross vane. Three boulder clusters were removed.

Status of Deliverables Timeline

Deliverables	**Proposed Timeframe**	**Completed By:**
Mobilize equipment/ materials	Sept 2016	Sept 2016
in-channel construction	Oct-Nov 2016/spring-fall 2017	End of October 2016
Maintenance work (correction of cross vanes on Henson, removal of clusters at Memorial Park)	-	August 2018

TASK 3 – Revegetation

Description of Task and Outcomes

Areas previously denuded and those impacted from construction are being revegetated with native willows, poplars, alder and spruce, to bring back the natural riparian community that previously existed here and that is of high biodiversity significance in the state. In areas where live vegetation was to be moved to reshape the channel and banks, these materials were transplanted to newly constructed flood plain. This was done with great success in Phase I with 100% survivability of transplants. Transplants in Phase II showed good growth in 2017, but failed to thrive during the drought year of 2018. We hope that the high snow pack and run off in 2019 helps recover these plantings.

The Phase II area below the 8 ½ Street Bridge requires intensive revegetation work beyond transplants and natural recruitment due to the significant amount of flood plain reconstruction that took place here. A grant was submitted to American Rivers in December 2015 to fund the cost of revegetation along the highly denuded area below 8½ Street Bridge (in oval area of Figure 1). This grant was to cover costs for materials and labor to be provided by Wildlands Restoration Volunteers. We were unsuccessful with this proposal.

LFVC applied for a small grant from US Fish and Wildlife Service Partners and received $3,000 to plant willow and poplar pole cuttings. We hired a local contractor to dig 150 holes to a depth of base flow ground water table in early April 2017. FFC Fencing out of Monte Vista, CO, then cut 50 cottonwood and 100 willow poles and planted in these holes. Each cutting was fertilized with root stimulator, backfilled with surrounding substrate, and covered with weed barrier fabric (Figure 6). In addition, we have purchased native grass and forb seed to broadcast in the area this coming summer. We had initially planned to seed last year but the drought of 2018 was severe and we decided to wait for more favorable conditions. As with the transplants discussed above, the pole cuttings showed good growth during the 2017 season, but failed to thrive in 2018. We hope that this year's conditions help revive the growth of the cuttings.

This area will need ongoing revegetation efforts due to the difficult substrate in the wider floodplain area. We will continue to search for funding to cover this vital project component.

Figure 4 shows what we hope the area will look like once we manage to get significant vegetation to establish.

Status of Deliverables Timeline

Deliverables	**Proposed Timeframe**	**Completed By:**
Design completed by Wildlands Restoration Volunteers	January 2017	April 2017 by FFC Fencing, Monte Vista
Revegetation	Fall of 2016 and 2017	Pole plantings April 2017; seeding June 2019

TASK 4 – Interpretive River Trail System

Description of Task and Outcomes

1) *Design and install an interpretive trail system along Phase I and Phase II sections of the river.*

LFVC coordinated the design and implementation of the first phase of an interpretive trail system along existing and new trails along Henson Creek and the Lake Fork (see map Figure 7). This system is helping to increase knowledge of river systems and appreciation for the asset this river provides the community. LFVC has used these plaques for environmental education programs with local youth and adults.

LFVC has already completed design and installation of 10 plaques and installed these in the early summer of 2018 (See Appendix E for final plaque images). We will design and install an additional eight plaques in 2020, depending on funding. The remaining plaques will cover the following topics:

1. Pump House Park and the Town Well System
2. Those Pesky Invasives!
3. Geology of a River Valley
4. Ocean Wave Smelter and Dam
5. History of Pete's Lake Wetlands
6. Macroinvertebrates
7. To be determined during design phase
8. To be determined during design phase

We have completed relevant sections of an accompanying guide book that gives more details on each topic for the first ten plaques. This will be published for use by trail walkers, once the remaining eight plaques are designed and installed.

A new trail was constructed on the Memorial Park terrace that was built in 2014 as part of Phase I. This trail was completed by the Hinsdale County Trials Commission in the summer of 2015.

The town also installed a gazebo and landscaping. See Figure 8 for a view of this very aesthetic and much visited recreational space.

2) Install signage that clearly demarcates public and private lands along the river in Town.

To date, river users have not really understood where the public-private interface exists and trespass inevitably results, especially if recreational use increases with river enhancements. Public access signage will be installed to guide users to public portions of the river. This effort will help to reduce potential conflicts and improve support of local land owners for current and future restoration efforts.

Unfortunately, we did not receive the funding to cover this component. However, under current UGRWCD watershed planning funding, we are working on a River Recreation Corridor Plan that will include placement of these types of signs, in addition to future river channel improvements, riparian enhancement, and recreational infrastructure. This plan is projected to be completed by spring of 2020.

Status of Deliverables Timeline

Deliverables	**Proposed Timeframe**	**Completed By:**
Install existing plaques (10 completed)	NTP + 60 days	Installed May 2018
Complete design of 6 additional plaques	September 2016 – February 2017	Not funded – proposed 8 new plaques and currently seeking funding
Install new plaques (6)	June 2017	Not funded – currently seeking funding
Install public/private boundary signs	September 2016 – February 2017	Not funded – proposed as part of the Lake Fork River Recreation Corridor Plan to be completed 2020
Complete interpretive trail guide	May 2017	Will be completed in 2020, concurrent with installation of final eight plaques
Construct new trail in open space park area	Summer 2017	Completed summer 2015

TASK 5 – Open Space River Park land and easement acquisition

Description of Task and Outcomes

The area below the 8½ Street Bridge (in the oval in Figure 1) has never been developed, although being primarily private parcels owned by the Main Family, Brad Griffith, and Silver

River Estates at the time we submitted this proposal. This area has great potential to be a public open space river park, granting residents and tourists greater access to the river, which is currently limited, and protect an important flood zone within the town of Lake City.

1) *Complete appraisal of private properties and easements/donations*

LFVC hired Arnie Butler, Conservation Appraiser out of Grand Junction, to complete appraisals for the parcels and public access easements in this area. Final appraisals were completed in fall of 2016. He provided appraised values for total land purchase of the Main property, donated Silver River land, and 25 foot access easements along the river (see Appendix F for appraisals).

2) *Complete transaction for donation of approximately 1.5 acres of Silver River parcel to the LFVC.*

The Silver River parcel is a total of 4 acres. They had initially agreed to donate the western portion of the property to LFVC, divided down the middle of the river, which is just under 2 acres and adjacent to the Main parcels to the north along the west side of the river (Figure 9). The donated value of this portion of the property is $25,000.

This step entailed initiating a sub-division process with Hinsdale County, which required a survey. We completed the survey in spring of 2017 (Appendix G), but the land owners did not agree to move forward with the sub-division process. At this point we are not certain if this donation will happen, but we are still in discussions with the land owners.

3) *Purchase of Main parcels*

The Main family parcels contain all of Town of Lake City's Block 4 and Lots 31 and 32 of Block 13 (approximately 2 acres). LFVC purchased the property in February 2017 with an owner financed promissory note, interest free if paid off within three years (Attachment H). Purchase price was $165,000 as per appraisal. LFVC made a down payment of $65,000 plus closing costs, using funds from the Gates Family Foundation and donations. UGRWCD later provided a grant for $70,000 toward the purchase price. The final $30,000 will come from private donors. We will pay this loan off by end of 2019.

4) *Public access easements*

In addition to acquiring the above lands, we had initially planned to also place a 25 foot public access easement along the river channel. The transaction costs were to be covered with a $33,000 grant from CPW's Fishing is Fun Program, including payment to LFVC of the value of the easements. However, after we were awarded the grant, the State of Colorado restricted use of FiF funding for easements or land acquisition, so now these funds will be used for river channel construction in Phase III of the Project.

We will place the acquired Main parcels under a deed restriction that allows public access and limited recreational development on the land to maintain more natural conditions. We will also do this for the Silver River property, if donated. This will ensure that the flood way and adjacent

flood plain are protected in perpetuity. Recreational development options along this reach will be identified as part of the Lake Fork River Recreation Corridor Plan. We will then explore possible donation to the Town of Lake City to add to their park system.

Status of Deliverables Timeline

Deliverables	**Proposed Timeframe**	**Completed By:**
Appraisals	September 2015 – January 2016	September 2016
Survey of Silver River subdivision	February 2016	Spring 2017
Complete sub-division process	February – April 2017	Survey done in spring 2017. Sub-division process on hold.
Complete Main land purchase	Summer 2016	February 2017
Complete easement transaction	Summer 2016	Not done. Deed restrictions to be placed on Main property in 2020.

TASK 6 – Post Construction Monitoring

Description of Task and Outcomes

1) *Channel surveys and structural assessments*

Prior to Phase I construction, LFVC selected seven cross-section locations in the project reach. At each cross section the following was done: 1) identify and monument cross section end points; 2) perform detailed survey of each cross section; 3) perform a pebble count at each cross section; and, 4) establish photo points at each cross section (upstream, downstream and left and right bank directions. Standard Operating Procedures used for items 1-4 are from CDPHE's Measurable Results Project, also used by CWCB).

After completion of channel construction and revegetation activities, the entire project area (Phase I and Phase II) was monitored in late summer and fall of 2017. The above methods were repeated at the same locations. Also, an assessment of structures was done using CDPHE's Structural Assessment SOP (See Appendix I - Monitoring Report prepared by HGD).

The in-channel surveys indicate that the structures are performing as designed and are meeting the project objectives and the success criteria set forth in the Colorado Measurable Results Program. The Henson Creek and confluence reaches have been in place since 2013-2014, having withstood four to five runoff seasons. During this time the reaches have met or exceeded the bank full discharge each year (excluding 2018) with one runoff season having a 10 year return interval runoff that was estimated to be almost twice the bank full discharge. The Lake Fork reach structures downstream of the 8 ½ Street bridge have been in place for two runoff seasons and the bank full discharge in the reach was exceeded in 2017.

The three representative channel sections for the project reach on the Lake Fork downstream of the 8 ½ Bridge were surveyed pre-project in the fall of 2016 and post-project in the fall of 2017. These cross sections spanned the entire valley bottom up to the adjacent hillslopes to capture the contours of the pre-existing flood levees and the newly constructed flood plain post project. The fall 2017 cross section survey reveals that the project reach has maintained its designed single thread meandering form and maintained sediment transport and stability in a reach previously subject to channel braiding aggradation and channel instability, even during the high flow of 2017.

2) Photo monitoring

Photo monitoring along constructed reaches of Henson and the Lake Fork was completed prior to construction in 2013 and 2016, as well as after construction, using the CWCB's SOP for Collection of Stream Restoration Monitoring Photographs. We used the same cross sections for our photo monitoring as those used for the above cross sectional surveys (see map in Appendix I for locations). These results are in Appendix L.

3) Vegetation monitoring

We had planned to do vegetation sampling during the summer/fall of 2018, using the protocols described in Appendix J, which would also have included sapling survival counts and macro-invertebrate sampling as per BLM's Utah BugLab protocols: (http://www.usu.edu/buglab/MonitoringResources/MonitoringProtocols/#item=26). However, extreme drought significantly curtailed vegetation growth. The cottonwoods and willows we planted barely survived, if at all, but we hope this year's high snow pack and run off help ameliorate that. We plan to conduct vegetation monitoring this coming summer and fall (2019).

4) Fish biomass monitoring

In September, 2015, CPW sampled fish biomass in lower Henson, one site being located within our improvement area (fish sampling station GU0639, Appendix K). This site was not sampled prior to completion of habitat improvement structures, so it is not known to what extent fish populations have improved since completion of the project. If the upstream sample site is a reasonable comparison with pre-project conditions, it appears that the habitat improvement project may have doubled fish densities and biomass. Pre and post habitat improvement fisheries assessments conducted by CPW on the lower Lake Fork at Red Bridge documented similar improvements in fish densities, biomass, and numbers of quality sized fish. CPW is planning to repeat these protocols in the Phase II river improvement area on the Lake Fork this year or next.

5) Long term monitoring

LFVC and the Town will continue to monitor structures annually for three years following completion of the project (summer/fall 2019-21), documenting the condition of treatments and identifying problems that may develop. Periodic maintenance (average every five years) is planned just below the confluence of the Lake Fork and Henson to remove bed load that will

accumulate during years of high flow (bank full or higher). This has been incorporated into the engineered design. In-channel structural maintenance will be dealt with as needed (e.g. after larger flood events).

Status of Deliverables Timeline

Deliverables	**Proposed Timeframe**	**Completed By:**
Pre-survey data	-	Submitted to CWCB in previous reports
CPW Fish Survey (Appendix J)	-	Completed 2015. Future survey summer of 2019.
post construction channel/pebble count surveys	Aug-Sept 2018	October 2017 (Appendix H)
post-construction vegetation and macroinvertebrate surveys	Aug-Sept 2018	Pole cuttings counted August 2017; Vegetation survey and macros done 2019-20
post-project structure assessment	Sept 2018	October 2017 (Appendix H)

TASK 7 - Project oversight and administration

Description of Task and Outcomes

This task involved the coordination of project activities and administration of grants.

Status of Deliverables Timeline

1) Deliverables	**Proposed Timeframe**	**Completed By:**
a) project coordination	Throughout Project	March 31, 2019
b) reimbursement requests	15 days after end of each quarter or as needed	Three submitted
c) semi-annual reports	Every 6 months. First report due 6 months from NTP	Updates provided with first two reimbursement requests
d) final report	Mar 31, 2019	March 31, 2019

PROJECT EXPENDITURES

Final project cost was $506,060.58, of which the UGRWCD grants covered $84,170. This has been matched with $421,890.58, from both cash and in-kind sources. For Task 5, cost match was $95,964.64 (56%). Table 2 shows total expenditures broken down by task and sources of match.

Table 2. Expenditures broken down by task and sources of match.

				Cash and in-kind Contribution by Partners*:							
Task	**Task Description**	**UGRWCD 2015 funding**	**UGRWCD 2016-17 funding**	**CWCB WSRF**	**CWCB CWRP**	**LFVC**	**USFWS Partners**	**Gates Family Foundation**	**Hinsdale County Trails (in-kind)**	**Cumulative Match**	**Total Project Cost**
1	Project Design and Permitting	$0.00	$0.00	0.00	$19,950.00	$3,940.03	$0.00	$0.00	$0.00	$23,890.03	$23,890.03
2	In-Channel Construction	$0.00	$0.00	201,948.00	$0.00	$40,700.05	$0.00	$0.00	$0.00	$242,648.05	$242,648.05
3	Revegetation	$0.00	$0.00	0.00	$0.00	$0.00	$3,000.00	$0.00	$0.00	$3,000.00	$3,000.00
4	Interpretive Trail System, new trails	$0.00	$0.00	0.00	$0.00	$6,390.94	$0.00	$0.00	$3,600.00	$9,990.94	$9,990.94
5	Open Space Acquisition	$6,670.00	$70,000.00	0.00	$0.00	$35,964.64	$0.00	$60,000.00	$0.00	$95,964.64	$172,634.64
6	Monitoring	$0.00	$0.00	12,971.70	$0.00	$1,867.00	$0.00	$0.00	$0.00	$14,838.70	$14,838.70
7	Project Management	$2,250.00	$5,250.00	18,025.00	$0.00	$13,533.22	$0.00	$0.00	$0.00	$31,558.22	$39,058.22
	TOTAL	**$8,920.00**	**$75,250.00**	**$232,944.70**	**$19,950.00**	**$102,395.88**	**$3,000.00**	**$60,000.00**	**$3,600.00**	**$421,890.58**	**$506,060.58**

* CWRP - CWCB Watershed Restoration Program; UGRWCD - Upper Gunnison RIver Water Conservancy District; LFVC - Lake Fork Valley Conservancy; USFWS - US Fish and Wildlife Service

LIST OF FIGURES

LIST OF APPENDICES:

Figure 1. Comprehensive River Enhancement Project Area. Phase II is below the 8 ½ Street Bridge and also upstream near the 5th Street Pedestrian Bridge, within the ovals below. Phase III will be the remaining areas between 2nd Street and 8 ½ Street Bridge. See Appendix A for Design Drawings.

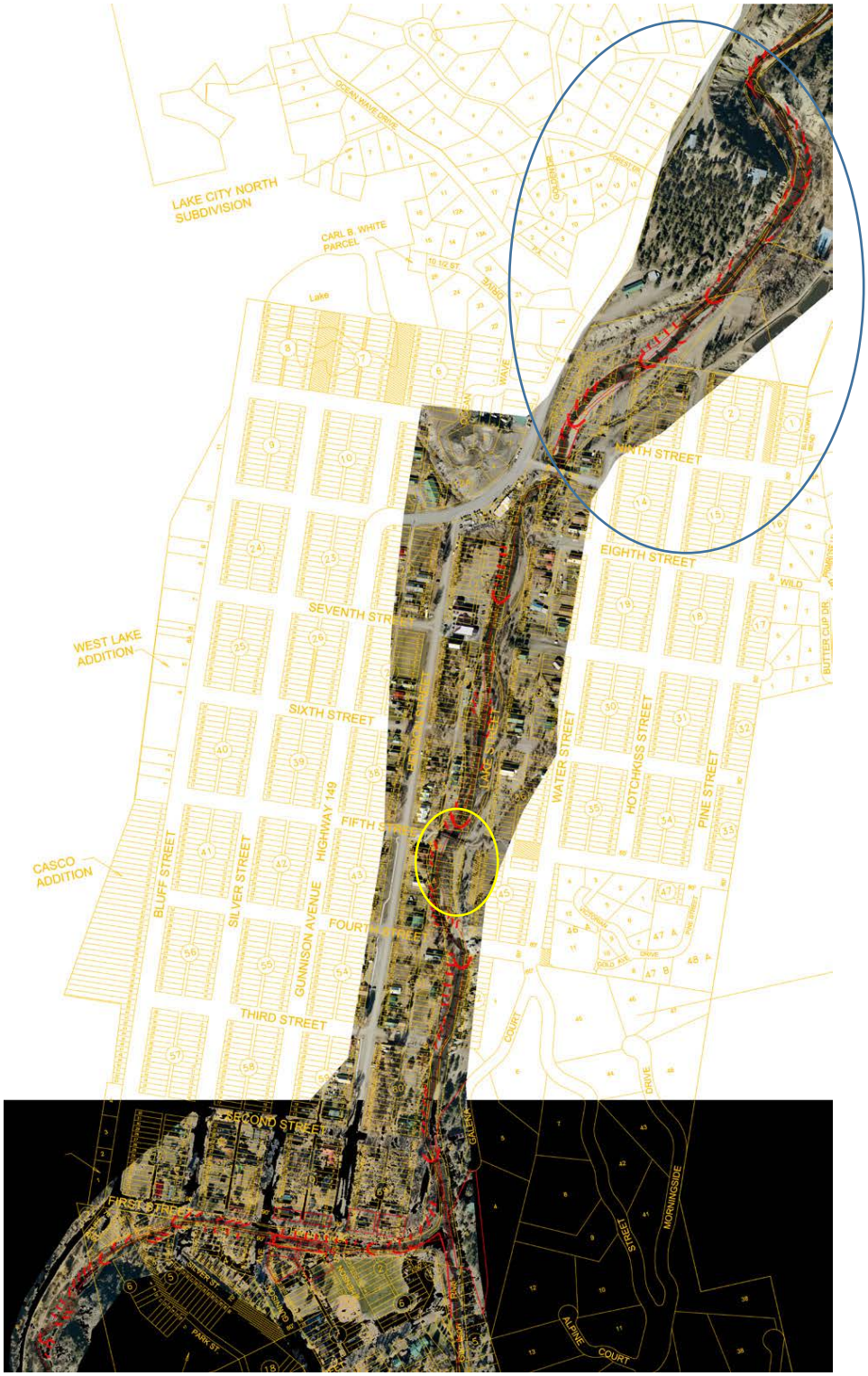


Figure 2. Channelization along the river through placement of gravel berms in the 1980's.

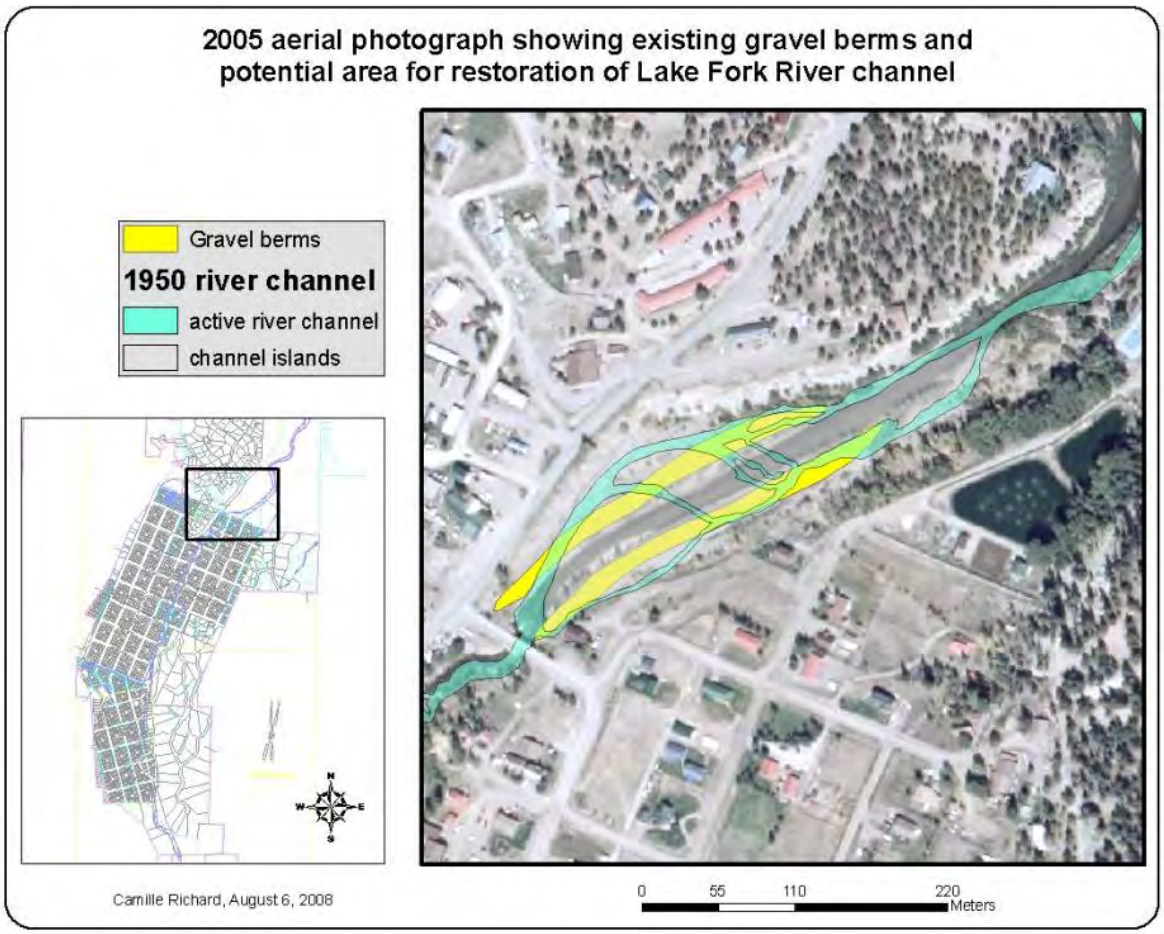


Figure 3. Pre-construction photos of area pre-flood (2009) and post-flood (2014 and 2016). In 2015-16, many of the trees on the left bank were lost. The first photo shows the gravel berm on the west side. This one was mostly washed out with the high flows in 2014-16 (third and fourth photos). The second photo shows the old gravel berm on the east side of the river, which was removed.

Figure 4. A graphical rendition of proposed improvements on the Lake Fork below the 8 ½ Street Bridge in Lake City with trail and revegetation within the proposed open space river park.

Figure 5. Reshaping of the flood plain and structure installation below the 8 ½ Street Bridge (fall 2016). The second to last photo is looking back toward the bridge and shows where a large area of berm was removed (compare to pre-construction photo Figure 3, second photo). Last photo is the area after one year of high flow (fall 2017).





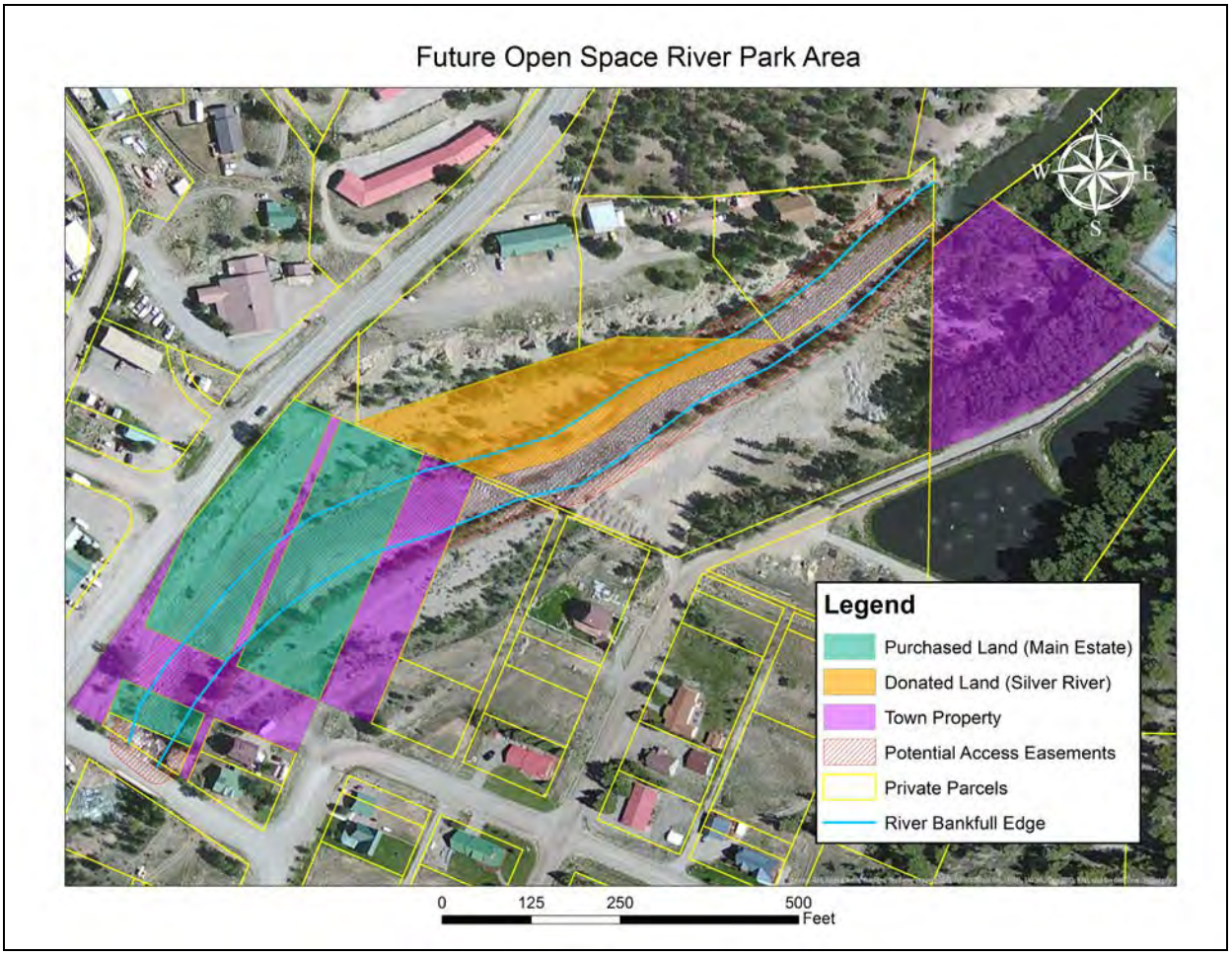


Figure 6. Photos of pole planting work in April 2017. The 4th photo shows a transplant sprouting leaves in late May, 2017. The last photo shows natural recruitment that is occurring along the river bank after high flows.

Figure 7. Trails Map showing locations of first ten plaques. Plaques LF5 and LF6 are not completed and will be part of next phase design. Finished plaques are found in Appendix E.

Figure 8. Developed park space on the confluence terrace at Memorial Park. LFVC constructed the terrace in 2014 as part of Phase I and the extended trail in 2015. The town installed the gazebo and other recreational infrastructure in 2015.

Figure 9. Proposed open space park area showing purchased and acquired parcels, as well as Town public lands. The red hatched area is the initially proposed area for fishing access easements. We will not know what this will look like in terms of ownership and easement until after completion of the River Recreation Corridor Plan.



North American Weather Consultants, Inc.

Air Quality, Applied Meteorology, Meteorological Research, Weather Modification

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Facsimile 801-942-9007
E-Mail nawc@nawcinc.com

April 3, 2019

Frank Kugel
Upper Gunnison River Water Conservancy District
210 West Spencer, Suite B
Gunnison, CO 81230

Dear Frank:

This report covers activities conducted for the upper Gunnison River Basin cloud seeding program during March 2019. March was an active weather month, with above normal snowfall area-wide. There were six seeding opportunities during March, as summarized in Table 1.

Avalanche conditions were carefully monitored before and during each event to ensure that all regulations were honored. Seeding suspensions for the entire target occurred on the 6th for a period of about five days due to avalanche concerns after discussions between the Upper Gunnison River Water Conservancy District (UGRWCD) and North American Weather Consultants, Inc. (NAWC). On the March 12, seeding suspensions continued only for Hinsdale County for the reminder of the month due to the continued high SNOTEL snowpack values and avalanche concerns. On March 27, UGRWCD asked for seeding to be suspended for the Cochetopa area in the southern portions of the target area. Table 2 shows the amount of snow water equivalent accumulated at select SNOTEL sites during seeded events. Figure 1 shows budgeted verses actual seeding hours for the season so far.

Table 1
Generator Usage for March 2019

Storm Number	Dates	Number of Generators Used	Number of Hours
23	March 1	3 + remote	19.75 + 4 remote
24	March 3	5 + remote	37.25 + 3.25 remote
25	March 13	7 + remote	51 + 7.75 remote
26	March 22	4	20.25
27	March 24	3 + remote	26.5 + 4 remote
28	March 29	5 + remote	32.75 + 4 remote

March Total	---	---	187.5 + 23 remote
Seasonal Total	---	---	1795 + 103.25 remote

Table 2
SNOTEL Snow Water Equivalent Accumulation for March Seeded Storm Events

Dates	SNOTEL Site					
	Schofield Pass	Park Cone	Porphyry Creek	Cochetopa Pass	Slumgullion	Idarado
March 1	1.3	0.7	0.6	0.1	0.3	0.1
Mach 3	1.1	0.4	0.8	0.3	0.8	0.4
March 13	0	0	0.1	0.5	0.1	1.1
March 22	0.1	0	0	0.1	0.1	0.2
March 24	0.1	0.2	0	0.1	0	0.1
March 28	1.7	0	0	0	0	0.1

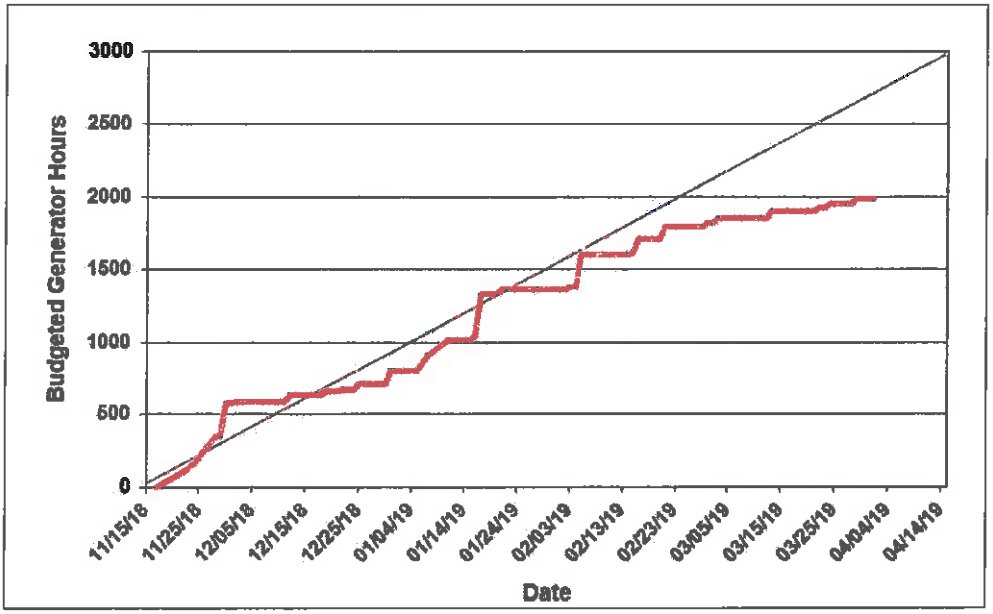

Figure 1 Seeding operations so far this season (red) in comparison to a linear usage of the total budged hours (diagonal black line)

As of April 1, 2019, snow water equivalent in the Gunnison Basin was above normal with a basin-wide median of 149% for the date. Water year precipitation as of April 1 was 133% of the mean for this date. Table 3 shows percentages of normal for the SNOTEL sites listed in and near the target area. Data were obtained from the Natural Resources Conservation Service website.

Table 3
Snow Water Content and Water Year Precipitation as of April 1, 2019

Measurement Site	Snow Water Equivalent (in)			Water Year Precipitation (in)		
	4-1-19	Median	%	4-1-19	Averag	%
Butte	19.2	13.3	144	18.6	15.7	118
McClure Pass	22.0	16.2	136	26.3	20.4	129
Schofield Pass	47.1	30.4	155	39.1	31.0	126
Park Cone	14.1	9.9	142	14.6	11.8	124
Porphyry Creek	21.4	15.2	141	18.7	15.1	124
Slumgullion	21.1	13.4	157	20.	13.0	155
Red Mountain Pass	33.0	22.8	145	32.3	25.2	128
Beartown	34.4	22.1	156	31.9	23.7	135
Idarado	18.9	13.9	136	22.5	18.2	124
Gunnison Basin %			**149**			**133**

Figure 2 is a map of snow water equivalent (SWE) for the Colorado River Basin area as of March 4. Data were obtained from the National Resources Science Center. It is obvious form this figure that the prevailing storm tracks have favored southern Colorado.

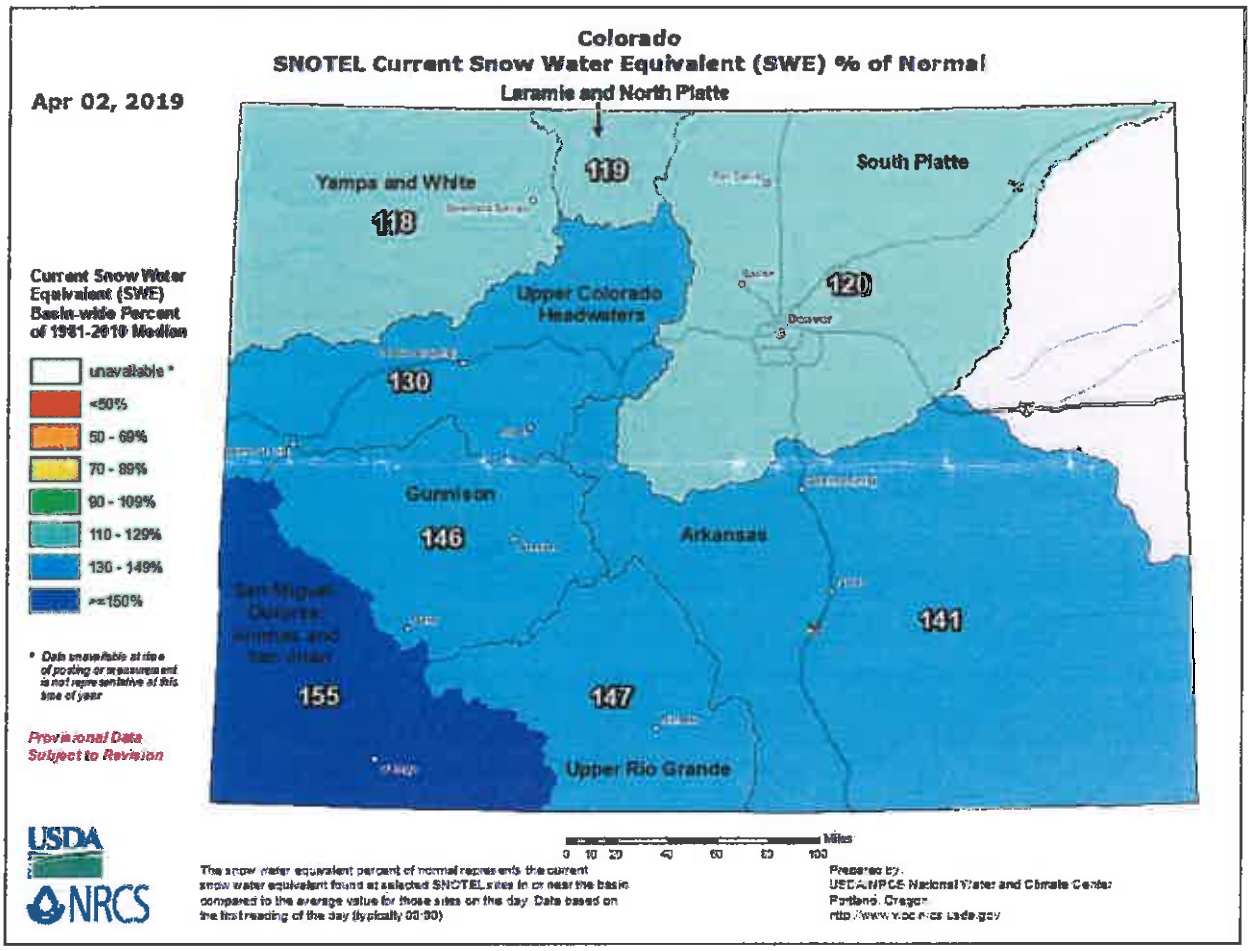

Figure 2 April 2, 2019 Snow Water Equivalent expressed as a percent of median (source: NRCS)

The seeding program is scheduled to continue through April 15, 2019. Please call us with any questions or comments.

Sincerely,

Don Griffith, President

cc: Joe Busto, Colorado Water Conservation Board
Tom Ryan, Metropolitan Water District of Southern California

UGRWCD
c/o Beverly

Thank you for the use of space
for our AmeriCorps program orientation.
We are grateful for your support.

Lyndie Bradshaw
Holly Conn

earth. food. community. mountain roots food project. org

AGENDA ITEM 13

April 2019

April 2019

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May 2019

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Mar 31	Apr 1 Jill Vacation 8:00am Colorado Water Congress State Affairs Committee (1580 Logan, Suite 700, Denver)	2 12:00pm GoToWebinar - Know Your Snow: understanding the importance of Colorado's snowpack	3 4:30pm Taylor Park Vegetation Workgroup 7:00pm Vandenbusche slide show (CB Museum)	4 WSCU Outdoor Industry Ethics - Summit (WSCU) 12:00pm Frank - Mayors and Managers mtg	5 8:00am Legislative Committee 8:00am Legislative Committee Meeting (857-216-4883) -	6
7	8 John vacation 8:00am Colorado Water Congress State Affairs 1:00pm WMP 2:00pm NWS Focus 6:30pm NWS Gunnison	9 9:00am Bev-Vet Appointment 11:30am League of Women Voters 1:00pm KBUT - West Elk	10 Frank - vacation	11 2:00pm Copy: STOR	12 8:00am Legislative	13
14 Frank - vacation	15 8:00am Colorado Water Congress State Affairs Committee (1580 Logan, Suite 700, Denver)	16 Colorado River District Board Meeting	17 8:00am GRF 2:00pm Bureau of Reclamation re 11CW31 settlement	18	19 8:00am Legislative Committee	20
21 Frank - vacation	22 8:00am Colorado Water Congress State Affairs 9:00am Work Plan Meeting - WMP 1:00pm Collective 5:30pm UGRWCD Board	23 2019 Audit 9:30am Colorado Water Congress Board of Directors meeting 1:00pm Aspinall operations meeting	24 Growing Water Smart in the Headwaters (Keystone) WMA Annual Conference (Gila Bend - Chandler) 25th Annual Arkansas River Basin Water Forum (Pueblo Conv	25 John vacation	26 8:00am Legislative	27
28	29 Ag Venture Presentation 8:00am Colorado Water Congress State Affairs Committee (1580 Logan, Suite 700, Denver)	30 Park Cone snow survey 2:00pm CCWC Technical Committee (CB Town Hall)	May 1	2	3	4

May 2019

May 2019

Su	Mo	Tu	We	Th	Fr	Sa
			1	**2**	**3**	4
5	**6**	7	**8**	**9**	10	11
12	**13**	**14**	**15**	16	17	18
19	**20**	**21**	**22**	23	**24**	25
26	27	28	**29**	30	31	

June 2019

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	**3**	**4**	**5**	**6**	7	8
9	**10**	**11**	**12**	**13**	14	15
16	17	18	**19**	20	21	22
23	**24**	**25**	**26**	**27**	**28**	29
30						

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Apr 28	29	30	May 1	2	3	4
			Bev Vacation	West Slope Roundtable Summit (Ute Water, Grand Junction) 12:00pm Frank - Mayors and Managers mtg	General Assembly adjourns sine die 6:00pm WECO President's Reception (Balistreri Vineyards,	
5	6	7	8	9	10	11
	Bev Vacation 10:00am Education Committee Meeting		1:00pm TLUG meeting	8:30am GRCL Board meeting 2:00pm STOR Committee Meeting (2nd Floor	John Vacation 4th Grade Water Festival	
12	13	14	15	16	17	18
John Vacation	Jill Vacation 1:00pm WMP Committee Meeting (District Board Room)	11:30am League of Women Voters (District Board Room)	8:00am GRF			
19	20	21	22	23	24	25
	4:00pm Gunnison Basin Roundtable	10:00am Frank: May Implementation Working Group #5 @ 1:00pm UGRWCD Board of Directors Meeting - LSCWAE Annual	9:00am AMWG Webinar	Bev Vacation	Frank - vacation John vacation	
26	27	28	29	30	31	Jun 1
	Memorial Day Holiday - Office CLosed	John vacation	Western Water Future Games 8:00am GRF			

June 2019

June 2019

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	**3**	**4**	**5**	**6**	7	8
9	**10**	**11**	**12**	**13**	14	15
16	17	18	**19**	20	21	22
23	**24**	**25**	**26**	**27**	**28**	29
30						

July 2019

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	**4**	5	6
7	**8**	**9**	10	**11**	12	13
14	**15**	16	17	18	19	20
21	**22**	23	24	25	26	27
28	29	30	31			

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
May 26	27	28	29	30	31	Jun 1
2	3	4	5	6	7	8
	Hyperion Project (Annapolis, MD)					
	John Vacation			12:00pm Frank - Mayors and Managers mtg		
				6:00pm GRCL Award -		
9	10	11	12	13	14	15
	1:00pm WMP Committee Meeting (District Board Room)	11:30am League of Women Voters (District Board Room)	8:00am GRF	2:00pm Copy: STOR Committee Meeting (2nd Floor Conference Room,		
16	17	18	19	20	21	22
			8:00am GRF	Gunnison River Festival		
23	24	25	26	27	28	29
	5:30pm UGRWCD Board of Directors Meeting (UGRWCD Office - 210 West Spencer)	Colorado Water Congress Board of Directors retreat (TBD)		UCRC Summer Meeting (TBD Colorado)		
30	Jul 1	2	3	4	5	6

July 2019

July 2019

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	**4**	5	6
7	**8**	**9**	10	**11**	12	13
14	**15**	16	17	18	19	20
21	**22**	23	24	25	26	27
28	29	30	31			

August 2019

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	**12**	**13**	14	**15**	16	17
18	**19**	20	21	**22**	23	24
25	**26**	27	28	29	30	31

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Jun 30	Jul 1	2	3	4 Independence Day Holiday - Office Closed 12:00pm Frank - Mayors and Managers mtg	5	6
7	8 1:00pm WMP Committee Meeting (District Board Room)	9 11:30am League of Women Voters (District Board Room)	10	11 8:00am GRCL Board meeting (712.432.0220 PIN 6414386)	12	13
14	15 SWCD 4:00pm Gunnison Basin Roundtable	16	17	18	19	20
21	22 5:30pm UGRWCD Board of Directors Meeting (UGRWCD Office - 210 West Spencer)	23	24	25	26	27
28	29	30	31	Aug 1	2	3